

**AGENDA**  
**CARRBORO BOARD OF ALDERMEN**  
**TUESDAY, SEPTEMBER 1, 1998**  
**7:30 P.M., TOWN HALL BOARD ROOM**

Approximate Time\*

- |                    |     |  |
|--------------------|-----|--|
| 7:30 - 7:40        | A.  | REQUESTS FROM VISITORS AND SPEAKERS FROM THE FLOOR   |
| 7:40 - 7:45        | B.  | CONSENT AGENDA   |
|                    |     | (1) <b>Approval of Minutes of Previous Meeting:</b> August 25, 1998  |
| 7:45 - 7:55        | C.  | RESOLUTIONS, PROCLAMATIONS AND CHARGES   |
|                    | D.  | OTHER MATTERS  |
| 7:55 - 8:10<br>P/5 | (1) | <b>Change Order for Town Hall Renovations</b><br><br>The purpose of this item is to consider an amendment to the construction budget for the renovations to the Town Hall.   |
| 8:10 - 9:10<br>P/5 | (2) | <b>Discussion of Solid Waste Management Issues</b><br><br>The Board of Aldermen will discuss a proposal made by the Orange County Board of Commissioners who would assume solid waste management responsibilities. |
| 9:10 - 9:15        | E.  | MATTERS BY TOWN CLERK  |
| 9:15 - 9:25        | F.  | MATTERS BY TOWN MANAGER  |
| 9:25 - 9:35        | G.  | MATTERS BY TOWN ATTORNEY   |
| 9:35 - 9:45        | H.  | MATTERS BY BOARD MEMBERS   |

\*The times listed on the agenda are intended only as general indications. Citizens are encouraged to arrive at 7:30 p.m. as the Board of Aldermen at times considers items out of the order listed on the agenda.

# BOARD OF ALDERMEN

ITEM NO. D(1)

## AGENDA ITEM ABSTRACT

MEETING DATE: September 1, 1998 REVISED

**SUBJECT: Amendment to Town Hall Renovation Construction Budget**

|  |  |
|--|--|
| <b>DEPARTMENT:</b> Town Manager's Office | <b>PUBLIC HEARING:</b> YES ____ NO <input checked="" type="checkbox"/> ____                                |
| <b>ATTACHMENTS:</b> architect's letter   | <b>FOR INFORMATION CONTACT:</b><br>Robert W. Morgan, Town Manager<br>Chris Peterson, public Works Director |

### PURPOSE

The purpose of this item is to consider an amendment to the construction budget for the renovations to the Town Hall.

### ANALYSIS

On August 18 the Board approved two change orders for the renovation work on Town Hall. The two change orders added 4000 and 3000 bricks to complete the project. The cost of these two change orders was \$80,500 for labor and \$1,329 for brick for a total of \$81,829. Adding these two change orders with the base contract of \$109,000 and Architectural Services of \$12,560 brought the total budget to \$203,389. The original estimate for this project was \$190,000 requiring \$13,389 to be transferred from the Town Center construction account to the Town Hall renovations.

These two change orders were to replace the face brick on Town Hall on the Farmers' Market side and the Fire Station side. This past week it became necessary to remove an entire top section of the wall on the market side approximate five feet by twenty feet. The condition of the entire wall was not known until the face brick was removed. This section of the wall was three and sometimes four brick thick. Repairing this section has used all the brick currently approved plus approximately 800 more. This leaves unfinished the reconstruction work on the fire station side of Town Hall.

Attached is a letter from Dan Huffman with Cherry Huffman Architects outlining the need for additional funds for renovating the Town Hall. The change order calls for additional funds of \$51,823. This would put the project \$65,212 over the original budget of \$190,000.

### RECOMMENDATION

The Town Administration recommends that the Town Manager be authorized to sign the change order for the Town Hall Renovation Project for the amount of \$51, 823 and that these funds be transferred out of the funds designated for the Town Center. Based upon the Administration's observations further renovations are necessary for the long term protection of the Town Hall. Further postponement or stop gap measures could result in the deterioration of the integrity of the building as we saw on the South wall. The transfer of funds from the Town Center budget will require the Town Administration to develop options for that construction budget. Including the loss of saving of \$30,000 from the Town Hall renovations and the need for an additional \$65,212 for those renovations, the proposed budget for the Town Center has been reduced by \$95,211.



August 28, 1998

Mr. Chris Peterson  
Town of Carrboro  
Post Office Box 829  
Carrboro, North Carolina 27510

Dear Mr. Peterson:

As you are aware, the upper portion of the brick wall on the parking lot side of the building fell during construction efforts. This area is approximately 25' long by 5' high with 4 brick wythes thick at the lower 1' x 25' and 3 wythes of brick at the upper 4' x 25'.

This wall was in very poor condition, much worse than anticipated. It appears that the upper portion of the wall was painted and that this was removed by sand blasting. The sand blasting removed the harder finish on the face of the bricks. This has created a more porous surface which absorbs more moisture which is wicked to the inside. Apparently this has deteriorated the mortar on the interior wythes of brick. This a hidden condition which is not typical.

The work remaining includes the top of the southern wall, where the brick fell, and the upper portion of the north wall. The Contractor has not started removing the brick from this wall. However, this part of the wall appears to have been sand blasted and the brick is discolored. The Contractor feels that this wall is more sturdy than the south wall. However, when the face brick are removed, we could find that the interior wythes of brick and mortar have deteriorated.

I recommend that the Owner provide additional funds to replace the brick on the south wall to complete it and replace the face brick on the upper 5' portion of the north wall. Portions of the interior brick may be in poor condition also. A contingency amount should be added to allow for this. This is extremely difficult to estimate until the face brick are removed. The estimate for the remaining work is:

#### South Wall

|                                       |              |
|---------------------------------------|--------------|
| 1' x 25' x 4 wythes x 6.75 brick/sf = | 675 bricks   |
| 4' x 25' x 3 wythes x 6.75 brick/sf = | 2025 bricks  |
| Total                                 | 2700 bricks  |
| Remaining brick                       | -1900 bricks |
| Additional required                   | 800 brick    |
| 800 brick x \$11.685/bk =             | \$9,348.00   |

Architecture

Interior Design

Environmental Graphic

Cherry

Huffman

Architects, PA

100 S. Harrington St.

Faleigh,

North Carolina

27603

919.821.0593

Fax 919.821.0720

*North Wall*

63.25' x 25' x 6.75 brick/sf = 2135 brick (1 wythe)

2135 brick x \$11.685/bk = \$24,947.50

Contingency (1500 brick) = \$17,527.5

Total Add \$51,823.00

The contingency amount for the north wall is a minimal amount. Once the face brick are removed we may find more extensive damage. Please contact me if you have questions or would like to discuss this further.

Sincerely,



Dan G. Huffman, AIA



# BOARD OF ALDERMEN

ITEM NO. D(2)

## AGENDA ITEM ABSTRACT

MEETING DATE: September 1, 1998

**SUBJECT:** Discussion of Solid Waste Management Issues

|  |  |
|--|--|
| <b>DEPARTMENT:</b> Town Manager's Office | <b>PUBLIC HEARING:</b> YES ____ NO <input checked="" type="checkbox"/> |
| <b>ATTACHMENTS:</b> (See attached list)  | <b>FOR INFORMATION CONTACT:</b><br>Robert W. Morgan, Town Manager      |
|  |  |

### PURPOSE

This week each member of the Board should have received a letter from Margaret W. Brown, Chair, Orange County Commissioners requesting a response within sixty days on the County's proposal for assuming solid waste management responsibilities. The purpose of this item is for the Board to discuss this proposal for the first time

### ANALYSIS

Since May of this year, the Mayor and Board of Aldermen have received numerous letters, memorandums and reports related the reorganization of solid waste management in Orange County. Attached to this agenda item are those documents. The Carrboro Public Works Staff has also prepared information concerning solid waste collection cost and service levels, tons collected, and tipping fees. (This information will be distributed to the Board on Monday evening.)

The Town Manager met with Aldermen Gist and McDuffee on Monday evening to review what information should be included for your discussion of this agenda item. They also requested the Town Administration provide some analysis of the key issues in the county's proposal. That analysis will be provided to the Board on Monday evening.

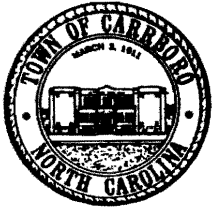
Aldermen Gist and McDuffee requested that County Manager, John Link be in attendance for this discussion. This request was made, however neither he nor a staff person will be available due to a previously scheduled meeting.

### RECOMMENDATION

Review and discuss Orange County's proposal to assume responsibility of solid waste management.

## **LIST OF ATTACHMENTS**

- March 30 and June 11, 1998 letter from Mayor Nelson responding to County's last proposal
- July 8, 1998 letter from Mayor Waldorf responding to County's last proposal
- August 20, 1998 letter from Margaret Brown containing County's new proposal ( two exhibits )
- August 11, 1998 agenda abstract: Orange County Solid Waste Report (twenty-one exhibits)
- June 2, 1998 revised report on Alternative Funding Strategies for Solid Waste Management Programs prepared by HDR



## TOWN OF CARRBORO

NORTH CAROLINA

March 30, 1998

Ms. Margaret Brown, Chair  
Orange County Board of Commissioners  
P.O. Box 8181  
Hillsborough, N.C. 27278

Dear Margaret:

The Carrboro Board of Aldermen met in a special worksession on Thursday, March 26, 1998 to discuss solid waste management issues. The Board made the following responses to your letter dated February 20, 1998 concerning proposed community benefits to the neighborhoods around the Eubanks Road Landfill:

Benefit #1 – Water/Sewer Extensions – Potential Approaches, Cost Allocation, and Other Issues

**SEWER**

The Board reconfirms its willingness to compromise on the issue of sewer connections. However, the Board believes that the three governments, under the leadership of the County, should explore the possibility of extending sewer lines to the historic Rogers Road community. Options such as CDBG funds or a bond referenda could be explored. (Question A-1)

**WATER**

The Board reconfirms its position that installation of water lines serves as insurance in terms of future potential litigation. (A-2) Because of this, our attorney advises us that tipping fees (A-4) could be used for community benefits, including water extensions. We are interested in keeping all options open at this time, including CDBG and a bond referenda. It is our opinion that the county government, which represents all taxpayers, should take the lead on this. (C)

With regard to the area to be served with water, the Board concurs with the County that the historic Rogers Road neighborhood should be included in any benefit related to water quality. (B)

In addition, the Board feels that water lines should be extended to those residences in the Millhouse Road neighborhood that were constructed prior to 1972. Millhouse Road residents are in closest proximity to the landfill of any residents considered. Neighbors have suffered significant degradation of quality of life for an extended period of time as a result of living in close proximity to activities associated with a public enterprise in the form of the Orange County landfill for over 25 years. It should be recognized that this action is a specific remedy to correct this unique hardship to residents who have specifically suffered and to insure these residents against potential health hazards resulting from past, present and future landfill-associated activities.

The Board believes that, because this neighborhood is downhill from the landfill and because contaminants have been found already in one well, an exception should be made. However, in order to protect the integrity of the rural buffer, which we care deeply about, the water lines should be carefully sized to serve only the residents intended.

The Board would not support a survey to ascertain which residents could benefit from the installation of water filtration systems.

#### Benefit #2 – Financial Assistance for Water and Sewer Connections

1. The Board is interested in exploring reduction in fees, fee waivers and alternative funding sources as a means of addressing financial assistance for water quality improvements, if legal.
2. The Board feels that main water lines should be paid for with as yet undetermined funds. Acreage/facility fees and plumbing connections might be paid for, based on need, with CDBG funds, bonds, etc. The Board would like to do whatever possible to facilitate use of the water lines.

#### Benefit #11 – Activities Related to Planning Boundaries

The Board will work with the Town of Chapel Hill in redefining the Carrboro and Chapel Hill transition areas.

#### Benefit #12 – Post-Closure Use of the Landfill

1. The Board agrees that it is not prudent to construct a recreation facility on a closed landfill.
2. The Board agrees with the most recent position of the LOG that the Greene Tract not be used for:
  - Construction and demolition landfill
  - Mixed solid waste landfill
  - Materials recovery facility

➤ Transfer station

The Board will have proposals in the future addressing where these facilities could be located following a thorough Board discussion of this matter.

Benefit #13 – Expansion of Landfill

The Board does not support expanding the current landfill by purchasing land for landfilling activities, but the Board is open to purchasing land for other solid waste activities.

Other Solid Waste Issues

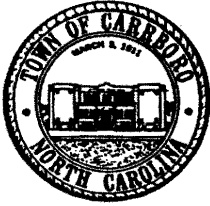
1. The Board does not want to close the door on a new landfill siting process, and would like to keep that option at this time. We would like to extend the life of the existing landfill by shipping some waste and exploring options to reduce waste flow.
2. The Board would not be interest in conducting additional testing of wells in the vicinity of the landfill at this time.

Thank you for passing this information along to the County Commissioners for consideration.

Sincerely,

*Michael R. Nelson*  
*SW*

Michael R. Nelson  
Mayor



## TOWN OF CARRBORO

NORTH CAROLINA

June 11, 1998

Ms. Margaret Brown, Chair  
Orange County Board of Commissioners  
P.O. Box 8181  
Hillsborough, N.C. 27278

Dear Margaret:

The Carrboro Board of Aldermen at its meeting on June 9, 1998 discussed your letter dated April 30, 1998 concerning solid waste matters.

Due to the lateness of the hour, the Board was unable to fully discuss your letter, but the Board did make the following comments:

- 1) The Board of Aldermen is concerned that there is no funding allocated for supplying water to the Millhouse Road neighborhood which is in close proximity to an unlined landfill.
- 2) The Board of Aldermen would like to reiterate its position that the Greene Tract not be used for landfill-related purposes.

As this process moves forward, the Board will have further input. We look forward to continued discussion on this issue.

Sincerely,

Michael R. Nelson  
Mayor

# TOWN OF CHAPEL HILL

306 NORTH COLUMBIA STREET  
CHAPEL HILL, NORTH CAROLINA 27516

Telephone (919) 968-2700

July 8, 1998

Margaret Brown  
Board of Orange County Commissioners  
1509 Smith Level Road  
Chapel Hill, N.C. 17516

Dear Ms. Brown:

Thank you for your thoughtful letter of April 30, 1998 regarding a series of issues related to solid waste management. The Council has discussed these issues at some length on June 22 and July 2 and we send our comments to you. We have organized our response around the questions that you raised.

In addition to the discussion below, I enclose a copy of the resolution the Council adopted giving guidance to the Chapel Hill representatives on the Landfill Owners Group. Also enclosed is a copy of a proposal for governance of the solid waste system. The Council voted to endorse it as a proposal that the Council would like to consider and to forward it to the governing bodies of Orange County, Carrboro and Hillsborough. I am doing so along with copies of this letter and the accompanying resolution.

## Financing Solid Waste Operations

### Point A1: Local responsibility for collection of garbage

The Commissioners support the principle that each governing board would retain its responsibility for collection of solid waste. The adopted solid Waste Management Plan contemplates the same division of responsibility for garbage collection as well as the centralized collection and processing of recyclables.

### Point A2-4: Use of tipping fee to maximum extent possible

We agree that the tipping fee should be used to the extent possible to support county-wide solid waste management operations. However, we also agree with the Landfill Owners Group's admonition that the tipping fee may become inadequate to do that. As waste reduction and waste recycling programs succeed, the volume of waste disposed in the landfill decreases. However, landfill tipping fees support the cost of waste reduction and waste recycling programs. If the tipping fees are increased to cover the increasing costs of waste reduction and recycling, volumes delivered to the landfill decrease partly because of the success of the other programs and partly because tipping fees become prohibitive. The Orange Regional Landfill tipping fees are now close to the top of the range of landfills in surrounding counties.

Therefore, we believe that it would be prudent to establish alternative funding to be incorporated into the Fiscal 1999/00 landfill budget. A necessary step before recycling can be substantially increased is the siting, building and operation of a materials recovery facility. The siting and development of a construction and demolition landfill is needed now to help extend the life of the mixed solid waste landfill. A transfer station may be needed in 2005-06 when the current landfill is full. Therefore, we believe it is advisable to initiate additional funding sources as soon as possible to begin accumulating needed capital funds.

A LOG committee is currently exploring financing methods in addition to the tip fee. Until that work is completed this summer, we would not want to exclude the use of any potential financial source, including pay-as-you-throw fees and the General Fund of any of the governmental bodies.

Presently the solid waste operation is an enterprise fund. It is assumed from this section that the County intends to continue to deal with solid waste matters in the same way, but this is not clearly stated. It would be helpful to have the County say that it intends to continue the solid waste operations as an enterprise fund. Also a LOG financing committee has been at work for several months and will make recommendations in the future to the LOG for review and consideration for all the governing bodies in Orange County. It would be helpful for the County to acknowledge this committee and let us know how it plans to use these recommendations.

#### Point A5: Participation of Carrboro and Chapel Hill in financing community benefits

We continue to believe that the issue of double taxation is an important one. We believe that all county residents should share equally in the funding of any water service lines provided to the community around the present landfill, using the principle of one person/one tax. Several means of County funding could avoid the double taxation of municipal taxpayers. We support the County either paying from its operating budget or financing the costs through bonds or other instruments of debt. The use of County sales tax revenues would also avoid municipal taxpayers paying twice. We would emphasize that the use of any resources of the municipalities would constitute double taxation.

#### Point A6: Analysis of indirect costs to be charged against the Landfill Fund

We are not sure of the benefit of an independent analysis of the indirect costs of administering the solid waste operations. It appears that the County believes that the \$115,000 (FY 98/99) that the Landfill Fund pays to the Chapel Hill General Fund for such costs would not be sufficient should the County be the administrator of the landfill.

Over the past 26 years, the work of the Solid Waste Management Department has grown significantly, but gradually. Therefore, Landfill Fund administration has been gradually incorporated into the jobs of many Town employees, including such positions as revenue collector, payroll clerk, personnel analyst, purchasing agent, finance director, personnel director and the like. Such work has also become a part of the jobs of the Town Attorney, Assistant Town Manager and the Town Manager. None of these positions exist solely to serve Solid Waste and in no case does Landfill Fund-related work comprise the full work of any position outside of those positions that are part of the Solid Waste Department.

We believe that the existing cost allocation formula that assigns administrative overhead costs to the Landfill Fund generally provides reasonable compensation for financial, personnel, and general administrative services.



Point A7: Direction of reserve funds to the planning and development of new facilities

Landfill Fund reserve accounts have been established to provide for part of the costs of planning and establishing new facilities, as follows:

- The Equipment Reserve is intended to provide for the equipment needed for daily operations.
- The Eubanks Road Reserve is intended to pay for the planning and construction of the remaining cell of the Eubanks Road landfill, as well as the final cover and closing of that facility.
- The Land Acquisition and Construction Reserve is available and sufficient for the acquisition of land for a material recovery facility (MRF), a transfer station and a construction and demolition disposal facility.

Operating funds have been appropriated for the planning for a MRF, with the understanding that the MRF would be designed, built and operated by a private party. If the governments decide that it is advantageous for the Landfill Owners Group to retain ownership of the building itself and/or the equipment within, this reserve fund could also contribute, as funds are available, to this expense. The attached tables (Attachment 5) demonstrate how the present reserves could, with continued annual contributions, finance site acquisition and development of the needed additional facilities.

The Finance Committee of the Landfill Owners Group will be discussing financing issues for all contemplated facilities and programs over the summer, reporting back to the full Owners Group. We anticipate that the Landfill Owners Group will further discuss financing issues this fall following the Finance Committee's work.

We agree that discussion among the two staffs would be helpful in developing options for the future disposition of the administration building currently located in the Chapel Hill Public Works yard. In this regard, we note that it is likely that sufficient property could result from proposed land acquisition for some of the above mentioned facilities to site a new or relocated administration building.

Point A8: No use of the power of eminent domain for acquiring land for a sanitary landfill

We would request that the Commissioners clarify whether this policy would apply also to acquisition of land for other solid waste management facilities, such as a construction and demolition waste landfill, materials recovery facility or a transfer station. We believe that it would be difficult, maybe impossible, to site one of these facilities without the possibility of using eminent domain.

We believe that it is unlikely that a new sanitary landfill could be acquired in Orange County without the use of eminent domain proceedings.

Regardless, it appears that a decision has been passively made not to have another mixed solid waste landfill in Orange County. There is no effort now being made to identify a site for a landfill. There is no discussion of initiating a process to do so. The present landfill will be full in 2005-06, and it takes about 5 years from the point of transfer of title to disposal of the first bag of garbage in a new landfill. Therefore, we believe that the community should be planning for a transfer station, including searching for a site.

Point A9: Higher costs of operating multiple facilities

We anticipate that a construction and demolition (C&D) landfill and a materials recovery facility (MRF) will need to operate simultaneously with either a mixed solid waste landfill or a transfer station. The two former facilities are necessary to minimize the solid waste that must be either landfilled or transported out of county to a final disposal facility.

The attached March 12 memorandum from the Solid Waste Director to the Landfill Owners Group explains the issues related to the simultaneous operation of a landfill and a transfer station and why we do not recommend it. The key points are:

- fixed costs of landfill operation are such that reducing the volumes received would not reduce the costs significantly
- building and operating a transfer station is expensive, especially because our waste stream is relatively small; reducing the waste stream would likely increase the unit costs of transfer and transportation

We would recommend operating a transfer station only if it were necessary to fill the time interval between the closing of the present landfill and the opening of another, or if the decision is made to avoid an in-county landfill in the future.

The simultaneous operation of a MRF and either a landfill or a transfer station is a key point of the integrated solid waste management plan. The MRF would be necessary to maximize recycling and, therefore, to reduce to the greatest extent possible the waste either being landfilled in Orange County or needing transportation to an out-of-county landfill.

As noted in the discussion above of the Landfill Fund's reserves, we believe that existing reserves and future landfill revenues, if continued as currently projected, could fund the acquisition of property for a

construction and demolition facility and for a transfer station/materials recovery facility; and pay for the construction of the transfer station in 20005-06 (assuming a construction and demolition management facility site can be developed, preventing C&D wastes from shifting to the lined landfill). The construction and demolition facility could pay for all C&D operations and, in addition, could probably fund post-closure expenses for the required thirty years for the Eubanks Road landfill.

It is also our opinion that current and future landfill revenues will be insufficient to fund all the new costs related to the implementation of the solid waste plan. Additionally, revenues from the transfer station would be needed to fund the waste transfer operation, with little or none left over for funding of recycling or waste reduction programs. Once the landfill reaches capacity, those existing recycling and waste reduction programs being funded from landfill revenues would also need to receive other funding.

In summary, we believe that the main financial issue is how to fund county-wide recycling, processing and waste reduction programs. Other programs could probably be self-sustaining. These issues will be discussed in detail by the Landfill Owners Group and its Finance Committee.

#### Administration

Attached is a copy of the Town's policy on reduction in force. However, we cannot comment now on what the Town would do if it finds that a reduced waste stream would allow a decrease in solid waste staff. It would depend on the situation in the rest of the Town's organization and exactly which positions were not needed.

We do not envision a significantly reduced waste stream in the near future. Rather, we expect a major shift of waste materials from disposal to recycling, and shift of resources from landfill to recycling and waste reduction activities. If the adopted solid waste management plan is implemented, recycling and waste reduction services for the county will be expanded.

#### Timing of Potential Transfer of Responsibility for Solid Waste Operations

The County Commissioners note that it would take a year for the County to assume administration of solid waste management activities after an agreement on governance is concluded. The Town can continue to manage solid waste operations indefinitely, but we believe that a decision must be made. We are especially concerned about the stress being experienced by landfill employees, who, for several years have had no certainty about their future employer or their future employment. We would emphasize our sense of urgency about the County completing a proposal this fall so that we might resolve issues of governance and be able to focus on the solid waste management needs of the community.

#### Community Benefits

We agree with the resolution of the Landfill Owners Group adopted unanimously on February 18, 1998, that the Greene tract not be used for C&D, MRF, or transfer station operations. In addition, State regulations would not allow its use for a mixed solid waste landfill because of its proximity to Horace Williams Airport.

We would not object to asking OWASA to consider a means of waiving or reducing its fees to help fund neighborhood benefits.

The Council has also supported the extension of water lines to the area surrounding the landfill, assuming that an equitable way to share the cost can be developed.

We believe that a special reserve fund to help defray the costs of any future water line extensions is unnecessary for the following reasons:

1. The fill area is surrounded by 21 monitoring wells meant to detect any contamination coming from the waste before it reaches the property line of the landfill. Therefore, it should be possible for the first indications of any contamination from the fill area to be detected and mitigated before such contamination can reach the property line.
2. Even with all the precautions followed in designing, building and operating the landfill, it is theoretically possible for contamination to occur. There is an undesignated fund balance available at all times for true emergencies.
3. The entity that is ultimately responsible for solid waste management should decide if such a reserve fund is prudent.

The Town Attorney also notes that any neighborhood benefits need to follow a general policy, rather than distinguishing among landowners based on their individual histories. We would also point out that the area designated by the County as the "historical Rogers Road neighborhood" excludes the land of Gertrude Nunn, next to the eastern boundary of the landfill.

### CONCLUSION

The life of our present mixed solid waste landfill is expected to end in 2005-06. As we move closer to that point, it will become more difficult to make decisions and provide services in the most efficient and effective way possible.

As time goes by, the community's options will become more and more restricted. Remaining space in both the construction and demolition and the municipal solid waste landfills diminishes with each day of operation. This community may be forced to negotiate agreements with out-of-county landfills and operators of other solid waste facilities when the predictable end of our disposal capacity puts us in a very poor negotiating position.

We believe that we need to maximize the life of the landfill even while we prepare to replace it, be the replacement in-county or out-of-county. To this end we believe the following steps are needed:

1. **Acquire a site for a construction and demolition waste landfill now.** About one third of our waste stream is construction and demolition (C&D) waste. The current C&D landfill space will be full in 18 months; if no alternative has been identified and developed by that time, C&D waste will have to go into the lined municipal solid waste (MSW) landfill. Such placement would cut about 2 years from the remaining life of the MSW landfill. Simple refusal by the landfill to accept C&D waste would leave about 550 customers a week with a choice of travelling to Holly Springs (a facility that is predicted to close in 2 years) or farther, or dumping in the woods or the side of the road. Finally, because handling C&D costs less than the revenue it generates, the lack of a C&D landfill would cause the loss of about \$400,000-500,000 per year of net revenue.

Three potential sites are before the Landfill Owners Group now: a) an extension of the present C&D site onto land owned primarily by Ms. Blackwood; b) the Greene tract, and 3) a site within 2 miles of the present landfill whose owner wishes to keep the location confidential.

- a) The Blackwood site would be the most efficient and economical to operate, because it would be an extension of present operations. The same scales, equipment, access road and supervision could continue to be used. No land would need to be acquired for a buffer where it adjoins the present landfill. However, it would come close to the home of Ms. Blackwood and of Mr. Nunn, and Ms. Blackwood has recently repeated her refusal to sell her land for use as a landfill.
- b) The Greene tract would have the lowest acquisition costs: it is presently owned by the three landfill partners. It could use the same scales, equipment and supervision. However, it is surrounded by developed neighborhoods. The Landfill Owners Group unanimously adopted a resolution on February 18 recommending to the governing boards that the Greene tract not be used for a C&D landfill, a materials recovery facility or a transfer station. And, we believe that the land is too valuable to use this way, both in terms of the market price and in terms of the role it could play in creating a village center, a park, affordable housing, and/or other elements of the Council's vision for the northern part of our planning area.
- c) The third site has the advantages of being well-buffered from the closest house and being freely offered for sale. It is also close enough to the mixed solid waste landfill to minimize inconvenience to customers who have to be redirected to the C&D landfill, and close enough for supervision and some equipment to be shared. It is the only site found preliminarily to be suitable for a C&D landfill after a county-wide search for land freely offered for sale. Its total price may be higher than we would expect to pay for the smaller parcels owned by Ms. Blackwood and an out of town owner, but we believe its isolation from neighbors and the fact that it is voluntarily offered for sale are worth the price.

We discuss below how the acquisition of these sites could be financed.

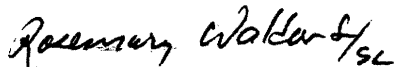
- 2. **Acquire a site for a material recovery facility (MRF) now and proceed to plan and build it.** Such a facility is necessary for a significant increase in recycling and concomitant reduction in municipal solid waste going into the mixed solid waste landfill. The three parcels directly west of the current landfill property on the north side of Eubanks Road together make an excellent site. The power of eminent domain should be used if necessary. It would take about three years to design, permit and build a materials recovery facility, once the site has been acquired.
- 3. **Use the Landfill Fund reserves to finance the acquisition of both sites.** There is enough in reserve for the acquisition of sites for both a materials recovery facility and a C&D landfill, as well as for the development of the rest of the present mixed solid waste landfill and its closure. Attachment 5 includes tables detailing the present and projected status of the reserve funds assuming that the recommended sites for the materials recovery facility and the C&D landfill are acquired in 1998-99.
- 4. **Conclude issues concerning governance.** Lack of agreement on governance has made it difficult to make decisions effectively and in a timely manner. It has created unnecessary and time-consuming steps for all the elected officials to go through. Staffing these extra steps has taken time away from the business of managing the current operations.

We would add three other items which are important to the Town Council:

1. We believe that all current Solid Waste Department employees should be transferred to the County, where they would become County employees subject to the supervision of the County Manager.
2. We caution that the administrative cost factor not substantially increase. It is currently based on 13.5% of the salaries of Solid Waste employees.
3. We believe that all of the solid waste issues now pending should be resolved before any agreement on changes in governance, including the need for a construction and demolition waste landfill, siting a construction and demolition landfill, siting a materials recovery facility, siting a transfer station and the resolution of future financing methods for solid waste operations.

We in Chapel Hill look forward to receiving your proposed agreement in the fall and recognize that, whoever runs solid waste operations, we will all need to work together to make these decisions. Continued cooperation among the governments will serve the welfare of the residents of this community.

Sincerely,



Rosemary I. Waldorf  
Mayor

enclosures

cc: Orange County Board of Commissioners  
Mayor and Carrboro Board of Aldermen  
Mayor and Hillsborough Board of Commissioners

RIW:ddh

A RESOLUTION OFFERING SUGGESTIONS REGARDING THE COUNTY ASSUMING ADMINISTRATION OF SOLID WASTE MATTERS FOR ORANGE COUNTY WITH A REQUEST FOR A REPLY (98-7-2/R-1)

WHEREAS, the Council of the Town of Chapel Hill is one of three governments which own the Orange Regional landfill; and

WHEREAS, representatives of the governing body of each owner form the Landfill Owners Group, which advises the governments on matters of solid waste management; and

WHEREAS, the Town of Chapel Hill, under the 1972 agreement, operates the landfill; and

WHEREAS, the three owners of the landfill have raised significant questions about future means of reducing and disposing of solid waste, and about future governance of solid waste management in Orange County;

NOW, THEREFORE, BE IT RESOLVED by the Council of the Town of Chapel Hill that its representatives on the Landfill Owners Group are requested to pursue the following objectives:

1. Join with the other Landfill Owners Group members to hold a public hearing in September on the three sites presently under consideration by the Landfill Owners Group. Acquire a site for a construction and demolition waste landfill by fall of 1998. Continue to be open to other possibilities that may arise.
2. Acquire a site, if acquisition is necessary, for a materials recovery facility by fall of 1998 and proceed to plan and build it. The site next to the landfill on the north side of Eubanks Road is one possible site and the power of eminent domain should be used if necessary; the Greene Tract is another possible site which would not require acquisition. Continue to be open to other possibilities that may arise.
3. Plan for a transfer station if no alternatives, including use of existing transfer stations in other locations, can be found. Begin to identify possible locations. The site next to the landfill on the north side of Eubanks Road is one possible site and the Greene Tract is another possible site.
4. Use the Landfill Fund reserves to finance the acquisition of sites for and construction of solid waste facilities.
5. Acknowledge at this time that there will be no search for a future landfill site recognizing that this will not be binding on any future governments.
6. We desire a quick resolution to governance issues.
7. Recognize that a decision about the Greene Tract should not delay the transfer of governance.
8. In all finance issues, be sensitive to the issue of double taxation.

This the 2nd day of July, 1998.

July 2, 1998

Memo to: Council Members

From: Mayor Waldorf

Re: A proposal for governance of the solid waste system

I offer the following proposal for governance of future solid waste management operations for your consideration. It is an option that has been mentioned, but never much discussed, at Council meetings. You will see that it is rather general, but I believe it is quite workable if our partners can agree to it, or to some variation of it. I have told both Mayor Nelson and Chairman Brown that I would probably offer this suggestion to Council today, and asked them directly if they would in any way take offense. Both assured me that they would not. Let me state emphatically that it is not my intent to create any division among the partners, or to prolong this process. I am searching for an approach that will move the process forward.

## **ACTION STEPS**

Step 1. Conclude site selections for a C&D disposal facility and a MRF and transfer station. The LOG is attempting to do this now. Acquire the properties, using landfill reserves. These decisions, which would be ratified by all the LOG partners, would settle key policy and operational issues.

Step 2. Agree that Chapel Hill will administer future solid waste management operations, specifically:

- Operate the landfill until it is closed, and assume responsibility for post-closure monitoring.
- Construct and operate a new C&D facility indefinitely.
- Supervise design of a MRF; negotiate contract with a private company to build and operate a MRF. (I recommend that we pin down our minimum predictable recyclables stream before we make this large financial commitment. For a MRF, more recyclables are better; in fact, it's hard to have enough. )
- Supervise design and construction of a transfer station. Negotiate contract with an out of county hauler and disposer. Manage the transfer station operation indefinitely.

Step 3. Agree on dimension of shared budget oversight, and whether we should have an advisory board. (Accomplish these steps quickly.)

## **BASIC ASSUMPTIONS**

**Personnel:** Qualified solid waste management staff would retain their jobs, as employees of the town of Chapel Hill. Our manager, assistant manager and attorney would continue to provide management and legal advice.



**Collection:** Collection method would remain a decision made by each local government.

**Annual budget:** Chapel Hill staff would develop the annual budget for solid waste operations. The annual budget must be reviewed by Board of Commissioners, Carrboro Board of Aldermen, and Hillsborough Town Board. These elected boards need some specific budget authorities regarding system costs that directly affect their town or county budgets. I do not have details to offer here, but I believe we should return to the draft Interlocal Agreement. It has some very reasonable stipulations on this point, and it was worked out in great detail. (In addition, the landfill fund paid an attorney, Bob Jessup, a handsome fee to draft this proposal. I hope we will not throw it away; instead, I hope we will mine it for its good features.) Clearly, the 1972 interlocal agreement needs updating.

**Sources of revenue:** Tip fees will be charged for both C&D and MSW disposal. It is clear to everyone that another source of revenue will be needed in the future. Equity requires that this be a county-wide source of revenue. Law requires that any county-wide source of revenue must be imposed by the commissioners, and can only be imposed by the commissioners. I would hope that Orange County would enact a non-regressive revenue-generating instrument for long-term solid waste management, to provide the necessary supplement to tip fees -- necessary if we are going to meet our solid waste reduction goals. (For the part of Chapel Hill that is in Durham County, Chapel Hill might need to capture this revenue.)

**Solid Waste Management Plan:** All 4 governing bodies adopted this plan, and adopted the same set of waste reduction goals. As policy, this plan is in force for our system, though not fully implemented. Our planning, to date, is predicated on this plan, because this plan is policy.

**Community Benefits:** This issue has been successfully severed (I hope and believe) from the governance issue. Several requested benefits have already been provided. Data to help determine where the water lines should go is being studied by an Orange County intern, under the direction of Margaret Brown. An Orange County-Chapel Hill-Carrboro committee has been appointed to recommend how water provision should be financed. I think we all hope this committee will complete its charge over the summer.

## **"OPEN MATTERS"**

Bob Jessup, the attorney hired to draft the Interlocal Agreement, used this elegant phrase to refer to matters undecided, and not essential to executing an interlocal agreement. As open matters, I would put forth a preliminary list of 2:

**Advisory Board.** Perhaps we need a citizen advisory board with representation from each of the 4 jurisdictions. I am very flexible, and could happily

live with or without such a board. (Again, the draft Interlocal Agreement has some good and painstakingly worked out standards on this subject.)

**The Greene Tract.** I would suggest that Chapel Hill be willing to commit to administer solid waste management operations without requiring that the Greene Tract be a landfill asset. I am content to say, for now, that it is a public asset, and to let its future be determined later by the three owners. I fear the Greene Tract's future may stand in the way of getting the important siting and governance decisions made.

Thank you for considering my proposal. As I see it, the Council could do any of the following:

1. Politely thank me for this proposal and reject it.
2. Endorse it as an option the Council would like to consider, and forward it to Orange County, Carrboro and Hillsborough, for their consideration and comment.
3. Embrace it warmly, with smiles all round, and urge it on our partners.

I have resolved to go home happy, no matter how my proposal is dealt with, but gently remind us all that these issues need to be put to bed soon.

August 20, 1998

«Title» «First\_Name» «Last\_Name»  
«Organization»  
«Address1»  
«Address2»  
«City», «State» «Zip»

Dear «First\_Name»:

As I noted in my letter last week, on August 11 the Orange County Board of Commissioners met in a work session to discuss the future of solid waste management in Orange County. The Board reached consensus concerning a concrete proposal under which the County would assume responsibility for overall solid waste management in the next fiscal year.

The Board's discussion at the work session followed the organization of a report prepared by the County Manager, based on the conceptual framework approved by the Commissioners in mid-June for a countywide solid waste management plan. The Commissioners' proposal to the Towns for assumption by the County of solid waste responsibility is attached in Exhibit 1. It is laid out in accordance with the major headings of the Manager's proposal of August 11, the outline of which presentation accompanies this letter as Exhibit 2.

I hope that you and your board will review this proposal carefully and let us know within sixty days whether the Town feels we can move forward with this framework for solid waste management oversight. I know that all jurisdictions would like to resolve the remaining open matters as soon as possible, and trust that a spirit of reasonable compromise will help our respective jurisdictions reach final agreement. The Board of Commissioners looks forward to your thoughts about our proposal.

Sincerely,

Margaret W. Brown  
Chair

**Orange County Board of Commissioners****Proposal for Assuming Responsibility for Solid Waste Management Operations****August 11, 1998****I. Vision/Goals**

- A. The Board confirmed its commitment to the solid waste goals as adopted in December 1995.
- B. The Board confirmed its adherence to the six principles it identified in November 1997 (with minor modifications noted where applicable in the sections that follow). Those principles are:
  - 1. Enterprise fund operation (i.e. revenues must meet or exceed expenditures).
  - 2. The Greene Tract remains a landfill asset.
  - 3. No restrictions on acquisition of additional acreage at the current landfill.
  - 4. Whoever is responsible for countywide solid waste system needs committed partners to make an enterprise operation economically viable.
  - 5. All community benefits to be provided through the landfill enterprise.
  - 6. Seek a solution in which reduction of solid waste and the economic viability of the solid waste facility are in concert – right now, when solid waste is reduced, the landfill suffers financially.

**II. Community Benefits**

- A. With regard to principle #5 (Section I-B) and the financing of water line extensions to neighborhoods adjacent to the Eubanks Road landfill, the Board indicated its preference that the County and Towns share the cost using one cent sales tax revenue based on each jurisdiction's share of that revenue source (Orange County-Chapel Hill-Carrboro shares are roughly 65%-26%-9%, per Attachment 3 to the Manager's August 11 report). If agreement cannot be reached to use this revenue source, then the water line extensions should be funded using LOG resources.

**III. Governance/Management**

- A. If agreement with the Towns is reached on points as noted, the County will assume solid waste management responsibility no earlier than October 1, 1999, to include current and future operations.
- B. The County will accept transfer of all Chapel Hill solid waste management positions that exist as of September 30, 1998.
- C. If the County assumes the lead role, the Board of Commissioners shall approve the 1999-2000 solid waste management operating budget.
- D. All parties will sign the Interlocal Agreement after it has been revised to incorporate modifications.
- E. With regard to principle #4 (section I-B), the Board emphasized the importance of having committed partners.
- F. Until the County assumes responsibility, the LOG shall continue to direct solid waste management, as in the past, including operating by consensus.
- G. Each government shall appoint two representatives to a Solid Waste Management Advisory Commission, pursuant to an adopted Interlocal Agreement, which shall succeed the LOG and begin meeting after adoption of the 1999-2000 budget (no later than July 1, 1999).

- H. The Board re-emphasized that solid waste collection/transportation decisions would remain the prerogative of each local government entity.
- I. It is important that UNC-CH representatives sit at the table, even if the University chooses not to commit to participation in the solid waste management system.

#### **IV. Facilities, Services, & Programs**

- A. With regard to principle #2 (Section I-B), sixty acres of the Greene Tract should be set aside for use by the County in future solid waste management activities, with the balance of the Greene Tract to remain under the ownership of the current owners, who shall determine its future use. If this course of action is followed, the Town of Chapel Hill is expected to rezone the property for appropriate solid waste uses. If the Towns disagree with this approach, they should offer counterproposals that are reasonable and cost effective. Failing agreement within 12 months, the Greene Tract would become a landfill asset with the lead entity making siting decisions and assuming control of the property as a landfill asset.
- B. Local governments shall continue to work, through the LOG, to site a transfer station and work to develop options for materials recovery and construction & demolition disposal. The Board acknowledged the need for siting decisions, but believes that those decisions should be considered comprehensively rather than piecemeal. Review of options should include the pros and cons of co-locating major solid waste facilities; and review of information to be gathered by County and LOG staffs regarding model solid waste facilities from across the nation that are viewed positively in their communities.
- C. The Board formally indicated its intent not to seek a new MSW landfill in Orange County.
- D. The Board affirmed its intent not to use eminent domain to acquire an MSW landfill site, but acknowledged that decision is not binding upon future Boards of Commissioners. The Board also indicated a willingness to consider the use of eminent domain as a last resort, with regard to other types of solid waste facilities.

#### **V. Financing**

- A. As part of the financing mechanism, all boards endorse implementation of a "Chapel Hill-Carrboro-Hillsborough-Orange County Solid Waste Availability Fee" for all county residents.
- B. Solid waste operations shall continue to operate as an enterprise fund after the County assumes responsibility. The County shall have the option of implementing other fees, and shall not be required to use general funds for solid waste management activities.
- C. Any interlocal agreement must allow the lead entity unilaterally to raise fees by up to 10% annually (this provision is in the most recent version of the draft interlocal agreement).
- D. The Board endorsed a conceptual revenue structure that:
  - 1. finances core operations (MRF, MSW and C&D Landfills) through tipping fees
  - 2. finances collection/transportation activities through property taxes and collection charges
  - 3. finances reduction/recycling through tipping fees to the extent practical, with the balance from availability fees
- E. The Board indicated its willingness to consider pay-per-throw as a revenue and waste reduction tool.
- F. It is important that an indirect cost study be accomplished, if the County assumes the lead role, so that administrative cost allocations for required County support (personnel, finance, purchasing, budget, attorney, etc) can be accurately determined.

**Orange County Board of  
Commissioners**

August 11, 1998

**Options for Solid Waste Operations,  
Planning, and Financing****Solid Waste Operations,  
Planning, and Financing**

- During past year, BOCC & Town Boards have researched, analyzed, and discussed:
  - benefits to community adjacent to current landfill
  - future governance of solid waste management
  - future solid waste processes and facilities
  - financing for future solid waste operations
  - implementation of Countywide, integrated SW plan
- BOCC approved framework for Comprehensive Solid Waste Plan - June 15, 1998 (Attachment 1)

**Solid Waste Operations,  
Planning, and Financing**

- Report Organization
  - Vision/Goals
  - Community Benefits
  - Governance/Management
  - Facilities, Services, and Programs
  - Financing
  - Solid Waste Plan Implementation

## Solid Waste Operations, Planning, and Financing

### Vision/Goals

#### ■ Adopted by BOCC in Dec 95

- minimize waste generation
- conserve resources
- maximize recycling/reuse
- environmentally sound, socially responsible, & cost effective disposal

- *Review, and confirm/amend these goals*

## Solid Waste Operations, Planning, and Financing

### Community Benefits

- most have been approved and implemented
- scope/method of financing water line extensions requires resolution
  - survey planned of buildings/residents
  - BOCC should not underwrite full cost of non-LOG funded benefits
- use one cent sales tax revenues to pay County & Towns shares of costs without double taxation
- *Falling agreement on cost distribution, use broad interpretation and fund water line extensions through LOG resources*

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- "Open matters" must be resolved regardless of lead agency
  - selection of new disposal option
  - effective date of interlocal agreement
  - advisory committee appointments
  - use and disposition of Greene Tract
  - employment status of solid waste system employees
  - community benefits for neighbors of current and future solid waste sites
  - financing for solid waste system

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- Although open matters require resolution, latest draft interlocal agreement reflects substantial consensus
- *Resume discussions soon with Towns on governance, using Oct 97 draft as departure point to resolve remaining issues*

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- Principles Essential to County Governance (Nov 97)
  - 1 enterprise fund operation
  - 2 Greene Tract remains landfill asset
  - 3 no restrictions on acquisitions at current landfill
  - 4 committed partners required for economic viability
  - 5 community benefits paid through LOG resources
  - 6 seek solution allowing waste reduction and economic viability to be compatible

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- Principles Essential to County Governance
  - #1 reflects shift in nature of enterprise if additional revenue mechanisms chosen
  - Chapel Hill perspective on #2 as a public asset
  - #6 possible with additional revenue sources that reduce reliance on tipping fees
- *Review, and confirm/amend these principles*
- *Consider Greene Tract as public vs. landfill asset*
- *Require clear statement in final agreement of functions to be financed by tip fees vs. other mechanisms*



## Solid Waste Operations, Planning, and Financing

### Governance/Management

- Pros/Cons of County assuming lead role
  - BOCC represents, and elected by, all County residents
  - BOCC has broader financing options (e.g. Countywide availability fee)
  - County has greater legal debt capacity
  - County has less experience in SW management
  - requires at least twelve month transition period
  - requires some operational changes to integrate with County policy, procedures, and practice

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- Other Impacts
  - will require indirect cost study to accurately determine administrative cost allocations
  - must consider how policy decisions would be made during transition to County operations
  - will require agreement by Towns to bring their waste to County managed solid waste facilities
  - County would assume more responsibility/liability for major solid waste decisions

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- transition issues identified, preparatory work carried out but much remains to be done if County assumes responsibility
- personnel issues most complex and sensitive - require effective communication with employees
- *Should County assume responsibility, earliest effective date should be October 1, 1999 to allow completion of implementation details*

## Solid Waste Operations, Planning, and Financing

### Governance/Management

- **Organizational Considerations if County Takes Lead Role**
  - Chapel Hill Solid Waste Department transferred in its entirety - becomes County department
  - SW Director becomes County department head - reports directly as Assistant to the Manager for Solid Waste
  - all current employees become County employees, continuing current structure, duties, & responsibilities
  - employee pay and benefits "substantially equivalent"
  - as SW functions change, fewer/different staff handled through attrition/reassignment

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- Regardless of governance decisions, appropriate facilities will be required for some or all of the 140,000 tons of solid waste currently generated in Orange County
- 1997-98 Tonnage - Current Landfills
  - MSW - 68,000
  - C&D - 31,000
- Continued assumption that each jurisdiction will maintain responsibility for its own MSW collection

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- Future facilities required
  - C&D landfill to reach capacity in 12-18 months
  - MSW landfill to reach capacity in 5-10 years
  - MRF to process commingled recyclables central to reduction goals of 45% by 2001 and 61% by 2006
- BOCC stated intent not to use eminent domain to site a new MSW landfill
  - Discuss/determine to what extent, if any, that prohibition applies to other facility siting

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- To achieve waste reduction goals, need more recycled materials through consideration of:
  - curbside collection to more households
  - service to new sectors/locations (more multi-family & commercial)
  - more types of accepted materials (e.g. mixed paper)
  - additional public education for all waste generators
  - other differential landfill fees
  - additional non-economic incentives
  - mandatory recycling and/or disposal bans
  - volume based fees/pay-per-throw

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- MSW Disposal
  - premise of new MSW landfill rising challenged in Fall 1997 by Duke action regarding Site OC-17
  - County/Towns have not resumed previous or initiated a new MSW site search
- *BOCC/Towns should formalize decision not to seek a new MSW site in Orange County now - focus on other solid waste processes and facilities*
- Transfer station will be required when existing landfill reaches capacity, assuming decision made not to pursue new MSW landfill

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- C&D Disposal
  - most urgent facility issue (at capacity in 12-18 months)
  - 70% of C&D stream is recyclable
  - reduction targets assume 20%/58% reduction in C&D
  - without C&D management plan, targets likely not met
  - C&D less expensive to handle, "makes money" (\$400K-\$500K/year) to subsidize recycling/reduction programs
- *BOCC/Towns should proceed with siting new Orange County C&D landfill*

## Solid Waste Operations, Planning, and Financing

### Facilities, Services & Programs

- Materials Recovery Facility (MRF)
  - centerpiece to 1996 Weston report and 1997 Solid Waste Plan submitted to the State
  - essential to meeting 45%/61% reduction targets in 2001/2006
  - requires 10-15 acres for siting
- Greene Tract
  - BOCC views as last resort option for SW facilities
  - Towns oppose use for SW facilities
  - consider as "de facto" choice if decisions not reached in 12 months - entity with lead role would then make siting decisions or assume property as landfill asset

## Solid Waste Operations, Planning, and Financing

### Financing

- Implementation of Solid Waste Plan involves new facilities/programs with higher costs
- If tipping fees remain only major source of revenue, fee levels required to meet higher costs may be uncompetitive
- Private haulers (50% of revenue stream) may choose not to use Orange County landfills
  - higher tip fees for remaining users (including govts)
  - loss of ability to influence reduction for waste stream taken out of County - still counts against Orange County waste totals and makes reduction goals harder to meet

## Solid Waste Operations, Planning, and Financing

### Financing

- *County General Fund should not underwrite solid waste programs that cannot be met by tip fees/other revenues*
- *Interlocal agreement must allow lead entity unilaterally to raise fees by up to 10% annually*
- *If County assumes lead role, BOCC must have ability to review and approve 1999-2000 LOG budget to ensure County could meet responsibilities as of October 1, 1999*

## Solid Waste Operations, Planning, and Financing

### Financing

- LOG Financing Committee studying revenue options, including user, collection, and availability fees
- *If BOCC ultimately levies Countywide availability fee*
  - *Towns should adopt resolution endorsing financing mechanism*
  - *referred to as Chapel Hill-Carrboro-Orange County Solid Waste Availability Fee*

## Solid Waste Operations, Planning, and Financing

### Financing

- Specific mix/levels of fees to be determined after LOG Finance Committee completes work
- *BOCC should endorse conceptual revenue structure that*
  - *finances core operations (MRF, MSW and C&D Landfills) through tipping fees*
  - *finances collection/transportation activities through property taxes and collection charges*
  - *finances reduction/recycling through tipping fees to the extent practical, with the balance from availability fees*

## Solid Waste Operations, Planning, and Financing

### Financing

- Reserves
  - sufficient on-hand/planned to finance needed facilities
  - must maintain discipline to fund reserves as programmed
- Pay Per Throw for County Collection
  - creates additional revenue and incentives to reduce
  - consider after governance/siting decisions made
    - weight vs. volume
    - type of container
    - lessons learned and expected reduction rates
  - *If BOCC chooses pay-per-throw as a tool, undertake public information effort or explain rationale*

## Solid Waste Operations, Planning, and Financing

### Integrated Solid Waste Management Plan

- Progress towards implementation has been made through
  - public education (flyers, ads, Waste Manners)
  - differential landfill fees (yard waste, white goods, scrap metal)
  - non-economic incentives (voluntary waste audits, required SW plans for CH non-residential construction)
- If MRF not pursued, solid waste reduction goals must be downgraded accordingly

## Conclusion

- If all governments
  - reaffirm current goals or agree on revisions
  - agree on scope/financing of water line extensions to Eubanks Road landfill neighborhoods
  - agree on Orange County developing policies and the process for establishing policies on facility siting/development/financing/staffing
  - agree on MSW and C&D disposal options, MRF, and disposition of the Greene Tract (or to delegate to Orange County responsibility for those decisions)

## Conclusion

- If all governments
  - agree on financing through an enterprise fund, which may include new revenue mechanisms to meet solid waste reduction targets
  - reaffirm adopted waste reduction goals of 45% by 2001 and 61% by 2006, and commitment of resources beyond tipping fees to achieve those reductions
- Then on October 1, 1999, Orange County would assume full solid waste management responsibility and adopt financial plans for solid waste programs and services

-1

**ORANGE COUNTY  
BOARD OF COMMISSIONERS**

**ACTION AGENDA ITEM ABSTRACT**

**Meeting Date:** August 11, 1998

**Action Agenda**

**Item No.** 2

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**SUBJECT:** Solid Waste Report: Options for Solid Waste Operations, Planning and Financing

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**DEPARTMENT:** County Manager

**PUBLIC HEARING:** (Y/N)

**BUDGET AMENDMENT:** (Y/N)

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**ATTACHMENT(S):**

Yes

**INFORMATION CONTACT:**

John Link, County Manager  
Extension 2300

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**TELEPHONE NUMBERS:**

|                     |                 |
|---------------------|-----------------|
| <b>Hillsborough</b> | <b>732-8181</b> |
| <b>Chapel Hill</b>  | <b>968-4501</b> |
| <b>Durham</b>       | <b>688-7331</b> |
| <b>Mebane</b>       | <b>227-2031</b> |

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**PURPOSE:** To discuss options as presented in the attached report and develop County responses to the outstanding solid waste issues.

**BACKGROUND:** At the BOCC Work Session on June 15, 1998, you requested that staff prepare a report for presentation in August, 1998 that would address options for the operation, planning and financing of solid waste facilities and programs in Orange County. The information in this report is intended to assist the Board in developing the County's response on facilities and programs needed in Orange County for solid waste management, who should administer these facilities and programs and the best approach to finance their development and operation. **One item of requested information that is not included in the enclosed packet of attachments will be presented at the meeting on August 11. This item is a map that indicates possible routes and mileages in terms of locating certain solid waste facilities in the County's western (Buckhorn Rd./I-85) E.D.D. This map is intended as information for the transportation component of a County Comprehensive Solid Waste Plan. Another item of information that is forthcoming is a review of examples of materials recovery/resources recovery facilities that are comprehensive and include education components.**

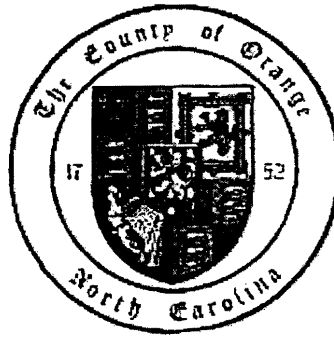
**RECOMMENDATION(S):** Receive report and develop County responses to the unresolved solid waste matters.

# SUMMARY OF ATTACHMENTS/REFERENCE DOCUMENTS

| NUMBER             | DATE     | DOCUMENT TITLE  |
|--------------------|----------|---|
| Solid Waste Report | 08/11/98 | Solid Waste Report: Options for Solid Waste Operations, Planning and Financing  |
| 1                  | 06/15/98 | Framework for a Comprehensive Plan for Solid Waste Management in Orange County  |
| 2                  | 10/19/97 | Goals for the Management of Solid Waste in Orange County  |
| 3                  | 08/06/98 | Calculation of Community Benefits for Landfill  |
| 4                  | 10/08/97 | Memo from Mike Brough to Carrboro Mayor and Board of Aldermen Re: Benefits to Neighbors of Existing Landfill  |
| 5                  | 10/16/97 | Letter from Geoffrey Gledhill to BOCC Re: Report of the Landfill Owners Group/Landfill Neighbors Working Group – Recommendations for Improvements around the Orange Regional Landfill |
| 6                  | 05/13/98 | Memo from Paul Thames to BOCC Re: Property parcel maps, small scale aerial photography parcel maps, parcel analysis chart and community waster service benefits cost chart            |
| 7                  | 10/7/97  | Interlocal Agreement, Eight Draft dated October 7, 1997   |
| 8                  | 06/15/98 | Interlocal Agreement - Summary of Points of Consensus   |
| 9                  | 08/04/98 | Interlocal Agreement: Points on Which Consensus Has Not Been Reached  |
| 10                 | 11/26/97 | Memo from John Link to BOCC Re: Conditions for County's Assumption of Lead role in Solid Waste Management   |
| 11                 | 04/14/98 | Employee Transition from Town of Chapel Hill to Orange County Employment  |
| 12                 | 11/20/97 | Orange County Integrated Solid Waste Management Plan – Current Recycling Programs versus Proposed Additions (Updated table presented at BOCC Work Session)                            |
| 13                 | 01/12/98 | Memo from John Link to County Landfill Owners Group Representatives Re: Development of Materials Recovery Facility  |
| 14                 | 11/13/97 | Memo from Gayle Wilson to John Link Re: Response to Question on development of transfer station and materials recovery facility   |
| 15                 | 01/12/98 | Memo from John Link to County Landfill Owners Group Representatives Re: Management of Construction and Demolition (C&D) Waste   |
| 16                 | 06/30/98 | Memo from Wilbert McAdoo to John Link Re: C&D Waste Management Practices – Summary Reports  |
| 17                 | 06/02/98 | Joyce Engineering Inc., Report – Life Cycle Cost Analyses, Proposed C&D Landfill Sites  |
| 18                 | 08/04/98 | Memo from Gene Bell to Rod Visser Re: Review Process for Solid Waste Facilities   |
| 19                 | 04/20/98 | Memo from Wilbert McAdoo to John Link Re: Solid Waste Issues Arising from BOCC Meeting of 04/14/98  |
| 20                 | 06/06/98 | HDR Engineering, Inc., Residential “Availability Fee” Options for Solid Waste Services  |
| 21                 | 06/04/98 | Memo from Gayle Wilson to LOG Re: Funding for C&D Landfill Site Acquisition   |

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# **BOARD OF COUNTY COMMISSIONERS**

## **SOLID WASTE REPORT: Options for Solid Waste Operations, Planning and Financing**

**August 11, 1998**

**REPORT TO:** Orange County Board of Commissioners  
**FROM:** John M. Link, Jr., County Manager   
**DATE:** August 11, 1998  
**RE:** Options for Solid Waste Operations, Planning, and Financing

At your work session on June 15, 1998, you requested that staff prepare a report for presentation in August 1998 that would address options for the operation, planning, and financing of solid waste facilities and programs in Orange County, both current and future. While these options are complex, I hope that the information in this report and cited reference documents will assist the Board in moving closer to agreement with our municipal partners as to: facilities and programs needed in Orange County for solid waste management; who should oversee and administer these facilities and programs; and the best approach to financing their development and operation.

## 1.0 INTRODUCTION

During the past year, the governing boards of Orange County and its municipalities have been involved in extensive discussion, research, and analysis regarding a number of critical solid waste matters, including:

- benefits to be provided to the community adjacent to the current landfill
- future governance of solid waste management
- future solid waste processes and facilities
- financing for future solid waste operations
- implementation of a Countywide, integrated solid waste management plan

**The Board will recall that at the June 15, 1998 Work Session, a Framework for a Comprehensive Plan for Solid Waste Management in Orange County was presented and adopted. As the Board considers elements of this report, they should refer back to this Framework, which has been included here as Attachment 1.<sup>1</sup>**

**This report is organized to address the issues cited above in one or more sections, as follows.**

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<sup>1</sup> Framework for a Comprehensive Plan for Solid Waste Management in Orange County, June 15, 1998.

## **Vision/Goals for Solid Waste Management (Section 2.0)**

This section recaps the solid waste management mission and goals adopted by the County and municipalities several years ago.

## **Community Benefits (Section 3.0)**

Resolution between the governing boards has been achieved for most community benefits proposed by the LOG/Neighborhood Working Group. Many proposals have been implemented or are in the process of being implemented. The most challenging issue remaining involves the scope and financing for provision of water lines to neighborhoods in the vicinity of the Eubanks Road landfill.

## **Governance/Management Issues (Section 4.0)**

Recent discussion has focused on the concepts of either Orange County or Chapel Hill assuming full responsibility for solid waste management and governance; or some hybrid of that approach, such as Chapel Hill continuing to operate the current landfill and the County planning for and operating all future facilities. **The outstanding solid waste issues - who makes policy and how; siting and development of facilities; and financing of facilities and operations; among others -must be resolved regardless of which government serves as lead agency for solid waste management.** LOG funded staff have been awaiting a determination of their future employer and employment status throughout governance discussions this past year. In the interests of reducing their uncertainty and understandable anxiety, resolution should also be reached soon about their potential transfer to County government.

## **Future Solid Waste Processes and Facilities (Section 5.0)**

Important decisions need to be made in the near term regarding siting one or more solid waste processing or disposal facilities. This report briefly reviews the primary issues related to: municipal solid waste (MSW) disposal options, either landfill and/or transfer station; construction and demolition (C&D) waste disposal options; and a Materials Recovery Facility (MRF). Consensus has been elusive regarding another issue directly related to siting of needed solid waste facilities - the disposition of the Greene Tract. This 169-acre property, jointly owned by Chapel Hill, Carrboro, and the County and originally purchased for future solid waste needs, has been the focal point of many competing proposals for its ultimate use. Agreement about its use soon, or an agreement to postpone such a decision to a specified point in the future, is essential to solving the challenges we face collectively on both governance and facility siting issues.

## **Financing for Future Solid Waste Facilities and Operations (Section 6.0)**

**It appears that waste reduction programs can no longer be financed through tipping fee revenue alone, if waste reduction targets are to be achieved. Additional revenue sources will be required to allow the implementation of the programs required attaining the**

**adopted waste reduction goals.** Options for supplementing tipping fee revenue are being examined by a LOG subcommittee this summer. This report summarizes the financial issues reviewed by that committee to date and briefly outlines the primary revenue mechanisms available. The potential role of "pay per throw" - as a mechanism for generating revenue for collection programs and for creating incentives for citizens to reduce the amount of solid waste they generate for disposal - is discussed briefly in this report.

### **Integrated Solid Waste Management Plan (Section 7.0)**

With aggressive reduction goals of 45% by 2001 and 61% by 2006 in place, and in the face of an approaching disposal challenge, it is essential that we undertake full implementation of the countywide solid waste plan. The framework for the plan was adopted by all four governments in 1997 and forms the basis for the local solid waste plan formally submitted to the State. It has been assumed that the four member governments remain committed to these goals and are willing to commit the necessary resources to their attainment. A Materials Recovery Facility (MRF) has been identified as the centerpiece of the waste reduction plan. Timely siting, design, and construction of this facility are essential if the 2001 reduction target is to remain realistic.

## **2.0 VISION/GOALS**

In December 1995, the Board of County Commissioners adopted a set of 14 solid waste goals. Its LOG partners subsequently adopted these goals.<sup>2</sup> The vision reflected in these goals included minimizing waste generation; conserving resources; maximizing recycling and reuse of materials; and disposing of the balance in an environmentally sound, socially responsible, and cost effective manner.

These goals remain viable, if the County and its municipal partners are willing to incur the financial impacts and implement the policies necessary to achieve our aggressive solid waste reduction targets. **I recommend that the Board review these goals and either affirm its commitment to them as written, or amend them as needed and communicate any changes to the municipal governing boards.**

## **3.0 COMMUNITY BENEFITS**

Most of the fourteen community benefits have been addressed and implemented. **The most significant community benefit requiring resolution remains the scope and method of paying for water line extensions to properties in the vicinity of the Eubanks Road landfill.** While some elected officials have indicated a desire for a broader scope, recent discussion has focused on pursuing extensions to the "traditional Rogers Road neighborhood". LOG member governments have appointed representatives to serve on a committee that will make recommendations regarding which properties water lines should be extended to, and how these extensions should be paid.

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<sup>2</sup> Goals for the Management of Solid Waste in Orange County, October 19, 1995.

The County Engineer and the Orange County Personnel Department are continuing the process of seeking an intern to conduct a field survey of the Rogers Road neighborhood. The purpose of the survey is to:

1. accurately locate or verify locations of existing structures and buildings on existing property parcel maps and aerial photography maps;
2. determine which structures have been, are or can be occupied and thus require water service; and
3. survey residents to determine the number and socio-economic status of occupants of each building as may be required to help determine the extent of an economic status related expenditure of public benefits for individual service fees and plumbing costs.

The intern will coordinate his or her activities with the County Engineer, the Housing and Community Development Director, neighborhood residents, and community activists. The field survey and data compilation process is estimated to take approximately five weeks, a period, which will commence upon the hiring of the intern. A second round of advertising for the intern position is currently underway.

The County has previously advanced various alternative formulas for sharing the costs of community benefits. The municipalities have made it clear that they believe the County should finance those community benefits, if any, which cannot be funded through LOG resources. I believe just as strongly that the Board of Commissioners should not be expected to underwrite the full cost of non-LOG funded benefits. The municipalities have raised concerns about what they perceive as the issue of double taxation. **I maintain that there are revenue sources, such as one-cent sales taxes (which are distributed back to the County and Towns on the basis of each's population), that could be employed using an agreed upon cost distribution formula, and would not constitute double taxation.** The attached spreadsheet provides an example of a cost allocation based on per capita formula (sales tax distribution).<sup>3</sup>

Perhaps the County and Towns will just have to agree to disagree over this point. If so, **I would suggest that we reexamine a broad interpretation of how benefits related to water line extensions could be funded through LOG resources.** Both Carrboro Town Attorney Mike Brough<sup>4</sup> and County Attorney Geof Gledhill<sup>5</sup> reviewed this approach in reports in October 1997. The former raised the "insurance theory" and the latter discussed funding benefits in light of the possibility that groundwater supplies to landfill neighbors could become contaminated at some point in the future. Preliminary estimates of the cost to provide water service to the 119 households in the historic Rogers Road neighborhood is \$840,500<sup>6</sup>. This amount can reasonably be borne through existing landfill reserves and/or an increase in planned allocations to those reserves in future years.

<sup>3</sup> Calculation of Community Benefits for Landfill, August 6, 1998.

<sup>4</sup> Memo from Michael Brough to Carrboro Mayor and Board of Aldermen Re: Benefits to Neighbors of Existing Landfill, October 8, 1997.

<sup>5</sup> Letter from Geoffrey Gledhill to BOCC, Re: Report of the Landfill Owners Group/Landfill Neighbors Working Group – Recommendations for Improvements around the Orange Regional Landfill, October 16, 1997.

<sup>6</sup> Memo – Paul Thames to BOCC, Property parcel maps, small scale aerial photography parcel maps, parcel analysis chart and community waster service benefits cost chart, May 13, 1998

## 4.0 GOVERNANCE/MANAGEMENT

### 4.1 Interlocal Agreement

The LOG retained Attorney Bob Jessup to assist in preparing a new interlocal agreement to serve as the basis for governance among the County and Towns of future solid waste management programs and facilities. Eight drafts were carefully prepared, reviewed, and revised over a period of many months. Momentum was lost when final agreement among the parties could not be reached at an Assembly of Governments meeting in October 1997. A copy of the most recent version of the Interlocal Agreement has been included here as Attachment 7 for reference.

However, after further reflection, I think one could conclude that there is far more agreement than disagreement regarding the entire draft interlocal agreement. A summary of points of agreement was most recently presented at the June 15, 1998 BOCC Solid Waste Work Session.<sup>7</sup> There are many strong features of this document and substantial compromise has been achieved to preserve the most important interests of all intended parties to the agreement. Therefore, I **strongly recommend that the Board of Commissioners resume discussions in the near future with its municipal partners to reach resolution on the governance question**, using the most recent draft of the document as the departure point for tackling "open matters" which include:

- selecting a new solid waste management disposal option (i.e., new landfill or transfer station prior to execution of the interlocal agreement)
- date for adoption of the interlocal agreement and Advisory Commission appointments
- use and disposition of the Green Tract
- employment resolution of solid waste system employees
- provision of community benefits to neighbors of the existing landfill and neighbors of the new solid waste management sites
- financing for the solid waste system

Attachment #9 of this report provides a more detailed enumeration of the elements of the proposed interlocal agreement about which consensus has not yet been reached.<sup>8</sup>

### 4.2 Principles Essential to County Governance of Solid Waste Management

In November 1997, the Board of Commissioners enumerated six principles or conditions under which the County Commissioners would be willing to take the lead responsibility for solid waste management in the County.<sup>9</sup> These conditions were:

1. Enterprise fund operation (i.e. revenues must meet or exceed expenditures).
2. The Greene Tract remains a landfill asset.
3. No restrictions on acquisition of additional acreage at the current landfill.

<sup>7</sup> Interlocal Agreement – Summary of Points of Consensus, BOCC Work Session, June 15, 1998, Attachment #4

<sup>8</sup> Interlocal Agreement: Points on Which Consensus Has Not Yet Been Reached.

<sup>9</sup> Memo from John Link to BOCC Re: Conditions for County's Assumption of Lead Role in Solid Waste Management, November 26, 1997.

4. Whoever is responsible for countywide solid waste system needs committed partners to make an enterprise operation economically viable.
5. All community benefits to be provided through the landfill enterprise.
6. Seek a solution in which reduction of solid waste and the economic viability of the solid waste facility are in concert – right now, when solid waste is reduced, the landfill suffers financially.

**I recommend that the Board review these principles at the August 11 work session and confirm or amend these to reflect the Board's current outlook.** This should prove helpful in narrowing the issues remaining to be resolved regarding future solid waste management and governance in Orange County. In reviewing these principles, several observations are worthy of note:

- In my view, principle #1 remains entirely valid, although the potential supplementing of tipping fees with one or more additional revenue sources reflects a shift in the nature of the enterprise fund used for solid waste management accounting to date.
- Principal #2 may present the stickiest point affecting resolution of governance decisions. The Town of Chapel Hill has suggested that a perspective be adopted that the Greene Tract be viewed as a *public* asset, rather than specifically as a *landfill* asset. **I recommend that the Board discuss this approach to determine if it helps move the process forward.**
- Principal #6 reflects a challenge that can be met, I believe, by employing additional revenue sources to reduce the reliance on tipping fees. Judicious application of certain mechanisms, such as pay-per-throw financing of some portion of collection activities, can provide the dual benefit of providing revenue and creating incentives for waste reduction. However, **I strongly recommend that there be a clear statement of purpose in the final interlocal agreement regarding the functions that tipping fees finance and functions that will be financed by other resources.**

#### 4.3 County vs. Town Governance

In addition to deliberations about possible unilateral administration by either Chapel Hill or the County, there has been discussion regarding the County assuming responsibility for planning and operating future solid waste facilities, and the Town of Chapel Hill assuming responsibility for operating the Eubanks Road landfill for the rest of its useful life. Should this approach be adopted, provisions would need to be made for landfill reserve funds to be employed by the County to pay for planning and implementation of future facilities and programs. **Should the County assume responsibility for planning and implementation of future facilities and programs, it is recommended that the earliest date for this to occur would be October 1, 1999, as numerous implementation details remain to be worked out in the areas of personnel, finance, purchasing, automation, and facilities, to name a few.**

The next subsections outline some of the pros, cons, and impacts of Orange County or Chapel Hill operating either current or future (or both) solid waste facilities. Many of the pros and cons are similar for either County or Town operations. Notable distinctions are highlighted in bold text.

#### 4.3.1 Pros, Cons, and Other Impacts of Orange County Operating the Eubanks Road Landfill and Assuming Responsibility for Planning and Operating Other Future Solid Waste Facilities

##### *Pros*

- **County Commissioners represent all County residents.**
- **County Commissioners elected by entire County electorate.**
- Budget adoption and approval by one entity.
- Single governmental unit owning and operating, may improve timeliness, and simplify solid waste management, administration, and operations decisions.
- Single government approval for major contracts, construction, and bid award.
- Fees set and adopted by one Government including tipping fees, penalty fees, and service fees.
- Vote decided by simple majority of the Board of County Commissioners.
- Equal vote for each County Commissioner.
- **County Commissioners have broader financing options available to them than the town governments (e.g. authority to levy availability fees countywide)**
- One government negotiates land purchases.
- One government conduct public hearings and provide zoning/land use regulatory approvals.
- County has greater legal debt capacity due to substantially higher tax base.

##### *Cons*

- **Orange County has less experience in managing major solid waste facilities (i.e. landfill)**
- Will require considerable coordination and cooperation with Town governments to meet waste reduction goals and recycling goals, if collection is still handled by the towns.
- **Will require a transition period of at least twelve months before transfer takes place.**
- **Will require some operational changes for integration with County policy procedures and practices.**
- Will place additional demands on County support services departments (i.e., Finance Purchasing and Central Services, Personnel, and Public Works).

##### *Other Impacts*

- Will require an indirect cost study to accurately determine appropriate administrative cost allocations (needed to justify to Towns the charges County would make against Landfill Fund for indirect costs).
- If County takes over completely, must consider how policy decisions will be made during the transition period to County operations - is the LOG dissolved immediately and BOCC take over?
- Will require agreement with member governments to ensure that they bring waste to Solid Waste Management facilities operated by the County.
- Orange County will assume more responsibility and liability for major solid waste management decisions.



- Will require that Towns relinquish control and decision making authority on major solid waste management issues, although municipal governing boards can influence those through the proposed advisory committee.
- Commitment and cooperation on the part of the Towns for financing for major solid waste initiatives will be required.
- Will require development of a finance plan for solid waste facilities that will require funding other than tipping fees.
- Will require development of contract / agreement with the University of North Carolina, UNC Hospital and commercial customers to gain commitments and plan for future solid waste facilities.
- Will require establishment of an Assistant to the County Manager to administer Solid Waste programs.
- May require outside consulting help until the County gains experience and knowledge in operating solid waste programs.

#### **4.3.2 Pros, Cons, and Other Impacts of Chapel Hill Operating the Eubanks Road Landfill and Assuming Responsibility for Planning and Operating Other Future Solid Waste Facilities**

##### *Pros*

- **Town of Chapel Hill has more experience in operating solid waste facilities.**
- Budget adoption and approval by one entity.
- Single government owning and operating, may improve timeliness, and simplify solid waste management, administration, and operations decisions.
- Single government approval for major contracts, construction and bid award.
- One government will set tipping fees, penalty fees, service fees, etc.
- Vote decided by simple majority of Chapel Hill Town Council.
- One government negotiates land purchase.
- One government conduct public hearings and provide zoning – land use regulatory approvals

##### *Cons*

- Officials elected by limited segment of county making decisions that affect all county residents.
- Town has lower debt capacity.
- Town has less financing options available for financing of solid waste programs.

##### *Other Impacts*

- Will require that County relinquish control and decision making authority on major solid waste management issues, although BOCC can influence those through the proposed advisory committee.
- If Town takes over completely must consider how soon policy decisions will be made solely by Town Council - does LOG go away immediately?

### **4.3.3 Primary Considerations to be Addressed if Orange County Assumes Responsibility for Management of Solid Waste Operations.**

Town of Chapel Hill and County staff have previously dedicated a significant amount of time and effort to the development of a transition plan to facilitate the potential transfer of responsibility from Chapel Hill to the County. Preparatory work has addressed issues such as automation, employee compensation, position descriptions, financial system/general ledger, assets, operations, legal, insurance, liability issues, organization, and regulatory requirements. Progress on this transition plan stopped after the October 1997 Assembly of Governments meeting until decisions could be reached. Much work and many implementation details remain to be worked out, however. Staff from both jurisdictions refrained from prematurely assuming that the governing boards would ultimately approve such a transition. Personnel related issues are the most complex and sensitive, and will require considerable time and care to effectively communicate policies, procedures, and other transition impacts to each affected employee. Attachment #8 outlines personnel work accomplished thus far and remaining to be completed prior to a turnover of management responsibility<sup>10</sup> The major staffing considerations related to a potential assumption of overall solid waste management responsibility by Orange County are presented below:

- The Town of Chapel Hill Solid Waste Department would be transferred in its entirety and become a new County department.
- The Solid Waste Management Director would become a County department head, reporting directly to the County Manager. This position, paid by the Landfill Fund, would have a working title of Assistant to the Manager for Solid Waste.
- Upon the Solid Waste Department becoming an Orange County organization, each of the current employees, both permanent and temporary, would become an Orange County employee. At the time of this transition, the functions of the Solid Waste Department would continue as presently structured and the employees' duties and responsibilities would continue as presently assigned.
- To support the transition, employee pay and benefits would be handled in such ways as to provide a substantially equivalent total compensation package for the employees transferring from the Town of Chapel Hill to Orange County.
- Upon the transition and with the pay and benefits handling approved to provide a substantially equivalent compensation package, the employees would become Orange County employees and be covered by the County's personnel policies and benefits.
- If the County Solid Waste functions should change in the future such as through implementation of a transfer station or materials recovery facility, the County would handle any need for fewer staff or different staff through attrition or reassignment of existing staff rather than through layoff.

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<sup>10</sup> Employee Transition from Town of Chapel Hill to Orange County Employment, April 14, 1998.

## 5.0 SOLID WASTE MANAGEMENT FACILITIES AND SERVICES/ PROGRAMS

Appropriate solid waste management facilities are, and will continue to be, required for the management of some or all of the approximately 140,000 tons of solid waste generated within Orange County, regardless of decisions related to governance issues. At a minimum, this would include facilities to manage the quantity of municipal solid waste (MSW), construction and demolition (C&D) waste and recyclable material that is collected by, and therefore within the control of, the LOG member governments. It may also include facilities with adequate capacity to manage some or all of the MSW and C&D waste that is collected and disposed by private waste management companies. Figures 1 and 2 present a summary of the estimated quantity, source and disposition of solid waste generated in Orange County during the 1997/98 fiscal year.

### 5.1 Existing System

The existing waste management system includes the system components summarized below.

#### 5.1.1 Waste Reduction

LOG member governments currently reduce the quantity of waste sent to disposal through the following programs:

- drop-off centers, urban and rural curbside, multi-family and commercial recycling programs for container materials and fibers;
- construction and demolition waste recycling program (salvaged materials sales and pallet recovery);
- household hazardous waste and paint exchange programs;
- other recycling programs (i.e., automotive battery recycling, tire recycling, scrap metal recycling, etc.);
- a yard waste mulching program.

Quantity and cost information for each of these programs was initially presented by Weston, Inc., updated for the BOCC Solid Waste Management Work Session, November 20, 1997, and included here as Attachment #9<sup>11</sup>. The estimated reduction in waste sent to disposal during the 1997/98 fiscal year was approximately 40,000 tons, or 28% of the total waste generated within Orange County.

#### 5.1.2 Waste Collection

Each member government in Orange County is responsible for collecting MSW within their jurisdiction. Other MSW collection (i.e., from larger industrial, commercial and institutional (IC&I) locations) is provided by private waste management service companies (i.e., BFI, Waste Industries, etc.).

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<sup>11</sup> Orange County Integrated Solid Waste Management Plan – Current Recycling Programs versus Proposed Additions, updated Table presented as Attachment 2-A, Board of County Commissioners Work Session agenda package, November 20, 1997.

Collection services for residential and some light commercial recyclable materials are provided under private contracts administered by Orange Community Recycling, or in-house by Orange Community Recycling employees. Collection and processing for most commercial locations are provided by private sector waste management service companies.

### 5.1.3 Waste Disposal – MSW and C&D

During the 1997/98 fiscal year, approximately 99,000 tons of waste was disposed at landfill in Orange County. This included approximately 68,000 tons of MSW and 31,000 tons of C&D waste. MSW is currently disposed at the Orange Regional Landfill, a lined MSW landfill site. C&D waste is currently disposed at an unlined portion of the Orange Regional Landfill. Approximately 1,000 tons of MSW and C&D wastes were disposed at out-of-County landfill sites.

## 5.2 Required Facilities for Future Waste Management

New and/or additional facilities will be required in the future to manage recyclable materials as well as waste requiring disposal:

- it is projected that the existing C&D landfill site will reach capacity within 12 to 18 months;
- it is projected that the existing MSW landfill site will reach capacity within 5 to 10 years;
- previous reports have specifically identified the need for a materials recovery facility (MRF) to process and prepare commingled recyclable materials, if the adopted waste reduction goals are to be met (45% by 2001 and 61% by 2006. Table 1 presents proposed recycling program additions, including estimated cost and diversion for each.

The Board of Commissioners has specified it would not employ the power of eminent domain for any new MSW landfill. **I recommend that the Board discuss and determine to what extent, if any, that proscription applies to siting of other solid waste facilities.**

### 5.2.1 Waste Reduction

In order to achieve the waste reduction goals as identified, both the amount and type of recycled materials must be increased. This could be achieved by:

- **Increasing the service level** to provide curbside collection to additional households in the unincorporated areas of the County;
- **Providing recycling service to new locations** not currently being served (i.e. additional multi-family and commercial locations);
- **Increasing the type of materials collected** at some or all locations (i.e. mixed paper). As this would include some materials that are not currently being managed by private sector service companies in this area, it will be necessary to develop and operate a MRF to facilitate processing and marketing. The need for a MRF has previously been identified in the Integrated Solid Waste Management Study; the Integrated Solid Waste Management Plan previously adopted by all participating governments, and various staff reports and memos. A

previous memo summarized factors related to the development and implementation of a MRF, including a projected schedule for development and construction.<sup>12</sup>

Based on previous reports, it is assumed that a property of approximately 10 to 15 acres would be required for the development and operation of a MRF.<sup>13</sup> Considerations for co-siting with a transfer station are examined below.

It should also be noted that various policy initiatives and other support programs might be required to ensure adequate participation in waste reduction programs to achieve desired reduction rates. The previously adopted waste reduction framework for MSW identified the following items for implementation:

- **public education** for all waste generators in order to reduce the amount of waste being produced, and to encourage greater participation in recycling programs;
- **differential landfill fees** to encourage the separation of recyclable materials (i.e., lower tipping fees are currently charged for yard waste that can be ground for mulch, waiving of tipping fees for scrap metals that can be recycled, etc.);
- **non-economic incentives** such as a requirement for solid waste plans for new, non-residential construction, waste audits, recognition programs for businesses that achieve high waste reduction or recycling rates, etc.;
- **mandatory recycling and/or disposal bans** in order to ensure that most or all recyclable materials are diverted from the waste stream;
- **volume based fees/pay-as-you-throw programs** that charge waste generators for collection and disposal based on the quantity (either by volume or weight) of waste disposed. In addition to providing revenues to pay for collection and/or disposal of waste, these programs typically result in increased waste reduction and recycling.

## 5.2.2 Waste Collection

As previously agreed by member governments, collection of MSW would continue to be managed by local governments.

## 5.2.3 Waste Disposal - MSW

**Discussions in recent years about implementation of an integrated solid waste management plan, while never formally resolved with regard to the disposal component had clearly been predicated on the assumption that a new MSW landfill would be sited and permitted in Orange County. That premise was severely challenged in Fall 1997 when it was learned that action taken by Duke University had effectively forestalled the development of Site OC-17, the preferred landfill site identified by the Landfill Search Committee.**

<sup>12</sup> Memo from John Link to BOCC Re: Development of Materials Recovery Facility, January 12, 1998.

<sup>13</sup> Memo from Gayle Wilson to John Link Re: Response to Question on development of transfer station and materials recovery facility, November 13, 1997.

Those circumstances have profoundly changed the environment for future solid waste governance and operations. Neither the County nor the Towns have indicated any intent to undertake the steps necessary to continue the landfill search process begun in 1990, or to begin anew. I recommend that the Board of Commissioners formalize the decision not to seek a new site for a MSW landfill, and encourage the Towns to do likewise. That step will remove any lingering uncertainty among Orange County citizens regarding the other 15 sites considered during the landfill search process, and allow LOG members to focus their full attention on other solid waste processes and facilities.

Even if the local governments decide formally not to pursue another MSW landfill, every effort should be made to extend the useful life of the Eubanks Road landfill. Through skillful planning and administration and the effective implementation of waste reduction and recycling measures, the life of that landfill has already been extended from its originally expected closing date of 1997 to 2006. Aggressive implementation of the Integrated Solid Waste Management Plan is our best hope for achieving further longevity at the Eubanks Road facility.

Assuming a new in-County landfill is not developed, a transfer station will be required to consolidate waste for shipment to an out-of-County site once the existing landfill reaches capacity. The cost to construct a transfer station has previously been estimated at \$1.8 million, plus \$300,000 for equipment. While it is difficult to predict future hauling costs and tipping fees at an out-of-County landfill with a great degree of accuracy, current costs are estimated to be in the range of \$17.50 per ton for shipping and \$24.00 to \$30.00 per ton for disposal at an out-of-County landfill.

As with other solid waste management facilities, a site for a transfer station will need to be identified. Based on previous reports, it is assumed that a property of approximately 10 to 15 acres would be required for the development and operation of a transfer station.<sup>14</sup> Although not a necessity, it may make sense to site both the MRF and transfer station together in order to share access roads, weigh scales, etc. The area required to site these facilities together would not be double the area required for one, but would likely be in the range of 15 to 20 acres.

#### **5.2.4 Waste Disposal – C&D**

The need for a new management option for C&D waste is currently the most urgent. C&D waste makes up approximately one-third of the total waste stream. As much as 70% of this waste is recyclable as wood products, scrap metal, construction rock and dirt products. As part of the adopted waste reduction goals, C&D waste is slated to be reduced by 20%, as part of the overall 45% reduction goal for 2001 and 58% as part of the 61% goal by 2006. If a C&D waste management plan is not developed, it is unlikely that we can meet our waste reduction goals. While the current C&D salvage program and the requirement for solid waste plans for non-residential construction (Town of Chapel Hill) contribute to waste reduction goals, it is likely

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<sup>14</sup> Memo from Gayle Wilson to John Link Re: Response to Question on development of transfer station and materials recovery facility. November 13, 1997.

that some type of sorting or processing facility will be required in future to achieve the overall waste reduction goals.

Although future disposal for C&D waste may be left to the private sector, it should be noted that the excess revenue that is currently generated by C&D disposal would go to the private sector, and would no longer be available to fund other waste reduction activities in Orange County. C&D waste, disposal of which is charged at \$38/ton against an estimated handling cost of less than \$22 per ton, provides a substantial subsidy of approximately \$400,000 - \$500,000 per year that is currently used to fund waste reduction and recycling programs, which themselves produce very little program revenue.

Discussions and considerations related to future management options have been on going. A previous memo summarizes five main options for future management of construction and demolition waste materials.<sup>15</sup> That memo did not address the option of developing a new C&D landfill site at a new location. A June 1998 summary report presented details regarding C&D waste management practices in several neighboring communities, and has been included here for reference.<sup>16</sup>

A recent report from Joyce Engineering, Inc., presented life cycle cost analyses for three proposed C&D landfill sites in Orange County.<sup>17</sup> While none of these sites may ultimately be selected for use as a C&D landfill, the report does provide 'order of magnitude' life cycle costs (\$19 to \$22/ton) that would likely be representative of costs that would be incurred at other potential locations in Orange County.

**Given that the existing C&D landfill will reach capacity within 12 to 18 months, and the financial considerations addressed above, it is recommended that the BOCC and other governments proceed with siting a new in-County C&D landfill.**

### **5.3 Materials Recovery Facility**

In order to achieve the waste diversion goals that have previously been identified (45% by 2001 and 61% by 2006); the capture rate for available recyclable containers and fibers must be increased. This could be achieved by broadening the source of recyclable materials to include additional households (rural, multi-family) and/or commercial locations and deepening recovery from these locations (i.e., through recovery of additional materials, and/or increased capture of target materials). As this would include some materials that are not currently being managed by private sector service companies, it will be necessary to develop and operate a materials recovery facility (MRF) to facilitate processing and marketing. The need for a MRF was identified in a May 1996 report from Weston (Final Report, Integrated Solid Waste Management Study) and the Integrated Solid Waste Management Plan previously adopted by all participating governments.

<sup>15</sup> Memo from John Link to BOCC Re: Management of Construction and Demolition (C&D) Waste, January 12, 1998.

<sup>16</sup> Memo from Wilbert McAdoo to John Link, Re: C&D Waste Management Practices - Summary Reports, June 30, 1998.

<sup>17</sup> Joyce Engineering, Inc., Life Cycle cost Analyses, Proposed C&D Landfill Sites, June 2, 1998.

A previous memo summarized factors related to the development and implementation of a MRF, including a projected schedule for development and construction.<sup>18</sup>

Based on previous reports, it is assumed that a property of approximately 10 to 15 acres would be required for the development and operation of a MRF.

In order to ensure that waste reduction goals can be attained, the BOCC and member governments should proceed with siting and development of a MRF in keeping with previously identified timelines.

#### **5.4 Disposition of the Greene Tract**

The Board has indicated in the past that one of the principles involved with possible County assumption of solid waste management responsibility is that the Greene Tract must remain a landfill asset. The BOCC has also indicated that it believes the Greene Tract should not yet be ruled out as the site of one or more future solid waste facilities, and should be preserved as a last resort option. Other governing boards have indicated they are opposed to using the Greene Tract for any solid waste facility with the view that the land is too valuable and would be better put to other public uses. Perhaps a "sword of Damocles" approach may be helpful in moving the process forward at this point. If needed solid waste facilities have not been sited within 12 months, then the Greene Tract would become the de facto choice. If decisions had not been made by all the governing boards at that point, then the entity designated to assume overall solid waste management authority would make the final siting decisions, or assume control of the Greene Tract as a landfill asset.

#### **5.5 Review Process for Siting New Solid Waste Facilities**

Attachment 18 of this report addresses the required steps for the siting of various solid waste facilities within Orange County's jurisdiction.<sup>19</sup>

### **6.0 FINANCING**

Implementation of the Integrated Solid Waste Management Plan adopted by the County and its municipal partners in 1997 will involve new facilities and programs, and substantially higher annual operating and maintenance costs than at present. Currently, virtually all LOG programs, including recycling and reduction efforts, are underwritten by landfill tipping fees. A significant concern for LOG members is that if tipping fees remain essentially the only revenue source for solid waste operations, fee levels required would become uncompetitive with disposal facilities elsewhere in the region. If landfill users find that they can dispose of some of their waste less expensively elsewhere, it will intensify upward pressure on tipping fees (and/or other revenue mechanisms) to cover lost revenue and to pay operational costs which will be only marginally lower with a reduced waste stream.

<sup>18</sup> Memo from John Link to BOCC Re: Development of Materials Recovery Facility, January 12, 1998.

<sup>19</sup> Memo from Gene Bell to Rod Visser Re: Review Process for Solid Waste Facilities, August 4, 1998.



The LOG has appointed a subcommittee to examine options for generating additional revenue for solid waste operations. While specific conclusions and recommendations must await the completion of the Solid Waste Financing Committee's work in the next several months, preliminary data compiled by the committee's consulting firm HDR Engineering, Inc. are enlightening. LOG solid waste programs are primarily oriented towards residential collection and disposal, but more than 50% of program revenue comes from private haulers of commercial waste. An April 1998 summary report presented information regarding alternative funding sources for waste management services in several neighboring communities, and has been included here for reference.<sup>20</sup>

Private waste haulers are presently under no compulsion to dispose of waste at the Orange Regional Landfill. HDR advises that as tipping fees in Orange County continue to increase, private haulers may make economic decisions to transport waste they collect to other landfills with lower tipping fees.<sup>21</sup> With relatively fixed costs for many aspects of LOG programs, higher fees would need to be charged against the smaller waste stream left behind in order to generate the same operational revenue. There are a number of adverse consequences resulting from this, such as higher tip fees for remaining customers, including the local governments; and loss of any ability to influence reduction efforts in the waste stream taken to out of County landfills. Orange County incentives/disincentives to reduce waste are meaningless to haulers taking waste out of county, and their waste still counts against Orange County in the calculations of per capita waste reduction. Reduction efforts directed against the remaining waste stream would have to be that much more intense if the County is to reach its stated reduction goals of 45% by 2001 and 61% by 2006.

## 6.1 Revenue Mechanisms

While the precise level at which tipping fees would become uncompetitive regionally is arguable, it is clear that additional revenue source(s) need to be employed to minimize future tipping fee increases. **I recommend that the Board of Commissioners maintain its previously established stance that Orange County General Fund revenue will not be used to underwrite current LOG programs and activities that cannot be covered in the future by tipping fees or other revenues described below. It would be critical for the BOCC to retain in the Interlocal Agreement the provision that allows the BOCC to increase the mixed solid waste tipping fee up to 10% per year, without the prior consent of the other governments. It would also be important for the County to assure that resources have been appropriately budgeted, if and when the County assumes responsibility. For instance, assuming that Orange County assumes full responsibility for solid waste management and governance on October 1, 1999, we urge the BOCC to have the right to review and approve the final budget for FY 1999/2000 as adopted by the LOG to ensure the County has the resources required to carry out its responsibilities.**

<sup>20</sup> Memo from Wilbert McAdoo to John Link Re: Solid Waste Issues Arising from BOCC Meeting of 04/14/98.

<sup>21</sup> HDR Engineering, Inc., Residential "Availability Fee" Options for Solid Waste Services, July 6, 1998

There are three primary mechanisms for generating solid waste program revenue currently under review by the Solid Waste Financing Committee:

**6.1.1 User Fees:** Fees that are directly charged by local governments to the users of solid waste management services. Tipping fees charged to haulers for disposing of waste at the landfill are a prime example.

**6.1.2 Collection Fees:** Boards of County Commissioners are authorized in the North Carolina General Statutes to impose a fee for solid waste collection that may not exceed the cost of collection.

**6.1.3 Availability Fees:** Charged to persons/entities who have an opportunity to benefit from a solid waste management facility. The state statute has been broadly construed by a number of local governments to permit the application of availability fees to address the costs of recycling programs.

It seems logical to consider implementing availability fees on a countywide basis, as all citizens benefit from collaborative recycling and reduction efforts. The Board of Commissioners is the only body empowered to levy such fees countywide. **I recommend that if the Board ultimately pursues this course of action, that the Towns demonstrate their agreement through adopting resolutions specifically endorsing the levying of this fee, thereby reflecting the broad support of all jurisdictions for this particular funding mechanism. This fee should be known as the "Chapel Hill - Carrboro - Orange County Solid Waste Availability Fee".**

The specific mix and levels of fees to be implemented should be determined after the Financing Committee completes its work. However, **I recommend the Board consider endorsing a conceptual revenue structure that would include:**

- Financing for core operations (such as a MRF, and MSW and C&D landfilling), and the solid waste positions that support these operations, through tipping fees.
- Financing solid waste collection/transportation activities and positions through a combination of property taxes and collection charges, such as pay-per-throw (for County at large operations only).
- Financing reduction/recycling efforts and required staff through tipping fees to the extent practical, and finance the balance with availability fees. The nature and scope of reduction/recycling efforts would be examined biannually, and approved with clear performance standards and expectations as to the desired levels of service as it relates to the availability fee.

## **6.2 Financing of New Facilities and Services**

LOG staff have indicated throughout development of the 1998-99 Landfill Fund budget that adequate reserves are on hand or programmed for the acquisition of sites and for construction and

development of needed facilities including a C&D landfill, MRF, and transfer station.<sup>22</sup> We would note that LOG finances will grow increasingly tight as the amount of solid waste processed decreases and tipping fees (and other potential revenue mechanisms) increase. Without this self-discipline the responsible government could find itself without the revenues required to ensure that planned annual reserves are indeed set aside. The temptation to reduce the contributions to the reserves in order to minimize required annual increases in tipping fees must be resisted.

### 6.3 Pay-Per -Throw

This report examines pay-as-you-throw in the context of County operations due to the individual responsibility of each government for waste collection.

As discussed above, pay-per-throw offers at least two significant benefits. First, it provides an additional revenue source that can offset overreliance on tipping fees. Second, by charging users based on the amount of waste they dispose, it creates incentives for users to reduce the amount of waste they present for collection and disposal. There are drawbacks to its implementation, however, including its unfamiliarity and the likely perception that it is "just another tax". **Should the Board ultimately elect to use pay-per-throw as a solid waste management tool, I recommend that the County undertake an extensive, proactive public information effort to explain the rationale for its implementation.** Input from citizens at public meetings held in the County several years ago indicated that citizens in unincorporated Orange County were relatively satisfied with the level of service provided at the County's solid waste convenience centers. They also indicated their general preference that solid waste collection be funded through general property tax revenue. If we do implement a pay-per-throw approach, I suggest we consider a phased-in approach where some of the cost of collection initially is borne by the General Fund. Over time, the fees for waste disposal could increase to a greater percentage of the cost of collection.

Decisions on pay-per-throw can be considered further down the road, after the current pressing decisions about governance and solid waste facility siting have been resolved. However, some of the implementation issues the Board will need to consider in addition to those outlined above will include:

- weight (scales) vs. volume (bag or can) based
- type of containers to be used (cans vs. clear bags vs. any bags)
- lessons learned from case studies of successes and challenges experienced in implementation of pay-per throw systems elsewhere (North Carolina and nationally)
- what kind of reduction rates can be expected for different levels of fees
- what problems are likely if County uses pay-per-throw but municipalities don't?

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<sup>22</sup> Memo from Gayle Wilson to LOG Re: Funding for C&D Landfill Site Acquisition, June 4, 1998, Revised June 15, 1998

## 7.0 SOLID WASTE PLAN IMPLEMENTATION

### INTEGRATED SOLID WASTE MANAGEMENT PLAN

In order to meet the 45% (by 2001) and 61% (by 2006) reduction goals that were previously adopted by all governments, it is necessary to begin implementation of the integrated solid waste management plan. It has been assumed that the four member governments remain committed to these goals and are willing to commit the necessary resources to their attainment.

The Materials Recovery Facility (MRF) has previously been identified as the foundation of the waste reduction plan. **Should member governments choose to not pursue the development of a MRF, the waste reduction goals and the Integrated Solid Waste Management Plan would need to be revised downward.**

It is also important to note that the integrated plan is intended to address all waste management system elements, not simply waste reduction. The goal of a truly integrated solid waste system should be to ensure that all system components are consistent with, and work to reinforce and support all other system components.

The framework for waste reduction previously adopted by all governments, identified the following items for implementation:

- **public education** for all waste generators in order to reduce the amount of waste being produced, and to encourage greater participation in recycling programs;
- **differential landfill fees** to encourage the separation of recyclable materials (i.e., lower tipping fees are currently charged for yard waste that can be ground for mulch, waiving of tipping fees for scrap metals that can be recycled, etc.)
- **non-economic incentives** such as a requirement for solid waste plans for new, non-residential construction, waste audits, recognition programs for businesses that achieve high waste reduction or recycling rates, etc.;
- **mandatory recycling and/or disposal bans** in order to ensure that most or all recyclable materials are diverted from the waste stream;
- **volume based fees/pay-as-you-throw programs** that charge waste generators for collection and disposal based on the quantity (either by volume or weight) of waste disposed. In addition to providing revenues to pay for collection and/or disposal of waste, these programs typically result in increased waste reduction and recycling. At this point in time, it remains unclear what level of commitment exists among member governments to implement volume based or pay-as-you-throw programs.

### 7.1 Steps to Implementation

The Integrated Solid Waste Management Study identified three suggested steps for development of an implementation plan.<sup>23</sup> The three steps identified were:

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<sup>23</sup> Roy F. Weston, Inc., Integrated Solid Waste Management Study, Final Report, Revised Draft, May 1996.

- Determine the administrative method for the overall system and system components. This step is considered essential because the administrative method will often impact the capital financing and annual funding methods.
- Determine the capital financing and annual funding methods to be used for the overall system and system components.
- Prioritize system elements. Setting priorities will be dependent, in part, on which components are required to be in place to make another element work. Additionally, setting priorities will depend on preference factors, including:
  - Timing for achievement of certain diversion levels;
  - Spreading of potential cost impacts; and
  - Linking cost and diversion benefits.

More recently, a proposed timetable for implementation of the Countywide solid waste reduction plan was presented to the LOG.<sup>24</sup> The timetable included a timeline for development of a materials recovery facility, which is considered to be the cornerstone of the larger waste reduction plan.

## 7.2 Progress Toward Implementation

Some progress has been made in implementing several components of the waste reduction framework, including:

- **Public education programs** are on going through the “Waste Matters” newsletter, newspaper advertisements, flyers,, etc.
- **Differential landfill fees** have been implemented for several materials, including:
  - Yard materials;
  - Scrap metals;
  - White goods (appliances);
- **Non-economic incentives** have been initiated (i.e., requirement for solid waste plans for new non-residential construction projects in the Town of Chapel Hill).

## 7.3 Next Steps

As has been noted previously in this report, the development and implementation of a MRF has been identified as a key component of the overall waste management plan. A request for qualifications (RFQ) was issued in May 1998 to secure the services of a consulting team to advise and assist staff from the Town of Chapel Hill in selecting a private sector partner for the development, construction and/or on-going operation of a comingled MRF. Interviews for the selection of a consulting team have been completed, and final negotiations are planned with a consulting firm.

Estimated timelines for the development and construction of a MRF were reviewed in Section 5 of this report. Other factors, such as financing and policy initiatives required to support the

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<sup>24</sup> Memo from Gayle Wilson to LOG, Re: Timeline for Implementation of Solid Waste Reduction Plan, May 12, 1998.

operation of the MRF should be implemented as appropriate to ensure waste reduction targets can be achieved (i.e., mandatory recycling and/or landfill bans for recyclable materials).

Other components of the integrated plan will also need to be coordinated to optimize efficiency in the overall system (i.e., collection demands for recyclable materials will increase following the opening of the MRF, while collection demands for mixed waste can be expected to decrease).

## **8.0 CONCLUSION**

Numerous important solid waste management decisions face the Board of County Commissioners and the municipal governing boards. Some decisions will be unpopular, at least until the public grows accustomed to new programs, processes, and financing mechanisms. Most decisions will require a concerted and straightforward public information effort that explains to citizens the rationale for the difficult choices made and the sacrifices needed to achieve the aggressive waste reduction goals established in Orange County. No single government acting alone can provide the best and most cost effective approach to solid waste management in its jurisdiction.

In an effort to provide the Board of County Commissioners with a framework by which to pursue these solid waste discussions, I offer the following structure for the Board to consider and modify as they see fit:

### **2.0 Vision/Goals for Solid Waste Management**

**If all governments reaffirm their commitment to the goals as written, or amend them as required and adopt the agreed upon goals;**

### **3.0 Community Benefits**

**If all governments reach agreement on the scope and method of financing for provision of water lines to neighborhoods in the vicinity of the Eubanks Road landfill;**

### **4.0 Governance/Management Issues**

**If all governments reach agreement on Orange County developing policies, and the policy development process, for, among others, planning, siting and development of facilities, financing of facilities and operations, and transfer of staff (as referenced on page 9 of this report) and through agreement on the Interlocal Agreement;**

### **5.0 Future Solid Waste Processes and Facilities**

**If all governments reach agreement concerning the siting of an MSW disposal option (i.e., transfer station), C&D waste disposal option and a materials recovery facility, and the purpose and/or disposition of the Green Tract, or agreement to delegate these responsibilities to Orange County as part of future solid waste management responsibilities;**

#### **6.0 Financing for Future Solid Waste Facilities and Operations**

If agreement can be reached by governments concerning financing through an enterprise fund for future solid waste programs, or through identification of additional revenue sources that will be necessary to allow implementation of the programs required to attain the adopted waste reduction goals, to the extent that these cannot be funded through tipping fee revenues;

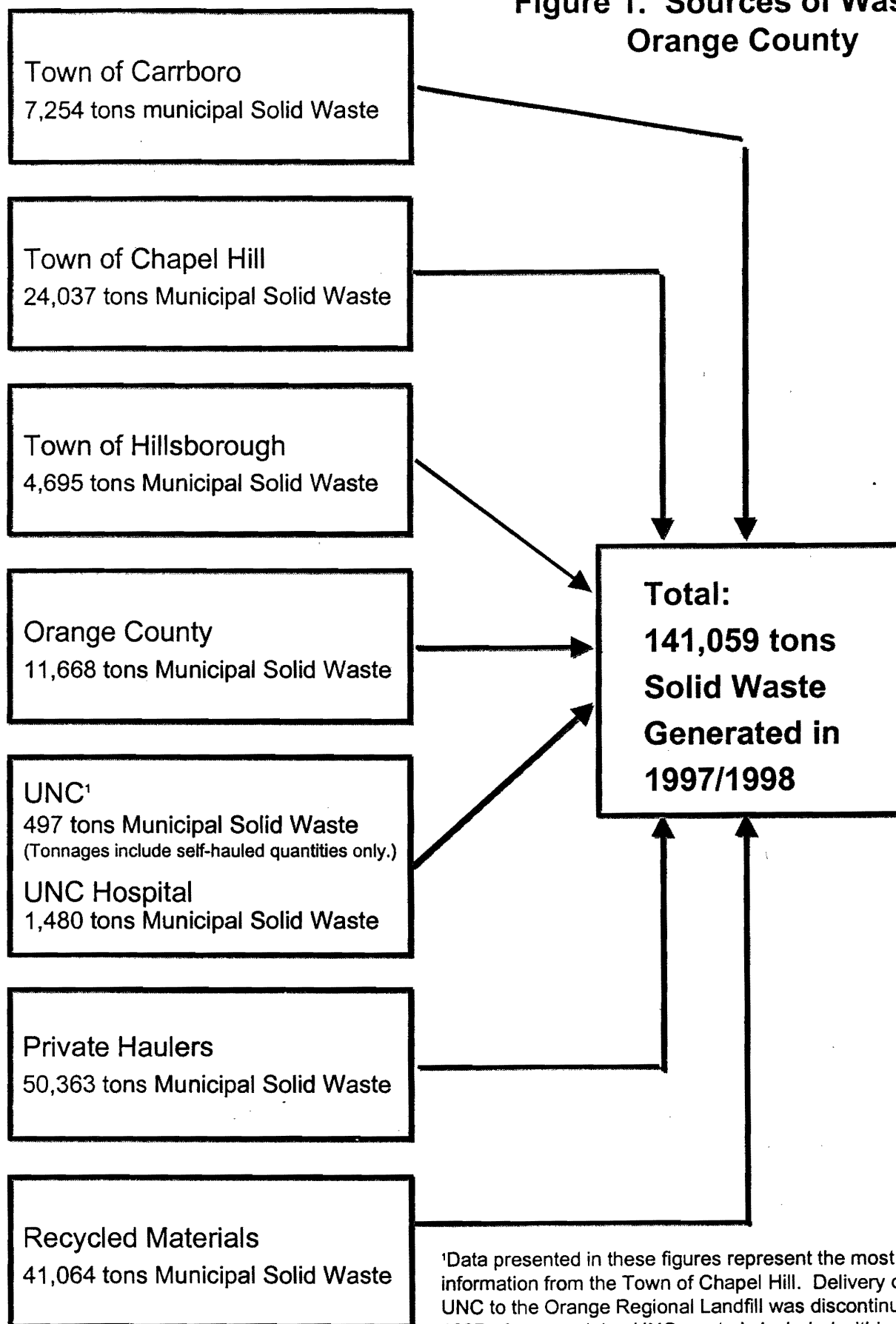
#### **7.0 Integrated Solid Waste Management Plan**

If all governments reaffirm the adopted waste reduction goals of 45% by 2001 and 61% by 2006, including committing the necessary resources above and beyond tipping fees to their attainment and reach agreement on all elements of the Integrated Solid Waste Management Plan;

Then, on October 1, 1999, Orange County would assume full responsibility for solid waste management and governance and adopt a financial plan for solid waste programs and services.

The staff and I welcome the opportunity to discuss this report and these recommendations with the Board, as we attempt to achieve closure on major solid waste decisions in Orange County.

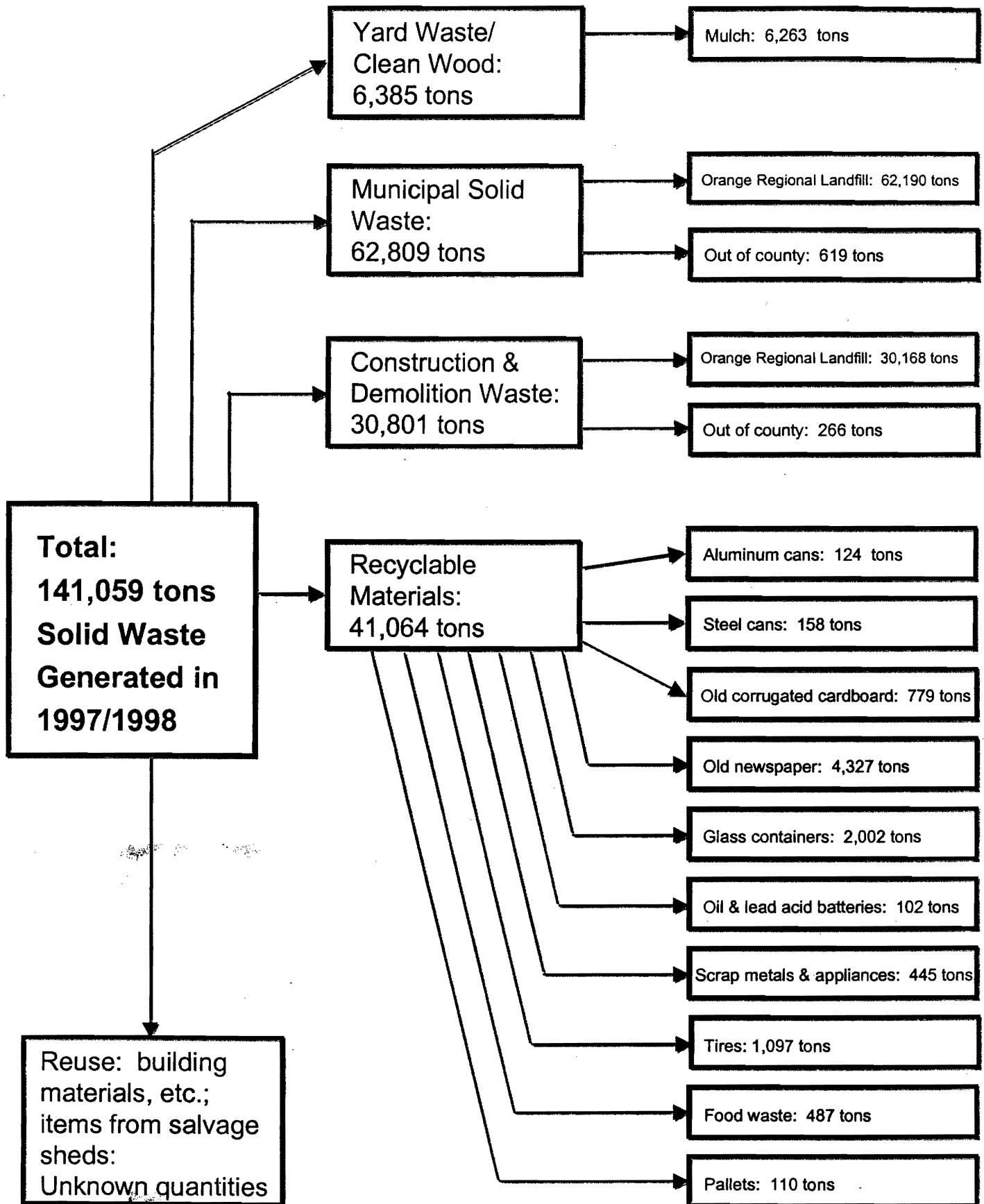
**Figure 1. Sources of Waste in Orange County**



<sup>1</sup>Data presented in these figures represent the most recent information from the Town of Chapel Hill. Delivery of coal ash from UNC to the Orange Regional Landfill was discontinued January 1, 1997. Any remaining UNC waste is included within the private haulers' totals.



**Figure 2. Waste Recycling and Disposal in Orange County**



# **ATTACHMENT 1**

**Framework for a Comprehensive Plan for Solid Waste Management in Orange County**

**FRAMEWORK FOR A COMPREHENSIVE PLAN**  
**FOR**  
**SOLID WASTE MANAGEMENT**  
**IN**  
**ORANGE COUNTY**

**VISION**

**MISSION**

**IMPLEMENTATION**

1. Governance
2. Inter-local Agreement
  - Partner
  - Customer
  - Transition
3. Integrated Solid Waste Management Plan for Waste Reduction Goals
  - Pay as you Throw
  - Other Waste Reduction Options
4. Financial Plan
  - Access Fees
  - Tip Fees
  - Other
5. Transportation Plan
6. Solid Waste Management Ordinance
7. Ordinance Concerning Disposal of Solid Waste

## **ATTACHMENT 2**

### **Goals for the Management of Solid Waste in Orange County**

The mission of the "Orange Solid Waste Management Group" shall be to minimize the generation of waste; to conserve resources; to recycle and reuse that portion of our waste that we can; and to dispose of the remaining solid waste in an environmentally sound, socially responsible and cost effective manner.

- a. Manage the waste in Orange County consistent with the mission statement above, consistent with environmental and human health protection, consistent with conservation of natural resources and energy, and in compliance with all federal, State and local laws and regulations.
- b. Set aggressive waste reduction goals, with the intent of raising waste reduction goals when set goals have been achieved.
- c. Achieve these stated goals through the development of public and public-private waste prevention, source reduction, recycling and reuse opportunities, materials recovery, as well as development and implementation of public and public-private education programs, policies and incentives to promote waste prevention, recycling and reuse.
- d. Design, develop and implement public information, awareness and education programs designed to increase public awareness of the need for, and public involvement in the implementation of, source reduction, recycling, composting, and to promote environmentally sound and cost effective integrated solid waste management.
- e. Participate with regional efforts to manage and reduce waste, when consistent with adopted goals and policies.
- f. Evaluate and establish alternatives for the management of recyclable materials banned from landfilling.
- g. Evaluate and establish alternatives for the management of materials which pose special management problems. Develop programs which result in the elimination of these materials from the waste stream whenever possible.

## **ATTACHMENT 3**

### **Calculation of Community Benefits for Landfill**

ATTACHMENT 3  
Calculation of Community Benefits for Landfill

| <b>Based on Per Capita Formula (Sales Tax Distribution)</b> |                   |                                    |
|---|-------------------|------------------------------------|
|   | <i>Percentage</i> | <i>Amount</i><br>(= % * \$840,500) |
| Orange County   | 65.11%            | \$547,216                          |
| Chapel Hill   | 25.77%            | \$216,579                          |
| Carrboro  | 9.13%             | \$76,705                           |
| <b>Total</b>  | <b>100.00%</b>    | <b>\$840,500</b>                   |

## **ATTACHMENT 4**

**Memo from Mike Brough to Carrboro Mayor and Board of Aldermen Re: Benefits to Neighbors of  
Existing Landfill**



1

## MEMORANDUM

TO: Carrboro Mayor and Board of Aldermen

FROM: Michael B. Brough *MBB*

DATE: October 8, 1997

RE: Benefits to Neighbors of Existing Landfill

The Board has requested that I address the legal issues surrounding the recommendations of the Landfill Owners Group/Landfill Neighbors Working Group to provide certain benefits to the neighbors of the existing landfill. Of the eleven recommendations in the report that I reviewed, significant legal issues are presented only by the first two: extending water and sewer mains to the area and paying for all or a portion of the costs (primarily, OWASA fees) associated with making connections to these utility lines.

While there is no doubt that utility lines can be extended to the area in question at public expense, the principal question is whether and to what extent revenues generated by landfill fees can be used to pay for such extensions. The main obstacle is N.C.G.S. 153A-292, which states: "The board of county commissioners may impose a fee for the use of a disposal facility provided by the county. The fee for use *may not exceed the cost of operating the facility* and may be imposed only on those who use the facility." (Emphasis added). Therefore, in order to be able to use landfill funds derived from "tipping fees" to pay for utility extensions or connections, it would be necessary to demonstrate that such extensions or connections are necessary to the operation of the landfill.

While the matter is hardly free from doubt, I believe a good argument can be made that the cost of extending water lines to neighboring properties can be justified as an operational cost of the landfill under what may be characterized as the "insurance theory." The argument is that, if nearby properties are on wells, the existence of the landfill creates the possibility of contamination of those wells, which might subject the landfill to nuisance suits that could potentially result in significant damages or other injunctive relief that would interfere with or perhaps even prevent the landfill's operation. Paying for the extension of water lines to allow neighboring properties to connect to the public water system is tantamount to providing insurance against such potential legal difficulties.

Even assuming the basic theory is sound, two potential problems should be considered. The first is whether there is any factual basis for the concern over the pollution of wells. The second is whether there is any relationship between the areas that have been selected to receive benefits and the concern over well pollution. I have no information about either matter.

The payment of sewer line extensions out of landfill funds is more problematic. Apparently the extension of a sewer line to the landfill can be justified as an operating cost because regulations require that the liquid that leaches from the landfill be removed from the site

used in determining which properties were to be benefited and which were not. The degree of attention that must be paid to this issue varies, depending on which source of funds is used to pay for water line extensions and hook-ups. If general funds are used, then the issue of where to draw the line presents a political rather than a legal issue. However, if landfill funds are used, then the justification for using such funds (described above) presumes that there is some relationship between the properties that are benefited and the concern about well contamination.

## **ATTACHMENT 5**

**Letter from Geoffrey Gledhill to BOCC Re: Report of the Landfill Owners Group/Landfill  
Neighbors Working Group – Recommendations for Improvements around the Orange Regional  
Landfill**

LAW OFFICES

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FROM THE DESK OF  
GEOFFREY E. GLEDHILL

October 16, 1997

Bill Crowther, Chair  
Margaret Brown  
Moses Carey, Jr.  
Alice Gordon  
Stephen Halkiotis  
Orange County Board of Commissioners  
Post Office Box 8181  
Hillsborough, North Carolina 27278

**RE: Report of the Landfill Owners Group/Landfill Neighbors Working Group -  
Recommendations for Improvements around the Orange Regional Landfill**

Dear Board Members:

At your October 6 meeting you requested that I look at the legal issues surrounding the recommendations for improvements in the community of neighbors of the Orange Regional Landfill which are contained in the September 18, 1997 Report of the Landfill Owners Group/Landfill Neighbors Working Group. An important starting point of my review and analysis of these recommendations is the second paragraph of the Report itself. It states: "In no way should these recommendations be interpreted as compensation for siting of a future landfill in the Eubanks Road area -- rather they are solely meant to address the compensation of neighbors for having lived near the current landfill." (Emphasis added.) Any public improvements that are made in the area surrounding the Orange Regional Landfill must be legally justified on some basis other than compensation for siting the Orange Regional Landfill. The ability of the local governments of Orange County, Chapel Hill and Carrboro to pay for the recommended and any other public improvements must rest on some basis other than compensation.

Most of the recommendations do not have significant legal implications. Those that don't may call for additional financial and people resources and in some instances some regulatory tightening. But generally they can be performed within the context of the operation of the landfill enterprise. Only those that have significant legal implications will be addressed further in this letter.

October 16, 1997

reasonable to assume annexation by the towns of their respective transition areas. The towns can provide public water and sewer in their transition areas. Furthermore, and in my opinion significantly, the entire identified community can be served with public water and sewer using the general fund revenue of Orange County, Chapel Hill and Carrboro in a joint undertaking. This would allow a "blurring" of jurisdictional lines by reasonable assumptions concerning financial contribution to the enterprise. I think there could be quite a bit of latitude in these assumptions given that the enterprise in question would be one of constructing public water and sewer utilities and not their operation thereafter. The operation of these utilities would presumably fall to OWASA once they were constructed.

Fees for connection to the water and sewer utilities can be justified, if they are all to be paid, on the same basis as the line extensions themselves. However, if only those fees associated with homes owned by persons with low and moderate income are to be paid, then landfill enterprise funds would not be available. Low and moderate income homeowners' fees can be paid by the local governments under the community development programs and activities power of the County, Carrboro and Chapel Hill found in N.C. Gen. Stat. §§ 153A-376 and 160A-456, copies of which are enclosed.

The legal analysis for public transportation in the Orange Regional Landfill community is the same as the general fund public water and sewer extension analysis above. The practical issues are different but the legal issues are the same.

Relocating future annexation boundaries by referendum is, in my opinion, problematic. I have previously written to the Board advising against holding non-binding or "straw" ballot referenda not expressly authorized by the North Carolina General Assembly. The annexation boundary and the joint planning transition area boundary should be determined through the joint planning process already in place.

One of the recommendations in the Report of the Landfill Owners Group/Landfill Neighbors Working Group calls for using at least 50 acres of the Greene tract for recreation facilities. The Greene tract is presently an asset of the Orange Regional Landfill enterprise. I have not done an exhaustive research project on this question. However, transferring the Greene tract out of the enterprise and essentially declaring it to be surplus property for landfill purposes raises a legal question because the property was purchased with landfill tipping fees, which by law cannot exceed the cost of operating the landfill. The question further becomes one of whether the Greene tract is or ever can become truly surplus given the potential liability associated with owning and operating a landfill forevermore and the cost of its continued operation. Put another way, can the Greene tract be disposed of by the landfill enterprise while tipping fees are charged for operations expenses, including the potential for future payment of environmental mitigation expenses due to past, present and future landfill practices, that could otherwise be avoided because of the availability of the Greene tract asset? I have not reached

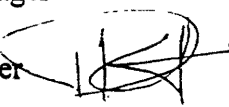
## **ATTACHMENT 6**

**Memo from Paul Thames to BOCC Re: Property parcel maps, small scale aerial photography parcel maps, parcel analysis chart and community waster service benefits cost chart**

## MEMORANDUM

**TO:** County Commissioners  
John Link, County Manager  
Rod Visser, Assistant County Manager

**COPIES:** Wilbert MacAdoo, Public Works Director  
Wayne Fenton, Solid Waste Manager

**FROM:** Paul Thames, PE, County Engineer 

**DATE:** May 13, 1998

**SUBJECT:** Property parcel maps, small scale aerial photography parcel maps, parcel analysis chart and community water service benefits cost chart

As per the request of Commissioner Brown, I have prepared (or had prepared by the Orange County Planning Department's GIS specialist) and attached several new or modified Rogers Road community water service benefit documents for distribution to the various elected officials, solid waste staff and management staff for the local governments involved in the LOG. Two of these documents are new and larger scale maps of the Rogers Road neighborhood. The first of the maps is a modification of earlier maps which showed all of the six originally proposed water and sewer "benefit" neighborhoods with proposed water and sewer line layouts and land use designations. The new map shows primarily the Rogers Road neighborhood and its proposed water line layout, with only a portion of some of the other neighborhoods shown along the periphery. Another modification to the revised map, the use of color to designate neighborhoods and cross-hatching to designate land use classifications (on the original maps, colors were used to designate land use and cross-hatching was used to designate neighborhoods) has been made to enhance the visual definition of the neighborhoods included on the map. The second map, a "key" map of sorts, shows the property lines of parcels in the neighborhoods on the periphery of the Rogers Road neighborhood, but only the Rogers Road neighborhood and its proposed water line system is shown in color. This map also shows a parcel map key number for each tract of property (numbered as 1 through 119) which might logically be considered to be in the Rogers Road neighborhood or provided water service by the proposed water distribution system. These parcel numbers are keyed to a third document, a ten page chart entitled "Desktop Analysis of Property Parcels in the Historical Rogers Road Neighborhood". This title may be a slight misnomer in that parcel 119 is actually the Nunn property located off of Eubanks Road and originally proposed (by OWASA's Hazen & Sawyer water and sewer benefit area layout and cost report) to be served by water lines extended along and from Eubanks Road. In addition to the parcel map key numbers, this chart also includes following information derived from the County's Land Records and Tax Assessor's databases for each property: the owner's name and address, parcel acreage, number of buildings on each parcel, total value of the buildings on each parcel, the date of the last recorded deed and year the dwelling was constructed (if applicable). A parcel tax map reference number (TMBL) is also included, although this number is useful primarily as a database reference for staff working to obtain additional information or performing additional analysis. The fourth document is actually two small scale (1" = 600") aerial photographs of the same general area shown on the maps described above. Outlines and some TMBL reference

# DESKTOP ANALYSIS OF PROPERTY PARCELS IN THE HISTORICAL ROGERS ROAD NEIGHBORHOOD

| Parcel<br>Map<br>Key # | Parcel<br>Tax Map<br>Reference #<br>(TMBL) | Owner's<br>Name & Address  | Parcel<br>Acreage | Buildings/<br>(Building<br>Value) | Last<br>Deed<br>Date | Building<br>Date |
|------------------------|--|--|-------------------|-----------------------------------|----------------------|------------------|
| 1                      | 7.23.C.4                                   | John/Addie Street<br>7619 Rogers Rd<br>Chapel Hill               | 1.00              | 5 (\$42643)                       | 5/19/58              | 1955             |
| 2                      | 7.23.C.4A                                  | John/Addie Street<br>7619 Rogers Rd<br>Chapel Hill               | 0.43              | 0                                 | 6/28/61              | Not<br>Available |
| 3                      | 7.23.C.5                                   | Calvin Neville<br>107 Cobb St.<br>Carrboro                       | 0.47              | 1 (\$23927)                       | 4/1/96               | 1960             |
| 4                      | 7.23.C.6                                   | Mamie Thompson<br>7707 Rogers Road<br>Chapel Hill                | 0.42              | 1 (\$20167)                       | 4/11/84              | 1961             |
| 5                      | 7.23.C.6A                                  | Monica Brooks<br>202 West Union St.<br>Hillsborough              | 0.44              | 1 (\$16189)                       | 4/24/96              | 1961             |
| 6                      | 7.23.C.7                                   | Kerney/Ruth Scurlock<br>1116 Sedgfield St.<br>Durham             | 1.20              | 2 (\$19793)                       | 12/30/92             | 1960             |
| 7                      | 7.23.C.8                                   | Dorthy Morrow<br>317 McDade St<br>Chapel Hill                    | 0.56              | 1 (\$19549)                       | 3/20/96              | 1961             |
| 8                      | 7.23.C.9                                   | Gloria Williams/S.J. Knight<br>7729-A Rogers Road<br>Chapel Hill | 1.35              | 1 (\$39657)                       | 8/9/94               | Not<br>Available |
| 9                      | 7.23.C.10                                  | Lewis Rogers<br>7729 Rogers Road<br>Chapel Hill                  | 1.50              | 0                                 | 6/7/54               | Not<br>Available |
| 10                     | 7.23.C.10A                                 | S.J. Knight<br>729 S. State College Blvd.<br>Anaheim, Calif.     | 0.40              | 1 (\$0)                           | 8/9/94               | Not<br>Available |



| Parcel Map Key # | Parcel Tax Map Reference # (TMBL) | Owner's Name & Address  | Parcel Acreage | Buildings (Building Value) | Last Deed Date | Building Date |
|------------------|-----------------------------------|---|----------------|----------------------------|----------------|---------------|
| 24               | 7.23.C.23                         | Robert/Ila McMillan<br>8009 Rogers Road<br>Chapel Hill                      | 0.57           | 1 (\$227556)               | 5/13/81        | 1981          |
| 25               | 7.23.C.24                         | Robert/Ila McMillan<br>8009 Rogers Road<br>Chapel Hill                      | 1.14           | 2 (\$63940)                | 3/6/80         | 1979          |
| 26               | 7.23.C.27                         | Ezra Barbee<br>701 Terrace View Dr.<br>Chapel Hill                          | 1.07           | 2 (\$8959)                 | 9/1/90         | Not Available |
| 27               | 7.23.C.24C                        | Barndoor Properties<br>214 Windover Dr.<br>Chapel Hill                      | 1.18           | 1(\$139838)                | 3/17/98        | 1997          |
| 28               | 7.23.C.24A                        | Bruce Tucker<br>414 East Main St.<br>Carrboro                               | 1.04           | 2 (\$110387)               | 10/9/97        | 1997          |
| 29               | 7.23.C.24B                        | Michael/Elen Wilkinson<br>8017 Rogers Road<br>Chapel Hill                   | 0.84           | 1 (\$86396))               | 2/10/97        | 1996          |
| 30               | 7.18.27G                          | Brenda Carney<br>1003 Eubanks Road<br>Chapel Hill                           | 2.14           | 2 (\$86794)                | 9/16/94        | 1974          |
| 31               | 7.23.D.1                          | Laura/Scott Crenshaw<br>8207 Reynard Road<br>Chapel Hill                    | 1.30           | 0                          | 12/29/93       | Not Available |
| 32               | 7.23.D.2                          | Harold Rogers<br>7620 Rogers Road<br>Chapel Hill                            | 2.22           | 0                          | 7/12/94        | Not Available |
| 33               | 7.23.D.2B                         | Mildred Rogers<br>7620 Rogers Road<br>Chapel Hill                           | 1.21           | 1 (\$37894)                | 11/23/93       | 1970          |
| 34               | 7.23.D.2C                         | Mildred Rogers<br>7620 Rogers Road<br>Chapel Hill                           | 0.41           | 0                          | 3/7/49         | Not Available |
| 35               | 7.23.D.3                          | Walter Crowe Heirs<br>c/o Mildred Rogers<br>7620 Rogers Road<br>Chapel Hill | 0.44           | 1 (\$15348)                | 6/28/80        | 1960          |

| Parcel Map Key # | Parcel Tax Map Reference # (TMBL) | Owner's Name & Address   | Parcel Acreage | Buildings (Building Value) | Last Deed Date | Building Date |
|------------------|-----------------------------------|--|----------------|----------------------------|----------------|---------------|
| 49               | 7.18..26A                         | Alfred/Elsie Barbee<br>205 Terrace View Drive<br>Chapel Hill           | 3.40           | 0                          | 3/22/84        | Not Available |
| 50               | 7.18..26B                         | Tate Realty & Construction<br>342 W. Rosemary Street<br>Chapel Hill    | 3.30           | 0                          | 9/25/97        | Not Available |
| 51               | 7.18..26                          | Norman Barbee<br>210 Jones Ferry Road<br>Carrboro                      | 2.30           | 0                          | 7/14/97        | Not Available |
| 52               | 7.18..26C                         | Alfred/Elsie Barbee<br>205 Terrace View Drive<br>Chapel Hill           | 4.30           | 0                          | 2/19/88        | Not Available |
| 53               | 7.18..28                          | Timothy Peppers<br>107 Carmichael Lane<br>Spring Lake, NC              | 3.50           | 2 (\$0)                    | 3/1/63         | Not Available |
| 54               | 7.18.25                           | Jimmy C Rogers<br>1706 Purfoy Drive<br>Chapel Hill                     | 3.26           | 3 (\$12074)                | 10/5/90        | 1940          |
| 55               | 7.18..23                          | Nola West<br>1706-A Purefoy Drive<br>Chapel Hill                       | 21.81          | 6 (\$71603)                | 9/24/94        | 1932          |
| 56               | 7.18..23A                         | Lecia Harris<br>1712 Purefoy Drive<br>Chapel Hill                      | 3.00           | 1 (\$46380)                | 3/1/94         | 1975          |
| 57               | 7.23.D.10                         | Tate Realty & Construction<br>342 W. Rosemary Street<br>Chapel Hill    | 8.00           | 2(\$11218)                 | 9/25/97        | Not Available |
| 58               | 7.23.D.11B                        | Laura/Samuel Jones<br>1612 Purefoy<br>Chapel Hill                      | 4.15           | 2 (\$31425)                | 5/1/71         | 1872          |
| 59               | 7.23.D.11                         | Martha Purfoy Heirs<br>c/o Samuel Jones<br>1612 Purefoy<br>Chapel Hill | 2.07           | 0                          | 12/14/60       | Not Available |
| 60               | 7.23.D.11A                        | George/Esther Tate<br>342 W. Rosemary Street<br>Chapel Hill            | 2.08           | 0                          | 11/1/72        | Not Available |

| Parcel Map Key # | Parcel Tax Map Reference # (FMBL) | Owner's Name & Address   | Parcel Acreage | Buildings (Building Value) | Last Deed Date  | Bonding Date         |
|------------------|-----------------------------------|--|----------------|----------------------------|-----------------|----------------------|
| 74               | 7.23B.B.7                         | Bobby R. Roberts<br>PO Box 2626<br>Durham                          | +/-0.6         | 0                          | 8/1/75          | Not Available        |
| 75               | 7.24..1                           | Julia/Samuel Jones<br>1612 Purefoy<br>Chapel Hill                  | 2.97           | 0                          | 12/29/89        | Not Available        |
| 76               | 7.24..1B                          | Carl Purefoy, Sr.<br>1718 Purefoy Drive<br>Chapel Hill             | 1.00           | 1 (\$54704)                | 1/10/95         | 1971                 |
| 77               | 7.24..1C                          | Carl L Purefoy<br>1803 Purefoy Drive<br>Chapel Hill                | 2.97           | 0                          | 12/29/89        | Not Available        |
| 78               | 7.24..1A                          | <b>Carl L Purefoy<br/>1803 Purefoy Drive<br/>Chapel Hill</b>       | 1.00           | <b>1 (\$500)</b>           | <b>12/4/91</b>  | <b>Not Available</b> |
| 79               | 7.24..2A                          | Danny Dunmore<br>1810 Purefoy Drive<br>Chapel Hill                 | 1.25           | 1 (\$51645)                | 10/14/96        | 1996                 |
| 80               | 7.24..2                           | Dorthea Purefoy<br>1814 Purefoy Drive<br>Chapel Hill               | 6.75           | 1 (\$58220)                | 9/12/95         | 1970                 |
| 81               | 7.24..4J                          | <b>Larry/Karen Reid<br/>8006 Sandberg Lane<br/>Chapel Hill</b>     | 0.96           | <b>3 (\$15111)</b>         | <b>11/26/85</b> | <b>Not Available</b> |
| 82               | 7.24..4                           | Larry/Karen Reid<br>8006 Sandberg Lane<br>Chapel Hill              | 1.00           | 1(\$79443)                 | 11/26/85        | 1986                 |
| 83               | 7.24..4E                          | <b>Arlin/Jeanette Scott<br/>8012 Sandberg Lane<br/>Chapel Hill</b> | 0.99           | <b>6 (\$14600)</b>         | <b>4/11/88</b>  | <b>Not Available</b> |
| 84               | 7.24..4G                          | Malwood Revels<br>8030 Sandberg Lane<br>Chapel Hill                | 1.00           | 2 (\$37041)                | 1/19/90         | 1991                 |
| 85               | 7.24..4H                          | Creighton Humphries, Jr<br>127 Green Street<br>Chapel Hill         | 0.99           | 0                          | 5/7/85          | Not Available        |
| 86               | 7.24..4F                          | Mary/Charles Burnette<br>8023 Sandberg Lane<br>Chapel Hill         | 1.00           | 0                          | 4/15/85         | 1992                 |

| Parcel Map Key # | Parcel Tax Map Reference # (TMBL) | Owner's Name & Address                                     | Parcel Acreage | Buildings/ (Building Value) | Last Deed Date | Building Date |
|------------------|-----------------------------------|--|----------------|-----------------------------|----------------|---------------|
| 100              | 7.24D.C.3                         | Scellarniez Alston<br>955 Hwy 54<br>Chapel Hill            | +/-0.80        | 2 (\$200)                   | 3/3/93         | Not Available |
| 101              | 7.24D.C.2                         | Gail Neville<br>3925 Mebane-Oaks Road<br>Mebane            | +/-0.80        | 4 (\$850)                   | 3/1/73         | Not Available |
| 102              | 7.24D.C.1                         | Harris/Karen Farrington<br>8016 Rogers Road<br>Chapel Hill | +/-0.60        | 2 (\$200)                   | 3/1/78         | Not Available |
| 103              | 7.23.D.15                         | Thomas/Thelma Bass<br>1033 Chalmers Street<br>Durham       | +/- 0.50       | 1(\$19918)                  | 7/1/72         | 1962          |
| 104              | 7.23.D.16                         | Preston Weaver, Jr.<br>8028 Rogers Road<br>Chapel Hill     | +/- 0.50       | 3 (\$26418)                 | 4/26/62        | 1960          |
| 105              | 7.23.D.14                         | David/Sarah Caldwell<br>1715 Rusch Road<br>Chapel Hill     | 2.75           | 0                           | 4/14/98        | Not Available |
| 106              | 7.23.D.17                         | Darryl Revels<br>1708 Rusch Road<br>Chapel Hill            | +/- 0.70       | 2 (\$24594)                 | 5/3/85         | 1964          |
| 107              | 7.23.D.18                         | Leola Booth<br>PO Box 2117<br>Chapel Hill                  | +/- 0.40       | 1 (\$20717)                 | 11/6/84        | 1962          |
| 108              | 7.23.D.19                         | Topsy Woods<br>1714 Rusch Road<br>Chapel Hill              | +/- 0.40       | 3 (\$150)                   | 12/31/86       | Not Available |
| 109              | 7.23.D.20                         | David/Sarah Caldwell<br>1715 Rusch Road<br>Chapel Hill     | +/- 0.40       | 0                           | 1/22/90        | Not Available |
| 110              | 7.23.D.21                         | Larry Caldwell<br>1715 Rusch Road<br>Chapel Hill           | +/- 0.40       | 0                           | 4/14/98        | Not Available |
| 111              | 7.23.D.22                         | David/Sarah Caldwell<br>1715 Rusch Road<br>Chapel Hill     | +/- 0.40       | 2 (\$59599)                 | 5/15/62        | 1962          |
| 112              | 7.23.D.23                         | Dorothy Baldwin<br>1709 Rusch Road<br>Chapel Hill          | +/- 0.50       | 1 (\$24416)                 | 12/13/94       | 1969          |



Selected Parcels



Background Info

## PROPERTY MAP

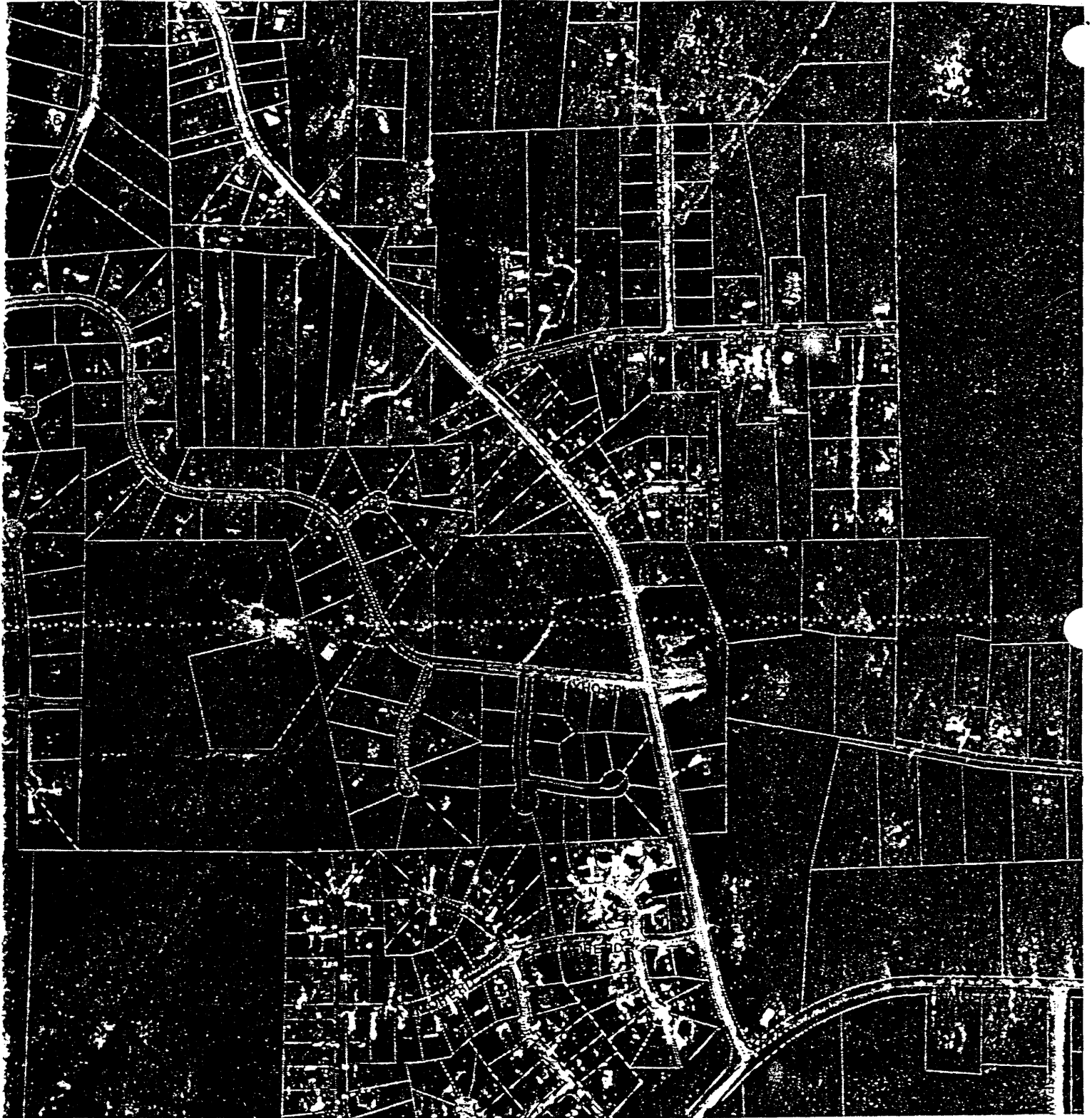
This map contains parcels prepared for the inventory of real property within Orange County, and is compiled from recorded deeds, plats, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map. The County and its mapping companies assume no legal responsibility for the information contained on this map.



Map Scale : 1" = 600'

DATE: 14 May 98 10:19:12 Thursday





## PROPERTY MAP



Selected Parcels



Background Info

This map contains parcels prepared for the inventory of real property within Orange County, and is compiled from recorded deeds, plats, and other public records and data. Users of this map are hereby notified that the aforementioned public primary information sources should be consulted for verification of the information contained on this map. The County and its mapping companies assume no legal responsibility for the information contained on this map.



Map Scale: 1" = 600'

DATE: 14 May 98 10:22:32 Thursday

Prepared By Orange County Central Land Records/GIS Office

# Water Service Community Benefit Cost for the Historical Rogers Road Neighborhood (revised 5/12/98)

Rogers Rd., Rusch Rd., Purefoy Rd., Priscilla Ln., Sandburg Ln.

| Line segment location  | Line segment diameter,<br>length and cost<br>(with appurtenances,<br>easements, engineering<br>and contingencies) | Line segment designation #<br>(as per Hazen-Sawyer Report)                                  |
|--|---|---|
| Rogers Road from Talley Ho to just south of Meadow Run   | 4260 LF - 12" W/L<br>\$226,000  | 1   |
| Purefoy Road   | 850 LF - 8" W/L<br>\$35,000   | 6   |
| Purefoy Road   | 1020 lf - 8"W/L<br>100 lf - 4"W/L<br>\$43,000   | 7   |
| Sandburg Lane  | 790 lf - 8"W/L<br>100 lf - 4" W/L<br>\$39,000   | 8   |
| Cross-country north and west from Purfoy Road, south on Priscilla Lane to Rodgers Road               | 2700 lf - 8"W/L<br>200 lf - 4" W/L<br>\$124,000   | 9   |
| Rusch Road   | 500 lf - 8" W/L<br>680 lf - 4"W/L<br>\$36,000   | 10  |
| Cross-country east from Rogers Road near north end   | 140 lf - 3"W/L<br>\$5,000   | 51  |
| Cross-country north-east from Rogers Road near north end (to serve B.G. Carney home on Eubanks Road. | 560 lf - 3"W/L<br>\$8,500   | not shown in Hazen & Sawyer report - proposed service to Carney home from Eubanks Road line |
| Cross-country north from east end of Purefoy Road (to serve G. F. Nunn property                      | 3000 lf - 3"W/L<br>\$44,000   | not shown in Hazen & Sawyer report - proposed service to Nunn home from Eubanks Road line   |
| <b>Total Construction Cost for Rogers Road neighborhood</b>  | <b>\$560,500</b>  |   |
| <b>Plumbing costs and OWASA fees for approximately 70 existing units @ \$4000 per unit</b>           | <b>\$280,000</b>  |   |
| <b>Total of All Costs for the Rogers Road neighborhood</b>   | <b>\$840,500</b>  |   |

## **ATTACHMENT 7**

**Interlocal Agreement, Eight Draft dated October 7, 1997**



*Eighth draft, dated October 7, 1997*

*Marked to show changes from the draft of September 22*

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**INTERLOCAL AGREEMENT**

**CONCERNING SOLID WASTE  
MANAGEMENT MATTERS**

*Dated as of ~~October~~ November 1, 1997*

*Among*

**ORANGE COUNTY, NORTH CAROLINA**

**TOWN OF CARRBORO, NORTH CAROLINA**

**TOWN OF CHAPEL HILL, NORTH CAROLINA**

**TOWN OF HILLSBOROUGH, NORTH CAROLINA**

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# INTERLOCAL AGREEMENT

## CONCERNING SOLID WASTE MANAGEMENT MATTERS

*This Interlocal Agreement Concerning Solid Waste Management Matters* is dated as of ~~October~~ November 1, 1997, and is by and among ORANGE COUNTY, NORTH CAROLINA, the TOWN OF CARRBORO, NORTH CAROLINA, the TOWN OF CHAPEL HILL, NORTH CAROLINA, and the TOWN OF HILLSBOROUGH, NORTH CAROLINA.

*WHEREAS*, the parties have worked together over a period of years to develop an effective, comprehensive approach to the solid waste management issues confronting them, and have reached this Agreement to address those issues;

*THEREFORE*, the parties agree as follows:

### ARTICLE I

#### Purpose of Agreement; Conditions to Effectiveness

1.01. **Purpose.** The purpose of this Agreement is to set forth the Parties' agreement to transfer operational control to the County of the solid waste management system serving the County and the Towns, and to establish the terms for the management of such solid waste management system under which the Towns will participate in formulating solid waste management policy for their own jurisdiction and for Orange County as a whole.

1.02. **Conditions.** Notwithstanding any other provision of this Agreement,

(a) no provision of this Agreement, other than the requirement to bargain as described in Section 1.03, shall become effective until the Parties have selected the New Solid Waste Management Site ~~and finished developing the processes described in Sections 3.02(a) and 3.02(b);~~ and

(b) the asset and liability transfer contemplated by Article II, and the transfer of operational control contemplated by Article V, shall not take place until Carrboro, Chapel Hill and the County have executed and delivered the Transfer Agreement, as contemplated by Sections 2.01 and 2.07.

The selection of the New Solid Waste Management Site, ~~the completion of the development of the processes described in Sections 3.02(a) and 3.02(b) and the completion of the Transfer~~ and the approval by the Governing Boards of Carrboro, Chapel Hill and the County of a substantially final form of the Transfer Agreement are referred to in this Agreement as the "Open Matters."

**1.03. Diligent, Good Faith Bargaining.** The Parties shall bargain together in good faith and with all due diligence, and shall use their respective best efforts, to reach final agreement on resolution of the Open Matters.

**1.04. Deadline for Negotiations.** This Agreement shall automatically terminate on December 1, 1997, unless each Party's Governing Board has adopted an appropriate resolution referencing this Agreement and stating that the Open Matters have been resolved to such Party's satisfaction.

## ARTICLE II

### County's Acquisition of Existing Solid Waste System

**2.01. County's Acquisition; Consideration.** In consideration for the transfer of assets described in Section 2.02, and in consideration for the other undertakings of the Towns in this Agreement (including the undertakings set forth in Section 2.05), but without additional monetary compensation, the County agrees to assume the liabilities described in Section 2.04 and to undertake the other obligations imposed on it by this Agreement. The Transfer will be consummated pursuant to a separate transfer agreement (the "Transfer Agreement") to be negotiated among the County, Carrboro and Chapel Hill, which agreement shall be subject to approval in its substantially final form by the respective Governing Boards of those three Parties.

**2.02. Existing System Assets.** (a) Under the Transfer Agreement, Carrboro and Chapel Hill shall transfer all of their respective right, title and interest in and to all of the Existing System Assets to the County.

(b) The Parties agree that they do not intend, by the Transfer, to revive any easement across the Greene Tract for the benefit of the property known as the "Neville Tract."

**2.03. Greene Tract.** (a) The Parties agree that neither the Transfer nor any other provision of this Agreement shall or does effect any change in the status of the ownership of the Greene Tract.

(b) Carrboro, Chapel Hill and the County, as the current owners of the Greene Tract, agree to bargain together in good faith and with all due diligence, and to use their respective best efforts, to determine an ultimate use or disposition of the Greene Tract before January 1, 2000 2003. During this period, no Party shall take any action to force any sale or division of the Greene Tract, nor shall any Party take any action to sell, mortgage or otherwise transfer all or any part of its ownership interest in the Greene Tract.

(c) If the owners of the Greene Tract have not reached an agreement as to the ultimate use or disposition of the Greene Tract by January 1, 2000, then the County, for itself and as agent for the other owners, shall forthwith proceed to offer and sell all the Greene Tract in fee simple for cash to the highest bidder therefore, in such manner as the County may determine in its reasonable discretion.

(d) The County shall promptly apply the proceeds of any ~~such sale~~ sale made pursuant to subsection (c) above in the following manner:

(i) First, to pay the expenses of the sale;

(ii) Second, to pay to the Solid Waste System enterprise fund then maintained by the County pursuant to Section 5.04, the sum of (a) \$608,823, being the original purchase price of the Greene Tract, plus ~~(B)(b)~~ un compounded interest on such amount at the annual rate of 6% from March 30, 1984, to the closing date of any sale; and

(iii) Any remainder shall be distributed in the following proportions:

(A) To Carrboro, 14%;

(B) To Chapel Hill, 43%; and

(C) To the County, 43%.

**2.04. Liabilities.** (a) Under the Transfer Agreement, the County shall assume all liabilities, including environmental liabilities, related to the ownership of the Solid Waste System, including, to the extent permitted by law, all liabilities related to the ownership of Existing System Assets which may have accrued prior to the Closing.

(b) Under the Transfer Agreement, the Parties shall retain their individual liability, if any, under environmental laws and otherwise, related to their respective use of the Solid Waste System both before and after the Closing (as, for example, any liability arising from their delivering, or causing to be delivered, Solid Waste to System Management Facilities).

(c) The Parties acknowledge that the County's assumption of certain liabilities pursuant to the Transfer Agreement, as described in subsection (a) above, will not limit, and is not intended to limit, the ability of any governmental authority to impose, or to seek to impose,

environmental or other liability directly on a Party (as, for example, any liability accruing to the current owners of the Existing System Assets as a result of their status as owners prior to the Closing).

(d) The County shall not assume any indebtedness of Carrboro or Chapel Hill. Furthermore, by this Agreement and the County's agreement to acquire assets and assume liabilities as provided in Section 2.01, the County does not assume any indebtedness of Carrboro or Chapel Hill.

**2.05. Delivery of Solid Waste and Recyclables.** (a) As additional consideration for the Parties' respective and mutual undertakings under this Agreement and the Transfer Agreement, the County and the Towns all agree to deliver, or cause to be delivered, to System Management Facilities for disposal or processing, respectively, all Solid Waste and County Recyclables under their respective control, including (without limitation) all Solid Waste and County Recyclables collected by any Party's employees, solid waste collection contractors, solid waste collection licensees or solid waste collection franchisees; provided, however, that there shall be no such obligation to deliver Other Recyclables to System Management Facilities.

(b) All Solid Waste and County Recyclables delivered to System Management Facilities, or to County employees, solid waste collection contractors, solid waste collection licensees or solid waste collection franchisees, shall be the property of the County upon such delivery. After Recyclables have been placed in a designated container at a convenience center, the Recyclables are the County's property.

**2.06. Treatment of Solid Waste System Employees.** (a) All of the System Employees will be transferred to the County and become County employees subject to the supervision of the County Manager in the same fashion as other County employees.

(b) The Parties acknowledge that it is an important objective of this Agreement that the current total compensation package for System Employees be maintained at a substantially equivalent level through the Transfer, although the combination of salary and benefits for any employee may change. The Parties recognize that all components of compensation to System Employees after the Transfer will be subject to changes in salaries and benefits in the same fashion as other County employees. The County and Chapel Hill shall develop a detailed schedule comparing the total pre-Transfer and post-Transfer compensation for each System Employee in connection with the Transfer Agreement. Chapel Hill shall send a copy of such schedule to Carrboro when the schedule is complete.

**2.07. Closing Procedure.** (a) The Transfer Agreement shall provide for the appropriate parties to execute and deliver at the Closing the documents and instruments listed on Exhibit C to carry out the Transfer, all of which documents and instruments shall be in form and substance reasonably acceptable to the County, Carrboro and Chapel Hill.

(b) The Transfer Agreement shall transfer all Existing System Assets on an as-is, where-is basis, without warranty of title, condition or any other kind; provided, however, (i) that

real property shall be transferred pursuant to general warranty deed as described in paragraph (a) of Exhibit C, (ii) that vehicles subject to State motor vehicle titling requirements shall be transferred by endorsement and delivery of title certificates as described in paragraph (b) of Exhibit C, and (iii) that Chapel Hill shall provide such evidence of title to all other transferring equipment as it may have reasonably available in its business records.

(c) In the Transfer Agreement, the County, Carrboro and Chapel Hill shall make appropriate representations and warranties with respect to (i) their respective authority to enter into the Transfer Agreement and consummate the Transfer and (ii) the absence of conflicts with agreements and applicable laws.

### ARTICLE III

#### **Selection of New Solid Waste Management Site and Related Matters**

**3.01. Selection of New Solid Waste Management Site.** (a) The Parties shall work together to select a New Solid Waste Management Site within Orange County.

(b) For the purposes of this Agreement, "~~selection of the~~**selecting a** New Solid Waste Management Site" means (i) completion of all public meetings or hearings required by law or regulation prior to the filing of an application for a State permit to construct a solid waste landfill and (ii) the adoption by each Governing Board of a resolution designating ~~a single particular tract of~~ **the same real** property as the ~~parcel~~ **real property** as to which such permit should be sought.

**3.02. Benefits to Communities.** (a) **Existing Landfill Site -- [To come.]**

~~\_\_\_\_\_ (b) New Solid Waste Management Site --~~ The Parties shall ~~work together to develop a process to address issues related to providing~~ **cooperate to provide** reasonable public benefits to the community of residents and property owners in the neighborhood of the New Solid Waste Management Site, in recognition of the effects that operation of a landfill **or other solid waste management or disposal site** may be perceived to have on ~~the community of adjoining property owners and residents. These public benefits~~ **such community.**

**This process shall include facilitated discussions among persons belonging to such community, members of the Advisory Commission selected by the Advisory Commission and at least one member of each Governing Board (as each Governing Board shall designate for itself) who is not a member of the Advisory Commission. This working group shall determine a proposed list of community benefits to be provided.**

**Each Party shall then provide for its Governing Board to discuss the proposed list, and shall provide for such legal and other staff analysis of the proposed list as it may deem appropriate. After each Governing Board has held its own discussions of the proposed list to its own satisfaction, the Parties shall provide for selected members of each Governing**

Board (as each Governing Board shall designate for itself) to meet as a working group to discuss the respective views of the Governing Boards. Through this working group and continued discussion by the Governing Boards, the Parties shall work together, diligently and in good faith, to reach an agreement as to community benefits to be provided. The process of determining community benefits shall continue to include participation by persons belonging to the relevant community.

Final determinations of the public benefits to be provided, the sources for their payment and the mechanisms for providing the benefits shall be made only by agreement of all the Parties.

(c) *In General* – The public benefits contemplated by this Section 3.02 are to be considered as separate and distinct from any compensation determined to be owed for any "taking" of an interest in property, as determined under applicable State or federal law. The Parties agree that this process should include participation by persons belonging to such community. To the extent permitted by law, by this Agreement and by generally accepted accounting principles, and to the extent determined by the Parties **and notwithstanding any other provision of this Agreement**, the costs of providing reasonable public benefits as described in this Section subsection may be treated as an expense of the Solid Waste System and may be paid from System Revenues.

~~(b) Existing Landfill Site – The Parties shall work together to develop a process to address issues related to providing reasonable public benefits to the community of residents and property owners in the neighborhood of the existing landfill. These public benefits are to be considered as separate and distinct from any compensation determined to be owed for any "taking" of an interest in property, as determined under applicable State or federal law. The Parties agree that this process should include participation by persons belonging to such community. To the extent permitted by law, by this Agreement and by generally accepted accounting principles, and to the extent determined by the Parties, the costs of providing reasonable public benefits as described in this subsection may be treated as an expense of the Solid Waste System and may be paid from System Revenues.~~

## ARTICLE IV

### Development of Solid Waste Management Policy

**4.01. Previous Cooperation in Policy Development.** All the Parties have joined in a solid waste management plan designed to comply with certain State regulatory requirements. This plan incorporates a solid waste plan framework (attached as Exhibit E) which reflects agreements in principle reached by representatives of the Parties.

**4.02. Future Policy Development.** (a) Upon the resolution of the Open Matters, the County, as the operator of the Solid Waste System, shall have the ongoing authority and responsibility in its discretion (i) to administer and operate the Solid Waste System in



accordance with the Solid Waste Management Plan Policies and (ii) to determine and modify from time to time the Solid Waste Management Plan Policies.

(b) The County agrees, however, to consult with the other Parties and the Advisory Commission, frequently and consistently, to determine on an on-going basis their respective views on the Solid Waste Management Plan Policies and possible changes thereto.

(c) Notwithstanding the provisions of subsection (a) above, the County shall not put into effect any "Material Financial Change," as defined in subsection (d) below, unless the County shall first obtain the consent of all Parties.

(d) A "Material Financial Change" means a change, or series of related changes, made by the County to the Solid Waste Management Policies that, in the determination of any Town (provided that the Advisory Commission must verify such determination if so requested by the County), would have the effect of increasing by more than 15% the direct monetary cost to such Town of all its solid waste management activities (such as solid waste collection), when comparing (i) the expected cost of such activities for the first full Fiscal Year following the effective date of the Material Financial Change to (ii) the total cost for the Fiscal Year most recently completed prior to the effective date of the Material Financial Change.

(e) It shall be each Town's obligation to determine whether any change or proposed change to the Solid Waste Management Policies is a Material Financial Change with respect to such Town within ten Business Days of receiving actual or constructive notice of the change or proposed change, and to notify the County within five additional Business Days if the Town determines that such change or proposed change is a Material Financial Change.

(f) The provisions of this Section 4.02 are independent of the provisions regarding rates, fees and charges set forth in Article V.

## ARTICLE V

### County's Operation of the Solid Waste System

**5.01. Solid Waste System Operation.** (a) The County shall establish and enforce reasonable rules and regulations governing the operation and use of the Solid Waste System, operate the Solid Waste System in an efficient and economical manner, and maintain the properties constituting the Solid Waste System in good repair and in sound operating condition for so long as the same are necessary for the operation of the Solid Waste System.

(b) As part of its responsibility to operate the Solid Waste System, the County shall provide System Management Facilities suitable for the disposition of Solid Waste by the County,

the Towns and the persons and organizations within their jurisdictions. The County shall have the right to refuse to accept for disposal at System Management Facilities any material or substance which the County reasonably determines is barred from such disposal by the Solid Waste Management ~~Plan~~ **Policies** or any applicable law or regulation.

(c) The existing landfill, as well as any successor thereto, shall be designated to accept solid waste generated exclusively by residents, businesses and other institutions located in Orange County and that portion of Chapel Hill located within Durham County, North Carolina.

(d) The Parties in all events retain the right to determine their own systems and procedures for the collection of Solid Waste and related matters, provided that such systems and procedures are reasonably designed to be consistent and compatible with the provisions of the Solid Waste Management ~~Plan~~ **Policies** concerning Solid Waste disposal and processing of County Recyclables.

**5.02. Compliance with Law.** The County shall comply with, or cause there to be compliance with, all applicable laws, orders, rules, regulations and requirements of any governmental authority relating to the construction, use and operation of the Solid Waste System. Nothing in this Agreement, however, shall prevent the County from contesting in good faith the applicability or validity of any such law or other requirement, so long as the County's failure to comply with the same during the period of such contest will not materially impair the operation or revenue-producing capability of the Solid Waste System.

**5.03. Budget.** The County shall annually adopt a separate budget for the Solid Waste System in accordance with the County's usual budgetary process.

**5.04. Records, Accounts and Audits; Other Reports.** (a) The County shall segregate for accounting purposes all the accounts, moneys and investments of the Solid Waste System.

(b) The County shall keep accurate records and accounts of all items of costs and of all expenditures relating to the Solid Waste System, and of the System Revenues collected and the application of System Revenues. Such records and accounts shall be open to any Party's inspection at any reasonable time upon reasonable notice. The County shall provide for the assets, liabilities and results of operations of the Solid Waste System to be presented in the County's annual audit as a separate enterprise fund, in accordance with generally accepting accounting principles.

(c) The County shall make, or cause to be made, any additional reports or audits relating to the Solid Waste System as may be required by law. The County, as often as may reasonably be requested, shall furnish such other information as the County may have reasonably available concerning the Solid Waste System or its operation as the **Advisory** Commission or any Party may reasonably request.

**5.05. Rates, Fees and Charges.** (a) The County shall establish and maintain a system of rates, fees and charges for the use of, and for the services provided by, the Solid Waste System which is reasonably designed to pay in full all the costs (and only the costs) of carrying out the County's responsibilities under this Agreement and the Solid Waste Management ~~Plan~~ **Policies**, including, without limitation, (i) costs of disposing of Solid Waste, (ii) costs of collecting, processing and disposing of Recyclables, (iii) to the extent permitted by law, costs of providing public benefits determined to be provided pursuant to Section 3.02, and (iv) costs of solid waste reduction activities.

(b) Subject to the limitations of Sections 5.06, 5.07 and 5.08, the County may revise any rates, fees and charges at any time and as often as it shall deem appropriate, and shall not be limited in the number of times in any Fiscal Year that it changes any rate, fee or charge.

**5.06. Mixed Solid Waste Tipping Fee.** (a) The County may increase the Mixed Solid Waste Tipping Fee from time to time in its discretion with at least 30 days' notice of the increase to all other Parties. The County may not, however, increase the Mixed Solid Waste Tipping Fee during or at the beginning of any Fiscal Year to a fee that exceeds the Mixed Solid Waste Tipping Fee in effect at the end of the preceding Fiscal Year by more than 10%, without the prior consent of all the other Parties. Further, the Parties intend and agree that the County shall endeavor to adjust the Mixed Solid Waste Tipping Fee only annually, with changes becoming effective only at the beginning of a Fiscal Year.

(b) The County may decrease the Mixed Solid Waste Tipping Fee from time to time in its discretion, without prior notice to or action by any other Party. The County shall promptly notify the other Parties of any decrease in the Mixed Solid Waste Tipping Fee.

**5.07. Other Governmental Fees.** (a) For the purposes of this Agreement, a "Governmental Fee" shall mean any fee related to activities of the Solid Waste System that is imposed directly and solely on the Parties themselves, other than the Mixed Solid Waste Tipping Fee.

(b) If the County determines that it is or may be advisable to create and impose any Governmental Fee, then the County shall give at least 30 days' notice of the proposed Governmental Fee to the other Parties. A Governmental Fee may then be imposed only if the creation and imposition of such Governmental Fee is subsequently approved by the County and at least two other Parties (except that approval by any two Parties shall be required at any time there are less than four Parties to this Agreement). A new Governmental Fee shall take effect at the end of the notice period or, if later, the date of the last Governing Body approval necessary for it to take effect.

(c) The County may increase any individual Governmental Fee from time to time in its discretion with at least 30 days' notice of the increase to all other Parties. The County may not, however, increase any individual Governmental Fee during or at the beginning of any Fiscal Year to a fee that exceeds the fee in effect at the end of the preceding Fiscal Year by more than 10%, without the prior consent of all the other Parties. The Parties intend and agree that the

County shall endeavor to adjust any and all Governmental Fees only annually, with changes becoming effective only at the beginning of a Fiscal Year.

(d) The County may decrease any Governmental Fee from time to time in its discretion, without prior notice to or action by any other Party. The County shall promptly notify the other Parties of any decrease in any Governmental Fee.

**5.08. Other Fees.** If the County determines that it is or may be advisable to create, increase or decrease any other rate, fee or charge, including any charges by the County for the sale of goods (for example, mulch) or services, then the County shall give at least 30 days' notice of the proposed change to the other Parties, and the County shall request that the Advisory Commission consider the proposed change. If the Advisory Commission recommends that the change be approved, then the change may take effect if it is subsequently approved by the County. If the Advisory Commission recommends that the change not be approved, then the change may take effect only if the change is subsequently approved by the County and at least two other Parties (except that approval by any two Parties shall be required at any time there are less than four Parties to this Agreement). A change shall take effect at the end of the notice period or, if later, the date of the last Governing Body approval necessary for it to take effect.

**5.09. Time Limitation on Fee Change Approvals.** Any approvals given by a Party to the imposition or increase of any fee, pursuant to the approval requirements in Sections 5.06, 5.07 and 5.08, shall be of no further effect after 90 days from the date of the action granting approval (or after such shorter or longer period as may be made part of the action granting approval), if the imposition or increase so approved has not by such time received all approvals required for its effectiveness.

**5.10. Use of System Revenues and County General Funds.** (a) The County shall use System Revenues solely to carry out the Solid Waste Management Plan Policies and solely for the benefit of the Solid Waste System, including (i) to pay costs of disposing of Solid Waste, (ii) to pay costs of collecting, processing and disposing of Recyclables, (iii) to the extent permitted by law, to pay costs of providing public benefits determined to be provided pursuant to Section 3.02, and (iv) to pay costs of solid waste reduction activities. The County shall not use System Revenues to pay costs of collecting Solid Waste in unincorporated areas of the County.

(b) The County shall in no event be required to use assets or funds other than those of the Solid Waste System to fulfill its obligations under this Agreement, including its obligations under Section 2.04(a) but excluding its obligations under Section 2.05.

**5.11. Risk Management.** The County covenants that it will maintain a practical program of insurance and risk management, with reasonable terms, conditions, provisions and costs, which the County determines (a) will afford the County adequate protection against loss caused by damage to or destruction of the Solid Waste System or any part thereof and (b) will provide reasonable liability protection for bodily injury and property damage resulting from the construction or operation of the Solid Waste System.

Any such insurance policies contracted by the County to provide for the risk coverages required by this Section shall be carried with one or more responsible insurance companies authorized and qualified to assume the risks thereof. The County shall have the right to provide for the risk coverages required by this Section, in whole or in part, by means of a reasonable and prudent program of self-insurance, pooled risk coverages or other alternative means of risk management.

All insurance policies and other risk coverages provided for in this Section shall be for the County's benefit, and the County shall have the exclusive right to receive any amounts recoverable under such coverages. The County shall apply any amounts recovered under such coverages (net of any expenses of collection) in its discretion for the benefit of the Solid Waste System.

**5.12. Solid Waste Reporting: Similar Matters.** The County and the Towns shall cooperate in preparing and submitting any reports that a Party may be required to file with governmental authorities, such as the State's Division of Waste Management. The County shall also be generally responsible for solid waste reporting, planning, regulatory compliance and similar matters.

**5.13. Reservation of County's Rights.** Notwithstanding any provision of the Solid Waste Management Plan Policies or this Agreement to the contrary, the County shall in all events be entitled to operate the Solid Waste System and all its facilities, and may adjust any and all rates, fees and charges, as it may in its reasonable discretion deem reasonably necessary (a) to comply with any requirements of any applicable law or regulation or any court order, administrative decree or similar order of any judicial or regulatory authority, (b) to comply with the requirements of any contracts, instruments or other agreements at any time securing Outstanding System Debt, (c) to pay unfinanceable costs related to the acquisition of the New Solid Waste Management Site, or (d) to pay costs of remediating any adverse environmental conditions at any time existing with respect to the Solid Waste System.

## ARTICLE VI

### Solid Waste Management Advisory Commission

**6.01. Establishment.** There is hereby established the "Orange County Solid Waste Management Advisory Commission."

**6.02. Advisory Commission's Responsibilities.** The Advisory Commission shall advise the County's Governing Board on matters related to the Solid Waste System and the Solid Waste Management Plan Policies. The Advisory Commission's responsibilities include the following:

(a) To recommend programs, policies, expansions and reductions of services, and other matters related to the operation of the Solid Waste System;

(b) To suggest amendments to the Solid Waste Management ~~Plan~~ Policies;

(c) To provide advice to the County Manager for use in the County Manager's developing the proposed annual budget for the Solid Waste System, to review the budget for the Solid Waste System as proposed by the County Manager to the County's Governing Board, and to provide recommendations to the County's Governing Board for the approval or amendment of the proposed budget;

(d) To receive and interpret for the County public input concerning the Solid Waste System and the Solid Waste Management ~~Plan~~ Policies;

(e) To further such mission and goals for the Solid Waste System as the Governing Boards may together adopt from time to time (a copy of the current version of the mission statement and goals appears as Exhibit D);

(f) To advise the County Manager on the hiring of any subsequent department head for the Solid Waste System;

(g) To provide promptly to the County's Governing Body a recommendation concerning any proposal for a change to rates, fees and charges forwarded to the Advisory Commission pursuant to Section 5.08; and

(h) Such other matters as the Advisory Commission may deem appropriate or which may be requested by any Governing Board or the County Manager.

**6.03. Appointment of Members; Terms.** (a) Each Governing Board shall appoint two members to the Advisory Commission. All appointments shall be made within 45 days of the Parties' reaching final agreement on the Open Matters, and each Party shall notify all the other Parties of its appointments within 10 days of making such appointments.

(b) Advisory Commission members shall serve staggered three-year terms. To provide for the staggered terms of the members, the initial appointments by the Parties shall be for the following terms:

|                     |           |         |
|---------------------|-----------|---------|
| <i>County:</i>      | Member A. | 3 years |
|                     | Member B. | 2 years |
| <i>Carrboro:</i>    | Member A. | 2 years |
|                     | Member B. | 3 years |
| <i>Chapel Hill:</i> | Member A. | 3 years |
|                     | Member B. | 1 year  |

*Hillsborough:*           Member A.    1 year  
                                   Member B.    2 years

(c)    The first year of the term of each initial member of the Advisory Commission shall be deemed to expire on December 31, 1998. Thereafter, each year of the term of an Advisory Commission member shall run from January 1 through the subsequent December 31, but each member shall continue to serve until such member's successor has been duly appointed and qualified for office.

(d)    Each Party may establish its own rules and procedures for selecting and appointing Advisory Commission members, except that no staff member of a Party may be appointed as a Advisory Commission member. This Agreement in no way requires that any member be an elected official of the appointing Party. Any elected official of a Party appointed to the Advisory Commission shall be deemed to be serving on the Advisory Commission as a part of the individual's duties of office, and shall not be considered to be serving in a separate office. Any elected official of a Party appointed to the Advisory Commission shall cease to be a member of the Advisory Commission upon such individual's cessation of service as an elected official of such Party, whether or not such member's successor shall be been appointed and qualified for office. Each member of the Advisory Commission (including elected officials) serves at the pleasure of the appointing Party, and may be removed at any time by the appointing Party, with or without cause.

(e)    Any vacancy on the Advisory Commission shall be filled by the Governing Board that appointed the person who vacated the Advisory Commission seat. In the case of a vacancy created during the term of a member, the appointment to fill the vacancy shall be made for the remaining portion of the term in order to preserve the staggered-term pattern.

**6.04. Advisory Commission's Procedures.** The Advisory Commission may adopt its own rules of procedure not inconsistent with the provisions of this Agreement, but the Advisory Commission's procedures shall include the following provisions:

(a)    Each member of the Advisory Commission shall have one vote, except that in the event of the absence of a member, the other member appointed by the same Party as the absent member shall be entitled to cast two votes.

(b)    A number of affirmative votes equal to a majority of the authorized number of Advisory Commission members shall be necessary to take any action.

(c)    The Advisory Commission's presiding officer shall vote as a member of the Advisory Commission, but shall have no additional or tie-breaking vote.

(d)    Representatives of a Party that has given notice of withdrawal as provided in Section 7.02 shall have no vote on any matters that will affect the Solid Waste System beyond

the effective date of such Party's withdrawal, and as to any such matters such members shall not be deemed to be within the authorized number of Advisory Commission members for the purposes of subsection (b) above.

## ARTICLE VII

### Term of Agreement; Withdrawal

7.01. **Term.** This Agreement (a) shall take effect immediately upon its execution and delivery by all the Parties, and (b) shall continue in effect so long as there are at least two Parties to the Agreement, in each case subject to the provisions of Section 1.02.

7.02. **Withdrawal of a Party.** (a) Any Party may withdraw from this Agreement (and thereby cease to be a Party to this Agreement) upon notice given to all the other Parties and subject to the other provisions of this Section.

(b) A withdrawal may be effective only upon the beginning of a Fiscal Year. A Town may withdraw only with at least one year's notice. The County may withdraw only with at least two years' notice.

(c) No withdrawal shall relieve a Party of its obligations under Section 2.05 so long as there is System Debt Outstanding; provided, however, that System Debt first issued or contracted after the date a Party gives notice of withdrawal shall be disregarded for the purposes of this subsection.

(d) No withdrawal shall relieve any Party of its individual liability, if any, under environmental laws or otherwise, related to its respective use or ownership of the Solid Waste System which may accrue or which has accrued prior to the effective date of such Party's withdrawal.

## ARTICLE VIII

### Parties' Representations and Warranties

The Parties hereby represent and warrant, one to each other, but each only as to itself, as follows:

(a) **Valid Existence; Due Authorization.** The Party is a public body validly organized and existing under State law, has full power to enter into this Agreement and has duly authorized, executed and delivered this Agreement.

(b) **Valid Obligation.** This Agreement, when executed and delivered by the Party and assuming its due authorization, execution and delivery by each other Party, will be the legal,



valid and binding obligation of the Party, enforceable in accordance with its terms, except to the extent the same may be limited by the application of insolvency and similar general laws and by the application of equitable principles.

(c) **No Breach of Law or Contract.** Neither the execution and delivery of this Agreement nor the consummation of the transactions contemplated hereby, nor the fulfillment of or compliance with the terms and conditions of this Agreement, (i) to the best of the Party's knowledge, constitutes a violation of any provision of law, rule or regulation governing the Party, or (ii) results in a breach of the terms, conditions or provisions of any contract, lease or other agreement or any order, decree or judgment to which the Party is a party or by which the Party is bound.

(d) **No Litigation.** There is no litigation or any governmental administrative proceeding to which the Party (or any official thereof in an official capacity) is a party that is pending or, to the best of the Party's knowledge after reasonable investigation, threatened with respect to (i) the Party's organization or existence, (ii) its authority to execute and deliver this Agreement or to comply with the terms of this Agreement, (iii) the validity or enforceability of this Agreement or the transactions contemplated hereby, (iv) the title of the Party officers who executed this Agreement, (v) any proceedings relating to the Party's authorization, execution, delivery or performance of this Agreement, or (vi) the undertaking of the transactions contemplated by this Agreement. To the best of the Party's knowledge, there is no reasonable basis existing for any such litigation.

(e) **No Misrepresentation.** No representation, covenant or warranty by the Party in this Agreement is false or misleading in any material respect.

## **ARTICLE IX**

### **Miscellaneous**

9.01. **Amendments.** This Agreement may not be modified or amended unless such amendment is approved by all Parties, is in writing and is signed on behalf of all the Parties.

9.02. **Definitions; Rules of Construction.** All capitalized terms used in this Agreement and not otherwise defined shall have the meanings ascribed thereto in Exhibit A. This Agreement and its terms shall be construed using the rules of construction set forth in Exhibit B.

9.03. **Notices.**

(a) Any notice or other communication required or permitted by this Agreement must be in writing.

(b) Any notice or other communication shall be deemed given (i) on the date delivered by hand or (ii) on the date it is received by mail, as evidenced by the date shown on a United States mail registered mail receipt, in any case addressed as follows:

(A) If to the County, as follows:

Orange County  
Attn: County Manager  
200 South Cameron St.  
Hillsborough, NC 27278

(B) If to Carrboro, as follows:

Town of Carrboro  
Attn: Town Manager  
301 West Main St.  
Carrboro, NC 27510

(C) If to Chapel Hill, as follows:

Town of Chapel Hill  
Attn: Town Manager  
306 North Columbia St.  
Chapel Hill, NC 27516

(D) If to Hillsborough, as follows:

Town of Hillsborough  
Attn: Town Manager  
137 North Churton St.  
Hillsborough, NC 27278

When this Agreement requires that notice be given to more than one Party, the effective date of the notice shall be the last date on which notice is deemed given to any required Party.

(c) Any Party may designate a different address for communications by notice given under this Section to each other Party.

(d) A Party may also designate, by notice to each other Party under this Section, additional addresses to which copies of required notices shall be given. Each Party shall make a good faith effort to send required notices to such additional addressees, but no failure to deliver any such additional notices shall affect the validity of notices properly given to the address designated in subsection (a) or its successor address.

(e) Whenever in this Agreement the giving of notice is required, the giving of such notice may be waived in writing by the Party entitled to receive such notice, and in any such case the giving or receipt of such notice shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

**9.04. Further Instruments.** Upon any Party's request, the Parties shall execute, acknowledge and deliver such further instruments as may be reasonably desired by any Party to carry out more effectively the purposes and intents of this Agreement.

**9.05. Limitation of Rights.** Nothing expressed or implied in this Agreement shall give any person other than the Parties any rights to enforce any provision of this Agreement. There are no intended third-party beneficiaries of this Agreement.

**9.06. Non-Business Days.** When any action is provided in this Agreement to be done on a designated day or within a designated time period, and the designated day or the last day of the designated period is not a Business Day, the action may be done on the next Business Day, with the same effect as if done on the designated day.

**9.07. Survival of Covenants and Representations.** All covenants, representations and warranties made by the Parties in this Agreement shall survive the delivery of this Agreement.

**9.08. Severability.** If any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not invalidate or render unenforceable any other provision of this Agreement; provided, however, that upon the election of any Party, this Agreement shall immediately become void and of no further effect upon such election (except that the provisions of Section 2.05 and Section 7.02(c) shall continue in effect, unless either such Section is among the Sections held unenforceable) if any provisions of Section 2.02, Section 2.04, Section 2.05, Section 5.10 or Article VII are among those held unenforceable.

**9.09. Governing Law.** The parties intend that this Agreement and all rights and obligations provided for in this Agreement, including matters of construction, validity and performance, shall be governed by North Carolina law.

**9.10. Entire Contract.** This Agreement, including the Exhibits, constitutes the entire agreement between the Parties with respect to its subject matter.

**9.11. Counterparts.** This Agreement may be signed in several counterparts, including separate counterparts. Each shall be an original, but all of them together constitute the same instrument.

**9.12. Recordable Form.** As this Agreement limits the Parties' rights to dispose of their respective ownership interests in the Greene Tract, any Party may cause this Agreement to be filed in the real property records in the office of the Register of ~~Deed~~ Deeds of Orange County.

IN WITNESS WHEREOF, each of the Parties has caused this Agreement to be executed in its corporate name by its duly authorized officers, all as of the date first above written.

**ORANGE COUNTY, NORTH CAROLINA**

(SEAL)

By: \_\_\_\_\_  
Chair, Board of Commissioners

ATTEST:

\_\_\_\_\_  
Clerk, Board of Commissioners

**TOWN OF CARRBORO, NORTH CAROLINA**

(SEAL)

By: \_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

**TOWN OF CHAPEL HILL,  
NORTH CAROLINA**

(SEAL)

By: \_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

**TOWN OF HILLSBOROUGH,  
NORTH CAROLINA**

(SEAL)

By: \_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
Town Clerk

[Interlocal Agreement Concerning Solid Waste Management Matters, Dated as of November 1, 1997]

**EXHIBIT A****DEFINITIONS**

For all purposes of this Agreement, the following terms have the following meanings, unless the context clearly indicates otherwise.

**"Advisory Commission" means the Orange County Solid Waste Management Advisory Commission created pursuant to Article VI.**

**"Agreement"** means this Interlocal Agreement Concerning Solid Waste Management Matters, as it may be duly amended and supplemented from time to time.

**"Business Day"** means any day (a) other than a day on which national banks are required or authorized to close and (b) on which the New York Stock Exchange is not closed.

**"Carrboro"** means the Town of Carrboro, North Carolina.

**"Chapel Hill"** means the Town of Chapel Hill, North Carolina.

**"Closing"** means the consummation of the Transfer by the execution and delivery of the Transfer Agreement.

**~~"Commission" means the Orange County Solid Waste Management Commission created pursuant to Article VI.~~**

**"County"** means Orange County, North Carolina.

**"County Manager"** means the County's chief administrative officer.

**"County Recyclables"** means all materials processed by the County for recycling and not disposed of at System Management Facilities, as the same shall be established and amended from time to time under the Solid Waste Management Plan **Policies**.

**"Existing System Assets"** means all assets of the Solid Waste System existing as of the Closing, including, without limitation, the existing landfill, all other land and buildings, all equipment, including rolling stock, all licenses, permits and other governmental authorizations, all contracts, all customer records, all bank and other business records, and all cash and investments, including the capital reserve account currently maintained by Chapel Hill on behalf of the Landfill Owners' Group, but expressly excluding any interest in the Greene Tract.

**"Fiscal Year"** means the County's fiscal year beginning July 1, or such other fiscal year as the County may lawfully establish.

**"Governing Board"** means, for any Party, its governing board of elected officials.

**"Greene Tract"** means the parcel of land comprising approximately 169 acres lying south of Eubanks Road described in Plat Book 14, Page 143 and Plat Book 15, Page 138, Orange County Registry, as more specifically described in Exhibit F.

**"Hillsborough"** means the Town of Hillsborough, North Carolina.

**"Material Financial Change" has the meaning assigned in Section 4.02(d).**

**"Mixed Solid Waste Tipping Fee"** means the fee of that name assessed for disposing mixed solid waste at the existing landfill, or any successor to that fee.

**"New Solid Waste Management Site"** means the location of the new System Management Facilities which are expected to be needed to serve the solid waste disposal needs of the County, the Towns and all persons and organizations within their jurisdictions.

**"Open Matters"** has the meaning assigned in Section 1.02.

**"Other Recyclables"** means materials which would otherwise constitute Solid Waste, but which are to be delivered to some other entity and processed for recycling. For any material to constitute Other Recyclables, however, the entity to which the material is to be delivered must represent that such materials are intended to be processed for use in new products. Material will not constitute Other Recyclables, for example, if the entity to which it is to be delivered intends to re-deliver the material to some other disposal facility (such as a landfill or incinerator), whether or not such material is intended to be subject to further processing before disposal.

**"Parties"** means, collectively, the County and the Towns, and **"Party"** means any one of them individually.

**"Solid Waste"** means all materials accepted by the County for disposal at System Management Facilities, as the same shall be established and amended from time to time under the Solid Waste Management ~~Plan~~ **Policies** (subject to the provisions of Section 5.01(b)), which therefore does not include County Recyclables.

**"Solid Waste Management Plan" Policies** means, collectively, all policies related to the Solid Waste System and coordinated solid waste management for the County, the towns and the persons and organizations in their jurisdictions, as the same may exist from time to time; it includes, as of the date of this Agreement, all such policies now in place and the policies incorporated in the framework attached as Exhibit E.

**"Solid Waste System"** means all assets, including both real and personal property, used from time to time in the conduct of the functions of collecting and processing Recyclables, reducing solid waste, disposing of Solid Waste and mulching, composting and re-using Solid

Waste, and includes both (a) the Existing System Assets and (b) all moneys and investments related to such functions.

**"State"** means the State of North Carolina.

**"System Debt"** means all obligations incurred or assumed by the County in connection with the ownership or operation of the System for payments of principal and interest with respect to borrowed money, without regard to the form of the transaction, and specifically including leases or similar financing agreements which are required to be capitalized in accordance with generally accepted accounting principles. System Debt is **"Outstanding"** at all times after it is issued or contracted until it is paid.

**"System Employees"** means employees of Chapel Hill directly engaged in carrying out the business of the Solid Waste System (but expressly not including employees of Chapel Hill's sanitation department).

**"System Management Facilities"** means those assets of the Solid Waste System used to provide final disposal of solid waste, such as landfills.

**"System Revenues"** means all amounts derived by the County from the imposition of rates, fees and charges for the use of, and for the services furnished by, the Solid Waste System.

**"Towns"** means, collectively, Carrboro, Chapel Hill and Hillsborough.

**"Transfer"** means the conveyance of the Existing System Assets to the County pursuant to the Transfer Agreement in accordance with Article II.

**"Transfer Agreement"** has the meaning assigned in Section 2.01.

**EXHIBIT B****RULES OF CONSTRUCTION**

For all purposes of this Agreement, unless the context clearly requires otherwise,

- (a) an accounting term not otherwise defined has the meaning assigned to it in accordance with generally accepted accounting principles;
- (b) references to Articles and Sections are to the Articles and Sections of this Agreement;
- (c) words importing the singular shall include the plural and vice versa;
- (d) the headings in this Agreement are solely for convenience of reference; the headings shall not constitute a part of this Agreement, nor shall they affect its meanings, construction or effect;
- (e) all references to any Party shall be deemed to include any successor to the general functions, powers and properties of such Party; and
- (f) any references to approvals or other actions by any Party shall be deemed to be references to actions taken by the Party's Governing Board or taken pursuant to express, specific direction given by the Party's Governing Board.



**EXHIBIT C****DOCUMENTS AND INSTRUMENTS FOR TRANSFER**

- (a) General warranty deed for the transfer of Carrboro's and Chapel Hill's real property interests in Existing System Assets;
- (b) Titles to vehicles that are subject to State titling laws, properly endorsed for transfer;
- (c) Bills of Sale to convey all ownership rights in all other personal property constituting any portion of Existing System Assets;
- (d) An Assignment and Assumption Agreement, transferring to the County all rights under existing contracts that constitute any portion of the Existing System Assets;
- (e) All instruments necessary and appropriate to transfer to the County all permits, licenses and other governmental authorizations now being utilized in connection with the operation of the System;
- (f) A detailed listing of the assets being transferred; and
- (g) Such other documents and instruments as any Party may reasonably request.

**EXHIBIT D**

**MISSION STATEMENT AND GOALS**

**EXHIBIT E**

**SOLID WASTE FRAMEWORK**

**EXHIBIT F**

**LEGAL DESCRIPTION OF THE GREENE TRACT**

**STATE OF NORTH CAROLINA****ORANGE COUNTY**

I, a Notary Public of such County and State, certify that \_\_\_\_\_ and \_\_\_\_\_ personally came before me this day and acknowledged that they are the Chair and Clerk, respectively, of the Board of Commissioners of Orange County, North Carolina, and that by authority duly given and as the act of Orange County, North Carolina, the foregoing instrument was signed in the County's name by such Chair, sealed with its corporate seal and attested by such Clerk.

WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 1997.

[SEAL]

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

**STATE OF NORTH CAROLINA****ORANGE COUNTY**

I, a Notary Public of such County and State, certify that \_\_\_\_\_ and \_\_\_\_\_ personally came before me this day and acknowledged that they are the Mayor and Town Clerk, respectively, of the Town of Carrboro, North Carolina, and that by authority duly given and as the act of such Town, the foregoing instrument was signed in the Town's name by such Mayor, sealed with its corporate seal and attested by such Town Clerk.

WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 1997.

[SEAL]

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

**STATE OF NORTH CAROLINA**

**ORANGE COUNTY**

I, a Notary Public of such County and State, certify that \_\_\_\_\_ and \_\_\_\_\_ personally came before me this day and acknowledged that they are the Mayor and Town Clerk, respectively, of the Town of Chapel Hill, North Carolina, and that by authority duly given and as the act of such Town, the foregoing instrument was signed in the Town's name by such Mayor, sealed with its corporate seal and attested by such Town Clerk.

WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 1997.

[SEAL]

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_

**STATE OF NORTH CAROLINA**

**ORANGE COUNTY**

I, a Notary Public of such County and State, certify that \_\_\_\_\_ and \_\_\_\_\_ personally came before me this day and acknowledged that they are the Mayor and Town Clerk, respectively, of the Town of Hillsborough, North Carolina, and that by authority duly given and as the act of such Town, the foregoing instrument was signed in the Town's name by such Mayor, sealed with its corporate seal and attested by such Town Clerk.

WITNESS my hand and official stamp or seal, this \_\_\_\_ day of \_\_\_\_\_, 1997.

[SEAL]

\_\_\_\_\_  
Notary Public

My commission expires: \_\_\_\_\_



## **ATTACHMENT 8**

**Interlocal Agreement - Summary of Points of Consensus**



# INTERLOCAL AGREEMENT - SUMMARY OF POINTS OF CONSENSUS

1

| <b>ARTICLE I - Purpose of Agreement: Conditions and Effectiveness</b> | <b>General Consensus Among 3 Governments</b> |
|---|--|
| 1.01 Purpose  | YES  |
| 1.02 Conditions   |  |
| a)  | NO   |
| b)  | YES  |
| 1.03 Diligent, Good Faith Bargaining                                  | YES  |
| 1.04 Deadline for Negotiations  | NO   |

| <b>ARTICLE II - County's Acquisition of Existing Solid Waste System</b> | <b>General Consensus</b> |
|---|--------------------------|
| 2.01 County's Acquisition: Consideration                                | YES                      |
| 2.02 Existing System Assets   |                          |
| a)  | YES                      |
| b)  | NO                       |
| 2.03 Greene Tract   |                          |
| a)  | NO                       |
| b)  | NO                       |
| c)  | NO                       |
| d)  | NO                       |
| 2.04 Liabilities  |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |
| d)  | YES                      |
| 2.05 Delivery of Solid Waste and Recyclables                            |                          |
| a)  | YES                      |
| b)  | YES                      |
| 2.06 Treatment of Solid Waste System Employees                          |                          |
| a)  | NO                       |
| b)  | NO                       |

# INTERLOCAL AGREEMENT - SUMMARY OF POINTS OF CONSENSUS

| <b>ARTICLE II - County's Acquisition of Existing Solid Waste System</b> | <b>General Consensus</b> |
|---|--------------------------|
| 2.07 Closing Procedure  |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |

| <b>ARTICLE III - Selection of New Solid Waste Management Site and Related Matters</b> | <b>General Consensus</b> |
|---|--------------------------|
| 3.01 Selection of New Solid Waste Management Site                                     |                          |
| a)  | NO                       |
| b)  | NO                       |
| 3.02 Benefits to Communities  |                          |
| a) Existing Landfill Site   | NO                       |
| b) New Solid Waste Management Site  | YES                      |
| c) In General   | YES                      |

| <b>ARTICLE IV - Development of Solid Waste Management Policy</b> | <b>General Consensus</b> |
|--|--------------------------|
| 4.01 Previous Cooperation in Policy Development                  | YES                      |
| 4.02 Future Policy Development                                   |                          |
| a)   | YES                      |
| b)   | YES                      |
| c)   | YES                      |
| d)   | YES                      |
| e)   | YES                      |
| f)   | YES                      |

| <b>ARTICLE V - County's Operation of the Solid Waste System</b> | <b>General Consensus</b> |
|---|--------------------------|
| 5.01 Solid Waste System Operation                               |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |
| d)  | YES                      |

# **INTERLOCAL AGREEMENT - SUMMARY OF POINTS OF CONSENSUS**

| <b>ARTICLE V - County's Operation of the Solid Waste System</b> | <b>General Consensus</b> |
|---|--------------------------|
| 5.02 Compliance with Law  | YES                      |
| 5.03 Budget   | YES                      |
| 5.04 Records, Accounts and Audits: Other Reports                |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |
| 5.05 Rates, Fees and Charges                                    |                          |
| a)  | YES                      |
| b)  | YES                      |
| 5.06 Mixed Solid Waste Tipping Fee                              |                          |
| a)  | YES                      |
| b)  | YES                      |
| 5.07 Other Governmental Fees                                    |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |
| d)  | YES                      |
| 5.08 Other Fees   | YES                      |
| 5.09 Time Limitation on Fee Change Approvals                    | YES                      |
| 5.10 Use of System Revenues and County General Funds            |                          |
| a)  | YES                      |
| b)  | YES                      |
| 5.11 Risk Management  | YES                      |
| 5.12 Solid Waste Reporting: Similar Matters                     | YES                      |
| 5.13 Reservation of County's Rights                             |                          |
| a)  | YES                      |
| b)  | YES                      |
| c)  | YES                      |
| d)  | YES                      |

# INTERLOCAL AGREEMENT - SUMMARY OF POINTS OF CONSENSUS

4

| ARTICLE VI - Solid Waste Management Advisory Commission | General Consensus |
|---|-------------------|
| 6.01 Establishment                                      | YES               |
| 6.02 Advisory Commission's Responsibilities             | YES               |
| a)  | YES               |
| b)  | YES               |
| c)  | YES               |
| d)  | YES               |
| e)  | YES               |
| f)  | YES               |
| g)  | YES               |
| h)  | YES               |
| 6.03 Appointment of Members: Terms                      | YES               |
| a)  | YES               |
| b)  | YES               |
| c)  | YES               |
| d)  | YES               |
| e)  | YES               |
| 6.04 Advisory Commission's Procedures                   | YES               |
| a)  | YES               |
| b)  | YES               |
| c)  | YES               |
| d)  | YES               |

| ARTICLE VII - Terms of Agreement: Withdrawal | General Consensus |
|--|-------------------|
| 7.01 Term                                    | YES               |
| 7.02 Withdrawal by a Party                   | YES               |
| a)   | YES               |
| b)   | YES               |
| c)   | YES               |
| d)   | YES               |

## INTERLOCAL AGREEMENT - SUMMARY OF POINTS OF CONSENSUS

| <b>ARTICLE VIII - Parties Representations and Warranties</b> | <b>General Consensus</b> |
|--|--------------------------|
| a) Valid Existence: Due Authorization                        | YES                      |
| b) Valid Obligation  | YES                      |
| c) No Breach of Law or Contract                              | YES                      |
| d) No Litigation   | YES                      |
| e) No Misrepresentation                                      | YES                      |

| <b>ARTICLE IX - Miscellaneous</b>       | <b>General Consensus</b> |
|---|--------------------------|
| 9.01 Amendments                         | YES                      |
| 9.02 Definitions: Rules of Construction | YES                      |
| 9.03 Notices                            |                          |
| a)                                      | YES                      |
| b)                                      | YES                      |
| c)                                      | YES                      |
| d)                                      | YES                      |
| e)                                      | YES                      |
| 9.04 Further Instruments                | YES                      |
| 9.05 Limitation of Rights               | YES                      |
| 9.06 Non-Business Days                  | YES                      |
| 9.07 Survival of Covenants              | YES                      |
| 9.08 Severability                       | YES                      |
| 9.09 Governing Law                      | YES                      |
| 9.10 Entire Contract                    | YES                      |
| 9.11 Counterparts                       | YES                      |
| 9.12 Recordable Form                    | YES                      |



## **ATTACHMENT 9**

**Interlocal Agreement: Points on Which Consensus Has Not Been Reached**

## Interlocal Agreement: Points On Which Consensus Has Not Been Reached

- 1.02 (a) no provision of this Agreement, other than the requirement to bargain as described in Section 1.03, shall become effective until the Parties have selected the New Solid Waste Management Site; and
- 1.02 (b) ...  
The selection of the New Solid Waste Management Site and the approval by the Governing Boards of Carrboro, Chapel Hill and the County of a substantially final form of the Transfer Agreement are referred to in this Agreement as the "Open Matters."
- 1.04 Deadline for Negotiations. This Agreement shall automatically terminate on December 1, 1997, unless each Party's Governing Board has adopted an appropriate resolution referencing this Agreement and stating that the Open Matters have been resolved to such Party's satisfaction.
- 2.02 (b) The Parties agree that they do not intend, by the Transfer, to revive any easement across the Greene Tract for the benefit of the property known as the "Neville Tract."
- 2.03 (a) Greene Tract. (a) The parties agree that neither the Transfer nor any other provision of this Agreement shall or does effect any change in the status of the ownership of the Greene Tract.
- 2.03 (b) Carrboro, Chapel Hill, and the County, as the current owners of the Greene Tract, agree to bargain together in good faith and with all due diligence, and to use their respective best efforts, to determine an ultimate use or disposition of the Greene Tract before January 1, 2003. During this period, no Party shall take any action to force any sale or division of the Greene Tract, nor shall any Party take any action to sell, mortgage or otherwise transfer all or any part of its ownership interest in the Greene Tract.
- 2.03 (c) If the owners of the Greene Tract have not reached an agreement as to the ultimate use or disposition of the Greene Tract by January 1, 2000, then the County, for itself and as agent for the other owners, shall forthwith proceed to offer and sell all the Greene Tract in fee simple for cash to the highest bidder therefore, in such manner as the County may determine in its reasonable discretion.
- 2.03 (d) The County shall promptly apply the proceeds of any sale made pursuant to subsection (c) above in the following manner:
  - (i) First, to pay the expenses of the sale;
  - (ii) Second, to pay to the Solid Waste System enterprise fund then maintained by the County pursuant to Section 5.04, the sum of (a) \$608,823, being the original purchase price of the Greene Tract, plus (b) uncompounded interest on such amount at the annual rate of 6% from March 30, 1984, to the closing date of any sale; and
  - (iii) Any remainder shall be distributed in the following proportions:
    - (A) To Carrboro, 14%
    - (B) To Chapel Hill, 43%; and
    - (C) To the County, 43%.
- 2.06 (a) Treatment of Solid Waste System Employees. (a) All of the System



Employees will be transferred to the County and become County employees subject to the supervision of the County Manager in the same fashion as other County employees.

**2.06 (b)** The Parties acknowledge that it is an important objective of this Agreement that the current total compensation package for System Employees be maintained at a substantially equivalent level through the Transfer, although the combination of salary and benefits for any employee may change. The Parties recognize that all components of compensation to System Employees after the Transfer will be subject to changes in salaries and benefits in the same fashion as other County employees. The County and Chapel Hill shall develop a detailed schedule comparing the total pre-Transfer and post-Transfer compensation for each System Employee in connection with the Transfer Agreement. Chapel Hill shall send a copy of such schedule to Carrboro when the schedule is complete.

**3.01 (a)** Selection of New Solid Waste Management Site. (a) The Parties shall work together to select a New Solid Waste Management Site within Orange County.

**3.01 (b)** For the purposes of this Agreement, "selecting a New Solid Waste Management Site" means (i) completion of all public meetings or hearings required by law or regulation prior to the filing of an application for a State permit to construct a solid waste landfill and (ii) the adoption by each Governing Board of a resolution designating the same real property as the real property as to which such permit should be sought.

**3.02 (b)** New Solid Waste Management Site -- The Parties shall cooperate to provide reasonable public benefits to the community of residents and property owners in the neighborhood of the New Solid Waste Management Site, in recognition of the effects that operation of a landfill or other solid waste management or disposal site may be perceived to have on such community.

This process shall include facilitated discussions among persons belonging to such community, members of the Advisory Commission selected by the Advisory Commission and at least one member of each Governing Board (as each Governing Board shall designate for itself) who is not a member of the Advisory Commission. This working group shall determine a proposed list of community benefits to be provided.

Each Party shall then provide for its Governing Board to discuss the proposed list, and shall provide for such legal and other staff analysis of the proposed list as it may deem appropriate. After each Governing Board has held its own discussions of the proposed list to its own satisfaction, the Parties shall provide for selected members of each Governing Board (as each Governing Board shall designate for itself) to meet as a working group to discuss the respective views of the Governing Boards. Through this working group and continued discussion by the Governing Boards, the Parties shall work together, diligently and in good faith, to reach an agreement as to community benefits to be provided. The process of determining community benefits shall continue to include participation by persons belonging to the relevant community.

Final determination of the public benefits to be provided, the sources for their payment and the mechanisms for providing the benefits shall be made only by

agreement of all the Parties.

- 5.10 (b)** The County shall in no event be required to use assets or funds other than those of the Solid Waste System to fulfill its obligations under this Agreement, including its obligations under Section 2.04(a) but excluding its obligations under Section 2.05.
- 6.03 (c)** The first year of the term of each initial member of the Advisory Commission shall be deemed to expire on December 31, 1998. Thereafter, each year of the term of an Advisory Commission member shall run from January 1 through the subsequent December 31, but each member shall continue to serve until such member's successor has been duly appointed and qualified for office.

## **ATTACHMENT 10**

**Memo from John Link to BOCC Re: Conditions for County's Assumption of Lead role in Solid Waste Management**

## MEMORANDUM

**TO:** Orange County Board of Commissioners

**FROM:** John Link, County Manager

**DATE:** November 26, 1997

**RE:** Conditions for County's Assumption of Lead Role in Solid Waste Management

At the November 20 solid waste work session, the Board indicated that it was important to communicate to the other governing boards the conditions under which the County Commissioners would be willing to take lead responsibility for solid waste management in the County. There appears to be consensus among the Commissioners that there are at least six conditions which the Board requires, as embodied in the 'six principles' restated below:

1. Enterprise fund operation, i.e. revenues must meet or exceed expenditures.
2. The Greene Tract remains a landfill asset.
3. No restrictions on acquisition of additional acreage at the current landfill.
4. Whoever is responsible for county-wide Solid Waste System needs committed partners to make an enterprise operation economically viable.
5. All community benefits to be provided should be funded through the landfill enterprise.
6. Seek a solution in which reduction of solid waste and the economic viability of the solid waste facility are in concert - right now, when solid waste is reduced, the landfill suffers financially.

Commissioners indicated that they have other conditions in mind as well. The staff, Attorney, and I have met, along with Gayle Wilson, and developed the following information and list of questions and issues that we suggest you review as you consider the conditions you believe should apply to the County's possible assumption of overall solid waste management responsibility.

### GOVERNANCE

under what conditions are you willing to govern solid waste functions?

BOCC only, with no advisory board?

BOCC w/advisory board (N-1 decision making)? - if so, other jurisdictions must be committed/long-term contracted customer to participate on advisory board, and BOCC makes final decisions

different version of current LOG model w/N-1 decision making?  
 under what conditions would you be willing to have someone else govern - if BOCC doesn't do it, are you willing to submit to same conditions we ask of others, especially Chapel Hill?  
 if not, what are the reasons (e.g. only BOCC represents all the population in County)?  
 what contractual arrangements would you require of partners?

### LAND USE POLICIES

zoning of Greene Tract - what degree of assurance can we obtain that County could use it for landfill related purposes? (Gene indicates under current Chapel Hill zoning, it is "rural transition" - this would allow a landfill, with a Special Use Permit approved by Chapel Hill)  
 how could County acquire zoning authority over Greene Tract (and do we want to pursue this)? - Geof says no property under County zoning authority immediately adjacent to this  
 zoning control of the Greene Tract - what zoning do you want if Chapel Hill has zoning authority?  
 what zoning do you want if OC has zoning authority? (property would need to be in rural buffer; would require Joint Planning Agreement be amended to include this property in rural buffer - that would require approval by Chapel Hill, Carrboro, and County; rural buffer does permit a landfill with a Class A Special Use Permit, which would be approved solely by BOCC)  
 will you allow Chapel Hill to have that authority if they run landfill?  
 are governments willing to pursue elimination of turboprops from Horace Williams Airport? (Gayle to produce footprint of Greene Tract landfill usable area, considering buffers - Gayle says he will also prepare short memo on regulatory feasibility of siting solid waste facilities (MRF, transfer station, C&D disposal) on the Greene Tract)  
 what zoning/watershed/rural buffer limitations would you impose on landfill siting or other SW facility siting? (LONG TERM ISSUE)

### OPERATIONS

what staffing/management structure? (importance of Landfill staff having "one boss")  
 transfer of landfill staff/resources per draft interlocal agreement?  
 contract w/Chapel Hill to handle solid waste functions w/existing staff, as governed by County?  
 leave Chapel Hill w/present operation?  
 county hire own employees?  
 county contract w/private enterprise?  
 budgetary considerations?  
 decision on waste disposal approach? MRF, C&D, landfill siting (if any) or transfer station?  
 factors about shipping out waste - while there is lots of landfill space in the Southeast now, the glut of landfill space likely to disappear; may get lucrative contract now, but contractor may fill up their landfill that your waste is being shipped to, and they may ship your waste instead to a different landfill, perhaps one with a history of violations - then, you have to look for a different contract at a much higher rate; reasonable assumption is that once you get out of landfill business, you're out of it for good  
 are Commissioners willing to pick up landfill siting process on their own? to start over on their own? examining any other potential site? picking either existing sites, or some new site? (Gayle points out if the answer is yes, it is important to start now; if no, we can build a transfer station in 2 years) (Gayle says if we stop using landfill for a period of 4-5 years,

would have to be repermited - permit comes up every five years - he needs to check timeframe)

is BOCC willing to cease use of Eubanks Road now to buy more time?

is there some way of substantially decreasing the use now of the current landfill to preserve space, without triggering State repermited requirements? (Gayle mentions if landfill cell will be inactive for a year, must use 18 inches of cover rather than 6 - eats a lot of "airspace")

whoever is doing long term planning must have access to landfill budget to fund short term decisions

need assets in one name, not Chapel Hill, Carrboro, and County

## COMMUNITY BENEFITS

decisions have been made on nine of fourteen proposed benefits, with some already being implemented

consensus at Assembly of Governments meeting not to pursue sewer extensions

what to do about water line extensions?

although the recent landfill leachate report "Groundwater Risk Assessment for the Orange

Regional Landfill" does not provide a scientific or technical basis for providing an enterprise funded extension of water utilities, the report does not completely eliminate that possibility; the conclusion to the report which states that "potential shallow ground water contamination at the Orange Regional Landfill does not appear to pose an immediate threat to surrounding residential water supply wells" leaves open the possibility of long term contamination of the bedrock or deep ground water aquifers; as the deep aquifers are those which are the water source for local water supply wells, this could allow the use of the enterprise fund to pay for the extension of utilities as insurance against potential future pollution; does the BOCC wish to pursue this option? would the BOCC prefer that additional study of this issue be folded into the USGS ground water analysis or some other study which could perhaps provide a better indication of the long-term probabilities for leachate contamination of the deep or bedrock aquifers?

if at some point governments decide to pursue water line extensions, where does the money come from? do we start reserving a portion of tip fees now? fund all in one fiscal year with a corresponding one time impact on the tip fee?

## FINANCIAL

which jurisdiction(s) responsible for 1998-99 budget approval?

what mix of revenue sources beyond tipping fees, but still in enterprise revenue concept. will you consider? tip fees only? solid waste availability fee? weight/volume based fees, or "pay-per-throw"? fees for services?

## RECYCLING

are you willing to pursue the established SW reduction goals - do they need to be revisited?

are we willing to incur the costs associated with 61% reduction by 2006?

what would be the threshold for decisions to pursue goals vs. cost?

must recycling always be paid by tipping fees - what revenue sources are permissible for recycling?

We have asked the Landfill staff to provide us with information about what is expected to be accomplished, and included in the budget, for the current and upcoming fiscal years regarding implementation of the integrated solid waste management plan. We realize this information is important to you as you deliberate about future solid waste direction. Please consider the information presented and questions posed above and let me have your feedback within the next two weeks. Staff and I could then develop a composite of what the majority of the Board members seem to favor on each major point. We would prepare this composite for your review. After further discussion, the Board would hopefully agree on conditions under which the County

would assume the lead role for solid waste management and convey those to the other municipal governing boards.



## **ATTACHMENT 11**

**Employee Transition from Town of Chapel Hill to Orange County Employment**

4/14/98

## **Employee Transition from Town of Chapel Hill to Orange County Employment**

1. Over the last year, Orange County Personnel staff and Town of Chapel Hill staff have completed a number of activities related to identifying, assessing and working through transition issues involved if the Town of Chapel Hill Solid Waste employees became Orange County employees. Activities completed include:
  - a. Drafting of requests for proposals and contracting with two consultants to assist in the transition issues. This included:
    - (1) Selection of a consultant to identify and recommend the appropriate classification and salary grade assignment for the involved Town positions within the Orange County classification and pay plan.
    - (2) Selection of a consultant to compare the Town of Chapel Hill and Orange County employee benefits, analyze the differences and recommend the benefits and pay to maintain the current total compensation package for each employee at a substantially equivalent level.
  - b. Completion of the classification study by the consultant. This included receipt of updated position descriptions, review of the results with County and Town personnel staff and the Solid Waste Management Director and resolution of concerns.
  - c. Review and detailed comparison of the Town and County benefits by the consultant, analysis of the results, and identification of recommended handling.
2. There are a number of activities remaining to complete any employee transition to Orange County employment including:
  - a. Updating of the classification, pay and benefits analysis done earlier, and reviewing the final outcomes of the classification, pay and benefits review with the County Manager and Town Manager.
  - b. Reporting on the proposed pay and benefits handling to the Board of Commissioners and requesting approval for the classification plan amendments and benefits handling necessary for the proposed pay and benefits package.
  - c. Extensive employee communications including group and individual meetings to explain the planned handling, to provide each employee with a full and individualized information package and to respond to questions.
3. Upon the transition and with the pay and benefits handling approved to provide a substantially equivalent total compensation package for the employees, the employees would become Orange County employees and be covered by the County's personnel policies and benefits programs.

## **ATTACHMENT 12**

**Orange County Integrated Solid Waste Management Plan – Current Recycling Programs versus  
Proposed Additions (Updated table presented at BOCC Work Session)**

ORANGE COUNTY INTEGRATED SOLID WASTE MANAGEMENT PLAN  
Current Recycling Programs versus Proposed Additions

| Program   | Current System (1995-96) |                     |                | Additions & Expansions |                     |              | New System (est. 2006) <4> |                     |                |
|---|--------------------------|---------------------|----------------|------------------------|---------------------|--------------|----------------------------|---------------------|----------------|
| Population Estimate   | 105,821                  |                     |                | 105,821                |                     |              | 125,300                    |                     |                |
|   | Tons                     | Cost <2>            | Cost/ton       | Tons                   | Cost                | Cost/ton     | Tons                       | Cost <3>            | Cost/ton       |
| <b>Recycling Collections &amp; Programs</b>   |                          |                     |                |                        |                     |              |                            |                     |                |
| Urban curbside collection   | 2,452                    | \$ 334,200          | \$ 136         | 2,864                  | \$ 202,533          | \$ 71        | 5,316                      | \$ 536,733          | \$ 101         |
| Rural curbside collection   | 551                      | \$ 122,600          | \$ 223         | 2,179                  | \$ 240,463          | \$ 110       | 2,730                      | \$ 363,053          | \$ 133         |
| Commercial collection   | 369                      | \$ 30,000           | \$ 81          | 10,855                 | \$ 808,183          | \$ 74        | 11,224                     | \$ 838,183          | \$ 75          |
| Multi family collection   | 895                      | \$ 193,800          | \$ 217         | 1,332                  | \$ 149,700          | \$ 112       | 2,227                      | \$ 343,500          | \$ 154         |
| C&D Recycling   |                          |                     |                | 12,831                 | \$ 615,425          | \$ 48        | 18,969                     | \$ 615,425          | \$ 32          |
| Additional waste prevention efforts   |                          |                     |                |                        | \$ 125,750          |              |                            | \$ 125,750          |                |
| Other OCR Recycling Programs  | 4,081                    | \$ 591,621          | \$ 145         |                        |                     |              | 4,081                      | \$ 591,621          | \$ 145         |
| <b>Subtotal OCR Recycling Collections</b>   | <b>8,348</b>             | <b>\$ 1,272,221</b> | <b>\$ 152</b>  | <b>30,061</b>          | <b>\$ 2,142,044</b> | <b>\$ 71</b> | <b>44,548</b>              | <b>\$ 3,414,205</b> | <b>\$ 77</b>   |
| <b>Recycling Processing (Commingled MRF)</b>  | <b>&lt;1&gt;</b>         |                     |                |                        | <b>\$ 523,089</b>   | <b>\$ 30</b> |                            | <b>\$ 776,530</b>   | <b>\$ 30</b>   |
| <b>Subtotal OCR Recycling System</b>  | <b>8,348</b>             | <b>\$ 1,272,221</b> | <b>\$ 152</b>  | <b>30,061</b>          | <b>\$ 2,665,143</b> | <b>\$ 89</b> | <b>44,546</b>              | <b>\$ 4,190,795</b> | <b>\$ 94</b>   |
| <b>Disposal (MSW Landfilled) &lt;5&gt;</b>  |                          |                     |                |                        |                     |              |                            |                     |                |
| <b>C&amp;D Disposal</b>   | <b>31,452</b>            |                     |                | <b>(30,061)</b>        | <b>\$ (711,861)</b> |              | <b>47,794</b>              |                     |                |
| <b>Other Materials Managed</b>  | <b>557</b>               |                     |                |                        |                     |              | <b>18,621</b>              |                     |                |
| <b>Total Materials Managed</b>  | <b>90,381</b>            | <b>\$ 2,140,280</b> | <b>\$ 24</b>   |                        |                     |              | <b>67,107</b>              | <b>\$ 3,432,491</b> | <b>\$ 51</b>   |
| MSW Pounds per capita   | 1708                     |                     |                | (637)                  |                     |              | 1071                       |                     |                |
| Base Year (91-92) MSW Lbs./capita   | 2,722                    |                     |                |                        |                     |              | 2,722                      |                     |                |
| <b>MSW Reduction v. 91-92 Base-Year</b>   | <b>37%</b>               |                     |                |                        |                     |              | <b>61%</b>                 |                     |                |
| <b>Cost per Ton Managed</b>   |                          |                     |                |                        |                     |              |                            |                     |                |
| MSW and C&D Landfilled  | 90,381                   | \$ 2,140,280        | \$23.68        |                        |                     |              | 67,107                     | \$ 3,432,491        | \$51.15        |
| Recycling (Collection and Processing)   | 8,348                    | \$ 1,272,221        | \$152.41       |                        |                     |              | 44,546                     | \$ 4,190,795        | \$94.08        |
| <b>Total</b>  | <b>98,729</b>            | <b>\$ 3,412,501</b> | <b>\$34.56</b> |                        |                     |              | <b>111,653</b>             | <b>\$ 7,623,286</b> | <b>\$68.28</b> |
| <b>Notes:</b>   |                          |                     |                |                        |                     |              |                            |                     |                |
| <1> Costs represent annual costs which include amortized capital costs.   |                          |                     |                |                        |                     |              |                            |                     |                |
| <2> Current System Recycling Processing costs for source separated materials are included in collection contracts.  |                          |                     |                |                        |                     |              |                            |                     |                |
| <3> New System Recycling/C&D Processing costs include commingled processing of both current (8,348 tons) and additional (30,061 tons) materials.          |                          |                     |                |                        |                     |              |                            |                     |                |
| <4> 2006 is the projected date for achieving the 61% recycling goal and the first operating year of a new MSW and C&D landfill. Costs in current dollars. |                          |                     |                |                        |                     |              |                            |                     |                |
| <5> Landfill Cost Data, Source: Joyce Engineering Study for 50-Yr. Facility (2/24/95) presented to Landfill Owners Group. Adjusted for Waste Reduction.   |                          |                     |                |                        |                     |              |                            |                     |                |
| <6> Construction and Demolition Cost Data, Source: Memorandum to Landfill Owners Group, 1/22/97.  |                          |                     |                |                        |                     |              |                            |                     |                |

Shaded area highlights potential impacts of implementing waste reduction elements of the integrated system under consideration

## **ATTACHMENT 13**

**Memo from John Link to County Landfill Owners Group Representatives Re:  
Development of Materials Recovery Facility**

**DATE:** 1/14/98

**MEMO TO:** County Landfill Owners Group Representatives

**FROM:** John Link, County Manager

**RE:** Development of Materials Recovery Facility

### **Background**

A materials recovery facility (MRF) is a key component of the integrated waste management system for Orange County, and will be necessary if diversion targets/goals are to be met (i.e., 45% by 2001 and 61% by 2006). The need for a MRF was identified in an earlier report from Weston (Final Report, Integrated Solid Waste Management Study, May 1996) and the Integrated Solid Waste Management Plan previously adopted by all participating governments.

The diversion achieved through the establishment and operation of a MRF will contribute to extending the useful life of the existing landfill site by approximately one year, based on the implementation schedule presented below. The MRF is required to expand the recycling efforts that will be necessary to achieve the 45% and 61% diversion goals.

A survey was recently delivered to several neighboring jurisdictions, Orange Regional Landfill users, and other prospective MRF users to determine the level of interest in participating in the development of a MRF and/or delivery of recyclable materials to a MRF established in Orange County. This information will assist in determining the appropriate capacity of the MRF. The estimated capacity required for processing materials generated within Orange County only, including the local municipalities is 100 tons per day.

The estimated cost of the MRF has been identified as \$30 per ton, including amortized capital costs.

A projected schedule for development and construction of the MRF is presented below. Early development and implementation of the MRF will allow waste diversion rates to be achieved sooner and the useful life of the existing landfill site extended. Greater diversion through the MRF will also reduce future disposal requirements, whether at a new in-county landfill, or to be shipped to an out-of-county landfill via a transfer station.

Potential locations for siting a new MRF include:

- Greene Tract
- unfilled area of existing landfill site
- other unidentified sites

| <b>Implementation Item</b>                                  | <b>Date To Be Completed</b> |
|---|-----------------------------|
| MRF siting decision by local governing bodies               | April 1998                  |
| Selection of consultant to assist with facility development | June 1998                   |
| Finalize contract with consultant                           | July 1998                   |
| Preparation and release of RFP for MRF                      | October 1998                |
| Deadline for RFPs   | January 1999                |
| Review and evaluation of RFPs                               | March 1999                  |
| Selection of preferred RFP for negotiations                 | April 1999                  |
| Sign contract   | July 1999                   |
| Completion of facility design                               | January 2000                |
| Begin construction  | March 2000                  |
| Complete construction                                       | June 2001                   |
| Shakedown of facility and equipment                         | July 2001                   |
| Begin full operation  | August 2001                 |

### **Recommendations**

In order for the implementation as described above to be accomplished, the following decisions are required:

- location of MRF
- ownership and operation (i.e., public, private, or public-private partnership)
- approval to proceed with selection of consultant and issuance of RFPs for the design and development of MRF

The local governing bodies should make immediate decisions concerning each of the above items.

## **ATTACHMENT 14**

**Memo from Gayle Wilson to John Link Re: Response to Question on development of transfer station  
and materials recovery facility**



To: John Link, County Manager  
From: Gayle Wilson, Solid Waste Management Department  
Subject: Response to Question on development of transfer station and materials recovery facility  
Date: November 13, 1997

What is the feasibility of developing a transfer station and a materials recovery facility (MRF) including possible costs and sites.

### **Introduction**

Both a transfer station and a materials recovery facility (MRF) could be developed at a variety of sites in Orange County using any combination of public and private ownership and operation. State and federal siting regulations are far less onerous for these types of facilities than for landfills. Environmental monitoring needs are limited compared to landfills which must monitor for groundwater contamination and methane generation as well as develop long term post-closure plans.

The Greene Tract is a possible site for either a transfer station or a materials recovery facility provided that local zoning regulations allow either one or both. Other sites adjoining the existing landfill or throughout the County are also feasible. Sites chosen for transfer stations and MRFs should be near good transportation networks and close to the centers of waste generation to achieve efficiency in transportation. Both transfer stations and materials recovery facilities have been built in all types of settings including adjoining residential areas.

Either type of facility could be built on 12 to 15 acres including ample buffer areas. It is possible to site both facilities on a single parcel that might have to be greater than 12 to 15 acres but not double the size needed for the individual facilities. Land quality and utility requirements would be similar to that needed for other industrial facilities.

### **Transfer Stations**

A transfer station is an enclosed facility that consolidates waste from a variety of smaller trucks for reloading into single larger transfer trailers capable of transporting as much as twenty tons of waste to a distant disposal facility. Typically hauls of greater than 20 miles one-way to landfills or other disposal facilities make transfer stations economical. All the private, licensed facilities investigated by WESTON as part of the out-of-county alternatives report issued to the Owners Group in July 1995 were further than twenty miles from Orange County. The private landfill to which Durham plans to ship its waste is over 100 miles away.

Transfer stations are capable of handling both mixed solid waste and construction and demolition wastes, both of which are now received at the Orange Regional Landfill. It is somewhat more costly to design a facility capable of handling the construction and

demolition waste since that material may be heavier, more abrasive and generate more dust thus requiring more durable floors and walls and dust control than a facility for only mixed solid waste.

### Estimating the cost of a Transfer Station

Facility cost varies with size, number of bays, types of equipment, design and amenities. From discussions with engineering firms who have designed transfer stations recently in North Carolina and nationally, we believe that a facility of 8,000 to 10,000 square feet with a minimum of two bays would be capable of handling the waste stream of 66,500 tons per year projected to be generated in Orange County by 2006, around the year the current landfill is projected to close. Facility costs could be in the range of \$200 per square foot including all site development costs and utilities, but exclusive of land costs. Land costs could be paid out of a fund already established for that purpose.

Averaging the projected size at 9,000 square feet and estimating the cost at \$200 per square foot, the capital cost of the facility would be around \$1.80 million. Equipment, according to WESTON's report could cost another \$300,000. Total capital cost for a transfer station would then be about \$2.1 million. The transfer station could be expected to last twenty years with a 10% annual maintenance cost to replace equipment and floors. Annualized capital cost would then be \$115,000 over twenty years excluding debt service.

Operations costs are estimated at \$350,000 to include eight full-time people, utilities, benefits, repairs, leachate collection, and administration to operate approximately the same 54 hours per week that the landfill is now operated.

Operating costs do not include the post-closure monitoring costs estimated by Joyce Engineering at \$50,000 annually. By federal law, landfills must be monitored for thirty years after closure.

The above-stated costs do not include cost of hauling and tipping at the remote disposal site that would accept waste from the transfer station. Those costs range from the \$24.05 per ton that the City of Durham recently negotiated with Carolina Container Corporation for hauling and tipping fees to the \$27.50 per ton tipping fee only offered to the Orange Regional Landfill at the Browning Ferris Industries landfill in Sampson County plus hauling costs of \$17.50 per ton estimated by WESTON in their July 1995 report on out-of-county disposal facilities. Hauling and tipping fee contracts should be negotiated long-term to achieve the lowest prices. The cost model shown in table 1 below assumes that a twenty year contract at fixed prices (adjusted for inflation only) could be negotiated. We note that the proposed new landfill for Orange County is designed as a fifty year facility.

All transfer station capital and operating costs, tipping fee, hauling costs and ancillary landfill operations costs could be paid for with tipping fees as the landfill operation is now. If Orange County meets the adopted goal of 61% waste reduction per capita by

2006, we project that 66,500 tons of mixed solid waste plus construction and demolition waste will be delivered to the Orange Regional waste disposal facility for transfer to a final disposal site. An average per ton tipping fee would range from \$31.80 to \$52.75 (See table 1) to cover costs of disposing of this waste and paying post-closure costs.

Table 1

**Cost of Operating a Transfer Station at Orange Regional Landfill**  
estimated November 1997.

| Category  | Cost                       | Annual Cost (in 1997 dollars) |
|---|----------------------------|-------------------------------|
| Capital Cost  | \$2,100,000                | \$115,500 (20 years)          |
| Annual Operating Costs, Transfer Station only   | \$350,000                  | \$350,000 (8 staff)           |
| Post-closure costs (Joyce Engineering, June 1995)   | \$1,500,000 (30 years)     | \$50,000                      |
| Hauling costs plus tipping fees at remote landfill, based on 66,500 tons per year total waste | \$24.05 -- \$45 per ton    | \$1,599,000 -- \$2,992,500    |
| Total cost (tipping fee)*   | \$31.80 -- \$52.75 PER TON | \$2,114,500 -- \$3,508,000    |

\* NOTE: Tip fees do not include funds to finance programs other than transfer station operation and post-closure monitoring.

### Materials Recovery Facility

In adopting an integrated solid waste plan with a goal of 61% waste reduction per capita by 2006, the member governments of the Landfill Owners Group included the development of a materials recovery facility to process recyclables from residents and businesses into market-ready commodities. Such a facility would be capable of handling up to 100 tons per day (25,500 tons per year) of source-separated and commingled recyclable paper, containers and other materials expected to be collected by publicly operated programs. The MRF could be built and operated with a combination of public and private resources. No facility now exists or is planned in the Triangle Region that could process the wide variety of commingled and source-separated materials envisioned in this collection program. We believe such a facility to be necessary to expand recycling efforts sufficiently to reach the 61% diversion goal.

A materials recovery facility would need an area of 12 to 15 acres including adequate indoor and outdoor storage, buffers, parking, and access areas. If built in combination with a transfer station for non-recyclable wastes, the facility would need more than 12 acres but less than double the amount for the two facilities built individually. As with a transfer station, a MRF is best located in a area close to the point of materials generation and near good transportation to achieve highest efficiency of moving large amounts of mostly low-value materials. The Greene tract, other areas adjoining the current landfill,

or other sites throughout the County would be suitable locations if local zoning is adequate.

Costs of materials recovery facilities vary greatly according to size, degree of automation, design, amenities. Generally the trend in materials recovery facility design is towards larger facilities with flexibility in design to handle a wider variety of materials and adapt quickly to changing market conditions. There are significant economies of scale achievable with larger facilities.

#### Estimated Cost of Materials Recovery Facility

A literature review of existing MRF operations and survey of MRF tipping fees conducted by the Solid Waste Department staff last year came up with an average net tipping fee of approximately \$30 per ton to cover operating costs and debt service for a facility large enough to process the projected 100 tons per day expected to be recycled by publicly operated programs in Orange County by 2006. The range of tipping fees in the survey varied from \$12 per ton to \$90 per ton. The privately operated materials recovery facility in Mecklenberg County charges \$36 per ton to process commingled recyclables. Factors affecting the wide variation depended upon the nature of ownership and operation, degree of automation, expected amounts of residue from processing and market conditions for recyclables.

The planning level cost analysis for considering construction of a materials recovery facility uses \$30 per ton net processing cost. Therefore the cost to process the 25,600 tons of recyclables expected to be collected by programs operated by Orange Community Recycling in the target year of 2006 is \$768,000 (See spread sheet on current v. proposed recycling costs attached elsewhere in this report). This processing cost is part of the overall cost of operating the recycling and waste reduction system..

If recyclables collected by others are also processed at the MRF, total cost could rise but those new costs would be covered by the tipping fee collected from the haulers of the other materials plus the revenues generated from sale of the collected materials. Cost per ton could fall with the increased economies of scale. The projected processing cost of \$30 per ton is less than the projected cost of a tipping fee at a transfer station or landfill, so it is possible that this differential could create an additional incentive to recycle.

## **ATTACHMENT 15**

**Memo from John Link to County Landfill Owners Group Representatives Re:  
Management of Construction and Demolition (C&D) Waste**

|                 |  |
|-----------------|--|
| <b>DATE:</b>    | <b>1/12/98</b>   |
| <b>MEMO TO:</b> | <b>County Landfill Owners Group Representatives</b>              |
| <b>FROM:</b>    | <b>John Link, County Manager</b>                                 |
| <b>RE:</b>      | <b>Management of Construction and Demolition (C&amp;D) Waste</b> |

### Background

Of the estimated 90,000 tons of waste delivered each year to the Orange Regional Landfill, 33,000 tons is estimated to consist of construction and demolition (C&D) waste materials. At current fill rates, and without any new diversion options, it is estimated that capacity at the current C&D disposal area will be exhausted within eighteen months.

Several memos and reports have previously examined current management practices and proposed future management options for C&D wastes. Complete copies have been attached and are summarized below.

| <b>DATE</b> | <b>ITEM</b>                                | <b>SUBJECT</b>   |
|-------------|--|--|
| 07/11/96    | Gayle Wilson Memo to LOG                   | Follow-up Items on Construction and Demolition Waste Reduction Planning  |
| 12/12/96    | Gayle Wilson Memo to Log                   | Follow-up Report on Options for Reducing Construction and Demolition Waste   |
| 01/15/97    | Joyce Brown Memo to LOG                    | Article from "Governing" journal   |
| 01/22/97    | Gayle Wilson Memo to LOG                   | Information for Public Forum on Construction and Demolition Waste Management   |
| 01/22/97    | Gayle Wilson Memo to LOG                   | Regulating Construction and Demolition Waste Through Solid Waste Planning Ordinances   |
| 01/22/97    | Gayle Wilson Memo to LOG                   | Selection of Construction and Demolition Waste Management Options  |
| 06/23/97    | W. Calvin Horton Memo to Mayor and Council | Funding of Construction and Demolition Waste Reduction Programs with an Increase in Construction and Demolition Waste Landfill Tipping Fee |
| 07/16/97    | Solid Waste Plan                           | Chapter 3, p. 3-9 - 3-13   |
| 11/11/97    | Gayle Wilson Memo to John Link             | Response to County Board Questions - C&D Disposal  |

### Current Practices and Activities

Current diversion practices include a manual separation program for reusable and recyclable C&D materials at the landfill. This program has been in operation since December 1997 and has diverted 12 tons of materials during its first month. Estimated annual diversion is 400 tons. In addition, draft ordinances which would require separation of reusable and/or recyclable C&D materials are currently being developed by Chapel Hill for consideration by all local governments. It is also proposed that landfill bans may be implemented for certain materials, and higher tipping fees implemented for incoming loads which contain mixed waste materials. Although important waste diversion activities, these programs will have only a minimal impact on postponing the need for additional disposal capacity.

### Future Management Options

Five main options for future management of C&D waste materials were previously developed, and are summarized in the table below. It must be noted that *even with current and future diversion activities for C&D waste materials, new landfill capacity will be required for materials which cannot be diverted from disposal.*

| OPTION  | NEW COSTS<br>FOR LOG               | IMPLICATIONS   |
|---|------------------------------------|--|
| Discontinue Management of C&D Materials   | no                                 | <ul style="list-style-type: none"> <li>may have impacts associated with new development (i.e., illegal dumping, etc.)</li> <li>unlikely to meet waste reduction targets</li> </ul>                               |
| Expansion of Existing C&D Disposal Area   | yes<br>(est. \$0.60/ton)           | <ul style="list-style-type: none"> <li>unlikely to meet waste reduction targets without processing facility</li> </ul>   |
| Construction of Transfer Station for Shipment of C&D Materials  | yes<br>(est. \$9.90 - \$15.50/ton) | <ul style="list-style-type: none"> <li>unlikely to meet waste reduction targets without processing facility</li> </ul>   |
| Development of a Manual Processing Facility for Recovery of Reusable/Recyclable C&D Materials         | yes<br>(est. \$17.70)              | <ul style="list-style-type: none"> <li>would still require new disposal capacity for residual materials</li> <li>may not achieve waste reduction targets</li> <li>estimated 15% total diversion</li> </ul>       |
| Development of a Semi-Automated Processing Facility for Recovery of Reusable/Recyclable C&D Materials | yes<br>(est. \$20.50)              | <ul style="list-style-type: none"> <li>would still require new disposal capacity for residual materials</li> <li>should enable attainment of waste reduction targets</li> <li>estimated 25% diversion</li> </ul> |

## Recommendations

If it is determined that a processing facility will be developed to divert reusable and recyclable materials from incoming loads, a decision will be required regarding the type of facility (i.e., manual vs. semi-automated). The type of facility that is developed will have an impact on the quantity of waste materials which are diverted, and therefore the quantity of remaining waste which will require disposal.

Decisions are also required regarding suitable locations for any new C&D processing, transfer and/or landfill disposal facilities for C&D waste materials, as well as the financing and ownership of the selected facilities.

| Facility  | Potential Locations  |
|---|--|
| C&D Processing Facility <ul style="list-style-type: none"> <li>• manual</li> <li>• semi-automated</li> </ul>      | <ul style="list-style-type: none"> <li>• Greene Tract</li> <li>• Unfilled area of existing landfill site</li> <li>• Purchase of additional property</li> </ul> |
| Disposal <ul style="list-style-type: none"> <li>• C&amp;D Transfer Station</li> <li>• C&amp;D Landfill</li> </ul> | <ul style="list-style-type: none"> <li>• Greene Tract</li> <li>• Unfilled area of existing landfill site</li> <li>• Purchase of additional property</li> </ul> |

Note: a C&D transfer station would likely be developed in conjunction with a transfer facility for mixed solid waste.

In order to ensure adequate time for the planning, development and construction of the necessary facilities to manage C&D waste materials beyond the life of the existing C&D landfill, member governments must make immediate decisions regarding the preferred future diversion and disposal option(s) for C&D waste materials. Even with the current diversion activities for C&D waste materials, new diversion and disposal options will be required when the existing C&D disposal site reaches capacity in approximately eighteen months. Eighteen months, or more, will be required for the planning, development, and construction of C&D waste management facilities.



## **ATTACHMENT 16**

**Memo from Wilbet McAdoo to John Link Re: C&D Waste Management Practices – Summary  
Reports**

|              |  |
|--------------|--|
| <b>DATE:</b> | 06/30/98   |
| <b>TO:</b>   | John Link, County Manager                        |
| <b>FROM:</b> | Wilbert McAdoo, Public Works Director            |
| <b>RE:</b>   | C&D Waste Management Practices – Summary Reports |

The attached summary reports present an overview of current management practices for construction and demolition (C&D)<sup>1</sup> waste in several neighboring communities. Some communities also provided information regarding land clearing and inert debris (LCID) management practices.<sup>2</sup>

Public Works staff initially contacted several neighboring communities and counties to obtain information regarding the management of C&D waste. The North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management was also contacted to obtain up-to-date information about permitted C&D landfills operating in the State. The complete list provided by the Waste Management Division is attached for reference.

Public Works attempted to contact representatives from eleven neighboring communities including:

- Alamance County
- Caswell County
- Chatham County
- City of Durham
- Granville County

---

<sup>1</sup> **Construction and Demolition Waste:** Solid waste resulting solely from construction, demolition, remodeling or demolition operations on pavement, buildings, or other structures, not including inert, land-clearing or yard debris.

<sup>2</sup> **Land Clearing and Inert Debris:** Solid waste generated solely from land-clearing activities, such as stumps and trees; material that is virtually inert, such as concrete, brick, rock, and clean soil. Note: used asphalt may also be legally accepted.

(Source: Triangle Region Construction and Demolition Waste Recycling and Disposal Directory, Triangle J Council of Governments, August 1997)

- City of Greensboro
- Guilford County
- Lee County
- Person County
- Wake County
- Winston-Salem/Forsyth County

At the time that this report was prepared, information had been obtained from ten of these communities.

Browning-Ferris Industries (BFI) was also contacted for information regarding their Holly Springs C&D landfill site in Wake County.

|                        |
|------------------------|
| <b>ALAMANCE COUNTY</b> |
|------------------------|

- Accept specified C&D materials in a separate cell at MSW landfill
  - Shingles, asphalt, brick, block, concrete, scrap lumber, pallets, etc.
  - Do not accept plastic, insulation, paint buckets, etc.
- Natural clay liner, no synthetic liner in C&D cell
- Tipping fees:
  - \$30/ton – C&D
- ~ 9,000 tons per year
- ~ 2 years remaining capacity
- expect to expand in 1999 for ~ additional 5 years
- may be additional future expansions as required
- have ground clean loads of wood in past for use as mulch and/or for volume reduction
- are not doing so actively at this time as they still have large quantities of mulch remaining from Hurricane Fran storm debris

**CASWELL COUNTY**

- County does not operate a C&D or MSW landfill
- County accepts only residential waste at nine convenience centers
- Centers accept household waste and recyclable materials
- Households are charged a \$70/year availability fee (will stay the same for 1998/99) for disposal of household waste and recyclables
- C&D waste from residents is accepted at one of the convenience centers only
- Tip fee for C&D materials is \$45/ton
- ~ 93.5 tons received in 1996/97 (includes tree limbs, etc., that are accepted at no charge as storm debris)
- Waste from the convenience centers is currently shipped to a transfer station in Virginia, then transferred to a landfill in Kernersville for disposal

**CHATHAM COUNTY**

- Accept land clearing and inert debris (LCID) only
- \$18/ton - LCID
- Are considering changes required to allow acceptance of C&D
- Are examining/considering the County's obligation to provide access to C&D disposal
- Considerations include the need to monitor incoming loads to ensure no unacceptable materials are included in loads – increased staffing, costs
- Many loads come in with what people think is LCID, but is really C&D
- People with C&D loads are currently directed to C&D sites, including private site in Holly Springs

**CITY OF DURHAM**

- Land clearing and inert debris (LCID) is accepted at Durham rubble landfill - \$24/ton
- 'extensive' life left – not a lot of material is delivered to this site, as lower cost options are available from private sector
- C&D is accepted and mixed with MSW at transfer station and shipped to Virginia landfill
- Tipping fee at transfer station is \$39.50/ton
- Consideration had previously been given to finishing out contours at closed MSW landfill, but clear answers were not readily available and other issues/concerns (i.e., transfer station) have taken priority
- New (permanent) transfer station should be open ~ 3 weeks

**GRANVILLE COUNTY**

- Closed two unlined MSW sites in December 1997
- Currently operate one of these (old Oxford landfill) as a C&D site
- Accept C&D, LCID, some dry inert industrial waste (i.e., off cuts, etc. from a shingle manufacturer)
- Accept material from outside of Granville County
- Hasn't accepted any from Virginia but assume that they could
- \$20/ton
- ~20,000 tons per year – not at this level yet, but hope to be – site is a net revenue generator
- remaining capacity ~25 years+

**CITY OF GREENSBORO**

- C&D materials are being used to develop final contours for a closed MSW site
- ~ 25 years+ remaining
- ~ 150,000 - 180,000 tons per year currently received
- Did market survey
  - Two private C&D landfills within City limits
  - Both charge by volume/load – no scales
  - City weighs incoming loads, but charges by load size to be competitive

**GUILFORD COUNTY**

- 

**LEE COUNTY**

- County operates a C&D landfill
- Tip fee: \$18/ton
- ~ 4,600 tons during 1997 calendar year (C&D and LCID)
- accept yard materials and LCID – material is chipped and given to residents at no charge
- only accept waste generated within Lee County

**PERSON COUNTY**

- County opened a new landfill ~ one year ago
- MSW and C&D landfilled together
- Yard waste is not accepted at the landfill
- Currently receive ~ 225,000 – 240,000 tons per year
- Hope to reach 300,000 tons per year
- Estimated site life of 20-30 years based on fill rate of 300,000 tons per year
- Tip fees:
  - In-county: will only provide to in-county residents/businesses
  - Out-of-county: \$30/ton

**WAKE COUNTY**

- Manage C&D waste at two sites
  - North Wake – disposed with MSW in lined site (to assist in meeting put or pay quantities)
    - Tip fees: \$25/ton (same as MSW)
    - ~ 75,000 tons disposed in 1997/98
    - Remaining capacity ~ five years (MSW and C&D)
  - South Wake (Feltsville) – C&D waste is being used to develop final contours at MSW site
    - Tip fees: \$22/ton
    - ~ 42,000 tons disposed in 1997/98
    - Remaining capacity – several years
- Are examining potential future options – i.e., separation of sheetrock, brick, block, etc., and attempts to develop interest by private recyclers
- Would possibly entertain receipt of out-of-county C&D waste

**WINSTON-SALEM/FORSYTH COUNTY**

- City/County Utilities Commission owns/operates MSW and C&D landfills and yard materials processing facility
- ~ 284,000 tons of MSW in 1997/98
- ~ 60,000 tons of C&D in 1997/98 (~ triple original projections)
- Tipping fees – 1998/99:
  - \$15/ton – C&D

- \$12/ton – Yard
- there are private C&D landfills within the County, but it is assumed that the majority is delivered to the City/County site
- large site that has been open for ~ 1.5 years
- remaining site life assumed to be 20 years+
- haulers who consistently bring loads containing significant quantities of clean wood waste are diverted to yard material facility
- yard material facility receives clean yard materials
- yard materials are ground under contract for a fee by a private company – contractor owns and markets wood chips

|  |
|--|
| <b>BFI – HOLLY SPRINGS (WAKE COUNTY)</b> |
|--|

- Tip fees
  - \$22/ton OR
  - charge by load
    - \$20 – small truck
    - \$40-70 – depending on size
    - \$100 – tandem
    - \$110 – triaxle
    - \$120 – tractor
- Also operate a yard waste facility
- No white goods, A/C equipment, liquid paint, etc. are accepted. Some OCC will be accepted with mixed loads.

## **ATTACHMENT 17**

**Joyce Engineering Inc., Report – Life Cycle Cost Analyses, Proposed C&D Landfill Sites**





ENGINEERING, INC.

1  
SOLID WASTE ENGINEERING  
AND MANAGEMENT

Joyce Engineering, Inc.  
436 Spring Garden Street  
Greensboro, North Carolina 27401  
Tel (910) 230-1992  
Fax (910) 230-1998

June 2, 1998

Mr. Gayle Wilson, Director  
Department of Solid Waste Management  
Town of Chapel Hill  
306 N. Columbia Street  
Chapel Hill, North Carolina 27516-2113

RE: LIFE CYCLE COST ANALYSES  
PROPOSED C&D LANDFILL SITES  
JEI PROJECT NO. 229.00, TASK 46

Dear Gayle:

As requested, Joyce Engineering, Inc. has completed life cycle cost analyses for three proposed construction and demolition (C&D) landfill sites. The three sites included in this study are (1) Site CD-1, located along the east side of Old Highway 86, north of Duke Forest; (2) a northern expansion of the existing C&D landfill onto the adjacent Blackwood and other properties; and (3) the publicly owned Greene tract, located adjacent to the southeast corner of the South Eubanks Road landfill. The life cycle cost analyses include development, operations and maintenance (O&M), closure and post-closure costs.

The purpose of the life cycle cost analyses was to identify and quantify significant differences between the development and operating costs for each site over the life of the facility. Conceptual landfill development plans were prepared for each site to obtain projections of the initial capital, closure, and post-closure costs. Landfill operations and maintenance costs were obtained from budget figures from the Town of Chapel Hill. General assumptions applicable to all sites, and specific assumptions used for the individual sites, are provided below. A summary of the results follows the assumptions.

General Assumptions:

- The landfill's operating life will be at least 30 years.
- The C&D waste stream will average 30,000 tons per year. Waste density is assumed to be 1200 pcy.
- Weekly soil cover is assumed, resulting in a 9:1 waste-to-cover ratio.
- Each landfill has additional available capacity (and life) if the fill height is increased or the

Mr. Gayle Wilson  
 June 2, 1998  
 Page 2

footprint is expanded. Expanding the landfill will reduce the life cycle unit cost, while decreasing the size or the height will increase the life cycle unit cost.

- All costs are in 1998 dollars. It is assumed that money will be available to meet the initial capital requirements, and that no financing will be necessary.
- Land costs were provided by the Town of Chapel Hill. Actual purchase price may vary.
- Operations and maintenance costs were based on Chapel Hill's budget projections for the C&D landfill.
- Initial earthwork costs are for excavation of the initial waste disposal area. It is assumed that subsequent grading activities will be performed during normal landfill operations.
- Volumes of available on-site soil were estimated from preliminary base grading plans. Actual volumes of available soil will need to be confirmed by subsurface testing prior to development.
- The Town of Chapel Hill will use its own equipment and personnel to construct the majority of the landfill. Significant costs associated with bidding and contracting the construction work are not anticipated and are therefore not included.
- Published values for the cost of off-site soil borrow material are used in the analyses. Actual cost may vary over a wide range depending on local conditions.
- Future closure and post-closure costs for the existing C&D landfill are not included in the cost estimates for the new C&D landfill.
- The post-closure period is assumed to be the minimum five-year period. Per the regulations, five years after closure, the Section will evaluate the data and determine whether to continue post-closure monitoring at the landfill.

**Additional Assumptions for Site CD-1 (Old Highway 86):**

- The maximum elevation for Site CD-1 was limited to 610 feet (MSL) to be comparable to the proposed elevation of the South Eubanks Road landfill. An additional four years of life could be available if the maximum landfill elevation is increased to 650 feet (MSL).
- A new unpaved one-half mile access road will be constructed to serve both the landfill and a police shooting range, located to the northeast of the proposed landfill footprint.

- Two-thirds of the area of the conceptual footprint will require only light clearing and grubbing. The remaining area is assumed to be densely wooded, with a higher site preparation cost.
- Two additional employees (a weighmaster and an equipment operator) will be required at this location compared to the two sites that are contiguous to existing landfill operations. This is reflected in a higher annual personnel cost for CD-1.
- A new set of scales and an office/scalehouse trailer will be required.
- Separate equipment will be required at this site, including a scraper (pan), crawler loader, water truck, motor grader, service truck, small tractor and equipment, and a fuel tank. However, it is possible that some of this equipment could be shared with the nearby landfill operations.
- Adequate on-site soils are available for operations, but approximately 130,000 cy of soil will be required from a separate borrow area for closure.
- Because of radial flow from the disposal area, the number of wells needed to monitor this site is higher than the average site monitoring network. The monitoring network is assumed to consist of ten groundwater monitoring wells.

**Additional Assumptions for a Northern Expansion of the Existing C&D Landfill:**

- The maximum elevation for the northward expansion of the existing C&D landfill was limited to 570 feet (MSL) to be comparable to the elevation of the North Eubanks Road landfill. Additional life could be available if the maximum landfill elevation is increased, or the footprint is expanded. An earlier scenario presented a smaller landfill expansion at this location, with a life of approximately 10 years.
- The area of the conceptual footprint will require only light clearing and grubbing.
- Current personnel numbers are adequate at this location, since an expansion will result in a continuation of the existing operations.
- The existing scales and office/maintenance facilities will be utilized.
- The existing equipment can be used to operate the site. However, capital costs include a scraper (pan) which is scheduled for replacement regardless of the site chosen.

Mr. Gayle Wilson

June 2, 1998

Page 4

- Initial earthwork costs are for excavation of the initial waste disposal area. It is assumed that subsequent grading activities will be performed during normal landfill operations.
- Adequate on-site soils are available for operations, but approximately 180,000 cy of off-site soil will be required for closure.
- To allow for equivalent comparisons with the other sites, the monitoring network is assumed to consist of only those groundwater monitoring wells that would be required to monitor the expansion footprint area. Therefore, only three monitoring wells are included for this site.
- To allow for equivalent comparisons with the other sites, the area used in the closure and post-closure cost calculations is assumed to consist of only the area in the expansion footprint area.

**Additional Assumptions for a C&D Landfill on the Greene Tract:**

- The maximum elevations for the Greene tract was limited to 610 feet (MSL) to be comparable to the proposed elevation of the South Eubanks Road landfill. An earlier scenario presented a larger C&D landfill at this location, with a life of approximately 70 years.
- The area of the conceptual footprint is densely wooded and will require clearing, grubbing, and grinding.
- Current personnel numbers are adequate at this location, since the site is contiguous with the existing MSW operations.
- The existing scales and office/maintenance facilities will be utilized.
- The existing equipment can be used to operate the site. However, capital costs include a scraper (pan) which is scheduled for replacement regardless of the site chosen.
- Initial earthwork costs are for excavation of the initial waste disposal area. It is assumed that subsequent grading activities will be performed during normal landfill operations.
- Adequate on-site soils are available for operations and closure.
- The monitoring network is assumed to consist of six groundwater monitoring wells.

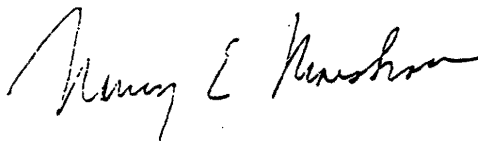
Summary:

A summary of the projected total, annual and unit life cycle costs is provided in Table 1. The conceptual site development plans are provided on Drawing Nos. 1 through 3. Based on the analyses, all three sites are technically and economically feasible for development as a construction and demolition landfill. For the operating lives used in the analysis (39 to 42.5 years), the annual life cycle costs for the three sites range between approximately \$550,000 and \$650,000. In comparison, the revenues projected from tipping fees are over one million dollars per year. This results in a net lifetime revenue from the proposed C&D facilities on the order of 14 to 18 million dollars.

If a smaller landfill is developed, unit life cycle costs will increase as the landfill life decreases. This is because expenditures for initial capital, closure, and post-closure are relatively independent of landfill life, except for costs that are directly related to developed area. In contrast, O&M costs remain relatively constant for each year of operation, as long as the waste stream remains unchanged. For example, for the approximately 40-year life used in these analyses, over eighty percent of the life cycle cost for each site results from operation of the facility. Of the total unit cost of \$21.72 projected for Site CD-1, O&M costs are around \$17.58 per ton, while all other costs are around \$4.14 per ton. If the landfill life were reduced to eight years, O&M costs would remain the same, while the other costs would increase to around \$16.00 per ton, for a total unit cost on the order of \$34. This underscores the cost advantages of prolonging operating life at the chosen facility.

If you have comments or questions, please call me at your convenience. As always, it is a pleasure to be of service to the Town of Chapel Hill and the Landfill Owners Group.

Sincerely,  
JOYCE ENGINEERING, INC.



Nancy E. Marshall, P.E.  
Senior Project Engineer

Attachments: Table 1  
Drawing Nos. 1 through 3

C: Janis D. McHargue, P.E.

**JLE 1**  
**SUMMARY OF PROJECTED LIFE CYCLE COSTS**

| Site and Conceptual Design Information | PROPOSED C&D LANDFILL SITE    |  |                |
|--|-------------------------------|--|----------------|
|  | Site CD-1<br>(Old Highway 86) | Northern Expansion<br>(Blackwood) Site | Greene Tract   |
| Waste Disposal Area:                   | 37 Acres                      | 37 Acres*                              | 36 Acres       |
| Max Elevation:                         | 610 feet (MSL)                | 570 feet (MSL)                         | 610 feet (MSL) |
| Total Tons:                            | 1,203,250                     | 1,275,000                              | 1,171,800      |
| Total Site Area:                       | 133.5 Acres                   | 59 Acres                               | 168.74 Acres   |

\*Does not include the existing 13 acre area

|                                    |                     |                     |                     |
|------------------------------------|---------------------|---------------------|---------------------|
| <b>Total Life Cycle Costs (\$)</b> | <b>\$26,140,000</b> | <b>\$26,963,000</b> | <b>\$21,879,000</b> |
| Initial Capital                    | \$2,278,500         | \$1,053,000         | \$610,000           |
| Operations and Maintenance         | \$21,150,500        | \$21,619,000        | \$19,991,000        |
| Closure                            | \$2,416,000         | \$3,041,000         | \$1,002,000         |
| Post-Closure                       | \$295,000           | \$250,000           | \$276,000           |

|  |                  |                  |                  |
|--|------------------|------------------|------------------|
| <b>Annual Life Cycle Costs (\$/Year)</b> | <b>\$653,600</b> | <b>\$611,000</b> | <b>\$561,000</b> |
| Life:                                    | 40 years         | 42.5 years       | 39 years         |

|   |                |                |                |
|---|----------------|----------------|----------------|
| <b>Unit Life Cycle Costs per Ton (\$/Ton)</b> | <b>\$21.72</b> | <b>\$20.36</b> | <b>\$18.67</b> |
| Initial Capital                               | \$1.89         | \$0.83         | \$0.52         |
| Operations and Maintenance                    | \$17.58        | \$16.94        | \$17.06        |
| Closure                                       | \$2.00         | \$2.39         | \$0.85         |
| Post-Closure                                  | \$0.25         | \$0.20         | \$0.24         |

**NOTE:**

1. ALL PROPERTY BOUNDARIES ARE APPROXIMATE.

W  
S

PROPOSED ACCESS  
ROAD

OLD N.C. 86

POWERLINE

MAXIMUM RISE ELEVATION 210 FT

DRAWING NO.1



SCALE  
1"=500'

PROJECT NO.  
229.46

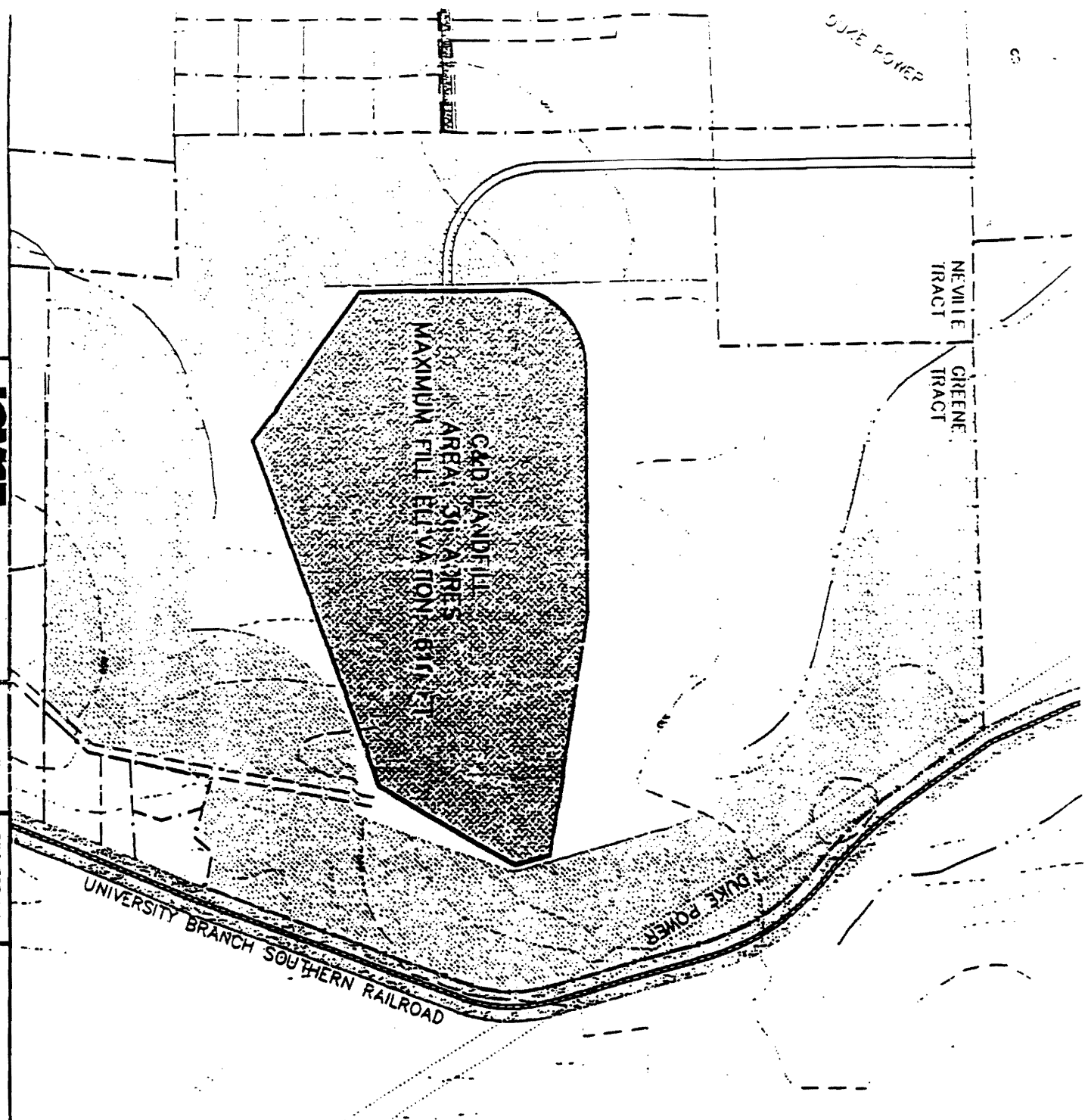
SITE CD-1  
OLD HIGHWAY 86  
ORANGE COUNTY, NORTH CAROLINA

06-02-98

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W  
S



**NOTE:**  
1. ALL PROPERTY BOUNDARIES ARE APPROXIMATE.

DRAWING NO. 2



SCALE  
1" = 500'

PROJECT NO.  
229.46

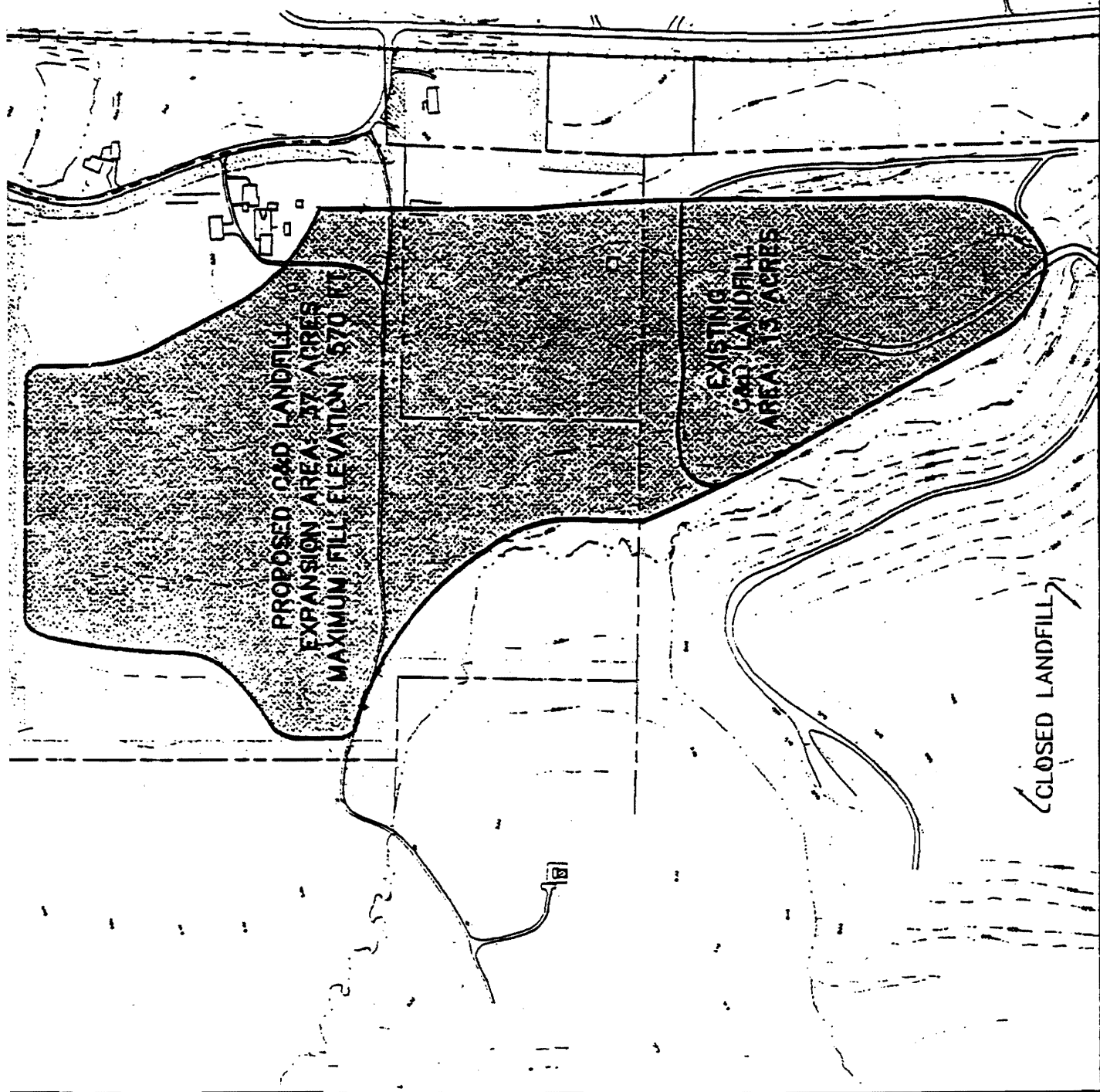
15/28/98  
GREENE TRACT  
ORANGE COUNTY, NORTH CAROLINA  
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DIVISIONAL MAP NO. 2  
SPRINTING 229.46



**NOTE:**

1. ALL PROPERTY BOUNDARIES APPROXIMATE.



DRAWING NO. 3  
CONDUCTED BY VICKI - 40 DAY REPORT NO. 3-229 DWG.



SCALE  
 1" = 400'

PROJECT NO.  
 229.46

EXISTING C&D AND  
 PROPOSED EXPANSION  
 ORANGE COUNTY, NORTH CAROLINA  
© 1998 ROCE ENGINEERING, INC. 40

Life = 40 Years; Footprint Area = 37 acres; Total Site Size = 133.5 acres; 30,000 TPY

**(A) INITIAL CAPITAL COST ( See Page 2)**

**(A) SUBTOTAL \$2,278,405**

**(B) OPERATIONS & MAINTENANCE (See Page 3)**

|   |                    |                     |
|---|--------------------|---------------------|
| Total airspace = 2,437,200 cy; 0.6 tons/cy; 9:1 waste:cover ratio |                    |                     |
| Total Capacity (tons) = 1,203,250                                 |                    |                     |
| Annual O&M Cost   | Years of Operation | Total O&M Cost      |
| \$528,755   | 40                 | \$21,150,200        |
| <b>(B) SUBTOTAL</b>   |                    | <b>\$21,150,200</b> |

**(C) CLOSURE COSTS (See Page 4)**

**(C) SUBTOTAL \$2,416,014**

**(D) POST CLOSURE COSTS (See Page 5)**

|                          |                 |                  |
|--------------------------|-----------------|------------------|
| Annual cost for 37 acres | Number of Years | Total Cost       |
| \$58,994                 | 5               | \$294,970        |
| <b>(D) SUBTOTAL</b>      |                 | <b>\$294,970</b> |

**TOTAL LIFE CYCLE COST (SUM A-D) \$26,139,589**

**UNIT LIFE CYCLE COST (TOTAL \$/TON) (\$/TON) \$21.72**

NOTE: All values are in 1998 dollars.

TABLE 2: SITE CD-1 (OLD HIGHWAY 36)  
(A) PROJECTED INITIAL CAPITAL COSTS

| ITEM   | UNIT     | QUANTITY | UNIT COST | COST             |
|--|----------|----------|-----------|------------------|
| <b>Predevelopment</b>                                  |          |          |           |                  |
| Siting   | lump sum | -        | -         | \$0              |
| Mapping, Hydrogeo, Design and Permitting, Well Network | lump sum | -        | -         | \$165,000        |
| Legal/public hearings                                  | lump sum | -        | -         | \$5,000          |
| Administrative support                                 | lump sum | -        | -         | \$5,000          |
| Contingency  | -        | -        | -         | \$10,000         |
| <b>Subtotal</b>  |          |          |           | <b>\$185,000</b> |

|                                      |       |   |          |                  |
|--------------------------------------|-------|---|----------|------------------|
| <b>Land Cost (acres x cost/acre)</b> | 133.5 | x | \$10,000 | <b>1,335,000</b> |
| (Estimated)                          |       |   |          |                  |

|  |          |       |           |                  |
|--|----------|-------|-----------|------------------|
| <b>Ancillary Facilities</b>            |          |       |           |                  |
| Site preparation (clearing & grinding) | acres    | 20    | \$4,500   | \$90,000         |
| Earthwork                              | cy       | 25000 | \$2       | \$50,000         |
| Access road                            | lump sum | -     | estimated | \$60,000         |
| Scales and Office Trailer              | each     | 1     | estimated | \$90,000         |
| Gates and signs                        | lump sum | -     | estimated | \$10,000         |
| Capital Equipment                      | each     | 1     | estimated | \$428,405        |
| <b>Subtotal</b>                        |          |       |           | <b>\$728,405</b> |

|   |                    |
|---|--------------------|
| <b>Sedimentation and Erosion Controls</b> | <b>\$30,000</b>    |
|   |                    |
| <b>TOTAL INITIAL CAPITAL COSTS</b>        | <b>\$2,278,405</b> |

TABLE 2: SITE COST (OLD HIGHWAY 86)  
(B) PROJECTED OPERATIONS AND MAINTENANCE COSTS

12

| PERSONNEL               | FY 2000-01       | Present Worth (1998 dollars) |
|-------------------------|------------------|------------------------------|
| Weigh Master (1)        | N/A              |                              |
| Equipment Operators (3) | N/A              |                              |
| Salvage Person (1)      | N/A              |                              |
| Landfill Inspector (1)  | N/A              |                              |
| Benefits                | N/A              |                              |
| <b>Subtotal</b>         | <b>\$218,103</b> | <b>\$201,548</b>             |

| OPERATIONS                          | FY 2000-01       | Present Worth (1998 dollars) |
|-------------------------------------|------------------|------------------------------|
| Professional Services               | \$4,244          | \$4,000                      |
| Environmental Monitoring (10 wells) | NA               | \$18,000                     |
| Meetings and Training               | \$4,098          | \$3,863                      |
| Telephone                           | \$2,652          | \$2,500                      |
| Printing                            | \$1,591          | \$1,500                      |
| Advertising                         | \$1,326          | \$1,250                      |
| Buildings Maintenance/Repair        | \$1,061          | \$1,000                      |
| Equipment Maintenance/Repair        | \$34,214         | \$32,250                     |
| Equipment Rental                    | \$10,742         | \$10,125                     |
| Uniform Rental                      | \$4,244          | \$4,000                      |
| Electricity                         | \$2,122          | \$2,000                      |
| Misc. Contracted Services           | \$2,652          | \$2,500                      |
| Supplies                            | \$10,305         | \$9,713                      |
| Misc. Vehicles Supplies             | \$28,379         | \$26,750                     |
| <b>Subtotal</b>                     | <b>\$107,630</b> | <b>\$119,451</b>             |

| OTHER NON-DEPARTMENTAL COSTS      | FY 2000-01       | Present Worth (1998 dollars) |
|-----------------------------------|------------------|------------------------------|
| Pay Adjustments Reserve           | \$8,048          | \$7,586                      |
| Insurance and Bond                | \$4,303          | \$4,056                      |
| Charges by General Fund           | \$19,658         | \$18,530                     |
| Contribution to Equipment Reserve | \$177,484        | \$177,484                    |
| <b>Subtotal</b>                   | <b>\$209,493</b> | <b>\$207,656</b>             |

|   |                  |
|---|------------------|
| <b>TOTAL ANNUAL OPERATIONS AND MAINTENANCE COST</b> | <b>\$528,755</b> |
|---|------------------|

Notes:

1. The inflation factor used for personnel items was 4%.
2. The inflation factor used for operational items was 3%.
3. The annual costs and inflation rates are based on the Town of Chapel Hill landfill budget figures provided by the Department of Solid Waste Management.
4. Two additional personnel (operator and weighmaster) will be required for this site.
5. Adequate cover soil is available for operations.

TABLE 2: SITE CD-1 (OLD HIGHWAY 36)  
(C) PROJECTED CLOSURE COSTS

13

| ITEM | UNIT | QUANTITY | UNIT COST | COST \$ |
|------|------|----------|-----------|---------|
|------|------|----------|-----------|---------|

**FINAL CAP SYSTEM**

|                                      |    |         |         |                    |
|--------------------------------------|----|---------|---------|--------------------|
| Intermediate Cover (12")             | cy | 66,857  | \$2.00  | \$133,714          |
| Infiltration Layer (24" low k soil)* | cy | 133,713 | \$12.00 | \$1,604,556        |
| Topsoil (6")                         | cy | 29,847  | \$2.00  | \$59,694           |
| <b>Subtotal</b>                      |    |         |         | <b>\$1,797,964</b> |

|                       |      |    |         |                  |
|-----------------------|------|----|---------|------------------|
| <b>CQA MONITORING</b> | acre | 37 | \$6,400 | <b>\$236,800</b> |
|-----------------------|------|----|---------|------------------|

**SEDIMENTATION AND EROSION CONTROLS**

|                              |      |        |             |                  |
|------------------------------|------|--------|-------------|------------------|
| Diversion Berms with matting | lf   | 10,900 | \$5.00      | \$54,500         |
| Silt Fence                   | lf   | 1,500  | \$2.50      | \$3,750          |
| Slope Drains                 |      |        |             |                  |
| Drop Inlet with Cover        | each | 19     | \$500.00    | \$9,500          |
| HDPE Pipe                    | lf   | 2,700  | \$45.00     | \$121,500        |
| Conveyance Channels          |      |        |             |                  |
| Grass-lined Channels         | lf   | 5,300  | \$3.00      | \$17,400         |
| RCP Culverts                 | lf   | 70     | \$80.00     | \$5,600          |
| Sediment Basin               | each | 1      | \$30,000.00 | \$30,000         |
| Sediment Traps               | each | 2      | \$3,000.00  | \$6,000          |
| <b>Subtotal</b>              |      |        |             | <b>\$248,250</b> |

|                         |      |    |         |                 |
|-------------------------|------|----|---------|-----------------|
| <b>VEGETATIVE COVER</b> | acre | 37 | \$2,000 | <b>\$74,000</b> |
|-------------------------|------|----|---------|-----------------|

**ENGINEERING FEES**

|                                      |   |   |  |                 |
|--------------------------------------|---|---|--|-----------------|
| Closure Plan, E&S Plan, Specs        | - | - |  | \$28,000        |
| Construction Oversight               |   |   |  | \$20,000        |
| CQA Report and Closure Certification |   |   |  | \$6,000         |
| Survey and Deed                      |   |   |  | \$5,000         |
| <b>Subtotal</b>                      |   |   |  | <b>\$59,000</b> |

|                           |  |  |  |                    |
|---------------------------|--|--|--|--------------------|
| <b>TOTAL CLOSURE COST</b> |  |  |  | <b>\$2,416,014</b> |
|---------------------------|--|--|--|--------------------|

TABLE 2: SITE CD-1 (OLD HIGHWAY 86)  
(D) PROJECTED POST-CLOSURE COSTS

14

| ITEM                                  | UNIT     | QUANTITY | UNIT COST | ANNUAL COST     |
|---------------------------------------|----------|----------|-----------|-----------------|
| INSPECTIONS/ RECORD KEEPING           | per trip | 12       | \$200     | \$2,400         |
| <b>ENVIRONMENTAL MONITORING</b>       |          |          |           |                 |
| Groundwater (semi-annually)           | per trip | 2        | \$9,000   | \$18,000        |
| <b>ROUTINE MAINTENANCE</b>            |          |          |           |                 |
| Mowing                                | acre     | 37       | \$90      | \$3,330         |
| Fertilizing                           | acre     | 37       | \$200     | \$7,400         |
| Reseeding (once every 3 years)        | acre     | 12       | \$1,125   | \$13,500        |
| <b>Subtotal</b>                       |          |          |           | <b>\$24,230</b> |
| <b>WELL MAINTENANCE</b>               |          |          |           |                 |
| Groundwater Wells                     | each     | 10       | \$50      | \$500           |
| CAP REPAIR                            | acre     | 0.25     | \$30,000  | \$7,500         |
| ADMINISTRATION & FEES                 | lump sum | -        | -         | \$1,000         |
| <b>TOTAL OF ABOVE ITEMS</b>           |          |          |           | <b>\$53,630</b> |
| ENGINEERING                           | -        | -        | 5%        | \$2,682         |
| CONTINGENCY                           | -        | -        | 5%        | \$2,682         |
| <b>TOTAL ANNUAL POST-CLOSURE COST</b> |          |          |           | <b>\$58,994</b> |

Notes:

1. Groundwater monitoring includes sampling and analysis costs for 10 wells and 2 blanks.
2. Maintenance of groundwater wells assumes \$500 per well every ten years.

**TABLE 3: NORTHERN EXPANSION (BLACKWOOD) SITE  
PROJECTED LIFE CYCLE COSTS**

**Life = 42.5 Years; Expansion Area = 37 acres; Total Site Size = 59 acres; 30,000 TPY**

**(A) INITIAL CAPITAL COST ( See Page 2)**

**(A) SUBTOTAL                      \$1,052,500**

**(B) OPERATIONS & MAINTENANCE (See Page 3)**

Total airspace = 2,665,500 cy; 0.6 tons/cy; 9:1 waste:cover ratio

Total Capacity (tons) = 1,275,000

| Annual O&M Cost | Years of Operation | Total O&M Cost |
|-----------------|--------------------|----------------|
| 456,543         | 8                  | \$3,652,344    |
| 520,755         | 34.5               | \$17,966,048   |

**(B) SUBTOTAL                      \$21,618,392**

**(C) CLOSURE COSTS (See Page 4)**

**(C) SUBTOTAL                      \$3,042,734**

**(D) POST CLOSURE COSTS (See Page 5)**

| Annual cost for 37 acres | Number of Years | Total Cost |
|--------------------------|-----------------|------------|
| \$49,808                 | 5               | \$249,040  |

**(D) SUBTOTAL                      \$249,040**

**TOTAL LIFE CYCLE COST (SUM A-D)                      \$25,962,666**

**UNIT LIFE CYCLE COST (TOTAL/TON) (\$/TON)                      \$20.36**

NOTE: All values are in 1998 dollars.

TABLE 3: NORTHERN EXPANSION (BLACKWOOD) SITE  
(A) PROJECTED INITIAL CAPITAL COSTS

| ITEM   | UNIT     | QUANTITY | UNIT COST | COST             |
|--|----------|----------|-----------|------------------|
| <b>Predevelopment</b>                                  |          |          |           |                  |
| Siting   | lump sum | -        | -         | \$0              |
| Mapping, Hydrogeo, Design and Permitting, Well Network | lump sum | -        | -         | \$100,000        |
| Legal/public hearings                                  | lump sum | -        | -         | \$5,000          |
| Administrative support                                 | lump sum | -        | -         | \$5,000          |
| Unanticipated costs                                    | -        | -        | -         | \$5,000          |
| <b>Subtotal</b>  |          |          |           | <b>\$115,000</b> |

|                                      |           |          |                  |                |
|--------------------------------------|-----------|----------|------------------|----------------|
| <b>Land Cost (acres x cost/acre)</b> | <b>55</b> | <b>x</b> | <b>\$12,500</b>  | <b>687,500</b> |
| <b>House Lots (1 and 3 acres)</b>    | <b>2</b>  |          | <b>\$200,000</b> | <b>400,000</b> |

|                                       |          |       |           |                  |
|---------------------------------------|----------|-------|-----------|------------------|
| <b>Ancillary Facilities</b>           |          |       |           |                  |
| Site preparation (clearing /grinding) | acres    | 5     | \$4,500   | \$22,500         |
| Earthwork                             | cy       | 25000 | \$2       | \$50,000         |
| Access road                           | lf       | 0     | -         | \$0              |
| Scales and Office Trailer             | each     | 0     | estimated | \$0              |
| Gates and signs                       | lump sum | -     | estimated | \$7,500          |
| Capital Equipment                     | each     | 1     | estimated | \$140,000        |
| <b>Subtotal</b>                       |          |       |           | <b>\$220,000</b> |

|   |  |  |  |                    |
|---|--|--|--|--------------------|
| <b>Sedimentation and Erosion Controls</b> |  |  |  | <b>\$30,000</b>    |
| <b>TOTAL INITIAL CAPITAL COSTS</b>        |  |  |  |                    |
|   |  |  |  | <b>\$1,052,500</b> |



**TABLE 3: NORTHERN EXPANSION (BLACKWOOD) SITE  
(B) PROJECTED OPERATIONS AND MAINTENANCE COSTS**

17

| <b>PERSONNEL</b>        | <b>FY 2000-01</b> | <b>Present Worth (1998 dollars)</b> |
|-------------------------|-------------------|-------------------------------------|
| Weigh Master (0)        | N/A               |                                     |
| Equipment Operators (2) | N/A               |                                     |
| Salvage Person (1)      | N/A               |                                     |
| Landfill Inspector (1)  | N/A               |                                     |
| Benefits                | N/A               |                                     |
| <b>Subtotal:</b>        |                   | <b>\$144,396</b>                    |

| <b>OPERATIONS</b>                  | <b>FY 2000-01</b> | <b>Present Worth (1998 dollars)</b> |
|------------------------------------|-------------------|-------------------------------------|
| Professional Services              | \$4,244           | \$4,000                             |
| Environmental Monitoring (3 wells) | NA                | \$10,000                            |
| Meetings and Training              | \$4,098           | \$3,863                             |
| Telephone                          | \$2,652           | \$2,500                             |
| Printing                           | \$1,591           | \$1,500                             |
| Advertising                        | \$1,326           | \$1,250                             |
| Buildings Maintenance/Repair       | \$1,061           | \$1,000                             |
| Equipment Maintenance/Repair       | \$34,214          | \$32,250                            |
| Equipment Rental                   | \$10,742          | \$10,125                            |
| Uniform Rental                     | \$4,244           | \$4,000                             |
| Electricity                        | \$2,122           | \$2,000                             |
| Misc. Contracted Services          | \$2,652           | \$2,500                             |
| Supplies                           | \$5,305           | \$5,000                             |
| Misc. Vehicles Supplies            | \$28,379          | \$26,750                            |
| <b>Subtotal</b>                    | <b>\$102,630</b>  | <b>\$106,738</b>                    |

| <b>OTHER NON-DEPARTMENTAL COSTS</b> | <b>FY 2000-01</b> | <b>Present Worth (1998 dollars)</b> |
|-------------------------------------|-------------------|-------------------------------------|
| Pay Adjustments Reserve             | -                 | \$5,339                             |
| Insurance and Bond                  | \$4,303           | \$4,056                             |
| Charges by General Fund             | \$19,658          | \$18,530                            |
| Contribution to Equipment Reserve   | \$177,484         | \$177,484                           |
| <b>Subtotal</b>                     | <b>\$201,445</b>  | <b>\$205,409</b>                    |

|   |                  |
|---|------------------|
| <b>TOTAL ANNUAL OPERATIONS AND MAINTENANCE COST</b> | <b>\$456,543</b> |
|---|------------------|

**Notes:**

1. The inflation factor used for personnel items was 4%.
2. The inflation factor used for operational items was 3%.
3. The annual costs and inflation rates are based on the Town of Chapel Hill landfill budget figures provided by the Department of Solid Waste Management.
4. The annual O&M cost is for the first 8 years while the adjacent MSW landfill is operational. For the remaining years of operation after closure of the MSW landfill, O&M costs will be comparable to those for Site CD-1, except for environmental monitoring (\$520,755).

TABLE 3: NORTHERN EXPANSION (BLACKWOOD) SITE  
(C) PROJECTED CLOSURE COSTS

18

| ITEM                                      | UNIT | QUANTITY | UNIT COST   | COST \$            |
|---|------|----------|-------------|--------------------|
| <b>FINAL CAP SYSTEM</b>                   |      |          |             |                    |
| Intermediate Cover (12")                  | cy   | 66,857   | \$12.00     | \$802,284          |
| Infiltration Layer (24" low k soil)       | cy   | 133,713  | \$12.00     | \$1,604,556        |
| Topsoil (6")                              | cy   | 29,847   | \$2.00      | \$59,694           |
| <b>Subtotal</b>                           |      |          |             | <b>\$2,466,534</b> |
| <b>CQA MONITORING</b>                     |      |          |             |                    |
|   | acre | 37       | \$6,400     | \$236,800          |
| <b>SEDIMENTATION AND EROSION CONTROLS</b> |      |          |             |                    |
| Diversion Berms with matting              | lf   | 9,400    | \$5.00      | \$47,000           |
| Silt Fence                                | lf   | 0        | \$2.50      | \$0                |
| <b>Slope Drains</b>                       |      |          |             |                    |
| Drop Inlet with Cover                     | each | 13       | \$500.00    | \$6,500            |
| HDPE Pipe                                 | lf   | 2,300    | \$45.00     | \$103,500          |
| <b>Conveyance Channels</b>                |      |          |             |                    |
| RCP Culverts                              | lf   | 70       | \$80.00     | \$5,600            |
| Grass-lined Channels                      | lf   | 4,500    | \$3.00      | \$13,800           |
| Sediment Basin                            | each | 1        | \$30,000.00 | \$30,000           |
| Sediment Traps                            | each | 1        | \$3,000.00  | \$3,000            |
| <b>Subtotal</b>                           |      |          |             | <b>\$206,400</b>   |
| <b>VEGETATIVE COVER</b>                   |      |          |             |                    |
|   | acre | 37       | \$2,000     | \$74,000           |
| <b>ENGINEERING FEES</b>                   |      |          |             |                    |
| Closure Plan, E&SC Plan, Specs            |      |          |             | \$28,000           |
| Construction Oversight                    |      |          |             | \$20,000           |
| CQA Report and Closure Certification      |      |          |             | \$6,000            |
| Survey and Deed                           |      |          |             | \$5,000            |
| <b>Subtotal</b>                           |      |          |             | <b>\$59,000</b>    |
| <b>TOTAL CLOSURE COST</b>                 |      |          |             | <b>\$3,042,734</b> |

Notes:

1. Adequate on-site soils are not available to complete the cap construction.  
An additional 190,000 cy will likely be required from an off-site source.

TABLE 3: NORTHERN EXPANSION (BLACKWOOD) SITE  
(D) PROJECTED POST-CLOSURE COSTS

19

| ITEM | UNIT | QUANTITY | UNIT COST | ANNUAL COST |
|------|------|----------|-----------|-------------|
|------|------|----------|-----------|-------------|

|                             |          |    |       |         |
|-----------------------------|----------|----|-------|---------|
| INSPECTIONS/ RECORD KEEPING | per trip | 12 | \$200 | \$2,400 |
|-----------------------------|----------|----|-------|---------|

|                             |          |   |         |          |
|-----------------------------|----------|---|---------|----------|
| ENVIRONMENTAL MONITORING    |          |   |         |          |
| Groundwater (semi-annually) | per trip | 2 | \$5,000 | \$10,000 |

|                                |      |    |         |          |
|--------------------------------|------|----|---------|----------|
| ROUTINE MAINTENANCE            |      |    |         |          |
| Mowing                         | acre | 37 | \$90    | \$3,330  |
| Fertilizing                    | acre | 37 | \$200   | \$7,400  |
| Reseeding (once every 3 years) | acre | 12 | \$1,125 | \$13,500 |
| SUBTOTAL                       |      |    |         | \$24,230 |

|                   |      |   |      |       |
|-------------------|------|---|------|-------|
| WELL MAINTENANCE  |      |   |      |       |
| Groundwater Wells | each | 3 | \$50 | \$150 |

|            |      |      |          |         |
|------------|------|------|----------|---------|
| CAP REPAIR | acre | 0.25 | \$30,000 | \$7,500 |
|------------|------|------|----------|---------|

|                       |          |   |   |         |
|-----------------------|----------|---|---|---------|
| ADMINISTRATION & FEES | lump sum | - | - | \$1,000 |
|-----------------------|----------|---|---|---------|

|                      |  |  |  |          |
|----------------------|--|--|--|----------|
| TOTAL OF ABOVE ITEMS |  |  |  | \$45,280 |
|----------------------|--|--|--|----------|

|             |   |   |    |         |
|-------------|---|---|----|---------|
| ENGINEERING | - | - | 5% | \$2,264 |
| CONTINGENCY | - | - | 5% | \$2,264 |

|                                |  |  |  |          |
|--------------------------------|--|--|--|----------|
| TOTAL ANNUAL POST-CLOSURE COST |  |  |  | \$49,808 |
|--------------------------------|--|--|--|----------|

Notes:

1. Groundwater monitoring includes sampling and analysis costs for 3 wells and 2 blanks.
2. Maintenance of groundwater wells assumes \$500 per well every ten years.

TABLE 4: GREENE TRACT  
PROJECTED LIFE CYCLE COSTS

20

Life = 39 Years; Footprint Area = 36 acres; Total Site Size = 168.74 acres; 30,000 TPY

(A) INITIAL CAPITAL COST ( See Page 2)

|              |           |
|--------------|-----------|
| (A) SUBTOTAL | \$610,500 |
|--------------|-----------|

(B) OPERATIONS & MAINTENANCE (See Page 3)

|   |                    |                |
|---|--------------------|----------------|
| Total airspace = 2,373,300 cy; 0.6 tons/cy; 9:1 waste:cover ratio |                    |                |
| Total Capacity (tons) = 1,171,800                                 |                    |                |
| Annual O&M Cost   | Years of Operation | Total O&M Cost |
| \$461,543   | 8                  | \$3,692,344    |
| \$525,755   | 31                 | \$16,298,405   |
| (B) SUBTOTAL  |                    | \$19,990,749   |

(C) CLOSURE COSTS (See Page 4)

|              |             |
|--------------|-------------|
| (C) SUBTOTAL | \$1,002,478 |
|--------------|-------------|

(D) POST CLOSURE COSTS (See Page 5)

|                          |                 |            |
|--------------------------|-----------------|------------|
| Annual cost for 36 acres | Number of Years | Total Cost |
| \$55,154                 | 5               | \$275,770  |
| (D) SUBTOTAL             |                 | \$275,770  |

|  |              |
|--|--------------|
| TOTAL LIFE CYCLE COST (SUM A-D)            | \$21,879,497 |
| UNIT LIFE CYCLE COST (TOTAL/TONS) (\$/TON) | \$18.67      |

NOTE: All values are in 1998 dollars.

TABLE 4: GREENE TRACT  
(A) PROJECTED INITIAL CAPITAL COSTS

21

| ITEM  | UNIT     | QUANTITY | UNIT COST | COST             |
|---|----------|----------|-----------|------------------|
| <b>Predevelopment</b>                                     |          |          |           |                  |
| Siting  | lump sum | -        | -         | \$0              |
| Mapping, Hydrogeo, Design<br>and Permitting, Well Network | lump sum | -        | -         | \$180,000        |
| Legal/public hearings                                     | lump sum | -        | -         | \$5,000          |
| Administrative support                                    | lump sum | -        | -         | \$5,000          |
| Unanticipated costs                                       | -        | -        | -         | \$10,000         |
| <b>Subtotal</b>   |          |          |           | <b>\$200,000</b> |

|                  |           |
|------------------|-----------|
| <b>Land Cost</b> | <b>00</b> |
|------------------|-----------|

|                                       |          |       |           |                  |
|---------------------------------------|----------|-------|-----------|------------------|
| <b>Ancillary Facilities</b>           |          |       |           |                  |
| Site preparation (clearing /grinding) | acres    | 20    | \$4,500   | \$90,000         |
| Earthwork                             | cy       | 50000 | \$2       | \$100,000        |
| Access road                           | lump sum | 1     | estimated | \$43,000         |
| Scales and Office Trailer             | each     | 0     | estimated | \$0              |
| Gates and signs                       | lump sum | 1     | estimated | \$7,500          |
| Capital Equipment                     | each     | 1     | estimated | \$140,000        |
| <b>Subtotal</b>                       |          |       |           | <b>\$380,500</b> |

|   |                  |
|---|------------------|
| <b>Sedimentation and Erosion Controls</b> | <b>\$30,000</b>  |
| <b>TOTAL INITIAL CAPITAL COSTS</b>        | <b>\$610,500</b> |

| PERSONNEL               | FY 2000-01 | Present Worth (1998 dollars) |
|-------------------------|------------|------------------------------|
| Weigh Master (0)        | N/A        |                              |
| Equipment Operators (2) | N/A        |                              |
| Salvage Person (1)      | N/A        |                              |
| Landfill Inspector (1)  | N/A        |                              |
| Benefits                | N/A        |                              |
| <b>Subtotal:</b>        |            | <b>\$144,396</b>             |

| OPERATIONS                   | FY 2000-01       | Present Worth (1998 dollars) |
|------------------------------|------------------|------------------------------|
| Professional Services        | \$4,244          | \$4,000                      |
| Environmental Monitoring     | NA               | \$15,000                     |
| Meetings and Training        | \$4,098          | \$3,863                      |
| Telephone                    | \$2,652          | \$2,500                      |
| Printing                     | \$1,591          | \$1,500                      |
| Advertising                  | \$1,326          | \$1,250                      |
| Buildings Maintenance/Repair | \$1,061          | \$1,000                      |
| Equipment Maintenance/Repair | \$34,214         | \$32,250                     |
| Equipment Rental             | \$10,742         | \$10,125                     |
| Uniform Rental               | \$4,244          | \$4,000                      |
| Electricity                  | \$2,122          | \$2,000                      |
| Misc. Contracted Services    | \$2,652          | \$2,500                      |
| Supplies                     | \$5,305          | \$5,000                      |
| Misc. Vehicles Supplies      | \$28,379         | \$26,750                     |
| <b>Subtotal</b>              | <b>\$102,630</b> | <b>\$111,738</b>             |

| OTHER NON-DEPARTMENTAL COSTS      | FY 2000-01       | Present Worth (1998 dollars) |
|-----------------------------------|------------------|------------------------------|
| Pay Adjustments Reserve           | -                | \$5,339                      |
| Insurance and Bond                | \$4,303          | \$4,056                      |
| Charges by General Fund           | \$19,658         | \$18,530                     |
| Contribution to Equipment Reserve | \$177,484        | \$177,484                    |
| <b>Subtotal</b>                   | <b>\$201,445</b> | <b>\$205,409</b>             |

|   |                     |
|---|---------------------|
| <b>TOTAL ANNUAL OPERATIONS AND MAINTENANCE COST</b> | <b>\$461,543.00</b> |
|---|---------------------|

## Notes:

1. The inflation factor used for personnel items was 4%.
2. The inflation factor used for operational items was 3%.
3. The annual costs and inflation rates are based on the Town of Chapel Hill landfill budget figures provided by the Department of Solid Waste Management.
4. The annual O&M cost is for the first 8 years while the adjacent MSW landfill is operational. For the remaining years of operation after closure of the MSW landfill, O&M costs will be comparable to those for Site CD-1, except for environmental monitoring (\$525,755).

TABLE 4: GREENE TRACT  
(C) PROJECTED CLOSURE COSTS

23

| ITEM | UNIT | QUANTITY | UNIT COST | COST \$ |
|------|------|----------|-----------|---------|
|------|------|----------|-----------|---------|

|                                     |    |         |        |                  |
|-------------------------------------|----|---------|--------|------------------|
| <b>FINAL CAP SYSTEM</b>             |    |         |        |                  |
| Intermediate Cover (12")            | cy | 65,050  | \$2.00 | \$130,100        |
| Infiltration Layer (24" low k soil) | cy | 130,099 | \$2.00 | \$260,198        |
| Topsoil (6")                        | cy | 29,040  | \$2.00 | \$58,080         |
| <b>Subtotal</b>                     |    |         |        | <b>\$448,378</b> |

|                       |      |    |         |                  |
|-----------------------|------|----|---------|------------------|
| <b>CQA MONITORING</b> | acre | 36 | \$6,400 | <b>\$230,400</b> |
|-----------------------|------|----|---------|------------------|

|   |      |        |             |                  |
|---|------|--------|-------------|------------------|
| <b>SEDIMENTATION AND EROSION CONTROLS</b> |      |        |             |                  |
| Diversion Berms with matting              | lf   | 11,100 | \$5.00      | \$55,500         |
| Silt Fence                                | lf   | 0      | \$2.50      | \$0              |
| Slope Drains                              |      |        |             |                  |
| Drop Inlet with Cover                     | each | 16     | \$500.00    | \$8,000          |
| HDPE Pipe                                 | lf   | 1,700  | \$45.00     | \$76,500         |
| Conveyance Channels                       |      |        |             |                  |
| Grass-lined Channels                      | lf   | 5,700  | \$3.00      | \$17,100         |
| RCP Culverts                              | lf   | 70     | \$80.00     | \$5,600          |
| Sediment Basin                            | each | 1      | \$30,000.00 | \$30,000         |
| Sediment Traps                            | each | 0      | \$3,000.00  |                  |
| <b>Subtotal</b>                           |      |        |             | <b>\$192,700</b> |

|                         |      |    |         |                 |
|-------------------------|------|----|---------|-----------------|
| <b>VEGETATIVE COVER</b> | acre | 36 | \$2,000 | <b>\$72,000</b> |
|-------------------------|------|----|---------|-----------------|

|                                      |  |  |  |                 |
|--------------------------------------|--|--|--|-----------------|
| <b>ENGINEERING FEES</b>              |  |  |  |                 |
| Closure Plan, E&SC Plan, Specs       |  |  |  | \$28,000        |
| Construction Oversight               |  |  |  | \$20,000        |
| CQA Report and Closure Certification |  |  |  | \$6,000         |
| Survey and Deed                      |  |  |  | \$5,000         |
| <b>Subtotal</b>                      |  |  |  | <b>\$59,000</b> |

|                           |  |  |  |                    |
|---------------------------|--|--|--|--------------------|
| <b>TOTAL CLOSURE COST</b> |  |  |  | <b>\$1,002,478</b> |
|---------------------------|--|--|--|--------------------|

Notes:

1. Adequate on-site soils are available to complete the cap construction.
2. Costs assume that on-site material will be hauled and spread by landfill personnel.

TABLE 4: GREENE TRACT  
(D) PROJECTED POST-CLOSURE COSTS

24

| ITEM                                  | UNIT     | QUANTITY | UNIT COST | ANNUAL COST     |
|---------------------------------------|----------|----------|-----------|-----------------|
| INSPECTIONS/ RECORD KEEPING           | per trip | 12       | \$200     | \$2,400         |
| <b>ENVIRONMENTAL MONITORING</b>       |          |          |           |                 |
| Groundwater (semi-annually)           | per trip | 2        | \$7,500   | \$15,000        |
| <b>ROUTINE MAINTENANCE</b>            |          |          |           |                 |
| Mowing                                | acre     | 36       | \$90      | \$3,240         |
| Fertilizing                           | acre     | 36       | \$200     | \$7,200         |
| Reseeding (once every 3 years)        | acre     | 12       | \$1,125   | \$13,500        |
| <b>SUBTOTAL</b>                       |          |          |           | <b>\$23,940</b> |
| <b>WELL MAINTENANCE</b>               |          |          |           |                 |
| Groundwater Wells                     | each     | 6        | \$50      | \$300           |
| CAP REPAIR                            | acre     | 0.25     | \$30,000  | \$7,500         |
| ADMINISTRATION & FEES                 | lump sum | -        | -         | \$1,000         |
| <b>TOTAL OF ABOVE ITEMS</b>           |          |          |           | <b>\$50,140</b> |
| ENGINEERING                           | -        | -        | 5%        | \$2,507         |
| CONTINGENCY                           | -        | -        | 5%        | \$2,507         |
| <b>TOTAL ANNUAL POST-CLOSURE COST</b> |          |          |           | <b>\$55,154</b> |

Notes:

1. Groundwater monitoring includes sampling and analysis costs for 6 wells and 2 blanks.
2. Maintenance of groundwater wells assumes \$500 per well every ten years.



## **ATTACHMENT 18**

**Memo from Gene Bell to Rod Visser Re: Review Process for Solid Waste Facilities**

# ORANGE COUNTY PLANNING DEPARTMENT

306F REVERE ROAD  
HILLSBOROUGH, NORTH CAROLINA 27278

1



## MEMORANDUM

**TO:** Rod Visser, Assistant County Manager

**FROM:** Gene Bell, Interim Planning Director *GB*

**SUBJECT:** Review Process for Solid Waste Facilities

**DATE:** August 4, 1998

**COPIES:** Geof Gledhill, Orange County Attorney  
Wilbert McAdoo, Public Works Director  
Emily Cameron, ASLA, Planner II/Landscape Architect

As per your request, the following information is provided regarding siting various solid waste facilities in Orange County's jurisdiction. The e-mail we received from you also included questions about the requirements, process and time frame for such a project in the Town of Chapel Hill's Joint Planning jurisdiction. The Greene Tract and the area east of the existing Orange Regional Landfill are parcels you asked about which are subject to review by Chapel Hill. Zoning and development review questions for the Town's Planning Staff may be directed to J.B. Culpepper at 968-2728.

To accurately respond to zoning questions regarding a specific use, submittal of a site plan and a written description of the proposed use is recommended. Individual characteristics of a proposed use can determine where it "fits" in terms of zoning. In the absence of an application for a zoning compliance permit, the Planning Staff is limited to generalizations about the ordinance requirements that may apply to a category of land use, in this case, solid waste facilities. While reviewing the current request for a recycling facility adjacent to the existing landfill, the Planning Staff consulted with the County Attorney who advised us of statutes and court cases he is examining which may affect how zoning regulations are applied to solid waste facilities.

Given the context described above, the points we were asked to address are listed below:

1. *What would be the approval process for siting a construction and demolition landfill, a materials recovery facility, and a transfer station? Are certain solid waste facilities permitted by right in certain zoning classifications?*

A landfill two (2) acres or more in size may be permitted in the AR, RB, or R-1 zoning districts through approval of a Class A Special Use Permit. New landfills are not allowed in Critical Watershed Areas. Discharging landfills are not permitted in protected

*L*

watersheds. Application for a Class A Special Use Permit is subject to approval by the Board of County Commissioners following presentation at a public hearing. As you know, our regular public hearings are scheduled on a quarterly basis.

In the Orange County Zoning Ordinance, Article 4 establishes the list of permitted uses. Section 4.1 states that "uses not expressly permitted are prohibited." Section 4.1 also describes uses permitted as a matter of right in all zoning districts. A "solid waste collection facility" is a use permitted in all zoning districts when it is owned and operated by a public agency and limited to disposal of household waste by Orange County residents. A materials recovery facility or a transfer station may be determined to be a solid waste collection facility to the extent that it is limited to household waste.

If upon application for a zoning compliance permit for a governmentally owned and operated materials recovery facility or a materials recovery facility and transfer station combined, it is determined to be a solid waste collection facility, then performance standards and design criteria in Section 6.16.15 of the Zoning Ordinance must be met. The process would be an administrative site plan review by the Planning Department Staff.

If a materials recovery facility or a transfer station is determined to be a "Government Facility," it may be considered a permitted use in most zoning districts (except EC-5, EI, and AS). Government facilities involving structures in the County's jurisdiction also require site plan review by Staff.

**2. *What aspect of each facility (e.g. construction of a building) would trigger any need for special use permits?***

A zoning compliance permit or Special Use Permit is required for construction of a building or structure.

**3. *What are the steps in the application and review process for a Special Use Permit? How long does the process typically take?***

A pre-application meeting is required for Special Use Permit requests. The application and review process typically follows the quarterly public hearing cycle. For example, the application deadline for the August 24 public hearing was at the end of June. At the hearing, usually no action is taken other than to refer the request to the Planning Board for a recommendation. The Planning Board is scheduled to review items presented at the August hearing at its regular meeting on October 7.

In the August cycle, action by the Board of Commissioners is anticipated at the first regular meeting in November. Following approval by the Commissioners, the Special Use Permit is revised if necessary to include all conditions of approval. The permit document is subject to review by the County Attorney. Upon approval of the final version, the permit is signed by the County Manager, the Clerk to the Commissioners, and the applicant(s), with appropriate certifications from a Notary Public. The executed permit must be recorded at the Orange County Register of Deeds.

A building permit may be issued after the Special Use Permit has been recorded and the site plan meets all conditions of approval contained in the permit. In addition all other conditions of the SUP must be met, such as obtaining approvals from other agencies. The total process beginning with the pre-application meeting may take five or six months.

4. *Who has planning jurisdiction over potential solid waste facilities that might be sited on:*
  - a. *the Greene Tract* - The Town of Chapel Hill (as per the Joint Planning Agreement);
  - b. *property in the immediate vicinity of the current landfill*
    - to the north* - Orange County (Rural Buffer zoning district)
    - to the east* - Town of Chapel Hill
    - to the west* - Orange County (Rural Buffer);
  - c. *Buckhorn Road Economic Development District (all quadrants)* - Only the two eastern quadrants of the interchange are zoned EDD and Upper Eno Protected Watershed with a portion in the Major Transportation Corridor (MTC). The northwest quadrant and approximately 50 acres of the southwest quadrant are in the Town of Mebane's jurisdiction. Outside of Mebane's jurisdiction on the southwest side of the interchange is Orange County's jurisdiction zoned Rural Residential (R-1) and MTC; and
  - d. *Tax Map Parcels 7.20..6, 18, 18A, 18B, 18C* - The area east of Old NC 86 north of Duke Forest is in Orange County's jurisdiction and zoned Rural Buffer.

If you need additional information, please let us know.

## **ATTACHMENT 19**

**Solid Waste Issues Arising from Meeting of 04/14/98**

**DATE:** April 20, 1998

**MEMO TO:** John Link, County Manager

**FROM:** Wilbert McAdoo, Public Works Director

**RE:** Solid Waste Issues Arising from BOCC Meeting of 04/14/98

### **ALTERNATIVE FUNDING SOURCES FOR WASTE MANAGEMENT SERVICES – AREA COUNTIES**

Several neighboring counties have developed and implemented alternative funding mechanisms for solid waste programs. An overview of several programs is presented below. **It should be noted that the types of services for which fees are charged varies from one county to another, with many charging for collection services as well as access to other programs.**

#### **ALAMANCE COUNTY**

- does not use an Availability Fee
- charges by the bag (\$0.25/bag) for waste
- no charge for recyclables
- currently examining possible need to increase the per bag fee and/or to charge for recyclables
- recyclables charge related to expiration of processing contract with BFI July 1, 1998

#### **CHATHAM COUNTY**

- \$45.00/year Availability Fee for access to services provided at Convenience Centers
- \$45.00/year Collection Fee
- all households in unincorporated areas of County are billed
- those who subscribe to waste services with a private contractor are exempt from both
- as of 07/01/98 no one will be exempt from Availability Fee, as many services at Convenience Centers are not provided by private contractors (i.e., bulky items, large appliances, tires, etc.)
- fees are collected with tax billings
- consideration is being given to use of Availability Fee for fixed costs only (i.e., staffing and maintenance of Convenience Centers), and pay-as-you-throw for variable costs (i.e., quantity of waste to be transported and disposed)
- current Availability Fee (\$45.00/year) does not cover total fixed costs which are estimated to be \$55.00/year. Consideration is currently being given to increasing the fee to \$55.00/year which would cover all fixed costs.

### **DURHAM COUNTY**

- \$45.00/year Availability Fee for unincorporated County residents for access to:
  - Solid Waste Convenience Centers
  - Recycling Centers
  - Collection of yard trimmings
  - Biweekly curbside recycling
  - Large appliance recycling
  - Litter control enforcement/education
- services may be made available to out-of-County residents and City of Durham residents at higher rates (i.e., \$60.00/year for City residents)

### **GRANVILLE COUNTY**

- have a standard charge on tax bill (\$65.00/year) to cover operation of Convenience Centers
- only applied to County residents who do not use curbside recycling service
- have franchised collection areas
- looking at a \$15.00/year fee for access to limited services
- City of Oxford uses a bar code and scanner system to provide a credit for recycling

### **LEE COUNTY**

- solid waste fee for County residents of \$50.00/year
- \$75.00/year fee for City residents includes sewer fees

### **WAKE COUNTY**

- \$18.00 annual residential waste reduction fee for all County residents to support County non-landfill solid waste programs and facilities, including:
  - eleven County Convenience Centers
  - two multi-material drop-off facilities
  - fifty school 'Igloo' recycling programs
  - one permanent household hazardous waste facility
  - forty-nine magazine collection days
  - one semi-annual telephone book recycling program
  - extensive public education programs for all waste reduction and recycling initiatives
  - research and activities of the Solid Waste Advisory Committee
  - Recycling Reserve Fund
- The programs covered by the County's fee are in addition to the curbside/drop-off programs offered by municipalities and private waste haulers
- Use of the fee allowed reduced tipping fee at landfill from \$31/ton to \$22/ton. Residents could see cost savings in monthly solid waste fees charged by municipalities and/or private waste haulers.

**FEASIBILITY OF SIMULTANEOUS OPERATION AND/OR MAINTENANCE OF  
EXISTING LANDFILL AND TRANSFER STATION**

In a memo dated March 12, 1998, the Solid Waste Director provided an overview of issues related to the development and simultaneous operation of a transfer station and the existing Orange Regional Landfill. A copy of this memo is included with the agenda for the April 22, 1998 LOG meeting.



## **ATTACHMENT 20**

**HDR Engineering, Inc., Residential “Availability Fee” Options for Solid Waste  
Services**

***Supplementary Report***

**RESIDENTIAL "AVAILABILITY FEE" OPTIONS  
FOR SOLID WASTE SERVICES**

**Prepared for:**

**Landfill Owners Group  
Chapel Hill, North Carolina**

**Prepared by:**

**HDR Engineering, Inc. of North Carolina  
Charlotte, North Carolina**



***July 6, 1998***

LANDFILL OWNERS GROUP  
FINANCING COMMITTEE

RESIDENTIAL "AVAILABILITY FEE" OPTIONS  
FOR SOLID WASTE SERVICES

**INTRODUCTION**

The Financing Committee of the Landfill Owners Group has been charged with developing an alternative method of financing for the solid waste services it provides. Historically, these services—which include recycling and disposal services—have been paid for through the tipping fees charged at the Regional Landfill. In light of the increased types and levels of recycling services that are planned to meet the Landfill Owners Group's (LOG) 61% recycling goal by the year 2006, this financing option is no longer feasible.

A previous report entitled "Alternative Funding Strategies for Solid Waste Management Programs," submitted to the LOG on May 5, 1998, and revised on June 2, 1998, provided information on the costs and service levels of current and planned LOG solid waste services. It also analyzed the implications of continuing to use the current funding approach—namely, reliance on tipping fees—to pay for future programs. Finally, it presented an overview of alternative funding approaches being used by other local governments in North Carolina.

One of the most popular options that is being used by local governments in North Carolina is the "Availability Fee." (The other major alternative financing method is taxation.) The purpose of this paper is to present two alternative financing options that the LOG Financing Committee may want to consider for future implementation. These are:

- **Flat Fee Used to Pay for All Future Non-Disposal Services** – The current tipping fee of \$38 per ton at the Regional Landfill is at the high end of the competitive range when compared to other disposal rates in the area. The current tipping fee generates sufficient revenues to pay for the current disposal and other services provided by the LOG. Under this option, a flat fee would be used to pay for future LOG services. The future costs split equally between the residential and commercial sectors.

- **Variable Fee Used to Pay for Current and Future Disposal Services –**  
Under this option, recipients of LOG services would be charged an availability fee for all non-landfill services, based on the number and type of services they receive.

## ***METHODOLOGY AND ASSUMPTIONS***

To develop availability fee estimates for each of the two options, HDR and the LOG Administrative staff first refined the program cost projections presented to the LOG Financing Committee in the June 2<sup>nd</sup> report. These updated cost projections are presented in Table 1. Key changes and assumptions included in this table are as follows:

- Overall cost projections changed slightly due to reallocation and refinement of cost projections. For example, in fiscal year (FY) 1999/2000 the overall program cost projections changed from \$4.81 million to \$4.76 million.
- The costs of the “Transfer Station” services increased substantially. The original costs did not include the costs of disposal at the remote landfill site. The current cost estimates assume a one-way haul distance of 100 miles and remote disposal costs of \$25 per ton in 1998 dollars inflated at a rate of 4% per year.
- Except for the Materials Recovery Facility (MRF), the capital costs associated with each service are assumed to be covered through the annual “Contributions to Reserves” charge made to each service in the annual budget.
- Landfill closure costs are assumed to be covered through the annual “Contributions to Reserve Funds” charge to the MSW Landfill account.
- Landfill revenues do not include the sale of the “green tract” of land currently owned by the LOG. This land was purchased for \$650,000 and is now estimated to be worth \$2.5-\$3.0 million.

TABLE 1

## PROGRAM COST PROJECTIONS

| <u>Program</u>                      | <u>1999-2000</u> | <u>2000-2001</u> | <u>2001-2002</u> | <u>2002-2003</u> | <u>2003-2004</u> | <u>2004-2005</u> | <u>2005-2006</u> | <u>2006-2007</u> | <u>2007-2008</u> | <u>2008-2009</u> |
|-------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| MSW Landfill                        | \$2,229,618      | \$ 2,307,185     | \$2,357,994      | \$ 2,409,943     | \$ 2,464,876     | \$2,543,209      | \$2,621,351      | \$ 84,341        | \$ 86,027        | \$ 87,748        |
| Transfer Station                    | \$ -             | \$ -             | \$ -             | \$ -             | \$ -             | \$ -             | \$ -             | \$3,711,784      | \$ 3,813,013     | \$3,966,208      |
| C&D Landfill                        | \$ 541,120       | \$ 647,615       | \$ 511,711       | \$ 537,797       | \$ 563,166       | \$ 578,068       | \$ 593,528       | \$ 609,569       | \$ 642,757       | \$ 674,642       |
| Commercial Glass                    | \$ 112,972       | \$ 166,170       | \$ 268,941       | \$ 279,561       | \$ 290,606       | \$ 302,093       | \$ 314,708       | \$ 327,130       | \$ 340,051       | \$ 353,489       |
| Commercial Food                     | \$ 43,380        | \$ 51,634        | \$ 65,220        | \$ 67,829        | \$ 70,542        | \$ 73,364        | \$ 76,298        | \$ 79,350        | \$ 82,524        | \$ 85,825        |
| Commercial General                  | \$ -             | \$ -             | \$ 27,861        | \$ 85,255        | \$ 114,813       | \$ 114,813       | \$ 114,813       | \$ 114,813       | \$ 120,220       | \$ 131,358       |
| Multi-Family Recyclables Collection | \$ 264,382       | \$ 274,957       | \$ 285,955       | \$ 297,393       | \$ 309,289       | \$ 321,661       | \$ 334,527       | \$ 347,908       | \$ 361,824       | \$ 376,297       |
| Drop-Off Centers                    | \$ 295,890       | \$ 305,628       | \$ 315,755       | \$ 326,287       | \$ 342,496       | \$ 353,887       | \$ 369,509       | \$ 381,830       | \$ 394,644       | \$ 414,064       |
| HHW Collection/Processing           | \$ 129,688       | \$ 134,876       | \$ 140,271       | \$ 145,881       | \$ 151,717       | \$ 157,785       | \$ 164,097       | \$ 170,661       | \$ 177,487       | \$ 184,586       |
| Materials Recovery Facility         | \$ -             | \$ -             | \$ 901,463       | \$ 777,208       | \$ 766,326       | \$ 756,678       | \$ 747,041       | \$ 737,416       | \$ 727,804       | \$ 718,203       |
| Non-Allocable Costs                 | \$ 369,529       | \$ 409,943       | \$ 506,604       | \$ 525,403       | \$ 544,909       | \$ 565,151       | \$ 586,155       | \$ 607,952       | \$ 630,571       | \$ 654,044       |
| Curbside Recycling - Urban          | \$ 558,670       | \$ 575,430       | \$ 747,020       | \$ 732,675       | \$ 754,655       | \$ 777,295       | \$ 800,613       | \$ 824,632       | \$ 849,371       | \$ 874,852       |
| Curbside Recycling - Rural          | \$ 213,624       | \$ 220,033       | \$ 587,171       | \$ 641,543       | \$ 660,789       | \$ 680,613       | \$ 701,031       | \$ 722,062       | \$ 743,724       | \$ 766,036       |
| TOTAL                               | \$4,758,873      | \$ 5,093,470     | \$6,715,965      | \$ 6,826,774     | \$ 7,034,184     | \$ 7,224,616     | \$ 7,423,670     | \$8,719,449      | \$ 8,970,016     | \$9,287,352      |

For each option, estimates are provided only for the Availability Fees that would be charged to the Residential Sector. While it is assumed that some type of "Availability Fee" would also be developed for the Commercial Sector, estimates of the magnitude of these fees will be provided once input is provided from the LOG Finance Committee on the methodology that should be used to assess the commercial fees.

Specifically, input is needed from the LOG Financing Committee on the establishment of availability fees for the commercial sector in the following areas:

- **Basis for Fee Assessment** – Residential solid waste customers can be categorized into a relatively small number of categories (urban single family; urban multi-family, etc.). Businesses, on the other hand, run the gamut from small convenience stores to major industries or institutions (such as UNC). There is no clearly defined way to group businesses in order to assess availability fees.

One option would be to charge all businesses a uniform fee, regardless of size. Another would be to group businesses into three sizes based on number of employees, (e.g., small, medium, or large). A third option would be to assess the fee based on the amount of solid waste generated.

- **Fee Administration** – The administration of a commercial availability fee is significantly more complex than a residential fee. Businesses will need to be assessed the appropriate fees and then billed accordingly. A bill accounting and collection program will need to be established and administered. Input is needed on the most efficient and appropriate methods that should be used for fee billing and collection.

Once guidance is received from the LOG Financing Committee on these areas, staff will then gather the additional required information in order to properly group the businesses and develop estimates of the required fees.



- **Option 2: Variable Residential Fee Pays for Current and Future Non-Disposal Services** – Under this option, residential fees would be assessed based on the services provided to each residence by the LOG. In FY 1999/2000, these fees are projected to be:

- Urban Single Family Residence - \$51 per year
- Urban Multi-Family Residence - \$33 per year
- Rural Single Family Residence - \$57 per year  
(With Curbside Recycling)
- Rural Single Family Residence - \$13 per year  
(Without Curbside Recycling)

These fees would increase through FY 2008/2009 as indicated in Table 2. Support data used to develop these fee estimates are provided in Attachment A.

The Availability Fees that would be needed by the LOG to supplement tipping fee revenues are in line with those charged by other North Carolina jurisdictions, as indicated in Table 3. Of the jurisdictions listed, the fees charged in Wake County and Mecklenburg County would be most comparable to those estimated for the LOG. However, it is likely that these fees do not cover curbside recycling costs in these two counties.

**TABLE 3**  
**AVAILABILITY FEES CHARGES BY OTHER**  
**N.C. JURISDICTIONS**

| Jurisdiction          | Fee                                     | Covers                          |
|-----------------------|---|---------------------------------|
| 1. Wake County        | \$18 per year                           | Non-landfill Services           |
| 2. Mecklenburg County | \$10 per year                           | Non-landfill Services           |
| 3. City of Charlotte: |   |                                 |
| ▪ Single Family       | \$38 per year                           | Recycling and disposal services |
| ▪ Multi-Family        | \$23 per year                           | Recycling and disposal services |
| 4. Chatham County     | \$45 per year <sup>+45 collection</sup> | Recycling and disposal services |
| 5. Durham County      | \$45 per year                           | Recycling and disposal services |



## *CONCLUSIONS*

Depending on the strategy selected, LOG Availability Fees would range from \$12 to \$57 per residence per year. These fee estimates assume that a separate Availability Fee strategy would be developed for the commercial sector. Input is needed from the LOG Financing Committee on the appropriateness of the residential Availability Fee options presented in this paper, as well as policies that should guide the development of Availability Fees for the commercial sector.

**OPTION 1: RESIDENTIAL AVAILABILITY FEE PAYS FOR 50% OF ALL FUTURE SERVICES**

**PROGRAM COST PROJECTIONS**

| <u>Program</u>   | <u>1999-2000</u>    | <u>2000-2001</u>    | <u>2001-2002</u>    | <u>2002-2003</u>    | <u>2003-2004</u>    | <u>2004-2005</u>    | <u>2005-2006</u>    | <u>2006-2007</u>    | <u>2007-2008</u>    | <u>2008-2009</u>    |
|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| MSW Landfill   | \$ 2,229,818        | \$ 2,307,185        | \$ 2,357,994        | \$ 2,409,943        | \$ 2,464,876        | \$ 2,543,209        | \$ 2,621,351        | \$ 84,341           | \$ 86,027           | \$ 87,748           |
| Transfer Station   | \$ -                | \$ -                | \$ -                | \$ -                | \$ -                | \$ -                | \$ -                | \$ 3,711,784        | \$ 3,813,013        | \$ 3,966,208        |
| C&D Landfill   | \$ 641,120          | \$ 647,815          | \$ 611,711          | \$ 537,797          | \$ 563,166          | \$ 578,068          | \$ 593,528          | \$ 609,569          | \$ 642,757          | \$ 674,642          |
| Commercial Glass   | \$ 112,972          | \$ 166,170          | \$ 268,941          | \$ 279,581          | \$ 290,606          | \$ 302,093          | \$ 314,706          | \$ 327,130          | \$ 340,051          | \$ 353,489          |
| Commercial Food  | \$ 43,380           | \$ 51,634           | \$ 65,220           | \$ 87,829           | \$ 70,542           | \$ 73,364           | \$ 76,298           | \$ 79,350           | \$ 82,524           | \$ 85,825           |
| Commercial General   | \$ -                | \$ -                | \$ 27,861           | \$ 65,255           | \$ 114,813          | \$ 114,813          | \$ 114,813          | \$ 114,813          | \$ 120,220          | \$ 131,358          |
| Multi-Family Recyclables Collection                          | \$ 284,382          | \$ 274,957          | \$ 285,955          | \$ 297,393          | \$ 309,289          | \$ 321,661          | \$ 334,527          | \$ 347,908          | \$ 361,824          | \$ 376,297          |
| Drop-Off Centers   | \$ 295,890          | \$ 305,628          | \$ 315,755          | \$ 326,287          | \$ 342,496          | \$ 353,887          | \$ 369,509          | \$ 381,830          | \$ 394,644          | \$ 414,064          |
| HHW Collection/Processing                                    | \$ 129,688          | \$ 134,878          | \$ 140,271          | \$ 145,881          | \$ 151,717          | \$ 157,785          | \$ 164,097          | \$ 170,661          | \$ 177,487          | \$ 184,586          |
| Materials Recovery Facility                                  | \$ -                | \$ -                | \$ 901,463          | \$ 777,208          | \$ 766,326          | \$ 756,678          | \$ 747,041          | \$ 737,416          | \$ 727,804          | \$ 718,203          |
| Non-Allocable Costs  | \$ 369,529          | \$ 409,943          | \$ 506,604          | \$ 525,403          | \$ 544,909          | \$ 565,151          | \$ 586,155          | \$ 607,952          | \$ 630,571          | \$ 654,044          |
| Curbside Recycling - Urban                                   | \$ 558,670          | \$ 575,430          | \$ 747,020          | \$ 732,676          | \$ 754,655          | \$ 777,295          | \$ 800,613          | \$ 824,632          | \$ 849,371          | \$ 874,852          |
| Curbside Recycling - Rural                                   | \$ 213,624          | \$ 220,033          | \$ 587,171          | \$ 641,543          | \$ 680,789          | \$ 680,613          | \$ 701,031          | \$ 722,062          | \$ 743,724          | \$ 766,036          |
| <b>TOTAL</b>   | <b>\$ 4,758,874</b> | <b>\$ 5,093,470</b> | <b>\$ 6,715,965</b> | <b>\$ 6,826,774</b> | <b>\$ 7,034,184</b> | <b>\$ 7,224,616</b> | <b>\$ 7,423,670</b> | <b>\$ 8,719,449</b> | <b>\$ 8,970,016</b> | <b>\$ 9,287,352</b> |
| Tons Disposed  | 92,001              | 92,773              | 88,271              | 78,709              | 78,953              | 79,197              | 79,442              | 79,687              | 79,934              | 80,180              |
| Tipping Fee (Based on Competitive Rates)                     | \$ 39.52            | \$ 41.10            | \$ 42.74            | \$ 44.45            | \$ 46.23            | \$ 48.08            | \$ 50.01            | \$ 52.01            | \$ 54.09            | \$ 56.25            |
| Revenues From Tipping Fees                                   | \$ 3,635,862        | \$ 3,813,037        | \$ 3,773,117        | \$ 3,498,974        | \$ 3,650,202        | \$ 3,807,959        | \$ 3,972,525        | \$ 4,144,195        | \$ 4,323,275        | \$ 4,510,084        |
| Net Program Costs Requiring Additional Funding               | \$ 1,123,012        | \$ 1,280,432        | \$ 2,942,848        | \$ 3,327,800        | \$ 3,383,982        | \$ 3,416,658        | \$ 3,451,145        | \$ 4,575,254        | \$ 4,646,741        | \$ 4,777,268        |
| Program Costs To Be Paid Residential Availability Fees (50%) | \$ 561,506          | \$ 640,216          | \$ 1,471,424        | \$ 1,663,900        | \$ 1,691,991        | \$ 1,708,329        | \$ 1,725,573        | \$ 2,287,627        | \$ 2,323,371        | \$ 2,388,634        |
| No. of Residences  | 45,972              | 46,891              | 47,829              | 48,786              | 49,762              | 50,757              | 51,772              | 52,807              | 53,864              | 54,941              |
| <b>Annual Availability Fee Per Residence</b>                 | <b>\$12</b>         | <b>\$14</b>         | <b>\$31</b>         | <b>\$34</b>         | <b>\$34</b>         | <b>\$34</b>         | <b>\$33</b>         | <b>\$43</b>         | <b>\$43</b>         | <b>\$43</b>         |

# OPTION 2: RESIDENTIAL AVAILABILITY FEE PAYS FOR ALL RESIDENTIAL NON-DISPOSAL SERVICES

## PROGRAM COST PROJECTIONS AND REVENUE SOURCES

|  |       | <u>1999-2000</u>    | <u>2000-2001</u>    | <u>2001-2002</u>    | <u>2002-2003</u>    | <u>2003-2004</u>    | <u>2004-2005</u>    | <u>2005-2006</u>    | <u>2006-2007</u>    | <u>2007-2008</u>    | <u>2008-2009</u>    |
|--|-------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>Program Costs To Be Paid By Residential User Fees</b> |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Multi-Family Recyclables Collection                      |       | \$ 264,382          | \$ 274,957          | \$ 285,955          | \$ 297,393          | \$ 309,289          | \$ 321,661          | \$ 334,527          | \$ 347,908          | \$ 361,824          | \$ 376,298          |
| Drop-Off Centers   |       | \$ 295,890          | \$ 305,628          | \$ 315,755          | \$ 326,287          | \$ 342,496          | \$ 353,887          | \$ 369,509          | \$ 381,830          | \$ 394,644          | \$ 414,066          |
| HHW Collection/Processing                                |       | \$ 129,688          | \$ 134,876          | \$ 140,271          | \$ 145,881          | \$ 151,717          | \$ 157,785          | \$ 164,097          | \$ 170,661          | \$ 177,487          | \$ 184,588          |
| Materials Recovery Facility (50%)                        | 50.4% | \$ -                | \$ -                | \$ 454,337          | \$ 391,713          | \$ 386,228          | \$ 381,368          | \$ 376,509          | \$ 371,658          | \$ 366,813          | \$ 361,978          |
| Non-Allocable Costs (50%)                                | 0.5   | \$ 184,764          | \$ 204,972          | \$ 253,302          | \$ 282,701          | \$ 272,455          | \$ 282,575          | \$ 293,078          | \$ 303,976          | \$ 315,286          | \$ 327,028          |
| Curbside Recycling - Urban                               |       | \$ 558,870          | \$ 575,430          | \$ 747,020          | \$ 732,675          | \$ 754,655          | \$ 777,295          | \$ 800,613          | \$ 824,632          | \$ 849,371          | \$ 874,858          |
| Curbside Recycling - Rural                               |       | \$ 213,624          | \$ 220,033          | \$ 587,171          | \$ 641,543          | \$ 660,789          | \$ 680,613          | \$ 701,031          | \$ 722,062          | \$ 743,724          | \$ 766,038          |
| Subtotal   |       | \$ 1,647,018        | \$ 1,715,894        | \$ 2,783,811        | \$ 2,798,193        | \$ 2,877,628        | \$ 2,955,181        | \$ 3,039,364        | \$ 3,122,727        | \$ 3,209,149        | \$ 3,304,838        |
| <b>TOTAL PROGRAM COSTS</b>                               |       | <b>\$ 4,758,874</b> | <b>\$ 5,093,470</b> | <b>\$ 6,715,965</b> | <b>\$ 6,829,883</b> | <b>\$ 7,037,250</b> | <b>\$ 7,227,643</b> | <b>\$ 7,426,658</b> | <b>\$ 8,722,399</b> | <b>\$ 8,972,928</b> | <b>\$ 9,290,228</b> |
| <b>Residential Users and Proposed Fees</b>               |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| <b>Urban Single Family Residences</b>                    |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Annual Fee   |       | \$ 51.05            | \$ 51.91            | \$ 76.56            | \$ 72.89            | \$ 73.32            | \$ 73.68            | \$ 74.13            | \$ 74.52            | \$ 74.94            | \$ 75.41            |
| Projected Annual Revenues                                |       | \$ 755,028          | \$ 783,090          | \$ 1,178,052        | \$ 1,143,967        | \$ 1,173,729        | \$ 1,203,071        | \$ 1,234,656        | \$ 1,266,091        | \$ 1,298,624        | \$ 1,334,254        |
| <b>Urban Multi-Family Residences</b>                     |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Annual Fee   |       | \$33                | \$34                | \$44                | \$44                | \$45                | \$46                | \$47                | \$48                | \$49                | \$50                |
| Projected Annual Revenues                                |       | \$ 441,382          | \$ 462,146          | \$ 594,429          | \$ 599,109          | \$ 618,986          | \$ 638,256          | \$ 659,430          | \$ 680,351          | \$ 702,147          | \$ 726,828          |
| <b>Rural Single Family Residences - With Curbside</b>    |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Annual Fee   |       | \$57                | \$59                | \$58                | \$59                | \$60                | \$60                | \$61                | \$61                | \$62                | \$63                |
| Projected Annual Revenues                                |       | \$ 426,910          | \$ 445,595          | \$ 968,914          | \$ 1,013,760        | \$ 1,042,502        | \$ 1,070,531        | \$ 1,100,853        | \$ 1,130,862        | \$ 1,161,912        | \$ 1,196,238        |
| <b>Rural Single Family Residences - Without Curbside</b> |       |                     |                     |                     |                     |                     |                     |                     |                     |                     |                     |
| Annual Fee   |       | \$13                | \$14                | \$24                | \$23                | \$24                | \$24                | \$25                | \$25                | \$26                | \$27                |
| Projected Annual Revenues                                |       | \$ 23,698           | \$ 25,062           | \$ 42,416           | \$ 41,357           | \$ 42,413           | \$ 43,324           | \$ 44,425           | \$ 45,422           | \$ 46,465           | \$ 47,798           |
| <b>Total User Fee Revenues</b>                           |       | <b>\$ 1,647,018</b> | <b>\$ 1,715,894</b> | <b>\$ 2,783,811</b> | <b>\$ 2,798,193</b> | <b>\$ 2,877,628</b> | <b>\$ 2,955,181</b> | <b>\$ 3,039,364</b> | <b>\$ 3,122,727</b> | <b>\$ 3,209,149</b> | <b>\$ 3,304,838</b> |
| <b>TOTAL REVENUES</b>                                    |       | <b>\$ 4,758,874</b> | <b>\$ 5,093,470</b> | <b>\$ 6,715,965</b> | <b>\$ 6,829,883</b> | <b>\$ 7,037,250</b> | <b>\$ 7,227,643</b> | <b>\$ 7,426,658</b> | <b>\$ 8,722,399</b> | <b>\$ 8,972,928</b> | <b>\$ 9,290,294</b> |

## User Fees: Urban Residential Single Family

Option: User Fees Pay For All Non-Landfill Programs

| Program                             | Percent of Program Costs | 1999-2000         | 2000-2001         | 2001-2002         | 2002-2003         | 2003-2004         | 2004-2005         | 2005-2006         | 2006-2007         | 2007-2008         | 2008-2009         |
|-------------------------------------|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Drop-Off Centers                    | 32%                      | \$ 95,193         | \$ 98,326         | \$ 101,584        | \$ 104,972        | \$ 110,187        | \$ 113,852        | \$ 118,878        | \$ 122,842        | \$ 126,964        | \$ 133,212        |
| HHW Collection/Processing           | 32%                      | \$ 41,723         | \$ 43,392         | \$ 45,127         | \$ 46,933         | \$ 48,810         | \$ 50,762         | \$ 52,793         | \$ 54,905         | \$ 57,101         | \$ 59,385         |
| Materials Recovery Facility (22.5%) | 22.5%                    | \$ -              | \$ -              | \$ 202,829        | \$ 174,872        | \$ 172,423        | \$ 170,253        | \$ 168,084        | \$ 165,919        | \$ 163,756        | \$ 161,596        |
| Non-Allocable Costs (50%)           | 18%                      | \$ 59,442         | \$ 65,943         | \$ 81,492         | \$ 84,516         | \$ 87,653         | \$ 90,909         | \$ 94,288         | \$ 97,794         | \$ 101,433        | \$ 105,209        |
| <u>Curbside Recycling - Urban</u>   | <u>100%</u>              | <u>\$ 558,670</u> | <u>\$ 575,430</u> | <u>\$ 747,020</u> | <u>\$ 732,675</u> | <u>\$ 754,655</u> | <u>\$ 777,295</u> | <u>\$ 800,613</u> | <u>\$ 824,632</u> | <u>\$ 849,371</u> | <u>\$ 874,852</u> |
| TOTAL                               |                          | \$ 755,028        | \$ 783,090        | \$ 1,178,052      | \$ 1,143,967      | \$ 1,173,729      | \$ 1,203,071      | \$ 1,234,656      | \$ 1,266,091      | \$ 1,298,624      | \$ 1,334,252      |
| No. Urban Single Family Households  |                          | 14,790            | 15,066            | 15,388            | 15,695            | 16,009            | 16,329            | 16,656            | 16,989            | 17,329            | 17,675            |
| Annual User Fee                     |                          | \$ 51.05          | \$ 51.91          | \$ 76.56          | \$ 72.89          | \$ 73.32          | \$ 73.68          | \$ 74.13          | \$ 74.52          | \$ 74.94          | \$ 75.49          |

Urban residential tons to MRF represent 22.5% of total MRF tons.  
Total No. households in Orange County (FY 1999-2000):

|  |        |     |
|--|--------|-----|
| Urban                                  |        |     |
| Single Family                          | 14,790 | 32% |
| Multi-Family                           | 13,332 | 29% |
| Rural                                  |        | 0%  |
| Single Family _Curbside Collection     | 16,065 | 35% |
| Single Family _ No Curbside Collection | 1,785  | 4%  |

# User Fees: Urban Residential Multi-Family

Option:

## User Fees Pay For All Non-Landfill Programs

| Program   | Percent of Program Costs | 1999-2000         | 2000-2001         | 2001-2002         | 2002-2003         | 2003-2004         | 2004-2005         | 2005-2006         | 2006-2007         | 2007-2008         | 2008-2009         |
|---|--------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Drop-Off Centers  | 29%                      | \$ 85,809         | \$ 88,633         | \$ 91,570         | \$ 94,624         | \$ 99,325         | \$ 102,628        | \$ 107,159        | \$ 110,732        | \$ 114,448        | \$ 120,080        |
| HHW Collection/Processing                               | 29%                      | \$ 37,610         | \$ 39,114         | \$ 40,679         | \$ 42,306         | \$ 43,998         | \$ 45,758         | \$ 47,588         | \$ 49,492         | \$ 51,472         | \$ 53,531         |
| Materials Recovery Facility                             | 11.4%                    | \$ -              | \$ -              | \$ 102,767        | \$ 88,602         | \$ 87,361         | \$ 86,261         | \$ 85,163         | \$ 84,065         | \$ 82,970         | \$ 81,875         |
| Non-Allocable Costs (50% of Costs * Multi-Family Share) | 15%                      | \$ 53,582         | \$ 59,442         | \$ 73,458         | \$ 76,184         | \$ 79,013         | \$ 81,948         | \$ 84,993         | \$ 88,154         | \$ 91,434         | \$ 94,837         |
| Multi-Family Recycling                                  | 100%                     | \$ 264,382        | \$ 274,957        | \$ 285,955        | \$ 297,393        | \$ 309,289        | \$ 321,661        | \$ 334,527        | \$ 347,908        | \$ 361,824        | \$ 376,297        |
| <b>TOTAL</b>  |                          | <b>\$ 441,382</b> | <b>\$ 482,146</b> | <b>\$ 594,429</b> | <b>\$ 599,109</b> | <b>\$ 618,986</b> | <b>\$ 638,256</b> | <b>\$ 659,430</b> | <b>\$ 680,351</b> | <b>\$ 702,147</b> | <b>\$ 726,620</b> |
| No. Urban Multi-Family Households                       |                          | 13,332            | 13,465            | 13,600            | 13,736            | 13,873            | 14,012            | 14,152            | 14,294            | 14,437            | 14,581            |
| Annual User Fee   |                          | \$ 33.11          | \$ 34.32          | \$ 43.71          | \$ 43.62          | \$ 44.62          | \$ 45.55          | \$ 46.60          | \$ 47.60          | \$ 48.64          | \$ 49.83          |

- Multi-family residential tons to MRF represent 11.4% of total MRF tons in FY2002-2003.
- Total No Households in Orange County (FY 1999-2000):

|  |        |      |
|--|--------|------|
| Urban                                  |        |      |
| Single Family                          | 14,790 | 32%  |
| Multi-Family                           | 13,332 | 29%  |
| Rural                                  |        | 0%   |
| Single Family - Curbside Collection    | 16,065 | 35%  |
| Single Family - No Curbside Collection | 1,785  | 4%   |
| Total HH in County                     | 45,972 | 100% |

## User Fees: Rural Residents With Curbside Recycling

Option:

User Fees Pay For All Non-Landfill Programs

| Program   | Percent of<br>Program Costs | 1999-2000         | 2000-2001         | 2001-2002         | 2002-2003           | 2003-2004           | 2004-2005           | 2005-2006           | 2006-2007           | 2007-2008           | 2008-2009           |
|---|-----------------------------|-------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Drop-Off Centers  | 35%                         | \$ 103,399        | \$ 106,802        | \$ 110,341        | \$ 114,021          | \$ 119,686          | \$ 123,667          | \$ 129,126          | \$ 133,431          | \$ 137,909          | \$ 144,695          |
| HHW Collection/Processing                                   | 35%                         | \$ 45,320         | \$ 47,132         | \$ 49,018         | \$ 50,979           | \$ 53,018           | \$ 55,138           | \$ 57,344           | \$ 59,638           | \$ 62,023           | \$ 64,504           |
| Materials Recovery Facility                                 | 14.9%                       | \$ -              | \$ -              | \$ 133,867        | \$ 115,415          | \$ 113,799          | \$ 112,367          | \$ 110,936          | \$ 109,506          | \$ 108,079          | \$ 106,653          |
| Non-Allocable Costs (50% of Costs * Rural Residents' Share) | 17%                         | \$ 64,566         | \$ 71,628         | \$ 88,517         | \$ 91,801           | \$ 95,210           | \$ 98,746           | \$ 102,417          | \$ 106,225          | \$ 110,177          | \$ 114,278          |
| <b>Rural Recycling</b>                                      | <b>100%</b>                 | <b>\$ 213,624</b> | <b>\$ 225,033</b> | <b>\$ 587,171</b> | <b>\$ 641,543</b>   | <b>\$ 660,789</b>   | <b>\$ 680,613</b>   | <b>\$ 701,031</b>   | <b>\$ 722,062</b>   | <b>\$ 743,724</b>   | <b>\$ 766,103</b>   |
| <b>TOTAL</b>  |                             | <b>\$ 426,910</b> | <b>\$ 445,595</b> | <b>\$ 968,914</b> | <b>\$ 1,013,760</b> | <b>\$ 1,042,502</b> | <b>\$ 1,070,531</b> | <b>\$ 1,100,853</b> | <b>\$ 1,130,862</b> | <b>\$ 1,161,912</b> | <b>\$ 1,196,234</b> |
| No. Rural Single Family Households                          |                             | 7,446             | 7,595             | 16,714            | 17,048              | 17,389              | 17,737              | 18,092              | 18,453              | 18,822              | 19,199              |
| Annual User Fee   |                             | \$ 57.33          | \$ 58.67          | \$ 57.97          | \$ 59.46            | \$ 59.95            | \$ 60.36            | \$ 60.85            | \$ 61.28            | \$ 61.73            | \$ 62.31            |

Rural residential tons to MRF represent 16.5% of total MRF tons in FY2002-2003.  
Total No Households in Orange County: (FY 1999/2000)

|  |        |      |
|--|--------|------|
| Urban                                  |        |      |
| Single Family                          | 14,790 | 32%  |
| Multi-Family                           | 13,332 | 29%  |
| Rural                                  |        | 0%   |
| Single Family - Curbside Collection    | 16,085 | 35%  |
| Single Family - No Curbside Collection | 1,785  | 4%   |
| Total HH in County                     | 45,972 | 100% |

## User Fees: Rural Residents Without Curbside Recycling

Option:

User Fees Pay For All Non-Landfill Programs

| Program  | Percent of Program Costs | 1999-2000        | 2000-2001        | 2001-2002        | 2002-2003        | 2003-2004        | 2004-2005        | 2005-2006        | 2006-2007        | 2007-2008        | 2008-2009        |
|--|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Drop-Off Centers   | 4%                       | \$ 11,489        | \$ 11,867        | \$ 12,260        | \$ 12,669        | \$ 13,298        | \$ 13,741        | \$ 14,347        | \$ 14,826        | \$ 15,323        | \$ 16,077        |
| HHW Collection/Processing  | 4%                       | \$ 5,038         | \$ 5,237         | \$ 5,446         | \$ 5,664         | \$ 5,891         | \$ 6,126         | \$ 6,372         | \$ 6,626         | \$ 6,891         | \$ 7,167         |
| Materials Recovery Facility  | 1.7%                     | \$ -             | \$ -             | \$ 14,874        | \$ 12,824        | \$ 12,644        | \$ 12,485        | \$ 12,328        | \$ 12,167        | \$ 12,009        | \$ 11,850        |
| <u>Non-Allocable Costs (50% of Costs - Rural Residents' Share)</u> | <u>2%</u>                | <u>\$ 7,174</u>  | <u>\$ 7,959</u>  | <u>\$ 9,835</u>  | <u>\$ 10,200</u> | <u>\$ 10,579</u> | <u>\$ 10,972</u> | <u>\$ 11,380</u> | <u>\$ 11,803</u> | <u>\$ 12,242</u> | <u>\$ 12,698</u> |
| <b>TOTAL</b>   |                          | <b>\$ 23,698</b> | <b>\$ 25,062</b> | <b>\$ 42,416</b> | <b>\$ 41,357</b> | <b>\$ 42,413</b> | <b>\$ 43,324</b> | <b>\$ 44,425</b> | <b>\$ 45,422</b> | <b>\$ 46,465</b> | <b>\$ 47,792</b> |
| No. Rural Single Family Households - Without Curbside Recycling    |                          | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            | 1,785            |
| Annual User Fee  |                          | \$ 13.28         | \$ 14.04         | \$ 23.76         | \$ 23.17         | \$ 23.76         | \$ 24.27         | \$ 24.89         | \$ 25.45         | \$ 26.03         | \$ 26.77         |

Rural residential tons to MRF represent 16.5% of total MRF tons in FY2002-2003.  
Total No Households in Orange County: (FY1999/2000)

|                                    |        |      |
|------------------------------------|--------|------|
| Urban                              |        |      |
| Single Family                      | 14,790 | 32%  |
| Multi-Family                       | 13,332 | 29%  |
| Rural                              |        |      |
| Single Family - Curbside Collectio | 16,065 | 35%  |
| Single Family - No Curbside Coll   | 1,785  | 4%   |
| Total HH in County                 | 45,972 | 100% |

## **ATTACHMENT 21**

**Memo from Gayle Wilson to LOG Re: Funding for C&D Landfill Site Acquisition**



## MEMORANDUM

TO: Landfill Owners Group

FROM: Gayle Wilson, Solid Waste Director

SUBJECT: Funding for C & D Landfill Site Acquisition

DATE: June 4, 1998

Sufficient resources exist within the Landfill Fund to spend \$1,330,000 in 1998-99 to acquire a site for the proposed C & D landfill from the following sources:

| <u>Funding</u> | <u>Source</u>                                      |
|----------------|--|
| \$ 556,500     | Reserve Fund for Land Acquisition and Construction |
| 558,500        | Reserve Fund for Eubanks Construction              |
| <u>185,000</u> | Undesignated Reserve (Fund Balance)                |
| \$1,330,000    |  |

Copies of the tables of each reserve account, modified to reflect the proposed funding for the C&D landfill, are attached.

If the purchase of a C & D site is made in 1998-99, the residual in the Reserve Fund for Land Acquisition and Construction would drop to \$59,700 at the end of this year. However, assuming no subsequent outlays, and none are now planned, the residual would grow to \$2,304,700 in 2004-05. That is the time that we may need approximately \$2 million to construct a transfer station.

Using \$588,500 from the Eubanks Construction Reserve Account in 1998-99 would reduce the residual this year to \$85,500. However, given the proposed schedule of contributions, this reserve fund would be sufficient to fund the major expenses remaining related to the Eubanks Road landfill.

Using \$185,000 of undesignated Fund balance would leave a Fund Balance as of June 30, 1999, of approximately \$587,000, 13.6% of the operating budget.

In summary, the proposal detailed in the following tables would require an increase of 3.0% in contributions to reserves between 1998-99 and 2004-05.

LANDFILL RESERVE FUND for:  
Equipment Replacement

2

| YEAR        | CONTRIBUTION                    |                                | OUTLAY                          |                                | RESIDUAL |
|-------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|----------|
| Fiscal Year | 1998-99<br>Original<br>Proposal | 1998-99<br>Revised<br>Proposal | 1998-99<br>Original<br>Proposal | 1998-99<br>Revised<br>Proposal |          |
| 88-89       | 50,000                          | 50,000                         |                                 |                                | 50,000   |
| 89-90       | 109,300                         | 109,300                        |                                 |                                | 159,300  |
| 90-91       | 273,819                         | 273,819                        |                                 |                                | 433,119  |
| 91-92       | 350,415                         | 350,415                        |                                 |                                | 783,534  |
| 92-93       | 242,411                         | 242,411                        | 215,545                         | 215,545                        | 810,400  |
| 93-94       | 0                               | 0                              | 234,500                         | 234,500                        | 575,900  |
| 94-95       | 175,000                         | 175,000                        | 252,000                         | 252,000                        | 498,900  |
| 95-96       | 216,000                         | 216,000                        | 317,000                         | 317,000                        | 397,900  |
| 96-97       | 275,000                         | 275,000                        | 255,504                         | 255,504                        | 681,900  |
| 97-98       | 385,000                         | 385,000                        | 601,000                         | 601,000                        | 465,900  |
| 98-99       | 475,000                         | 300,000                        | 343,000                         | 325,000                        | 440,900  |
| 99-00       | 550,000                         | 550,000                        | 305,000                         | 305,000                        | 685,900  |
| 00-01       | 550,000                         | 550,000                        | 609,000                         | 749,000                        | 486,900  |
| 01-02       | 550,000                         | 550,000                        | 504,000                         | 505,000                        | 531,900  |
| 02-03       | 550,000                         | 550,000                        | 506,000                         | 505,300                        | 576,600  |
| 03-04       | 550,000                         | 550,000                        | 509,500                         | 525,000                        | 601,600  |
| 04-05       | 550,000                         | 550,000                        | 364,000                         | 728,400                        | 423,200  |

**Footnotes:**

| Notes     | Purchases / Comments   |
|-----------|--|
| 1998-99   | Purchases: bulldozer (\$190,000); Roll-Off Truck (\$115,000); and used grader (\$20,000) = \$325,000.                      |
| 1999-2000 | Purchase of: Scraper/pan (\$305,000).  |
| 2000-2001 | Purchases: Landfill compactor (\$320,770), scaper/pan (\$288,405); and crawler/dozer for C&D fill (\$140,000) = \$749,175. |
| 2001-2002 | Purchases: Bulldozer (\$378,515) and Loader/backhoe (\$125,727) = \$504,242.   |
| 2002-2003 | Purchases: Landfill compactor (\$340,305) and front-loading recycling truck (\$164,998) = \$505,303.                       |
| 2004-2005 | Replacement schedule assumes continuation of landfill operations beyond 2004/05.   |

LANDFILL RESERVE FUND for:  
Land Acquisitions

3

| YEAR         | CONTRIBUTIONS       |                                | OUTLAY              |                                | RESIDUAL  |
|--------------|---------------------|--------------------------------|---------------------|--------------------------------|-----------|
|              | 1997-98<br>Estimate | 1998-99<br>Revised<br>Estimate | 1997-98<br>Estimate | 1998-99<br>Revised<br>Estimate |           |
| 89-90        | 100,000             | 100,000                        | 0                   | 0                              | 100,000   |
| 90-91        | 110,000             | 110,000                        | 0                   | 0                              | 210,000   |
| 91-92        | 110,000             | 110,000                        | 0                   | 0                              | 320,000   |
| 92-93        | 130,000             | 130,000                        | 0                   | 0                              | 450,000   |
| 93-94        | 110,000             | 110,000                        | 0                   | 0                              | 560,000   |
| 94-95        | 135,000             | 135,000                        | 0                   | 0                              | 695,000   |
| 95-96        | 160,000             | 160,000                        | 202,450             | 202,450                        | 652,550   |
| 96-97        | 185,000             | 185,000                        | 0                   |                                | 837,550   |
| 97-98        | 210,000             | 210,000                        | 309,300             | 561,300                        | 486,250   |
| 98-99        | 235,000             | 235,000                        | 255,000             | 661,550                        | 59,700    |
| 99-00        | 260,000             | 10,000                         | 0                   | 0                              | 69,700    |
| 00-01        | 285,000             | 10,000                         | 0                   | 0                              | 79,700    |
| 01-02        | 700,000             | 500,000                        | 0                   | 0                              | 579,700   |
| 02-03        | 700,000             | 500,000                        | 0                   | 0                              | 1,079,700 |
| 03-04        | 700,000             | 500,000                        | 0                   | 0                              | 1,579,700 |
| 04-05        | 925,000             | 725,000                        | 0                   | 0                              | 2,304,700 |
| <b>TOTAL</b> | <b>\$5,055,000</b>  | <b>\$3,730,000</b>             | <b>\$766,750</b>    | <b>\$1,425,300</b>             |           |

**NOTES:**

| <u>Fiscal Year</u> | <u>Purchases / Comments</u>  |
|--------------------|--|
| 1995-1996          | Expenditure for purchase of Neville tract and Johnson tract  |
| 1997-1998          | Expenditure for purchase of Wilson property and professional services related to landfill site search.   |
| 1998-1999          | Expenditures include: development of either landfill/MRF/Transfer Station (\$50,000); construction of materials separation area (\$55,000); and towards acquisition of a C&D Landfill (\$556,500). |

| YEAR         | CONTRIBUTIONS       |                         | OUTLAY              |                             | RESIDUAL  |
|--------------|---------------------|-------------------------|---------------------|-----------------------------|-----------|
|              | 1997-98<br>Estimate | 1998-99 Revised<br>Est. | 1997-98<br>Estimate | 1998-99 Revised<br>Estimate |           |
| 88-89        | 100,000             | 100,000                 | 0                   | 0                           | 100,000   |
| 89-90        | 300,000             | 300,000                 | 0                   | 0                           | 400,000   |
| 90-91        | 250,000             | 250,000                 | 0                   | 0                           | 650,000   |
| 91-92        | 550,000             | 550,000                 | 0                   | 0                           | 1,200,000 |
| 92-93        | 650,000             | 650,000                 | 0                   | 0                           | 1,850,000 |
| 93-94        | 567,000             | 567,000                 | 0                   | 0                           | 2,417,000 |
| 94-95        | 835,000             | 835,000                 | 3,038,500           | 3,038,500                   | 213,500   |
| 95-96        | 855,000             | 855,000                 | 0                   | 0                           | 1,068,500 |
| 96-97        | 670,000             | 670,000                 | 272,000             | 272,000                     | 1,738,500 |
| 97-98        | 400,000             | 400,000                 | 1,550,000           | 1,550,000                   | 588,500   |
| 98-99        | 420,000             | 335,000                 | 71,500              | 840,000                     | 83,500    |
| 99-00        | 440,000             | 720,000                 | 0                   | 130,000                     | 673,500   |
| 00-01        | 440,000             | 735,000                 | 1,610,000           | 1,400,000                   | 8,500     |
| 01-02        | 225,000             | 225,000                 | 0                   | 0                           | 233,500   |
| 02-03        | 225,000             | 225,000                 | 0                   | 0                           | 458,500   |
| 03-04        | 225,000             | 225,000                 | 680,000             | 680,000                     | 3,500     |
| 04-05        | 0                   |                         | 0                   | 0                           | 3,500     |
| 05-06        |                     |                         |                     |                             |           |
| <b>TOTAL</b> | <b>\$7,152,000</b>  | <b>\$7,642,000</b>      | <b>\$7,222,000</b>  | <b>\$7,910,500</b>          |           |

**NOTES:**

| <u>Fiscal Year</u> | <u>Purchases / Comments</u>  |
|--------------------|--|
| 1998-1999          | Expenditure: gas flares (\$30,000), perimeter fencing (\$71,500), MRF land and development (\$150,000); and funds towards acquisition of C&D landfill (\$588,500). |
| 1999-2000          | Outlay for scales and related development for C&D landfill (\$130,000).  |
| 2000-2001          | Construction of Landfill Cell #4 (final cell)  |
| 2003-2004          | Closure costs for Eubanks landfill, which will likely be deferred one additional year.   |

Landfill Reserve Funds:  
Aggregate of All Funds

5

| YEAR         | CONTRIBUTIONS       |                         | OUTLAY              |                                | RESIDUAL  |
|--------------|---------------------|-------------------------|---------------------|--------------------------------|-----------|
|              | 1997-98<br>Estimate | 1998-99<br>Revised Est. | 1997-98<br>Estimate | 1998-99<br>Revised<br>Estimate |           |
| 88-89        | 150,000             | 150,000                 | 0                   | 0                              | 150,000   |
| 89-90        | 509,300             | 509,300                 | 0                   | 0                              | 659,300   |
| 90-91        | 633,819             | 633,819                 | 0                   | 0                              | 1,293,119 |
| 91-92        | 1,010,415           | 1,010,415               | 0                   | 0                              | 2,303,534 |
| 92-93        | 1,022,411           | 1,022,411               | 215,545             | 215,545                        | 3,110,400 |
| 93-94        | 677,000             | 677,000                 | 234,500             | 234,500                        | 3,552,900 |
| 94-95        | 1,145,000           | 1,145,000               | 3,290,500           | 3,290,500                      | 1,407,400 |
| 95-96        | 1,231,000           | 1,231,000               | 519,450             | 519,450                        | 2,118,950 |
| 96-97        | 1,130,000           | 1,130,000               | 527,504             | 527,504                        | 3,257,950 |
| 97-98        | 995,000             | 995,000                 | 2,460,300           | 2,712,300                      | 1,540,650 |
| 98-99        | 1,130,000           | 870,000                 | 669,500             | 1,826,550                      | 584,100   |
| 99-00        | 1,250,000           | 1,280,000               | 305,000             | 435,000                        | 1,429,100 |
| 00-01        | 1,275,000           | 1,295,000               | 2,219,000           | 2,149,000                      | 575,100   |
| 01-02        | 1,475,000           | 1,275,000               | 504,000             | 505,000                        | 1,345,100 |
| 02-03        | 1,475,000           | 1,275,000               | 506,000             | 505,300                        | 2,114,800 |
| 03-04        | 1,475,000           | 1,275,000               | 1,189,500           | 1,205,000                      | 2,184,800 |
| 04-05        | 1,475,000           | 1,275,000               | 364,000             | 728,400                        | 2,731,400 |
| 05-06        | 0                   | 0                       | 0                   | 0                              | 2,731,400 |
| <b>TOTAL</b> | <b>18,058,945</b>   | <b>17,048,945</b>       | <b>13,004,799</b>   | <b>14,854,049</b>              |           |

| Notes     | Purchases / Comments  |
|-----------|---|
| 1996-1997 | Arithmetic anomaly is based upon a reconciliation of reserve accounts with the current audited financial statements, which resulted in higher reserve account balances. Higher reserve account balances are due to the difference between charging only the actual expenditures rather than the budgeted appropriations in several fiscal years preceeding the account reconciliation in 1996-97. |

|                   |               |         |                 |
|-------------------|---------------|---------|-----------------|
| Post-it® Fax Note | 7671          | Date    | # of pages ▶    |
| To                | ANN RIMMER    | From    | EDWARD PULLAN   |
| Co./Dept.         | ORANGE COUNTY | Co.     | CHAPEL HILL     |
| Phone #           |               | Phone # | 968-2800, x-136 |
| Fax #             | 644-3004      | Fax #   |                 |

LANDFILL RESERVE FUND for:  
Equipment Replacement

| YEAR         | CONTRIBUTION                    |                                | OUTLAY                          |                                | RESIDUAL |
|--------------|---------------------------------|--------------------------------|---------------------------------|--------------------------------|----------|
| Fiscal Year  | 1998-99<br>Original<br>Proposal | 1998-99<br>Revised<br>Proposal | 1998-99<br>Original<br>Proposal | 1998-99<br>Revised<br>Proposal |          |
| 88-89        | 50,000                          | 50,000                         |                                 |                                | 50,000   |
| 89-90        | 109,300                         | 109,300                        |                                 |                                | 159,300  |
| 90-91        | 273,819                         | 273,819                        |                                 |                                | 433,119  |
| 91-92        | 350,415                         | 350,415                        |                                 |                                | 783,534  |
| 92-93        | 242,411                         | 242,411                        | 215,545                         | 215,545                        | 810,400  |
| 93-94        | 0                               | 0                              | 234,500                         | 234,500                        | 575,900  |
| 94-95        | 175,000                         | 175,000                        | 252,000                         | 252,000                        | 498,900  |
| 95-96        | 216,000                         | 216,000                        | 317,000                         | 317,000                        | 397,900  |
| 96-97        | 275,000                         | 275,000                        | 255,504                         | 255,504                        | 681,900  |
| 97-98        | 385,000                         | 385,000                        | 601,000                         | 601,000                        | 465,900  |
| 98-99        | 475,000                         | 300,000                        | 343,000                         | 325,000                        | 440,900  |
| 99-00        | 550,000                         | 550,000                        | 305,000                         | 305,000                        | 685,900  |
| 00-01        | 550,000                         | 550,000                        | 609,000                         | 749,000                        | 486,900  |
| 01-02        | 550,000                         | 550,000                        | 504,000                         | 505,000                        | 531,900  |
| 02-03        | 550,000                         | 550,000                        | 506,000                         | 505,300                        | 576,600  |
| 03-04        | 550,000                         | 550,000                        | 509,500                         | 525,000                        | 601,600  |
| 04-05        | 550,000                         | 550,000                        | 364,000                         | 728,400                        | 423,200  |
| 05-06        | 0                               | 0                              | 0                               | 0                              | 423,200  |
| <b>TOTAL</b> | <b>\$5,851,945</b>              | <b>\$5,676,945</b>             | <b>\$5,016,049</b>              | <b>\$5,518,249</b>             |          |

**Footnotes:**

| Notes     | Purchases / Comments  |
|-----------|---|
| 1996-1997 | Arithmetic anomaly is based upon a reconciliation of reserve accounts with the current audited financial statements, which resulted in higher reserve account balances. Higher reserve account balances are due to the difference between charging only the actual expenditures rather than the budgeted appropriations in several fiscal years preceeding the account reconciliation in 1996-97. |
| 1998-1999 | Purchases: bulldozer (\$190,000); Roll-Off Truck (\$115,000); and used grader (\$20,000) = \$325,000.   |
| 1999-2000 | Purchase of: Scraper/pan (\$305,000).   |
| 2000-2001 | Purchases: Landfill compactor (\$320,770), scraper/pan (\$288,405); and crawler/dozer for C&D fill (\$140,000) = \$749,175.   |
| 2001-2002 | Purchases: Bulldozer (\$378,515) and Loader/backhoe (\$125,727) = \$504,242.  |
| 2002-2003 | Purchases: Landfill compactor (\$340,305) and front-loading recycling truck (\$164,998) = \$505,303.  |
| 2004-2005 | Replacement schedule assumes continuation of landfill operations beyond 2004/05.  |

LANDFILL RESERVE FUND for:  
Eubanks Construction

| YEAR         | CONTRIBUTIONS       |                         | OUTLAY              |                             | RESIDUAL  |
|--------------|---------------------|-------------------------|---------------------|-----------------------------|-----------|
|              | 1997-98<br>Estimate | 1998-99 Revised<br>Est. | 1997-98<br>Estimate | 1998-99 Revised<br>Estimate |           |
| 88-89        | 100,000             | 100,000                 | 0                   | 0                           | 100,000   |
| 89-90        | 300,000             | 300,000                 | 0                   | 0                           | 400,000   |
| 90-91        | 250,000             | 250,000                 | 0                   | 0                           | 650,000   |
| 91-92        | 550,000             | 550,000                 | 0                   | 0                           | 1,200,000 |
| 92-93        | 650,000             | 650,000                 | 0                   | 0                           | 1,850,000 |
| 93-94        | 567,000             | 567,000                 | 0                   | 0                           | 2,417,000 |
| 94-95        | 835,000             | 835,000                 | 3,038,500           | 3,038,500                   | 213,500   |
| 95-96        | 855,000             | 855,000                 | 0                   | 0                           | 1,068,500 |
| 96-97        | 670,000             | 670,000                 | 272,000             | 272,000                     | 1,738,500 |
| 97-98        | 400,000             | 400,000                 | 1,550,000           | 1,550,000                   | 588,500   |
| 98-99        | 420,000             | 335,000                 | 71,500              | 840,000                     | 83,500    |
| 99-00        | 440,000             | 720,000                 | 0                   | 130,000                     | 673,500   |
| 00-01        | 440,000             | 735,000                 | 1,610,000           | 1,400,000                   | 8,500     |
| 01-02        | 225,000             | 225,000                 | 0                   | 0                           | 233,500   |
| 02-03        | 225,000             | 225,000                 | 0                   | 0                           | 458,500   |
| 03-04        | 225,000             | 225,000                 | 680,000             | 680,000                     | 3,500     |
| 04-05        | 0                   | 0                       | 0                   | 0                           | 3,500     |
| 05-06        | 0                   | 0                       | 0                   | 0                           | 3,500     |
| <b>TOTAL</b> | <b>\$7,152,000</b>  | <b>\$7,642,000</b>      | <b>\$7,222,000</b>  | <b>\$7,910,500</b>          |           |

**NOTES:**

| <u>Fiscal Year</u> | <u>Purchases / Comments</u>  |
|--------------------|--|
| 1996-1997          | Arithmetic anomaly is based upon a reconciliation of reserve accounts with the current audited financial statements, which resulted in higher reserve account balances. Higher reserve account balances are due to the difference between charging only the actual expenditures, rather than the budgeted appropriations in several fiscal years preceeding the account reconciliation in 1996-97. |
| 1998-1999          | Expenditure: gas flares (\$30,000), perimeter fencing (\$71,500), MRF land and development (\$150,000); and funds towards acquisition of C&D landfill (\$588,500).   |
| 1999-2000          | Outlay for scales and related development for C&D landfill (\$130,000).  |
| 2000-2001          | Construction of Landfill Cell #4 (final cell)  |
| 2003-2004          | Closure costs for Eubanks landfill, which will likely be deferred one additional year.   |

LANDFILL RESERVE FUND for:  
Land Acquisitions

| YEAR         | CONTRIBUTIONS       |                                | OUTLAY              |                                | RESIDUAL  |
|--------------|---------------------|--------------------------------|---------------------|--------------------------------|-----------|
|              | 1997-98<br>Estimate | 1998-99<br>Revised<br>Estimate | 1997-98<br>Estimate | 1998-99<br>Revised<br>Estimate |           |
| 88-89        | 0                   | 0                              | 0                   | 0                              |           |
| 89-90        | 100,000             | 100,000                        | 0                   | 0                              | 100,000   |
| 90-91        | 110,000             | 110,000                        | 0                   | 0                              | 210,000   |
| 91-92        | 110,000             | 110,000                        | 0                   | 0                              | 320,000   |
| 92-93        | 130,000             | 130,000                        | 0                   | 0                              | 450,000   |
| 93-94        | 110,000             | 110,000                        | 0                   | 0                              | 560,000   |
| 94-95        | 135,000             | 135,000                        | 0                   | 0                              | 695,000   |
| 95-96        | 160,000             | 160,000                        | 202,450             | 202,450                        | 652,550   |
| 96-97        | 185,000             | 185,000                        | 0                   |                                | 837,550   |
| 97-98        | 210,000             | 210,000                        | 309,300             | 561,300                        | 486,250   |
| 98-99        | 235,000             | 235,000                        | 255,000             | 661,550                        | 59,700    |
| 99-00        | 260,000             | 10,000                         | 0                   | 0                              | 69,700    |
| 00-01        | 285,000             | 10,000                         | 0                   | 0                              | 79,700    |
| 01-02        | 700,000             | 500,000                        | 0                   | 0                              | 579,700   |
| 02-03        | 700,000             | 500,000                        | 0                   | 0                              | 1,079,700 |
| 03-04        | 700,000             | 500,000                        | 0                   | 0                              | 1,579,700 |
| 04-05        | 925,000             | 725,000                        | 0                   | 0                              | 2,304,700 |
| 05-06        | 0                   | 0                              | 0                   | 0                              | 2,304,700 |
| <b>TOTAL</b> | <b>\$5,055,000</b>  | <b>\$3,730,000</b>             | <b>\$766,750</b>    | <b>\$1,425,300</b>             |           |

**NOTES:**

|           |  |
|-----------|--|
| 1995-1996 | Expenditure for purchase of Neville tract and Johnson tract  |
| 1997-1998 | Expenditure for purchase of Wilson property and professional services related to landfill site search.       |
| 1998-1999 | construction of materials separation area (\$55,000); and towards acquisition of a C&D Landfill (\$556,500). |



**ALTERNATIVE FUNDING STRATEGIES**  
**for**  
**SOLID WASTE MANAGEMENT PROGRAMS**

**Prepared for:**

**Landfill Owners Group  
Chapel Hill, North Carolina**

**Prepared by:**

**HDR Engineering, Inc. of North Carolina  
Charlotte, North Carolina**



**May 5, 1998**

**Revised June 2, 1998**

## SECTION 1.0

### INTRODUCTION

The Landfill Owners Group (LOG) provides a variety of solid waste management services to residents and businesses in the towns of Chapel Hill, Carrboro, and Hillsborough, as well as the unincorporated areas of Orange County. Major services include solid waste planning, curbside recycling, operation of 10 drop-off centers, commercial glass and food waste recycling, multi-family recycling, solid waste disposal, disposal of construction and demolition waste, and the periodic collection and disposal of household hazardous waste. Public education services are also provided.

LOG services are managed by the Town of Chapel Hill's Solid Waste Department. Some of these services, such as solid waste disposal, are provided directly by the LOG, while others are provided by private companies under contract to the LOG.

LOG services are currently funded primarily by tipping fees charged for the disposal of municipal solid waste (MSW) and construction and demolition (C&D) wastes. The proposed fiscal year 98/99 tipping fee for disposal of either waste is \$38 per ton.

#### 1.1 Purpose of Study

The purpose of this study, prepared by Solid Waste Department staff and HDR Engineering, Inc. of North Carolina (HDR), is to assess current and future funding needs associated with the solid waste management services provided by the LOG. This assessment is also needed to address the risks and inequities associated with the current system.

- ***Need for Additional Funding Sources*** – Additional funding sources are needed to pay for future programs proposed in the Solid Waste Management Plan (the Plan) and for other future solid waste facilities. The major future programs identified in the Plan include the expansion of the residential curbside recycling program; the

**Table 2-1**  
**Program Cost Summary**

| Program   | Program Cost<br>FY 98/99 | Program Cost<br>FY 03/04 | Program Cost<br>FY 08/09 |
|---|--------------------------|--------------------------|--------------------------|
| Services Provided to Residential Customers:                                       |                          |                          |                          |
| ▪ Residential Curbside – Incorporated Areas                                       | \$ 538,150               | \$ 646,119               | \$ 749,029               |
| ▪ Residential Curbside – Rural  | 211,750                  | 361,670                  | 419,275                  |
| ▪ Recycling Drop-Off Centers  | 232,839                  | 303,388                  | 366,483                  |
| ▪ Household Hazardous Waste Management  | 124,700                  | 151,717                  | 184,586                  |
| ▪ Residential Curbside – Multi-Family   | 254,213                  | 309,289                  | 376,297                  |
| Services Provided to Commercial Customers:  |                          |                          |                          |
| ▪ Commercial Glass  | \$ 57,389                | \$ 290,606               | \$ 353,489               |
| ▪ Commercial Food Waste   | 41,712                   | 60,298                   | 73,362                   |
| ▪ Commercial – General  | --                       | 144,371                  | 160,916                  |
| Services Provided to All Customers:   |                          |                          |                          |
| ▪ Program Administration/Overhead   | \$ 362,446               | \$ 554,889               | \$ 668,182               |
| ▪ Materials Recovery Facility   | --                       | 652,250                  | 690,675                  |
| ▪ C&D Landfill  | 279,772                  | 631,666                  | 743,142                  |
| ▪ MSW Landfill  | 2,222,774                | 3,466,497                | 2,548,408                |
| <b>Total</b>  | <b>\$4,325,745</b>       | <b>\$6,572,761</b>       | <b>\$7,333,846</b>       |
| Percent of Net Costs Paid by Landfill Tipping Fees                                | 78%                      | 78%                      | 78%                      |
| Tons Landfilled   | 88,700                   | 73,187                   | 69,992                   |
| Required Tipping Fees   | \$37.93                  | \$69.85                  | \$81.50                  |
| Required Tipping Fee to Cover Landfill Costs                                      | \$28.21                  | \$33.70                  | \$36.41                  |
| Competitive Tipping Fees in Region (including Transfer, Haul, and Disposal Costs) | \$35.00                  | \$42.58                  | \$51.81                  |
| Amount of Tipping Fee Used to Cover Other LOG Program Costs                       | \$9.72                   | \$36.15                  | \$45.09                  |

• @ possible correction to \$246,497

| <p align="center"><b>Table 2-4</b><br/> <b>Monthly Value of Services Provided by the LOG</b><br/> <b>FY98/99 Costs/Residential Customer</b></p> |   |                            |                             |
|---|---|----------------------------|-----------------------------|
|   | Incorporated Areas<br>Residential Customers |                            | Unincorporated<br>Areas     |
|   | Single-Family<br>(\$/HH/Mo)                 | Multi-Family<br>(\$/HH/Mo) | Single-Family<br>(\$/HH/Mo) |
| Program Administration/<br>Planning <sup>(1)</sup>  | \$0.35                                      | \$0.35                     | \$0.35                      |
| Drop-Off Recycling<br>Centers <sup>(2)</sup>  | \$0.22                                      | \$0.22                     | \$0.22                      |
| Multi-Family Curbside   |   | \$0.94                     |                             |
| Residential Curbside  | \$3.26                                      |                            | \$2.42                      |
| MRF Operations  |   |                            |                             |
| HHW Management  | \$0.24                                      | \$0.24                     | \$0.24                      |
| Landfill Disposal   | \$1.84                                      | \$1.84                     | \$1.84                      |
| <b>Total</b>  | <b>\$5.91</b>                               | <b>\$3.59</b>              | <b>\$5.07</b>               |
| (1) Assumes 50% of Total Program Administration/Planning costs are allocated to residential customers.  |   |                            |                             |
| (2) Assumes 50% of Drop-Off Center costs are allocated to residential customers.  |   |                            |                             |

Currently, about 70% of LOG revenues are received from landfill tipping fees. Residents in the incorporated areas of the county pay their landfill tipping fees through property taxes, which are used, in turn, to pay the solid waste disposal agencies or service providers. The tipping fees for solid wastes from residents in the unincorporated areas are also paid indirectly through Orange County taxes.

Currently, about 31,530 tons of residential waste, or 0.72 tons per residential unit, are received at the landfill each year. At the proposed tipping fee of \$38 per ton of MSW, this means that each residence pays \$27.36 for LOG services per year, or \$2.28 per household per month.

### 3.3 Overview of Funding Options

As indicated in Articles 15 and 16 of the North Carolina State Statutes, the provision of solid waste management services by a city or county government is considered a public enterprise. To fund public enterprises, local governments can levy property taxes, charge fees, borrow money, and/or accept grants.

The major funding mechanisms for solid waste management services are property taxes and fees. There are three types of fees that can be charged for solid waste services: user fees, collection fees, and availability fees.

#### 3.3.1 User Fees

User fees, as the name implies, are fees that are directly charged by local governments to the users of solid waste management services. For example, a “tipping fee” that is charged by a local government to a hauler for the use of a public landfill would be considered a user fee.

#### 3.3.2 Collection Fees

A collection fee is a type of user fee that is specifically described in the North Carolina Statutes. According to the Statutes,

“A municipality which provides garbage collection services may impose a charge reasonably commensurate with the cost of the service.”

Similarly,

“The board of county commissioners may impose a fee for the collection of solid waste. The fee may not exceed the costs of collection.”

- **Chatham County** – In 1996, Chatham County adopted an annual availability fee of \$45, as well as an annual collection fee of \$45. These fees are charged to all County residences that are located outside the corporate limits of Goldston, Pittsboro, and Siler City.
- **Charlotte** – In 1995, the city of Charlotte implemented an availability fee to pay for city solid waste recycling and disposal services. This fee is \$38 per residence per year for single family residences and \$23 per year for multi-family residences.
- **Greensboro** – The city of Greensboro charges a solid waste collection availability fee to residences. The \$2.35 per household/per month fee became effective on January 1, 1998.
- **City of Durham** – The city of Durham does not have an availability fee but pays for solid waste services through a combination of tipping fees and property taxes.
- **Durham County** – Durham County charges an availability fee of \$45 per year to residences in the unincorporated areas of the County. The fee is used to pay for the County landfill, as well as other programs.

The members of LOG recently adopted a Solid Waste Management Plan that calls for a significant expansion in recycling programs to meet the state and local waste reduction goals. These programs, if funded exclusively from tipping fees, will cause a significant increase in the tipping fees charged at the Eubanks Road Landfill, which, in turn, will further jeopardize landfill revenues. In order to avoid the “vicious” cycle of declining revenues resulting from increasing tipping fees, LOG will need to implement other funding strategies to pay for new solid waste management services.

**City of Chapel Hill, North Carolina  
Landfill Owners Group**

**Program Cost Projections**

| Program                     | 1999-2000          | 2000-01            | 2001-02            | 2002-03            | 2003-04            | 2004-05            | 2005-06            | 2006-07            | 2007-08            | 2008-09            |
|-----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| MSW Landfill                | \$2,231,058        | \$2,308,668        | \$2,359,522        | \$2,411,517        | \$2,466,497        | \$2,544,879        | \$2,623,070        | (\$217,865)        | (\$226,976)        | (\$235,346)        |
| Transfer Station            | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$0                | \$2,693,942        | \$2,741,207        | \$2,783,754        |
| C&D Landfill                | \$609,620          | \$716,115          | \$580,211          | \$606,297          | \$631,666          | \$646,568          | \$662,028          | \$678,069          | \$711,257          | \$743,142          |
| Commercial Glass            | \$112,972          | \$166,170          | \$268,941          | \$279,561          | \$290,606          | \$302,093          | \$314,706          | \$327,130          | \$340,051          | \$353,489          |
| Commercial Food             | \$50,101           | \$53,605           | \$55,749           | \$57,979           | \$60,298           | \$62,710           | \$65,219           | \$67,827           | \$70,541           | \$73,362           |
| Commercial General          | \$0                | \$0                | \$27,861           | \$85,255           | \$144,371          | \$144,371          | \$144,371          | \$144,371          | \$149,778          | \$160,916          |
| Multi-Family                | \$264,382          | \$274,957          | \$285,955          | \$297,393          | \$309,289          | \$321,661          | \$334,527          | \$347,908          | \$361,824          | \$376,297          |
| Drop-Off Centers            | \$262,461          | \$270,861          | \$279,597          | \$288,683          | \$303,388          | \$313,215          | \$327,211          | \$337,840          | \$348,894          | \$366,483          |
| HHW                         | \$129,688          | \$134,876          | \$140,271          | \$145,881          | \$151,717          | \$157,785          | \$164,097          | \$170,661          | \$177,487          | \$184,586          |
| Materials Recovery Facility | \$0                | \$0                | \$449,525          | \$608,000          | \$652,250          | \$658,063          | \$664,766          | \$672,404          | \$681,024          | \$690,675          |
| Non-Allocable Costs         | \$376,888          | \$417,906          | \$515,203          | \$534,674          | \$554,889          | \$575,878          | \$597,670          | \$620,296          | \$643,789          | \$668,182          |
| Recycling Curbside          | \$554,295          | \$570,923          | \$984,029          | \$627,300          | \$646,119          | \$665,502          | \$685,467          | \$706,031          | \$727,212          | \$749,029          |
| Rural Curbside              | \$218,103          | \$224,646          | \$579,909          | \$351,136          | \$361,670          | \$372,521          | \$383,696          | \$395,207          | \$407,063          | \$419,275          |
| <b>TOTAL</b>                | <b>\$4,809,568</b> | <b>\$5,138,727</b> | <b>\$6,526,773</b> | <b>\$6,293,676</b> | <b>\$6,572,760</b> | <b>\$6,765,246</b> | <b>\$6,966,828</b> | <b>\$6,943,821</b> | <b>\$7,133,151</b> | <b>\$7,333,844</b> |

|   |             |             |             |             |             |             |             |             |             |             |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tons Disposed                                 | 88,635      | 89,151      | 84,272      | 75,753      | 73,187      | 72,529      | 71,969      | 71,361      | 70,703      | 69,992      |
| Tipping Fee                                   | \$39.52     | \$41.10     | \$42.74     | \$44.45     | \$46.23     | \$48.08     | \$50.01     | \$52.01     | \$54.09     | \$56.25     |
| Revenues from Tipping Fees                    | \$3,502,855 | \$3,664,106 | \$3,601,785 | \$3,367,221 | \$3,383,435 | \$3,487,194 | \$3,599,170 | \$3,711,486 | \$3,824,325 | \$3,937,050 |
| Net Program Cost Requiring Additional Funding | \$1,306,713 | \$1,474,621 | \$2,924,988 | \$2,926,455 | \$3,189,325 | \$3,278,052 | \$3,367,658 | \$3,232,335 | \$3,308,826 | \$3,396,794 |