

REPORT 1

Impact of 1998 Clean Water Bonds



WATER2030



Water 2030 Initiative

The North Carolina Water 2030 Initiative was launched in March 2004 to determine North Carolina's water resource needs for the next 25 years and to explore choices that will ensure that North Carolinians, in every part of the state, will have access to ample supplies of clean water for years to come. The initiative is being led by the N.C. Rural Economic Development Center in collaboration with an advisory group representing business, agriculture, economic development, environmental protection, and national, state and local governments. Funds have been provided by the N.C. General Assembly, U.S. Congress through the Environmental Protection Agency, the N.C. Clean Water Management Trust Fund and the Rural Center Board of Directors.

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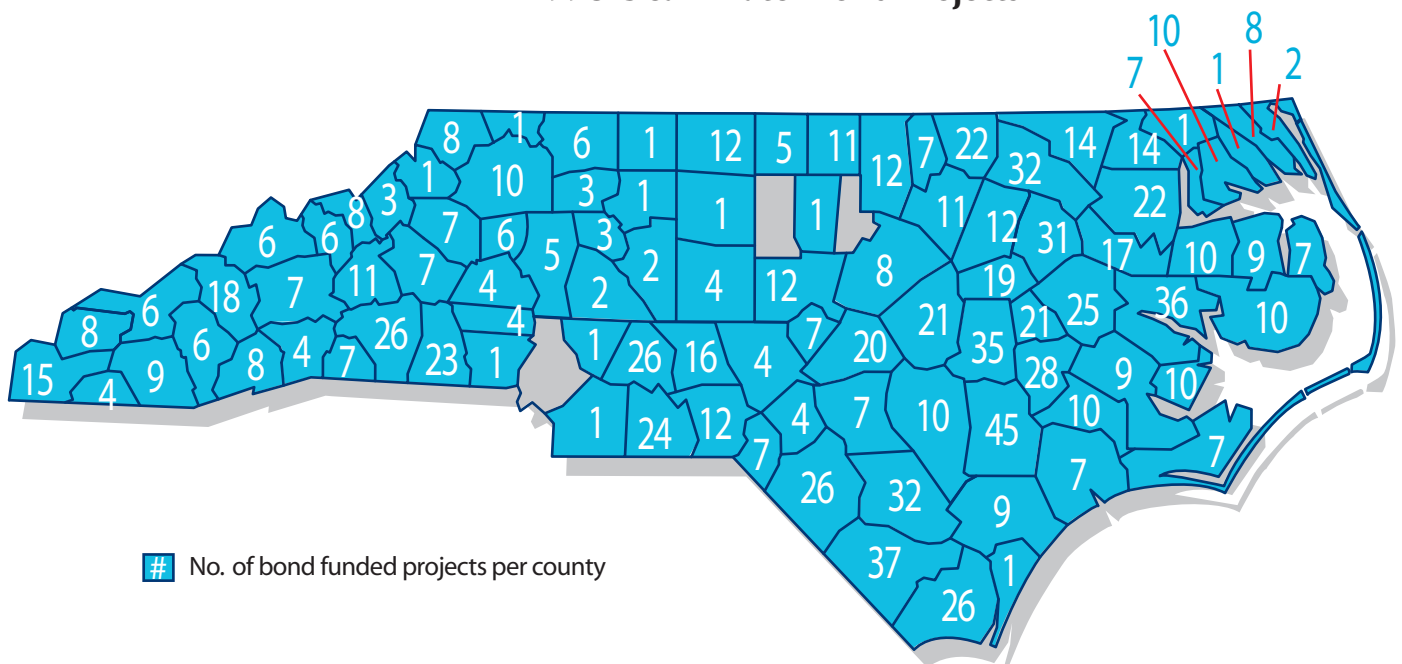
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EXECUTIVE SUMMARY

North Carolina's 1998 Clean Water Bonds provided a vital and timely infusion of cash for North Carolina's water and sewer infrastructure. They enabled many low-wealth communities to make repairs and upgrades that would have been impossible without this \$800 million in state aid. Among noteworthy outcomes:

- The bonds accounted for 30 percent of all water and sewer investments in North Carolina by state and federal sources during the 11 years ending in June 2005.
- They accounted for one-half of all state or federal grants during that period.
- Of the state's 100 counties, 97 received a bond-funded loan or grant for one or more projects.
- Rural, economically distressed areas benefited from three-quarters of all projects financed by the bonds.
- Bond-financed projects were credited with creating or retaining at least 42,000 jobs, primarily in economically distressed communities.
- Bond-financed projects corrected major regulatory violations in 97 communities. The affected systems served 228,400 customers in 55 counties.
- Some 136 bond projects addressed failing septic systems or contaminated wells. The projects served more than 384,000 customers in 59 counties.
- Fifty communities obtained sewer service for the first time.
- Nearly 9 out of 10 bond dollars went toward creating or improving regional utility systems.
- Of 347 wastewater projects that received grants from the Rural Economic Development Center and the N.C. Department of Environment and Natural Resources, 122 included water reuse and 324 implemented other water conservation measures.
- Nearly 140 communities created capital improvement plans with the help of bond funds.

1998 Clean Water Bond Projects



Assessing the impact of the 1998 Clean Water Bonds

On November 3, 1998, North Carolina voters overwhelmingly approved what was then the state's largest ever bond referendum. The vote gave the go-ahead for the state to issue \$800 million in Clean Water Bonds, providing grants and loans to local governments to meet critical water and sewer needs¹. As 2005 drew to a close, nearly all of the funds resulting from the referendum had been expended. The Rural Center was a key player in building the case for the bonds and promoting them to the public. It, therefore, sought to document the impact of the 1998 Clean Water Bonds: where the money went, how it was used and the needs it answered. This report summarizes those findings.

The statewide dilemma leading up to 1998

Water and sewer infrastructure is critical to the prosperity of local communities. It delivers clean, potable water to residences; enables industry to provide jobs for area citizens; and protects vital natural resources, thereby promoting the long-term health and safety of people and the environment. By the 1990s, however, many North Carolina communities were falling behind in their ability to install and maintain these important systems. Their needs were increasing while available resources shrank.

The Rural Center's North Carolina Water and Sewer Initiative, a multi-year study that concluded in 1998, documented approximately \$11.34 billion in repairs, upgrades and expansions needed for public water and sewer systems in North Carolina by 2015. This doubled the best estimates previously available.

N.C. Water and Sewer Initiative Doubles Previous Estimate of Need

| System Type | EPA Estimate (1995) | Rural Center Estimate (1997) |
|-------------|---------------------|------------------------------|
| Water | \$2.71 billion | \$4.00 billion |
| Sewer | \$3.75 billion | \$7.34 billion |
| Total | \$6.46 billion | \$11.34 billion |

Mounting needs. The reasons for the growing crisis were complex and mutually reinforcing. A majority of N.C. systems served fewer than 3,300 customers. Because they lacked economies of scale, these systems were expensive on a per-customer basis to build and maintain, and those high costs often forced systems to postpone needed work. Many of the systems also were old, with crumbling pipes, outdated technologies, and storage and treatment capabilities that were inadequate for a growing population and environmental protection. Some communities could no longer add customers or lacked the capacity to serve prospective industries, limiting their economic potential.

As the need for improvements rose, so did the costs for making them. Both federal and state governments have increased their oversight of water and sewer systems in recent decades. Concerns about health and environmental safety resulted in more stringent

¹ At the same time, voters also approved a second referendum on \$200 million in Natural Gas Bonds, to encourage extension of natural gas lines to regions of the state not previously served.

regulations. This meant higher costs for construction and for violations when communities failed to meet new standards. New stormwater rules added another list of needed improvements that were not reflected in the \$11.34 billion projection. Most of these regulations came without financial resources to help communities meet the increased burden.

Declining resources. Meanwhile, the programs that for years enabled local communities to make water and sewer investments were being reduced or altered. In 1981, the federal government contributed 43 cents of every dollar spent on water and sewer development in North Carolina — primarily through programs operated by the Environmental Protection Agency and the U.S. Department of Agriculture. By 1997, the federal contribution had declined to 17 cents on the dollar. The way federal funds were made available also changed. The EPA, for example, eliminated its grant program and shifted its resources to a revolving loan program operated by the state. USDA in turn increased its emphasis on loans over grants and reduced the maximum contribution on any individual project.

In response to changes in federal programs, North Carolina recognized that some local governments could not meet all needs through loans. The N.C. General Assembly funded a grants program to assist high unit-cost projects, which unaided would result in prohibitive water and sewer rates for local customers. Available funds, however, never provided the deep subsidies often needed by small and rural systems with limited debt capacity. Beginning in 1993, the legislature funded two additional programs operated by the Rural Center. The Supplemental Grants Program helps low-income communities meet local matching requirements for federal aid while the Capacity Building Grants Program helps low-income communities plan and prepare grant applications for water and sewer projects.

As grant money declined, water and sewer system operators increasingly turned to the private market for financing. In 1997, 68 percent of water and sewer infrastructure construction was financed by private market loans.

Communities stranded. The growing emphasis on loans, whether from public agencies or private lenders, left many communities unable to meet critical needs for infrastructure improvements. Approximately 60 percent of local governments — typically smaller and poorer communities — lacked the bond rating to qualify for loans from any source. As a result, more than nine of 10 loans by the EPA-funded State Revolving Loan Fund went to medium-size to large municipalities while violations, fines and moratoria on new connections mounted for communities that could not afford ever-increasing construction costs. Eighty-seven sewer systems were under moratoria and Special Orders by Consent in early 1998. Of those, 74 were small or rural systems.

1998 Clean Water Bonds

In September 1998, both houses of the N.C. General Assembly overwhelmingly passed the Clean Water and Natural Gas Critical Needs Bond Act of 1998, also known as Senate Bill 1354. Two months later, 68 percent of North Carolina voters approved issuance of \$800 million in Clean Water Bonds².

Coupled with other funding, the bonds were expected to cover the near-term demand — about five years’ worth of accumulated water and sewer needs. They were designed to address the most urgent needs of the state’s water and sewer systems — from moratoria and violations of state and federal regulations to failing septic systems and contaminated wells — by serving utilities unable to obtain other financing.

The bond legislation detailed several ways to ensure its goals were met. It established fiscal need and environmental impact as the primary criteria for determining awards. It also created a guideline, to be used in establishing need, for what households should be expected to pay for water and sewer rates: 1.5 percent of median household income. Strategies for improving efficiencies — from water reuse and water conservation to regionalization of utilities — were to count favorably in award decisions. Furthermore, the act allocated more than half of the funds to grant programs, with considerable sums set aside for communities with the lowest ability to pay. In addition, the bill created the State Infrastructure Council to develop a strategic plan for addressing North Carolina’s water supply and wastewater treatment needs long term.

Three agencies were assigned responsibility for administering specific programs funded by the bonds. The legislation directed \$630 million to the N.C. Department of Environment and Natural Resources (DENR) to establish two programs — grants for high unit-cost water and sewer projects and loans for other water and wastewater projects. Then Gov. James B. Hunt Jr. directed the department to move those grants and loans as quickly as possible. Another \$20 million went to the N.C. Department of Commerce for industry-related projects in economically distressed counties. The Rural Center received \$60 million for its Supplemental and Capacity Building Grants programs and \$55 million for a new grants program to help small communities that lacked sewer service. Rural Center funds were prorated over six years. An additional \$35 million was set aside for DENR to provide the state match for federal water and sewer funds.

Final Allocation of 1998 Clean Water Bonds

| | | |
|--|------------------------------|------------------|
| N.C. Department of Environment and Natural Resources | | |
| | High unit-cost grants | \$ 476 million |
| | Water and sewer loans | \$ 100 million |
| | State matching funds | \$ 35 million |
| N.C. Department of Commerce | | \$ 20 million |
| N.C. Rural Economic Development Center | | |
| | Supplemental grants | \$ 70.46 million |
| | Capacity building grants | \$ 17.62 million |
| | Unsewered communities grants | \$ 80.92 million |

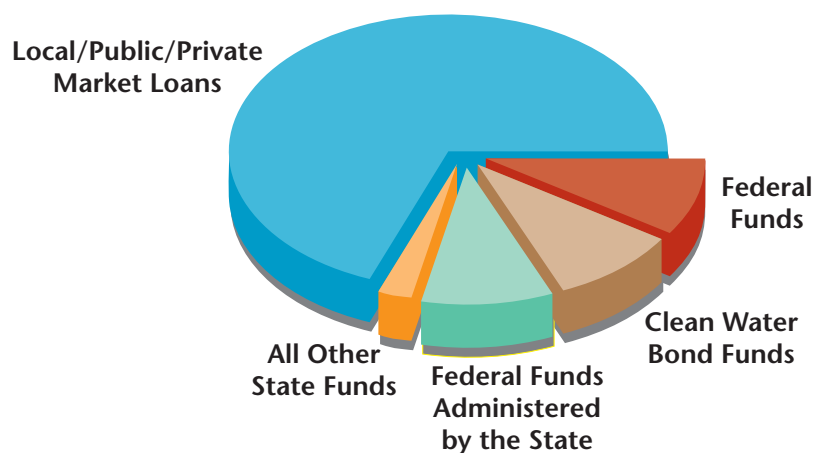
²The Natural Gas Bonds referendum passed with 51 percent of voters in favor.

Adjustments to the allocations. Over the life of the bonds, changing conditions led the General Assembly to reallocate funds among the various programs. Interest rates from private lenders fell so low that loan-worthy communities were able to obtain better terms in the private market, and state loan funds were left untapped. As a result, the legislature in 1999 and again in 2001 reassigned portions of the money intended for loans to grant programs operated by DENR and the Rural Center. Final allocations are reflected in the table at the bottom of page four.

Bonds helped where need was greatest

The 1998 Clean Water Bonds made a difference for individuals and communities all across North Carolina. These funds accounted for approximately 10 percent of all federal, state and private market financing of water and sewer projects from 1995 through 2005, and bond-financed projects took place in 97 of the state's 100 counties³. (A table detailing bond projects by county can be found at the end of this report.) In some years, bond funds exceeded monies from any other single source except private market lenders, making the bonds especially important for communities (60 percent of all local governments in 2005) that lacked borrowing power.

**Total Water and Sewer Funds Spent by Source
1995-2005**



Local/PPML (Public Private Market Loans) – private market loans to local governments.

Federal – infrastructure funding programs funded and administered by a federal agency.

State

1998 Clean Water Bond funds – money coming from the 1998 Clean Water Bonds. These include programs administered by the N.C. Department of Environment and Natural Resources (DENR), the N.C. Department of Commerce and the Rural Center.

Federal funds administered by the state – federal money allocated to state-administered programs, e.g., the EPA's State Revolving Loan Funds (administered by DENR) and the federal Community Development Block Grant program (administered by the N.C. Department of Commerce).

All other state funds – funds from previous state bond issues and those appropriated by the N.C. General Assembly as part of its regular budgetary process. Programs benefiting from these funds include those administered by DENR, the N.C. Clean Water Management Trust Fund and the Rural Center.

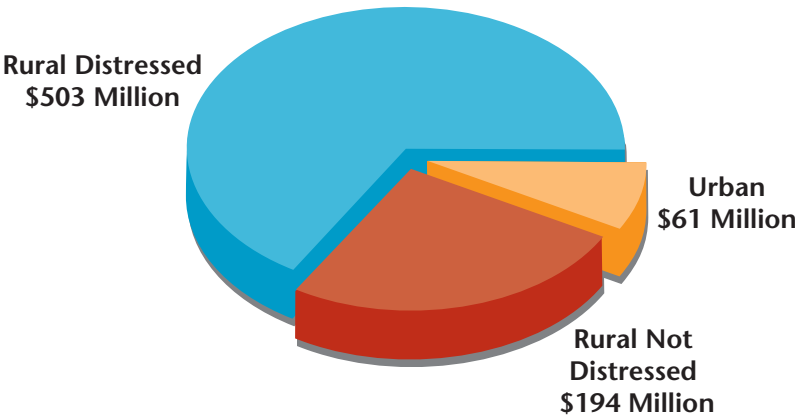
**Annual Water and Sewer Funding
1995-2005**

| | FY95 | FY96 | FY97 | FY98 | FY99 | FY00 | FY01 | FY02 | FY03 | FY04 | FY05 | TOTAL |
|---|----------------------|----------------------|----------------------|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|------------------------|
| Federal | \$76,447,089 | \$47,053,183 | \$56,532,603 | \$90,564,184 | \$75,044,237 | \$75,929,110 | \$85,925,783 | \$75,919,480 | \$70,615,615 | \$102,792,280 | \$58,849,920 | \$815,673,484 |
| 1998 State Clean Water Bond | \$30,766,714 | \$41,685,254 | \$3,129,378 | \$2,682,443 | \$111,198,279 | \$160,520,851 | \$146,928,566 | \$129,439,344 | \$76,141,534 | \$70,334,464 | \$36,098,785 | \$808,925,611 |
| Federal Funds Administered By the State | \$57,747,815 | \$50,528,971 | \$36,709,867 | \$46,519,027 | \$113,633,994 | \$127,292,333 | \$40,008,018 | \$49,751,325 | \$112,319,687 | \$70,470,077 | \$131,439,065 | \$836,420,179 |
| All Other State Funds | \$14,778,264 | \$5,958,705 | \$16,290,078 | \$28,887,239 | \$50,761,074 | \$23,639,053 | \$17,837,080 | \$16,859,308 | \$15,117,094 | \$14,354,432 | \$28,830,083 | \$233,321,410 |
| Local/Public/Private Market Loans | \$175,268,192 | \$468,616,851 | \$234,574,604 | \$406,666,936 | \$744,100,576 | \$358,939,937 | \$733,501,318 | \$507,113,402 | \$837,186,622 | \$704,242,122 | \$816,413,802 | \$5,986,634,362 |
| TOTALS | \$355,008,074 | \$613,842,964 | \$347,236,530 | \$575,319,829 | \$1,094,738,160 | \$746,321,284 | \$1,024,200,765 | \$779,082,859 | \$1,111,380,552 | \$962,193,375 | \$1,071,631,655 | \$8,680,975,046 |

³Data in this report do not include expenditures by public utility owners from local revenues such as utility fees and enterprise funds, nor do they include spending on privately owned water and sewer systems.

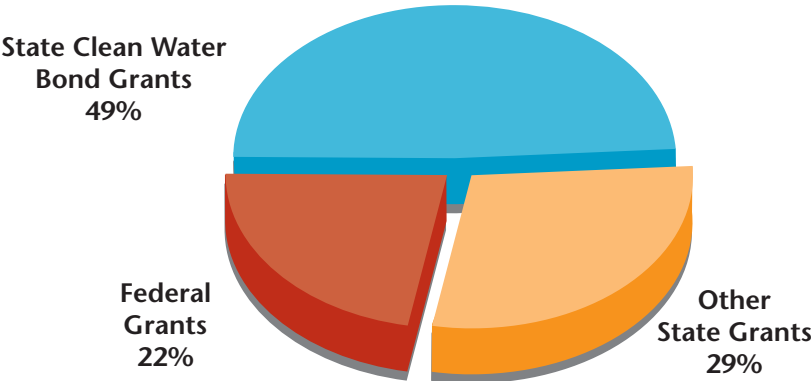
This ability — to help communities most in need — was the bonds’ most important contribution to public infrastructure financing. Rural, economically distressed areas benefited from three-quarters of all projects financed by the bonds: \$503 million worth of planning and construction altogether. These systems were more likely (before the new investments) to be small, serving fewer than 3,300 customers. Bond funds also made it possible to provide sewer service for the first time in 50 communities, many of which had been plagued by failing septic systems.

Counties Benefiting from Clean Water Bonds



Market conditions that led to a reallocation of bond money — from loan programs to grants — allowed more resources than originally anticipated to be devoted to communities least able to pay for needed projects on their own. The original formula for the Clean Water Bonds designated 62 percent of the money for loans and 38 percent for grants. The final allocations directed 17 percent to loans and 83 percent to grants. The bonds accounted for one-half of all state or federal grants from 1995 through 2005. This was particularly significant as federal agencies continued to reduce or eliminate grant programs.

**State and Federal Water and Sewer Grants
1995-2005**



Two of the grant programs — the Rural Center's Supplemental Grants and the Commerce Department's industry program — tracked the direct effect of water and sewer projects on jobs. With these, too, the impact on communities in need was significant. These two programs estimated that 42,000 jobs were created or retained because of funded projects. Eighty-two percent of those projects occurred in rural distressed counties just as other economic forces were slashing jobs in agriculture and manufacturing, making the bond impact all the more important.

Impact of Bonds on Job Creation/Retention

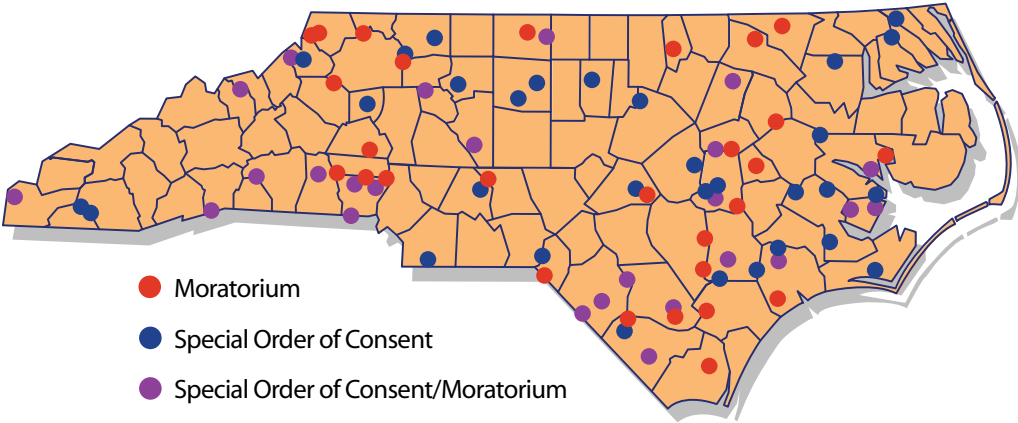
| | Total Projects | Jobs Retained | Jobs Created | Projects Serving Rural Distressed Counties | Jobs Created in Rural Distressed Counties |
|--|----------------|---------------|--------------|--|---|
| Rural Center Supplemental Grants (\$70.46 million) | 356 | 23,707 | 14,655 | 291 | 8,997 |
| N.C. Department of Commerce (\$20 million) | 62 | 0 | 3,635 | 50 | 2,607 |
| Total | 418 | 23,707 | 18,290 | 341 | 11,604 |

Specific issues addressed

In its legislation, the N.C. General Assembly noted that the bond funds would answer only a fraction of the current and near-term need for water and sewer funding. It, therefore, established several areas of special emphasis. Results in these areas also bear examination.

Current critical needs. At the time the bonds were approved, nearly 100 communities were under moratoria that prevented new utility connections or Special Orders of Consent, directing improvements within a specified time.

North Carolina Sewer Moratoria and Special Orders of Consent 1998



Many others also had been cited for violations of state and federal regulations, resulting from such problems as inadequate sewage treatment when rainwater and groundwater entered the sewer system and overtaxed its capacity. The 1998 Clean Water Bonds enabled 97 of these problems to be addressed. Those 97 projects served 228,400 customers in 55 counties. System owners estimate that these projects reduced inflow and infiltration of groundwater and rainwater by 10 million gallons per day.

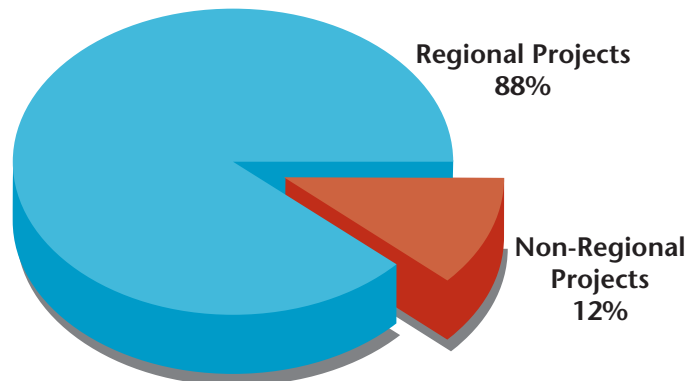
Roughly half of the state population — mostly in rural areas — continues to rely on well water and septic systems. In some areas of the state, well contamination presents serious health concerns. Nitrates from excessive fertilizer use have leached into the groundwater in some regions, for example. The floods that accompanied Hurricane Floyd in 1999 also contaminated wells across large sections of the east. High groundwater tables in the east and unsuitable soils elsewhere present problems for traditional septic systems. Clean Water Bonds funded 136 projects in 59 counties that addressed at least one of these problems. The projects served more than 384,000 customers.

Clean Water Bond Projects Impact on Septic/Well Problems

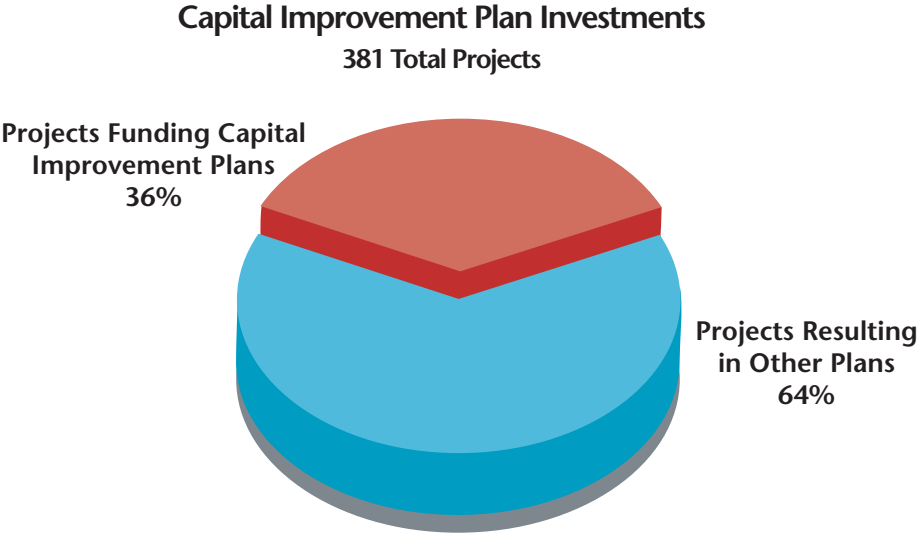
| | Rural Center (Supplemental Program) | Rural Center (Unsewered Program) | DENR (Water) | DENR (Sewer) |
|--|--|-------------------------------------|--------------|--------------|
| Projects with Failed Septics | 49 | 38 | 0 | 4 |
| Projects with Well Contamination | 33 | 0 | 12 | 0 |
| Water and/or Sewer Customers Served | 14,279 | 8,142 | 347,778 | 13,997 |
| N.C. Counties Served | 38 | 29 | 11 | 3 |

Encouraging efficiency. The legislation specifically sought to encourage efficiency in water and sewer systems through mergers and consolidations of smaller systems. Of the 1,041 Clean Water Bond projects administered by DENR and the Rural Center, 88 percent went to new or existing regional systems. These projects ranged in scope from cooperation by two neighboring towns to multi-county systems.

Clean Water Bond Regional Projects



Also emphasized was the importance of sound fiscal policies, creative planning and efficient operation and management on the part of local governments. Capacity Building Grants administered by the Rural Center directly addressed these issues. Of the 381 Capacity Building Grants issued, more than a third resulted in capital improvement plans. Others involved feasibility studies, examinations of utility rate structure and similar pertinent issues.



Water reuse and conservation. Bond legislation favored water reuse and conservation measures, both for their fiscal efficiency and for the environmental benefits in helping reduce effluent discharged into the state’s waterways. Such measures range from requirements for low-flow showerheads and toilets to the diversion of partially treated wastewater for use in irrigation. Of 347 wastewater projects funded by the Rural Center and DENR, 122 included water reuse and 324 implemented other water conservation measures.

Water Reuse and Conservation Measures

| | Total Wastewater Projects | WW Projects with Reuse Element | WW Projects Implementing Water Conservation Measures |
|---------------|---------------------------|--------------------------------|--|
| Rural Center | 244 | 83 | 230 |
| DENR | 103 | 39 | 94 |
| Totals | 347 | 123 | 324 |

Clean Water Bond Funds by County

| County | Economic Classification | Rural Center Projects | | Commerce Projects | | DENR Projects | | Grand Totals | |
|------------|-------------------------|-----------------------|-----------------|-------------------|-----------------|----------------|-----------------|---------------------------|----------------------------|
| | | Total Projects | Total \$ Amount | Total Projects | Total \$ Amount | Total Projects | Total \$ Amount | Total Projects per County | Total \$ Amount per County |
| Alamance | urban | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0 | \$0 |
| Alexander | rural distressed | 6 | \$1,090,000 | 0 | \$0 | 0 | \$0 | 6 | \$1,090,000 |
| Alleghany | rural distressed | 1 | \$18,167 | 0 | \$0 | 0 | \$0 | 1 | \$18,167 |
| Anson | rural distressed | 17 | \$3,778,896 | 2 | \$500,000 | 5 | \$12,530,108 | 24 | \$16,809,004 |
| Ashe | rural distressed | 5 | \$687,863 | 1 | \$377,762 | 2 | \$6,000,000 | 8 | \$7,065,625 |
| Avery | rural distressed | 3 | \$81,322 | 0 | \$0 | 0 | \$0 | 3 | \$81,322 |
| Beaufort | rural distressed | 22 | \$7,492,440 | 5 | \$1,369,990 | 9 | \$14,715,570 | 36 | \$23,578,000 |
| Bertie | rural distressed | 18 | \$8,380,358 | 0 | \$0 | 4 | \$10,730,630 | 22 | \$19,110,988 |
| Bladen | rural distressed | 29 | \$4,925,696 | 0 | \$0 | 3 | \$4,943,500 | 32 | \$9,869,196 |
| Brunswick | rural | 19 | \$8,879,159 | 1 | \$500,000 | 6 | \$14,200,155 | 26 | \$23,579,314 |
| Buncombe | urban | 0 | \$0 | 0 | \$0 | 7 | \$16,974,620 | 7 | \$16,974,620 |
| Burke | rural | 5 | \$1,179,170 | 0 | \$0 | 2 | \$3,000,000 | 7 | \$4,179,170 |
| Cabarrus | urban | 0 | \$0 | 0 | \$0 | 1 | \$1,644,181 | 1 | \$1,644,181 |
| Caldwell | rural | 7 | \$562,500 | 0 | \$0 | 0 | \$0 | 7 | \$562,500 |
| Camden | rural distressed | 5 | \$3,730,607 | 0 | \$0 | 3 | \$6,417,635 | 8 | \$10,148,242 |
| Carteret | rural | 2 | \$280,000 | 0 | \$0 | 5 | \$7,184,888 | 7 | \$7,464,888 |
| Caswell | rural distressed | 5 | \$1,784,000 | 0 | \$0 | 0 | \$0 | 5 | \$1,784,000 |
| Catawba | urban | 0 | \$0 | 0 | \$0 | 4 | \$2,000,386 | 4 | \$2,000,386 |
| Chatham | rural | 3 | \$413,780 | 3 | \$728,750 | 6 | \$8,212,753 | 12 | \$9,355,283 |
| Cherokee | rural distressed | 10 | \$1,709,291 | 0 | \$0 | 5 | \$10,669,100 | 15 | \$12,378,391 |
| Chowan | rural distressed | 7 | \$1,390,336 | 0 | \$0 | 0 | \$0 | 7 | \$1,390,336 |
| Clay | rural distressed | 2 | \$326,350 | 0 | \$0 | 2 | \$3,963,531 | 4 | \$4,289,881 |
| Cleveland | rural distressed | 22 | \$10,716,959 | 0 | \$0 | 1 | \$1,859,100 | 23 | \$12,576,059 |
| Columbus | rural distressed | 33 | \$12,277,828 | 2 | \$850,000 | 2 | \$3,950,000 | 37 | \$17,077,828 |
| Craven | rural | 7 | \$6,356,500 | 0 | \$0 | 2 | \$6,000,000 | 9 | \$12,356,500 |
| Cumberland | urban | 3 | \$7,837,467 | 0 | \$0 | 4 | \$4,106,327 | 7 | \$11,943,794 |
| Currituck | rural distressed | 2 | \$202,032 | 0 | \$0 | 0 | \$0 | 2 | \$202,032 |
| Dare | rural distressed | 4 | \$850,140 | 0 | \$0 | 3 | \$3,635,112 | 7 | \$4,485,252 |
| Davidson | urban | 2 | \$1,866,616 | 0 | \$0 | 0 | \$0 | 2 | \$1,866,616 |
| Davie | rural | 1 | \$400,000 | 1 | \$400,000 | 1 | \$2,281,200 | 3 | \$3,081,200 |
| Duplin | rural distressed | 29 | \$12,484,051 | 3 | \$1,269,640 | 13 | \$32,532,851 | 45 | \$46,286,542 |
| Durham | urban | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0 | \$0 |
| Edgecombe | rural distressed | 24 | \$4,652,224 | 2 | \$800,000 | 5 | \$11,819,190 | 31 | \$17,271,414 |
| Forsyth | urban | 1 | \$2,000,000 | 0 | \$0 | 0 | \$0 | 1 | \$2,000,000 |
| Franklin | rural | 7 | \$1,174,566 | 1 | \$500,000 | 3 | \$4,050,104 | 11 | \$5,724,670 |
| Gaston | urban | 0 | \$0 | 0 | \$0 | 1 | \$2,104,681 | 1 | \$2,104,681 |
| Gates | rural distressed | 1 | \$40,000 | 0 | \$0 | 0 | \$0 | 1 | \$40,000 |
| Graham | rural distressed | 6 | \$1,214,922 | 0 | \$0 | 2 | \$1,016,356 | 8 | \$2,231,278 |
| Granville | rural | 5 | \$3,309,500 | 2 | \$600,000 | 5 | \$4,396,751 | 12 | \$8,306,251 |
| Greene | rural distressed | 17 | \$4,511,000 | 0 | \$0 | 4 | \$10,632,221 | 21 | \$15,143,221 |
| Guilford | urban | 0 | \$0 | 0 | \$0 | 1 | \$3,000,000 | 1 | \$3,000,000 |
| Halifax | rural distressed | 22 | \$6,566,553 | 6 | \$2,166,425 | 4 | \$6,893,058 | 32 | \$15,626,036 |
| Harnett | rural | 12 | \$2,496,777 | 0 | \$0 | 8 | \$15,198,047 | 20 | \$17,694,824 |
| Haywood | rural distressed | 16 | \$5,744,986 | 0 | \$0 | 2 | \$4,055,067 | 18 | \$9,800,053 |
| Henderson | rural | 1 | \$32,500 | 0 | \$0 | 3 | \$7,341,709 | 4 | \$7,374,209 |
| Hertford | rural distressed | 11 | \$1,693,672 | 2 | \$500,000 | 1 | \$2,600,000 | 14 | \$4,793,672 |
| Hoke | rural distressed | 3 | \$758,243 | 0 | \$0 | 1 | \$2,705,666 | 4 | \$3,463,909 |
| Hyde | rural distressed | 9 | \$4,407,133 | 0 | \$0 | 1 | \$3,000,000 | 10 | \$7,407,133 |
| Iredell | rural | 3 | \$443,719 | 0 | \$0 | 2 | \$3,308,313 | 5 | \$3,752,032 |
| Jackson | rural distressed | 4 | \$1,123,893 | 2 | \$162,375 | 0 | \$0 | 6 | \$1,286,268 |
| Johnston | rural | 8 | \$1,632,250 | 0 | \$0 | 13 | \$17,356,774 | 21 | \$18,989,024 |
| Jones | rural distressed | 8 | \$1,150,206 | 0 | \$0 | 2 | \$3,632,800 | 10 | \$4,783,006 |
| Lee | rural | 2 | \$531,063 | 2 | \$590,000 | 3 | \$6,000,000 | 7 | \$7,121,063 |
| Lenoir | rural distressed | 24 | \$6,290,749 | 1 | \$50,000 | 3 | \$7,400,000 | 28 | \$13,740,749 |
| Lincoln | rural | 2 | \$436,000 | 0 | \$0 | 2 | \$348,266 | 4 | \$784,266 |

Clean Water Bond Funds by County

| County | Economic Classification | Rural Center Projects | | Commerce Projects | | DENR Projects | | Grand Totals | |
|--------------|-------------------------|-----------------------|----------------------|-------------------|---------------------|----------------|----------------------|---------------------------|----------------------------|
| | | Total Projects | Total \$ Amount | Total Projects | Total \$ Amount | Total Projects | Total \$ Amount | Total Projects per County | Total \$ Amount per County |
| Macon | rural distressed | 7 | \$1,093,000 | 0 | \$0 | 2 | \$3,358,350 | 9 | \$4,451,350 |
| Madison | rural distressed | 6 | \$863,678 | 0 | \$0 | 0 | \$0 | 6 | \$863,678 |
| Martin | rural distressed | 12 | \$1,750,813 | 3 | \$938,534 | 2 | \$4,071,766 | 17 | \$6,761,113 |
| McDowell | rural distressed | 8 | \$1,562,320 | 0 | \$0 | 3 | \$6,458,579 | 11 | \$8,020,899 |
| Mecklenburg | urban | 0 | \$0 | 0 | \$0 | 0 | \$0 | 0 | \$0 |
| Mitchell | rural distressed | 8 | \$1,186,995 | 0 | \$0 | 0 | \$0 | 8 | \$1,186,995 |
| Montgomery | rural distressed | 9 | \$1,521,425 | 5 | \$1,795,180 | 2 | \$3,724,904 | 16 | \$7,041,509 |
| Moore | rural | 3 | \$751,570 | 0 | \$0 | 1 | \$2,000,000 | 4 | \$2,751,570 |
| Nash | rural | 9 | \$1,191,546 | 0 | \$0 | 3 | \$6,423,855 | 12 | \$7,615,401 |
| New Hanover | urban | 0 | \$0 | 0 | \$0 | 1 | \$3,000,000 | 1 | \$3,000,000 |
| Northampton | rural distressed | 12 | \$1,843,410 | 0 | \$0 | 2 | \$5,999,940 | 14 | \$7,843,350 |
| Onslow | rural distressed | 4 | \$1,096,606 | 1 | \$166,260 | 2 | \$4,967,290 | 7 | \$6,230,156 |
| Orange | urban | 0 | \$0 | 0 | \$0 | 1 | \$2,000,000 | 1 | \$2,000,000 |
| Pamlico | rural distressed | 9 | \$4,117,400 | 0 | \$0 | 1 | \$3,000,000 | 10 | \$7,117,400 |
| Pasquotank | rural distressed | 1 | \$36,000 | 0 | \$0 | 0 | \$0 | 1 | \$36,000 |
| Pender | rural | 6 | \$3,724,614 | 1 | \$500,000 | 2 | \$6,000,000 | 9 | \$10,224,614 |
| Perquimans | rural distressed | 8 | \$1,295,000 | 1 | \$250,000 | 1 | \$2,061,000 | 10 | \$3,606,000 |
| Person | rural distressed | 7 | \$950,062 | 0 | \$0 | 4 | \$7,516,852 | 11 | \$8,466,914 |
| Pitt | rural | 21 | \$4,052,003 | 0 | \$0 | 4 | \$11,548,675 | 25 | \$15,600,678 |
| Polk | rural distressed | 7 | \$271,000 | 0 | \$0 | 0 | \$0 | 7 | \$271,000 |
| Randolph | rural | 3 | \$497,555 | 0 | \$0 | 1 | \$3,000,000 | 4 | \$3,497,555 |
| Richmond | rural distressed | 7 | \$1,483,788 | 4 | \$952,470 | 1 | \$609,819 | 12 | \$3,046,077 |
| Robeson | rural distressed | 16 | \$5,822,704 | 3 | \$1,287,250 | 7 | \$13,362,001 | 26 | \$20,471,955 |
| Rockingham | rural distressed | 10 | \$1,100,000 | 2 | \$987,500 | 0 | \$0 | 12 | \$2,087,500 |
| Rowan | urban | 2 | \$2,509,400 | 0 | \$0 | 0 | \$0 | 2 | \$2,509,400 |
| Rutherford | rural distressed | 24 | \$6,965,000 | 0 | \$0 | 2 | \$2,546,985 | 26 | \$9,511,985 |
| Sampson | rural | 7 | \$448,691 | 0 | \$0 | 3 | \$7,760,000 | 10 | \$8,208,691 |
| Scotland | rural distressed | 4 | \$3,836,000 | 2 | \$340,105 | 1 | \$646,100 | 7 | \$4,822,205 |
| Stanly | rural distressed | 16 | \$3,399,666 | 0 | \$0 | 10 | \$18,316,418 | 26 | \$21,716,084 |
| Stokes | rural | 1 | \$245,750 | 0 | \$0 | 0 | \$0 | 1 | \$245,750 |
| Surry | rural | 3 | \$255,200 | 0 | \$0 | 3 | \$6,986,388 | 6 | \$7,241,588 |
| Swain | rural distressed | 6 | \$5,056,557 | 0 | \$0 | 0 | \$0 | 6 | \$5,056,557 |
| Transylvania | rural distressed | 6 | \$742,475 | 0 | \$0 | 2 | \$1,791,147 | 8 | \$2,533,622 |
| Tyrrell | rural distressed | 7 | \$5,640,255 | 0 | \$0 | 2 | \$4,044,375 | 9 | \$9,684,630 |
| Union | rural | 1 | \$375,000 | 0 | \$0 | 0 | \$0 | 1 | \$375,000 |
| Vance | rural distressed | 6 | \$975,436 | 0 | \$0 | 1 | \$511,740 | 7 | \$1,487,176 |
| Wake | urban | 0 | \$0 | 0 | \$0 | 8 | \$12,378,366 | 8 | \$12,378,366 |
| Warren | rural distressed | 17 | \$2,796,261 | 3 | \$548,000 | 2 | \$4,918,596 | 22 | \$8,262,857 |
| Washington | rural distressed | 9 | \$1,545,214 | 0 | \$0 | 1 | \$3,000,000 | 10 | \$4,545,214 |
| Watauga | rural distressed | 1 | \$40,000 | 0 | \$0 | 0 | \$0 | 1 | \$40,000 |
| Wayne | rural distressed | 19 | \$6,730,965 | 0 | \$0 | 16 | \$38,574,850 | 35 | \$45,305,815 |
| Wilkes | rural | 9 | \$4,186,567 | 0 | \$0 | 1 | \$3,000,000 | 10 | \$7,186,567 |
| Wilson | rural distressed | 13 | \$2,860,510 | 0 | \$0 | 6 | \$12,571,345 | 19 | \$15,431,855 |
| Yadkin | rural | 2 | \$410,000 | 1 | \$121,500 | 0 | \$0 | 3 | \$531,500 |
| Yancey | rural distressed | 5 | \$3,489,600 | 0 | \$0 | 1 | \$219,580 | 6 | \$3,709,180 |
| TOTAL | | 786 | \$238,631,521 | 62 | \$19,251,741 | 255 | \$500,779,571 | 1,103 | \$758,662,833 |

Summary

| | # of Counties | # of Projects | Total Amount |
|------------------|---------------|---------------|---------------|
| Urban | 15 | 36 | \$61,422,044 |
| Rural | 26 | 240 | \$193,804,108 |
| Rural Distressed | 59 | 827 | \$503,436,681 |
| | 100 | 1,103 | \$758,662,833 |

Glossary

Bond rating — a numerical figure assigned by the N.C. Municipal Council to a local government's capacity to assume debt. The rating is based on several indicators of financial health and stability, including budgetary soundness, tax base and demographics. Bond ratings less than 75 on a scale of 1-100 are assessed as more risky for investment. Local governments with those low ratings have limited, if any, access to the private market for financing. Because of the locality's inability to repay, loans from public agencies also may be difficult to obtain.

Capital Improvement Plan — a community plan for short- and/or long-term physical development.

Economically distressed — a term assigned to the lowest three tiers of North Carolina's five-tier rankings for counties. The N.C. Department of Commerce assigns the tiers annually based on several economic indicators.

High unit costs — utility improvements that, spread out over the customer base, would result in combined water and sewer utility rates exceeding 1.5 percent of median household income.

Moratorium — an order imposed on utility owners to deny any additional water or sewer connections. Moratoria are most often issued to sewer systems that have serious, ongoing problems with their treatment capacity or collection systems, resulting in untreated or partially treated sewage being released into public waterways.

Notices of violation — a notice from a state agency that a system has violated state or federal regulations. NOV's may carry fines and other penalties.

Public sewer system — wastewater treatment and/or collection lines and related infrastructure owned by a local government. (Regional or interconnected utilities may count as more than one "system" if local governments retain ownership of individual portions.)

Public water system — water treatment and/or distribution lines and related infrastructure owned by a local government. (Regional or interconnected utilities may count as more than one "system" if local governments retain ownership of individual portions.)

Regional projects — water or sewer improvement projects that are regional in scope. These may range from cooperation by two neighboring towns to multi-county systems.

Rural — counties with a population density of fewer than 200 people per square mile (1990 Census). Of North Carolina's 100 counties, 85 are rural.

Septic system — an onsite treatment system for wastewater, most often belonging to an individual residence or business.

Special Order by Consent — an agreement that a sewer system operator or other permit holder enters into with the Environmental Management Commission to achieve some stipulated actions designed to reduce, eliminate or prevent water quality degradation. Limits set for particular environmental standards may be relaxed under an SOC for the time determined reasonable to make the necessary improvements.

State matching funds — 20 percent match for federal infrastructure money.

Urban — counties with a population density of 200 people per square mile or greater (1990 Census). Fifteen of North Carolina's 100 counties are urban.

Water reuse and conservation — measures to reduce water use and/or pollution going into public waterways from wastewater treatment plants. Water conservation may be as simple as low-flow toilets and showerheads. Water reuse, or recycling, typically involves reusing partially treated wastewater for beneficial purposes, such as irrigation, industrial processes and toilet flushing.

Sources of water and sewer funding

Federal programs (funded and administered by a federal agency)

■ The Appalachian Regional Commission (ARC) awards grants for water and sewer projects in its service area from funds appropriated to the commission annually by Congress. The maximum grant for a single project is \$200,000.

■ The Economic Development Administration (EDA), an arm of U.S. Department of Commerce, provides matching-grant assistance to economically distressed areas, primarily for projects that will create and retain private-sector jobs.

■ The U.S. Department of Agriculture (USDA), through its Rural Utilities Service, provides loans, grants and loan guarantees for facilities in rural areas and cities and towns of 10,000 or fewer.

State programs

■ The N.C. Department of Environment and Natural Resources, Division of Water Quality (DENR-DWQ), has three separate programs: the wastewater portion of State Revolving Loan Fund, which is funded primarily by the EPA with a 20 percent match by the state; State Revolving Loan and Grant Program, funded by the state; and the State Revolving Fund, generated by interest earned on the State Revolving Loan Fund.

■ The N.C. Department of Environment and Natural Resources, Public Water Supply Section (DENR-PWS), administers a set of programs for water systems parallel to the sewer programs of the Division of Water Quality.

■ The N.C. Department of Commerce, Division of Community Assistance (DCA), administers the small cities' portion of HUD's Community Development Block Grant (CDBG) program. Localities apply for funding for specific projects. Among the eligible uses for these funds are water and sewer infrastructure to correct severe health or environmental problems.

■ The N.C. Department of Commerce, Commerce Finance Center (CFC), operates the Industrial Development Fund, which awards grants to water and sewer programs intended to create jobs. This program originated with funds from the federal CDBG program.

■ The N.C. Clean Water Management Trust Fund (CWMTF), created with state appropriations in 1996, makes grants to local governments, state agencies and conservation nonprofits to help finance projects that specifically address water pollution problems.

■ The nonprofit N.C. Rural Economic Development Center (Rural Center) administers three separate programs funded by the N.C. General Assembly. Its Supplemental Grants Program helps low-wealth communities meet matching requirements for federal infrastructure programs. The Capacity Building Grants Program funds planning for capital improvement, often in preparation for other grant or loan applications. The Unsewered Communities Grants Program was created with money from the 1998 Clean Water Bonds to help communities financing their first public sewer system.

Local/PPML (Public Private Market Loans) — private loans to local governments. These loans may take the form of general revenue bonds, special obligation bonds, tax increment bonds and installment or lease purchase debt.

Federal funds administered by the state — money allocated to state-administered programs. The EPA's State Revolving Loan Funds (administered by the N.C. Department of Environment and Natural Resources) and the federal Community Development Block Grant program (administered by the N.C. Department of Commerce) are two examples.

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MISSION

The mission of the North Carolina Rural Economic Development Center is to develop, promote and implement sound economic strategies to improve the quality of life of rural North Carolinians. The center serves the state's 85 rural counties, with a special focus on individuals with low to moderate incomes and communities with limited resources.

Created in 1987, the Rural Center operates a multi-faceted program that includes conducting research into rural issues; advocating for policy and program innovations; and building the productive capacity of rural leaders, entrepreneurs and community organizations.

The center is a private, nonprofit organization, funded by both public and private sources and led by a 50-member board of directors.