

REPORT 2

Trends in Water and Sewer Financing



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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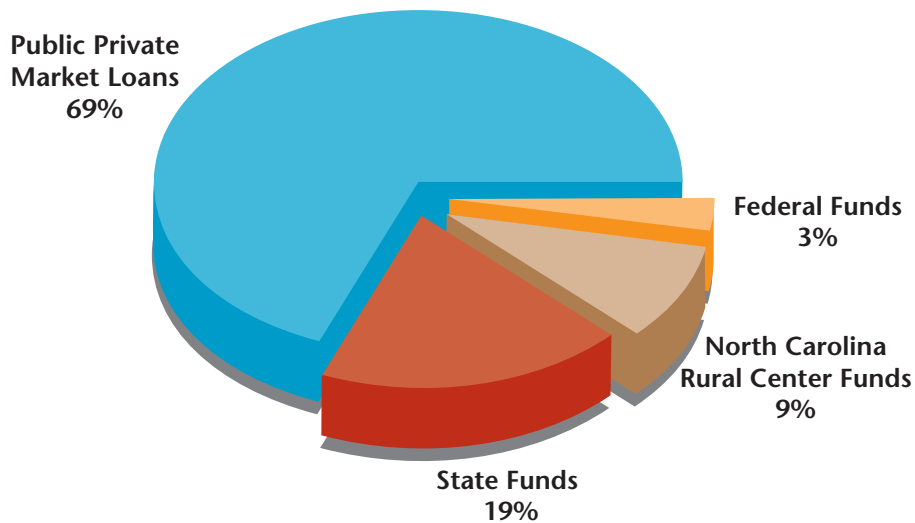
Jean Crews-Klein, N.C. Rural Economic Development Center

EXECUTIVE SUMMARY

The N.C. Rural Economic Development Center has charted annual financing for water and sewer projects statewide for the years 1995 through 2005. Several significant trends emerge from the analysis.

- Private market lenders are the dominant source of water and sewer financing. Private loans accounted for 70 percent of total financing for the entire period.
- Because of low bond ratings, approximately 60 percent of N.C. local governments cannot qualify for most infrastructure lending programs. Among the factors considered in establishing bond ratings are demographics, tax base, fiscal soundness and managerial practices.
- The U.S. EPA role in infrastructure financing is declining. Once a primary source of grants, the agency since 1990 has limited its financing to loans. The loan funds now are being reduced.
- USDA also has reduced the amount of grant funds for water and sewer improvements. USDA's Rural Utilities Service will operate in 2006 with the smallest amount of grant funds in years. In addition, USDA will lower the cap on the proportion of a project's total cost that may be funded through a grant.
- State contributions to infrastructure financing are becoming more important. Programs administered and/or financed by the state accounted for 60 percent of non-private loans and grants.
- The state has become the most important source of grant funding. Nearly 80 percent of all grants issued during the study period originated with the state.
- The 1998 Clean Water Bonds accounted for a large portion of state financing during this period. Approximately half of all grants issued for the entire 11-year period came from bond money.
- Sewer spending outpaced water supply investments slightly. Early indications are that water and stormwater investments will account for a growing proportion of spending over the coming decades.

**Total Funds Allocated for Water and Sewer Projects
1995-2005**



Trends in Water and Sewer Financing

Sources of Funding for N.C. Projects, 1995-2005

Each year since 1994, the N.C. Rural Economic Development Center has compiled information on funding for water and sewer infrastructure projects statewide. Funders have made use of these reports to plan for and make decisions on projects and to manage their own resources. The current report takes tracking a step further. It charts the annual funding information for an 11-year period (FY 1995-2005, inclusive) and provides analysis of the emerging trends. The goal is to provide another significant piece of information that will aid state decision-makers as they contemplate alternatives for meeting North Carolina's growing need for investments in water, sewer and stormwater infrastructure.

Infrastructure funders

This tracking report covers all of the major funders to which local governments may apply for assistance in financing water and sewer infrastructure.

Funds are credited to the administering agency. The U.S. Environmental Protection Agency is the largest source of federal funds for water and sewer infrastructure, but these funds are distributed to the states, which administer revolving loan funds. In this tracking report, therefore, EPA funds are reported through the administering agency, the N.C. Department of Environment and Natural Resources. Similarly, the N.C. Department of Commerce administers two programs funded by the U.S. Department of Housing and Urban Development (HUD).

Not included in the tracking report are local government investments derived from utility customers — such as water and sewer rates and utility hookup fees. Also not included are funds from the large cities' entitlement grants from HUD's Community Development Block Grants program. Twenty-three North Carolina cities receive these direct appropriations, which may be used for projects benefiting low- to moderate-income individuals.

Three agencies are listed as federal funders. These three agencies administer their programs directly.

- The **Appalachian Regional Commission** 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**, 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**, 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.

Five state agencies and one nonprofit organization administer water & sewer programs.

- **The N.C. Department of Environment and Natural Resources, Division of Water Quality**, 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**, administers a set of programs for water systems that parallel the sewer programs of the Division of Water Quality.
- **The N.C. Department of Commerce, Division of Community Assistance**, administers the small cities' portion of HUD's Community Development Block Grants (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**, operates the economic development portion of the state's CDBG allocation. This program awards grants to water and sewer programs intended to create jobs.
- **The N.C. Clean Water Management Trust Fund**, created with state appropriations in 1996, makes grants to local governments, state agencies and conservation nonprofits to help finance projects that address water pollution problems.
- **The nonprofit N.C. Rural Economic Development 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.

Tracking figures for these state programs include nearly \$800 million generated by the 1998 Clean Water Bonds. Bond funds were allocated to DENR's loan and grants programs, the Commerce Finance Center and the Rural Center. A more complete discussion of the Clean Water Bonds may be found in a separate publication, "Impact of 1998 Clean Water Bonds."

The final funding source tracked — **loans from banks and other private lending institutions** — has become the largest single source of capital investments for water and sewer construction projects. These loans take several forms, including general obligation bonds, revenue bonds, special obligation bonds, tax increment bonds and installment, or lease-purchase, debt.

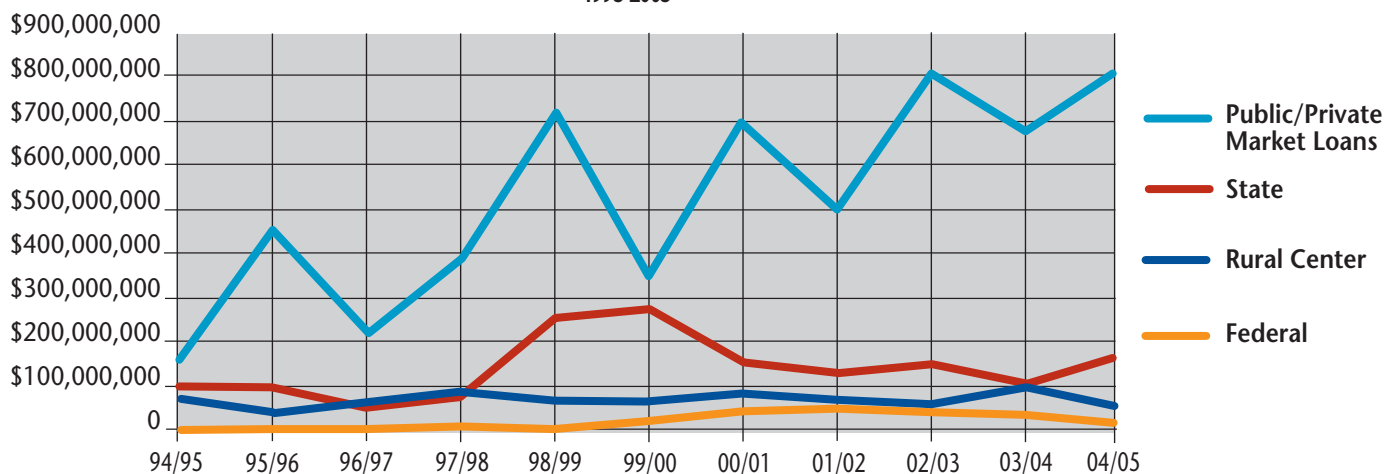
Investment trends

Tables and graphs at the end of this publication show aggregate and annual funding for water and sewer infrastructure by source, year and funding type (loans versus grants). An examination reveals several trends.

Communities increasingly rely on private lenders to finance infrastructure needs.

Private loans accounted for 70 percent of total financing for the entire period. Private loans exceeded the combined financing by federal and state sources in all but two of the 11 years, and they became the increasingly dominant source of funding beginning in 1999. Low interest rates during this period clearly benefited municipalities, sometimes making private market loans more economical choices than government-sponsored loans. Declining federal appropriations, which would have resulted in long delays for projects on waiting lists for government grants and loans, also encouraged utility owners to seek other sources of financing. These loans, however, benefited only those communities — mostly medium-size to large municipalities — considered credit-worthy. Approximately 60 percent of North Carolina local governments cannot qualify for most infrastructure loan programs.

North Carolina Water and Sewer Funding
by Administering Agent
1995-2005



The EPA role in infrastructure financing is declining. With passage of the federal Clean Water Act in 1972, EPA was given a leading role nationally in financing sewer infrastructure. Although funding has varied from year to year, there has been a clear downward trend in available money for infrastructure projects since the 1980s. Recent cuts have been particularly deep with some attempts to eliminate infrastructure funding altogether. The type of financing available through EPA has changed as well. In the beginning, the agency awarded grants representing as much as 75 percent of the total cost of a project. The cap was lowered to 55 percent in 1985, and by 1990, grants were eliminated altogether. Today, all EPA construction funds are allocated to the states to capitalized revolving loan programs.

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

		FY95	FY96	FY97	FY98	FY99	FY00	FY01	FY02	FY03	FY04	FY05	SOURCE TOTAL
U.S. Department of Agriculture	LOAN	45,275,600	26,897,400	36,095,400	61,334,500	52,862,000	55,947,500	53,126,050	36,637,325	43,904,000	69,388,000	39,629,000	521,096,775
	GRANT	22,798,000	15,023,400	16,437,700	15,085,300	14,787,800	13,897,400	20,022,600	30,617,701	22,375,000	32,074,900	14,179,000	217,298,80
	ANNUAL TOTAL	68,073,600	41,920,800	52,533,100	76,419,800	67,649,800	69,844,900	73,148,650	67,255,026	66,279,000	101,462,900	53,808,000	738,395,576

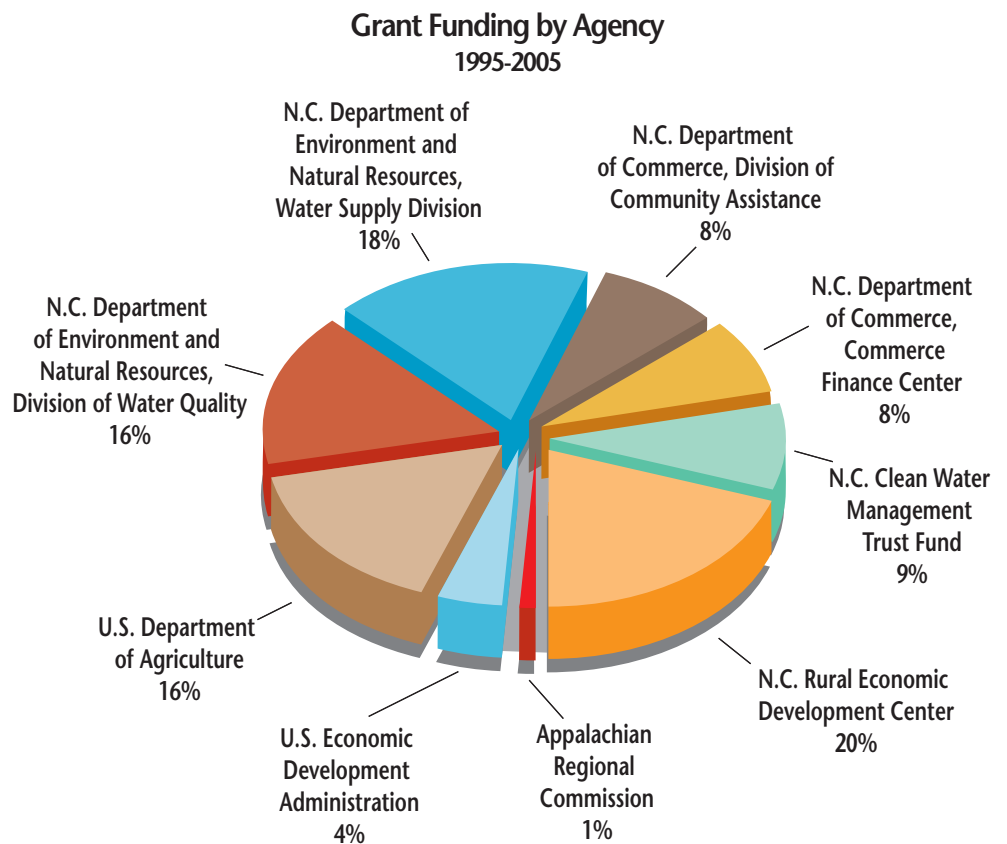
USDA also has reduced the amount of grant funds for water and sewer improvements. USDA's Rural Utilities Service is the second largest source of federal infrastructure funding. Beginning in the mid-1990s, the proportion of funds it allocated to grants began to decrease. The national shift to loans was accelerated by a program that encouraged the service's state offices to exchange, where possible, grant funds for lending capital. In pursuing this, many states, including North Carolina, dramatically increased the total amount of USDA funds placed into projects statewide. Through 2005, the state office also increased the amount of funds coming to North Carolina by competing successfully for funds in the separate, national pool. North Carolina's office led the nation last year in the total amount of USDA funds placed in any one state. FY 2006 signals a significant change for North Carolina. The starting allocation to the state has been reduced, with a further reduction in the proportion of those funds going into grants. Furthermore, the overall budget cut for USDA diminishes prospects for obtaining additional sums through the national pool. To account for these changes, the North Carolina office will lower the cap on the share of a project's total cost that may be funded through a grant from 45 percent to 20 percent or \$1 million, whichever is lower.

**Loan and Grant Funding by Agency
1995-2005**

Funding Source	Agency	Loan	Grant	Total
Federal	Appalachian Regional Commission	0	\$18,283,238	\$18,283,238
	Economic Development Administration	0	\$58,994,670	\$58,994,670
	U.S. Department of Agriculture	\$521,096,775	\$217,298,801	\$738,395,576
State	N.C. Department of Environment & Natural Resources			
	Division of Water Quality	\$654,573,739	\$215,646,863	\$870,220,602
	Water Supply Division	\$165,126,507	\$238,220,532	\$403,347,039
	N.C. Department of Commerce			
	Division of Community Assistance	0	\$113,703,371	\$113,703,371
	Commerce Finance Center	\$701,951	\$107,216,666	\$107,918,617
	N.C. Clean Water Management Trust Fund	0	\$119,609,039	\$119,609,039
N.C. Rural Economic Development Center	0	\$263,859,532	\$263,859,532	
Private/Public Market Loans		\$5,986,634,362	0	\$5,986,634,362

As a result, state contributions to infrastructure financing are becoming more important. Through budget appropriations and bonds, the state has provided funds for critically needed water, sewer and stormwater projects. State agencies and the N.C. Rural Economic Development Center (which receives state funding) together awarded 60 percent of publicly-funded loans and grants.

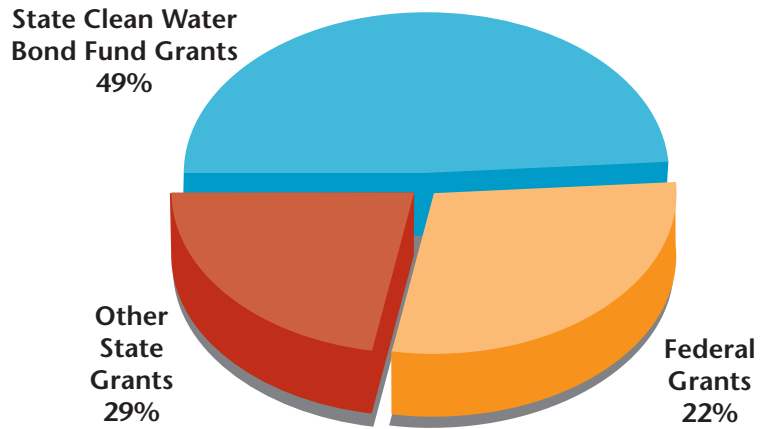
The state has become *the most important source of grant funding*. Of all grants that were issued during the 11 years studied, nearly 80 percent came from state funds. Grants are critical if low-wealth communities and those with high unit costs are to make needed infrastructure investments.



The 1998 Clean Water Bonds accounted for a large portion of state financing during this period. The 1998 referendum approved issuance of \$800 million in bonds for water and sewer projects. Tracking charts show the resulting increase in state funding beginning in 1999. The bonds provided a critical boost in state grants — accounting for a majority of all state-issued grants and approximately half of all grants issued by federal or state agencies throughout the 11 years. The bond funds were nearly depleted by the end of 2005.

State and Federal Water and Sewer Grants

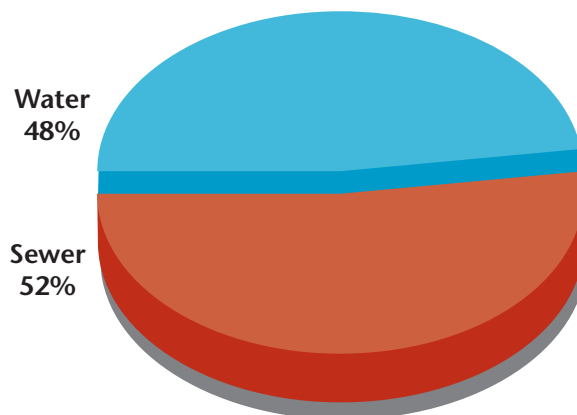
1995-2005



Sewer spending outpaced water supply investments. Expenditures to reduce pollution going into streams and rivers, necessary to meet stricter state and federal clean water standards, constituted a majority of infrastructure improvements in this period. Early indications are that water and stormwater investments will account for a growing proportion of spending over the coming decades.

Comparison of Water and Sewer Funding

1995-2005



Going forward

Infrastructure financing has become an issue of national concern. The U.S. Environmental Protection Agency (EPA), the Water Infrastructure Network (WIN), the American Society of Civil Engineers and other organizations have examined national needs for infrastructure capital investments. Although their estimates vary, all conclude that the need for capital to finance the repair, upgrade and expansion of infrastructure systems is large and growing. In November 2002, the Congressional Budget Office conducted its own study of capital needs. It placed the annual cost of needed water, sewer

and stormwater construction through 2019 at \$26.0 billion to \$42.7 billion.¹ This range roughly coincides with the estimates of the EPA at the lower end and WIN at the higher end. The estimate does not account for any investments that will be required to add new customers.

The EPA suggests that the potential funding gap for water and sewer infrastructure will be eliminated if municipalities increase their capital budgets by 3 percent annually (after inflation)². The Congressional Budget Office, on the other hand, cites a need to increase investments at a rate of 14 percent a year. This figure, unlike the EPA's, includes the costs of financing. The financing gap, however, may have increased since these analyses because of declining federal investments.

All of the national studies qualify their need estimates by noting the limited information available on the age and condition of most water and sewer systems. In this regard, North Carolina policymakers can have greater assurance.

From 1994 to 1998, the N.C. Rural Economic Development Center undertook a detailed study of water and sewer infrastructure in 78 of the state's 100 counties. It not only obtained estimates of needed investments, but also produced the nation's first comprehensive, standardized information base on a state's public community water and sewer systems. This information was incorporated into the state database of the N.C. Center for Geographic Information and Analysis. With projections for the 22 counties not included in the initial survey, the study estimated that the state's water and sewer systems would require approximately \$11.34 billion in repairs, upgrades and expansions by 2015. The study brought into focus a serious shortfall in financing, particularly for infrastructure needs in low-wealth communities, and resulted in passage of a referendum for \$800 million in Clean Water Bonds in 1998.

The Rural Center recently concluded an even more detailed study. Called the Water 2030 Initiative, the new study covers the entire state, includes stormwater as well as water and sewer systems, and takes into account recent investments along with increasing needs that result from new regulations and population growth. It documents \$16.6 billion in needed investments by 2030. Further details of the capital needs are contained in the report "Impact of 1998 Clean Water Bonds."

For local governments that provide utility services, the law mandates that drinking water be safe and that wastewater and stormwater be disposed of in an environmentally safe manner. They have no option but to meet federal and state regulatory standards. Larger systems serving concentrated centers of population have the means to answer this challenge. Economies of scale and higher incomes create viable financing options for them. Many smaller and rural communities, however, face an uncertain future. In December 2005 — after improvements made possible by the N.C. Clean Water Bonds — 64 rural communities remained under moratoria, Special Orders of Consent or other

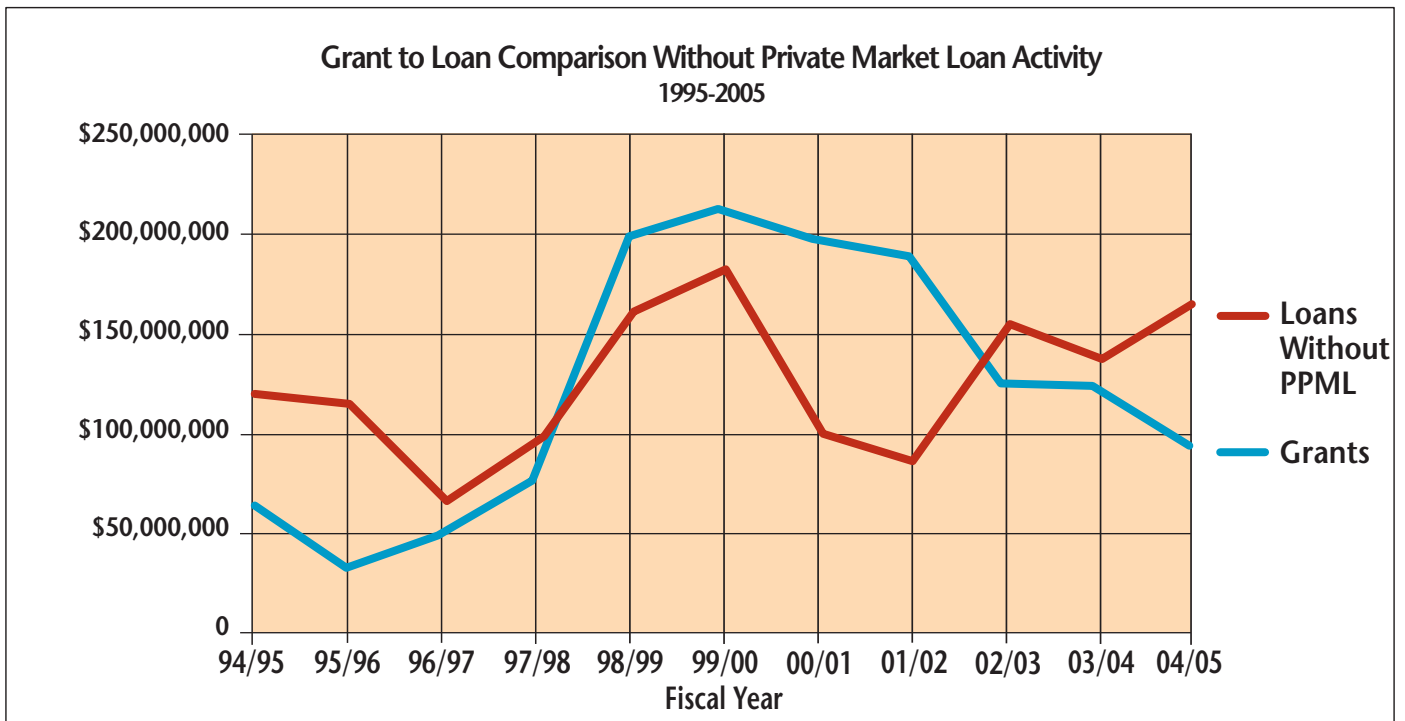
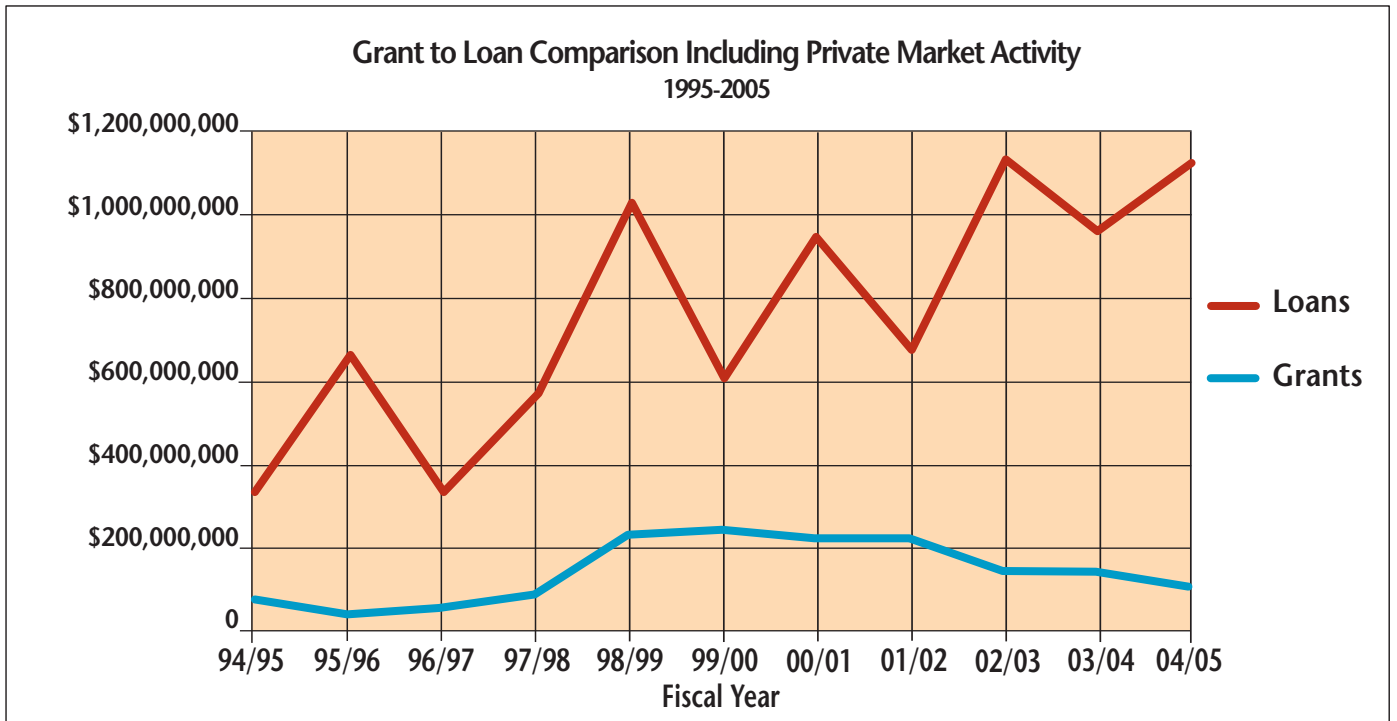
¹ "Future Investments in Drinking Water and Wastewater Infrastructure." Congressional Budget Office, November 2002.

² "The Clean Water and Drinking Water Infrastructure Gap Analysis," U.S. Environmental Protection Agency, September 2002.

³ "Future Investments in Drinking Water and Wastewater Infrastructure," Congressional Budget Office, November 2002.

⁴ "Clean Water: Our Livelihood, Our Life. A Report of the North Carolina Water and Sewer Initiative." N.C. Rural Economic Development Center, October 1998.

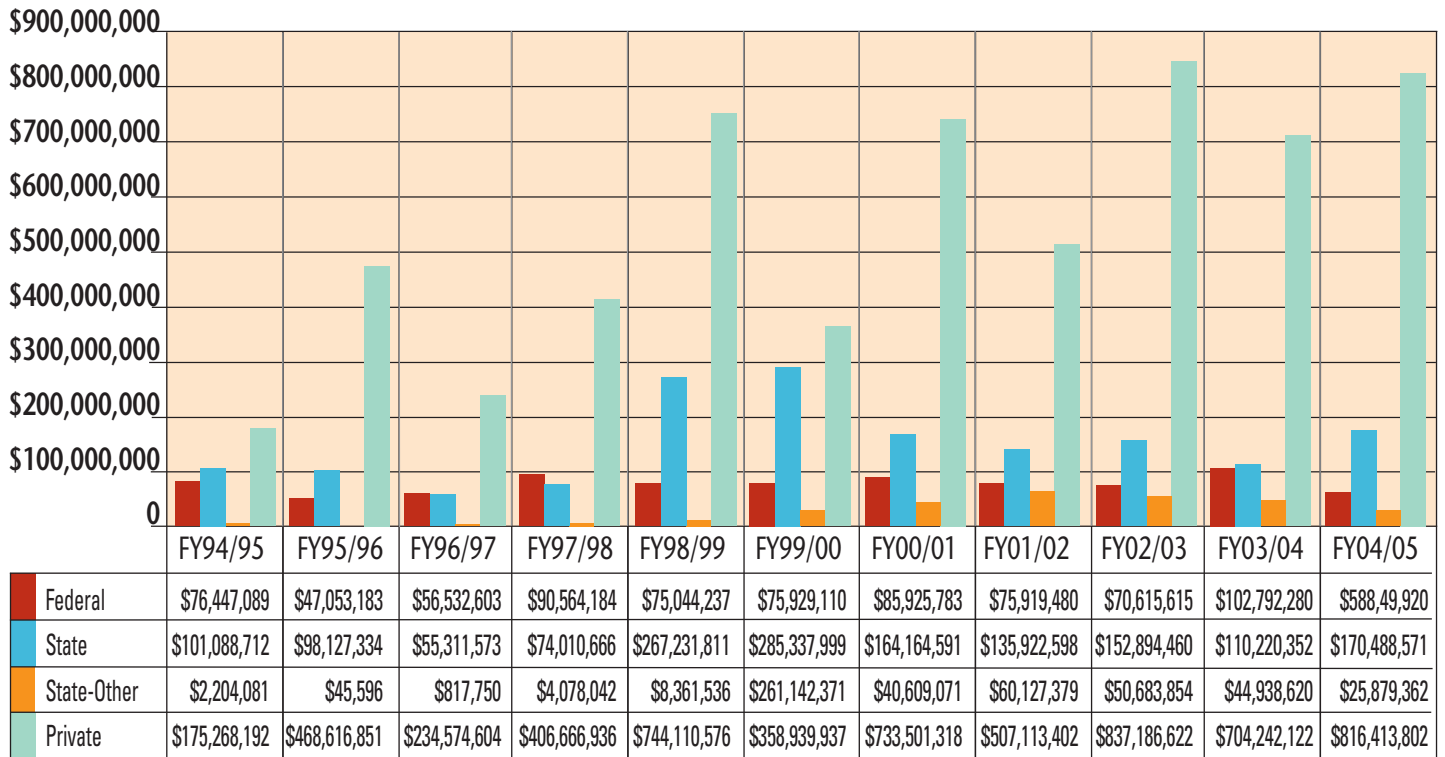
regulatory orders. Others face equally serious situations. With limited or no access to loans and dwindling grant resources, 60 percent of all public water and sewer systems in North Carolina struggle to comply with regulations as they serve their communities.



Comparison of Funding Sources

Agency	FY94/95	FY95/96	FY96/97	FY97/98	FY98/99	FY99/00	FY00/01	FY01/02	FY02/03	FY03/04	FY04/05	TOTAL
Federal Sources												
Appalachian Regional Commission	3,448,062	981,100	2,672,503	2,004,657	1,852,437	1,304,810	472,400	2,349,954	999,615	1,329,380	868,320	18,283,238
U.S. Economic Development Administration	4,925,427	4,151,283	1,327,000	12,139,727	5,542,000	4,779,400	12,304,733	6,314,500	3,337,000	3,755,300	4,173,600	58,994,670
U.S. Department of Agriculture	68,073,600	41,920,800	52,533,100	76,419,800	67,649,800	69,844,900	73,148,650	67,255,026	66,279,000	101,462,900	53,808,000	738,395,576
	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
State Sources												
N.C. Dept. of ENR, Division of Water Quality	69,101,750	85,366,416	25,226,098	34,652,482	55,131,827	159,849,022	80,032,237	66,809,057	93,871,051	84,067,609	116,113,053	870,220,602
N.C. Dept. of ENR, Water Supply Division	8,003,536	1,024,263	953,677	542,323	142,993,261	84,473,908	57,881,311	45,935,814	38,368,101	6,758,463	16,412,382	403,347,039
N.C. Dept. of Commerce, Commerce Finance Center	9,205,162	5,777,950	12,841,720	9,928,622	18,345,649	17,376,016	8,413,964	6,318,419	5,538,214	5,039,848	9,133,053	107,918,617
N.C. Clean Water Management Trust Fund	0	0	0	17,575,432	41,064,740	6,893,000	5,149,220	7,976,000	7,840,000	8,277,647	24,833,000	119,609,039
N.C. Dept. of Commerce, Div. of Community Assistance	14,778,264	5,958,705	16,290,078	11,311,807	9,696,334	16,746,053	12,687,860	8,883,308	7,277,094	6,076,785	3,997,083	113,703,371
	101,088,712	98,127,334	55,311,573	74,010,666	267,231,811	285,337,999	164,164,592	135,922,598	152,894,460	110,220,352	170,488,571	1,614,798,668
State-Other												
N.C. Rural Economic Development Center	2,204,081	45,596	817,750	4,078,043	8,361,536	26,114,238	40,609,071	60,127,379	50,683,855	44,938,621	25,879,362	263,859,532
	2,204,081	45,596	817,750	4,078,043	8,361,536	26,114,238	40,609,071	60,127,379	50,683,855	44,938,621	25,879,362	263,859,532
Private												
Private/Public Market Loans	175,268,192	468,616,851	234,574,604	406,666,936	744,110,576	358,939,937	733,501,318	507,113,402	837,186,622	704,242,122	816,413,802	5,986,634,362
	175,268,192	468,616,851	234,574,604	406,666,936	744,110,576	358,939,937	733,501,318	507,113,402	837,186,622	704,242,122	816,413,802	5,986,634,362
												GRAND TOTAL
FISCAL YEAR TOTALS	355,008,074	613,842,964	347,236,530	575,319,829	1,094,748,160	746,321,284	1,024,200,764	779,082,859	1,111,380,552	962,193,375	1,071,631,655	8,860,966,046

Comparison of Funding Sources 1994-2005



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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.

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