MINUTES

STATE OF NORTH CAROLINA
COUNTY OF HENDERSON

BOARD OF COMMISSIONERS
MAY 30, 1995

The Henderson County Board of Commissioners met for a Special Called meeting at 7:00 p.m. in the Commissioners' Conference Room of the County Office Building. The purpose of the meeting was a work session on Wastewater Disposal Alternatives. It was a joint meeting with Hendersonville City Council.

Those present were: Chairman Renee Kumor, Vice-Chairman Vollie G. Good, Commissioner J. Michael Edney, Commissioner Bob Eklund, Commissioner Don Ward, County Manager David F. Thompson, and Clerk to the Board Elizabeth W. Corn.

Also present were all five members of the City Council: Mayor Fred Niehoff, Barbara Volk, Diane Caldwell, Dan McGraw, and Tom Orr. Also present were City Manager Chris Carter and Tom Kilpatrick.

CALL TO ORDER/WELCOME

Chairman Kumor called the meeting to order and welcomed all in attendance.

She then recognized Mayor Niehoff. Mayor Niehoff expressed thanks to the Board of Commissioners for hosting the meeting and thanked his staff and council members for attending.

PRESENTATION OF ENGINEERING REPORT
Mr. Charles A. Willis, Willis Engineers

Mr. Willis explained that the charge of Willis Engineers was to evaluate facility planning to date and then return to the combined group (Henderson County Board of Commissioners & Hendersonville City Council) and present their preliminary findings for comment and input.

The need for adequate sewerage facilities for residential, commercial, and industrial growth in Henderson County has prompted activity on the part of Henderson County, the City of Hendersonville, and others. Of particular concern has been the fact that publicly owned sewerage facilities were not available to much of the development in the County. This lack of public sewer systems may have had a potentially negative impact on orderly development, and has led to the construction of nearly 75 privately-owned operating wastewater facilities in the County.

Both governing bodies have been attending to wastewater needs. These studies led to independent planning efforts by both the City and the County; and resulted in plans for sewerage facilities that were not compatible with each other.

Recognizing these areas of conflict, and with a common desire to provide sewerage facilities commensurate with the needs of the community and orderly growth, Henderson County and the City of Hendersonville have jointly sponsored this study to aid in the evaluation of wastewater disposal alternatives available to the total community. This study addresses the wastewater treatment program currently under consideration by the City and its suitability to serve the City and other areas in the County. This study also addresses the County plans for extending sewer service throughout portions of the County, and needs envisioned by industrial and private developers.

The geographic limit of this study involves those areas served or in close proximity to the City including portions of the Mud Creek, Clear Creek, and Mills River sub-basins and the French Broad drainage area in the general vicinity of Etowah to Fletcher.

Facilities

The current population of Henderson County is about 73,000, with only about 15% of that population served by publicly-owned collection and disposal systems. The remainder is served by individual septic tank systems or small private community systems.

There are three separate major public sanitary sewer collection systems in the County. The City of Hendersonville system serves all of the incorporated areas of the city, a portion of the Town of Laurel Park, part of the unincorporated areas of Henderson County in the vicinity of the General Electric Plant, and a portion of the County operated Mud Creek Water and Sewer District. This system serves a population of approximately 10,000 through nearly 4,700 connections.

The second major sewer collection system is that of the Cane Creek Water and Sewer District serving some areas within the Town of Fletcher and the northern portion of Henderson County tributary to the drainage area of Cane Creek. These sewer lines and pumping stations are tributary to the Cane Creek Outfall of the Buncombe County Metropolitan Sewer District (MSD). The CCWSD serves more than 400 customers and is a vehicle through which Henderson County has arranged for significant sewer disposal capacity with MSD.

The third system is that of the Mud Creek Water and Sewer District. While this system is still relatively small, the District's limits

encompass a major portion of the County. MCWSD completely encircles the Corporate Limits of the City of Hendersonville and the Town of Laurel Park. Henderson County has constructed the initial portion of the Mud Creek outfall system serving communities southeast of Hendersonville. The MCWSD has a treatment allocation from the City for 0.5 million gallons per day (MGD) capacity in its treatment works.

MSD Service.
The Metropolitan Sewer District of Buncombe County has a major wastewater treatment facility in Woodfin designed to serve an average daily flow of 40 MGD, and currently receiving about 26 MGD. This facility provides available capacity and can serve a significant role in the future planning for wastewater facilities to serve Hendersonville and Henderson County. This regional wastewater facility should be viewed as a potential alternative for both immediate and long range wastewater capacity.

Proposed City Improvements
In early 1993, the City sponsored the preparation of a Preliminary Engineering Report (PER) by McGill Associates related to the needs of the City for wastewater treatment expansion that might result from extension of the City's sewer system into Extra Territorial Jurisdiction (ETJ) areas. At that time, the City's 3.2 MGD treatment plan had an average daily flow of about 2.7 MGD.

Since the time of the original PER, the scope of wastewater facilities has undergone significant review and evaluation. The original options and the estimated project costs are:

OPTION I
Existing Plant Upgrade to 6.0 MGD Tertiary Treatment - $8,117,300.

OPTION II
New 6.0 MGD Tertiary Plant at existing site - $9,268,800.

OPTION III
7.0 MGD Secondary Plant at a site at the French Broad River - $13,445,400.

Widespread public review and debate has occurred since the City first announced its intentions to expand treatment capacity. Particular concern arose in relation to the proposed treatment plant capacity and for whom it was intended. Other inquiries related to the location of the facility and the desirability of transporting waste to the MSD. Reflecting these inquiries and in response to the State review comments on the Environmental Assessment prepared for the project, revised flow projections and cost

criteria were developed by McGill Associates. The cost estimates for the various treatment alternatives were also revised.

Still an additional alternative has been publicly discussed. This proposal envisions expanding the treatment capacity to 5.5 MGD at the existing Mud Creek site, providing only secondary treatment for that capacity, and piping the effluent from the existing Mud Creek site to a point of discharge to the French Broad River.

Treatment Option Discussions

Evaluation of the various treatment options readily indicates that the first three alternatives originally proposed are more cost effective than transporting all of the waste to MSD, or to combining wastes in a new regional wastewater treatment plant located in Buncombe County. Expansion of treatment capacity at the existing Mud Creek site, either through an upgrade of facilities or a reconstruction at that site, is the most cost effective solution. However, continuation at the same location will not expand the service area for the City in a northerly direction.

Location of the new treatment capacity at a new French Broad River site, six miles to the north of the existing facility, does afford a wider service area, and will require only secondary treatment, but is the most costly of the three options.

Heretofore, the local evaluations have considered that all of the wastewater flow of the Hendersonville system would be treated at a single location. This need not be the case. The expanded service area provided by a treatment facility at the French Broad River could likewise be provided through connection to a MSD, while retaining the City's primary waste disposal site at the existing Mud Creek facility.

County Comprehensive Plan

The County sponsored the preparation of the Henderson County Wastewater Master Plan prepared by Hendon Engineering Associates, Inc. of Asheville. The Plan, published in July 1994, deals with providing sewer service to unsewered areas of the County. About 85% of the development in the County is unsewered and served by individual septic systems.

The Master Plan envisioned construction of five phases of sewerage extensions over a ten year period at a cost of about $27.2 million (1994 values).

When ultimately completed, the facilities would include a 2.0 MGD wastewater treatment plant on the French Broad River near the mouth of Mud Creek, about ten miles of outfall sewers along Mud Creek

extending in a southerly direction from the mouth to the existing Mud Creek pumping station, and about 49 miles of collection sewers serving somewhere between 3,000 and 5,000 residential units along with associated commercial and industrial development.

The first phase of the system involves an outfall in the lower reach of Mud Creek, a pumping station and force main diverting wastewater to the MSD facility, and wastewater collection systems in the Mountain Home and Naples areas serving also the County's Industrial Park development.

The second phase of the system extends the outfall network both downstream to the proposed initial treatment plant at the French Broad River and upstream to eliminate the MCWSD's Mud Creek pump station. Additional sewers would be extended in this phase to add to the customer base. The subsequent three phases involve additional collection sewers and the expansion of the treatment plant capacity to 2.0 MGD.

All of the facilities envisioned in the County's Master Plan are within the geographic limits of the Mud Creek Water and Sewer District. Continuing growth and expansion of the service provided in the Cane Creek District would be independent of that envisioned in the Plan.

Options and Alternatives

It is evident that additional treatment capacity is necessary to meet the service commitments associated with normal, orderly growth in the region. It is desirable that this treatment be provided in a technique that retains some flexibility as growth patterns dictate.

Additional service areas are also desirable - those that afford sewers to residential and commercial customers, and the potential sewer service to emerging industrial development sites.

Without regard to additional treatment capacity or service areas, it is important that the structural integrity and capacity of the existing Hendersonville sewerage system be protected through a program of remediation, repair, and as appropriate replacement of old failed sewer lines. Correction of the infiltration/inflow problem likewise frees up treatment capacity to serve customers and improves the efficiency and performance of the wastewater treatment plant.

TREATMENT CAPACITY

All of the studies and evaluation performed for the City and the County indicate that the least costly treatment capacity that can

be constructed involves the upgrading of the existing City wastewater treatment plant on Mud Creek. Upgrading this plant to 5.5 MGD in the manner proposed in the McGill PER results in a virtually new treatment plant meeting all prescribed environmental criteria and serving the community needs for the foreseeable future. This upgrading could take place in orderly stages to minimize capital requirements and pace capacity with need.

Additional treatment plant capacity that might be required to serve the northern reach of the Mud Creek drainage area is relatively small and can be accommodated through connection to the Cane Creek Water and Sewer District and/or directly to MSD. In both the City's PER and the County's Master Plan, projected wastewater flows in that region over the next ten to twenty years are on the order of 0.5 MGD or less.

SEWER SERVICE AREAS

Although the City's PER and the County's Master Plan describe them in different terms, the areas into which sewers are contemplated all lie within the boundaries of the Mud Creek Water and Sewer District. Implementation of the County Master Plan in the sequence described results in construction of sewers initially in those areas where the need is most pressing, and expansion of the sewer systems into other areas as the need arises. A portion of Phase I of the Master Plan will provide for the collection system serving existing development in Mountain Home, and the system can be expanded as need arises.

The Master Plan also addresses construction of an outfall sewer along Mud Creek and the elimination of reliance on randomly located sewage pumping facilities that discharge into and tax the older portions of the City's collection system. The presence of outfall sewers and reliable sewer service encourages development and thus can serve as a guide in the overall orderly development in designated areas of the County.

There is no critical concentration of existing or planned development currently identified that would prompt accelerated sewer service beyond that called for in the Plan.

CORRECTION

Under current conditions, the extraneous infiltration/inflow reaching the Mud Creek treatment plant accounts for about 40% of the plant capacity, an average of 1.2 MGD. Replication of that plant capacity, based on the least costly alternative under consideration for plant expansion, represents a capital cost of nearly $2,000,000. The most pressing issue and that which should receive the highest priority is the timely program of correction of

all reasonable levels of inflow and infiltration.

SUMMARY
The big question to the county from the city was how much capacity the county will need. The big question to the city from the county was how much is the capacity going to cost.

The least costly option would cost $8,900,000 and the most costly option would cost $21,400,000 with the most cost effective and flexible option being to expand the current treatment plant.

There being no further business, the meeting was adjourned.

ATTEST:

Elizabeth W. Corn, Clerk

Renee Kumor, Chairman

THIS PAGE
INTENTIONALLY
LEFT BLANK