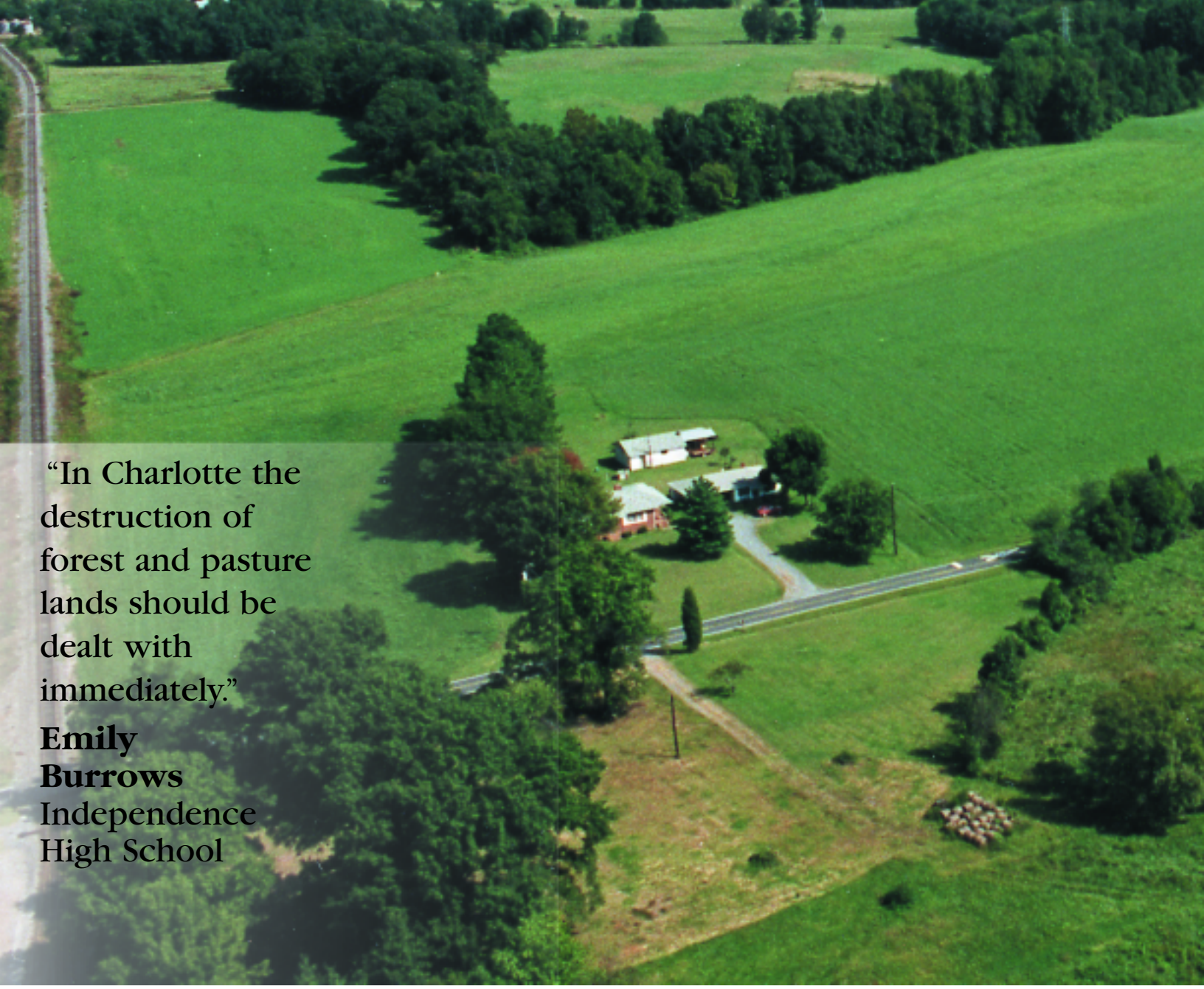


"In Charlotte the destruction of forest and pasture lands should be dealt with immediately."

Emily Burrows
Independence High School

OPEN Space?

What is **"open space?"** Open space means different things to different people. To some it conjures up images of the rural countryside with scenic vistas of farms, fields, pastures and woods. To others, it's the "pocket park" in their urban neighborhood - a refreshing oasis of green in the midst of concrete and asphalt. Open space can be privately or publicly owned, protected and preserved for future generations' benefit, or available for conversion to other more intensely-developed uses.

Open space can be a nature preserve with walking trails and wildlife observation stands, but it can also be soccer fields and baseball diamonds, or a favorite golf course. A stand of managed timber, a Christmas tree farm, a soybean field and a dairy cow pasture are all open space. So is a creek side greenway that lets floodplains serve multiple purposes, providing natural stormwater management, important habitat corridors for wildlife, and places for people to walk, jog, bike, and enjoy the natural setting. Even suburban lawns, planted medians on our roads, and landscaped plantings at shopping centers provide important "open space" functions by allowing rain to soak in rather than running off into storm sewers, thus replenishing groundwater, and by cleaning and cooling our air in summer.

Within Mecklenburg County, several government agencies acquire and manage or regulate open space for different purposes: the Parks & Recreation Department, School System, Utility Department, Stormwater Services and Engineering & Property Management, among others. Some of this open space is privately owned but affected and regulated by city or county utility easements or ordinances.

In the private sector, permanent protection for sensitive natural areas or important habitat areas is being furthered by a nonprofit local land trust, the Catawba Lands Conservancy, and its colleagues at the Trust for Public Land. Duke Energy's power company subsidiary manages thousands of acres of open space along its lakes on the Catawba River under its federally-mandated shoreline management plan. Mecklenburg County is also home to hundreds of small farms.

There is increasing recognition that open space makes an important contribution to our community's quality of life and even our economic vitality:

- Mecklenburg County voters approved a $220 million land purchase bond referendum in November 1999 to be used for purchasing land at current prices in anticipation of rising land prices and future needs for land for parks, schools and libraries and another $52 million in parks bonds were also approved.
- A public-private collaboration was formed in 1998 to protect land around Mountain Island Lake, from which Mecklenburg County draws all its drinking water; the Mountain Island Lake Initiative has set a goal of protecting 80% of the undeveloped land along the shores and tributaries of the Lake.
- In 1999 Mecklenburg County, the City of Charlotte and three of the county's incorporated towns (Huntersville, Cornelius, and Davidson) adopted stream buffer regulations more stringent than those required by the state. These regulations are designed to protect water quality in the streams by maintaining natural vegetation along the streams to filter runoff before it reaches the stream. These jurisdictions have also adopted more stringent restrictions on floodplain development to reduce flood risk and preserve the floodplains' natural floodwater absorption capacity.
- Open Space was identified as one of six key issues at the 1998 Regional Environmental Summit, which drew more than 550 participants from Mecklenburg and 13 surrounding counties; a citizen-based volunteer team worked throughout 1999 to develop an Open Space Action Plan, providing an initial template for regional open space planning and implementation

- Huntersville, Cornelius, and Davidson have adopted revisions to their land use plans and zoning ordinances that facilitate and encourage open space protection as an integral part of land development.
- Charlotte and Mecklenburg have adopted a "corridors and wedges" land use plan that envisions denser development along five key transportation corridors and ess dense development in the wedges between corridors.
- Mecklenburg County's Natural Heritage Inventory was completed in 1999, providing a wealth of information regarding the location of important native plant and animal species and their habitats that can be used in planning open space protection efforts.
- The Charlotte Tree Advisory Commission is in the process of revising the city's tree ordinance, with an eye toward extending the current regulations which affect businesses to include residences as well Trees are a critical part of open space planning. In addition to their shade-providing and air-filtering benefits, trees provide habitats and protect and condition the soil.
- The Brownfields program encourages redevelopment of underutilized or abandoned sites in or near the city center that are already served by public water, sewer and roads, thus reducing pressure to develop outlying "greenfields."

Despite these encouraging signs reflecting the importance of open space to our county, there is much still to be done. For example, there is no unified open space plan for the county, nor a central source of open space data from which to create such a plan. With so many ways of defining "open space," and so many different owners and managers of different types of open space, attempting to evaluate and monitor our open space is a daunting task. And yet, the task is critical, because we know that our county is becoming more and more urban in character and is projected to be fully developed or "built out" sometime between 2010 and 2015.

Nor have any of the local governments in Mecklenburg have established a program for the purchase of development rights ("PDR"). Under PDR programs, government agencies pay landowners to place conservation easements on their land. The landowner retains title to and full use of the land, except for development of it, and the public secures permanently protected open space at a fraction of the cost of acquiring title to it.

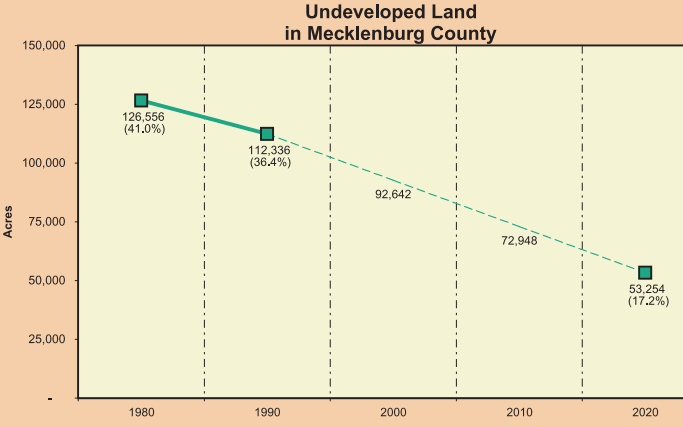
And other than for floodplains and stream buffers, none of the Mecklenburg jurisdictions have adopted ordinances to protect open space in environmentally sensitive areas such as wetlands, steep slopes or natural heritage inventory sites. The City of Durham adopted its Natural Resources Protection Standards in 1999, creating a comprehensive set of ordinances covering open space protection in floodplains, stream buffers, steep slopes, wetlands, and providing for future protection of natural heritage inventory sites.

Where do we stand now?

One way of evaluating open space is by using satellite imagery and computer analysis to distinguish between developed land and undeveloped land. This can give us a rough approximation of total open space, without regard to public versus private ownership, or use for farming versus recreation or wildlife habitat.

The Carolinas Land Conservation Network, a nonprofit land conservation research and education organization based at UNC-Charlotte, has created a computer model nicknamed the "Piedmont Green Plan" that identifies open space as it existed in 1980 and 1990 based on satellite imagery. It also uses population projections and adopted land use plans to project conversion of open space to developed uses for the year 2020. For Mecklenburg County, the model reports a decline in open space from 41% of total land area to 36% for the 1980 - 1990 time period, with a projected further drop to 17% by 2020.

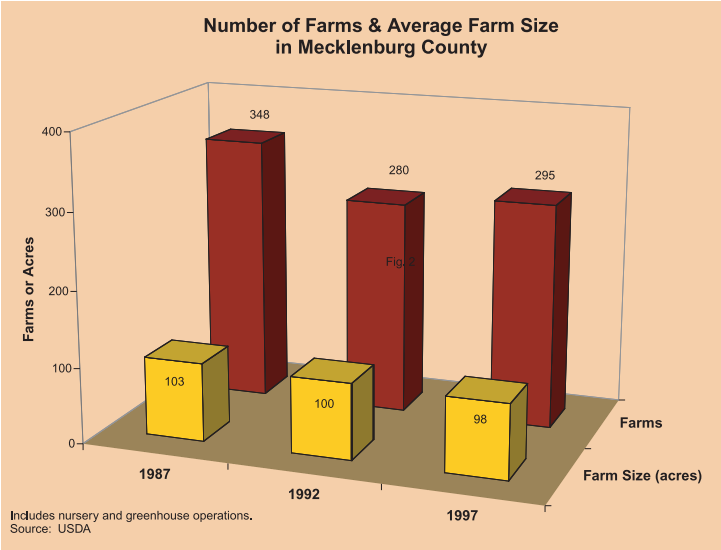
This is the equivalent of 5 acres a day throughout the 40-year period of 1980 to 2020.



Based on satellite imagery for 1980 & 1990, with projection to 2020 based on population projections and adopted land use plans.
The 2000 & 2010 values are estimations based on straight-line extrapolation.
Source: Carolinas Land Conservation Network, 1998

The model also displays its results in map form, showing not only how much open space is likely to be converted to developed uses, but where this conversion is likely to occur. The model provides the citizens, planners and elected officials with a starting point for public dialogue about how densely to develop, where to develop, how much open space to retain and where to retain it. In light of the newly-adopted corridors and wedges plan, public dialogue and tools such as the Piedmont Green Plan are essential.

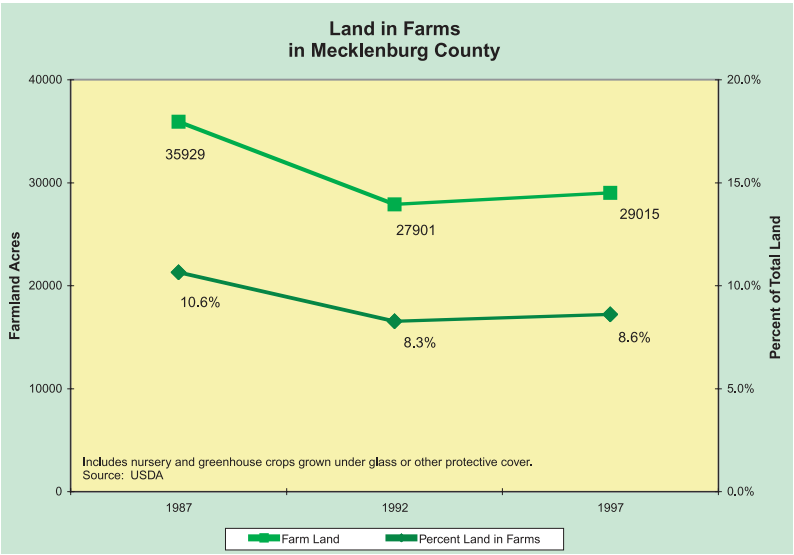
Another way of assessing the current status of open space in the county is to look at official statistics for selected types of open space. The U.S. Department of Agriculture conducts an extensive Census of Agriculture every five years, reporting results for every county and state in the nation. The number of farms, and acres of land in farms, is one of the key pieces of data available from those censuses. Farms are defined as operations producing more than $1,000 in income per year, whether from crops or livestock.



The last three agricultural censuses show that Mecklenburg County's farms have declined over a ten year period (1987-1997) both in number and in average size.

As a result, total acres in farms has shrunk from 10.6% of total land area in 1987 to 8.6% in 1997, a drop from about 36,000 acres to about 29,000. Interestingly, the five-year figures, for 1992-1997, show a modest increase: acres in farms had dropped to as low as 8.3% of total land area in 1992 before rebounding slightly in 1997.

Several options are available to farmers who want to continue farming, but feel the pressure of increasing land prices as development continues around them. The state provides property tax relief through its "agricultural use" valuation procedures, which allow the tax value to be determined by the land's agricultural value rather than its development value. Placing an agricultural conservation easement on the farmland also serves to lower its tax valuation, and can provide income tax credits under North Carolina's innovative conservation tax credit program. Farmers are also experimenting with shifting from traditional farm products such as large-scale dairying to "transitional" farm products, like organic and specialty produce designed to meet urban restaurant demands.



The other readily available set of data on open space is the amount of land owned and managed by the Parks & Recreation Department. The Department's holding range from nature preserves dedicated primarily to passive recreation and wildlife habitat protection (such as Latta Plantation's roughly 1,300 acres), down to neighborhood parks (with as little as 2 acres, providing mostly active recreation in the form of playgrounds), and include segments of creekside greenways throughout the county. In total, the Parks & Recreation Department owns and manages or leases over 13,000 acres of open space, representing 3.9% of the county's total land area, and providing 22 acres of recreational open space per 1,000 residents. The County recently revised its master greenways plan, more than doubling the number of miles of planned greenway. The master parks plan was last updated in 1989 and is now due for another revision. Parks bonds approved in November, 1999, will help land acquisition keep pace with the needs outlined in the master plans.

Conclusion

As a leader in the region, the county has before it an opportunity to make "open space protection" a household word in the same way that "environmental protection" became a household word more than 20 years ago. Integrating into mainstream consciousness the concepts of open space protection and understanding the value of protecting a wide range of open space uses may be the most important steps we can take to ensure that our future includes an adequate supply and equitable distribution of open space, even as our county continues to become more fully urban. However, we are just beginning to understand the importance of a comprehensive, collaborative approach to planning for our open space needs. The first steps in such an approach must be to arrive at useful ways of defining and inventorying open space and to establish measures that will allow us to determine whether we are successful in meeting our goals for open space for our future.

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A Reflection on Our Attitudes about Solid Waste

The history of solid waste management in Mecklenburg County is not so much a story of how much garbage was generated and disposed, but a story of unprecedented growth, prosperity and changing attitudes. Until late in the 20th century, attitudes about the accepted practices of solid waste generation and disposal in Mecklenburg County, or for that matter, in the whole United States had changed little. Open dumping and burning of waste on land and in crude incinerators which produced noxious smoke were the predominant means of disposal during most of the 20th century. Sanitary landfilling of solid waste in unlined landfills began to become the accepted practice after WWII. Sanitary landfilling had become the ultimate solution to our solid waste disposal needs. When sanitary landfilling was first initiated in the United States, the Surgeon General stated that landfilling posed no health or safety concerns to the public. Voila, the solid waste problem had been solved and with that, like the solid waste that was being buried in landfills, the problem seemingly vanished.

When recently asked at a family dinner to throw the garbage away, I asked for directions to this place called "away." After hearing none, I simply placed the bag of garbage into the roll out container for the weekly collection. We have become accustomed to throwing garbage into an inexpensive place called away. This place "away" does not appear on any known maps or navigational charts, but like the mythical childhood places of "Never Land" and "Oz," "away" exists in our minds ultimately affecting the way people perceive garbage disposal. Why should any one person worry about the cost and logistics of garbage disposal when that person can discard ten bags of garbage for the same cost as one. Every community has one or more places called "away" nearby and much of what has been put into away has contaminated the ground and surface water many of us drink and bathe in. Gaseous emissions from landfills have also affected our atmosphere.

Our garbage poised to go to that place called "away."

Mecklenburg County was established in 1762 in honor of the new Queen of England, Princess Charlotte of Mecklenburg. Our ingenuity and industrialism tamed this land much quicker than anyone could have imagined. By 1896, Charlotte and Mecklenburg County had also experienced industrial growth with the expansion of rail roads and proliferation of textile mills. The population of Charlotte and Mecklenburg County's 53 towns and postal stops swelled to 42,424 people. The massing of people in limited spaces resulted in never before faced problems of managing the sanitation of daily life. Excavations south of the downtown where stone had been quarried for Charlotte's growing skyline served as convenient open dumps for garbage. Abandoned mine shafts were also filled with garbage. Groundwater contamination around garbage dumps was not an important health issue of the day. Water from wells was reported to be much cleaner than the public water supply which was drawn directly from Irwin Creek within two miles of downtown until 1904.

The industrial revolution that began more than a century ago changed our lives and land forever. It was only in the last few decades of the 20th century that we began to understand pollution and the carrying capacity of our land. Late in the 1960s we embarked upon a wholesale endeavor to implement measures to better manage, protect and preserve our resources. The attitude which inspired this endeavor actually began

A Reflection on Our Attitudes about Solid Waste

shortly after the end of the 19th century during the industrial revolution when President Theodore Roosevelt with the aid of naturalist Gifford Pinchot, locally famous for the Biltmore Forest, set aside land containing natural wonders as the first national parks. The park lands contained vast deposits of coal, metals and minerals. America decided that protecting our land's natural resources was more important than mining it's wealth of industrial resources. The infant conservation movement was further fueled by writings like *A Sand County Almanac* by Aldo Leopold published in 1949. Leopold linked mans survival to the survival of the land and our natural resources. Leopold's story unfolds on an abandoned farm in Sand County Wisconsin left barren after the droughts of the great depression. The writings of Leopold and others like him had limited impact in their day but planted the seeds which have ultimately grown into our understanding that what affects the land also affects what the land produces and ultimately affects our quality of life.

> "I'm not sure where my trash goes, but I assume it goes to a nearby landfill."
>
> **Heidi Iravani**
> Myers Park High School

Not very much waste went into Mecklenburg County landfills during the depression. People didn't have a lot then and wasted little. By 1949, following WWII, Mecklenburg County was again experiencing unprecedented growth. Similar to the solid waste management of 1896, waste generated from the war production years and the years of domestic industrial production that followed was hauled just a short distance to be buried in one of two unlined landfills. Those landfills located on Statesville Avenue and Tyvola Road still sit as vacant unusable properties today. Experiments with developing parks, golf courses and businesses on other closed landfills in Mecklenburg County have had limited and expensive success. Building on these sites requires extensive engineering and poses risks to people and property.

A century has passed since the industrial revolution swept through our community but the same set of solid waste management problems remain to be solved. How do we accommodate large numbers of people living in cities with all of the necessities and conveniences of modern living while economically managing the waste created by this living arrangement? An added concern is how do we do this economically while minimizing negative impacts to the environment, a topic which was given little consideration until late in the 1960's when the pollution created by wasteful practices began to manifest itself as dead rivers, polluted groundwater, and dirty air. In 1962, Rachel Carson's book, *Silent Spring* awoke many Americans to the dangers of toxins in our environment. The majority of Americans went about their routines, but in America's universities, a change had begun. Environmental sciences were now being taught to students and the newly formed U.S. Environmental Protection Agency began to administer new legislation from the Congress such as the Clean Water, Clean Air and Resource Conservation and Recovery Acts. However, garbage was left behind. It would take until 1986 for the Federal Government to address garbage disposal in unlined landfills as a major source of pollution.

Leachate discharge (light colored liquid) at a closed landfill. Leachate is formed by water percolating through waste.

Until the Charlotte Observer reported in July of 1981 about the York Road Landfill that "Charlotte's principle garbage site is nearly full" most of us did not concern ourselves with garbage unless it had something to do with getting it picked up out of our backyards. People opposed roll out collection, wanting sanitation workers to continue twice a week backyard collection. However, when it came time to build a new landfill, the cry "not in my backyard" was heard. We wanted trash removed twice a week from the cans in our back yards but no one wanted their backyards anywhere near the landfill.

Although our land has been finitely measured and recorded, many people still tend to believe the availability of places to put our trash is virtually infinite. This attitude may change as large landfills in the crowded northeast receiving as much as 25,000 tons per day of garbage close and send their waste south. The logistics and economics of garbage disposal continue to change also. Soon each of us may be required to pay for the exact amount of garbage we discard called pay as you throw. Are you ready for that?

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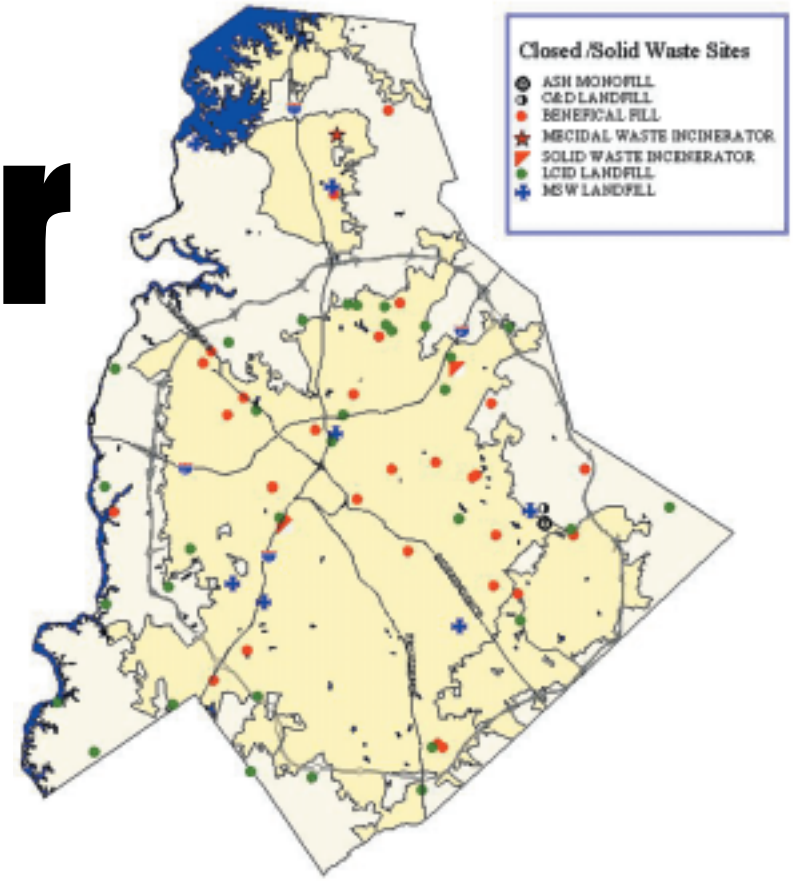
Where does our waste go?



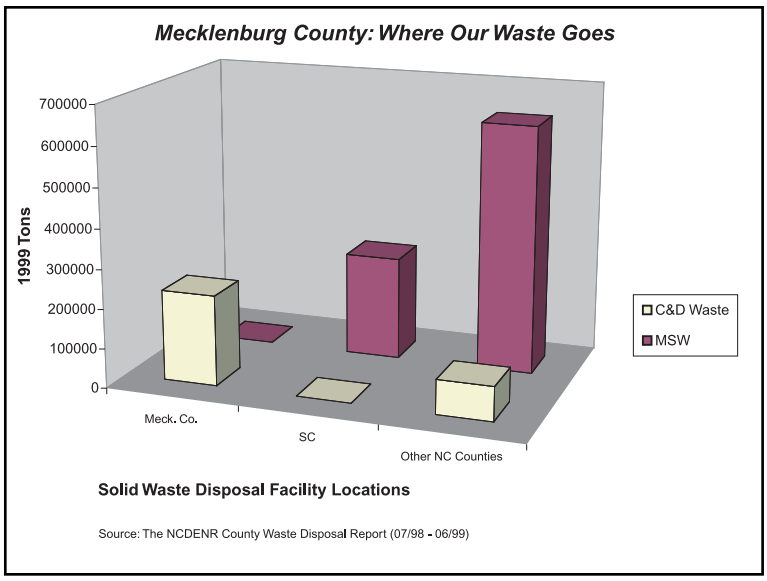
Most people are unaware that there are thirty active and more than forty closed solid waste management sites located in Mecklenburg County for the disposal, processing and transfer of the waste we discard. The active sites consist of a municipal solid waste landfill (1), a construction and demolition landfill (1), land clearing and inert debris landfills (13), a municipal transfer station (1), C&D material recovery facilities (2), an LCID material recovery (1), a medical waste incineration (1), composting facilities (2) and recycling centers (8). Of the closed facilities, forty-one were landfills, three were incinerators and there were countless open dumps. Roughly 29% of the County's measurable waste stream is disposed of or reclaimed for use within its borders; the rest is exported.

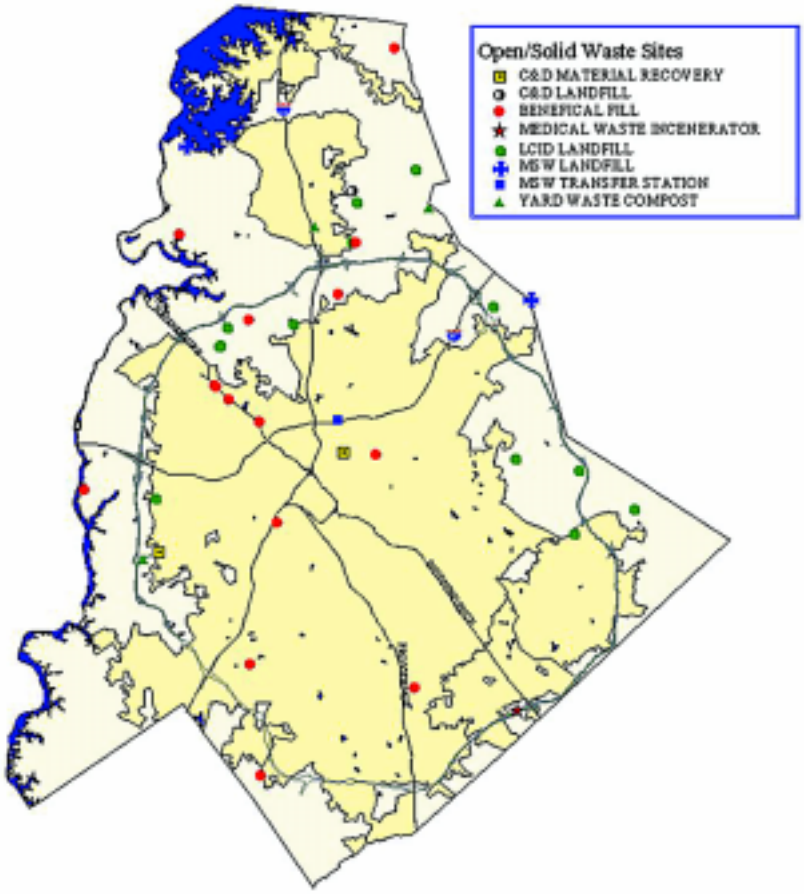
MSW is garbage, refuse and similar nonhazardous solid waste material generated by households and commercial establishments. In 1999, practically all of the MSW generated within Mecklenburg County (887,215 tons) was transported to locations outside the County for disposal. 625,260 tons were disposed of at the BFI/Charlotte Motor Speedway landfill in Cabarrus County, 259,599 tons were disposed of at the Lee County MSW landfill in Bishopville, South Carolina and the remaining 2356 tons were taken to other NC/SC landfills. Except for Duke Power Company's private lined landfill used for disposal of non-radioactive solid waste generated by the company, all MSW disposal since April 1994 has been at landfills outside of Mecklenburg County.

The County recycled 90,618 tons of material in its residential program during FY 98-99. Yard waste counted for 47,646 tons and curbside materials comprised the bulk of the remainder. The yard waste was composted at either the North Mecklenburg Recycling Center near Huntersville or the Compost Central Recycling Center near the airport. The curbside paper, plastic and metal materials were processed at the Metrolina Recycling Facility.

Construction and demolition (C&D) wastes are solid wastes resulting solely from construction, remodeling, pavement, building and other structures. Demolition contractors disposed of 228,934 tons of C&D Since 1997, there has been more local interest in C&D waste recycling. An undetermined amount of C&D waste sorting occurs at construction and demolition job sites by contractors to reduce their waste disposal costs and two fixed C&D material recovery facilities recently opened in the County. Phoenix Recycling Corporation, a sorting and processing operation located near the Charlotte-Douglas International Airport, processed 26,882 tons of C&D waste to reclaim usable materials in 1999. Additionally, Hawk Sanitation operating a material recovery facility located near uptown Charlotte, sorted 22,430 compacted cubic yards of C&D waste and diverted 1,950 cubic yards of metal and 1,860 cubic yards of paper stock to recycling facilities.

Land clearing and inert debris (LCID) wastes are those wastes generated during land clearing and demolition activities and include trees, stumps and





"When I see trash, I always pick it up unless it's extremely gross."

Jennifer Weih
Independence High School

other vegetative matter and virtually inert debris such as brick, concrete, concrete block, asphalt and uncontaminated soil, rock and gravel. Currently, the State does not require these wastes to be weighed prior to burial, therefore, the amount of LCID waste disposed of in Mecklenburg County LCID landfills is uncertain. An unmeasured amount of LCID and yard wastes were disposed of at thirteen (13) permitted LCID landfills in the County down from sixteen (16) permitted landfills in 1995.

Additionally 47,646 tons of yard waste was recycled by local government into compost, while an undetermined amount of tree waste was ground into mulch by private firms. Hensons' Inc., the County's largest private LCID material recovery facility, processed 208,000 cubic yards of tree waste into mulch and boiler fuel. Fourteen small (less than 2 acre) landfills for the on-site disposal of land clearing waste were recorded in 1998 and 1999.

Medical waste is any solid waste that is generated in the diagnosis, treatment or immunization of human being or animals, in related research, or in the testing of biologicals. Locally, BMWNC, Incorporated incinerated 1808 tons of medical waste generated by Mecklenburg County in 1999, while 4900 tons were treated by SafeWaste Corporation. An additional 375 tons was treated at the BFI medical waste incinerator in Haw River, North Carolina.

As demonstrated by the waste exportation numbers above, solid waste management in Mecklenburg County has become a regional issue. The convenience of local solid waste management facilities has diminished due to a variety of factors including the real and perceived risks associated with solid waste treatment facilities, the cost of designing and constructing state-of-the-art waste management facilities and the availability of affordable, suitable land. As Mecklenburg County becomes more urban, the challenges of solid waste management are to surely grow.

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WWW.

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Solid Waste Generation and Disposal Rates for Mecklenburg County

RADIOACTIVE WASTE

Radioactive waste is also generated and managed in Mecklenburg County. The majority of radioactive waste is spent nuclear fuel that comes from Duke Power's McGuire Nuclear Power Plant on Lake Norman. Spent fuel assemblies accounted for 160 tons of radioactive waste in 1999. The McGuire Nuclear Power Plant has a fuel assembly storage capacity of 2926 tons and at the end of 1999, there is approximately 16% storage volume remaining.

Low Level Waste (LLW) consists of industrial, research or medical wastes like paper, rags, gloves, protective clothing and packaging. The amount of LLW generated and stored in Mecklenburg County in 1999 was 8135 cubic feet.

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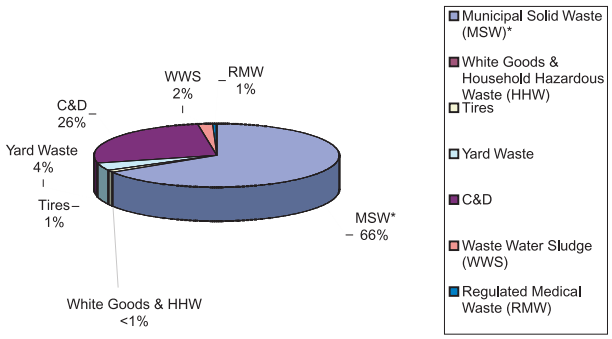
In 1998, North Carolina ranked 7th for municipal solid waste (MSW) generation in the United States - 12.6 million tons, being the 11th most populated state. With a 7% increase from 1997-98, the County's total solid waste tonnage for FY 98/99 was 1,266,233, where 1,144,736 tons were landfilled. 258,558 tons were produced by residents and 956,206 tons were generated by the commercially. Approximately 11% of the MSW waste for Mecklenburg County was recycled or composted and the rest was landfilled.

The national average for solid waste generated per capita per day is 4.4 pounds while North Carolina's average is 9 pounds, compared to a Mecklenburg County average of 7.5 pounds. By looking at the averages, it is evident that Mecklenburg County and North Carolina are well above the national average.

Goals for reducing the waste disposal rate are developed by the Waste Management Advisory Board (WMAB) and the Board of County Commissioners (BOCC). The WMAB and BOCC developed a 10-year plan in 1997 to reduce the amount of waste disposal by Mecklenburg County residents and businesses. This waste reduction plan was mandated by North Carolina House Bill 859 which set a 40% per capita waste disposal reduction for counties by 2006, measured from the FY 89/90 baseline. To meet this requirement, Mecklenburg County has committed to reduce household and commercial waste disposal by 12% for the year 2001 and 20% for 2006. We have also committed to reduce construction and demolition debris disposal 40% by 2006.

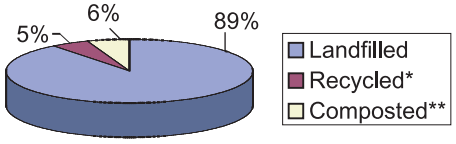
The 1999 residential and commercial MSW disposal

1999 Solid Waste Components for Mecklenburg County

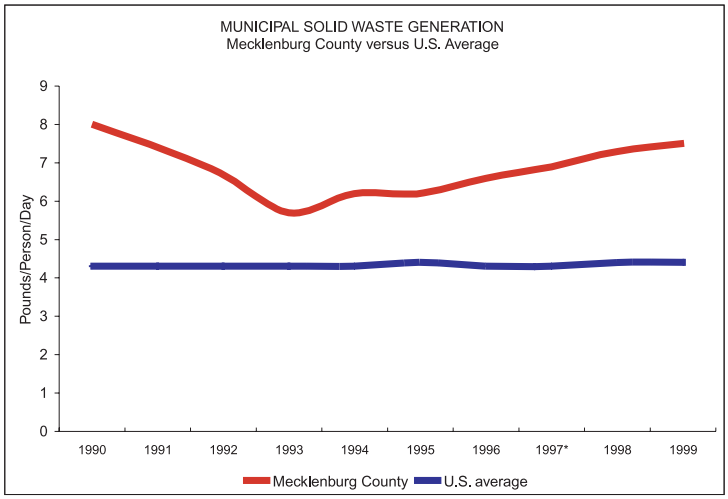


Source: Mecklenburg County Dept. of Engineering and Building Standards, NCDENR and Charlotte-Mecklenburg Utilities

1999 Municipal Solid Waste Management for Mecklenburg County



Source: Mecklenburg County Dept. of Engineering and Building Standards



Source: Mecklenburg County Dept. of Engineering and Building Standards, NCDENR and USEPA
*1997 waste generation was interpolated due to data inaccuracy.

Solid Waste Generation continued

rate is 1.12 tons/person/year which is 22% lower than the FY 89/90 baseline of 1.43 tons/person/year. The 1999 C&D waste disposal rate is 0.51 tons/person/year, while the FY 96/97 baseline is 0.56 tons/person/year.

Every citizen and business in the county generates waste. Waste generation in Mecklenburg County is a result of everyone's lifestyle in the community. Household and commercial garbage makes up the largest portion of our solid waste stream. Meeting our waste disposal reduction goals is contingent upon the cooperation of the citizens. It is essential that we are aware of what types of wastes we generate, where the waste goes and how we can reduce solid waste generation and landfilling.

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The Foxhole Landfill – New Waste Disposal Options

Mecklenburg County took a giant step in 1999 toward opening a municipal solid waste (MSW) landfill on US Highway 521 in southern Mecklenburg – a project that has been in the works since 1983. They completed construction on the first cell of the landfill, nicknamed the Foxhole for County Manager Gerald Fox, and prepared it for opening.

Workers install the plastic membrane of the landfill's composit liner system. The plastic covers three feet of clay and is itself covered by the leachate collection system and a top covering of dirt.

The County expects to receive the operating permit from the State and open the Foxhole by February 2000. When the Foxhole opens, southern Mecklenburg residents will have access to a full-service recycling center, swap shop and yard waste facility – the same waste reduction opportunities that exist in other areas of the County.

The Foxhole has been a long time coming.The land – 545 acres – was purchased in 1984, but final zoning approval wasn't obtained until 1993 (after several lawsuits and court decisions) with a favorable decision from the NC Supreme Court.

A site study was conducted from 1994 until 1996, and then the County hired consulting agency S & ME, Inc. to design the first cell. The State issued the permit to construct in July 1998, and the County awarded the construction contract to

Anson Contractors in August. That same month, local citizens known as GRACE filed an appeal to

The Fox Landfill

have the State revoke the County's construction permit.

The County spent the remainder of 1998 preparing the site by clearing and stripping the land and putting in erosion and settlement control. By the spring of 1999, they began the construction of the first cell, including the excavation, installation of the clay and synthetic liners and installation of the leachate collection and removal system. In addition, the County constructed the leachate storage and pretreatment tank system (pretreated leachate will be drained from the tank to McAlpine Treatment Plant for disposal) and built the entranceway, scales, fee collection building and infrastructure road system.

In June 1999, GRACE and the County reached an agreement which included the following conditions:

- Limit landfill elevation to 736 feet (10 feet below designlevel);
- Form an advisory committee from residents in Mecklenburg, Union and Lancaster counties to review landfill and operation plans;
- Construct the soccer fields and greenway portions of the final use plan within five years of the landfill opening;
- Limit the use of the landfill to acceptance of C&D debris and as a public convenience center for solid waste management until the end of the County's contract with BFI;
- Continue to work on a long term, cost-effective alternatives for MSW through the private sector after the termination of the BFI contract; and
- if an agreement is arranged, limit use of the landfill to acceptance of C&D and as a public convenience center for MSW

The recycling center, swap shop and yard waste operations will provide convenient waste reduction services to south Mecklenburg. Landfill final use plans include developing a park with playground areas, athletic fields, a wildflower exhibition area, walking paths and hiking trails – with the soccer fields and greenway opening within the next five years.

By owning their own landfill, the County gains flexibility, cost savings and control over their MSW. According to Cary Saul, Director of the County's solid waste management, "Our purpose in building the Foxhole is twofold. It represents both a cost savings to Mecklenburg users of the landfill and less risk in solid waste management. The Foxhole is a state-of-the-art facility, built with the latest technological and environmental controls. It will be operated in strict accordance with all local state and federal regulations. Landfill tip fees will be lower than other regional landfills, and the citizens of Mecklenburg will be in control of the disposal of their solid waste."

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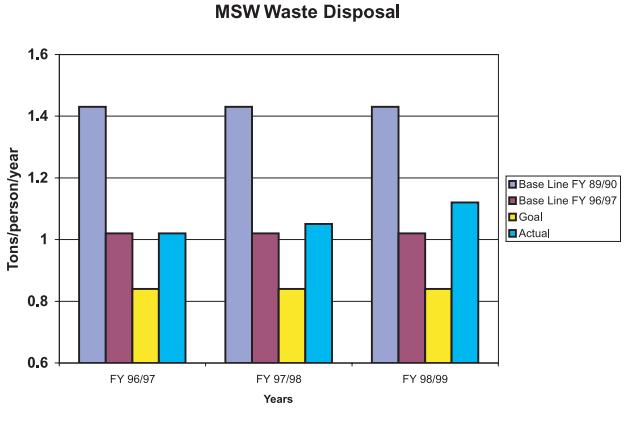
Recycling In Mecklenburg County

The management of the County's solid waste is determined by the Mecklenburg County Solid Waste Management 10-Year Plan, passed in 1997. The plan calls for a reduction in commercial, residential, and construction and demolition (C&D) waste through source reduction, recycling and composting efforts; and it sets reduction goals. For commercial and residential waste, the plan sets per capita waste reduction goals of 12% for the year 2001 and 20% for 2006, measured from the base year of FY96/97. For C&D, the per capita reduction goals are 30% by 2001 and 40% by 2006, measured from the base year of FY96/97.

Since the adoption of the plan, we have worked hard to achieve the goals — and in FY98/99 can say we've had both success and setbacks.

Residential recycling in the County has become almost as familiar as garbage pickup. What started in 1977 with one recycling drop center has grown into a comprehensive program. We have residential curbside collection in Charlotte and the surrounding towns, a network of eight recycling drop centers, a materials processing facility, a construction and demolition recycling facility and a composting operation.



Source: Mecklenburg County Dept. of Engineering and Building Standards

The County recycled 90,618 tons of material in its residential program during FY 98-99. Yard waste counted for 47,646 tons and curbside materials comprised the bulk of the remainder.

Charlotte and the surrounding towns each administer their own residential recycling collection programs and deliver the recyclable material to the County's Metrolina Recycling Facility for processing. Curbside programs accept newspaper, catalogs and magazines, #1 and #2 plastic bottles, glass bottles and jars, spiral paper cans and aluminum, steel and tin cans. Cardboard (flattened) is being added to Charlotte curbside collection and should be accepted everywhere by the end of 2000.

"I would like my generation to make more efficient ways of disposing trash, conserving water, energy and raw materials.

Katie Phillips
Independence High

The County operates eight recycling drop centers, three of which are staffed and offer additional recycling options, including swap shops and household hazardous waste. All centers accept the materials collected curbside, as well as junk mail, office paper and chipboard (e.g. cereal boxes, gift boxes, etc.). The three staffed centers also take white goods (used appliances), tires, batteries (household, car and Ni-Cd rechargeable), scrap aluminum and ferrous metal, motor oil, antifreeze, transmission fluid, used oil filters, oil and latex paints, eyeglasses and foam rubber.

ECOFLO, a Greensboro-based hazardous waste facility, is contracted to maintain storage and collection sites for household hazardous waste at the Hickory Grove and North Mecklenburg recycling centers.

Residential yard waste (e.g., leaves, plant trimmings, tree limbs and grass) is picked up curbside in Charlotte and the towns and taken to Compost Central, the municipal composting facility, or North Mecklenburg Yard Waste Facility. Residents can deposit yard waste for a fee at Hickory Grove, North Mecklenburg and Compost Central.

The County has expanded the residential backyard composting program to include comprehensive yard care workshops that emphasize conservation and environmentally friendly landscaping practices.They have introduced composting into the Charlotte-Mecklenburg school curriculum and every third grade classroom now has its own compost bin. The County will continue to expand residential recycling options, but staff efforts will concentrate on the more difficult task of educating residents to reduce their waste at the source through changing purchasing and consumption behaviors.

The Solid Waste Management Plan recognized the need for an aggressive commercial waste reduction program that called on businesses to remove from the waste stream cardboard, office paper and aluminum cans. While some commercial recycling had occurred, there wasn't any concentrated government effort to develop or monitor commercial reduction, even though com-

mercial waste accounts for 70% of the total waste stream – 952,960 tons in FY98/99 (including construction & demolition debris).

In response to opposition to the commercial program's funding mechanism (a $1 fee on every ton of landfilled commercial waste), the Board of County Commissioners (BOCC) approved the formation of a coalition of business and government to work on a voluntary commercial waste reduction program.

The Coalition for Voluntary Commercial Waste Reduction, composed of businesses, organizations and government, was formed to build a recycling infrastructure and educate businesses about waste reduction. They worked for two years with mixed success. They collaborated on an extensive outreach campaign, which resulted in an increased awareness of commercial recycling and waste reduction. Some new services such as the Wipe Out Waste Hotline and commercial recycling drop centers were launched, and former adversarial parties worked together. The County implemented a fiber recycling program in all the Charlotte-Mecklenburg schools and more than two-thirds of County buildings. But, the coalition was unsuccessful in significantly reducing the amount of landfilled waste. And even though their time was extended by the BOCC, they virtually ceased operating in 1999.

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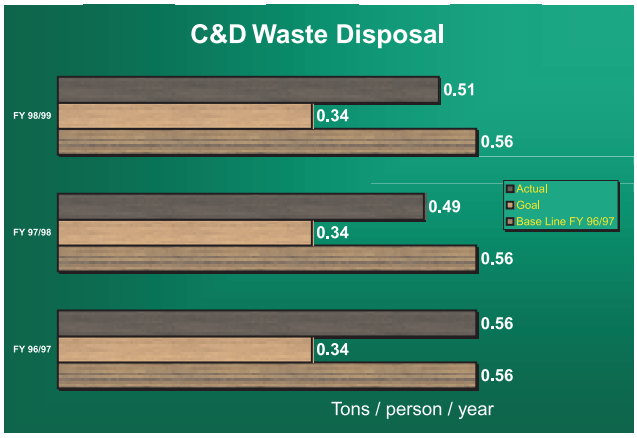

MECKLENBURG COUNTY SOLID WASTE RECYCLING FACILITIES

SELF-SERVICE RECYCLING CENTERS:

Park Road Park Recycling Center -
5300 Closeburn Rd., daily 7 a.m. - dusk
Uptown Recycling Center - 11th St.
Between Tryon and College St., open 24 hours
University City Resource Recovery Facility Recycling Center - Ken Hoffman Blvd. (off of Highway 29 (Tryon St.) at the Highway Patrol Station and Firestation 27), open 24 hours
McAlpine Creek Park Recycling Center -
8711 Monroe Rd., daily 7 a.m. - dusk
Rozzelles Ferry Road Recycling Center -
5800 Rozzelles Ferry Road, open 24 hours

Accepted Materials: newspapers & inserts, flattened cardboard, magazines & catalogs, telephone books, junk mail, mixed office paper, # 1 & #2 plastic jars & bottles, aluminum/tin/steel cans, spiral paper cans

FULL-SERVICE RECYCLING CENTERS:

- North Mecklenburg Recycling & Yard Waste Center - 12300 N. Statesville Rd., 875-3707, Tues. – Sat. 7 a.m. – 3 p.m
- Hickory Grove Recycling & Yard Waste Center - 8007 Pence Road, 535-3020, Tues. – Sat. 7 a.m. – 3 p.m.
- West Mecklenburg Recycling Center - 8440 Byrum Drive, 357-1473, Tues. – Sat. 7 a.m. – 3 p.m.

- Accepted Materials: (all of the above) and used appliances, scrap aluminum & ferrous metal, motor oil/antifreeze/transmission fluid & oil filters, tires, lead acid (car) batteries, Ni-Cd batteries, household batteries, oil & latex paint, eye glasses, foam rubber, used clothing in good condition, household hazardous waste, household garbage and yard waste (except West Mecklenburg; yard waste in that area goes to Compost Central).

Metrolina Recycling Facility – 1007 Amble Drive, 598-8595, Mon. – Fri. 7 a.m. – 4 p.m.; materials recovery facility with state-of-the-art theatre and education program. Call to book a free tour.

Compost Central Yard Waste Facility– 5631 West Boulevard, 588-9070, Mon. – Fri., 7 a.m. – 5 p.m., Sat. 7 a.m. – 3 p.m.

Metal and Tire Recovery Center – 5740 Rozzelles Ferry Road, 392-1063, Mon. – Fri. 7 a.m. – 3 p.m.

Phoenix Construction & Demolition Recycling – 5631 West Boulevard, 527-0039, Mon. – Fri., 7 a.m. – 5 p.m., Sat. 7 a.m. – 3 p.m.

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From Open Dump to Subtitle D - The Evolution of Solid Waste Regulation

Over the past century making changes to the way solid waste has been managed has been slow. It might be compared to turning a large ship heading for an iceberg in the fog at full speed ahead. Although the danger of the iceberg was always there and the ability to turn the ship was available, the realization that danger was imminent upon siting the iceberg at close range resulted in a response by all hands on board to steer the ship out of harms way. But, a ship does not turn on the dime. For many years we managed our waste simply by digging a hole and burying the waste out of site. Out of site was out of mind. Our solid waste ship steered an unchanging heading until contamination of groundwater and surface water by landfills became apparent. When wells and rivers around landfills began to show contamination from waste placed in the unlined landfills and it became apparent that landfill space may be approaching a crisis, the cry began to go out from the crows nest, iceberg dead ahead.

Significant events and recent changes to the regulations which dictate how solid waste is managed have changed the way we think about disposing of our trash. In order to see how much regulation has changed we need to take a look back to where we have been. Probably the earliest changes which affected how we managed solid waste began with the local health department.

Development of the Local Health Dept. and Local Regulations

Health concerns began to be addressed in Mecklenburg County before the turn of the 20th century. In the early 1880's, the County Commission and City Council created the positions of County Physician and City Physician respectively. By the summer of 1917, the Mecklenburg County Health Department was organized and located in rooms beneath the old City Auditorium located at the corner of North College and 5th streets. Major Benjamin Brown assisted by Dr. C. C. Hudson, one stenographer, one part-time milk inspector, one part-time clinician, one sanitary inspector and, two nurses began the task of standardizing the health of our community. However, this did not initially include solid waste management. It was 1954 before the first local solid waste regulations were enacted and the Health Department performed inspections to determine compliance. In July of 1960, the Health Department moved into a new facility at 1200 Blythe Boulevard on the grounds of Charlotte Memorial Hospital. By 1960, the Charlotte and Mecklenburg County Health Departments had been placed under the direction of one Health Director with a staff of 128 for the city tasks and 36 for the county. In 1975 the Mecklenburg County Department of Environmental Health was formed as a separate entity from the Health Department.

In September of 1981 the Mecklenburg County Commission voted to adopt the Mecklenburg County Solid Waste Management Regulations Governing the Storage, Collection, Transporting, and Disposal of Solid Waste in Mecklenburg County. In 1984, the North Carolina Department of Human Resources delegated authority to Mecklenburg County to perform a solid waste management program and the local Solid Waste Section was formed. The Department of Environmental Health was charged with the responsibility of administering the North Carolina Solid Waste Management Rules. In 1986, the Mecklenburg County Department of Environmental Protection ("MCDEP") diverged from Health Department and, with the exception of facilities operated by the County, continues to regulate solid waste in the County through the delegation of authority.

Development of the State and Federal Solid Waste Management Policy

The Federal Rivers and Harbors Act of 1899 forbade the discharge of "refuse matter" into navigable water without a permit. Although the intent of this act was to protect interstate commerce this clause is probably the first legislation to address solid waste management. Disposal of solid waste in North Carolina prior to 1935 was generally accomplished by one of three methods: by open dumping, feeding garbage to swine or incineration. Each method of disposal presented its own unique

From Open Dump to Subtitle D - The Evolution of Solid Waste Regulation

problems. Open dumps attracted rodents which spread disease and generated foul odors, and burning garbage often sparked forest fires. Feeding garbage to swine containing uncooked foods could lead to diseases like trichinosis. Inefficient incinerators of the day designed similar to crematoriums required expensive supplemental fuel to burn garbage and polluted the air.

Around 1935, a new form of disposal, sanitary landfilling, became an accepted alternative to these three methods. Sanitary landfilling was accomplished by digging a trench, filling it with the garbage brought to the landfill and covering it each day with soil to prevent rodent and mosquito access. Although sanitary landfilling became popular in the United States after World War II and many local governments in urban areas had converted to sanitary landfilling by 1960, open dumping and burning remained popular in rural states including North Carolina. During this era, North Carolina's solid waste program began.

The Division of Sanitary Engineering under the direction of the State Board of Health advised local governments on managing open dump sites to prevent rodent related health problems. The Division developed a bulletin in 1952 entitled Refuse Disposal by Sanitary Landfill intended to convince local governments to convert from the open dump disposal method. Few local governments converted. A model ordinance designed to enable local governments to better regulate the storage, collection transportation and disposal of garbage was developed by the Division in 1963, but the cost of the voluntary improvement in disposal method was seen as prohibitive in many North Carolina communities. When monies became available from the Federal Government via The Federal Solid Waste Disposal Act of 1965, the North Carolina General Assembly secured funds for three positions to complete a state solid waste survey and to develop a solid waste disposal plan. The survey revealed that only 23 of the 479 disposal sites being operated in North Carolina provided "reasonable protection to the public health and environment." The initial work completed led to the enactment of the Solid Waste Disposal Act of 1969 which resulted in the establishment of a statewide solid waste management program with the principal goal of assisting local governments develop and implement local disposal plans. In 1970 the Federal Resource Recovery Act emphasized the need to recycle, recover resources and convert waste to energy. A year later in 1971, the State Board of Health developed Rules and Regulations Providing Standards for Solid Waste Disposal. By 1974, the remaining 456 open dumps in North Carolina had been converted to 160 sanitary landfills. North Carolina Senate Bill 366 was passed into law in 1975 adding the tasks of recycling and resource recovery to the Department of Human Resources. In 1976, what would later be amended in 1986 to become the most significant piece of legislation to affect the way communities and private companies managed and disposed of solid waste, The Resource Conservation and Recovery Act ("RCRA") was enacted. Subtitle D of RCRA required that liners be installed at municipal solid waste landfills, financial responsibility accounts be established, hazardous waste be screened from entering landfills and the long term monitoring of groundwater beneath landfills.

After highly publicized incidents involving medical waste washing onto beaches and a New York garbage barge carrying 4,000 tons of garbage bound for disposal in North Carolina, the General Assembly considered legislature introduced as Senate Bill 111, later to be known as the Solid Waste Management Act of 1989. The bill was passed and a complete revision of solid waste management law in North Carolina was underway. The Act required the development of a comprehensive solid waste management plan, new medical waste and yard waste management rules and that 25% of solid waste would be recycled by 1993. In 1991, the act was amended by House Bill 1109 which changed the emphasis from recycling to waste reduction. The bill called for a 40% reduction in solid waste disposal by 2001. The Solid Waste Management Act was amended in 1995 after concerns by local governments about cost of the waste reduction requirements. The 1995 amendments would allow local governments to use their own strategies and initiatives to develop plans which demonstrated a "good faith effort" to meet the 40% reduction goal.

While everyone was busy trying to abide by the requirements of the Solid Waste Management Act, a larger pot was boiling. A small waste hauling company, C&A Carbone, Inc. sued the town of Clarkston, New York over the town's flow control ordinance. The ordinance required that all nonhazardous solid waste generated within the town or brought into the town be deposited at the local transfer station. On December 7, 1993, the Supreme Court of the United States heard arguments from both parties regarding the constitutionality of the local flow control ordinance. The same kind of flow control ordinance that many local governments including Mecklenburg County had adopted to meet waste reduction plans and generate revenue from solid waste in order to pay for facilities and comply with environmental regulations. Justice Kennedy in his delivery of the Court's opinion stated that "The avowed purpose of the ordinance is to retain the processing fees charged at the transfer station to amortize the cost of the facility. Because it attains this goal by depriving competitors, including out-of-state firms, of access to local market, we hold that the flow control ordinance violates the Commerce Clause".

The stringent requirements of Subtitle D in conjunction with the Supreme Court's "Carbone Decision" have significantly changed the way solid waste is managed and has affected counties abilities to meet the waste reduction requirements of the North Carolina Solid Waste Management Act. Expensive to operate waste to energy facilities closed as tipping fees were

higher than at competing landfills which could now receive the wastes without restriction. Transfer stations operated by private waste disposal companies opened in communities to capture a share of the waste and ship it to their own regional landfills. The entire waste management picture had changed.

The next big change that may dictate the direction of federal and state regulation of solid waste is the impending closure of super-sized landfills in the heavily populated northeast. The Fresh Kills Landfill in New York which receives 13,000 tons per day is closing in 2001. States to the west and south, including North Carolina, are beginning to get concerned that this waste will be visiting their states soon.

The future of direction of new solid waste management regulation is uncertain. Local Government will continue its efforts to reduce disposal and increase recycling. NCDENR is planning to review the effectiveness of the amended Solid Waste Management Act of 1995 by the end of this year before moving ahead with any new rules. SOER

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Solid Waste Complaints Increase Throughout the 90's!

In 1997, Mecklenburg County agencies responded to more than 366 incidents of open dumping including illegal landfilling and unlawful accumulations of solid waste. In 1999, the number of incidents increased to 563, a 35% increase from 1997.

In Mecklenburg County, three county agencies respond to open dumping complaints and incidents: City of Charlotte Solid Waste Services Community Improvement Division, Mecklenburg County Health Department Vector Control Section and Mecklenburg County Department of Environmental Protection. From 1987 -1991, the number of solid waste related incidents that either of the three agencies responded to was on average 256 per year. The average number of complaints received per year between 1993-1995 was 331.

The open dumping that occurred in Mecklenburg County in from 1987-1999 ranged from small quantities of household garbage, construction waste or in some cases, barrels of hazardous waste dumped on a roadside to larger multi-acre landfills of land clearing and inert debris and/or construction wastes. However, generally, there are few cases of illegal landfills involving the incorporation of municipal waste.

The North Carolina Solid Waste Management Rules define "disposal" as "the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters." The act of not properly disposing of waste in an approved facility is known as open dumping. This term can be used to describe trash that is deposited on a roadside, accumulated in a backyard or vacant lot or buried an illegal landfill.

Open dumping occurs generally for three reasons: the rising costs of disposal fees, lack of convenience and/or disregard or the lack of understanding of environmental regulations by some generators and transporters. Few of the open dumps in Mecklenburg County, including illegal landfills and unlawful accumulations of solid waste, meet the requirements that apply to permitted facilities. In addition, few of these sites exercise sound environmental practices which may potentially lead to soil, surface water and groundwater contamination.

The increase in the number of solid waste related incidents may be related back to the three factors mentioned earlier: cost, convenience and disregard. Heading into the year 2000, it will be necessary to combat these factors by educating the citizens of Mecklenburg County about the dangers of open dumping and the available solid waste disposal resources, and aggressively pursuing violators. SOER

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Brownfields in Charlotte – Opportunity Knocks

Camden Square - Design Center of the Carolinas, a $14 million brownfields redevelopment project located in the South End off South Boulevard.

Brownfields are idle properties, which were predominantly and historically industrial production sites whose redevelopment is greatly complicated by the presence of known or suspected contamination. In 1998, a UNC-Charlotte Department of Geography study revealed that Charlotte's urban area has over 1181 sites located on 5,606 acres, representing over $227 million in taxable value, where past land use may complicate future redevelopment efforts.

How did this occur in Charlotte? While Charlotte benefits from being the hub of an industrial Piedmont, the legacy of industrial use dating back to the nineteenth century has created environmental problems for us today. At manufacturing and service industry locations where lead, petroleum, metals and industrial solvents were not carefully handled, soil contamination often exists. The soil contamination degrades the groundwater and threatens plant, animal and human life. The presence of contamination and the need for safe cleanup complicates redevelopment; finding and cleaning the contamination is both expensive and time consuming.

Charlotte recognized that developers and business owners needed help in redeveloping these more complex brownfield sites. Many of these sites occurred in communities that had been overlooked for redevelopment and the City would see benefits from these building activities. The thought of new economic activity brought to these neighborhoods was very enticing. In 1996, Charlotte applied to the United States Environmental Protection Agency (EPA) for economic assistance and was awarded a $200,000 Brownfield Assessment Pilot Grant to support assessment of contaminated sites in the South End and Wilmore communities.

After extensive community input and involvement, seven sites were selected to receive assistance though the grant. Two of the projects (Camden Square's Design Center of the Carolinas and Thomas Construction) are now complete, representing over $14 million in new investment and over 400 new jobs. A third site has been cleaned up and redevelopment plans are underway. The fourth and fifth locations are completing their work with N. C. Department of Environment and Natural Resources to determine the right cleanup for safe redevelopment. The last two sites are owned by the Community Development Corporation's for housing and retail development and they have just begun their assessments.

These success stories have an important impact on the city. By demonstrating that these projects can be done and by blazing the trail through environmental engineers, attorneys and regulators, other developers have followed. Additional sites located on South Boulevard, Thrift Road and Tuckaseegee Road have been or are being redeveloped.

A broader program is needed to serve all Charlotte's similarly distressed areas. In 1999, the City was awarded a $500,000 EPA Brownfields Cleanup Revolving Loan Fund Grant to enable cleanup activities at sites scattered throughout Charlotte and $150,000 has been requested to fund assessments in our area. In 2000, the City hopes to offer both these programs, providing a comprehensive brownfield assistance program in Charlotte.

Brownfields represent important prospects for development of vacant lands in Charlotte. It is important to help underutilized sites reach their potential, eliminating hazards to health and creating amenities for neighborhoods. Through the EPA's programs and the City's coordination, developers and business people can receive the assistance they need to make redevelopment opportunities happen.

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HAZARDOUS WASTES IN MECKLENBURG COUNTY

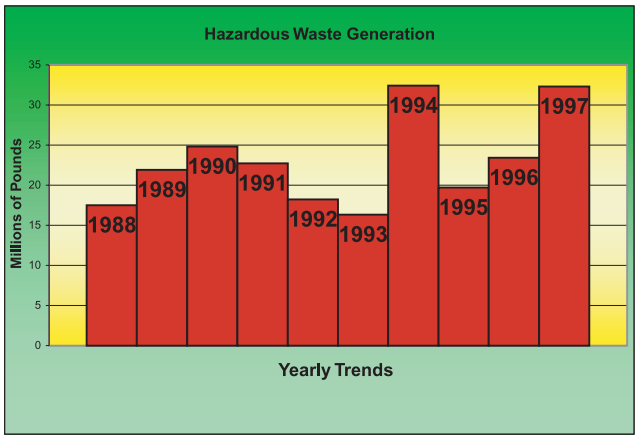
Mecklenburg County generates more hazardous wastes then any other county in North Carolina. Mecklenburg County has held this dubious distinction for more than 10 years now. In 1997 Mecklenburg County generated approximately 16,157 tons of hazardous wastes or 24.3% of the 66,501 tons of waste generated in North Carolina that same year. Additionally, a total of 44,927 tons of hazardous wastes were transported or stored thoughout Mecklenburg County in 1997.

Last year the Mecklenburg County Department of Environmental Protection Emergency Response Team responded to 11 accidents which had the potential to release hazardous wastes into the environment. Accidental spills and illegal dumping are the most publicized way in which hazardous wastes are released into the environment. However, hazardous wastes are also introduced into the environment unknowingly by the improper use or disposal of household hazardous wastes such as cleaning solvents, detergents, petroleum byproducts and acids.

Hazardous waste is a solid waste, or combinations of solid wastes, which because of its quantity, concentration or physical or chemical characteristics may potentially cause or contribute to an increase in death rates or serious illness rates. The hazard to human health or the environment caused by the substances can be felt immediately or over an extended period of exposure depending on the substance. Commonly, hazardous waste is thought of as any substance that displays one or more of the following characteristics: ignitability, corrosivity, reactivity or toxicity.

In 1978, the nation as a whole became aware of the threat of hazardous wastes when leaking drums of hazardous wastes were found buried throughout neighborhoods in the Love Canal housing development in Niagara, New York. Just two years prior to this discovery, the United States Congress had passed the first law regulating hazardous waste generation, management and disposal. Since that time, there have been numerous news specials about communities across the nation which have been contaminated by hazardous wastes. Many of these wastes have been found to cause cancer, birth defects and a variety of neurological disorders. Because of the seriousness of the threat posed by these chemicals, lawmakers have passed a variety of legislation in an attempt to prevent further contamination of the environment by hazardous wastes.

In 1965, the Unites States Congress passed the Solid Waste Disposal Act. Five years later, in 1970, Congress realized that there was great potential value to be found in materials which were commonly disposed of as municipal solid waste (MSW). This gave birth to the Resource Recovery Act which was passed that same year. In 1976, this act was amended and resulted in the Resource Conservation and Recovery Act (RCRA). This series of acts placed the government of the United States firmly in the arena of waste management and also gave the federal government the ability to regulate solid waste within the United States. Congress gave the United States



TYPICAL HAZARDOUS WASTE GENERATORS

General types of industries which are found to produce hazardous wastes during normal operations include among others:

- Chemical Manufacturers
- Vehicle Maintenance and Repair Shops
- Printing Companies
- Manufacturers of Leather Products
- Construction Industries
- Cleaning Agents and Cosmetics Manufacturers
- Manufacturers and Refinishers of Wood and Furniture Products
- Metal Manufacturing Companies

Environmental Protection Agency (USEPA) the authority and responsibly to act as the regulating agency for these acts.

For the purposes of the RCRA, household hazardous wastes and municipal solid wastes are excluded from this definition. The objective of this definition was to qualify hazardous waste as primarily a product of industry. Given the sampling of people who generate hazardous wastes, it becomes clear why the RCRA defined hazardous waste as a product primarily created by industry. Because of the RCRA focus on industry as the source of hazardous wastes, we have several categories of people who either generate, transport, store, dispose of, or handle hazardous wastes as part of their business enterprises. The generators whose production levels are tracked are large and small quantity generators and conditionally exempt small quantity generators.

Large quantity generators are those generators producing more than 1000kg (2200lbs.) of hazardous waste per month or 1kg of acutely hazardous waste per month. These generators may store their wastes on site for up to 90 days from when the accumulation began. Small quantity generators are generators whose production levels are regulated, but whose totals are not statistically tracked and are those generators producing less than 1000kg (2200lbs.) of hazardous waste per month. These generators may store their wastes on site for up to 180 days from when the accumulation began. Conditionally exempt generators are typically those generators that produce hazardous wastes sporadically or in very small amounts and are those generators producing less than100kg (220lbs.) of hazardous waste per month. These generators may store wastes on site for up to 270 days from when the accumulation began.

HAZARDOUS WASTE IN MECKLENBURG COUNTY

- Large Quantity Generators in Mecklenburg County: 53
- Small Quantity Generators in Mecklenburg County: 311
- Conditionally Exempt Generators in Mecklenburg County: 410
- Tons of Hazardous Waste Generated in Mecklenburg County: 16,157 tons
- Tons of Hazardous Waste Generated in North Carolina: 66,501 tons
- Percentage of Total Hazardous Waste in North Carolina Generated in Mecklenburg County: 24.3%
- Tons of Hazardous Waste handled by TSD's in Mecklenburg County: 44,926.52 tons

Any facility used for the storage, treatment and/or the ultimate disposal of hazardous wastes is a registered Treatment, Storage or Disposal Facility (TSD). There are four registered disposal facilities for hazardous wastes in Mecklenburg County, which are currently inactive. Hazardous wastes are stored or treated at five facilities in Mecklenburg County. In 1997 these facilities handled 44,926.52 tons of hazardous wastes.

Hazardous Waste Transporters are not regulated by the RCRA, but are regulated by the Hazardous Waste Transportation Act and by the Emergency Preparedness and Community Right to Know Act. There are no firm numbers on exactly how much hazardous waste material is transported throughout Mecklenburg County. There are three registered hazardous waste transporters in Mecklenburg County. Significant strides in reducing the amount of hazardous waste generated in Mecklenburg County were made early on. However, the overall generation of hazardous waste is not declining at this time.

CONTAMINATED SITES

The regulation of all handlers and generators of hazardous wastes becomes important when ensuring that these people show due care and caution while handling and dis-

CONTAMINATED SITES AND EMERGENCY RESPONSES

- Current NPL sites in Mecklenburg Co.: 1
- Current SPL sites in Mecklenburg Co.: 128
- Total NPL sites in North Carolina : 28 (w/23 currently being evaluated for addition)
- Total SPL sites in North Carolina : 1094 (w/700 currently being evaluated for addition)
- Total Emergency Responses in 1999: 11

posing of these wastes. There are guidelines and regulations that ensure that these wastes are properly transported, stored and handled. These regulations are in place to protect both the environment and the human population from being unnecessarily exposed to hazardous wastes. However, accidents happen and the environment becomes contaminated with hazardous wastes on occasion. When these accidents happened prior to the acts passed by Congress, the contamination was not always properly cleaned up. This led to the creation of many contaminated sites across the country, including sites throughout North Carolina and Mecklenburg County. These sites are regulated by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which is commonly referred to as the "Superfund Act".

In 1987, the General Assembly of North Carolina passed legislation to create the Inactive Hazardous Sites Program to identify, correct and control properties within North Carolina which had been contaminated by hazardous materials. This act reflects many of the aspects of the Superfund Act and was designed to work within the same frame work. The USEPA and/or NCDENR assesses the sites which are potentially contaminated and prioritizes them for investigation. When these sites are investigated, the extent of contamination is determined. The investigating agency then decides whether or not the site requires clean up based on the presence of contamination and the potential human or environmental impact any contamination present may have. Sites in need of clean up, as deemed by the USEPA, are placed on the National Priority List (NPL). Sites in need of clean up, as determined by the NCDENR, are placed on the State Priority List (SPL). In either case, these sites are attended to as funds become available.

When a spill or accidental release of hazardous material occurs, emergency personnel respond to the scene as needed. Emergency responders include Police and Fire Department units, Mecklenburg County Department of Environmental Protection and elements from either NCDENR or USEPA.

Hazardous waste is a byproduct of modern society. It is incumbent upon industries and consumers to minimize the amounts of hazardous wastes they create. The proper management and reduction of hazardous materials and wastes can reduce the detrimental effects these materials have on the environment. SOER

WWW.

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We Were Green, Have We Lost Our Color?

Thirty years ago, Charlotte had tree-lined streets, small and medium sized parks, undeveloped lots in residential areas and multiple acreage tracts that served as undesignated and informal green belts. We were a green city. We still have our parks, but development has just about eliminated our vacant lots and multiple acreage tracts. The once large, wooded tracts in the county are now residential developments or shopping centers. Charlotte still has tree-lined streets, but only in the older sections of the city. The new residential developments won't be tree-lined for another 25 years and the shopping centers will probably never develop a green image. Small towns are shoulder-to-shoulder with each other or with Charlotte.

Did we foresee economic development? - yes. Did we foresee economic development's affects on open space? - probably not. Did we go to sleep at the wheel? No, we adopted new strategies, new ideas and new leadership to maintain our green.

In 1978, a modest $19.7 million park bond package was passed which "jump started" the efforts to keep the County green. As demonstrated by bond passage in subsequent years, this initial attention to providing open space was and is a serious movement supported by the voters. Efforts to preserve open space ranged from the designation of nature preserves of more than 1000 acres to the development of local parks and greenways. The citizens continued their support in November 1999, passing a $52 million bond package. Where does this put us in relation to other similar areas? It is safe to say we are in the middle of the pack.

How is land identified for potential preservation, whether it is for a park or just for green space? There

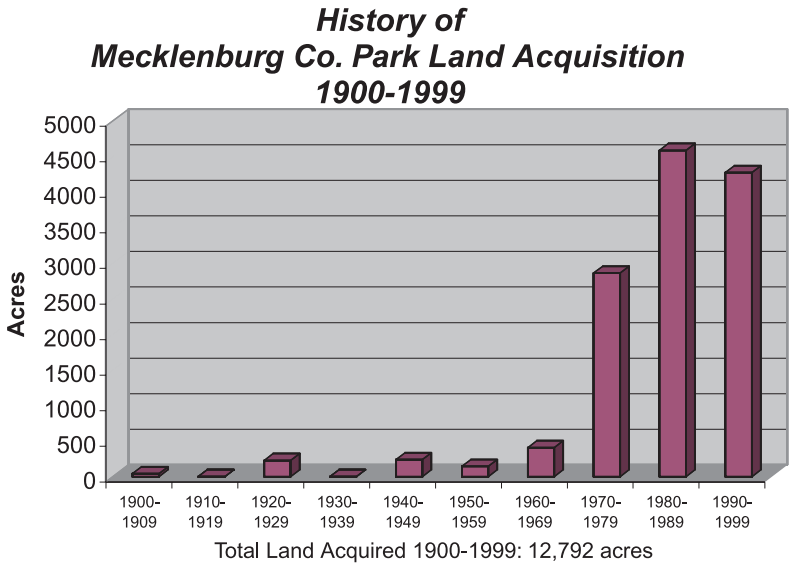
We Were Green, Have We Lost Our Color?

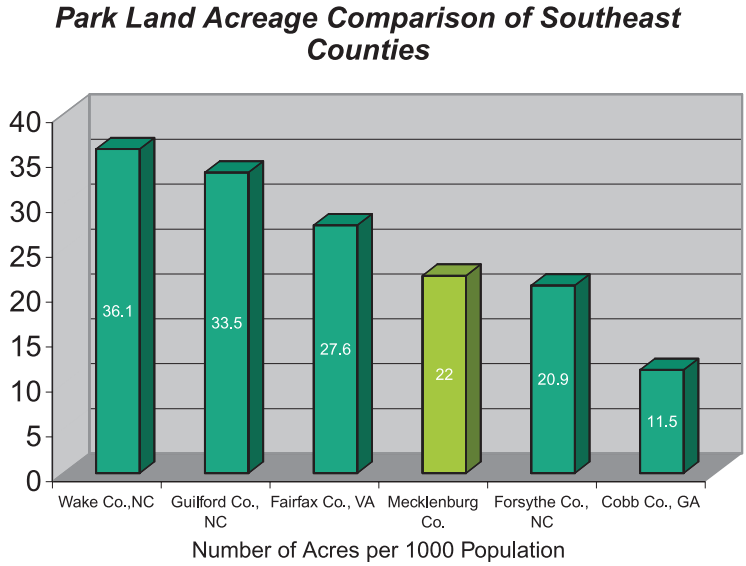
are many ways. Landowners will often want to preserve their land and make it available. Developers may need to preserve some green space as part of plans for development or they may want to combine green space as part of a contribution for a tax break. Some tracts come on the market, particularly as older owners divest themselves of property. Some sites are identified, through intensive investigations, as excellent examples of unique or special habits. Often these habitats were more common in the past, but are becoming rare due to continued economic growth and development. Efforts can then be made to focus limited resources on well defined targets. A summary of one such effort will show how green space can be identified and, using creative measures, be preserved.

From 1993 to 1996 an intensive natural heritage survey of Mecklenburg County was undertaken by a council working under the Mecklenburg County Park and Recreation Department. The objective of the survey was to identify the best remnant natural habitats in the county, document their characteristics and rank them by importance. During this investigation, 43 sites were examined and 27 were determined to be of significance at the County, State, Regional or National level. As a result of this natural heritage survey, six sites consisting of more than 400 acres have been preserved.

Their preservation came about in several ways. The Catawba Lands Conservancy (CLC), a nonprofit organization, purchased one site outright. The CLC received two sites from the State Department of Transportation as a mitigation for wetland impacts resulting from the I-485 outer belt construction project. Charlotte Mecklenburg Utilities bought one as a buffer for the water supply on Mt. Island Lake. The Park and Recreation Department acquired one site adjacent to the Latta Plantation Nature Preserve. Another area was donated to the CLC by an international business corporation. By combining identification, documentation, and public and private commitment with governmental leadership, almost 15,000 acres of land has been preserved.

The bond package passed by the citizens of Charlotte-Mecklenburg in November 1979 was a defining moment for preserving our open or green space. That action has resulted in the improvement of the quality of our life, more habitats for wildlife and better surface and ground water protection. Based on the land acquisition performance since 1978 and the present conservation commitment by the public and private sector, Mecklenburg County will not likely see nature become a distant neighbor.





Includes land acquired by Mecklenburg County and the City of Charlotte for parks, greenways and watershed protection. Source: Meck. Co. Parks and Recreation 1999 General Obligation Bond Referendum Information Handbook.

www.

Dr. James Matthews
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How Mecklenburg County's Parks and Greenways System Helps Our Environment

Mecklenburg County is developing an expansive parks and greenways system. Funded primarily by voter approved bonds since 1978, ten separate referenda bonds totaling $192,315,000 have been passed to acquire land and to develop and rehabilitate recreation facilities. In addition to $52,000,000 for park bonds, in 1999 a very forward-looking item was on the ballot in Mecklenburg County. A $220,000,000 land purchase bond was successfully passed which will fund the County?s projected land acquisition needs over the next ten years. The bonds will buy land for multiple public purposes including parks, greenways, schools, libraries, watershed protection and other needs. The need for acquisition of so much land was identified in the County?s ten-year capital planning document called the capital needs assessment or CNA. The timing of such an aggressive approach to public land acquisition was triggered by the County?s rapid and continuing growth. Officials and staff agreed that if land were not purchased quickly for many of the needs envisioned in the CNA, those opportunities would be lost.

One can travel through any area within this County and see that growth and change are taking place at an astonishing rate. We see I-485 steadily wrapping around the heart of the County forming a necklace of sorts with ?beads? in the form of interchanges scattered along its length. Nearly every bead will generate a star-like pattern of development radiating in all four directions from intersections with the existing roadways. In addition, new subdivisions drive and then follow the extension of sewer and water lines into parts of the county where sparse development has languished for years. At the same time, urban planners and other smart growth

How Mecklenburg County's Parks & Greenways system helps our Environment

advocates are encouraging in-fill development, particularly along future rapid transit corridors. All in all, this place is booming! So, you may ask, how does our parks and greenways system help our environment?

Mecklenburg County is in the ongoing process of implementing ambitious master plans for parks and greenways. This planned, interrelated system currently encompasses over 13,500 acres. True, this is proportionately only a fraction of the County?s total geographic area, but it is where some of this acreage is located that makes the difference. Much of the acreage is found in two strategic types of places. First, a network of nature preserves includes much of the shoreline of Mountain Island Lake, which is the drinking water source for most of this County as well as portions of Gaston County. The nature preserve designation protects over 2,700 acres of land ranging from Latta Plantation Nature Preserve, encompassing a contiguous mass of 1,300 acres, to portions of flood plains along McDowell and Gar Creeks, the two major creeks flowing through the protected watershed into the lake.

This undeveloped land serves to help filter non-point source pollution from our drinking water supply source. Storm waters transport the pollution through the natural drainage conduits (creeks) to the lake. Non-point source pollution is generated from siltation occurring with new development, from pesticides and fertilizers used on residential lawns and commercial landscaped areas as well as run-off from impervious surfaces including petroleum product residues that accumulate on parking lots. Thus the presence of Mecklenburg?s acres of nature preserves on Mountain Island Lake reduces the cost of chemically treating our water before it is piped into our homes. The benefit of this cost saving will compound (like interest in a savings account) and become more significant over time.

The second strategic place where Mecklenburg County?s parks and greenways system enhances the environment is the acreage incorporated into preserved flood plains (or greenways) along more than 16 miles of creeks draining across the County. These protected acres essentially remain in a natural vegetated state except for (underground) utility lines and recreation trails. Several thousand more acres are preserved along our creeks within parks located on the creeks. These flood plains filter and enhance water quality in the same manner as the nature preserve system described above. Vegetation that thrives undisturbed along these creeks also filters some pollutants from the air. Yet another environmental benefit derived from the parks and greenways system is protected habitat that supports a variety of wildlife within our urban setting.

Mecklenburg?s citizens can be assured that their votes for park and land purchase bonds will do (at least) double duty by way of providing places for people to play and by helping to protect our waters, our air quality and natural habitat for plants and many small creatures. In the next few years citizens will see hundreds of acres acquired and protected for these purposes. This is one significant method of sustaining and improving the quality of life in this place we call home.

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LAND ENVIRONMENTAL INDICATORS - 1999

SOLID WASTE	
Municipal Solid Waste Generation (tons)	887,215
Municipal Solid Waste Generated Per Person Per Day (Pounds)	7.5
Solid Waste Management (tons)	
Exported to Cabarrus County (Municipal Solid Waste)	625,260
Exported to South Carolina (Municipal Solid Waste)	259,599
Composted - Yard Waste	49,957
Recycled - Curbside and Drop Centers	44,400
Recycled - Household Hazardous Waste	164
Disposed in Mecklenburg County C&D landfill	228,934
Recycled at C&D Waste Recycling Facility	19,839
Disposed in Cabarrus County C&D Landfill	73,687
Disposed in Lincoln County C&D Landfill	6,078
Disposed in South Carolina C&D Landfills	6,435
Tires Managed (disposed or recycled)	11,218
Solid Waste Disposal in Mecklenburg County (tons)	
Construction and Demolition (C&D) Landfills	228,934
Land Clearing/Inert Debris (LCID) Landfills	(No Data)*
Municipal Solid Waste	0
Construction Permits Issued (residential and commercial)	74,651
Violations by Source Category (Total)	11
Sanitary Landfills	0
MSW Transfer Stations	1
Construction and Demolition Landfills	0
Land Clearing/Inert Debris Landfills	6
Land Clearing Waste Recycling Centers	1
Compost Sites	0
Incinerators	0
C&D Waste Recycling Centers	3
HAZARDOUS WASTE	
Total Hazardous Waste Generated (tons)	16,157
Hazardous Waste Facilities (2000)	
Large Generators	53
Small Generators	311
Conditionally Exempt Generators	410
Treaters, Storers, Disposers (TSD's)	10
Transporters	15
Burners/Blender	12
Recyclers	0
RADIOACTIVE WASTE	
Low-level Waste Generation (cubic feet)	8,135
High-level Waste: Spent Fuel Assemblies	160
Radioactive Waste Management (high level)	
Fuel Assembly Capacity	2,926
Fuel Assemblies Stored	2,469
Percent Storage Capacity Remaining	15.6
Medical Waste Management	(estimate in tons)
Treated by permitted/approved facilities in Mecklenburg County	16,837
Generated by Facilities in Mecklenburg County	7,038
Shipped for Treatment Outside Mecklenburg County	375

* LCID Landfills are not required to track tonnages.

Look Both Ways Before You...

John M. Barry, Ph.D.
Director, Department of Environmental Protection

Now that the rush of Y2K and all of that hubbub is over, it would be nice to turn again to the subject at hand – that of the state of Mecklenburg County's environment. We have left behind a century, that has for the most part, been interesting to say the least. We have endured several military conflicts. We have seen the advent of flight at Kitty Hawk and man walking in space and on the moon. We have seen awareness of environment problems rise to become a worldwide concern. And we have also seen technology grow and produce goods and services that even a few years ago, very few persons could imagine.

But most importantly, we have seen our quality of life improve in just about every aspect. This is true in Mecklenburg County as it is in the remainder of our great country. Yet with all of this change, with all of the advances in technology, with all of the knowledge that we have relative to our quality of life and our environment, are we really better off? Let's take a look back and see what we can learn, before we leap ahead.

I recently found a copy of the front section of the Sunday, September 21, 1975, Charlotte Observer in a drawer in my office. (I'm sure it had some historical significance, because I wasn't even living in Charlotte until 1978.) The headlines covered topics about the CIA, Lee Harvey Oswald, Howard Hunt and the upcoming City of Charlotte City Council elections.

But then, down in the right corner of the front page was the headline "Charlotte 59th in Life Quality Study." 59th? Come on now, can that be right? Yes, native Charlotteans, that's what the article said! Charlotte ranked 59th of the country's 83 cities of similar size in a study measuring "quality of life" standards ranging from swimming pools to smog to sexual discrimination. Eugene, Oregon, topped the 200,000 to 500,000 population category and Mobile, Alabama, was ranked the worst in the government-funded study. The rankings were based on economic, environmental, political, social and health and education components. From a regional environmental perspective, Raleigh, Greenville (SC) and Charleston ranked "adequate," while Charlotte and Columbia were graded "substandard." Fayetteville topped the Carolinas with a grade of "good."

However, it would also seems apparent from this article that in 1974, the citizens of Charlotte-Mecklenburg were thinking about the future. Community goals had already been proposed and adopted; and they were very similar to those being considered now, albeit not as technically detailed. Let's examine a few of these 1974 goals and compare them to the current situation.

Insist upon the countywide enforcement of antipollution and antilitter laws.

Charlotte-Mecklenburg now has federally recognized certified air pollution program, various antilitter ordinances and authority to enforce many State laws and regulations pertaining to illegal solid waste disposal, and a Memorandum of Agreement with the State to enforce water pollution laws and regulations.

continued

Encourage the development of solid waste recycling to minimize need for landfills.

Charlotte-Mecklenburg now has one of the premier voluntary recycling programs in the nation. Our effective overall solid waste management integrates source reduction, reuse, recycling, composting, waste to energy (incineration) in addition to landfilling.

Promote a positive public attitude on mass transit as a desirable alternative to private automobile use. [and] Resolve the problem of pedestrian and vehicular movement in the core city through development of parking facilities, convenient interchange facilities, and a circulation system integrating all forms of movement and traffic.

Charlotte-Mecklenburg and the region are now considering purchasing rights of way for light rail corridors, more extensive express bus patterns and a more complete and integrated bus system to reduce dependence on cars. Plans are being made to accommodate interconnecting greenways, bike lanes and pedestrian friendly areas. Planned communities incorporating residential, retail and business opportunities are being designed and built.

However, from today's perspective, the omission of surface water quality concerns is a major factor. Twenty-five years after this document, we are concerned about our drinking water source, not from a quantity standpoint, but from threats to its quality. In response to this relatively recent concern, Mecklenburg County has instituted the Surface Water Improvements and Management program, affectionately known as SWIM, and are studying and implementing buffer requirements for streams and the Catawba River system.

Yes, a lot has occurred in twenty-five years — much of it good. We have growth in the Metrolina area which has created thousands of jobs and increased our economic base, and due to technology, we are able to determine the effects of pollution on our health and our environment.

On the other hand, not everything that has happened has been for the good. We have continued growth and its accompanying sprawl; increasing air pollution problems from automobiles and industries; wetlands loss; solid waste production considerably higher than the national average; and because of the ever increasing amount of impervious surfaces, problems with the quality and movement of stormwater.

Should we forget the past and move on with the future? No way! It's time we look both at the future and the past, realize that we still have many of the same goals and the same or greater problems that we had some 25 years ago, and buckle down and make some tough political decisions that will guide us into the next century. And most importantly, we need to continue to move ahead – rapidly. We won't kill free-market enterprise or personal choice if we manage growth to lesson dependence on cars, preserve open space or create greenways. What we will do is create more options, preserve our quality of life and protect our health at the same time. Can we accomplish this? Probably so, but it will take political buy-in from regional elected officials and convincing our community of the importance of these efforts.

Still need time to think about it? Maybe you should do your thinking in your car during a high ozone day in August when the interstates are at a standstill.

Making the Vision Real

Bob Freedman and Lisa Renstrom
Co-Chairs, Voices & Choices

There's an old saying that goes "many hands make light work." During the past two years, hundreds of hands have been at work in a process called Voices & Choices, trying to find ways to balance our region's need vibrant economy with the need to protect our environment. Has the work been light? Well, just ask all the volunteers from anywhere in 14 counties around Mecklenburg, and they'll probably say, "Light work? No. Worth it? Yes!"

Voices & Choices began after the November 1998 Regional Environmental Summit in Rock Hill, SC. At that Summit, over 550 people gathered to learn about how the tremendous growth was putting pressure on the environment around us. At the end of the day, they decided that there were six areas around which a Plan should be formed for action, including: Land Use, Transportation, Air Quality, Water Quality, Open Space and Resource Recovery/Recycling. Since May of 1999, volunteers from across the region have been meeting to put together a plan entitled "Make the Vision Real" which lists goals and action steps in each of those areas. We'll talk more about that shortly.

During the process, a very important link was made between economics in our region and the environment. Our beautiful natural heritage has attracted re-locating businesses and industries, new talent and resources from across the country and the world. The Charlotte region had a secret that was out: it's a great place to live! But that quality of life won't last if we don't protect our environment. So, our environment is actually a crucial economic asset.

Voices & Choices Action teams have been meeting for months to come up with specific ideas to protect that asset. Some of their most important ideas include a Regional Land use and Transportation Plan, a Strategic Regional Plan for Open Space, and regional management of the three watersheds in the region. The teams are also calling for recycling programs throughout the region, even in rural areas, and adoption of more stringent air quality controls.

In years past, the business community and environmentalists have many times been on opposite sides of many issues, each mis-trusting the other, and each convinced that the other was unable to see another perspective. As co-chairs of Voices & Choices since the summer of '98, we represented those interests, but we recognized that in truth, we had a common goal: to find a balance that would both protect our environment and further strengthen our economy.

Throughout the process of creating "Make the Vision Real," developers and environmentalists, farmers and urbanites, met to share ideas. Imagine having the Catawba River Keeper and one of Duke Energy's head engineers together for weeks of discussion! No, it wasn't always pretty, but in the end, cooperation, sharing and establishing common ground has worked to produce a plan which we believe will affect significant positive change in the region.

It's not hard to imagine that having clean air and water, parks nearby, convenient transportation and fewer landfills adds to your everyday happiness. But these things don't just happen without careful planning, resources and a commitment to a long range view of how the choices we make today impacts our children and grandchildren. In the end, making the Summit vision of a clean, sustainable region a reality long into the future comes down to individual choices. Choices about how we use energy, how we support different types of housing patterns, and ways to get around.

In the end, solutions don't come from plans and books, they come from you, your neighbor, your friends and colleagues. Although the "Make the Vision Real" phase of Voices & Choices is complete, we're far from done, and it's never too late to get involved. We invite you, on behalf of the hundreds of citizens just like you who created this plan, to participate in continuing to craft new ways to meet the challenges facing our region. Throughout 2000, Voices & Choices will be traveling to solicit feedback and input on "Make the Vision Real," setting priorities for local action in town meetings, electronic forums and old-fashioned sit-downs.

In 2001, we'll convene a second Regional Environmental Summit. Somewhere in the region, hundreds of people will gather to discuss the progress we have made, report on the challenges we still face, and affirm a shared, common vision. What will we have to say to each other? Will we have begun leading the nation in innovative planning and cooperative progress? Can our region remain just as great a place to live as it is now, or even get better? We are optimists about the future, and we'd like to add your voice to Voices & Choices.

Reflections from a longtime Mecklenburg County Resident

I'm going to tell you about "my creek" in more detail than you care to hear. I'm 75 years old and was born and raised in Charlotte. I have lived in the Plaza Midwood neighborhood since 1928. When I was little, I played in a creek that ran between Nassau Boulevard and Tippah Avenue and finally flows into Briar Creek. The people in the neighborhood called it the Van Landingham Creek because it originated on their property and was thought to come from a spring there that fed their fishpond.

The creek was abundant with aquatic life, bullfrogs, crawfish, snails and various water bugs. On hot summer days, my little friends and I would play in it and if thirsty, drink the water by scooping it up in our hands. Amazingly, no one ever was sick from this and it tasted so good. Nearby, were other things like "hoppy" toads and turtles, which we captured and brought home, much to our Mother's consternation. We would dam up portions of the creek with a few rocks and sand and make a little pool. This was great fun because it made something like a little swimming pool except it was only about 6" or 8" deep. This was in the 1930's and early 40's. There were hardly any homes backing up to the creek. I can remember lying in my bed on Kenwood Avenue and hearing the bullfrogs "cheroom cheroom" at night. I went into the Navy in 1941 and did not return until 1958. By that time I heard no bullfrogs. I visited the creek several times after that and saw none of the creatures I have mentioned. Toads were present around our house up into the 1960's, but I don't think I have seen one since that time. Although I don't remember seeing any fish in our Van Landingham Creek, I did see them in a branch of Briar Creek. This is the branch that runs under Belvedere Avenue. There was a fairly sized pool just downstream from Belvedere that was deep enough and wide enough for some of us to "swim" in. We also fished there and caught a small fish that some said were Perch. Of course they are long gone.

Most people my age, did not think about the environment until we were long grown and some do not even now. When I realized what had transpired in our little neighborhood in my lifetime, I became alarmed. People in younger generations and beyond are going to be deprived of a lot of joys of nature.

Charles "Chuck" Paty, Jr.
Charlotte, NC