

JACK SIMONDS, CHAIRMAN  
RT. 1  
COPPERHILL, TENNESSEE

JACK T. LOVINGOOD  
MURPHY



W. T. MOORE  
ANDREWS

**Cherokee County**

**BOARD OF COUNTY COMMISSIONERS**

RUTH H. SPRUNG  
COUNTY ACCOUNTANT  
AND TAX COLLECTOR

**MURPHY, NORTH CAROLINA 28906**

WILLIAM A. HOOVER, JR.  
COUNTY ATTORNEY

ON HIWASSEE LAKE  
SOUTHERN GATEWAY TO SMOKY MOUNTAINS NATIONAL PARK

*June 21, 1973*

*North Carolina State Board of Health  
P. O. Box 2091  
Raleigh, NC 27602*

*Attention Sidney H. Usry  
Solid Waste and Vector Control Chief*

*Dear Sir:*

*In connection with Cherokee County's Sanitary Land-  
fill Project, we need 12 copies of your Sanitary  
Engineering Division's publication entitled, "Rules  
and Regulations Providing Standards For Solid Waste  
Disposal." Thank you.*

*Yours truly,*

*James T. Gentry*  
James T. Gentry  
County Manager

*scb*

*cc Commissioners*

*12 copies  
Sent 6-25-73*

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

December 13, 1972

RECEIVED

DEC 18 1972

TRIBUTARY ENGINEERING  
DIVISION

*Bob*  
*JERRY PERKINS*  
*Files*

Mr. Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division  
Department of Human Resources  
Post Office Box 2091  
Raleigh, North Carolina 27602

Dear Mr. Usry:

We are sending you under separate cover three large prints of the construction plans for the Cherokee County - Andrews - Murphy Sanitary Landfill Site. These prints include the changes stated in your letter of November 21, to Mr. Robert E. Thompson, eliminating the 25-foot setback of the dike around the spring.

*JTR*  
The written text concerning the operation of the landfill is in our reproduction shop; and as soon as we receive these, we will be sending you three copies. We have enjoyed working with you, Mr. Strickland, and Jerry Perkins on this plan and look forward to working with you and other counties in western North Carolina.

Sincerely yours,

*Bob*

Robinson R. Watson  
Tributary Area Representative  
Tributary Area Development

Enclosures: (under separate cover)

CC: Mr. Tommy Gentry, Planner  
Cherokee County Court House  
Murphy, North Carolina 28906

Mr. Charlie Johnson  
Town Clerk  
City of Murphy  
Murphy, North Carolina 28906

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

December 13, 1972

RECEIVED

DEC 15 1972

Mr. Tommy Gentry, Planner  
Cherokee County Courthouse  
Murphy, North Carolina 28906

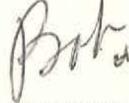
SANITARY ENGINEERING  
DIVISION

Dear Mr. Gentry:

Confirming our conversation of December 12, we are sending you under separate cover three large sets of the construction plan for the Cherokee County - Andrews - Murphy Sanitary Landfill Site. You may like to give one of these to the mayor of Andrews. We are sending Charlie Johnson two copies of these construction plans. The written text pertaining to the operation of the sanitary landfill is in our reproduction shop. When we receive this, we will be sending you copies of it.

If you will let us know when the county is ready to begin construction of the landfill site, we will be glad to come up and assist the county in staking the initial berm and trench.

Sincerely yours,



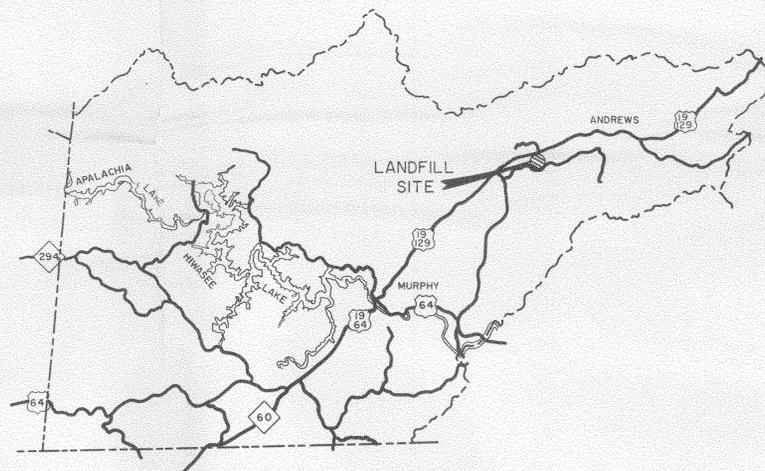
Robinson R. Watson  
Tributary Area Representative  
Tributary Area Development

Enclosures (under sep. cover)

CC: Mr. Charlie Johnson (2)  
Town Clerk  
City of Murphy  
Murphy, North Carolina 28906

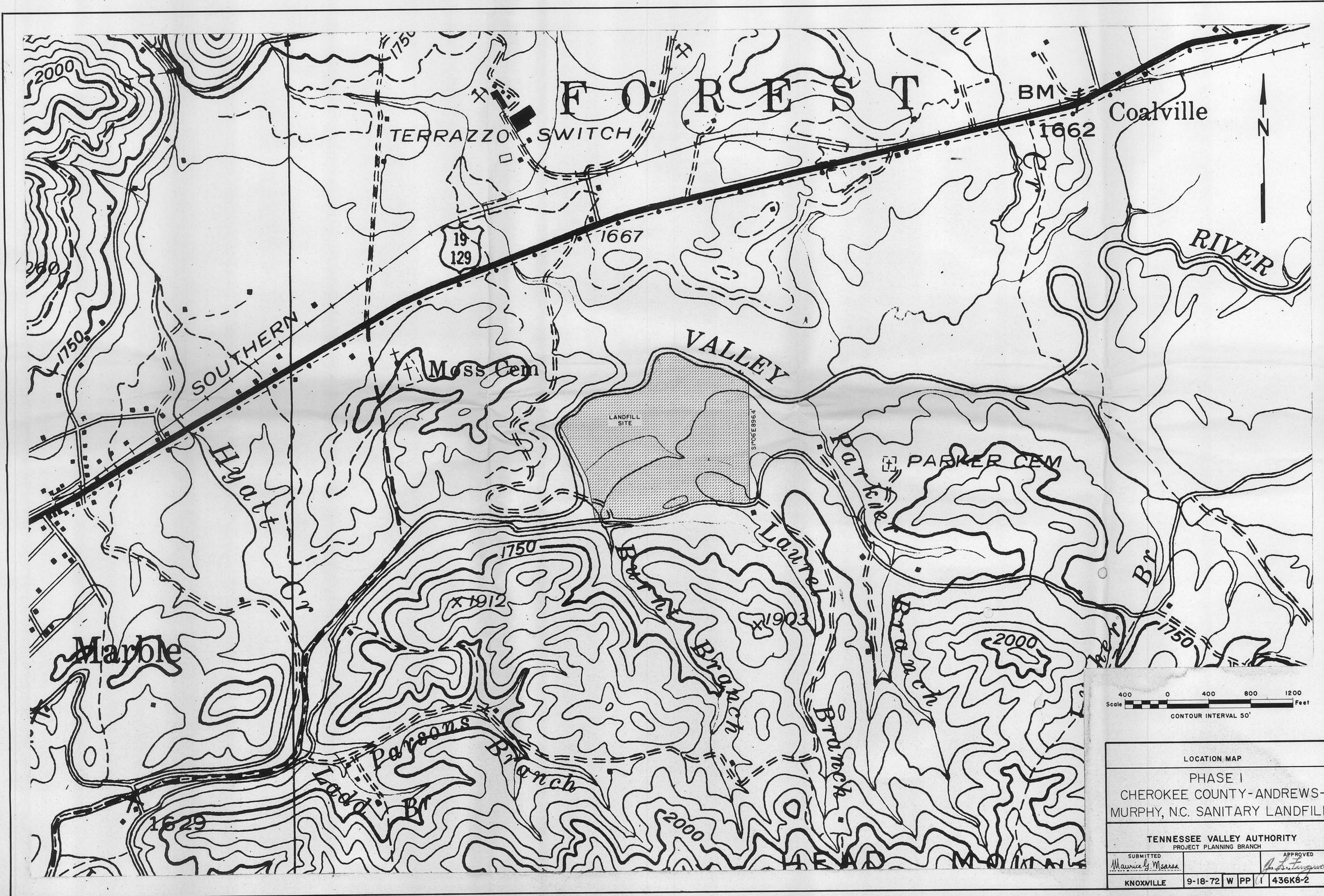
✓ Mr. Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division  
Department of Human Resources  
Post Office Box 2091  
Raleigh, North Carolina 27602

# CONSTRUCTION PLAN SOLID WASTE DISPOSAL SITE

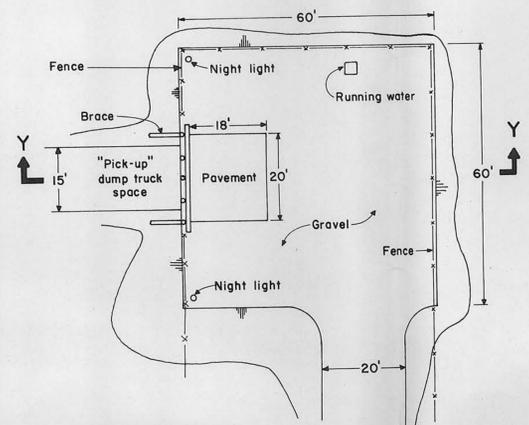


CHEROKEE COUNTY—ANDREWS—  
MURPHY, NORTH CAROLINA

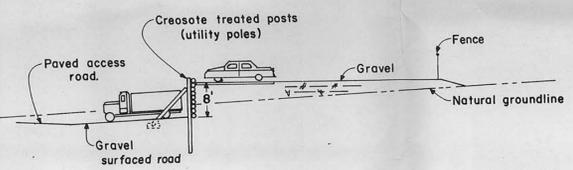
TENNESSEE  
VALLEY AUTHORITY  
9-18-72 W-PP-1-436K8-1



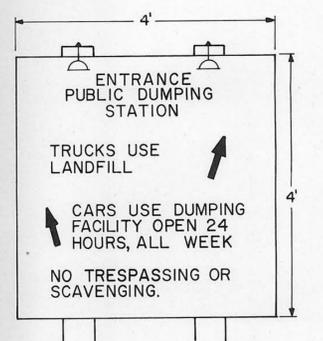
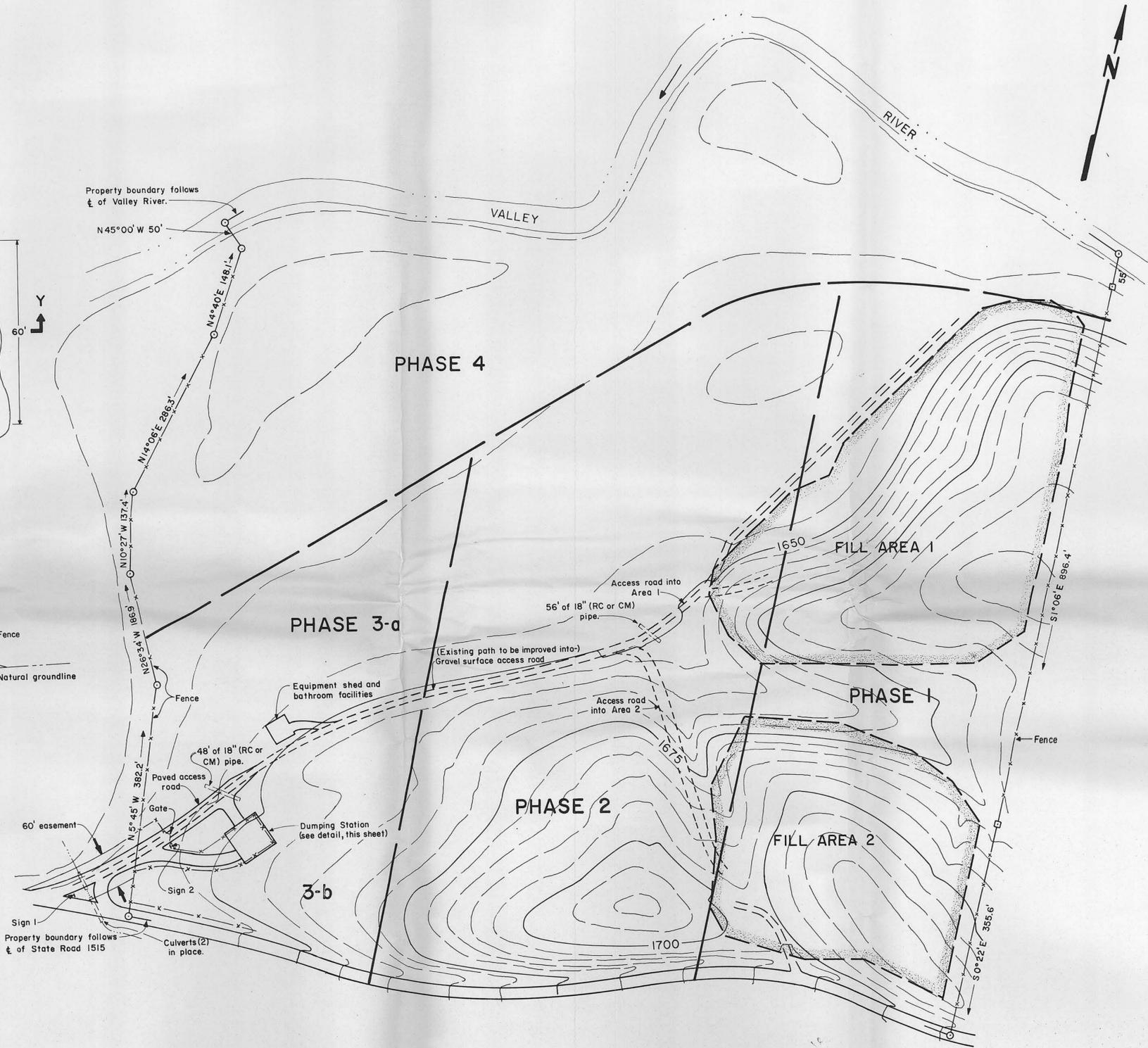
LOCATION MAP	
PHASE I CHEROKEE COUNTY-ANDREWS- MURPHY, N.C. SANITARY LANDFILL	
TENNESSEE VALLEY AUTHORITY PROJECT PLANNING BRANCH	
SUBMITTED <i>Maurice G. Moore</i>	APPROVED <i>[Signature]</i>
KNOXVILLE	9-18-72 W PP 436K8-2



DUMPING STATION DETAILS



SECTION Y-Y

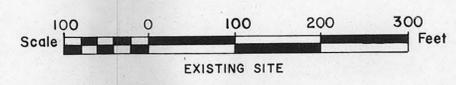
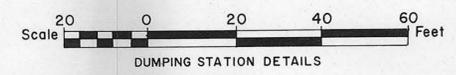


SIGN 2



SIGN 1 (DOUBLE FACED)

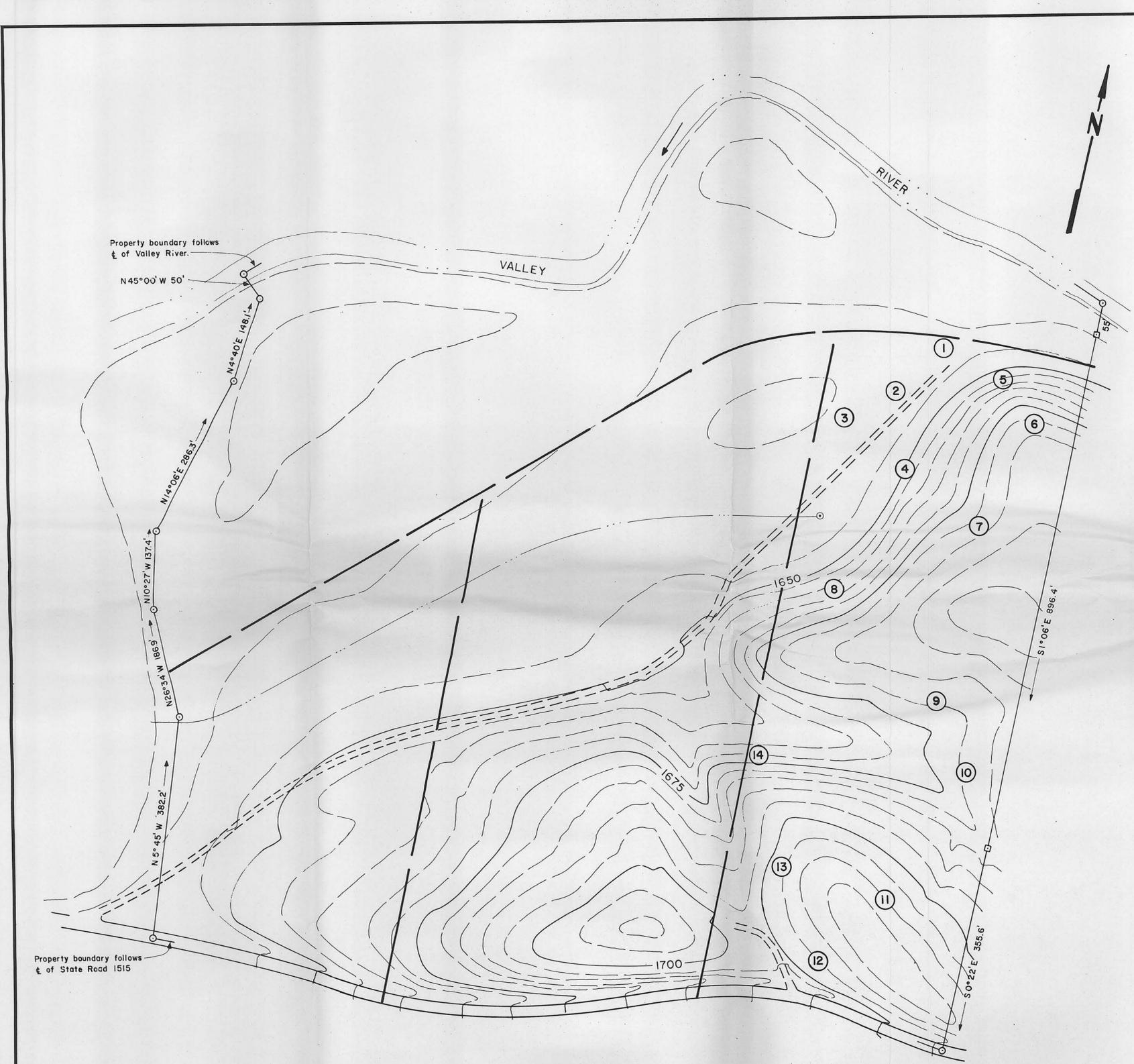
NOTE: The boundary survey was supplied by the Town of Murphy. Kersh topography was obtained from drawing number G-MS-461Q808-201-R1 (8-4-72).



CONTOUR INTERVAL 5'

EXISTING SITE, SIGNS & DUMPING STATION DETAILS	
<b>PHASE I</b> CHEROKEE COUNTY-ANDREWS-MURPHY, N.C. SANITARY LANDFILL	
TENNESSEE VALLEY AUTHORITY PROJECT PLANNING BRANCH	
SUBMITTED <i>Maurice B. Mearns</i>	APPROVED <i>J. L. Ferguson</i>
KNOXVILLE	9-18-72 W PP 436K6-3

REV NO.	DATE	MADE	CHKD	SUPV	INSP
DRWN		COMPUTED			
TRCD		ENGINEER			
CHKD					



<p>① Relief: Nearly level low stream terrace</p> <p>0-1' Dark brown loam</p> <p>1-5' Yellowish brown clay loam</p> <p>5-7' Grayish brown gravelly loam</p> <p>7' Hard cemented gravel and cobbles</p> <p>Water table at 5-foot depth.</p>	<p>⑧ Relief: Gently sloping stream terrace</p> <p>0-8' Red clay loam</p> <p>8-14' Loose cobbly loam</p> <p>14-20' Grayish brown soft silt loam, alluvial deposit</p> <p>Water table not encountered to 20-foot depth.</p>
<p>② Relief: Nearly level, low stream terrace</p> <p>0-1' Dark brown loam</p> <p>1-2' Yellowish brown clay loam</p> <p>2-5' Grayish brown clay loam</p> <p>5-7' Loose gravelly and cobbly sandy loam</p> <p>7-8' Hard cemented cobble and river rock</p> <p>Water table at 4-foot depth.</p>	<p>⑨ Relief: Sloping head of draw</p> <p>0-1' Dark brown loam</p> <p>1-3' Yellowish brown clay loam</p> <p>3-10' Soft cobbly and stony loam</p> <p>10' Hard cemented gravelly and cobbly sandy loam</p> <p>Water table not encountered to 10-foot depth.</p>
<p>③ Relief: Nearly level low stream terrace</p> <p>0-1' Dark brown loam</p> <p>1-4' Yellowish brown clay loam</p> <p>4-9' Loose gravelly and cobbly layer</p> <p>9-10' Soft weathered limestone rock</p> <p>10' Hard limestone</p> <p>Water table at 3-foot depth.</p>	<p>⑩ Relief: Sloping depression</p> <p>0-1' Dark brown loam</p> <p>1-3' Yellowish brown clay loam</p> <p>3-11' Moderately hard cemented cobbly and gravelly sandy loam</p> <p>Water table was at 9-foot depth.</p>
<p>④ Relief: Moderately steep hillside</p> <p>0-4' Red clay loam</p> <p>4-6' Hard cemented gravelly sandy loam</p> <p>Couldn't penetrate this layer with backhoe.</p> <p>Water table not encountered to 6-foot depth.</p>	<p>⑪ Relief: Moderately steep hillside</p> <p>0-1' Brown loam</p> <p>1-3' Yellowish brown clay loam</p> <p>3-14' Yellowish brown gneiss saprolite which crushed to loam texture.</p> <p>Chunks of hard rock increased with depth.</p> <p>14' Hard rock (apparently bedrock)</p> <p>No water table encountered to 14-foot depth.</p>
<p>⑤ Relief: Moderately steep hillside</p> <p>0-6' Red clay loam, few cobbles</p> <p>6-12' Yellowish brown clay loam, few cobbles</p> <p>12' Hard cemented cobble loam</p> <p>Water table not encountered to 12-foot depth.</p>	<p>⑫ Relief: Smooth ridge top</p> <p>0-1' Yellowish brown clay loam</p> <p>1-20' Soft schist saprolite, silt loam texture</p> <p>No water table encountered to 20-foot depth.</p>
<p>⑥ Relief: Gently sloping high stream terrace</p> <p>0-6' Red clay loam</p> <p>6-12' Hard cemented gravelly sandy clay loam</p> <p>12-22' Soft gray silt loam alluvial deposit</p> <p>Water table not encountered to 22-foot depth.</p>	<p>⑬ Relief: Smooth ridge top</p> <p>0-1' Yellowish brown clay loam</p> <p>1-20' Soft schist saprolite, silt loam texture</p> <p>No water table encountered to 20 foot depth.</p>
<p>⑦ Relief: Gently sloping high stream terrace</p> <p>0-4' Red clay loam</p> <p>4-8' Gravelly and cobbly clay loam</p> <p>8-22' Grayish brown moderately firm loam</p> <p>Water table not encountered to 22-foot depth.</p>	<p>⑭ Relief: Moderately steep hillside</p> <p>0-2' Yellowish brown loam</p> <p>2-8' Soft gneiss saprolite, loam texture with many moderately hard chunks of rock</p> <p>8' Hard rock (apparently bedrock)</p> <p>No water table encountered to 8-foot depth.</p>



The soil was logged by J. M. King, Soil Scientist, U.S. Soil Conservation Service, on June 1 and 2, 1972.

REV NO.	DATE	MADE	CHD	SUPV	INSP

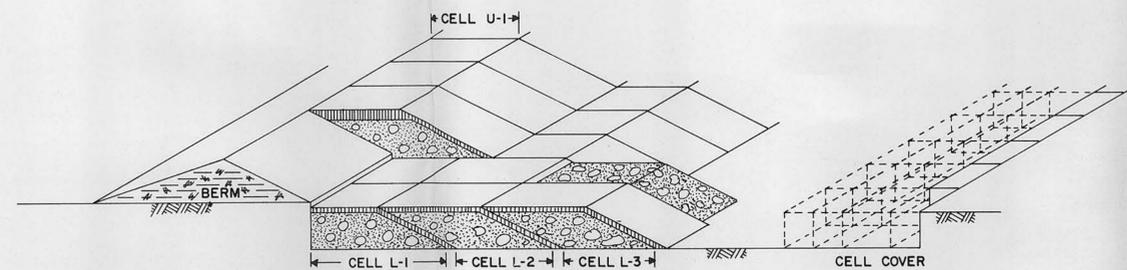
DRWN	COMPUTED
TRCD	ENGINEER
CHRD	

SOIL DATA

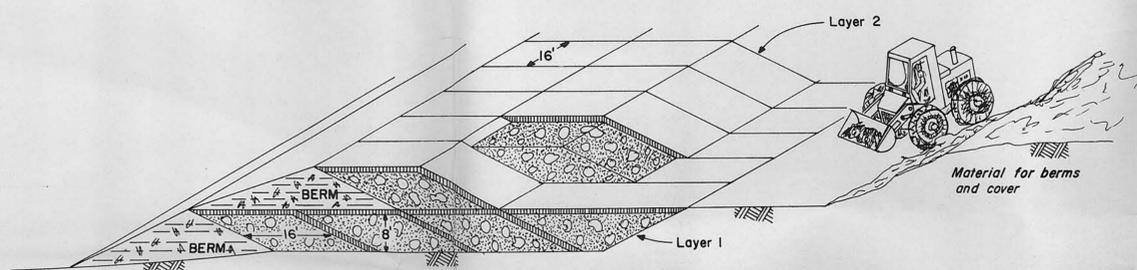
**PHASE I**  
**CHEROKEE COUNTY-ANDREWS-MURPHY, N.C. SANITARY LANDFILL**

TENNESSEE VALLEY AUTHORITY  
 PROJECT PLANNING BRANCH

SUBMITTED <i>Maurice G. McSaran</i>	APPROVED <i>[Signature]</i>
KNOXVILLE	9-18-72 W PP 1 436K8-4



PROGRESSIVE TRENCH METHOD  
FILL AREA 2



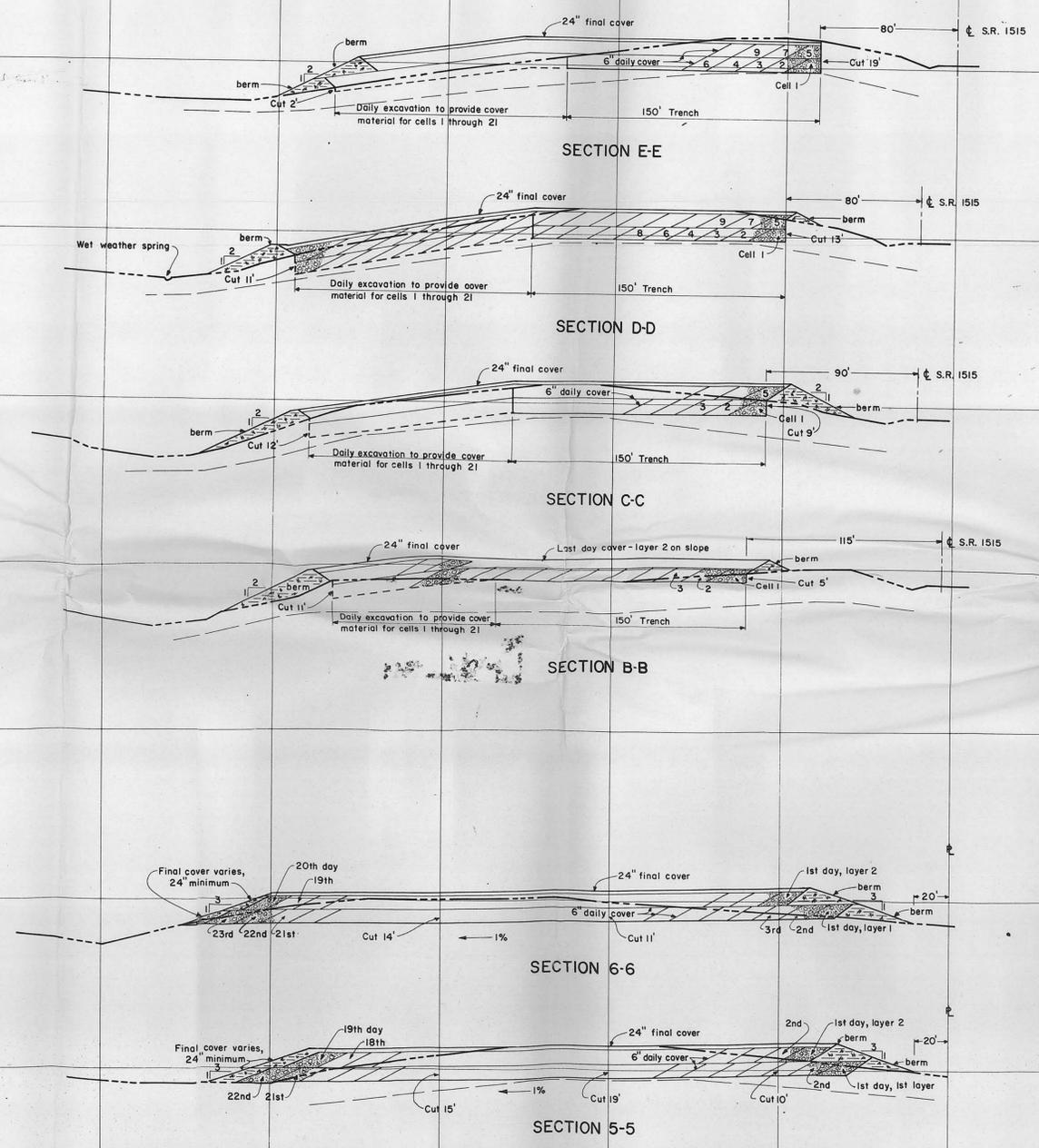
PROGRESSIVE FILL METHOD  
FILL AREA 1

Property boundary follows  
½ of State Road 1515



Rcvd 12/18/72  
Sanitary  
Engineering  
Division

### FILL AREA 2

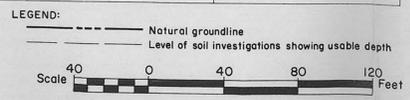


### DAILY QUANTITIES - cubic yards

	FILL AREA 1	FILL AREA 2
<b>BERMS</b>		
Layer 1	8,000	2,000
2	7,000	6,000
3	7,000	-
4	8,000	-
5	9,000	-
<b>TRENCH EXCAVATION</b>		
Initial trench	14,000	25,000
<b>COMPACTED DAILY QUANTITIES</b>		
Refuse		
Weekday		70
Saturday		35
Daily cover		
lower layers		
Weekday		25
Saturday		15
Last day		120
top layer		
Weekday		40
Saturday		25
Last day		130

1. Berm material for fill area 1 will be acquired from the hillside.  
2. Weekday cell 16'x16'x8' deep. Saturday cell 16'x8'x8' deep.  
3. Refuse and cover volumes shown are average. Cover volumes may vary with varying refuse volumes and due to varying terrain in the different fill areas.

### FILL AREA 1



SECTIONS & DAILY QUANTITIES

PHASE I  
CHEROKEE COUNTY-ANDREWS  
MURPHY, NC. SANITARY LANDFILL

TENNESSEE VALLEY AUTHORITY  
PROJECT PLANNING BRANCH

Maurice G. Moore  
KNOXVILLE

P. R. Ferguson  
436M66

9-18-72 W PP 436M66

436 \* 8

# Cherokee County

JACK SIMONDS, CHAIRMAN  
JACK T. LOVINGOOD  
W. T. MOORE

MURPHY, NORTH CAROLINA 28906

RUTH H. SPRUNG  
COUNTY ACCOUNTANT  
AND TAX COLLECTOR

ROBERT E. THOMPSON  
COUNTY MANAGER

WILLIAM A. HOOVER, JR.  
COUNTY ATTORNEY

October 30, 1972

Mr. Sidney H. Usry, Chief  
Solid Waste and Vector Control Section  
Sanitary Engineering Division  
North Carolina State Board of Health  
Post Office Box 2091  
Raleigh, North Carolina 27602

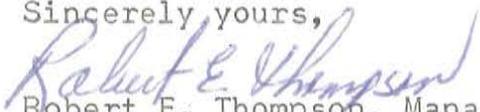
Dear Sir,

Attached are three copies of the Operational Design and Construction Plan for the Cherokee County, Andrews and Murphy Landfill. These copies are being submitted in accordance with Section 9 Paragraph B of the North Carolina State Board of Health Rules and Regulations providing standards for solid waste disposal. Please accept this as our application for approval of these plans.

The Town of Murphy made application for site approval but Cherokee County will purchase the property from the Town of Murphy and assume full responsibility for operation of the Landfill. The present solid waste disposal sites now in use by Cherokee County, Andrews and Murphy are completely exhausted so far as sanitary operation.

Your expediting of this application will be greatly appreciated as our Temporary Permit for the discharge of air contaminants into the atmosphere has expired and we need to get into operation at the new location as soon as possible.

Sincerely yours,



Robert E. Thompson, Manager  
Cherokee County  
Murphy, North Carolina 28906

RET/fk

Enclosures

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

*Cherokee  
doc*

*HBT*

October 6, 1972

RECEIVED

OCT 9 1972

Mr. Charlie Johnson  
Town Clerk  
City of Murphy  
Murphy, North Carolina 28906

SANITARY ENGINEERING  
DIVISION

Dear Charlie:

We are enclosing four draft copies of the Cherokee County - Andrews - Murphy Sanitary Landfill Operational Design and Construction Plan. I would appreciate it if you would give a copy of this plan to Bobby Thompson and the mayor of Andrews. I would like for you, Mr. Thompson, and the Mayor to review these plans, and let me have your comments back within a week if possible. After we receive all of your comments, we will put them into a revised plan for submission to Mr. Sidney Usry of the North Carolina State Health Department in Raleigh. If at all possible, I would like to send this plan to Mr. Usry by the middle of October.

If any of you have any questions on what we have stated or said in this plan, please feel free to give us a call. Please make any changes or be as critical as you can possibly be since this is a plan which Cherokee County will have to follow once the landfill becomes operational.

Sincerely yours,

Robinson R. Watson  
Tributary Area Representative  
Tributary Area Development

Enclosures

CC: Mr. J. N. Fulp, Sr. w/enclosure  
Sanitation District  
Drawer 520  
Wilkesboro, North Carolina 28697

✓ Mr. Sidney H. Usry, Chief  
Department of Human Resources  
P. O. Box 2091  
Raleigh, North Carolina 27602

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

*Cherokee  
LTK*

August 4, 1972

RECEIVED

AUG 7 1972

Mr. Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division  
Department of Human Resources  
Post Office Box 2091  
Raleigh, North Carolina 27602

SANITARY ENGINEERING  
DIVISION

Dear Mr. Usry:

In reply to your letter of June 30, giving approval to the proposed sanitary landfill site in Cherokee County, we have agreed to do the operational plan. We have just recently started working on this plan and will include the comments concerning the limitations given in your landfill site approval. When we complete a draft, we will be in touch with you. We are hoping to have this draft in about three to four weeks. If we can be of further assistance to you, please let me know.

Sincerely yours,



Robinson R. Watson  
Tributary Area Representative  
Tributary Area Development

JACOB KOOMEN, M.D.,M.P.H.  
STATE HEALTH DIRECTOR  
AND SECRETARY-TREASURER



W. BURNS JONES, JR., M.D.,M.P.H.  
ASSISTANT STATE HEALTH DIRECTOR

*Cherokee*  
*JSE*

James S. Raper, M.D.  
President  
Asheville

Lenox D. Baker, M.D.  
Vice-President  
Durham

Charles T. Barker, D.D.S.  
New Bern

Ben W. Dawsey, D.V.M.  
Gastonia

NORTH CAROLINA

STATE BOARD OF HEALTH

P. O. BOX 2091  
RALEIGH, NORTH CAROLINA 27602

June 22, 1972

Joseph S. Hiatt, Jr., M.D.  
Southern Pines

J. M. Lackey  
Hiddenite

Paul F. Maness, M.D.  
Burlington

Ernest A. Randleman, Jr., B.S.Ph.  
Mount Airy

Jesse H. Meredith, M.D.  
Winston-Salem

Gloe Moore, Mayor  
Town of Murphy  
Murphy, North Carolina 28906

Dear Mayor Moore:

We are in receipt of your letter of intent pursuant to Section XIII of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal." Your proposal to utilize the county operated disposal facility is acceptable provided the county program is implemented within the time schedule required by these regulations.

At the time the county disposal program is implemented, you will be required to close your present disposal site in accordance with the requirements of Section XIII - C of the regulations.

Very truly yours,

*Sidney H. Usry*

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm

cc: Mr. J. N. Fulp, Sr.

COMMISSIONERS

C. E. JOHNSON, CLERK

McKEEVER & EDWARDS, ATTORNEYS

COMMISSIONERS

W. T. BROWN, Jr.  
FRANCIS BOURNE, Jr.  
W. A. SINGLETON

JOHN CARRINGER  
JOE FOWLER  
HENRY SIMMONS

# Town of Murphy

CLOE MOORE, MAYOR  
MURPHY, NORTH CAROLINA

June 19, 1972

RECEIVED

JUN 21 1972

SANITARY ENGINEERING  
DIVISION

Mr. Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division  
N. C. State Board of Health  
P. O. Box 2091  
Raleigh, North Carolina 27602

Subject: Program & Plan for complying  
with standards for solid  
waste disposal

Dear Sir,

The Town of Murphy, Town of Andrews and Cherokee County have joined together in a Landfill plan. This plan has been in the process for about one year. The Tennessee Valley Authority and Soil Conservation Service have been assisting with the plan. Many sites have been studied by the State Board of Health and Soil Conservation and tentative approvals were received.

On April 18, 1972, the Town of Murphy took a six months option on a forty acre tract of land near Marble, North Carolina. A tentative approval was received from the North Carolina State Board of Health on this site April 20th. on the same date Soil Conservation Service gave preliminary approval.

The Town of Murphy, Andrews and Cherokee County agreed on the site and agreement was reached for the county to operate the Landfill with Murphy and Andrews disposing of their solid waste at this site subject to final approval of the application and operation plan by the North Carolina State Board of Health.

On May 6th. Cherokee County held a Bond election to cover the county's proposed share of the cost of a solid waste collection and disposal project. The bond carried and the county is proceeding with a plan which was drawn up through the assistance of the Tennessee Valley Authority Solid Waste management personnel. The County is also proceeding with applications for grant money and a loan from FHA to finance the implementation of their solid waste plan.

The Town of Murphy is proceeding with application for site approval. Mapping, Aerial Photographs and soil testing with water table information is complete. This application should be filed with the North Carolina State Health Board by June 30, 1972. Upon the Health Boards approval the TVA Landfill personnel will assist with the operation plan. The Town of Murphy will purchase the Landfill site upon approval of site by the North Carolina Health Board.

COMMISSIONERS

C. E. JOHNSON, CLERK

McKEEVER & EDWARDS, ATTORNEYS

COMMISSIONERS

W. T. BROWN, Jr.  
FRANCIS BOURNE, Jr.  
W. A. SINGLETON

JOHN CARRINGER  
JOE FOWLER  
HENRY SIMMONS

# Town of Murphy

CLOE MOORE, MAYOR  
MURPHY, NORTH CAROLINA

June 19, 1972

Page 2

The operation plan should be submitted and approved by July 31, 1972. The required site improvements necessary for the sanitary disposal of solid waste in accordance with the water and air pollution laws should be complete and the landfill placed in operation by September 1, 1972.

The availability of funds may delay the Cherokee County plan temporarily but as soon as the County has the necessary funds the site and complete management and operation of the site will be turned over to the County with the towns of Murphy and Andrews and Cherokee County using the site jointly for solid waste disposal.

Sincerely yours,



Cloe Moore, Mayor  
Town of Murphy  
Murphy, North Carolina 28906

Parkins

COMMISSIONERS

C. E. JOHNSON, CLERK

McKEEVER & EDWARDS, ATTORNEYS

COMMISSIONERS

W.T. BROWN  
FRANCIS BOURNE, JR.  
KENNETH GODFREY

W.A. SINGLETON  
JOHN CARRINGER  
JERRY HATCHETT

# Town of Murphy

CLOE MOORE, MAYOR  
MURPHY, NORTH CAROLINA

July 12, 1972

RECEIVED

JUL 12 1972

SANITARY ENGINEERING  
DIVISION

Mr. Sidney H. Usry, Sanitary Engineer  
State of North Carolina  
Solid Waste and Vector Control Section  
State Board of Health  
P. O. Box 2091  
Raleigh, North Carolina 27602

Re: Landfill Site Approval  
Your Letter 6-30-1972

Dear Sir,

The Town of Murphy appreciates your speedy consideration of the application for Landfill Site approval. Mr. Robinson R. Watson, Area Tributary Representative, Tennessee Valley Authority has been directed to proceed with the Landfill operational plan.

Upon studying the proposed site and aerial photo we are of the opinion that fifty percent of the proposed site cannot be used for solid waste disposal due to flooding, soil characteristics and the water table. We had hoped to utilize the strip of flat land lying outside of the 100 year flood zone through diking and filling if this proved economical and did not constitute a health hazard. In phase one only one acre will be involved but there will be eight to ten acres in all lying just outside the flood area that cannot be used unless we could dike and fill to a safe and permissible depth above the water table. This may not prove practical due to cost but finding a suitable site has taken us two years and usable acreage is running from \$1,000.00 to \$2,000.00 per acre. If we can salvage this strip of flat land for solid waste disposal it should lengthen the use of the site five years or more.

Please advise if further study of this area with the possibility of diking and filling might render the area safe for use.

Sincerely yours,

*Cloe Moore (FK)*  
Cloe Moore, Mayor  
Town of Murphy  
Murphy, North Carolina 28906

May 23, 1972

Mr. Robert E. Thompson  
County Manager  
Cherokee County  
Murphy, North Carolina 28906

Dear Mr. Thompson:

This agency will provide technical assistance to the Cherokee County Health Department with the implementation and operational procedures of the Solid Waste Management Program for Cherokee County. This assistance will be in accordance with the rules and regulations regarding the establishment of solid waste disposal facilities and operational procedures that are required. JK

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm

# Cherokee County

JACK SIMONDS, CHAIRMAN  
JACK T. LOVINGOOD  
W. T. MOORE

MURPHY, NORTH CAROLINA 28906

May 19, 1972

ROBERT E. THOMPSON  
COUNTY MANAGER

RUTH H. SPRUNG  
COUNTY ACCOUNTANT  
AND TAX COLLECTOR

WILLIAM A. HOOVER, JR.  
COUNTY ATTORNEY

RECEIVED

MAY 23 1972

SANITARY ENGINEERING  
DIVISION

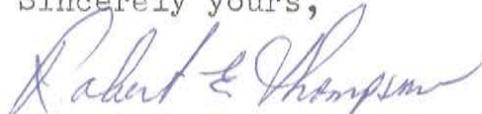
N. C. State Board of Health  
Sanitary Engineering Division  
Raleigh, North Carolina

Dear Sir:

Your Department, in conjunction with the Cherokee County Health Department, and the office of Tributary Area Development of the Tennessee Valley Authority proposed and completed a management program for Solid Waste collection and disposal in Cherokee County in 1971. We are now in the process of implementing this program. In order to comply with the F. H. A. requirements, we are requesting your office to furnish us a copy of the agreement whereby the North Carolina State Board of Health agrees to supervise the project from the inception to the completion, including site approval, operator training, recommendation for equipment and periodic inspection as they deem necessary.

We would greatly appreciate your sending this agreement as soon as possible.

Sincerely yours,



Robert E. Thompson  
County Manager

*Clerke*  
*J+K*

March 15, 1972

Mr. Grady Hamby  
Route 2, Box 247  
Murphy, North Carolina 28906

Dear Mr. Hamby:

I have discussed your letter of March 10, 1972, with Mr. Sidney H. Usry, Chief, Solid Waste and Vector Control Section. He informed me that Mr. J. N. Fulp, District Sanitarian, had been requested to visit the area and discuss the problem with you as soon as possible. I am sure that Mr. Fulp will visit Murphy within the next few days.

Very truly yours,

Marshall Staton, Director  
Sanitary Engineering Division

SHU:bm

RECEIVED

MAR 13 1972

SANITARY ENGINEERING  
DIVISION

Murphy, N.C. 28506

Rte # 2 Box 247

3/10/72.

Mr. Marshall Stator.  
Director Sanitation Div.  
State Department of Public Health  
Raleigh, North Carolina.

Dear Mr. Stator:

I am writing you in regard  
of the town of Murphy, N.C.  
Coming out here in Country  
and putting up a trash Garbage  
land fill right at the old  
sick people home and putting it  
right on our fresh drinking water  
shed ~~on~~ and over our water table  
it got all the old sick people upset  
and alarmed. And this is enough

2.

too get any one upset and  
alarmed trying to ruin  
our fresh water streams  
and that is a serious problem  
for we live on our open  
springs and wells water and I  
Apprehate it if you can  
give us some information on  
this serious matter and  
some steps to take to  
Prevent this serious matter

Answer soon  
Yours very truly  
G Grady Hamby

Rt 2, Box 247

Murphy, N.C., 28906

*Cherokee*  
*lor*

March 10, 1972

The Honorable B. Everett Jordan  
The United States Senate  
Committee on Rules and Administration  
Washington, D. C. 20510

Dear Sir:

Your letter to Mr. Grady Hamby, Murphy, North Carolina, (a copy of which was sent to Mr. Marshall Staton) has been referred to this office for reply.

I have received similar letters from Mr. Hamby regarding the proposed sanitary landfill at Murphy. I feel sure that a representative of this section has already contacted Mr. Hamby and explained the requirements for sanitary landfill operation. The State Board of Health has regulations that require minimum standards for disposal of solid waste by sanitary landfill.

I hope that our representative was able to explain our requirements and make recommendations to improve conditions that will alleviate the problem described by Mr. Hamby.

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm  
cc: Mr. Grady Hamby

*Wory*  
B. EVERETT JORDAN, N.C., CHAIRMAN

HOWARD W. CANNON, NEV.  
CLAIBORNE PELL, R.I.  
ROBERT C. BYRD, W. VA.  
JAMES B. ALLEN, ALA.

TED STEVENS, ALASKA  
JOHN SHERMAN COOPER, KY.  
HUGH SCOTT, PA.  
ROBERT P. GRIFFIN, MICH.

GORDON F. HARRISON, STAFF DIRECTOR  
HUGH Q. ALEXANDER, CHIEF COUNSEL  
BURKETT VAN KIRK, MINORITY COUNSEL

## United States Senate

COMMITTEE ON  
RULES AND ADMINISTRATION  
WASHINGTON, D.C. 20510

7 March, 1972

RECEIVED

MAR 9 1972

SANITARY ENGINEERING  
DIVISION

Mr. Grady Hamby  
Route 2, Box 247  
Murphy, North Carolina 28906

Dear Mr. Hamby:

Thank you for your February 27th letter reflecting your concern over the plans for establishment of a municipal sanitary landfill in the area where you live.

I appreciate your bringing this matter to my attention on your own behalf and that of other residents of the area.

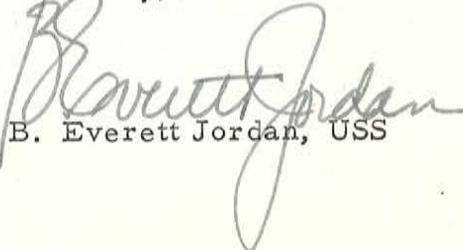
I believe, however, that the responsibility for regulating such trash and garbage disposal rests with the Sanitation Division of the State Department of Public Health rather than coming under federal jurisdiction.

The only way, therefore, in which I can be helpful is to forward a copy of your letter to that department for review and consideration by appropriate officials there.

I hope you will let me know whenever you feel that I can be of assistance in matters of interest to you which do come within my province as a member of the United States Senate.

With kind regards,

Sincerely,

  
B. Everett Jordan, USS

BEJ:dph

cc: Mr. Marshall Staton  
Director, Sanitation Division  
State Department of Public Health  
Raleigh, North Carolina

Murphy, N.C., 28906

Rt # 2 Box 247

2/27/72.

Honorable Sen. B. Everett Jordan.

Senate Office Building

Washington, D. C. 20516

Dear Mr. Jordan

I Am writing you in Concern of  
A town Dump trash landfill the  
town came out here in our  
neighbor hood and trying to put  
their trash and garbage off on  
us Country folks Right at  
our homes and drinking water  
we have open springs and they  
are trying to put it in our water  
shed and on our water table  
and they said it was a sanatory.

land fill but the forest land  
 and Government stop them at one  
 place. They said their rules  
 was too tough. well we dont  
 want our drinking water ruin  
 and polluted poison with all the  
 Germs that goes along with  
 trash dump it just a flies and  
 Rats trap and fire Hazard  
 every where they Rest on. and  
 we the people of wotley township  
 would appreshate it verry  
 much if you can help us  
 out on this verry serious thing  
 our water all we get and we  
 think could give us some  
 information on this water and  
 what ~~steps~~ steps to take too  
 prevent it yours truly Answeear  
 Garry Hamby

*Cherok  
to*

March 7, 1972

Mr. Garrett H. Hedden  
Route 2  
Murphy, North Carolina 28906

Dear Mr. Hedden:

Your letter to Dr. Burns Jones has been referred to this office for reply.

I am sending a copy of your letter to Mr. J. N. Fulp, Sr. requesting that on his next visit to your area that he contact you in regards to the proposed sanitary landfill.

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:jp

cc: Mr. J. N. Fulp, Sr.



**Bobby Thompson**

Stiles, 23, of Peachtree, was named to be the machinery operator, at monthly pay rate of \$441 and Dan Lovingood, 25, Route 4, Murphy, was named the mechanic, at \$500 a month.

Lovingood is a brother of Commissioner Jack Lovingood of Murphy but was described in the meeting as "the best qualified man we had," due to experience in Vietnam and schooling. Commissioner W. T. Moore made the motion to hire Lovingood, which was seconded by Chairman Jack Simonds.

Until a county landfill is begun, it was agreed to work one of the new men at the Andrews dump and one at the landfill at Murphy.

Thompson appeared briefly at the special meeting and was interviewed by the commissioners. A 1953

The commissioners last Thursday first considered men for the two landfill jobs, one to be machinery operator and the other to be a mechanic and maintenance man.

After some discussion of the applicants, two Vietnam veterans were hired. Harold C.

Bobby Thompson, a resident of the Bealtown section of Murphy, was interviewed by the commissioners last week and hired for the manager's office. He has no experience either as a county or town manager but responsibility is not new to him, a few years back he managed a sizeable auto dealership in a neighboring state. We wish Thompson well in his new position and hope he makes Cherokee County a fine manager.

Incidentally, the \$12,000-a-year salary being paid him is quite handsome for these parts but would probably be considered the absolute minimum if the county had gone looking for a man in the fiercely competitive manager market.

In settling on a hometown boy, with local roots, the commissioners may be wise in trying to develop their own manager rather than jumping into the bidding for a higher-priced expert from outside.

GARRETT H. HEDDEN  
RT. 2  
MURPHY, N.C.  
28906

March 3, 1972

Mr. W. Burns Jones Jr. M.D., M.P.H.  
Assistant State Health Director  
Raleigh N.C.  
P.O. Box 2091

Dear Mr. Burns:

Being a land owner & living  
near this proposed landfill  
here in Cherokee County N.C.  
we the Citizens of Nolla town-  
ship, would like for you &  
your people to find out why  
the Commissioners, of this County  
refuse to put this landfill on  
County property. as this County

owns property. <sup>#</sup> The Forest Service  
owns 1000 of acres of Clear Cut  
land, that would be suitable  
and out of the Community,  
and out of peoples water  
system, and from above a  
Clear water lake. We under-  
stand that government property  
is available, and would be  
suitable, as they have 1000. of  
acres to Choose from.

The town of Murphy is involved  
in this. and the Town Clerk  
said, the Government restrictions  
were so strict they didn't  
want that.

But at Board meeting we  
were promised that this

##  
would be sanitary. and  
checked by a qualified and  
experienced man.

So now the Commissioners  
has hired men unqualified, as  
- I will send a clipping out of  
the paper verifying that.

One Commissioner selling  
his own property through the  
City. Then appointing his  
Brother as one of the qualified  
men.

It has a bad taste.

They say they are Veterans  
which they are. I'm a Veteran  
my two boys are Veterans  
But not qualified. for such job.

and I believe in <sup>the</sup> on the job  
training for my boys and all  
Veterans. But we don't feel  
this is <sup>the</sup> place for to train  
some young men, my Boys  
or no body's else. This thing  
can ruin our water system  
and the valuation of our  
property

So I'm kindly asking that  
this be checked out properly. Then  
I'm sure it will be located  
some place else.

Thanking you very  
kindly

Garrett Hedden

P.S. (over)

This is just few clippings, as  
the hold paper would be to  
bulky to send.

if possible you have already  
read this paper I hope so.

RECEIVED

MAR 6 1977

SANITARY ENGINEERING  
DIVISION

*Cherokee*  
*2+R*

February 28, 1972

Mr. Grady C. Hamby  
Route 2, Box 247  
Murphy, North Carolina 28906

Dear Mr. Hamby:

Your letters to Governor Scott and Dr. Burns Jones have been referred to this office for reply.

I have referred your complaint to Mr. J. N. Fulp, Sr., District Sanitarian, and I am sure that he will contact you on his next visit to the area. He will investigate the conditions described and discuss the recommendations made with you at the time of his visit.

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm

cc: Mr. J. N. Fulp, Sr.  
Mr. David Murray

From

# GOVERNOR SCOTT'S OFFICE

To Dr. Jacob Koomen

Date: 2/21/72

PLEASE:

- Draft a reply for the Governor's signature.
- Reply, noting the letter was referred to you by the Governor.
- Phone me at your convenience.
- For your information.
- Investigate.
- Sign.
- Approve.

AND:

- Return the attached material.
- For your files.

REMARKS:

David Murray



RECEIVED

FEB 23

SECRETARY ENGINEERING  
DIVISION

Murphy N.C. 28906  
Rt # 2, Box 247  
2/17/72.

Mr. Bob Scott:

Dear Gov. Scott

Dear Sir:

We know you are a Great  
Gov. and a very busy  
man, but we the people  
of Notley Township are  
not interested in what is  
going on in our neighborhood  
the County Commissioner  
a Republican Jack Pungood  
is letting the Town and  
County put a trash dump  
above our drinking water  
shed right at our open springs

5.

And Wells and our neighbor  
Mr Jance a land owner  
and joining some good land  
built a nice clear water  
fishing lake and got it stocked  
with fish and he is in  
poor health and Mr Colton  
a world war one veteran  
he is in poor health and very  
old man and they are  
putting the fly and rat  
den right at his home  
and he very upset over it  
and I am in poor health  
with ulcers stomach and other  
defects and it right at my  
open spring where I drink my  
water and I am not for it  
at all. and it will ruin our  
country and run the value of

our property down too nothing  
 and Mr. Hedden is in poor  
 health and he lives around  
 here. And we would  
 appreciate it very very  
 very much if you

would get the State Board of  
 Health to come to our  
 rescue and investigate  
 this matter thereby our

water problem it all we  
 have to live on and we  
 the people don't want it  
 polluted and ruin

hoping to hear from you  
 real soon yours truly  
 and supporters answer soon  
 Grady C. Hamby Murphy, N.C. Rt. 2

mm

RECEIVED

FEB 24 1972

SED

FEB 24 1972

SANITARY ENGINEERING  
DIVISION

Murphy, N.C. 28906

Rt # 2, Box 247

2/18/72

Mr. W. Burns Jones, Jr., M.D.,  
Assistant State Health Director

Dear Sir:

I am writing about a landfill  
around our homes and our  
drinking water open springs  
and wells and runing the  
value of our property down to  
nothing and I would appreshate  
it if some one will check  
with us home stader and find  
out where our water is at  
the landfill has been described  
to us as a sanitary but at the  
same time they dont want to put

it on Government Property  
Because the restriction are  
too strict in other words the  
Government would see that  
it was kept in order  
there are plenty of cleared  
forest land that they  
could get away from  
homes and drinking water  
open spring and wells and people  
of notley township would  
apprehate it if the Health  
Department would come out  
and look the place over and  
check our drinking water  
our water all we got and  
we sure do not want a  
raw dump over it

Answer soon yours truly  
Grady C. Hamby Murphy N.C.

*Cherokee*

*348*

February 23, 1972

Mr. Garrett Hedden  
Route 2  
Murphy, North Carolina 28906

Dear Mr. Hedden:

I am sending a copy of your letter to Mr. J. N. Fulp, Sr., District Sanitarian, requesting that on his next visit to the area that he contact you regarding the Murphy disposal area.

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm  
cc: Mr. J. N. Fulp, Sr.

RECEIVED

Feb. 18, 1972

FEB 22 1972

Mr. Jacob Hooman M.D.M.P.H.  
State Health Director, and  
Secretary-Treasurer

SANITARY ENGINEERING  
DIVISION



Dear Sir,

I would like to call to your attention, This Sanitary land fill. That's being considered, in Gold Branch area of Cherokee Co.

I'm sure your Dept Knows the Requirements and etc. But when this site is checked or before they give

#

their approval of this site.

We the Citizens of this Community, would like to meet your people, if possible we would like to know in advance when they will be here. We feel that there is some things that the State Health Dept. Doesn't know about, on this site.

We would like to have the privilege of pointing out springs and etc. to them.

Knowing this property

##

for 40 some odd yrs. I feel that if your people, could meet and talk with the Citizens of this area, I'm sure they would not approve of this site. Due to the water and rock so ~~close~~ near to the surface.

We feel that Murphy is unloading something. They won't have.

We approve of sanitary land fill 100%. The City & County had <sup>on</sup> a ideal place near Murphy but would

#

not keep it in order, so they  
are being forced to move.  
by (Forest Service Dept.)

They say they are moving  
due to fact rock<sup>s</sup> is too close  
to surface. So we feel and  
know by cultivating this  
property they will have the  
same trouble. plus 3 clear  
water streams and clear water for

So if you would be kind  
enough to let us know in  
advance of this meeting  
or visit by your people

#

to murphy. we would like  
to have some one from our  
Community try to point  
out some of the disavantages  
this site has. That we fear  
they wont be shown from  
these people of Town of  
murphy as one of the County  
Commissioners is selling  
his own property.

So if you would be kind  
enough to write or call so  
we ~~could~~ could have some  
representation. Thanking you  
Garrett Hedden Phone  
murphy n.c. (28906) 837-7143  
12779

*Cherokee*

*Doc*

February 8, 1972

Honorable Roy A. Taylor  
Member of Congress  
Congress of the United States  
House of Representatives  
Washington, D. C. 20515

Dear Sir:

Your letter to Dr. Jacob Koomen has been referred to this office for reply.

During the week of January 24, 1972, personnel of this division visited the area for express purpose of inspecting the proposed sanitary landfill site for Cherokee County. Following this inspection, the authorities of the county were informed of the requirements of the North Carolina State Board of Health regarding obtaining permission to open a sanitary landfill on the proposed site. Upon receipt of this information, the site will be evaluated and recommendations made regarding its operation prior to final approval.

The North Carolina State Board of Health has adopted regulations that require that all disposal facilities be operated in accordance with these regulations. The use of the sanitary landfill is considered the method of choice at the present time and all new sites will have to be operated as sanitary landfills. This agency will routinely inspect the operation to determine compliance.

If I can provide you additional information, I shall appreciate hearing from you.

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm

ROY A. TAYLOR  
11TH DISTRICT  
NORTH CAROLINA

COMMITTEES:  
INTERIOR AND INSULAR AFFAIRS  
CHAIRMAN, NATIONAL PARKS AND  
RECREATION SUBCOMMITTEE  
FOREIGN AFFAIRS

OFFICE:  
2240 RAYBURN HOUSE OFFICE BLDG.  
WASHINGTON, D.C.  
TELEPHONE: CODE 202 225-6401

Congress of the United States  
House of Representatives  
Washington, D.C. 20515

LUTHER W. SHAW  
ADMINISTRATIVE ASSISTANT

CONGRESSIONAL DISTRICT OFFICE:  
1204 NORTHWESTERN BANK BLDG.  
ASHEVILLE, NORTH CAROLINA

TOM L. MALLONEE  
DISTRICT ASSISTANT

TELEPHONE:  
CODE 704 254-6526

February 4, 1972



RECEIVED

FEB 7 1972

SANITARY ENGINEERING  
DIVISION

*Mary*  
Mr. Grady C. Hamby  
Route 2, Box 247  
Murphy, North Carolina 28906

Dear Mr. Hamby:

Your letter of February 1, 1972 has been received. While I am very sympathetic toward the situation you described, I have no jurisdiction, as a Member of Congress, over the placement of county trash dumps.

I am taking the liberty of forwarding a copy of your letter to the Director of the State Board of Health in Raleigh to get a report on the matter and will forward you a copy of his response when it is received.

Sincerely,

Roy A. Taylor  
Member of Congress

RAT:dc

Murphy, N.C., 28906  
Rt 2. Box 247

2/1/72.

Honorable Roy A. Faylor  
11th District N.C.

Dear Mr. Faylor:

I am writing you in regard  
of Wotley township. And the  
people that lives in the  
country I live 8 or 18 miles  
out of Murphy and they the  
town and the Republic  
Commissioners are putting  
a County trash dump  
right in my door and  
all the people of Wotley  
Township is against it and it  
going too pollution our water

2.

our springs we use water  
from. And our neighbor  
built a nice fishing lake  
just from the spring heads  
and it will ruin and kill  
the fish for it about the  
lake. And you have always  
held up for us poor  
Country People. And we  
want you to help us out  
on this matter speak out  
for us we are trying  
to partition it out of  
our neighborhood here  
we would appreciate it if  
you can tell us the steps  
we should take to get rid  
of the Trash Dump

Yours truly

Answer soon Grady Hamby

*Enkins  
Strickland*

December 15, 1971

RECEIVED

DEC 20 1971

SANITARY ENGINEERING  
DIVISION

Mr. Jack T. Lovingood, Chairman  
Cherokee County Commissioners  
Murphy, North Carolina 28906

*LR*  
Dear Mr. Lovingood:

Today Mr. Charles Johnson, Mr. D. H. Moody, Sanitarian for Cherokee and I made an inspection of two possible landfill sites located in Cherokee County.

One site on the King Farm which is approximately 4 miles from Murphy off State Road 1576, will pass the preliminary inspection of the North Carolina State Board of Health.

The other site located off Highway 64 approximately 6 miles west of Murphy also passes our preliminary inspection contingent that no flooding by the Notley River exists. This information should be obtained from TVA. The existing Dam could control any possible flooding.

The operational plan for the landfill would be made by the County and reviewed by the Sanitary Engineering Division of the North Carolina State Board of Health as outlined in Bulletin #411 Section IX. A copy of which is enclosed to you.

Yours very truly,

*J. N. Fulp, Sr.*  
\_\_\_\_\_  
J. N. Fulp, Sr. District Sanitarian  
N. C. State Board of Health, Raleigh

*D. H. Moody, P.S.*  
\_\_\_\_\_  
D. H. Moody, District Sanitarian  
District Health Department  
Murphy, N. C.

cc: Mr. Charles Johnson, Clerk, Murphy  
Mr. S. H. Ustry, Chief Sanitary Waste and Vector Control

✓ Cherokee  
L+R

October 12, 1971

Mr. Robert D. Bruce, Supervisor  
Farmers Home Administration  
Library Building  
Box 218  
Murphy, North Carolina 28906

Dear Mr. Bruce:

The Solid Waste Collection and Disposal System for Cherokee County has been reviewed by the staff of this office. It is our opinion that this proposal is adequate and will meet the requirements of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal."

Very truly yours,

Sidney H. Uery, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm  
cc: Mr. Robinson R. Watson  
Mr. Paul V. Parks

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

September 22, 1971

RECEIVED

SEP 27 1971

SANITARY ENGINEERING  
DIVISION

Mr. Sydney Usry  
Sanitary Engineering Division  
State Board of Health  
P.O. Box 2091  
Raleigh, North Carolina 27602

Dear Mr. Usry:

Enclosed is a copy of the Management Program for Solid Waste Collection and Disposal System in Cherokee County, North Carolina, recently completed by our office. This is for your information and use.

Sincerely yours,



Robinson R. Watson  
Tributary Area Representative  
Tributary Area Development

Enclosure

2  
18600  
9800  
15300  
10000  
53300  
1



MANAGEMENT PROGRAM  
FOR  
SOLID WASTE COLLECTION AND DISPOSAL SYSTEM  
IN  
CHEROKEE COUNTY,  
NORTH CAROLINA

Prepared by  
Cherokee County Health Department  
Sanitary Engineering Division  
North Carolina State Board of Health  
Office of Tributary Area Development  
Tennessee Valley Authority

September 1971

RECEIVED

SEP 24 1971

SANITARY ENGINEERING  
DIVISION

## CONTENTS

	Page
Introduction	1
Existing Solid Waste Activities	2
Collection Service	2
Disposal Sites	4
Existing Laws	5
Recommendations	6
Rural Collection System Design	8
Routes	8
System Implementation	9
Record Keeping	10
Compactor Truck Selection and Personnel	10
Sanitary Landfill Design and Operations	14
Location	14
Size	15
Site Operation	15
Equipment Selection and Personnel	15
Administrative Organization and Financing	17
Authority to Regulate	17
Organization	18
Financing	19
Estimated Collection System Budget	20
Estimated Sanitary Landfill Budget	21
Conclusions	22

## EXHIBITS

1. Summary of Private Haulers
2. Map - Existing Disposal Sites
3. North Carolina Law - Highway Anti-Litter
4. Map - Proposed Collection Routes
5. Driver's Daily Work Report
6. Map - Center of Population
7. Population Data
8. Population Projection
9. Sanitary Landfill Methods
10. North Carolina Law - County Boards of Health Authority
11. North Carolina Law - County Commissioner's Authority to Regulate  
Collection and Disposal of Garbage
12. North Carolina Law - County Commissioner's Authority to Levy Taxes  
for Solid Waste Collection and Disposal
13. North Carolina State Board of Health Rules and Regulations Provides  
Standards for Solid Waste Disposal

## INTRODUCTION

The task of implementing a solid waste collection and disposal system offers one of the greatest challenges to the rapidly expanding rural and urban counties of North Carolina. This is a problem of local governments as well as of the taxpayers, and continued disregard on the part of both will result in unnecessary land pollution and inconvenience to the home owner.

An effort is being made by the Cherokee County Board of Commissioners to resolve solid waste collection and disposal problems. The Commissioners, working with the county and state health departments, local governing bodies and individuals in the towns of Andrews and Murphy, and technical advisors from the Tennessee Valley Authority, have devoted their attention to surveying the solid waste problems, analyzing factors such as existing county collection services and disposal facilities, and considering the needs for an efficient and economical service for all county residents. Primary attention is being given to establishing a countywide solid waste collection system and one sanitary landfill to serve the total population of the county. This report recommends approaches to organization, operation, and financing of both. Technical and financial limitations have been considered and included within the framework.

The key problem is lack of service for rural householders in Cherokee County. Since much of the uncollected refuse is thrown along the highways and roads and in random dumps, the implementation of a solid waste collection system and one sanitary landfill would improve the aesthetic attractiveness of the countryside and eliminate a public health hazard.

## EXISTING SOLID WASTE ACTIVITIES

### Collection Service

Refuse contaminated with disease organisms originating in the homes, businesses, or institutions provides food and shelter for many health pests, such as insects and rodents. Therefore it becomes necessary that refuse be handled in an acceptable manner from the point of origin to that of disposal. Refuse at the point of origin is the responsibility of the producer and must be stored in an approved manner. Refuse collection is accomplished in three ways: (1) by the individual, (2) by a governmental agency using public funds, and (3) by private contract refuse collectors who are paid by the individuals receiving pickup-disposal service.

Municipal Service--The incorporated towns of Andrews and Murphy provide weekly curbside collection service to city residents. In Murphy, downtown commercial establishments are provided with daily collection service. Many of the larger establishments in the town are using 1-, 2-, and 2-1/2-cubic-yard containers. These containers are purchased by the merchants to store refuse for pickup by the town's 18-cubic-yard side-loader compactor truck. Other businesses and family households use garbage containers, boxes, and cartons.

In Andrews, most of the downtown commercial establishments are provided with twice-a-week service. The town presently does not use bulk containers. The businesses as well as households are using small garbage containers, boxes, and cartons to store refuse for pickup by the town sanitation department's 13-cubic-yard compactor truck.

Private Service--Four individuals are presently engaged in the collection of household, commercial, and institutional wastes in Cherokee County. As shown in Exhibit 1, these four haulers serve 435 household units. None of these individuals pursues the collection routes on a full-time basis. They are primarily engaged in other occupations and employment, and service their subscribers before or after their normal working hours. The largest of these part-time haulers provides collection service for 198 households and 26 commercial establishments.

No Existing Service--The table below shows the estimated family units and population in Cherokee County who neither utilize the services of private collectors nor have the benefit of a municipal collection system.

<u>County</u>	<u>Estimated Unserved Family Units</u>	<u>Estimated Unserved Population</u>	<u>Total County 1970 Population</u>
Cherokee	3,710	11,500	16,330

This lack of service is the great underlying reason for the existence of the many small dumps which may be found along most roads in the county. Many people without collection services are disposing of their refuse in random dumps, creeks, and streams, or at any spot offering a little seclusion from the public. In addition to being unsightly and detrimental to property values, this indiscriminate random dumping poses a significant public health problem.

Very few residents make use of their privileges at the Murphy disposal site, due partly to the distance involved in driving to the site from the extreme ends of the county and to their being unaware of the

dumping privilege provided for them by the county at Murphy. Residents are hesitant to drive over 4 or 5 miles to any disposal location regardless of the facility. Therefore, even three or four landfill sites would not be a substitute for a countywide collection system.

### Disposal Sites

Solid waste disposal is normally accomplished (1) by the individual who utilizes his own land or areas belonging to private or public agencies (random dumps), (2) by governmental agencies who utilize publicly owned disposal area, or (3) by private collectors who provide their own disposal area or utilize that of a public agency. No longer is the old-fashioned, unsanitary refuse dump acceptable in today's society as a means of refuse disposal. An open dump is aesthetically offensive because of smoke and odors and is responsible for the reduction of adjacent land values, and dumps are gradually being replaced by the sanitary landfill or other sanitary means of refuse disposal.

Municipal Sites--There are two disposal sites in Cherokee County as shown in Exhibit 2--one at Murphy serving the town and Cherokee County residents and the other at Andrews serving town residents.

Murphy--This disposal site is located about one-half mile northwest of the town limits in the Texana area. The site covers about 6 acres of land leased by the town from the U.S. Forest Service. Since about July 1970 the town has been using a private contractor every fifth day to cover the refuse brought into the site. A caretaker is on duty from 8:00 a.m. to 5:00 p.m. on weekdays and from 8:00 a.m. to 12:00 noon on Saturdays; however, the disposal site is open for public use 24 hours a day 7 days a week. The estimated annual operating cost to the Town of Murphy for the operation amounts to \$11,500. Cherokee County reimburses

the town about one-third of this total cost since the landfill is open to residents to use for disposing of their refuse. The site is rapidly being filled, with less than a year of use remaining. The town and the county are now looking for additional land for relocating this disposal facility.

Andrews--At the Andrews disposal site the town operates an open dump. The site, covering about 3 acres, lies within about 27 acres of timber-covered hillside. Access into the area is controlled at all times by a locked gate. A bulldozer is brought to the site three or four times a year to push the burned-out refuse over the side of the pile and hill. It is reported the town expects to begin covering regularly within a year. At the present rate of filling the disposal site should be useful for several years.

#### Existing Laws

It is expected that North Carolina state laws prohibiting dumps and setting standards for solid waste disposal will be enforced more rigidly in the foreseeable future. The County Commissioner, in anticipation of more strict enforcement of the solid waste disposal laws, is establishing a central sanitary landfill which will become a central disposal site for both county and municipal sources.

RECOMMENDATIONS

It is recommended that Cherokee County install a countywide bulk container system to provide refuse collection service for residents of the rural and unincorporated areas. The system would provide one container for about every 50 residential or family units in the county. They should be strategically located to serve the householder on his or her way to work or school or the grocery store. Based on data collected, seventy-one 4-cubic-yard containers will be needed to serve the county's presently unserved population of approximately 11,500 persons. The bulk container system is financially feasible and will solve the county's random dump and lack of service problems.

One central sanitary landfill is to be provided and operated by Cherokee County and used by all collection agencies and individuals in the county, namely, the Towns of Andrews and Murphy, private collectors, industrialists and merchants hauling their own refuse, all other haulers of commercial, governmental, institutional and construction wastes, and individual householders hauling in vehicles. Ideally, this central sanitary landfill should be located near the center of the county population, which is between Murphy and Andrews.

Private haulers who presently provide house-to-house refuse collection service to the more populated areas should continue to provide their service, and the two systems will work compatibly. Most households which now subscribe to this house-to-house private collection service are likely to continue to pay the monthly charge even if a bulk container is located near their residence. This has been the experience in other systems.

There is also a need for the licensing of all private haulers and seeing that these private haulers meet the state board of health rules and regulations providing standards for solid waste disposal. Almost all of the present haulers in Cherokee County use open body trucks and therefore contribute to the highway litter problem. The private franchise privilege should not be limited to one collector at this time. Eventually, however, such a restriction may be desirable in order to provide enough volume for better service.

It is recommended that the Cherokee County Health Department provide the day-to-day management of the solid waste collection and disposal system. The county should enforce more rigidly the North Carolina highway litter law as shown in Exhibit 3.

These recommendations will be discussed in more detail in subsequent sections.

RURAL COLLECTION SYSTEM DESIGN

Routes

For Cherokee County five routes have been designed to service the 71 containers twice a week on scheduled intervals, using one 25-cubic-yard compactor truck. The truck will run a morning and an afternoon route with a maximum of 20 containers on any of the routes.

Refuse picked up by the compactor truck will be delivered to a central sanitary landfill. Exhibit 4 illustrates the five proposed collection routes, and the recommended location of each bulk container. The routes average 37 miles in length, the longest being 65 miles and the shortest being 19 miles. These mileages include a 10 percent factor for maneuvering and any additional travel necessary for unscheduled service requirements. All mileage traveled on these routes is on paved roads.

The route schedule for the compactor truck shown below is for a full-phase collection system. The truck driver will run the five different routes twice weekly, making 40 hours in five days, with Thursday and Sunday off.

Route Schedule

	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>
Morning	A	C	Varied Route	No	A	C	No
Afternoon	B	D & E	Duties and Truck Maintenance	Work	B	D & E	Work

To insure that container sites meet a high standard of cleanliness and appearance, the compactor will service each of the five routes twice a week. If more frequent pickups are required by the county, extra charges should be made, or the county may provide additional containers for serving on the regular basis. On Wednesday, the driver will perform regular specified maintenance to the truck chassis and compactor bodies, such as steam cleaning, treating with germicide, greasing, and minor adjustments.

#### System Implementation

For the bulk collection system to serve all residents in Cherokee County, it is suggested that the 71 containers be distributed at 71 or less container sites along the five routes indicated in Exhibit 4. After placement throughout the county, some route and maintenance flexibility will be required to service random containers which may become intermittently overloaded or underutilized. There will be occasions when an unthinking citizen will leave an item that the compactor unit cannot or should not handle, such as a stove, a refrigerator, or a piece of furniture. Arrangements should be made for the necessary maintenance of containers, to clean up litter that might be scattered around each container location, and to haul away from container stations any articles too large for the compactor unit to handle.

In placing the bulk containers care should be taken to see that they are located at points of maximum probable use. It is usually best to place them in the vicinity of commercial establishments in the rural and unincorporated areas, but not on the premises. If containers are placed on commercial property, the use is usually taken up by the tenant, limiting the use by the public. In addition, it would be desirable for all

commercial establishments and industries which generate large volumes of refuse to provide their own on-premise bulk containers for service by the compactor route truck. Arrangements should be worked out so that the county could provide these containers to the commercial establishments and industries on a reimbursable basis. These bulk containers would be in addition to those intended to handle most residential waste. The county should service these for a small fee which will help to offset the cost of operation.

Agreements should be made concerning repairs to the compactor body/truck chassis. It would be preferable if a local commercial garage/station handles minor repairs. Any garage/station should be convenient and have the special skills and equipment to make repairs/adjustments to the compactor truck.

#### Record Keeping

Truck and bulk container record keeping should be simple, yet show information essential to future planning and cost control. Exhibit 5 is a recommended form for daily completion by the driver. Copies should be filed for future analysis such as mileage, fuel, maintenance, and container utilization.

#### Compactor Truck Selection and Personnel

The compactor truck servicing the bulk containers in Cherokee County will drive about 400 route miles each week and will pick up an estimated 65,000 pounds of refuse from the bulk container stations serving rural residents.

Since the truck will need to average about 16,000 pounds/workday, it is desirable to have a large, light, front-loading compactor truck. A

front loader is recommended because the large rear- and side-loading compactors require the driver to get out of the truck to engage and disengage the rear- or side-loading container. However, the rear and side loaders do have some advantages, such as the rear loader's capability of picking up appliances left at container stations and the side loader's capability of operating in tighter areas by pulling alongside containers.

A 25-cubic-yard compactor body is recommended to service the countywide bulk container collection system. This size body will hold up to about 70 cubic yards of loose refuse, depending on refuse density. Everything should be done to keep the body light in weight because the truck chassis and body will weigh approximately 25,000 pounds, plus a full payload of refuse at about 8,000 pounds. A diesel motor will be desirable because of longer lasting quality and cheaper operational expense. Because of the terrain features in the county, the truck should be equipped with power steering, an automatic transmission, and consideration given to a single rear axle for maneuverability.

The truck should be serviced weekly on Wednesday or on Thursday in a commercial garage/station. When major repairs are required, they should be done by the dealer from whom the chassis and compactor body were purchased. For maintenance requiring excessive periods of time (more than one day), standby equipment should be furnished by the dealer/manufacturer from whom the compactor truck was purchased. Several dealers/manufacturers of compactor and truck equipment are now providing such equipment either at no charge or for nominal rental fees.

A regular full-time compactor truck driver should constitute the collection system personnel. A relief man (possibly the same employee working as the relief man in the central sanitary landfill operation) would

be required to substitute for the regular driver when he is on sick leave or vacation. Cleaning up and policing around container stations and performing other necessary route maintenance activities stated under System Implementation will be necessary. This work could be handled by the compactor driver on Wednesday, using the services of the relief man, or by private contractor. A representative from the county health department should have direct supervision over the driver and relief man, insure that the system operates properly, and handle all operational matters.

## SANITARY LANDFILL DESIGN AND OPERATIONS

A sanitary landfill is an area into which refuse is dumped and immediately covered with earth. The landfill provides for an efficient method to dispose of refuse without the objectionable characteristics of a "dump." A sanitary landfill can be initiated wherever cover material can adequately be obtained and wherever a tractor can operate.

By using refuse for fill and covering it with a relatively small amount of earth, the level of the land can be raised the same as if fill dirt were brought into the area. The final height of the fill should be predetermined, as should the slope for best drainage, usage, and access when completed.

There is a significant advantage in conducting landfill operations on a large scale. For example, disposal at one large central sanitary landfill site can be provided for Cherokee County and its municipalities at very little more than the operational costs for each one individually.

### Location

The distance from point of refuse pickup to point of disposal is an important factor. Haul distance can severely affect the economic aspects of solid waste collection and disposal. This lends itself to the fact that a sanitary landfill near the center of a county is economically feasible. Exhibit 6 shows the theoretical center of population for Cherokee County. It is not always possible to establish a site at the precise location. Soil cover materials and subsurface conditions are important criteria for selecting a site. In some other cases, road access and proximity to residential areas ruled them out.

### Size

Though the rate of acquisition depends upon the size of the tracts of land available, it is desirable to design and purchase the sanitary landfill for at least 10 years. Projections less than this do not justify money spent in planning, construction, and implementation. Land that would be acquired does not have to be in one or even two tracts or all in one location, but all tracts should be as near the population center as possible.

The data in Exhibits 7 and 8 have been compiled to give the best estimate of population trends in Cherokee County through the year 2020.

### Site Operation

Operation of Cherokee County central sanitary landfill will be in accordance with sections 8 through 11 of the state rules and regulations for solid waste disposal. (A copy of the existing Rules and Regulations Providing Standards for Solid Waste Disposal, prepared by the Sanitary Engineering Division of the North Carolina State Board of Health, is attached as Exhibit 13).

### Equipment Selection and Personnel

There are approximately 11,500 people living in rural or unincorporated areas of Cherokee County who have no collection or disposal service and approximately 1,400 people provided with service by private haulers. Computing their annual production rate at less than the urban dweller, an estimated 2,700 tons of refuse is produced by them annually. Part of this tonnage is being burned and part buried on the farm, but a large part is cluttering farms, woodlands, streams, and highways. No

estimate is made of the solid waste produced by the urban residents of the towns of Andrews and Murphy and the large tourist population to the county.

The type and size of tractor equipment required for sanitary landfills would depend upon the method of landfill operation as shown in Exhibit 9. For Cherokee County sanitary landfill operation a crawler (track) loader would perhaps be the best type of equipment. The size recommended would be a Caterpillar loader 955, International loader 175, Allis Chalmers HD7G, or equivalent. The loader is an excellent excavator and is very efficient where cover material must be carried some distances. In addition to the crawler loader, a pickup truck should be a part of the landfill equipment.

A full-time equipment operator and a relief man should constitute the landfill personnel. A relief man (possibly the same employee working as the relief man in the countywide bulk container collection system) would be required to assist the operator in operation and maintenance of the landfill and to substitute for the operator when he is out sick or on vacation. One representative from the county health department should have direct supervision over the operator and relief man, insure that the landfill operates properly, and handle all operational matters.

ADMINISTRATIVE ORGANIZATION AND FINANCING

Authority to Regulate

In Cherokee County the county board of health has the authority to set health standards for the collection and disposal of refuse. This authority is based on the broad powers as set forth in the General Statutes of North Carolina Section 130-17 (see Exhibit 10), which permits boards of health to make rules and regulations as necessary to protect and advance public health. Such regulations typically cover:

- (1) Sanitation and methods for disposal;
- (2) Sanitation standards for equipment used in the collection of refuse;
- (3) Type of containers in which garbage is stored.

In the Appendix is a suggested ordinance for adoption by the local board of health for the control of storage, collection, and disposal of refuse.

The Board of Commissioners in Cherokee County (see Exhibit 11) has the authority to regulate the collection and disposal of refuse by private collectors and haulers outside municipal boundaries and to provide such services itself, if it so desires. In exercising this, the Commissioners may:

- (1) Issue licenses or permits for the collection and disposal of refuse;
- (2) Prohibit collection and disposal by unlicensed persons;
- (3) Grant licensed persons exclusive rights to collect in designated areas;
- (4) Regulate the fees charged for private collection services;
- (5) Operate collection and disposal services.

Organization

The establishment of the solid waste management program for refuse disposal in Cherokee County is the responsibility of the governing bodies of the county and of the incorporated towns. The responsibility for the extent of collection and disposal services resides with each governmental jurisdiction individually. As shown below, representatives from the county and the two towns should then enter into a formal agreement with the county health department for operation and management of the central sanitary landfill. The county should make a separate agreement with the county health department for the operation of the rural bulk container collection system. A solid waste expense account should be established in the operating fund of the health department and used to pay all operating costs. Quarterly, the county health department should be reimbursed by each jurisdiction its sanitary landfill costs based on population. Also quarterly it should be reimbursed for its collection system costs by the county.

Cherokee County Commissioners
----------------------------------

Management (County Health Department)
--

1. Set up (Organization)
2. Operation-Maintenance
3. Promotion
4. Education
5. Community relations
6. Budgeting
7. Miscellaneous

As an alternative to the above organizational arrangement, the governing bodies may desire to contract a part or all of the collection and disposal operation to a private contractor. In this case the county health department would serve as a regulatory agency. A second alternative would be for the county commissioners, or a board appointed by them, to provide all services (except town collection), with the costs shared in the same manner as proposed above.

### Financing

Funds for initial outlays for the collection and disposal equipment may be borrowed by the governing bodies. It is recommended that the loan period be no longer than five years. This is approximately half of the life expectancy of most of the equipment. The annual costs shown below include a depreciation reserve which may be used to service the principal and interest. If funds or grants are available to initially purchase any or all of the equipment, the depreciation reserve funds should be used to replace the equipment. The operating costs for the countywide bulk container collection system should be paid annually from the general fund of the county. The operating costs in connection with the sanitary landfill should be paid annually from the general funds of the county and towns, based on the distribution of population.

As shown in Exhibit 12, under current enabling legislation the county may levy taxes for operation and maintaining their collection and disposal system.

The estimated budget expenses for each of the systems, collection and disposal, shown below should be revised annually, to reflect actual operating costs.

Estimated Collection System Budget

<u>Expense Item</u>	<u>Initial Expense</u>	<u>Annual Depreciation Expense</u>	<u>Annual Operating Expense</u>
<b>A. <u>Equipment</u></b>			
1. One 25-cubic-yard compactor unit depreciated over 10 yrs @ 6%	\$14,000	\$ 1,900	--
2. Truck chassis - depreciated over 3 yrs @ 6%	15,000	5,600	--
3. Bulk containers - 71 4-cubic-yard @ \$275, depreciated over 10 yrs @ 6% (including delivery cost)	19,500	2,700	--
4. Miscellaneous tools	200	--	\$ 50
<b>B. <u>Personnel</u></b>			
1. Compactor truck driver	--	--	6,000
2. Relief and route assistance	--	--	600
3. Collection Personnel Benefits	--	--	1,000
4. Supervisor	--	--	1,200
5. Record keeping supplies	--	--	50
<b>C. <u>Operation and Maintenance</u></b>			
1. Maintenance and operation of compactor truck	--	--	4,500
2. Maintenance of containers 71 @ \$20 each	--	--	1,400
3. Insurance and Miscellaneous	--	--	500
<b>Total</b>	<b>\$48,700</b>	<b>\$10,200</b>	<b>\$15,300</b>

Estimated Sanitary Landfill Budget

<u>Expense Item</u>	<u>Initial Expense</u>	<u>Annual Depreciation Expense</u>	<u>Annual Operating Expense</u>
<b>A. <u>Equipment</u></b>			
1. One loader tractor, depreciated over 10 yrs @ 6%	\$38,000	\$5,200	--
2. Pickup truck, depreciated 5 yrs @ 6%	3,500	800	--
3. One site of 25 acres @ \$500/acre @ 3% appreciation and 6% interest cost, 10 yrs	12,500	1,300	--
4. Site preparation, depreciated over 10 yrs @ 6%	14,100*	1,900	--
<b>B. <u>Personnel</u></b>			
1. Tractor Operator Salary	--	--	\$ 6,000
2. Landfill Assistance and Relief	--	--	3,500
3. Landfill Employees Benefits	--	--	1,400
4. Supervisor	--	--	600
5. Miscellaneous	--	--	600
<b>C. <u>Operation and Maintenance</u></b>			
1. Fuel, Lubricating, & Repairs	--	--	5,000
2. Tractor Rental, 10 days @ \$100	--	--	1,000
3. Insurance and Miscellaneous	--	--	600
<b>Total</b>	<b>\$68,000</b>	<b>\$9,200</b>	<b>\$18,600</b>

\*Site Preparation Detail: Clearing @ \$200; access road \$4,000; fence, gate, and signs \$1,400; tractor shed and office space \$6,000; grease rack \$500; dumping station \$2,000--  
Total \$14,100.

CONCLUSIONS

1. The problem of refuse disposal in Cherokee County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types but are disposables. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area is rural or urban, the disposable items are still the problem; only the quantity changes.
2. This is a problem that affects the total county population from the farmer who is being dumped upon to the person who lives near an open, burning dump.
3. Seventy-one (71) containers would be strategically located over the county and serviced twice a week or more often if needed. Pickup from these containers would be by a 25-cubic-yard compactor truck.
4. The containers would serve for household waste only. Other type waste would be transported to the disposal site by the individual or by contract collector.
5. Municipalities with their own collection service and industries would transport their refuse to the disposal site or use collection firms.
6. One central sanitary landfill or disposal site would serve all of Cherokee County, including the two towns.
7. The operator of the sanitary landfill would operate the disposal site six days per week and cover refuse daily.
8. Based on the total population of Cherokee County with a 1970 estimate of 16,330, the annual operation costs for solid waste disposal would

be about \$1.10 per capita (this does not include equipment depreciation costs).

9. The estimated annual operation cost for the bulk container collection system would be \$1.30/person (not including equipment depreciation costs). The estimated rural and unincorporated population with no collection at present is estimated at 11,500 people.
10. Additional containers could be added without imposing a burden on the container system. Industries and businesses could be served for a fee that would help defray the operating cost.
11. The Solid Waste and Vector Control Section of the North Carolina State Board of Health, through your local health department, and the Tennessee Valley Authority are available to assist in any way possible.
12. The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.

SUMMARY OF PRIVATE HAULERS  
 CHEROKEE COUNTY, NORTH CAROLINA  
 SOLID WASTE DISPOSAL PLAN  
 MARCH 1971

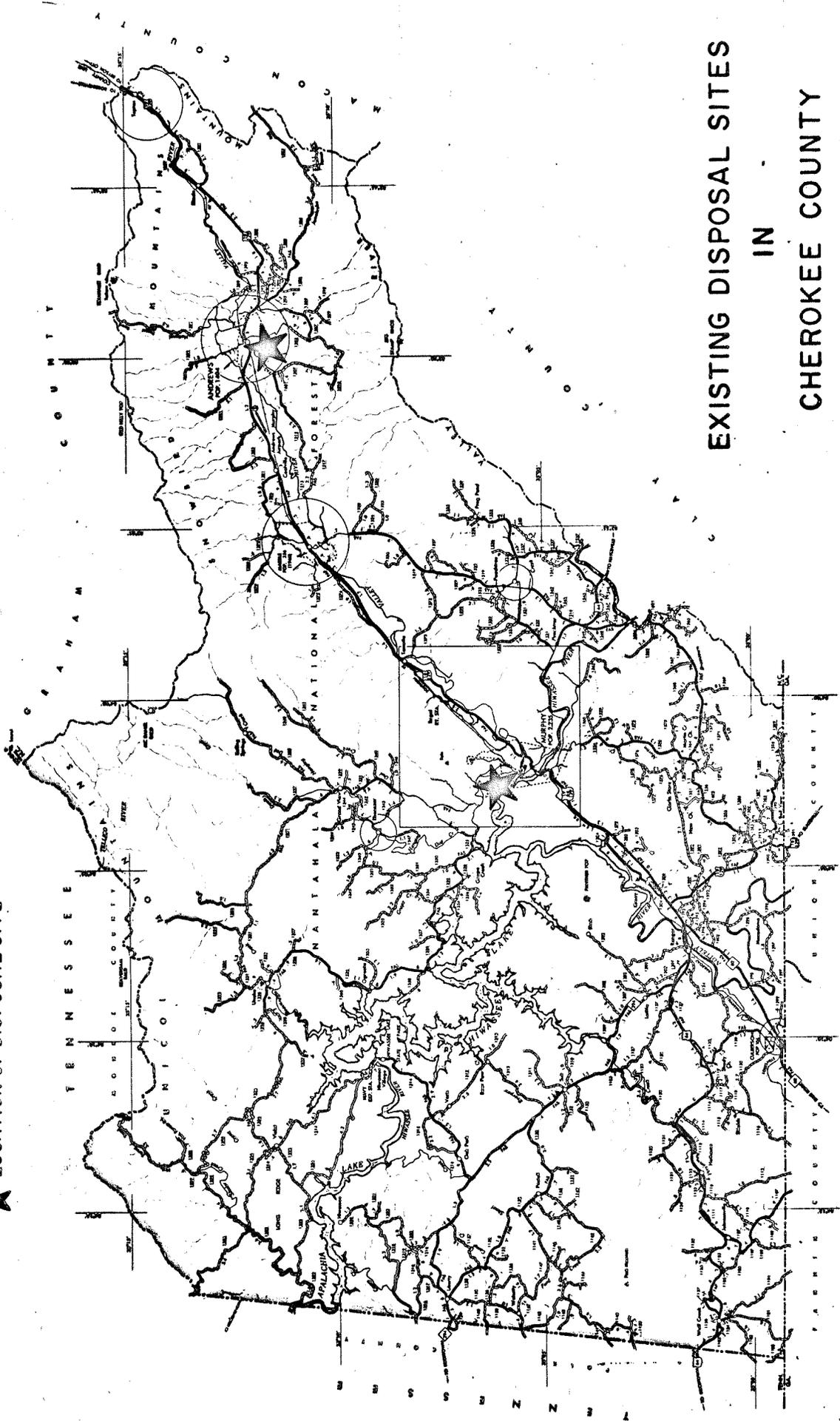
Name	Service		Number of Households	Number of Commercial Establishments	Disposal Site Used	Number of Refuse Loads (weekly)	Estimated Volume of Refuse Weekly (c.y.)
	Daily	Weekly					
Charles Anderson	-	x	198	26	Murphy	12	180
Charles Cornwell	-	x	37	-	Murphy	3	8
George Johnson	-	x	20	10	Murphy		
Bill Sherrill	-	x	180	4	Andrews	2	30
Total			435	40		17	218 c.y.

Households in counties:

Cherokee 5,779

# EXISTING DISPOSAL SITES IN CHEROKEE COUNTY

LEGEND:  
★ LOCATION OF DISPOSAL SITE



## GENERAL ASSEMBLY OF NORTH CAROLINA

1971 SESSION

SENATE BILL 51



Short Title: Highway Litter Fine.

(Public)

Sponsors: Senators Baugh; Moore and Knox.

Referred to: Committee on Public Roads.

## A BILL TO BE ENTITLED

AN ACT TO INCREASE THE FINE FOR PLACING TRASH ON THE HIGHWAYS.

The General Assembly of North Carolina do enact:

Section 1. G.S. 14-399 is hereby amended by deleting the words and figures "fifty dollars (\$50.00)" in the last paragraph thereof and inserting in lieu thereof "five hundred dollars (\$500.00)" so that G.S. 14-399 shall read as follows:

"§ 14-399. Placing of trash, refuse, etc., on the right-of-way of any public road.--It is unlawful for any person, firm, organization or private corporation, or for the governing body, agents or employees of any municipal corporation, to place or leave or cause to be placed or left temporarily or permanently, any trash, refuse, garbage, scrapped automobile, scrapped truck or part thereof on the right-of-way of any State highway or public road where said highway or public road is outside of an incorporated town.

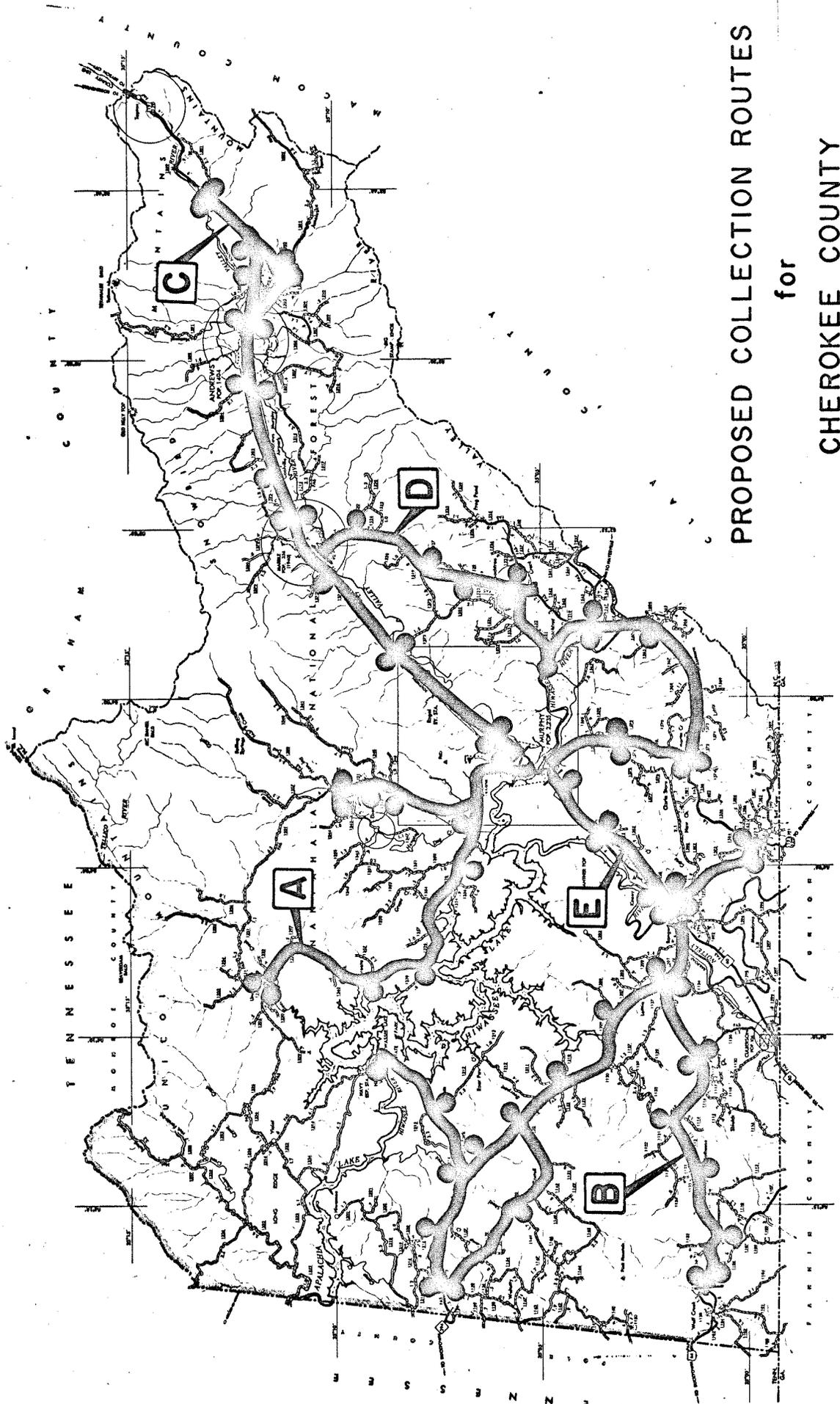
The placing or leaving of the articles or matter forbidden by this section shall, for each day or portion thereof that said articles or matter are placed or left, constitute a separate offense.

1 A violation of this section is punishable by a fine of not less  
2 than ten dollars (\$10.00) and not more than five hundred dollars  
3 (\$500.00) for each offense."

4 Sec. 2. This act shall become effective upon  
5 ratification and apply to offenses committed on and after that  
6 date.

PROPOSED COLLECTION ROUTES  
for  
CHEROKEE COUNTY

LEGEND:  
● Container  
— Route



Driver's Daily Work Report

Day of Week \_\_\_\_\_ Operator \_\_\_\_\_ Date \_\_\_\_\_

Containers Serviced

<u>No.</u>	<u>Amt. Waste</u>	<u>No.</u>	<u>Amt. Waste</u>	<u>No.</u>	<u>Amt. Waste</u>
1	1/4 1/2 3/4 Full	20	1/4 1/2 3/4 Full	39	1/4 1/2 3/4 Full
2	1/4 1/2 3/4 Full	21	1/4 1/2 3/4 Full	40	1/4 1/2 3/4 Full
3	1/4 1/2 3/4 Full	22	1/4 1/2 3/4 Full	41	1/4 1/2 3/4 Full
4	1/4 1/2 3/4 Full	23	1/4 1/2 3/4 Full	42	1/4 1/2 3/4 Full
5	1/4 1/2 3/4 Full	24	1/4 1/2 3/4 Full	43	1/4 1/2 3/4 Full
6	1/4 1/2 3/4 Full	25	1/4 1/2 3/4 Full	44	1/4 1/2 3/4 Full
7	1/4 1/2 3/4 Full	26	1/4 1/2 3/4 Full	45	1/4 1/2 3/4 Full
8	1/4 1/2 3/4 Full	27	1/4 1/2 3/4 Full	46	1/4 1/2 3/4 Full
9	1/4 1/2 3/4 Full	28	1/4 1/2 3/4 Full	47	1/4 1/2 3/4 Full
10	1/4 1/2 3/4 Full	29	1/4 1/2 3/4 Full	48	1/4 1/2 3/4 Full
11	1/4 1/2 3/4 Full	30	1/4 1/2 3/4 Full	49	1/4 1/2 3/4 Full
12	1/4 1/2 3/4 Full	31	1/4 1/2 3/4 Full	50	1/4 1/2 3/4 Full
13	1/4 1/2 3/4 Full	32	1/4 1/2 3/4 Full	51	1/4 1/2 3/4 Full
14	1/4 1/2 3/4 Full	33	1/4 1/2 3/4 Full	52	1/4 1/2 3/4 Full
15	1/4 1/2 3/4 Full	34	1/4 1/2 3/4 Full	<u>Commercial Containers</u>	
16	1/4 1/2 3/4 Full	35	1/4 1/2 3/4 Full	53	1/4 1/2 3/4 Full
17	1/4 1/2 3/4 Full	36	1/4 1/2 3/4 Full	54	1/4 1/2 3/4 Full
18	1/4 1/2 3/4 Full	37	1/4 1/2 3/4 Full	55	1/4 1/2 3/4 Full
19	1/4 1/2 3/4 Full	38	1/4 1/2 3/4 Full	56	1/4 1/2 3/4 Full

Cost Data

Quarts Oil Used \_\_\_\_\_ Gallons Fuel Used \_\_\_\_\_

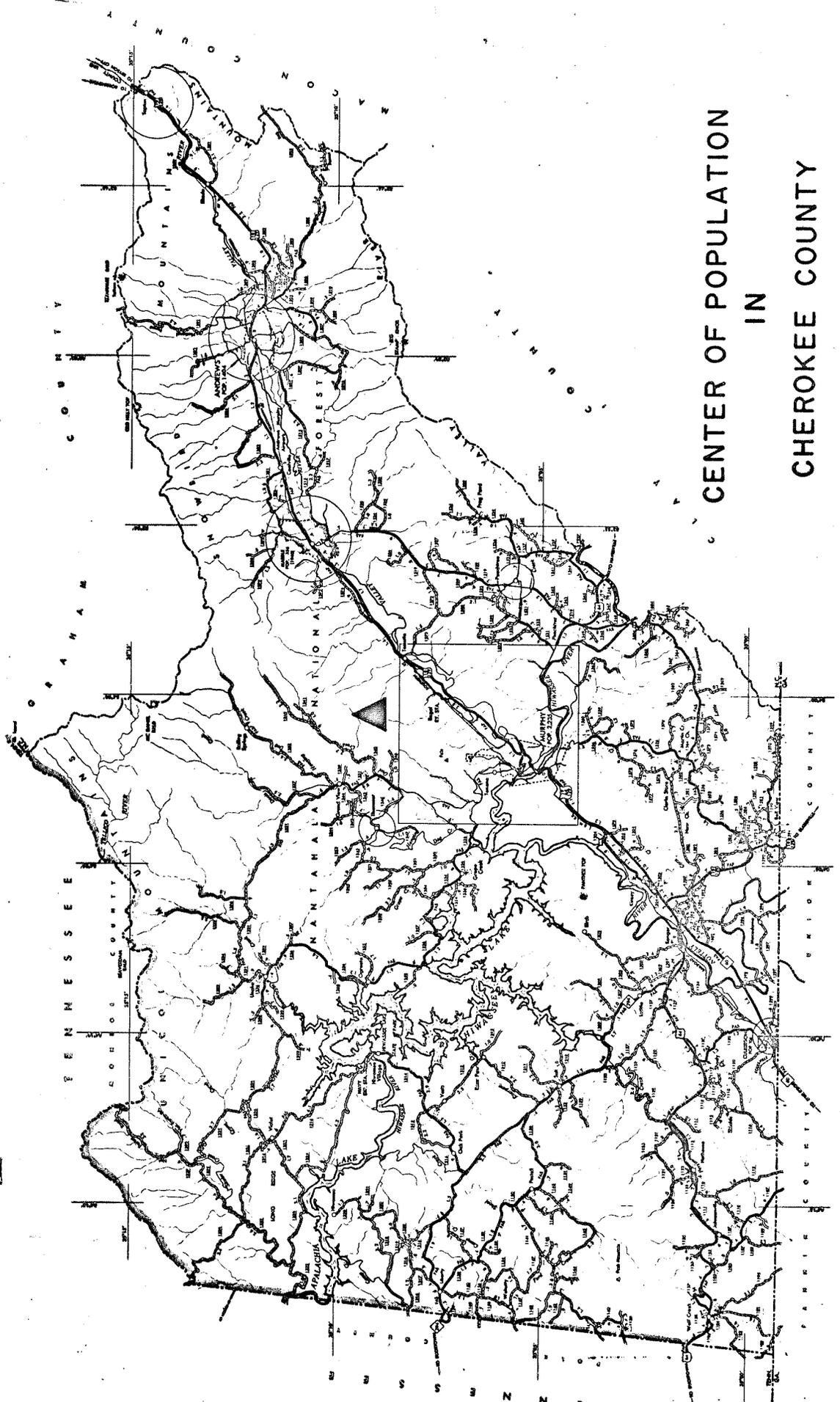
Time Dead Heading \_\_\_\_\_ Time at Landfill \_\_\_\_\_

Time on Routes \_\_\_\_\_ Total Miles Traveled \_\_\_\_\_

Container Stations that Need Policing \_\_\_\_\_

Total C. Y. 's Refuse Collected \_\_\_\_\_

LEGEND:  
▲ POPULATION CENTER

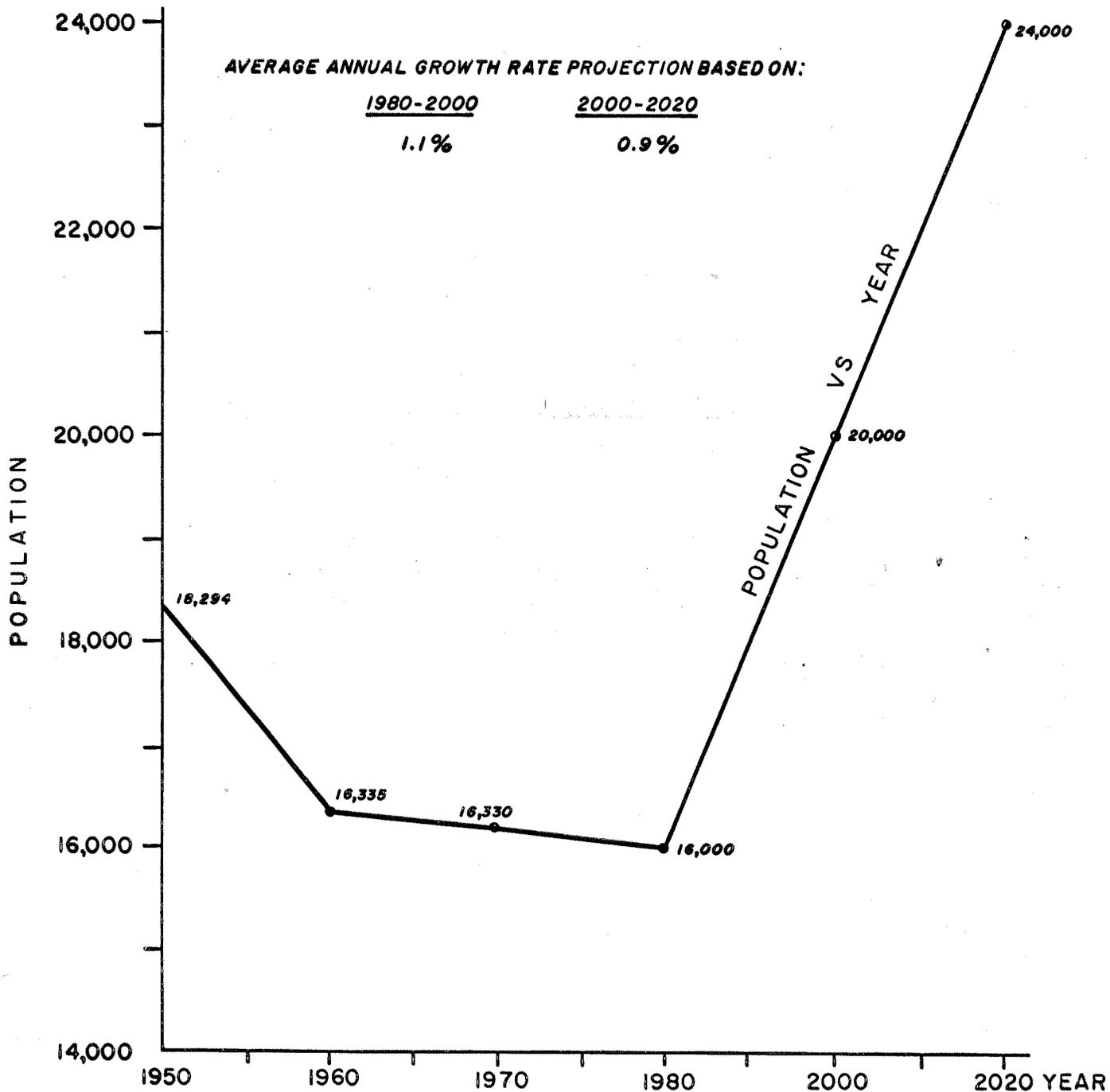


CENTER OF POPULATION  
IN  
CHEROKEE COUNTY

POPULATION DATA  
 CHEROKEE COUNTY, NORTH CAROLINA  
 AND SURROUNDING COUNTIES AND CITIES

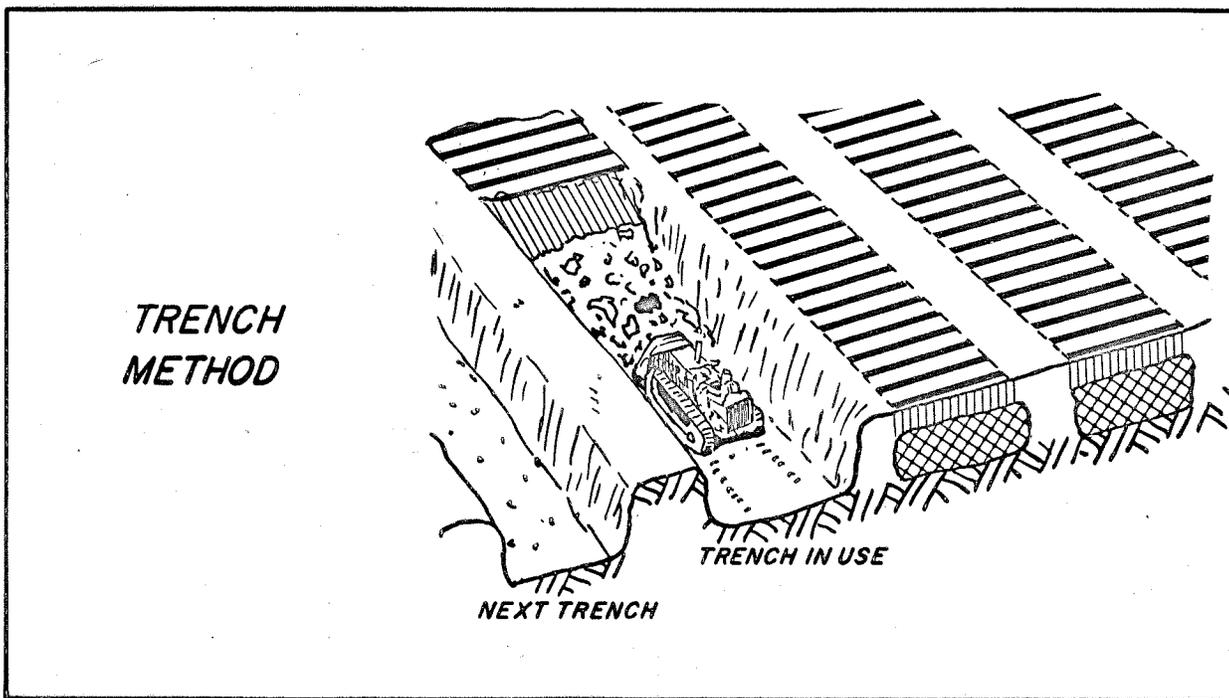
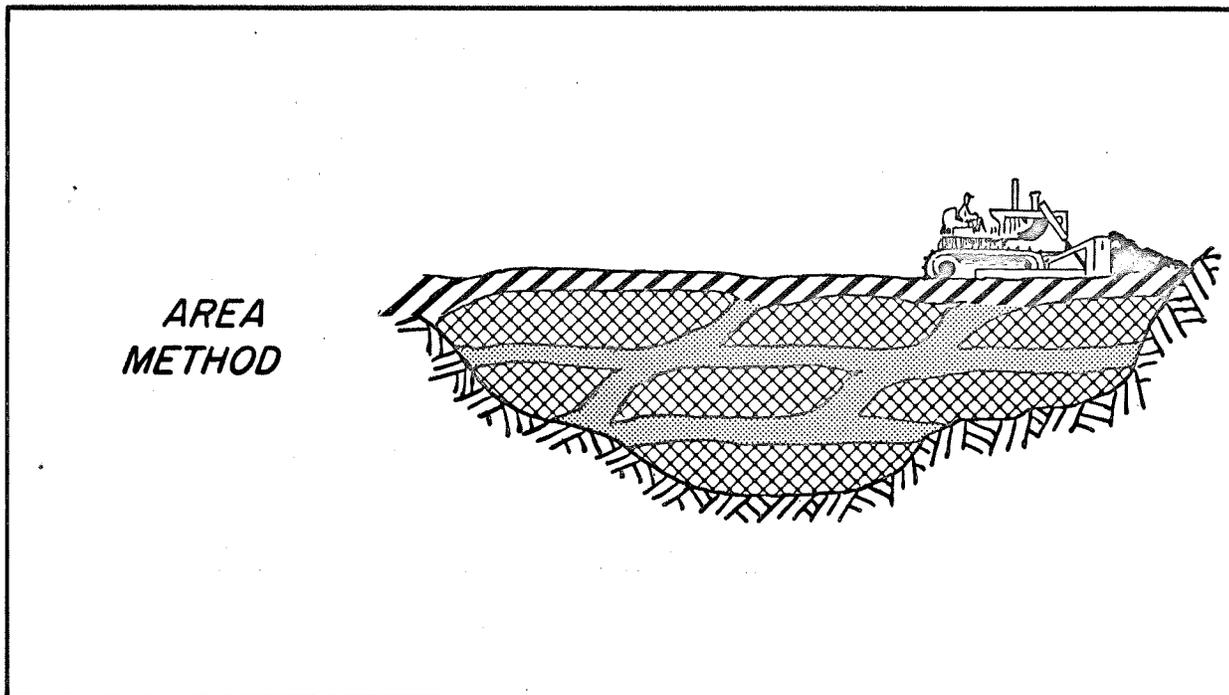
	<u>1950</u>	<u>1960</u>	<u>1970</u>
<b>Cherokee County</b>	18,294	16,335	16,330
Beaverdam Division	1,145	798	555
Hot House Division	1,097	913	767
Murphy Division	7,353	6,626	6,723
Town of Murphy	2,433	2,235	2,082
Notta Division	1,736	1,535	1,522
Town of Culberson	150	106	83
Shoal Creek Division	2,036	1,596	1,392
Valley Town Division	4,927	4,867	5,392
Town of Andrews	1,397	1,404	1,384
<b>Clay County</b>	6,006	5,526	5,180
Brasstown Division	962	923	851
Hayesville Division	2,240	2,138	2,049
Town of Hayesville	356	428	428
Hiwassee Division	651	674	599
Shooting Creek Division	1,099	902	868
Sweetwater Division	428	398	429
Tusquittee Division	626	502	384
<b>Graham County</b>	6,886	6,432	6,562
Town of Robbinsville	515	587	777
<b>Macon County</b>	16,174	14,935	15,788
Town of Franklin	1,975	2,173	2,336
<b>Monroe County, Tennessee</b>	24,513	23,316	23,475
Town of Madisonville	1,487	1,812	2,614
<b>Polk County, Tennessee</b>	14,074	12,160	11,669
Town of Benton	--	638	749
<b>Fannin County, Georgia</b>	15,192	13,620	13,357
Town of Blue Ridge	1,718	1,406	1,602

# POPULATION PROJECTION CHEROKEE COUNTY



**SOURCE:** U.S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS.  
TVA, DIVISION OF NAVIGATION DEVELOPMENT AND REGIONAL STUDIES,  
POPULATION AND EMPLOYMENT PROJECTIONS, RESEARCH REPORT RS-70-1,  
DECEMBER, 1970.

# SANITARY LANDFILL METHODS



**LEGEND:**

- |   |  |
|---|--|
|  Refuse Cell |  Intermediate Cover |
|  Daily Cover |  Final Cover        |

in which is the county seat, or a county superintendent of schools from each county.

The district board of health shall elect its chairman. A majority of the members of the district board of health shall constitute a quorum and the district health officer shall act as secretary to such board of health.

All vacancies in the ex officio membership of a district board of health caused by death, resignation, or any reason other than expiration of a term, shall be filled by appointments made by the State Health Director. Such appointments shall be made from any of the public officers or officials specified above, and the duties of such public officials as members of said district board of health shall be ex officio duties. Appointments to fill vacancies of ex officio members shall be for the unexpired term of the member or members causing the vacancy or vacancies and shall extend until the time for the next regular appointments of ex officio members. All vacancies in membership of the public members of a district board of health shall be filled by ex officio members at the next meeting of the district board of health following the creation of the vacancy. A member appointed to fill a vacancy of a public member shall be from the same county as the member causing the vacancy. In case any public member is a public officer or official, his membership and duties on the district board of health as a public member shall be deemed to be ex officio.

In lieu of district boards of health as herein described, upon approval of the board of commissioners of each county in the district, counties forming or which have formed district health departments may establish and maintain separate county boards of health, organized as prescribed in C. S. 130-13, to perform for their respective counties the functions in relation to the district health department which would have been performed by the district board of health had one been created, and each such board may maintain a separate budget. (1957, c. 1357, s. 1.)

A district board of health is a creature of law. State v. Curtis, 230 N. C. 169, 52 S. E. (2d) 364 (1949).  
 e legislature and has only such powers and authority as are given it by the legis-

§ 130-15. Removal of board members.—Any member of a local board of health may be removed from office by the local board of health for cause. (1957, c. 1357, s. 1.)

§ 130-16. Compensation of board members.—The members of a local board of health shall serve without compensation, except that they may receive eight dollars per diem for each day in attendance at a meeting of said board, plus necessary travel expenses; provided that this article shall not repeal any local act or acts which authorize compensation to members of a local board of health in excess of eight dollars (\$8.00) per diem plus necessary travel expenses. (1957, c. 1357, s. 1.)

§ 130-17. Powers and duties of local boards; expenditures.—(a) The local boards of health shall have the immediate care and responsibility of the health interests of their city, county or district. They shall meet quarterly, and any three members of the board, or the chairman of the board, shall be authorized to call a special meeting of the board, through the local health director, whenever in their opinion the public health interests of the city, county or district require it. All expenditures shall be made in accordance with appropriations duly made under the provisions of the County Fiscal Control Act.

(b) The local boards of health shall make such rules and regulations, not inconsistent with law, as are necessary to protect and advance the public health. Where such rules and regulations deal with subject matter also covered by rules and regulations of the State Board of Health, and there is an emergency, or a peculiar local condition or circumstance, requiring such action in the interest of public health, the rules and regulations of the local boards may be more stringent, but not less stringent, than those of the State Board. In other instances where there is a conflict between the rules and regulations of the State Board and the local boards, the rules and

adopted by a local board of health shall remain in full force and effect until repealed by said local board of health or superseded by rules and regulations duly adopted by said local board of health.

(c) The rules and regulations of a local board of health shall apply to municipalities within the area over which the local board has jurisdiction, but the local board (other than a city board of health) shall not enact any rules and regulations applying to one municipality only, except where circumstances peculiar to that municipality require more stringent rules and regulations. Where municipal ordinances deal with subject matter also covered by rules and regulations of a local board of health having jurisdiction over an area which includes the municipality, and there is an emergency, or a condition or circumstance peculiar to the municipality requiring such action in the interest of public health, the municipal ordinance may be more stringent, but not less stringent, than the rules and regulations of the local board of health. In other instances where there is a conflict between the rules and regulations of the local board and the municipal ordinance, the rules and regulations of the local board of health shall prevail.

(d) Before any rules and regulations of a local board of health, or any amendments or alterations thereof, hereafter adopted, amended, or altered, shall have the force and effect of law, they shall be posted at the courthouse door of each county within the jurisdiction of the board of health, and a statement setting out the title of such rules and regulations together with a statement indicating that the same have been adopted, amended, or altered, and that a copy is posted at the courthouse door of each county within the jurisdiction of the said board of health and that a copy is on file in the office of each health department under the jurisdiction of the said board of health shall be published at least once a week for two successive weeks in a newspaper having general circulation within the area over which the board of health has jurisdiction.

(e) The local boards of health are hereby authorized to enter into contracts with the Veterans' Administration or any other governmental or private agency, or with any person, whereby the local board of health agrees to render services to or for such agency or person in exchange for a fee to cover the cost of rendering such service. This authority is to be limited to services voluntarily rendered and voluntarily received, and shall not apply to services required by statute, regulation, or ordinance to be rendered or received. The fees to be charged under the authority of this subsection are to be based upon a plan recommended by the local health director and approved by the local board of health and the State Health Director, and in no event is the fee charged to exceed the cost to the health department of rendering the service.

The fees collected under the authority of this subsection are to be deposited to the account of the health department so that they may be expended for public health purposes in accordance with the provisions of the County Fiscal Control Act. No individual employee is to receive any compensation over and above his regular salary as a result of rendering services for which a fee is charged. (1901, c. 245, s. 3; Rev. s. 4444; 1911, c. 62, s. 9; C. S., s. 7065; 1957, c. 1357, s. 1; 1959, c. 1024, s. 1; 1963, c. 1087.)

Local Modification.—Franklin, as to subsection (d): 1959, c. 1024, s. 1 1/2.

Editor's Note.—The 1959 amendment rewrote subsection (d).

The 1963 amendment added subsection

(e) Limited Powers.—County boards of health and other administrative agencies, being creatures of statute, have only such powers as are conferred upon them by statute, either expressly or by necessary implication. Champion v. Vance County

## AN ACT TO AUTHORIZE COUNTIES TO REGULATE THE COLLECTION OF GARBAGE

## ARTICLE 22

Garbage Collection and Disposal

G. S. 153-272. Control of Private Collectors. -- The board of county commissioners of any county is hereby empowered to regulate the collection and disposal of garbage by private persons, firms, or corporations outside of the incorporated cities and towns of the county for the purpose of encouraging and attempting to insure an adequate and continuing service of garbage collection and disposal where the board deems it to be desirable. In the exercise of such power, the board may issue a license to any private person, firm, or corporation to collect and/or dispose of garbage; may prohibit the collection and/or disposal of garbage by unlicensed persons, firms, or corporations the exclusive right to collect and/or dispose of garbage for compensation within a specified area and prohibit unauthorized persons, firms, or corporations from collecting and/or disposing of garbage within said area; and may regulate the fees charged by licensed persons, firms, and corporations for the collection and/or disposal of garbage to the end that reasonable compensation may be provided for such services. The board may adopt regulations pursuant to the subject to a fine not exceeding fifty dollars, or imprisonment not exceeding thirty days; each week that any such violation continues to exist shall be a separate offense. (1961, c. 514, s.1)

G. S. 153-273. County collection and disposal. -- The board of county commissioners of any county is hereby empowered to establish and operate garbage collection and/or disposal facilities in areas outside of incorporated cities and towns where, in its opinion, the need for such

facilities exists. The board may contract with any city or town to collect and/or dispose of garbage in any such area. In the disposal of garbage, the board may use any vacant land owned by the county, or it may acquire suitable sites for such purpose. The board may make appropriations to carry out the activities herein authorized. The board may impose fees for the use of disposal facilities, and in the event it shall provide for the collection of garbage, it shall charge fees for such collection service sufficient in its opinion to defray the expense of collection. (1961, c. 514, s.1)

G. S. 153-274. Powers of local boards of health unaffected. -- Nothing in this article shall affect the powers of local boards of health to control the keeping, removal, collection, and disposal of garbage, insofar as the exercise of any such power is necessary to protect and advance the public health. (1961, c. 514, s.1)

G. S. 153-275. Powers granted herein supplementary. -- The powers heretofore or hereafter granted by any other law, either general, special, or local, for the same or similar purpose, and in any case where the provisions of this article conflict with or are different from the provisions of such other law, the board of county commissioners may in its discretion proceed in accordance with the provisions of such other law, or, as an alternative method, in accordance with the provisions of this article. (1961, c. 514, s.1)

Sec. 1a. The provisions of this Act shall not apply to Vance County.

Note:

Chapter 904 of the 1961 Session Laws exempts Johnston County from all provisions of this article.

Chapter 912 of the 1961 Session Laws authorizes Dare County Board Commissioners to levy ad valorem tax in areas of the county in which the county provides garbage collection service.

GENERAL ASSEMBLY OF NORTH CAROLINA  
1971 SESSION  
RATIFIED BILL

CHAPTER 568

HOUSE BILL 1088

AN ACT TO AUTHORIZE COUNTIES TO LEVY TAXES FOR THE OPERATION AND MAINTENANCE OF SOLID WASTE COLLECTION AND DISPOSAL SYSTEMS AND FACILITIES AS A SPECIAL PURPOSE.

The General Assembly of North Carolina do enact:

Section 1. G.S. 153-273 is amended by adding the following paragraph to the end thereof:

"The board of commissioners of each county is hereby authorized to levy taxes for the special purpose of carrying out the authority conferred by this section, in addition to the rate of tax allowed by the Constitution for general purposes, and the General Assembly hereby gives its special approval for such tax levies."

Sec. 2. This act shall become effective upon ratification.

In the General Assembly read three times and ratified, this the 15th day of June, 1971.

H. P. TAYLOR, JR.

H. P. Taylor, Jr.

President of the Senate

PHILIP P. GODWIN

# RULES AND REGULATIONS PROVIDING STANDARDS FOR SOLID WASTE DISPOSAL

For the protection of public health and pursuant to authority granted by Article 13B of Chapter 130 of the General Statutes of North Carolina, the State Board of Health hereby adopts rules and regulations to provide for the following standards:

Standards governing (1) general conditions for solid waste disposal facilities (2) solid waste storage (3) collection and transportation of solid waste (4) treatment, processing, and utilization of solid waste (5) disposal of solid waste (6) site and plan approval, denial, cancellation of approvals for solid waste disposal facilities, and exemption of certain sites (7) required information for approval of sanitary landfill sites and operational plans (8) restrictions on certain sanitary landfill areas (9) operational requirements for sanitary landfills (10) incineration of solid waste (11) non-conforming sites and facilities for solid waste disposal (12) variances in solid waste disposal programs.

## SECTION I—DEFINITIONS

For the purpose of these standards, the following words and phrases shall have the meanings ascribed to them in this section and as ascribed by law.

- A. **Garbage**—all putrescible wastes, including animal and vegetable matter, animal offal and carcasses, and recognizable industrial by-products, but excluding sewage and human wastes.
- B. **Refuse**—all non-putrescible wastes.
- C. **Solid waste**—garbage, refuse, rubbish, trash, and other discarded solid materials, including solid waste materials resulting from industrial, commercial, and agricultural operations, and from community activities, but does not include solids or dissolved materials in domestic sewage or other significant pollutants in water resources, such as silt, dissolved or suspended solids in industrial waste water effluents, dissolved materials in irrigation return flows or other common water pollutants.
- D. **Solid waste disposal**—the collection, storage, treatment, utilization, processing, or final disposal of solid waste.

# RULES AND REGULATIONS PROVIDING STANDARDS FOR SOLID WASTE DISPOSAL



PREPARED BY  
NORTH CAROLINA  
STATE BOARD OF HEALTH

- E. Solid waste disposal facility**—land, personnel, equipment, or other resources used in the disposal of solid wastes.
- F. Solid waste disposal site**—any place at which solid wastes are disposed of by incineration, sanitary landfill or any other methods.
- G. Hazardous solid wastes**—includes but is not limited to explosives, pathological wastes, pesticides, chemicals, and other toxic materials which are harmful to public health.
- H. Radioactive solid waste**—any radioactive material.
- I. Incineration**—the process of burning solid, semi-solid or gaseous combustible wastes to an inoffensive gas and a residue containing little or no combustible material.
- J. Open dump**—the consolidation of solid waste from one or more sources at a disposal site which has insanitary conditions, little or no cover, usually burning, and little or no management.
- K. Person**—means any individual, firm, governmental unit, organization, partnership, corporation, or company.
- L. Solid waste collector**—means any person who collects or transports solid waste.
- M. Sanitary landfill**—a method of disposing of solid waste on land in a sanitary manner without creating nuisances or hazards to public health or safety by utilizing the principles of engineering to confine the solid waste to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of compacted earth at the conclusion of each day's operation or at such more frequent intervals as may be necessary.
- N. Cell**—compacted refuse completely enveloped by a compacted cover material.
- O. Open burning**—means any fire wherein the products of combustion are emitted directly into the outdoor atmosphere and are not directed thereto through a stack or chimney, incinerator, or other similar devices.
- P. Putrescible**—solid waste capable of being decomposed by

microorganisms with sufficient rapidity as to cause nuisances from odors and gases, such as kitchen wastes, offal and carcasses.

- Q. Vector**—an insect or other animal which transmits infectious diseases from one person or animal to another.
- R. Spoiled food**—means any food which has been removed from sale by the United States Department of Agriculture, North Carolina Department of Agriculture, Food and Drug Administration, or any other regulatory agency having jurisdiction in judging food unfit for consumption.
- S. Local governing agency**—refers to incorporated cities, counties, and special purpose districts which are empowered to undertake solid waste management programs.
- T. Water supply watershed**—an area from which water drains to a point or impoundment, and the water is then used as a source for a public water supply.
- U. State Board of Health**—The term "State Board of Health" shall mean the State Health Director, or his authorized representatives.

## SECTION II—APPLICABILITY

These solid waste disposal standards are for general application throughout the State unless otherwise specifically indicated by their context. The official policy and purpose of the State of North Carolina in regard to solid waste control is set forth in North Carolina Statutes, Chapter 130, Article 13B, Solid Waste Disposal.

"Sec. 130-166.18. Solid waste disposal program. The State Board of Health is authorized and directed to engage in research, conduct investigations and surveys, make inspections, and to establish a statewide solid waste disposal program. In establishing a program, the Board shall have authority to:

- (a) Provide standards for the establishment, location, operation, maintenance, use and discontinuance of solid waste disposal sites and facilities. Such standards shall be designed to accomplish the maintenance of safe and sanitary

conditions in and around solid waste disposal sites and facilities, and shall be based on recognized public health practices and procedures, sanitary engineering research and studies, and current technological development in equipment and methods. Such standards shall not apply to the disposal of solid waste accumulated by an individual or individual family or household unit and disposed of on his own property.

(b) Develop a comprehensive program for implementation of safe and sanitary practices for disposal of solid waste throughout the State.

(c) Advise, consult, cooperate, and contract with other agencies and units of State and local governments, the federal government, and industries and individuals in the formulation and carrying out of a solid waste disposal program."

#### SECTION III—GENERAL CONDITIONS

A. All solid waste shall be stored, collected, transported, treated, utilized, processed, reclaimed, recycled, and disposed of in a manner consistent with the requirements of these standards. The State Board of Health is responsible for the enforcement of these standards and encourages cooperation from individuals, municipalities, county governments, local health departments, municipalities, county regional districts and private enterprise.

B. Notwithstanding Section III-A above, no radioactive solid wastes shall be collected and transported, stored, treated, processed, disposed of or reclaimed, except as specifically authorized by a radioactive material license issued by the State Board of Health.

#### SECTION IV—SOLID WASTE STORAGE

A. The owner or occupant of any premise, business establishment, or industry shall be responsible for the sanitary storage of all solid waste accumulated at that premise, business establishment, or industry.

B. Garbage shall be stored in:

1. Durable rust resistant, non-absorbant, water tight, rodent proof, and easily cleanable containers with a

close fitting fly-tight cover and with adequate handles or bails to facilitate handling, or

2. Other types of containers acceptable to the local governing agency and conforming to the intent of this section.

C. Refuse shall be stored in durable containers or as otherwise provided in this section. Where garbage is stored in combination with non-putrescible refuse, containers for the storage of the mixture shall meet the requirements for garbage containers.

D. Hazardous solid waste, pending disposal, shall be stored in containers and at locations prescribed in the applicable State or Federal regulations for control of the specific hazardous material.

E. All containers for the storage of solid waste shall be maintained in such a manner as to prevent the creation of a nuisance or insanitary conditions. Containers that are broken or otherwise fail to meet this standard shall be replaced with acceptable containers. Refuse too large or otherwise not suitable for storage in containers shall be stored in a nuisance free manner consistent with requirements with the local governing agency.

#### SECTION V—COLLECTION AND TRANSPORTATION OF SOLID WASTE

A. The solid waste collector shall be responsible for the satisfactory collection and transportation of all solid waste to a disposal site or facility.

B. Vehicles or containers used for the collection and transportation of garbage, or refuse containing garbage, shall be covered, leakproof, durable and of easily cleanable construction. These shall be cleaned as often as necessary to prevent a nuisance or insect breeding, and shall be maintained in good repair.

C. Vehicles or containers used for the collection and transportation of any solid waste shall be loaded and moved in such a manner that the contents will not fall, leak or spill therefrom, and shall be covered when necessary to prevent blowing of material. If spillage should occur, the material shall be picked up immediately by the solid

waste collector and returned to the vehicle or container and the area properly cleaned.

#### SECTION VI—TREATMENT, PROCESSING, AND UTILIZATION OF SOLID WASTE

All facilities used in the treatment and processing of solid waste for final disposal, or for utilization by reclaiming or recycling prior to final disposal, shall be operated in such a manner as to prevent the creation of a nuisance, insanitary condition, or potential public health hazard. Facilities used in sorting, separating, reducing, shredding, compressing, reclaiming, recycling, and other associate processes shall conform to these standards. The State Board of Health reserves the right to request submission of plans for approval to evaluate site location, design, operational techniques and procedures, and overall sanitation aspects of any facility used in the treatment, processing, or utilization of solid waste.

#### SECTION VII—DISPOSAL OF SOLID WASTE

The disposal or utilization of solid waste shall be by the following approved methods or any combination thereof:

- A. Sanitary landfill
- B. Use of incinerator
- C. Disposal by other sanitary methods which may be developed and demonstrated to be capable of fulfilling the basic requirements of these standards, and which have been approved by the State Board of Health. Plans for any such methods, including reclaiming or recycling processes, shall be submitted to the State Board of Health for approval as required by Section VIII of these standards.

#### SECTION VIII—SITE AND PLAN APPROVAL, DENIAL, CANCELLATION OF APPROVALS FOR SOLID WASTE DISPOSAL FACILITIES AND EXEMPTION OF CERTAIN SITES

- A. Site and plan approval. Effective July 1, 1971, except as otherwise provided in these standards, no person shall establish a solid waste disposal facility without first obtaining approval from the State Board of Health for site location and operational plan.

B. Request for approval of site locations shall be submitted to the State Board of Health in writing. Approval by the State Board of Health shall be based on site appraisals, and such approval shall be obtained prior to submission of the operational plan for the facility. Approvals or denials of proposed site locations shall be made in writing by the State Board of Health.

C. Each request for approval of sanitary landfill sites, operational plans, and other solid waste disposal facilities shall be accompanied by the information and data required by Section IX and other applicable Sections of these standards.

D. Requests for approval of solid waste disposal facilities and operations submitted by a private agency shall be accompanied by an approval letter from the local governmental agency having jurisdiction over the area where the operations are to be located.

E. Upon receipt of the request for approval, the State Board of Health shall review the request to assure that all provisions of these standards are met and that proposed facilities and operations will comply with other applicable State laws, rules and regulations. Based on its review, the State Board of Health shall either approve or deny the request in writing.

F. Denial of approval. When a request is denied approval, the applicant shall be notified in writing of the reasons therefore. A denial shall be without prejudice to the applicant's right to a hearing before the State Board of Health or for filing a future request after revisions are made to meet objections specified as reasons for the denial.

G. Cancellation of approval. The State Board of Health may cancel any approval if it finds that the disposal operation is not in conformance with these standards.

H. Sites exempted from approvals. Approvals by the State Board of Health shall not be required for sites used for the disposal of solid waste from a single family or household, a member of which is the owner, occupant, or lessee of the property. However, such sites shall be operated

and maintained in a nuisance-free and aesthetic manner consistent with the intent of these standards.

#### SECTION IX—REQUIRED INFORMATION FOR APPROVAL OF SANITARY LANDFILL SITES AND OPERATIONAL PLANS

A. Sanitary landfill site. Three sets of the following information for each proposed site shall be submitted to the State Board of Health for review and evaluation:

1. Map or aerial photograph on which land use and zoning within one-fourth mile of the solid waste disposal site is shown. The map or aerial photograph shall be sufficient scale to show the entire property owned or leased for the disposal site by the person proposing the landfill, all homes, industrial buildings, wells, watercourses, dry runs, rock out-croppings, roads and other applicable details and shall indicate the general topography.
2. Geological formations and ground water table to a depth of at least ten feet below the proposed excavation and at the lowest elevation of the site. Such data shall be obtained by soil borings or other appropriate means.
3. Source and characteristic of cover material.
4. Identification of watercourses within or adjacent to the sanitary landfill areas and, if no watercourse is involved, indicate the watershed by name which will receive the drainage from the site.
5. Any other information pertinent to the proposed site.

B. Sanitary landfill operational plans. Three sets of the following information for each proposed operational plan shall be submitted to the State Board of Health for review and evaluation:

1. Plans and drawings including plot plan of the site showing dimensions; trenching, ramping, or filling plans; soil boring locations when made; proposed cover stockpiles; screening, natural and man-made; location of existing and proposed utilities; existing

and proposed on-site structures for equipment storage or employee usage; weighing facilities if planned; and access and entrance roads to the site. Cross sectional drawings shall be included on the plan or on separate sheets showing both the original elevations and proposed fill elevations. The scale of the plot plan should not be greater than 200 feet per inch.

2. A report shall accompany the plans indicating:

- a. Population and area expected to be served by the proposed site.
- b. Anticipated type, quantity, and source of material to be disposed of at the site.
- c. Description of systematic usage of area, operation, orderly development and completion of the sanitary landfill.
- d. Type and number of pieces of equipment to be provided at the site for excavating, earth moving, spreading, compacting, covering, and other needs.
- e. Name of individual responsible for operation and maintenance of the site.
- f. Intended use of land after completion of the sanitary landfill.
- g. Anticipated lifetime of project.
- h. Any other information pertinent to the proposed operational plan

#### SECTION X—RESTRICTIONS ON CERTAIN SANITARY LANDFILL AREAS

Sanitary landfill sites are prohibited within the following areas unless written permission for use of such location is obtained from the State Board of Health.

- A. Within the boundaries of a public water supply watershed where disposal of solid waste in a particular site may have a deleterious effect on the quality of the raw water.
- B. Within the flood plain of any watercourse where underground seepage could cause contamination.

C. Within areas having high water tables where private or public well water supplies could be contaminated.

#### SECTION XI—OPERATIONAL REQUIREMENTS FOR SANITARY LANDFILLS

Any person who maintains or operates a sanitary landfill site shall maintain and operate the site in conformance with the following practices unless otherwise allowed by the State Board of Health in granting the required approval.

- A. Open burning of solid waste is prohibited.
- B. Solid waste shall be disposed of in such a manner that materials are confined and will have no detrimental effect on any ground or surface water.
- C. Dumping of solid waste shall be restricted to as small an area as practical.
- D. Appropriate facilities shall be provided to confine possible wind-blown material within the area. At the conclusion of each day of operation, all wind-blown material resulting from the operation shall be collected and returned to the area by the owner or operator.
- E. Solid waste shall be compacted as densely as practical into cells and covered after each day of operation, or as specified by the State Board of Health, with a compacted layer of at least six inches of suitable cover.
- F. Spoiled foods shall be compacted and covered immediately and separately from the routine solid waste being deposited at the disposal site.
- G. Animal carcasses, abattoir waste, hatchery waste, and other animal waste delivered to the disposal site shall be compacted and covered immediately and separately from the routine solid waste.
- H. No hazardous wastes shall be disposed of in a sanitary landfill except as may be permitted by applicable federal and State regulations.
- I. Effective vector control measures shall be applied to control flies, rodents, and other insects or vermin.
- J. Surface water shall be diverted from the landfill area.

K. The approach road to the disposal site shall be of all-weather construction and maintained in good condition.

L. Equipment shall be provided to control accidental fires or arrangements made with the local fire protection agency to immediately provide fire fighting services when needed.

M. An attendant shall be on duty at the site at all times while it is open for public use.

N. Signs providing information on dumping procedures and indicating the hours during which the site is open for public use, penalty for non-conformance dumping, and other pertinent information shall be posted at the site entrance.

O. Within one month after final termination of disposal operations at the site, or a major part thereof, the area shall be covered with at least two feet of compacted earth material adequately sloped to allow surface water runoff.

P. The finished surface of the filled area shall be covered with adequate topsoil and seeded with native grasses or other suitable vegetation immediately upon completion, or in the spring on areas where operations were terminated during winter conditions. If necessary, seeded slopes shall be covered with straw or similar material to prevent erosion.

Q. Prior to termination of operations at a sanitary landfill site, the State Board of Health shall be notified in order that a site investigation may be conducted by the State Board of Health before earth moving equipment is removed from the property.

#### SECTION XII—INCINERATION OF SOLID WASTE

A. All incinerators shall be designed and operated in a manner so as to prevent the creation of a nuisance or potential health hazard and must comply with the applicable requirements of these standards and those of the Department of Water and Air Resources.

B. Construction of an incinerator shall not be initiated prior to the approval of plans by the State Board of Health.

C. Plans and drawings for each proposed incinerator facility, including a plot plan of all facilities, together with a detailed description of proposed operational procedures, shall be submitted to the State Board of Health for review and evaluation. Such plans must be accompanied by a written statement from the Department of Water and Air Resources to show that air pollution control emissions can be met by the incinerator design and operation, and by a written statement from the governmental agency having jurisdiction that the proposed incinerator site has been approved.

D. The incinerator operation for each proposed installation shall be considered for approval on its merits, shall be in compliance with the following criteria, and in accordance with acceptable engineering practices.

1. The incinerator plant shall be so situated, equipped, operated, and maintained as to minimize interference with other activities in the area.
2. Signs shall be posted at the site of entrance specifying location of dumping area and indicating the normal hours the facility is in operation for public use. Access to the facility shall be limited to those times when authorized personnel are on duty.
3. All solid waste to be disposed of at the site shall be confined to the dumping area. Adequate storage facilities shall be provided.
4. Facilities shall be designed to provide for dust control in the unloading and charging areas.
5. Effective vector control measures shall be applied to control flies, rodents, and other insects or vermin.
6. Fire-fighting equipment approved by the North Carolina Fire Insurance Bureau shall be available in the storage and charging areas and elsewhere as needed.
7. Arrangements shall be made with the local fire protection agency to provide fire-fighting services in an emergency.
8. Communications shall be provided for emergency purposes.

9. Equipment shall be provided in the storage and charging areas and elsewhere as needed or as may be required in order to maintain the plant in a sanitary condition.

10. All residue from the incinerator plant shall be promptly disposed of at an approved site and in a manner consistent with the applicable Sections of these standards.

11. All waste water from the incinerator plant shall be disposed of in accordance with the applicable regulations, standards, or requirements of the Department of Water and Air Resources, the State Board of Health, and local government.

12. Upon completion of construction of the incinerator facility, and prior to initial operation, the State Board of Health shall be notified in order that an inspection may be made of the facility to determine conformance with the approved plan and with the applicable provisions of these standards.

#### SECTION XIII—NONCONFORMING SITE AND FACILITIES

A. Modification of existing sites and facilities and of operating procedures to conform to the requirements of these standards shall be accomplished. When the degree of necessary improvement is of such extent that immediate compliance cannot be accomplished, special consideration may be made by the State Board of Health. In such event, the owner of the nonconforming site or facility shall, not later than July 1, 1972, submit to the State Board of Health a report setting forth a program and plan for compliance with these standards together with a time schedule for submission of plans and specifications and commencement of construction of necessary improvements. In no case will the State Board of Health consider any time schedule for compliance which extends beyond July 1, 1974, unless a variance is granted as provided under Section XIV. After review and consideration of the report, the State Board of Health shall require completion of necessary improvements in accordance with the schedule submitted or as modified by the State Board of Health.

incinerators which do not meet air pollution emission standards shall conform to requirements and to implementation schedules established by the Department of Water and Air Resources and/or local air pollution control authorities.

C. A person operating an open dump for disposal of solid waste on the effective date of these standards and not choosing to conform to these standards shall upon abandoning the site or closing operations take the following actions:

1. Implement effective rat control, including baiting for at least two weeks after closing, to prevent rat migration to adjacent properties.
2. Compact and cover existing solid waste. Final cover for the entire area shall be two feet or more of compacted earth.
3. Implement erosion control measures by grading and seeding as necessary.
4. Post signs indicating the dump site closure.

#### SECTION XIV—VARIANCES

A. In order to avoid undue hardships, promote the effective and reasonable application and enforcement of these standards, the State Board of Health may grant variances from the requirements of these standards in accordance with such procedures and conditions as it may prescribe. Each application for variance shall be examined on the basis of conditions prohibiting full compliance.

B. Variable factors such as population density, daily or seasonal loadings, nature of wastes, location of facility or facilities, water table conditions, topography, soil and geology, climate, land use, stream and reservoir classification are to be taken into account in determining the degree of variance, if any, which may be allowed.

#### SECTION XV—LIMITATIONS

Nothing in these standards shall be construed to limit the authority of municipal and county governments or sanitary districts from adopting more stringent solid waste disposal requirements than those set forth in these standards.

#### SECTION XVI—SEVERABILITY

If any provision of these standards or its application to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the standards which can be given effect without the invalid provisions or applications, and to this end the provisions of these standards are declared to be severable.

#### SECTION XVII—PENALTIES

If any person shall violate any rules and regulations adopted by the State Board of Health, he shall be guilty of a misdemeanor and punishable by a fine not to exceed (\$50.00) or by imprisonment not to exceed thirty (30) days, as provided by Section 203 of Chapter 130 of the General Statutes of North Carolina.

#### SECTION XVIII—REPEALER

All rules and regulations heretofore adopted by the State Board of Health which are in conflict with the provisions of these rules and regulations are hereby repealed.

#### SECTION XIX—EFFECTIVE DATE

These rules and regulations shall be in full force and effect from and after March 11, 1971.

The foregoing rules and regulations were adopted at a meeting of the State Board of Health on March 11, 1971, at Raleigh, North Carolina.

*Certified as a true copy*

*Jacob Koonen*

State Health Director

*cut*

September 1, 1971

Mr. Robinson R. Watson  
Tributary Area Development  
Tennessee Valley Authority  
Knoxville, Tennessee 37902

Re: Cherokee County Solid Waste Plan

Dear Mr. Watson:

*JHR*

I have reviewed your proposed plan for solid waste disposal for Cherokee County along with the members of my staff. I think it is a very complete plan but for the purpose of making application to the Farmers Home Administration for financial assistance, I really think it is in too much detail. The Farmers Home Administration requires that the county commissioners adopt the complete plan.

I recommend that you consider the following changes:

- Page 5 - Our Rules and Regulations Providing Standards for Solid Waste Disposal will cover the storage and disposal of refuse in the municipalities since they are statewide.
- Page 7 - The state law also regulates collection as to the type of truck, etc. I do not feel that it is necessary to appoint an administration board, as these programs will be required to be operated by the county commissioners or local board of health. The county does not need to adopt a solid waste management ordinance since the State has adopted the Rules and Regulations Providing Standards for Solid Waste Disposal.
- Page 8 - Based on the information that we have, I think it should be recommended that only one site be operated within this county.

Mr. Robinson R. Watson

Page 2

September 1, 1971

- Page 10 - It would be our suggestion that a fewer number of sites be established and that the containers be placed in clusters.
- Page 11 - I suggest that the paragraphs regarding the State Highway participation be eliminated as this would tend to involve another agency in responsibility above their own requirements. I am sure that such assistance and cooperation will be available at the local level.
- Page 15 - In those paragraphs dealing with site selection  
Page 16 - and sanitary landfill operation, I would suggest that reference be made to the Rules and Regulations Providing Standards for Solid Waste Disposal that adequately describe the requirements of this State.

I appreciate your interest and cooperation in the preparation of solid waste disposal facilities in those counties of the Tennessee Valley area. The suggestions that I have made are in accordance with the plans that we have prepared for other counties in the State and appear to be acceptable to the Farmers Home Administration. I am sure that financial assistance from the Farmers Home Administration will provide much impetus for the establishment of county plans.

Thanking you again for your assistance, I am

Very truly yours,

Sidney H. Usry, Chief  
Solid Waste & Vector Control Section  
Sanitary Engineering Division

SHU:bm

TENNESSEE VALLEY AUTHORITY  
KNOXVILLE, TENNESSEE 37902

August 9, 1971

Mr. Sydney Usry  
Sanitary Engineering Division  
State Board of Health  
P. O. Box 2091  
Raleigh, North Carolina 27602

Dear Mr. Usry:

Per our conversation last week, attached is the Cherokee County Solid Waste Collection and Disposal Report. This draft is for your approval. We would appreciate receiving your comments as early as possible in order that we may put it in final form and send it to Cherokee County for attaching to the application to Farmers' Home Administration.

If there is any question, please give me a call.

Sincerely,

*Robinson R. Watson*

Robinson R. Watson  
Tributary Area Development

Enclosure

RECEIVED

AUG 11 1971

SANITARY ENGINEERING  
DIVISION

MANAGEMENT PROGRAM  
FOR  
SOLID WASTE COLLECTION AND DISPOSAL SYSTEM  
IN  
CHEROKEE COUNTY,  
NORTH CAROLINA

Prepared by  
Cherokee County Health Department  
Sanitary Engineering Division  
North Carolina State Board of Health  
Office of Tributary Area Development  
Tennessee Valley Authority

July, 1971

## CONTENTS

	Page
Introduction	1
Existing Solid Waste Activities	2
Collection Service	2
Disposal Sites	4
Existing Laws	5
Recommendations	6
Rural Collection System Design	8
Routes	8
System Implementation	10
Record Keeping	12
Compactor Truck Selection and Personnel	12
Sanitary Landfill Design and Operations	14
Location	14
Size	15
Site Selections	15
Sanitary Landfill Operation	16
Equipment Selection and Personnel	18
Administrative Organization and Financing	20
Authority to Regulate	20
Organization	21
Financing	22
Estimated Collection System Budget	23
Estimated Sanitary Landfill Budget	24
Conclusions	25
Appendix	

## EXHIBITS

1. Summary of Private Haulers
2. Map - Existing Disposal Sites
3. North Carolina Law - Highway Anti-Litter
4. Map - Proposed Collection Routes
5. Driver's Daily Work Report
6. Map - Center of Population
7. Population Data
8. Population Projection
9. Sanitary Landfill Methods
10. North Carolina Law - County Boards of Health Authority
11. North Carolina Law - County Commissioner's Authority to Regulate  
    Collection and Disposal of Garbage
12. North Carolina Law - County Commissioner's Authority to Levy Taxes  
    for Solid Waste Collection and Disposal

## INTRODUCTION

The task of implementing a solid waste collection and disposal system offers one of the greatest challenges to the rapidly expanding rural and urban counties of North Carolina. This is a problem of local governments as well as of the taxpayers, and continued disregard on the part of both will result in unnecessary land pollution and inconvenience to the home owner.

An effort is being made by the Cherokee County Board of Commissioners to resolve solid waste collection and disposal problems. The Commissioners, working with the county and state health departments, local governing bodies and individuals in the towns of Andrews and Murphy, and technical advisors from the Tennessee Valley Authority, have devoted their attention to surveying the solid waste problems, analyzing factors such as existing county collection services and disposal facilities, and considering the needs for an efficient and economical service for all county residents. Primary attention is being given to establishing a countywide solid waste collection system and one sanitary landfill to serve the total population of the county. This report recommends approaches to organization, operation, and financing of both. Technical and financial limitations have been considered and included within the framework.

The key problem is lack of service for rural householders in Cherokee County. Since much of the uncollected refuse is thrown along the highways and roads and in random dumps, the implementation of a solid waste collection system and one sanitary landfill would improve the aesthetic attractiveness of the countryside and eliminate a public health hazard.

## EXISTING SOLID WASTE ACTIVITIES

### Collection Service

Refuse contaminated with disease organisms originating in the homes, businesses, or institutions provides food and shelter for many health pests, such as insects and rodents. Therefore it becomes necessary that refuse be handled in an acceptable manner from the point of origin to that of disposal. Refuse at the point of origin is the responsibility of the producer and must be stored in an approved manner. Refuse collection is accomplished in three ways: (1) by the individual, (2) by a governmental agency using public funds, and (3) by private contract refuse collectors who are paid by the individuals receiving pickup-disposal service.

Municipal Service--The incorporated towns of Andrews and Murphy provide weekly curbside collection service to city residents. In Murphy, downtown commercial establishments are provided with daily collection service. Many of the larger establishments in the town are using 1-, 2-, and 2-1/2-cubic-yard containers. These containers are purchased by the merchants to store refuse for pickup by the town's 18-cubic-yard side-loader compactor truck. Other businesses and family households use garbage containers, boxes, and cartons.

In Andrews, most of the downtown commercial establishments are provided with twice-a-week service. The town presently does not use bulk containers. The businesses as well as households are using small garbage containers, boxes, and cartons to store refuse for pickup by the town sanitation department's 13-cubic-yard compactor truck.

Private Service--Four individuals are presently engaged in the collection of household, commercial, and institutional wastes in Cherokee County. As shown in Exhibit 1, these four haulers serve 435 household units. None of these individuals pursues the collection routes on a full-time basis. They are primarily engaged in other occupations and employment, and service their subscribers before or after their normal working hours. The largest of these part-time haulers provides collection service for 198 households and 26 commercial establishments.

No Existing Service--The table below shows the estimated family units and population in Cherokee County who neither utilize the services of private collectors nor have the benefit of a municipal collection system.

<u>County</u>	<u>Estimated Unserved Family Units</u>	<u>Estimated Unserved Population</u>	<u>Total County 1970 Population</u>
Cherokee	3,710	11,500	16,330

This lack of service is the great underlying reason for the existence of the many small dumps which may be found along most roads in the county. Many people without collection services are disposing of their refuse in random dumps, creeks, and streams, or at any spot offering a little seclusion from the public. In addition to being unsightly and detrimental to property values, this indiscriminate random dumping poses a significant public health problem.

Very few residents make use of their privileges at the Murphy disposal site, due partly to the distance involved in driving to the site from the extreme ends of the county and to their being unaware of the

dumping privilege provided for them by the county at Murphy. Residents are hesitant to drive over 4 or 5 miles to any disposal location regardless of the facility. Therefore, even three or four landfill sites would not be a substitute for a countywide collection system.

#### Disposal Sites

Solid waste disposal is normally accomplished by (1) the individual who utilizes his own land or areas belonging to private or public agencies (random dumps), (2) by governmental agencies who utilize publicly owned disposal area, or (3) by private collectors who provide their own disposal area or utilize that of a public agency. No longer is the old-fashioned, unsanitary refuse dump acceptable in today's society as a means of refuse disposal. An open dump is aesthetically offensive because of smoke and odors and is responsible for the reduction of adjacent land values, and dumps are gradually being replaced by the sanitary landfill or other sanitary means of refuse disposal.

Municipal Sites--There are two disposal sites in Cherokee County as shown in Exhibit 2--one at Murphy serving the town and Cherokee County residents and the other at Andrews serving town residents.

Murphy--This disposal site is located about one-half mile northwest of the town limits in the Texana area. The site covers about 6 acres of land leased by the town from the U.S. Forest Service. Since about July 1970 the town has been using a private contractor every fifth day to cover the refuse brought into the site. A caretaker is on duty from 8:00 a.m. to 5:00 p.m. on weekdays and from 8:00 a.m. to 12:00 noon on Saturdays; however, the disposal site is open for public use 24 hours a day 7 days a week. The estimated annual operating cost to the Town of Murphy for the operation amounts to \$11,500. Cherokee County reimburses

the town about one-third of this total cost since the landfill is open to residents to use for disposing of their refuse. The site is rapidly being filled, with less than a year of use remaining. The town and the county are now looking for additional land for relocating this disposal facility.

Andrews--At the Andrews disposal site the town operates an open dump. The site, covering about 3 acres, lies within about 27 acres of timber-covered hillside. Access into the area is controlled at all times by a locked gate. A bulldozer is brought to the site three or four times a year to push the burned-out refuse over the side of the pile and hill. It is reported the town expects to begin covering regularly within a year. At the present rate of filling the disposal site should be useful for several years.

#### Existing Laws

The incorporated towns of Murphy and Andrews do not have laws regulating the storage and disposal of refuse within their municipalities. Such laws should be adopted and adequately enforced. Cherokee County does not have a county ordinance prohibiting the dumping of refuse on public or private property. There are no county anti-litter ordinances, nor is there an ordinance regulating abandoned autos and junk yards.

It is expected that North Carolina state laws prohibiting dumps and setting standards for solid waste disposal will be enforced more rigidly in the foreseeable future. The County Commissioners, in anticipation of more strict enforcement of the solid waste disposal laws, propose to establish a central sanitary landfill which it is hoped eventually will become a central disposal site for both county and municipal sources.

*State law now covers*

RECOMMENDATIONS

It is recommended that Cherokee County install a countywide bulk container system to provide refuse collection service for residents of the rural and unincorporated areas. The system would provide one container for about every 50 residential or family units in the county. They should be strategically located to serve the householder on his or her way to work or school or the grocery store. Based on data collected, seventy-one 4-cubic-yard containers will be needed to serve the county's presently unserved population of approximately 11,500 persons. The bulk container system is financially feasible and will solve the county's random dump and lack of service problems.

One central sanitary landfill should be provided and operated by Cherokee County and used by all collection agencies and individuals in the county, namely, the Towns of Andrews and Murphy, private collectors, industrialists and merchants hauling their own refuse, all other haulers of commercial, governmental, institutional and construction wastes, and individual householders hauling in vehicles. Ideally, this central sanitary landfill should be located near the center of the county population, which is between Murphy and Andrews.

Private haulers who presently provide house-to-house refuse collection service to the more populated areas should continue to provide their service, and the two systems will work compatibly. Most households which now subscribe to this house-to-house private collection service are likely to continue to pay the monthly charge even if a bulk container is located near their residence. This has been the experience in other systems.

*State law regulates collectors.*

There is also a need for the licensing of private haulers.

?

Almost all haulers use open body trucks and therefore contribute to the highway litter problem. The private franchise privilege should not be limited to one collector at this time. Eventually, however, such a restriction may be desirable in order to provide enough volume for better service.

*Must be by Co Comm.*

It is recommended that the Cherokee County Health Department provide the day-to-day management of the solid waste collection and disposal system. A solid waste administration board, made up of officials from the county, <sup>may</sup> should immediately be formed with the responsibility to assist in setting it up, to operate the collection and disposal system, and provide overall administration and supervision when it becomes operational. This board should meet at least monthly and should be non-compensatory.

3

*Council under state law*

The county should also adopt a solid waste management ordinance (which may require a private act of the state legislature) that would regulate indiscriminate dumping and regulate private collections. Also, the county should enforce the state anti-litter law as shown in Exhibit 3. A sample of solid waste management ordinance is provided in this report as Appendix A.

(?)

These recommendations will be discussed in more detail in subsequent sections.

RURAL COLLECTION SYSTEM DESIGNRoutes

For Cherokee County five routes have been designed to service the 71 containers twice a week on scheduled intervals, using one 25-cubic-yard compactor truck. The truck will run a morning and an afternoon route with a maximum of 20 containers on any of the routes.

Ideally, refuse picked up by the compactor truck should be delivered to a central landfill located more or less near the center of population for the county. However, since a central landfill operation is not now available for the county, it is suggested that refuse be taken to the existing two disposal sites servicing Murphy and Andrews.

Exhibit 4 illustrates the five proposed collection routes, the two disposal sites, and the recommended location of each bulk container. The routes average 37 miles in length, the longest being 65 miles and the shortest being 19 miles. These mileages include a 10 percent factor for maneuvering and any additional travel necessary for unscheduled service requirements. All mileage traveled on these routes is on paved roads.

The route schedule for the compactor truck shown below is for a full-phase collection system. The truck driver will run the five different routes twice weekly, making 40 hours in five days, with Thursday and Sunday off.

*Only on route at  
Murphy and Andrews  
out*

Route Schedule

	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>
Morning	A	C	Varied Route	No	A	C	No
Afternoon	B	D & E	Duties and Truck Maintenance	Work	B	D & E	Work

Shown below is the estimated time required to work each of the five proposed collection routes in Cherokee County.

Time Required to Service Each RouteRoute A

11 - 4 c.y. containers @ 3 min/container excluding travel between containers	33 minutes
42 miles travel between containers @ 25 mi/h	95 minutes
Travel to begin route and trip to Murphy Disposal Site	<u>40 minutes</u>
	168 minutes, or 2 hours 48 minutes

Route B

20 - 4 c.y. containers @ 3 min/container excluding travel between containers	60 minutes
65 miles travel between containers @ 30 mi/h	130 minutes
Travel to begin route and trip to Murphy Disposal Site	<u>60 minutes</u>
	250 minutes, or 4 hours, 10 minutes

Route C

18 - 4 c.y. containers @ 3 min/container excluding travel between containers	54 minutes
37 miles travel between containers @ 30 mi/h	74 minutes
Travel to begin route and trip to Andrews Disposal Site	<u>40 minutes</u>
	168 minutes, or 2 hours, 48 minutes

Route D

13 - 4 c.y. containers @ 3 min/container excluding travel between containers	39 minutes
23 miles travel between containers @ 30 mi/h	46 minutes
Travel to begin route and trip to Murphy Disposal Site	<u>50 minutes</u>
	135 minutes, or 2 hours, 15 minutes

Route E

9 - 4 c.y. containers @ 3 min/container excluding travel between containers	27 minutes
19 miles travel between containers @ 30 mi/h	38 minutes
Travel to begin route and trip to Murphy Disposal Site	<u>40 minutes</u>
	105 minutes 1 hour, 45 minutes

To insure that container sites meet a high standard of cleanliness and appearance, the compactor will service each of the five routes twice a week. If more frequent pickups are required by the county, extra charges should be made, or the county may provide additional containers for serving on the regular basis. On Wednesday, the driver will perform regular specified maintenance to the truck chassis and compactor bodies, such as steam cleaning, treating with germicide, greasing, and minor adjustments.

System Implementation

For the bulk collection system to serve all residents in Cherokee County, it is suggested that the 71 containers be distributed along the five routes indicated in Exhibit 4. After placement throughout the county, some route and maintenance flexibility will be required to service random containers which may become intermittently overloaded or underutilized. There will be occasions when an unthinking citizen will

*we would recommend  
that only about 25-30  
sites be used.*

leave an item that the compactor unit cannot or should not handle, such as a stove, a refrigerator, or a piece of furniture. Arrangements should be worked out with the state highway maintenance department in the county to provide the necessary maintenance of containers, to put gravel around container stations, to clean up litter that might be scattered around each container location, and to haul away from container stations articles too large for the compactor unit to handle.

*Would also  
leave this  
out.*

In placing the bulk containers care should be taken to see that they are located at points of maximum probable use. It is usually best to place them in the vicinity of commercial establishments in the rural and unincorporated areas, but not on the premises. If containers are placed on commercial property, the use is usually taken up by the tenant, limiting the use by the public. In addition, it would be desirable for all commercial establishments and industries which generate large volumes of refuse to provide their own on-premise bulk containers for service by the compactor route truck. Arrangements should be worked out so that the county could provide these containers to the commercial establishments and industries on a reimbursable basis. These bulk containers would be in addition to those intended to handle most residential waste. The county should service these for a small fee or no charge to the customer.

Formal agreements should be made concerning repairs to the compactor body/truck chassis. It would be preferable if a local commercial garage/station handles minor repairs. Any garage/station should be convenient and have the special skills and equipment to make repairs/adjustments to the compactor truck.

### Record Keeping

Truck and bulk container record keeping should be simple, yet show information essential to future planning and cost control. Exhibit 5 is a recommended form for daily completion by the driver. Copies should be filed for future analysis such as mileage, fuel, maintenance, and container utilization.

### Compactor Truck Selection and Personnel

The compactor truck servicing the bulk containers in Cherokee County will drive about 400 route miles each week and will pick up an estimated 65,000 pounds of refuse from the bulk container stations serving rural residents.

Since the truck will need to average about 16,000 pounds/ workday, it is desirable to have a large, light, front-loading compactor truck. A front loader is recommended because the large rear- and side-loading compactors require the driver to get out of the truck to engage and disengage the rear- and side-loading container. However, the rear and side loaders do have some advantages, such as the rear loader's capability of picking up appliances left at container stations and the side loader's capability of operating in tighter areas by pulling alongside containers.

A 25-cubic-yard compactor body is recommended to service the countywide bulk container collection system. This size body will hold up to about 70 cubic yards of loose refuse, depending on refuse density. Everything should be done to keep the body light in weight because the truck chassis and body will weigh approximately 25,000 pounds, plus a full payload of refuse at about 8,000 pounds. A diesel motor will be desirable because of longer lasting quality and cheaper operational expense. Because

*if service is available*

of the terrain features in the county, the truck should be equipped with an automatic transmission and, because of the need for maneuverability, with a single rear axle.

The truck should be serviced weekly on Wednesday or on Thursday in a commercial garage/station. When major repairs are required, they should be done by the dealer from whom the chassis and compactor body were purchased. For maintenance requiring excessive periods of time (more than one day), standby equipment should be furnished by the dealer/manufacturer from whom the compactor truck was purchased. Several dealers/manufacturers of compactor and truck equipment are now providing such equipment either at no charge or for nominal rental fees.

A regular full-time compactor truck driver should constitute the collection system personnel. A relief man (possibly the same employee working as the relief man in the central sanitary landfill operation) would be required to substitute for the regular driver when he is on sick leave or vacation. Cleaning up and policing at least every two weeks around container stations will be necessary. This work could be handled by the compactor driver on Wednesday, or by using the services of the relief man, or by enlisting the services of the state highway maintenance department to do this required maintenance and cleanup work. One representative from the county health department should have direct supervision over the driver and relief man, insure that the system operates properly, and handle all operational matters.

## SANITARY LANDFILL DESIGN AND OPERATIONS

A sanitary landfill is an area into which refuse is dumped and immediately covered with earth. The landfill provides for an efficient method to dispose of refuse without the objectionable characteristics of a "dump." A sanitary landfill can be initiated wherever cover material can adequately be obtained and wherever a tractor can operate.

By using refuse for fill and covering it with a relatively small amount of earth, the level of the land can be raised the same as if fill dirt were brought into the area. The final height of the fill should be predetermined, as should the slope for best drainage, usage, and access when completed.

There is a significant advantage in conducting landfill operations on a large scale. For example, disposal at one large central sanitary landfill site can be provided for Cherokee County and its municipalities at very little more than the operational costs for each one individually.

### Location

The distance from point of refuse pickup to point of disposal is an important factor. Haul distance can severely affect the economic aspects of solid waste collection and disposal. This lends itself to the fact that a sanitary landfill near the center of a county is economically feasible. Exhibit 6 shows the theoretical center of population for Cherokee County. It is not always possible to establish a site at the precise location. Soil cover materials and subsurface conditions are important criteria for selecting a site. In some other cases, road access and proximity to residential areas ruled them out.

Size

Though the rate of acquisition depends upon the size of the tracts of land available, it is desirable to design and purchase the sanitary landfill for at least 10 years. Projections less than this do not justify money spent in planning, construction, and implementation. Land that would be acquired does not have to be in one or even two tracts or all in one location, but all tracts should be as near the population center as possible.

The data in Exhibits 7 and 8 have been compiled to give the best estimate of population trends in Cherokee County through the year 2020.

Site Selections

Before final site selection is made, an option to purchase the land should be taken. Following this, soil samples should be taken and test borings and a geological report should be made.

After acquisition of the land, five operational maps for the landfill should be drawn. Clear plans and procedures are essential to the efficient and successful operation of any sanitary landfill. These plans will show to all those involved (planners, legislative bodies, health officials, supervisors, equipment operators) the existing situation and the sequence of operations planned. Maps are necessary for the same reasons that they are necessary in road construction or other earth-moving projects.

The first map should show all of the existing contours, roads, buildings, and woods. Access roads, drainage facilities, permanent fencing, gates, weighing facilities, public dumping station, well, power lines, and telephone lines should be located on this map. A second map should show

*site must be approved  
by state board of health  
Section 12 Rule & Reg.*

*Same as above*

the different areas on this site at which landfill operations can be accomplished. The location of the test borings should be indicated on this map. On the third map the proper sequence of operations should be indicated. A fourth map should show the approximate finished contours of the site when the landfill is completed. The final drainage scheme should be shown on this map. A fifth map should show the location and details of the after-hours public dumping station at the landfill entrance.

Suitable shelter for landfill equipment should be provided. Protection of equipment from the weather reduces deterioration and maintenance. Therefore, it is necessary to have a shed large enough to store the equipment at night and during inclement weather, with enough room for routine maintenance, storage of tools, service equipment, spare parts, and other supplies. Toilet and handwashing facilities must be provided for good personal hygiene of the landfill and collection service employees.

Either an air compressor or water under pressure from a well should be available to clean out the radiator of the tractor. Also a stationary grease rack should be constructed to service the tractor and clean the undercarriage.

#### Sanitary Landfill Operation

*Section VI N.C. S.B.H. Rule + Reg.  
(see as appendix)*

Access into the landfill site should be controlled at all times. It should be limited to those times when an attendant is on duty and only to those authorized to use the site for disposal of refuse. If public use of a sanitary landfill is allowed when no attendant is on duty, scavenging and indiscriminate dumping commonly occur.

Gates should be locked when the landfill operation is closed for the day. A public dumping station should be located outside a short run of chain link fence and gate across the landfill entrance. The dumping station provides a depository for off-hour visitors. The station may consist of bulk containers under a special ramp. A dump truck could be used as well.

It is necessary to have weighing facilities at the site to allocate the proper charge to each of the users or collection agencies using the sanitary landfill.

*we feel that a few person charge can be used instead of scales.*

Individual cells in sanitary landfills should be no greater than 8 feet in depth. This depth minimizes settlement, surface cracking, and release of odors. Shallower cells do not generally make maximum use of available land but provide for earlier re-use of the site. A compacted layer of at least 6 inches of a suitable cover material (measured perpendicularly to the surface of the compacted refuse) should be placed on all exposed refuse by the end of each working day, as shown in Exhibit 9. This will prevent fly and rodent attraction, blowing of papers, production of odors, fire hazards, and an unsightly appearance. Daily covering divides the fill into "cells" that limit the spread of fires within the fill. In all but the final cell of a sanitary landfill, a layer (intermediate cover) of suitable cover material compacted to a minimum depth of 1 foot should be placed daily on all surfaces of the cell except those where operations will continue on the following working day. This 1-foot layer of properly compacted and maintained cover should prevent health hazards or nuisances until the next cell is placed. For final covering a layer of suitable cover material compacted to a minimum

thickness of 2 feet should be placed over the entire surface of each portion of the final cell. This amount of cover should provide an adequate bearing surface for vehicles and sufficient thickness for cover integrity in the event of settling or erosion.

On slopes exceeding 3 to 1, grass should be planted within 6 months. Fertilizer, lime, seed, and mulch will be needed for this operation. Flat areas may be left alone. After two years of settlement, the cracks should be repaired, filled, and grass sowed.

Scavenging should not be permitted. It is an unhealthy, aesthetically objectionable practice that interferes with the orderly and efficient operation of the landfill.

#### Equipment Selection and Personnel

~~The two types of tractors to be considered are the track loader and the crawler dozer. Either of these machines could be used effectively on the sanitary landfill.~~

There are approximately 11,500 people living in rural or unincorporated areas of Cherokee County who have no collection or disposal service and approximately 1,400 people provided with service by private haulers. Computing their annual production rate at less than the urban dweller, an estimated 2,700 tons of refuse is produced by them annually. Part of this tonnage is being burned and part buried on the farm, but a large part is cluttering farms, woodlands, streams, and highways. No estimate is made of the solid waste produced by the urban residents of the towns of Andrews and Murphy and the large tourist population to the county.

The size of equipment required is likely to depend upon the method of landfill operation. If the land is a level area requiring a trench-type landfill, a crawler loader is perhaps the best, such as a ~~Caterpillar loader 955, International loader 175, or equivalent.~~ If the landfill site is gullied, rolling, old quarry, pit or strip mine, it may be ideally suited for an area-type landfill (see Exhibit 9). Normally a track-type tractor dozer, such as a Caterpillar D6, International TD-15, or equivalent, is best suited for this kind of fill operation, especially if the machine is to work full-time, not leaving the site, and where excavation is not necessary beyond digging cover materials. The loader is a better excavator than a tractor-dozer and more efficient where cover material must be carried some distances. In addition to the tractor, a pickup truck should be a part of the landfill equipment.

*we advise  
rec. this  
type equip.*

A full-time equipment operator and a relief man should constitute the landfill personnel. A relief man (possibly the same employee working as the relief man in the countywide bulk container collection system) would be required to assist the operator in operation and maintenance of the landfill and to substitute for the operator when he is out sick or on vacation. One representative from the county health department should have direct supervision over the operator and relief man, insure that the landfill operates properly, and handle all operational matters.

Ref. to enclosed  
sheet.

ADMINISTRATIVE ORGANIZATION AND FINANCING

Authority to Regulate

In Cherokee County the county board of health has the authority to set health standards for the collection and disposal of refuse. This authority is based on the broad powers as set forth in the General Statutes of North Carolina Section 130-17 (see Exhibit 10), which permits boards of health to make rules and regulations as necessary to protect and advance public health. Such regulations typically cover:

- (1) Sanitation and methods for disposal;
- (2) Sanitation standards for equipment used in the collection of refuse;
- (3) Type of containers in which garbage is stored.

In the Appendix is a suggested ordinance for adoption by the local board of health for the control of storage, collection, and disposal of refuse.

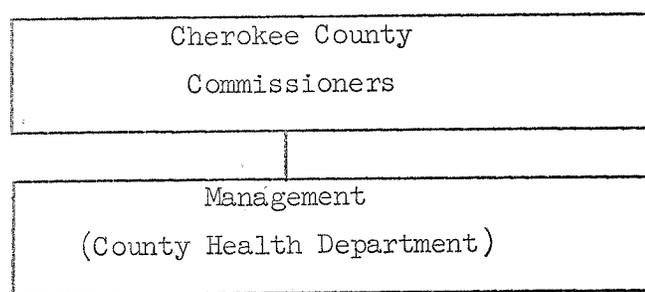
The Board of Commissioners in Cherokee County (see Exhibit 11) has the authority to regulate the collection and disposal of refuse by private collectors and haulers outside municipal boundaries and to provide such services itself, if it so desires. In exercising this, the Commissioners may:

- (1) Issue licenses or permits for the collection and disposal of refuse;
- (2) Prohibit collection and disposal by unlicensed persons;
- (3) Grant licensed persons exclusive rights to collect in designated areas;
- (4) Regulate the fees charged for private collection services;
- (5) Operate collection and disposal services.

### Organization

The establishment of the solid waste management program for refuse disposal in Cherokee County is the responsibility of the governing bodies of the county and of the incorporated towns. The responsibility for the extent of collection and disposal services resides with each governmental jurisdiction individually. As shown below, representatives from the county and the two towns should then enter into a formal agreement with the county health department for operation and management of the central sanitary landfill. The county should make a separate agreement with the county health department for the operation of the rural bulk container collection system. A solid waste expense account should be established in the operating fund of the health department and used to pay all operating costs. Quarterly, the county health department should be reimbursed by each jurisdiction its sanitary landfill costs based on population. Also quarterly it should be reimbursed for its collection system costs by the county.

### Suggested Solid Waste Board



1. Set up (Organization)
2. Operation-Maintenance
3. Promotion
4. Education
5. Community relations
6. Budgeting & Accounting
7. Miscellaneous

As an alternative to the above organizational arrangement, the governing bodies may desire to contract a part or all of the collection and disposal operation to a private contractor. In this case the county health department would serve as a regulatory agency. A second alternative would be for the county commissioners, or a board appointed by them, to provide all services (except town collection), with the costs shared in the same manner as proposed above.

### Financing

Funds for initial outlays for the collection and disposal equipment may be borrowed by the governing bodies. It is recommended that the loan period be no longer than five years. This is approximately half of the life expectancy of most of the equipment. The annual costs shown below include a depreciation reserve which may be used to service the principal and interest. If funds or grants are available to initially purchase any or all of the equipment, the depreciation reserve funds should be used to replace the equipment. The operating costs for the countywide bulk container collection system should be paid annually from the general fund of the county. The operating costs in connection with the sanitary landfill should be paid annually from the general funds of the county and towns, based on the distribution of population.

As shown in Exhibit 12, under current enabling legislation the county may levy taxes for operation and maintaining their collection and disposal system.

The estimated budget expenses for each of the systems, collection and disposal, shown below should be revised annually, to reflect actual operating costs.

Estimated Collection System Budget

<u>Expense Item</u>	<u>Initial Expense</u>	<u>Annual Depreciation Expense</u>	<u>Annual Operating Expense</u>
<u>A. Equipment</u>			
1. One 25-cubic-yard compactor unit depreciated over 10 yrs @ 6%	\$14,000	\$ 1,900	--
2. Truck chassis - depreciated over 3 yrs @ 6%	15,000	5,600	--
3. Bulk containers - 71 4-cubic-yard @ \$275, depreciated over 10 yrs @ 6% (including delivery cost)	19,500	2,700	--
4. Miscellaneous tools	200	--	50
<u>B. Personnel</u>			
1. Compactor truck driver (including benefits)	--	--	\$ 5,500
2. Relief and route assistance	--	--	600
3. Supervisor	--	--	1,200
4. Record keeping supplies	--	--	50
<u>C. Operation and Maintenance</u>			
1. Maintenance and operation of compactor truck	--	--	4,500
2. Maintenance of containers 71 @ \$20 each	--	--	1,400
3. Insurance and Miscellaneous	--	--	500
Total	\$48,700	\$10,200	\$13,800

*are we making  
this number*

Estimated Sanitary Landfill Budget

<u>Expense Item</u>	<u>Initial Expense</u>	<u>Annual Depreciation Expense</u>	<u>Annual Operating Expense</u>
<u>A. Equipment</u>			
1. One crawler dozer or loader tractor, depreciated over 10 yrs @ 6%	\$38,000	\$5,200	--
2. Pickup truck, depreciated 5 yrs @ 6%	3,500	800	--
3. One site of 25 acres @ \$500/acre @ 3% appreciation and 6% interest cost, 10 yrs	12,500	1,300	--
4. Site preparation, depreciated over 10 yrs @ 6%	14,100*	1,900	--
<u>B. Personnel</u>			
1. Tractor Operator (including benefits)	--	--	\$ 5,500
2. Landfill Assistance and Relief	--	--	3,500
3. Supervisor	--	--	600
4. Miscellaneous	--	--	600
<u>C. Operation and Maintenance</u>			
1. Fuel, Lubricating, & Repairs	--	--	5,000
2. Tractor Rental, 10 days @ \$100	--	--	1,000
3. Insurance and Miscellaneous	--	--	500
Total	\$68,100	\$9,200	\$16,700

\*Site Preparation Detail: Clearing @\$200; access road \$4,000; fence, gate, and signs \$1,400; tractor shed \$1,000; grease rack \$500; scales and scale house/office space \$5,000; dumping station \$2,000 -- Total \$14,100.

5  
1

CONCLUSIONS

1. The problem of refuse disposal in Cherokee County is due to a number of factors. There are more disposable items on the market today than ever existed in the past as many containers are no longer the returnable and reusable types but are disposables. The pounds of disposed items per capita per day have doubled over the past decade. Regardless of whether the area is rural or urban, the disposable items are still the problem; only the quantity changes.
2. This is a problem that affects the total county population from the farmer who is being dumped upon to the person who lives near an open, burning dump.
3. Seventy-one (71) containers would be strategically located over the county and serviced twice a week or more often if needed. Pickup from these containers would be by a 25-cubic-yard compactor truck.
4. The containers would serve for household waste only. Other type waste would be transported to the disposal site by the individual or by contract collector.
5. Municipalities with their own collection service and industries would transport their refuse to the disposal site or use collection firms.
6. One central sanitary landfill or disposal site would serve all of Cherokee County, including the two towns.
7. The operator of the sanitary landfill would operate the disposal site six days per week and cover refuse daily.
8. Based on the total population of Cherokee County with a 1970 estimate of 16,330, the annual operation costs for solid waste disposal would be about \$1.00 per capita (this does not include equipment depreciation costs).

9. The estimated annual operation cost for the bulk container collection system would be \$1.20/person (not including equipment depreciation costs). The estimated rural and unincorporated population with no collection at present is estimated at 11,500 people.
10. Additional containers could be added without imposing a burden on the container system. Industries and businesses could be served for a fee that would help defray the operating cost.
11. The Solid Waste and Vector Control Section of the North Carolina State Board of Health, through your local health department, and the Tennessee Valley Authority are available to assist in any way possible.
12. The recommendations of this report were made to meet the anticipated needs for a ten-year period. Before the end of this time, exhaustive studies of new methods should be made and incorporated in plans for the future.

RULES AND REGULATIONS GOVERNING THE STORAGE,  
COLLECTION, TRANSPORTING, AND DISPOSAL  
OF REFUSE IN \_\_\_\_\_ COUNTY

*not needed*

Be it ordained by the \_\_\_\_\_ Board of Health:

That the following regulations for the protection of public health are hereby adopted pursuant to authority granted by \_\_\_\_\_ of the \_\_\_\_\_ of \_\_\_\_\_, and shall govern the storage, collection, transporting, and disposal of refuse throughout \_\_\_\_\_ County, except that these regulations shall not apply to the area within any municipality, sanitary district, or other governmental unit which operates its own refuse collection and disposal system.

SECTION I - DEFINITIONS

The following definitions shall apply in the interpretation and enforcement of these regulations:

- A. The word "refuse" means garbage or rubbish.
- B. The word "garbage" means all putrescible solid wastes, including vegetable matter, animal offal, and carcasses of small animals, but excluding human body wastes, animal manure, and recognizable industrial by-products. Used milk cartons, or other discarded food containers that are not dry and clean, shall be included in this definition.
- C. The word "rubbish" means non-putrescible solid wastes.
- D. The term "Health Director" means the director of the \_\_\_\_\_ County Health Department, or his authorized representative.
- E. The word "person" means any individual, firm, governmental unit, organization, partnership, corporation, or company.
- F. The term "refuse collector" means any person who collects or transports refuse, other than one who removes refuse from his own premises.

SECTION II - REFUSE STORAGE

No owner, occupant, tenant, or lessee of any premises shall permit any garbage or other refuse to accumulate upon such premises that is not stored in a manner approved by the Health Director.

- (1) Garbage shall be stored in a container of a type approved by the Health Director. Every such container shall be constructed of metal, or equally durable material, in such a manner as to be strong, watertight, not easily corrodible, flyproof, and rodentproof; shall have a capacity of not more than 32 gallons; shall have handles designed for lifting; and shall have fly-tight covers which shall be kept in place at all times, except when garbage or other refuse is being deposited in or removed from such container. A sufficient number of containers shall be provided to hold at least one week's accumulation of garbage. Each garbage container shall be kept clean so that no odor or other nuisance will exist.

- (2) Rubbish shall be stored in such a manner that it will not provide harborage to rats, nor cause a fire hazard.

### SECTION III - REFUSE COLLECTION

- A. The owner, occupant, tenant, or lessee of any premises upon which garbage is stored shall remove, or cause to be removed, all garbage from said premises at least once a week. Refuse collectors shall remove all refuse from the premises, when they receive compensation for this service at least once a week. The work shall be done in a clean and orderly manner, without causing damage to the container. Any refuse that is spilled shall be cleaned up, and the premises left in a sanitary condition.
- B. Where \_\_\_\_\_ County has provided a bulk container system for collection of refuse, county residents may use containers in lieu of private collection or disposing of refuse on their own property, and residents must use containers in place of random dumping.

### SECTION IV - REFUSE TRANSPORTATION

No refuse collector shall transport refuse in a conveyance that has not been approved by the Health Director. Such conveyances shall be leakproof, and covered with a canvas or other substantial material, unless it is constructed in such a manner as to prevent leakage or spillage of the refuse. Truck beds in which garbage is hauled shall be cleaned daily.

### SECTION V - REFUSE DISPOSAL

No refuse collector, or other person, shall dispose of refuse, except by one of the following methods; provided that this section shall not be construed to prevent any person from properly disposing of refuse from his own residence or business establishment by burning or burying it in a safe and sanitary manner approved by the Health Director.

- (1) By burning refuse in an incinerator of a type approved by the Health Director as safe and sanitary.
- (2) By burying refuse in a sanitary landfill that is designed, operated, and equipped in accordance with the recommendations in \_\_\_\_\_ of the State Board of Health. This bulletin is hereby incorporated by reference pursuant to authority granted by \_\_\_\_\_ and becomes a part of these regulations as fully as if set out verbatim herein. A copy of said bulletin is on file in the office of \_\_\_\_\_ of \_\_\_\_\_ County and in the office of the Health Director.

### SECTION VI - REFUSE COLLECTOR PERMITS

- A. No person shall collect, transport, or dispose of refuse without a written permit or license from the Health Director; provided that this sub-section shall not apply to any person disposing of refuse from his own residence or business establishment. The Health Director shall issue such permit only when, upon inspection, he finds that the facilities, equipment, and proposed operating methods of the applicant are in compliance with the requirements of these regulations.

SECTION VII - REVOCATION OF PERMITS

- A. Whenever, upon the inspection of facilities, equipment, or operating methods of any person holding a permit to collect, transport, or dispose of refuse, the Health Director finds that conditions or practices exist which are in violation of the provisions of these regulations, the Health Director shall give notice in writing to such person that unless such conditions or practices are corrected within ten days, the permit will be revoked. At the end of such ten-day period, the Health Director shall make a re-inspection, and if he finds that such conditions or practices have not been corrected, he shall give notice in writing to such person that his permit has been revoked. Upon the receipt of this notice, such person shall immediately cease to collect, transport, or dispose of refuse. No such permit shall be reinstated by the Health Director until he finds, upon inspection, that all provisions of these regulations have been complied with, except that following a hearing, as hereinafter provided, such permit may be reinstated by order of the County Board of Health.
- B. Upon written petition from a person whose permit to collect, transport, or dispose of refuse has been denied or revoked, the County Board of Health shall hold a hearing at which time such person shall be given an opportunity to show that his permit should not have been denied or revoked. No such hearing shall be held unless written petition therefor shall have been filed in the office of the Health Director on or before the tenth day following the day on which said permit was denied or revoked. The Health Director shall convey the request for a hearing to the Chairman of the County Board of Health as soon as practicable. Such hearing shall be held within \_\_\_\_\_ days following the receipt of such petition by the Chairman. After such hearing, the County Board of Health may either approve the denial or revocation of such permit, or order that it be issued or reinstated, depending upon its findings as to whether or not these regulations have been complied with.

SECTION VIII - PENALTY

- A. Any person who violates any rules and regulations adopted by a local Board of Health shall be guilty of a misdemeanor and, upon conviction, shall be liable to a fine not exceeding \$ \_\_\_\_\_ or imprisoned not exceeding \_\_\_\_\_ days, as provided by \_\_\_\_\_.
- B. Each day's continuation of a violation after conviction is considered to be a separate offense.
- C. Enforcement of this ordinance is the responsibility of the \_\_\_\_\_.
- D. The \_\_\_\_\_ of \_\_\_\_\_ County will be responsible for publishing a fine and for enforcement as described by Section VIII of this resolution.

SECTION IX - CONFLICTING REGULATIONS REPEALED

All regulations or parts of regulations in conflict herewith are repealed only to the extent necessary to give these regulations full force and effect.

SECTION X - SEVERABILITY

If any provision of these rules and regulations, or the application thereof to any person or circumstance, is held invalid, the remainder of the rules and regulations, or the application of such provision to other persons or circumstances, shall not be affected thereby.

SECTION XI - EFFECTIVE DATE

These regulations shall be in full force and effect from and after \_\_\_\_\_.

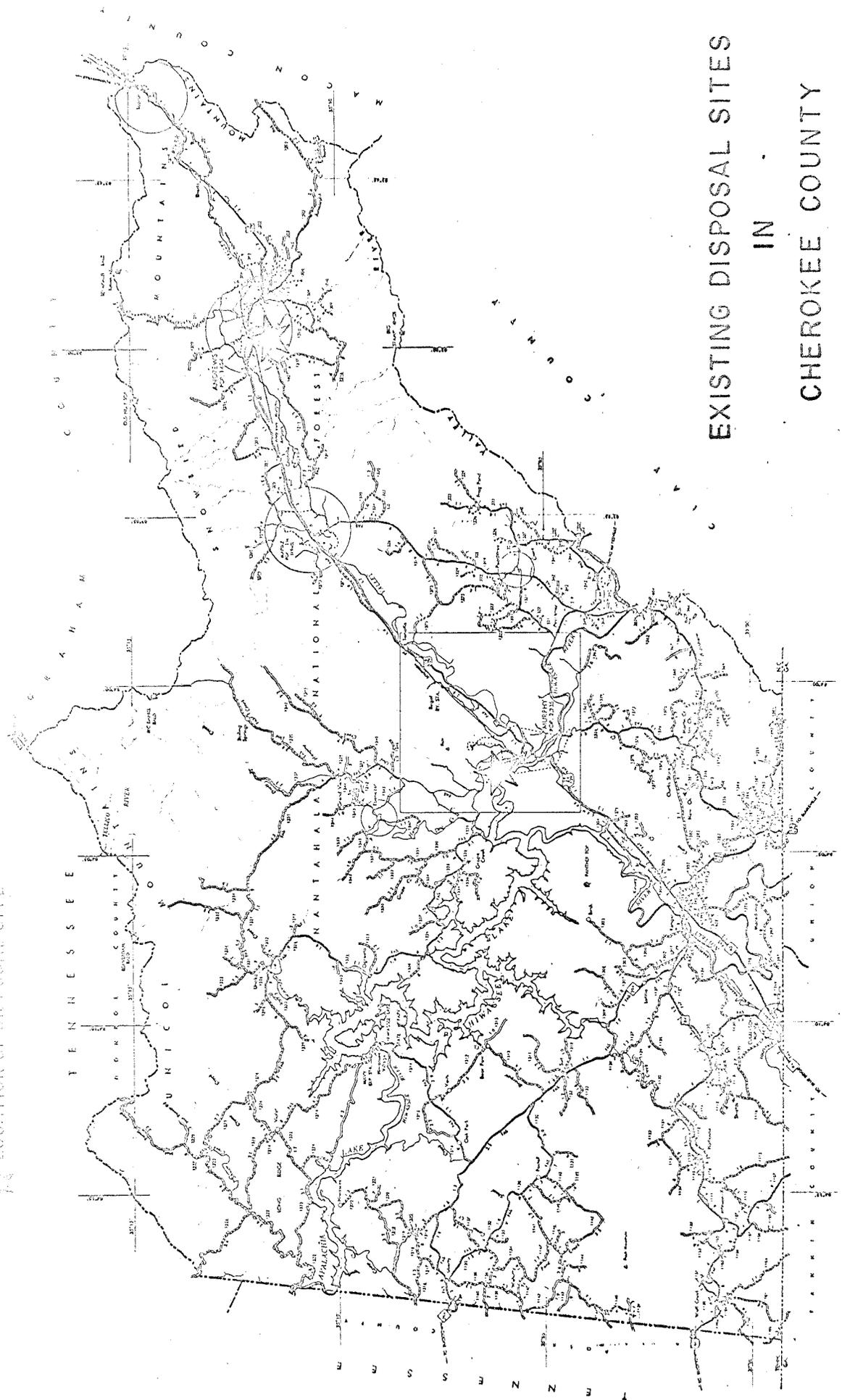
SUMMARY OF PRIVATE HAULERS  
 CHEROKEE COUNTY, NORTH CAROLINA  
 SOLID WASTE DISPOSAL PLAN  
 MARCH 1971

Name	Service		Number of Households	Number of Commercial Establishments	Disposal Site Used	Number of Refuse Loads (weekly)	Estimated Volume of Refuse Weekly (c.y.)
	Daily	Weekly					
Cherokee County:							
Charles Anderson	-	x	198	26	Murphy	12	180
Charles Cornwell	-	x	37	-	Murphy	3	8
George Johnson	-	x	20	10	Murphy		
Bill Sherrill	-	x	180	4	Andrews	2	30
Total			435	40		17	218 c.y.

Households in counties: Cherokee 5,779

LEGEND:

★ LOCATION OF DISPOSAL SITE



EXISTING DISPOSAL SITES  
IN  
CHEROKEE COUNTY

## GENERAL ASSEMBLY OF NORTH CAROLINA

1971 SESSION

SENATE BILL 51



Short Title: Highway Litter Fine.

(Public)

Sponsors: Senators Baugh; Moore and Knox.

Referred to: Committee on Public Roads.

## A BILL TO BE ENTITLED

AN ACT TO INCREASE THE FINE FOR PLACING TRASH ON THE HIGHWAYS.

The General Assembly of North Carolina do enact:

Section 1. G.S. 14-399 is hereby amended by deleting the words and figures "fifty dollars (\$50.00)" in the last paragraph thereof and inserting in lieu thereof "five hundred dollars (\$500.00)" so that G.S. 14-399 shall read as follows:

"§ 14-399. Placing of trash, refuse, etc., on the right-of-way of any public road.--It is unlawful for any person, firm, organization or private corporation, or for the governing body, agents or employees of any municipal corporation, to place or leave or cause to be placed or left temporarily or permanently, any trash, refuse, garbage, scrapped automobile, scrapped truck or part thereof on the right-of-way of any State highway or public road where said highway or public road is outside of an incorporated town.

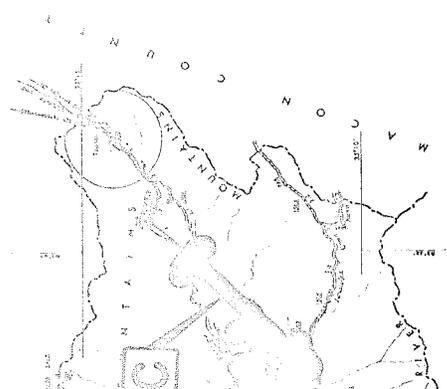
The placing or leaving of the articles or matter forbidden by this section shall, for each day or portion thereof that said articles or matter are placed or left, constitute a separate offense.

1 A violation of this section is punishable by a fine of not less  
2 than ten dollars (\$10.00) and not more than five hundred dollars  
3 (\$500.00) for each offense."

4 Sec. 2. This act shall become effective upon  
5 ratification and apply to offenses committed on and after that  
6 date.



PROPOSED COLLECTION ROUTES  
for  
CHEROKEE COUNTY



PROPOSED COLLECTION ROUTES  
for  
CHEROKEE COUNTY

Driver's Daily Work Report

Day of Week \_\_\_\_\_ Operator \_\_\_\_\_ Date \_\_\_\_\_

Containers Serviced

<u>No.</u>	<u>Amt. Waste</u>	<u>No.</u>	<u>Amt. Waste</u>	<u>No.</u>	<u>Amt. Waste</u>
1	1/4 1/2 3/4 Full	20	1/4 1/2 3/4 Full	39	1/4 1/2 3/4 Full
2	1/4 1/2 3/4 Full	21	1/4 1/2 3/4 Full	40	1/4 1/2 3/4 Full
3	1/4 1/2 3/4 Full	22	1/4 1/2 3/4 Full	41	1/4 1/2 3/4 Full
4	1/4 1/2 3/4 Full	23	1/4 1/2 3/4 Full	42	1/4 1/2 3/4 Full
5	1/4 1/2 3/4 Full	24	1/4 1/2 3/4 Full	43	1/4 1/2 3/4 Full
6	1/4 1/2 3/4 Full	25	1/4 1/2 3/4 Full	44	1/4 1/2 3/4 Full
7	1/4 1/2 3/4 Full	26	1/4 1/2 3/4 Full	45	1/4 1/2 3/4 Full
8	1/4 1/2 3/4 Full	27	1/4 1/2 3/4 Full	46	1/4 1/2 3/4 Full
9	1/4 1/2 3/4 Full	28	1/4 1/2 3/4 Full	47	1/4 1/2 3/4 Full
10	1/4 1/2 3/4 Full	29	1/4 1/2 3/4 Full	48	1/4 1/2 3/4 Full
11	1/4 1/2 3/4 Full	30	1/4 1/2 3/4 Full	49	1/4 1/2 3/4 Full
12	1/4 1/2 3/4 Full	31	1/4 1/2 3/4 Full	50	1/4 1/2 3/4 Full
13	1/4 1/2 3/4 Full	32	1/4 1/2 3/4 Full	51	1/4 1/2 3/4 Full
14	1/4 1/2 3/4 Full	33	1/4 1/2 3/4 Full	52	1/4 1/2 3/4 Full
15	1/4 1/2 3/4 Full	34	1/4 1/2 3/4 Full	<u>Commercial Containers</u>	
16	1/4 1/2 3/4 Full	35	1/4 1/2 3/4 Full	53	1/4 1/2 3/4 Full
17	1/4 1/2 3/4 Full	36	1/4 1/2 3/4 Full	54	1/4 1/2 3/4 Full
18	1/4 1/2 3/4 Full	37	1/4 1/2 3/4 Full	55	1/4 1/2 3/4 Full
19	1/4 1/2 3/4 Full	38	1/4 1/2 3/4 Full	56	1/4 1/2 3/4 Full

Cost Data

Quarts Oil Used \_\_\_\_\_ Gallons Fuel Used \_\_\_\_\_

Time Dead Heading \_\_\_\_\_ Time at Landfill \_\_\_\_\_

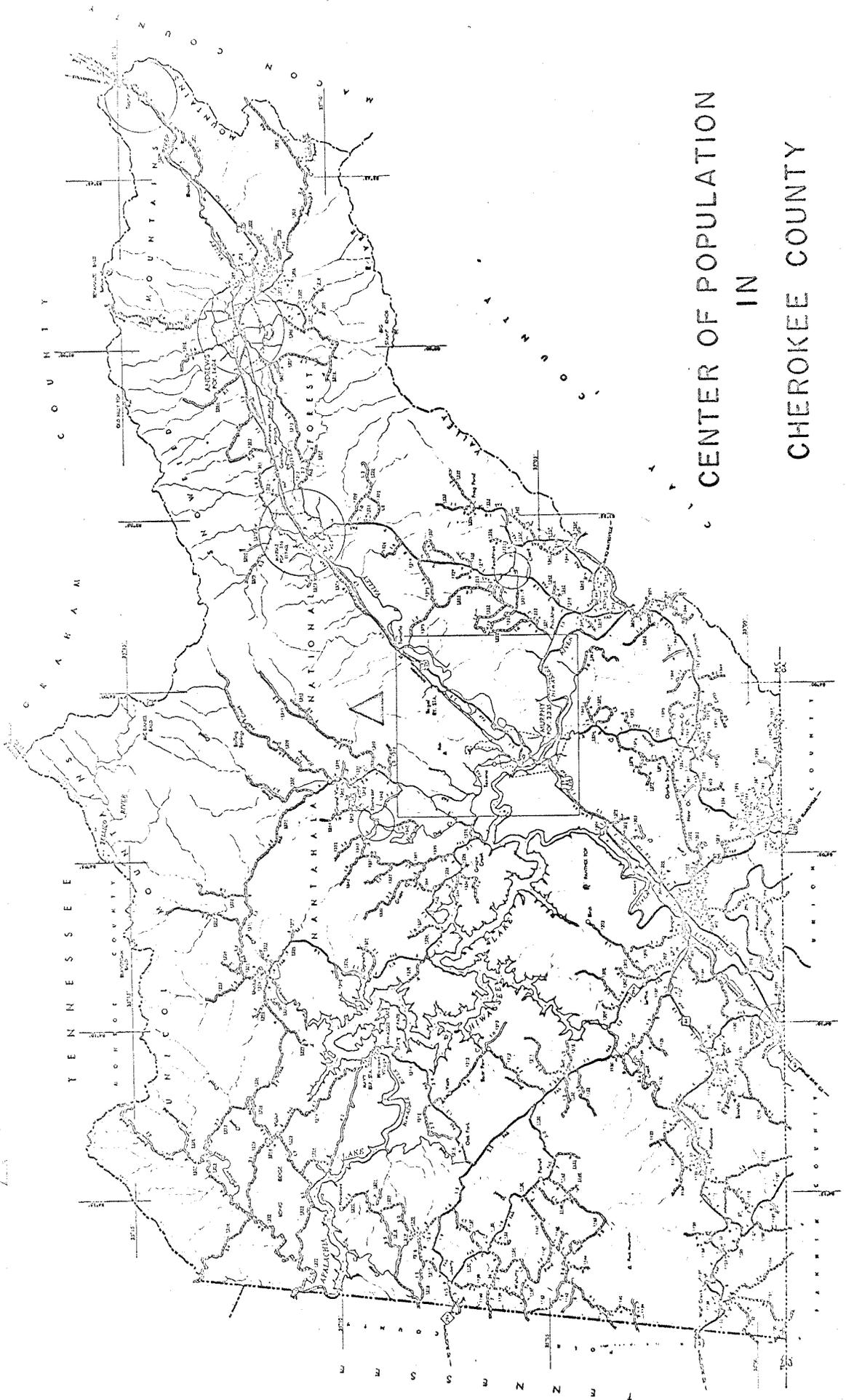
Time on Routes \_\_\_\_\_ Total Miles Traveled \_\_\_\_\_

Container Stations that Need Policing \_\_\_\_\_

Total C.Y.'s Refuse Collected \_\_\_\_\_

LEGEND:

▲ POPULATION CENTER

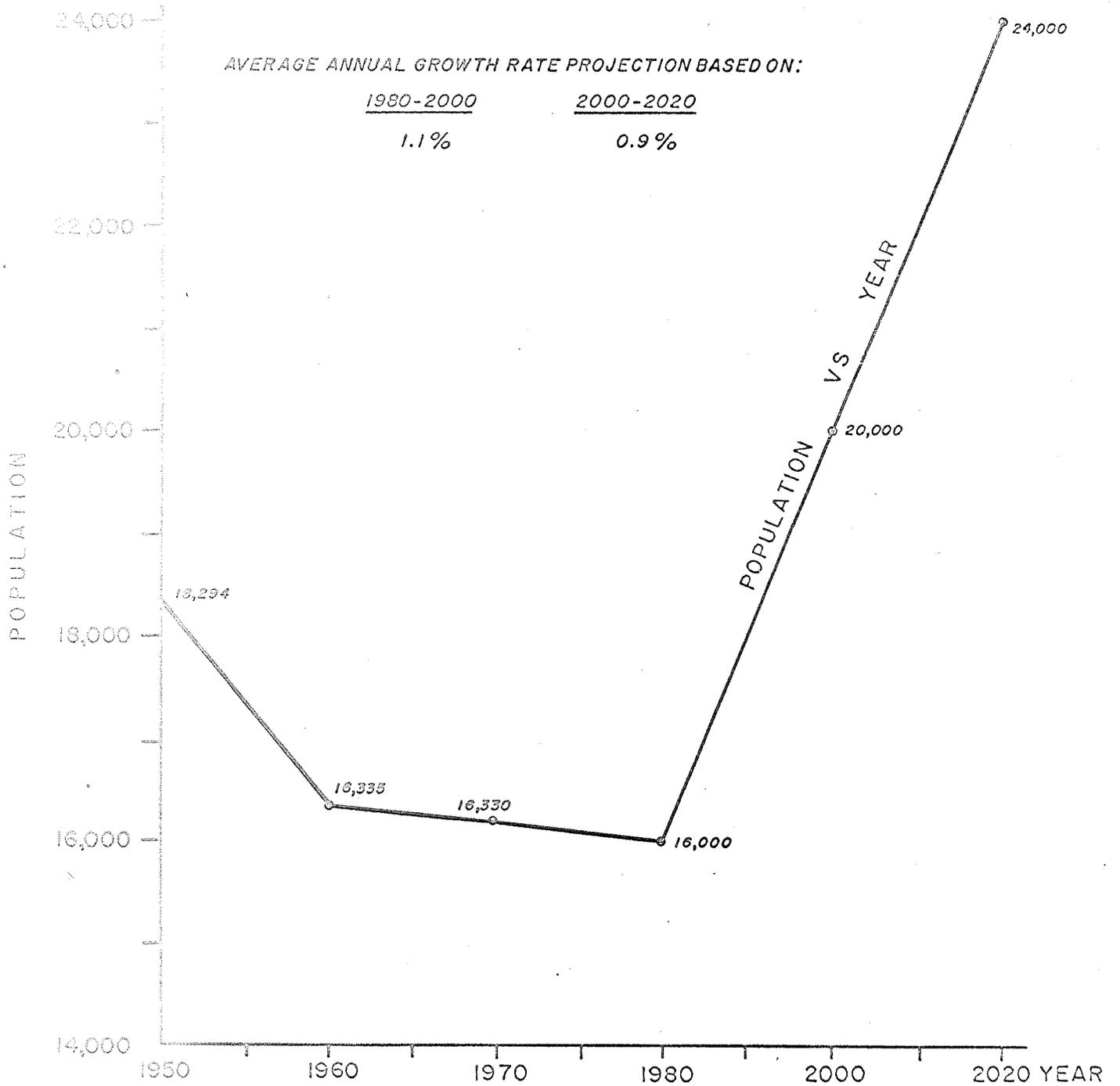


CENTER OF POPULATION  
IN  
CHEROKEE COUNTY

POPULATION DATA  
CHEROKEE COUNTY, NORTH CAROLINA  
AND SURROUNDING COUNTIES AND CITIES

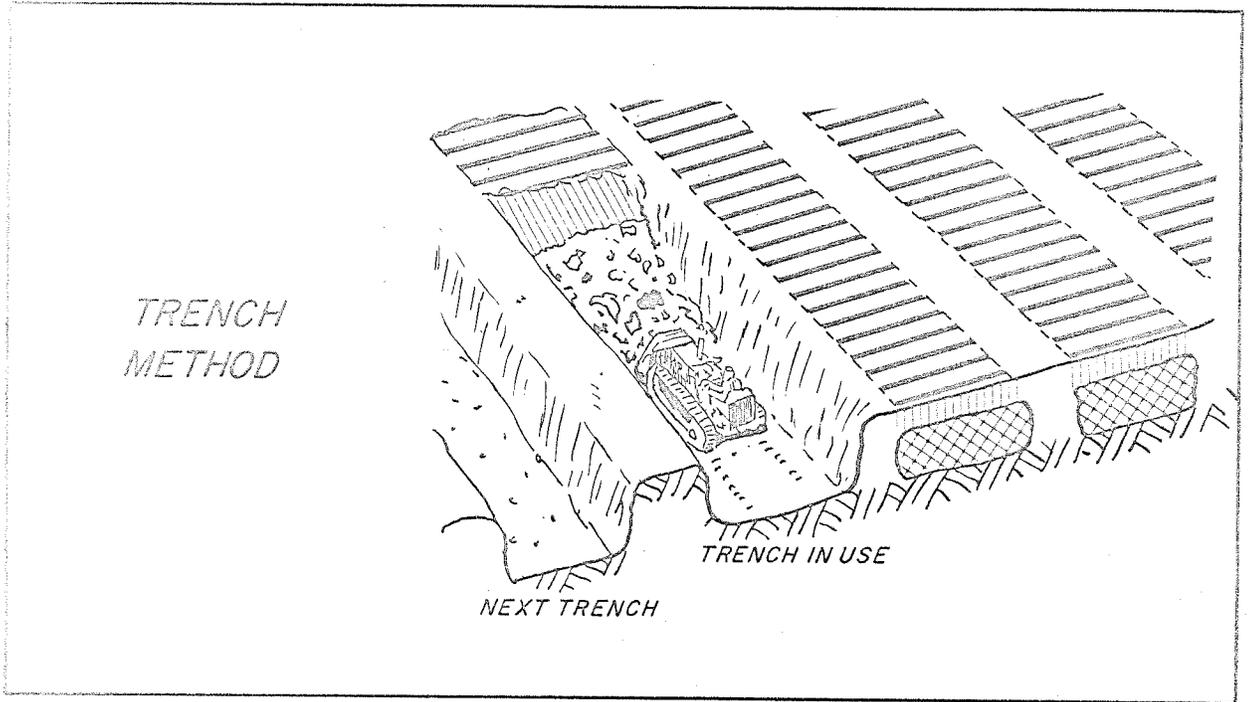
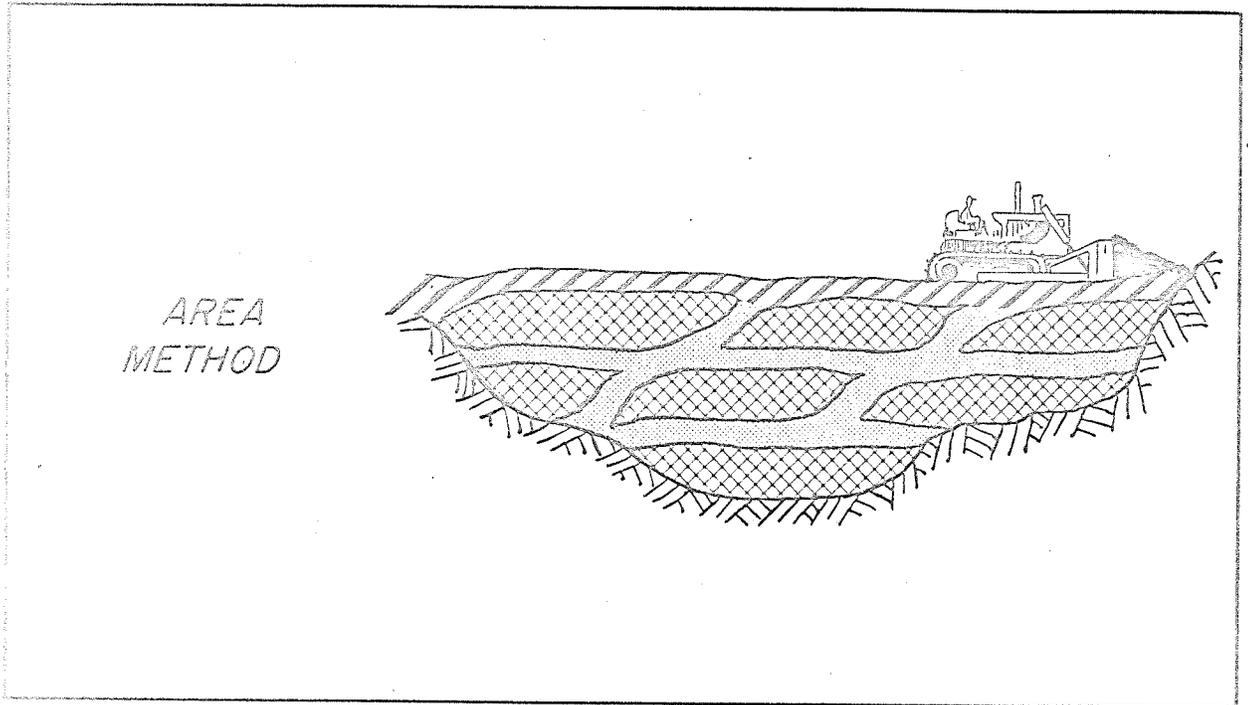
	<u>1950</u>	<u>1960</u>	<u>1970</u>
Cherokee County	18,294	16,335	16,330
Beaverdam Division	1,145	798	555
Hot House Division	1,097	913	767
Murphy Division	7,353	6,626	6,723
Town of Murphy	2,433	2,235	2,082
Notta Division	1,736	1,535	1,522
Town of Culberson	150	106	83
Shoal Creek Division	2,036	1,596	1,392
Valley Town Division	4,927	4,867	5,392
Town of Andrews	1,397	1,404	1,384
Clay County	6,006	5,526	5,180
Brasstown Division	962	923	851
Hayesville Division	2,240	2,138	2,049
Town of Hayesville	356	428	428
Hiwassee Division	651	674	599
Shooting Creek Division	1,099	902	868
Sweetwater Division	428	398	429
Tusquitee Division	626	502	384
Granham County	6,886	6,432	6,562
Town of Robbinsville	515	587	777
Macon County	16,174	14,935	15,788
Town of Franklin	1,975	2,173	2,336
Monroe County, Tennessee	24,513	23,316	23,475
Town of Madisonville	1,487	1,812	2,614
Polk County, Tennessee	14,074	12,160	11,669
Town of Benton	--	638	749
Fannin County, Georgia	15,192	13,620	13,357
Town of Blue Ridge	1,718	1,406	1,602

# POPULATION PROJECTION CHEROKEE COUNTY



SOURCE: U.S. DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS.  
 TVA, DIVISION OF NAVIGATION DEVELOPMENT AND REGIONAL STUDIES,  
 POPULATION AND EMPLOYMENT PROJECTIONS, RESEARCH REPORT RS-70-1,  
 DECEMBER, 1970.

# SANITARY LANDFILL METHODS



LEGEND:

- |   |             |   |                    |
|---|-------------|---|--------------------|
|  | Refuse Cell |  | Intermediate Cover |
|  | Daily Cover |  | Final Cover        |

in which is the county seat, or a county superintendent of schools from each city.

The district board of health shall elect its chairman. A majority of the members of the district board of health shall constitute a quorum and the district health officer shall act as secretary to such board of health.

Whenever there is a vacancy in the ex officio membership of a district board of health caused by resignation, or any reason other than expiration of a term, shall be filled by appointment made by the State Health Director. Such appointments shall be made in any of the public officers or officials specified above, and the duties of such public officials as members of said district board of health shall be ex officio duties. Appointments to fill vacancies of ex officio members shall be for the unexpired term of the member or members causing the vacancy or vacancies and shall extend until the time for the next regular appointments of ex officio members. All vacancies in membership of the public members of a district board of health shall be filled by ex officio members at the next meeting of the district board of health following creation of the vacancy. A member appointed to fill a vacancy of a public member shall be from the same county as the member causing the vacancy. In case a public member is a public officer or official, his membership and duties on the district board of health as a public member shall be deemed to be ex officio. In lieu of district boards of health as herein described, upon approval of the board of commissioners of each county in the district, counties forming or which have formed district health departments may establish and maintain separate county boards of health, organized as prescribed in G. S. 130-13, to perform for their respective counties the functions in relation to the district health department which would have been performed by the district board of health had one been created, and each such board may maintain a separate budget. (1957, c. 1357, s. 1.)

A district board of health is a creature of State v. Curtis, 230 N. C. 169, 52 S. E. (2d) 364 (1949). Authority as are given it by the legislature.

§ 130-15. Removal of board members.—Any member of a local board of health may be removed from office by the local board of health for cause. (1957, c. 1357, s. 1.)

§ 130-16. Compensation of board members.—The members of a local board of health shall serve without compensation, except that they may receive eight dollars (\$8.00) per diem for each day in attendance at a meeting of said board, plus necessary travel expenses; provided that this article shall not repeal any local act or acts which authorize compensation to members of a local board of health in excess of eight dollars (\$8.00) per diem plus necessary travel expenses. (1957, c. 1357, s. 1.)

§ 130-17. Powers and duties of local boards; expenditures.—(a) The local boards of health shall have the immediate care and responsibility of the health interests of their city, county or district. They shall meet quarterly, and any three members of the board, or the chairman of the board, shall be authorized to call a special meeting of the board, through the local health director, whenever in their or his opinion the public health interests of the city, county or district require it. All expenditures shall be made in accordance with appropriations duly made under the provisions of the County Fiscal Control Act.

(b) The local boards of health shall make such rules and regulations, not inconsistent with law, as are necessary to protect and advance the public health. Where such rules and regulations deal with subject matter also covered by rules and regulations of the State Board of Health, and there is an emergency, or a peculiar local condition or circumstance, requiring such action in the interest of public health, the rules and regulations of the local boards may be more stringent, but not less stringent, than those of the State Board. In other instances where there is a conflict between the rules and regulations of the State Board and the local boards, the rules and

adopted by a local board of health shall remain in full force and effect until repealed by said local board of health or superseded by rules and regulations duly adopted by said local board of health.

(c) The rules and regulations of a local board of health shall apply to municipalities within the area over which the local board has jurisdiction, but the local board of health (other than a county board of health) shall not enact any rules and regulations to cover municipalities, except where circumstances peculiar to that municipality require a different rule and regulations. Where municipal ordinances are subject matter also covered by rules and regulations of a local board of health, jurisdiction over an area which includes the municipality, and there is an emergency or a condition or circumstance peculiar to the municipality requiring such action in the interest of public health, the municipal ordinance may be more stringent, but not less stringent, than the rules and regulations of the local board of health. In other instances where there is a conflict between the rules and regulations of the local board and the municipal ordinance, the rules and regulations of the local board of health shall prevail.

(d) Before any rules and regulations of a local board of health, or any amendments or alterations thereof, hereafter adopted, amended, or altered, shall have the force and effect of law, they shall be posted at the courthouse door of each county within the jurisdiction of the board of health, and a statement setting out the title of such rules and regulations together with a statement indicating that the same have been adopted, amended, or altered, and that a copy is posted at the courthouse door of each county within the jurisdiction of the said board of health and that a copy is on file in the office of each health department under the jurisdiction of the said board of health shall be published at least once a week for two successive weeks in a newspaper having general circulation within the area over which the board of health has jurisdiction.

(e) The local boards of health are hereby authorized to enter into contracts with the Veterans' Administration or any other governmental or private agency, or with any person, whereby the local board of health agrees to render services to or for such agency or person in exchange for a fee to cover the cost of rendering such service. This authority is to be limited to services voluntarily rendered and voluntarily received, and shall not apply to services required by statute, regulation, or ordinance to be rendered or received. The fees to be charged under the authority of this subsection are to be based upon a plan recommended by the local health director and approved by the local board of health and the State Health Director, and in no event is the fee charged to exceed the cost to the health department of rendering the service.

The fees collected under the authority of this subsection are to be deposited to the account of the health department so that they may be expended for public health purposes in accordance with the provisions of the County Fiscal Control Act. No individual employee is to receive any compensation over and above his regular salary as a result of rendering services for which a fee is charged. (1901, c. 245, s. 3; Rev. s. 4444; 1911, c. 62, s. 9; C. S., s. 7065; 1957, c. 1357, s. 1; 1959, c. 1024 s. 1; 1963, c. 1087.)

Local Modification.—Franklin, as to subsection (d): 1959, c. 1024, s. 1 1/2.

Editor's Note.—The 1959 amendment rewrote subsection (d).

The 1963 amendment added subsection (c).

Limited Powers.—County boards of health and other administrative agencies, being creatures of statute, have only such powers as are conferred upon them by statute, either expressly or by necessary implication. *Champion v. Vance County Board of Health*, 231 N. C. 68, 19 S. E. 2d 1001 (1940).

This section gives no power to tax nevertheless, it indicates that a county board of health is a subordinate governmental agency which of necessity must derive funds either from the State or from the county, with which to pay salaries or other expenditures required in carrying out the health program of the State. *Champion v. Vance County Board of Health*, N. C. 98, 19 S. E. (2d) 239 (1940). Findings of Board Not Final.—The Board of Health is a creature of the State.