THE WASTEWATER TREATMENT CONSTRUCTION GRANTS PROGRAM: THE IMPACT OF "NEW" FEDERALISM

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The 1970s federal attempt to address water quality with national standards and national funding ran into Regan administration initiated budget cuts. This left state and local governments with the task of meeeting national water standards with largely local resources. The problem is illustrated in the cases of Muncie, Indiana and Norman, Oklahoma.

The 1972 wastewater treatment construction grants program (WTCG) was established with its three subsequent revisions to help US localities and states comply with federal standards on water quality. This intergovernmental program exemplifies the innate struggles within federalism over fiscal and political responsibility and administration. The program was designed to implement the national goal of clean water, compensate for inadequate state and local funding for wastewater treatment, and provide fiscal incentives to convince states and localities to cooperate in correcting the problem of spillovers and externalities (Dilger 1989). This article will provide an historical context to the current situation, a brief technical section on wastewater treatment facilities, a description of the current situation, and an evaluation of the WTCG's condition and its future based on materials and information gleaned from interviews with state (Oklahoma) and local (Norman, OK; Muncie, IN) officials. The lapse of all federal funding for the WTCG after 1994 has created a "new" federalism of federal mandates without compensatory funds for state and local governments. This may heighten intergovernmental tensions and spell disaster for the quality of water in the United States.

Anton (1989) argues that federalism scholars are not only divided over notions of accountability, but also over the use of coercion or cooperation incen-

tives in the implementation of intergovernmental programs. This argument illuminates the continuous struggle among intergovernmental actors from the very beginning of the WTCG to the intensified battle during the Reagan administration and beyond. Although Peterson, Rabe and Wong (1986) would classify the WTCG as a redistributive program that necessitates national responsibility and administration, political arguments over the structure and fate of the WTCG have yet to clarify whether the program is redistributive (national responsibility) or developmental (state and local responsibility). Utilizing Nice (1987), it can be seen that conflict over wastewater treatment has persisted since the 1970s. Despite the current legislation, debates over who the actors should be, what the rules should be, and what the goal(s) should be, are unresolved. The states emerge as the focal point for struggles over the WTCG because the program's funds are allocated to the states on the basis of a multifaceted formula. This produces formulamanship in Congress as the various actors struggle to influence the formula. Also, the state emerges as the focal point because the state allocates funds it receives on the basis of local applications for the categorical grant.This stimulates grantsmanship (Dilger 1983). Clearly, the WTCG deserves scholarly attention because of its intergovernmental aspects and because of the overwhelming concern for the improvement of water quality in the United States.

WASTEWATER TREATMENT FACILITIES

The WTCG provides funds for three stages: planning, design and specifications, and construction. All of these grants also cover nonconstruction costs. The costs of WTCG projects vary tremendously because of the wide number of variables. Wastewater treatment involves collection systems — collector sewers, interceptors or main trunk lines, pumping stations, and assorted other line systems — which tend to be capital intensive and politically sensitive (EPA 1981). The primary focus of the WTCG has been on the wastewater treatment plant itself, in the form of upgrades, construction of new facilities, and plant rehabilitation. Wastewater treatment at a plant involves at most three levels of treatment, primary, secondary and tertiary, and subsequent disposal of waste products. Primary treatment simply involves the use of mesh screens and settling chambers that remove from 93 to 97 percent of solids. Secondary treatment, which increases this to 98 to 99.5 percent of the solids, can involve a number of processes including trickling filters of bacteriologically activated rock beds to chemical disinfection of the wastewater held in settling tanks after screening. Secondary treatment is the federally mandated goal of the WTCG. Tertiary treatment brings this to over 99.5 percent of the solids removed and

tends to rely on expensive chemical and mechanical systems.

After the treatment process comes the necessary task of sludge management, which "can be the most complex and costly part of wastewater management" (EPA 1984). The plants must follow the restrictions of their National Pollutant Discharge Elimination System (NPDES) permits, which are defined by the Environmental Protection Agency (EPA) or state agency, or jointly, during the treatment process. The end product of the process — sludge — can be landfilled, applied as fertilizer to farmlands, sold, incinerated, or disposed of in the ocean depending on the NPDES permit and the costs involved. Municipal costs that are eligible for the WTCG fall into two general headings. First, construction costs include estimates on design flow and treatment levels, plant component costs (mobilization, site preparation, electrical and dewatering systems, labor, and so on), and unit process costs (concrete, steel, equipment, labor, and so on). Second, nonconstruction costs include preliminary planning costs, design, and administrative and legal costs, architectural and engineering fees, relocation costs to move those affected by the project, the contingency fund, and so on. Clearly, the technical costs of a WTCG project can be enormous, but here the interest is the political costs.

A LIMITED SCOPE OF CONFLICT BEFORE 1972

The federal government first got involved in the policy of wastewater treatment and disposal with the 1899 Refuse Act which established a permit system for the discharge of pollutants by municipalities and industries. The federal government did not reenter this "local" concern for nearly fifty years and then only with the 1948 Water Pollution Control Act, which was not implemented due to the lack of funding. The rapid suburbanization of the United States and the greater economic prosperity in the 1950s, brought increased industrial and agricultural pollution in addition to that provided by the growing population. This all began to seriously undermine U.S. water quality. As a result, the scope of conflict widened as cities and towns continued to discharge their wastewater at increasing levels downstream to other municipalities and states. During this period wastewater treatment was the sole responsibility of the localities (although they received some assistance from the state capital). These localities relied on user and hookup fees, property taxes and general revenues to finance their minimum treatment facilities (Davis 1987c).

In 1956 Congress passed the Federal Water Pollution Control Act in recognition that water quality was worsening and because of complaints from state

and local officials over the increasing levels of raw sewage coming from upstream. The Act established the Sewage Treatment Grant Program (Davis 1987c; Dilger 1983). This provided $50 million in total annual allocations to help localities construct treatment plants and interceptors. The federal share of the cost was 30 percent or $250,000, whichever figure was lower. During the program's ten year existence, small cities and towns were the only entities to effectively utilize the funds because of the low cost ceiling. The 1966 Clean Water Restoration Act removed the cost ceiling, raised the federal share to 40 percent, and authorized $3.5 billion to be spread out over fiscal years 1967-71. The federal commitment from 1956 to 1972 for wastewater treatment construction grants totaled $5.2 billion and provided funding for almost 13,800 municipal projects (Davis 1987c). Despite increased federal commitment to this "local" problem, the General Accounting Office stated in 1969 that although the three levels of government spent $15 billion since 1952, over 1,400 cities still discharged untreated waste into rivers and streams and only 70 percent of Americans were served by some sort of wastewater treatment system (Dilger 1989). Increased pressure from the states (e.g., National Governors' Association) and localities (e.g., US Conference of Mayors), the growing environmental awareness of the United States, and the growing realization that water quality was a national concern, led to the "most comprehensive and expensive environmental legislation in the nation's history" (*CQ Almanac* 1972).

A NATIONAL CONCERN? EXPANSION OF THE SCOPE OF CONFLICT

Richard Nixon wanted to devolve powers from the unresponsive and bureaucratic federal government to the localities, which would presumably be more responsive and efficient. He believed that wastewater treatment was a local concern to be paid for by local government. But continued pressure from the public, the National League of Cities, and fledgling environmental groups convinced Congress that the federal government should assist the municipalities over the short term to improve their water quality standards. It created the Environmental Protection Agency to administer national standards and provided the "carrot" of grant monies (Davis 1985; Davis 1987c). The 1972 Federal Water Pollution Control Act provided $18 billion over fiscal years 1973 to 1975 to subsidize the construction of publicly owned treatment plants (potws). The federal government would assume 75 percent of the costs of construction using the "best practicable technology" as designated by the EPA. The Act was designed to limit the discharge of pollutants and improve U.S. water quality. In

order to accomplish this, the old permit system was replaced with the NPDES system to be administered by the EPA or by the states (subject to EPA approval). In addition, the Act created the National Commission on Water Quality and set the national requirement that all potws must have at least secondary treatment by July 1, 1977. The long-term goal was the elimination of water pollution by 1985.

The 1972 Act was passed over Nixon's veto in the House by 247 to 23 and in the Senate by 52 to 12. Obviously, wastewater treatment had become a national concern and a matter of constituency interest. This expanded the scope of conflict on the policy. In spite of the increasing salience of wastewater treatment as a national issue, congressional supporters of the 1972 Act believed that federal assistance would only be needed for a short duration. Title II of the Act provided for the WTCG, and required local officials to fill out application for treatment schemes for EPA review. The EPA would oversee the management of the WTCG, but state officials were encouraged to create regional planning organizations (that would receive 100 percent EPA funding for three years) to lay the foundation for an efficient, effective state and local system. Grant funds were to be determined and allocated by the EPA to the states, which then would distribute the funds to municipalities for constructing plants, interceptors, collectors, and most other wastewater treatment construction. The 1972 Act set up a three-stage grant process (facility planning, design and specifications, actual construction) that required municipalities to submit a new application to the EPA for each stage of improving wastewater treatment.

Unfortunately, the ideals of the policy soon succumbed to the realities of a controversial intergovernmental program. Problems plagued the WTCG from the beginning. Nixon impounded $9 billion of the $18 billion allocated for the program in 1972. This was not released until a February 1975 Supreme Court ruling (*CQ Almanac* 1976a). In addition to this funding delay, a wide array of other problems soon surfaced. These included bureaucratic red tape at all levels, the absence of local expertise to deal with the complexities of the project and application process, the inefficient and timely processing of applications by the EPA, and the natural wariness on the part of state and local governments about a new intergovernmental program. Also, the declining national economy and rising inflation turned many localities away from the program because their 25 percent share was beginning to look much more daunting. The program was further tainted by EPA exceptions to regulations and lax enforcement. The 1972 Act also established a pre-treatment system, but the EPA failed to set regulations on the enforcement of this part of the program until 1978. This uncertain situation forced many localities to set up their own system of regulations based on the water quality at the end of the treatment process. Ultimately

this ran counter to the technological bias of the EPA (Stanfield 1985).

Application of the program showed that Congress had both underestimated the costs and the time necessary for the improvement of wastewater treatment. Another problem that emerged was the reliance of state agencies and municipal governments on federal funding to supplant rather than supplement state and local funding (Johnson and Heilman 1987). According to the Congressional Budget Office (1985), the level of federal outlays for the WTCG from 1970 to 1977 rose from $500 million to $6 billion (in 1983 dollars), while the local contribution fell from $4 to $1.5 billion over the same period. John Rhett, an EPA official, pointed out in February, 1977 that the federal government had allocated $11.9 billion since 1972 (the additional $6 billion that had been authorized was to be allocated soon) to over 9,400 grants, while state and local governments had only allocated $11 billion over the same period (*CQ Almanac* 1977). Many federal officials felt that municipalities had abused the program by spending the grant funds on exorbitant potws with built-in excess capacity that only spurred on additional demographic and economic growth, further burdening the already strained treatment system (Davis 1987c). Localities argued that if anyone was at fault it was the EPA, which was supposed to oversee the program but had done an exceedingly poor job. The 1976 EPA needs survey discovered that contrary to the WTCG's primary goal of better potws, municipalities actually needed new and better collectors, interceptors, and corrections for combined sewer overflows (csos). Older lines carrying both sewage and storm water were made illegal in 1972. At least $150 billion would be needed for the municipalities to meet the national standards (*CQ Almanac* 1977). The House, which is usually more responsive to local concerns (because of the reelection principle), argued throughout the period that the program could be improved if states were given more responsibility over the application process since they were more responsive to local needs. But the Senate and environmental groups, which feared the lack of environmental sincerity of many states, argued for even more national control of the program. The National Commission on Water Quality argued in March 1977 that the states should be given total control of the whole program as long as they could meet the national standards. Congress should promote stability (a state and local concern) by allocating $5-10 billion annually over 5-10 years in order to at least give the municipalities a chance to meet the goals of the 1972 Act (*CQ Almanac* 1976b).

The battle over the reauthorization of the 1972 Act, now called the 1977 Clean Water Act, took place in an atmosphere of growing federal commitment under President Carter; heightened local pressure (e.g., the National League of Cities); and the disheartening fact that less than one third of the nearly 13,000 US municipalities had been able to meet the July 1, 1977 deadline for secondary

treatment. The 1977 Act authorized for the WTCG $4.5 billion for fiscal 1978 and $5 billion annually for fiscal years 1979 to 1982; continued the 75 percent federal share of the costs, raised to 85 percent for alternative treatment methods (determined by the EPA); and provided each state with a minimum allotment of 0.5 percent of the total authorization, with additional funds to be distributed according to the criteria of population and needs as listed under the state's priority list. Under this proposal, Indiana for example, would receive $124.6 million in 1978 and $138.4 million annually from 1979 to 1982, and Oklahoma would receive $41.8 million and $46.4 million respectively. The states were given greater authority over the composition of their priority lists but were still limited by EPA oversight and the requirement that public hearings be used to approve their selections. In response to local concerns, the states were authorized to allocate up to 25 percent of their grant monies for collectors, interceptors and cso corrections. Also, the compliance deadline for secondary treatment was extended from 1977 to July 1, 1983. It appears that no municipalities were denied this extension because of the broad criteria used to make the decision, which included allowances for construction delays or shortfalls in federal funds.

THE REAGAN ADMINISTRATION AND THE CHANGING SCOPE OF CONFLICT

Ronald Reagan ushered in a new era of intergovernmental relations that would greatly transform the nature and treatment of programs like the WTCG. Anton (1989) argues that Reagan's stance on federalism and intergovernmental policies was backward looking and arrogant. Dilger (1983;1989) proposes that the Reagan era, which continued under George Bush, relied upon a system of macroeconomic theory for intergovernmental relations that would always relegate intergovernmental programs behind economic concerns. Johnson and Heilman (1987) point out that Reagan's focus on reducing federal involvement and responsibility for domestic programs while increasing the responsibilities of state and local officials and the private sector failed to integrate intergovernmental policies. Nice (1987) argues that Reagan's concentration on restructuring intergovernmental relations by clearly dividing functions and responsibilities through reductions in federal grants and severing ties with local governments quickly led to policy confusion and political and administrative frustration among all actors.

> Reagan did not like the [WTCG] Program. An advocate of state's rights, he argued that water pollution was a local issue that ought to be dealt with by local citizens in consultation with state and local government officials ... [he would] let local citizens decide for themselves what was an acceptable water quality standard for their area ... [that would require] a trade-off between better water quality and higher taxes and reduced business growth (Dilger 1989, 179).

Reagan's desire to devolve the responsibility and cost of the WTCG to local and state governments threatened to localize the conflict over a policy that had come to be considered a national concern needing national support. Bush maintained the contraction which was counter to the national concern and cemented the inability of most localities to meet national mandates.

Reagan's coattails ushered in a Republican Senate, a perceived popular mandate, and a temporary honeymoon period that would profoundly restructure the WTCG and redirect the processes of intergovernmental relations. As a first step for his "new" federalism Reagan quickly turned to the WTCG, which he and conservatives regarded as an expensive pork barrel program that had done little to improve water quality and had made countless controversial allocations (Dilger 1983). The 1980 EPA states needs survey determined that the country needed to allocate around $120 billion to meet the standards imposed in 1972. Of this the federal govermment would be responsible for $90 billion through the year 2000 (Dilger 1983). On the basis of this survey Indiana's needs were $4 billion with $3 billion paid by Washington, while Oklahoma's needs were placed at $624 million with a federal share of $468 million. Reagan blasted the survey's conclusions as budget-busting and said that he would only accept a federal share of $23 billion, which would only give Indiana $330 million and Oklahoma $104 million. Future allocations would not include a minimum state guarantee. Only secondary or advanced treatment and interceptors would be eligible for funding. Reagan appeared unstoppable, given the fact that he had already received a $1.7 billion rescission for the remaining fiscal 1980-81 funds (Dilger 1983).

Reagan's proposals shocked state and local officials who had been constantly complaining about the inadequacy of the federal grants to meet the costs of fulfilling the mandates set out in 1972 (Dilger 1989). In addition, some city governments argued that the federal govemment, which had hindered the realization of national goals from the beginning, should not only pay 100 percent of all future WTCG costs, but also should pay the operating and maintenance costs of this national program. Large cities argued, and rightly so, according to EPA figures, that states had spread out the grant monies to smaller municipalities in order to accrue political benefits. This left them incapable of meeting federal

standards. Environmentalists declared that every level of government had tried to get around the spirit of the WTCG, which was clean water. The federal government (i.e., EPA) had continued to make allowances for noncompliance and had not committed itself fiscally or politically to the much-touted national standards. State and local governments built exorbitant potws, misappropriated funds, and continually struggled to either get around the law or get allowances from the EPA. In 1972 the WTCG had been enacted with high hopes largely based on ignorance. Now it seemed that under Reagan the states and localities were to pay for this good deed gone awry.

Under intense state and local pressure Congress finally passed a 1981 Clean Water Act that Reagan could accept. The 1981 Act retained the 0.5 percent minimum guarantee for states; authorized $2.4 billion annually for fiscal years 1982 to 1985 for grants to construct secondary and advanced treatment facilities and interceptors; and retained the 1977 formula preferred by state and local officials for 1982 but adopted a new formula for following years. The federal government would maintain its 75 percent share, up to 1984 when it would be reduced to 55 percent. Plants could now only be constructed to meet existing capacity (20 year lifetime), but after 1984 states could spend up to 20 percent of the grant funds received on ineligible categories. Under the new act, twenty-seven states would benefit, although Indiana's allocation would fall after fiscal 1982 ($65.5 million) to $58.9 million annually from 1983 to 1985, as would Oklahoma's ($22.0 million to $19.7 million). A process of formulamanship adjusted construction formulas and eligibility criteria to get the necessary House votes. This underscored the fact that there was an "absence of objective criteria of need" (Dilger 1983), and that the WTCG was on the way to becoming the sacrificial lamb for Reagan's macroeconomic goals. The "coalition" of Congress, state and local officials and environmentalists were able to wrest a verbal agreement from Reagan that the federal govemment would continue funding for at least another ten years however (Davis 1987c).

Many felt that the federal government had done a fairly good job of making the program work, although others felt that state and local officials had only shoved a costly, politically unspectacular, program onto the federal govemment. From 1972 to 1984 the federal government contributed over $40 billion to the WTCG, while state and local governments only contributed $17 billion (Stanfield 1985). During these years, municipal wastewater discharges had grown by over seven billion gallons while the level of pollutants that were discharged remained stable. The statistics continued to show that state and local governments consistently used federal funds to replace their own, and that if they had retained their "traditional" levels of spending, water quality would have improved dramatically. The diversion of the supplanted funds to more "flashy" projects, like in-

dustrial parks, enabled officials to electorally capitalize on a broader array of constituency services. In 1984 the EPA estimated that the municipalities would need at least $110 billion from 1985 to 2000 to meet the 1972 mandates for local complaince, which had been extended in 1981 to July 1, 1988 (Stanfield 1985). Of this estimated cost, only $53 billion would be eligible under the WTCG with the federal share set at $36 billion ($2.1 billion a year to 2000) and the state and local share set at $17 billion ($1 billion a year) under the WTCG plus the additional $56 billion to be independently covered by either the states or the municipalities (CBO 1985).

The plight of the localities in the changing intergovernmental situation seemed dire for many, while some non-local officials regarded the changes as a positive step towards realizing the goals of the WTCG. The Association of Metropolitan Sewerage Agencies, the US Conference of Mayors, the National League of Cities, and other local organizations argued that the federal government was abandoning the cooperative WTCG cause and dumping the costs of a national policy on municipalities to solve its budget problems (Moore 1986). Both state and local officials argued that the blame for the program's shortcomings and high costs should rest with the EPA, which had not developed universal guidelines on pollutant levels and instead had relied on a technological fixation that had no regard for costs or efficiency (Stanfield 1985). Washington's measures indicated an ignorance of the budgetary constraints that states and localities are facing. The decaying and insufficient wastewater treatment system may continue to suffer from inadequate funding or it may send many municipalities over the fiscal brink as they struggle to meet national mandates. State and local officials are understandably afraid they are losing the "carrot" of grant funds and will solely face the "stick" of enforcement that has been lax up to this point. Leonard Simon, official for the US Conference of Mayors, laments the short-sightedness of federal policy makers on such a long-term problem. He argues (Stanfield 1985, 313):

> [T]he preeminent issue is the survival of the construction grant program ... It's unfortunate that we have to deal with the whole question of wastewater policy with the funding gun staring us down.

Cathy Reynolds, vice president of the National League of Cities, points out that the WTCG is a shared commitment that should remain so until its goals are attained, but that grant reductions for "federal mandates could prove to be the straws that break the backs of local governments" (Moore 1986, 2366).

Not everyone was pessimistic about the changes enacted in the WTCG and in intergovernmental relations in general. Federal officials, especially those in the administration and the EPA, viewed the changes as a positive move to

restore local government program accountability. A congressional study (CBO 1985) utilizing multiple regression analysis showed that as local shares of the cost of potws rose, the lifetime costs of the plant and supporting system dropped. In addition, the public became more involved in policy discussions over water quality; there were shorter construction periods; local oversight of plant operation increased; and the overall costs of the plants fell by an average of 30 percent. As the local costs increased, municipalities were less willing to wait around for the application process, which often took up to ten years, to be concluded. They often seized the initiative in construction and refurbishment. One of the major limitations to this increased local cost-effectiveness was that local operating costs had nearly doubled since 1972 and account for 90 percent of available local wastewater treatment resources.

Johnson and Heilman (1987) expand upon this notion of rising local costs to point to the limited phenomenon of privatization of potws that began to blossom with the incentives provided by the 1981 Economic Recovery Act and the 1982 Tax Equity and Fiscal Responsibility Act. Privatization of wastewater treatment includes not only private development and ownership of the plant. It includes the delivery of the service to the locality, which pays a standard service fee and may help finance the project by loaning bond proceeds to the private operator. Only eight municipalities decided to undertake this nontraditional method (all were in the Southwest), but they netted an average savings of 20 to 30 percent over the traditional intergovernmental method (Johnson and Heilman 1987). The 1988 deadline for municipal compliance and the removal of federal incentives (1986 Tax Reform Act) effectively ended this innovative experiment. Only one municipality has since privatized. One obvious problem with privatization is that wastewater treatment is often costly and has the possibility of being politically volatile. Thus some municipalities turned to the next choice — the state.

Many states already oversee their water quality standards and issue and enforce NPDES permits. About forty states augment federal funding anywhere from 5 to 20 percent (CBO 1985). In addition to the states' own limited resources, they can draw extra funds from the Community Development Block Grant, Economic Development Administration Grants, and others to help pay for shortfalls caused by the decline and ultimate elimination of the WTCG. Because none of these measures comes anywhere close to meeting the gaps caused by Reagan's policies and growing construction costs, the CBO in 1985 proposed that a revolving loan fund be established with federal and state contributions to be administered by the states with minimal federal oversight. States would be able to utilize a self-sustaining source of revenues to meet the national standards on water quality.

Lester is much less hopeful regarding the option of state financing and administration because "most state governments [have been] unable or unwilling to maintain service levels in the face of federal aid cuts" (1986, 154), and "state legislators have more pressing priorities [than wastewater treatment], such as higher education, health care, and housing" (1986, 165). Lester argues that the states' replacement of lost federal funds is largely determined by the states' level of fiscal dependency on the federal government and the states' commitment to environmental quality. It is interesting that the fourteen states, including Indiana, that were classified as independents (cuts in federal dollars would not effect environmental programs) and the fourteen states, including Oklahoma, that were classified as dependents (cuts in federal dollars lead to the collapse of state environmental programs) failed to perform according to his typology (Lester 1986). In fact none of the typologies were very accurate; only two states (Delaware and Missouri) replaced the federal cuts with their own funds. Lester acknowledges (1986, 161) that the primary reason for the discrepancies was that state officials "consider wastewater treatment a local responsibility." It appears that everyone seems eager to shift the responsibility and the costs of wastewater policy on to someone else.

Reagan shocked Congress and state and local officials with his fiscal 1986 proposal for the WTCG which called for its elimination despite his 1981 promise. Reagan's plan allocated only $6 billion for the program, which was to be completely phased out by 1990. This announcement initiated a political row with Congress which favored the WTCG because it enabled members to say they were saving the environment and bringing federal funds back to their states and districts. In response to Reagan and state and local concems, Congress created a $20 billion proposal ($18 billion for WTCG and $2 billion for administration and regulation) that would retain the federal commitment until 1994. In October 1986 the proposal passed the House 408-0 and the Senate 96-0, but was pocket vetoed by Reagan. Reagan followed the veto with a new $12 billion proposal, but the House (406-8) and Senate (93-6) repassed the vetoed bill in January 1987, and overrode Reagan's subsequent veto in February (House 401-26, Senate 86-14). Congress seemed to realize that budgetary constraints and program problems did not necessitate the politically unpopular move of terminating federal support for national policy, at least for the time being.

The 1987 Clean Water Act proposed profound changes in a program that had never fulfilled expectations. But if this attempt also failed then it would be the responsibility of state and local governments to meet the federal mandates without any federal assistance. The Act authorized $2.4 billion annually for fiscal years 1986-88, $1.2 billion to the states to be used as grants and $1.2 billion to the states to be used as loans for State Revolving Funds (SRFs) in

fiscal 1989-90, $2.4 billion for SRFs for fiscal 1991, $1.8 billion for SRFs in 1992, $1.2 billion in 1993, and $0.6 billion in 1994. The deadline for municipal compliance with the 1972 standards was extended for the "last" time to October 1, 1992, and the federal share of WTCG costs was set at 55 percent. Neither the states nor the EPA would be allowed to lower the treatment standards of municipalities to levels below the 1981 levels in order to prevent potws backsliding. The funds would continue to be allocated by formula; for example, Indiana's annual share would decline from $59 to $58.5 million through 1991 and Oklahoma's share would decline from $19.8 to $19.6 million (Davis 1987a). Until 1994, states would control the distribution of funds in accordance with annual priority lists that had to be approved by the EPA. The SRF program was limited to those projects on state priority lists and the states had to match federal contributions with a 20 percent share for the revolving loans (the interest and principal went back into the state funds) that could last up to twenty years at interest rates from zero to the market figure (Davis 1987b). Fines for noncompliance were raised to $25,000 per day and up to one year in prison for the first negligent permit violation, $50,000 per day and two years in prison for subsequent violations, and $100,000 per day and six years in prison for knowing and repeated violations (Davis 1987b). The EPA could impose additional sanctions if it so decided. Given the track record of EPA regulation, these measures arouse little concern.

STATE AND MUNICIPAL CASES

Probably because the 1987 Act was the WTCG's last hurrah, Congress responded to a variety of state and local concerns. The 1987 Act required the EPA "to agree in advance which costs of a construction project are eligible for grant funding" because the agency had reneged on numerous designations in the past (Davis 1987b). The 1987 Act contained a provision that allowed 20 percent of a state's authorization to be set aside for use at the governor's discretion for noneligible projects. But the SRFs were to be the miracle that would finally enable states to assume the cost and responsibility for this "local" problem that was still legally a national concern. The case of Oklahoma exemplifies the positives and negatives of a new intergovernmental system that imposes mandates for national policy and provides for fines for noncompliance, without any measure to help municipalities meet the mandates. The cases of Norman, Oklahoma and Muncie, Indiana provide some indication of municipal responses and capabilities in regards to the changes in the WTCG and intergovernmental relations. With the 1987 Act, the national government has finally given up deal-

ing with the wastewater problem. Thus the SRFs provide the easy way out with threats of the stringent use of the "stick" of regulations and fines. The experiences of states (Oklahoma) and localities (Norman and Muncie) are strongly re-enforced by comments from officials dealing this transformed policy and underscore the potential for nonfederal wastewater treatment. But they force us to recognize that abandonment by national policy makers makes *national* improvement of water quality virtually impossible.

In July 1988 the Oklahoma state government approved the creation of the Wastewater Facility Construction Revolving Loan Accounts (SRFs) to be a permanent fund separate from the general state budget. The fund was to be administered by the Oklahoma State Department of Health (OSDH), but the Oklahoma Water Resources Board (OWRB) would dispense the loans to eligible municipal treatment projects according to the regulations of the 1987 Clean Water Act. The state law required that OSDH and OWRB carefully examine the proposed project costs, the level of municipal loan requested, the assets and liabilities of the applicant, and set an appropriate repayment schedule before disbursing any funds. Because the 1987 Act stipulates that SRFs can only dispense loans, not grants, interest rates would be kept low so as to stimulate local participation in the program. Currently, the rate on interim one year loans is 4.25 percent plus an annual 0.5 percent loan administration fee (both the interest and principal are to be paid in full at the end of the term); while long-term loans (up to twenty years) are funded by 60 percent from the state's Financial Assistance Program (FAP) at 3.375 percent interest (this includes the administration fee) and 40 percent from the SRF at zero percent interest (OSDH and OWRB 1991). The OSDH and the OWRB have the prerogative of designating solely SRF long-term loans, but since the FAP repayments go back into the SRF program it is in the state's best interest to dispense the joint loans, especially since the 1987 Act requires a state match of 20 percent of federal funds anyway. OSDH and OWRB are required to submit an annual priority list which tallies the estimated needs for the upcoming five year period to the EPA. The list is revised quarterly by the OSDH and is submitted as the "Intended Use Plan" after congressional and state legislative appropriations are made. But it does not get enacted until public hearings are held and final OSDH adjustments are made. In addition, the OSDH and OWRB must submit an annual report to the Governor and legislature, and must make themselves available for annual audits by the State Auditor.

According to the OSDH (1989), eligible construction costs for SRF funding are secondary and advanced treatment, major rehabilitation of sewer systems, new collectors and interceptors, correction of csos and inflow problems, and certain nonconstruction costs to be determined by OSDH. The SRF priority

list is compiled annually by the OSDH based on the type of project the municipality is proposing and the project's segment ranking based on the severity of the pollution and uses of nearby waters, effluent quality, and public health concerns. Those projects with the most priority points (5000 or more) are given top SRF priority. The fiscal 1992 priority list contains 53 projects that have made it through the lengthy approval process for a total of nearly $260 million in loans, but it is estimated that only the top thirteen ($39 million) will be dealt with anytime soon (OSDH 1991a; Hodge 1991). Currently, there are 499 potws (all with 20 year design lives) in Oklahoma, and it is estimated that 5 percent of these will either need to be replaced or rehabilitated every year (OSDH and OWRB 1991b). The 1988 OSDH and EPA needs survey estimated that Oklahoma would need $480 million over the next 20 years to meet the standards (OSDH and OWRB 1991b), which is probably an underestimate because of the lag time in funding and construction and the likelyhood that water quality standards and regulation will be increased.

OSDH has had to deal with a lot of questions from, and concerns of, local officials since the creation of the SRF program in 1988. Paul Hodge (1991), the SRF Program Director, argues that the uncertainty and suspicion of the new program have been greatly aggravated by deliberate misinformation put out by bond firms. The following points (OSDH 1991b) are illustrative of the responses of OSDH officials in their attempt to alleviate local misgivings about the program. In order to prevent any accusations of political bias, OSDH and OWRB will make SRF loans available to all Oklahoma communities. Contrary to reports by bond firms, SRF planning costs are not 30 to 50 percent above those of locally issued bonds, but only range from 2.5 to 6 percent above these. For example, under the SRF four loans have been authorized so far (all to Tulsa) that totaled $25.9 million, which was nearly 16 percent below the engineer's estimate of $30.7 million. In addition, SRF projects do not take any longer to complete than locally financed projects because designs and specifications are included in the municipality's application; the state wholly administers the program; and the SRF program promotes a much more secure project because of its stricter regulations and oversight, such as the requirement of a one year performance period to be monitored by the architects and engineers. Finally, the OSDH requires that the application establish a user fee system before, not after, the project is approved to cover the operation and maintenance of the facility and to pay for any future replacement costs, which enables the municipal government to economically and politically prepare for the costs of the project.

Oklahoma appears to have done an outstanding job in quickly establishing a sound alternative to the WTCG. The task was quite daunting given the fact that the state has to meet sixteen federal requirements just to dispense the loans

(Hodge 1991). The uncertainty of the current situation and the future was underscored in an interview with Paul Hodge (1991). He noted that the WTCG and SRF programs never received the total amount of funds authorized by Congress (see Table 1). This greatly hindered Oklahoma's ability to meet the state's needs. The unfortunate legacy will carry over into the future (see Table 2). Hodge speculates that if a Democrat had been in the White House during the 1980s then the program would not have continually been shorted and may even have received additional support. As it stands now, Oklahoma will not even come close to being able to meet the state's needs as expressed in the fiscal 1992 priority list, which he estimates only documents about half of the municipal needs for wastewater treatment in the state. Although the state legislature has been willing and able to meet the SRF needs, Hodge wondered about the future as costs continue to rise in a state that has no centralized environmental organization — there are seven different agencies that deal with environmental concerns including the OSDH, the Oklahoma State Department of Pollution Control, and others. There exist two possibilities that would enable Oklahoma and the nation to meet the water quality standards. First, the elusive peace dividend could be used to subsidize the SRF program, which is currently the only preventive measure available to protect the future health of Americans and their environment. Hodge sees the alternative to be increased and more stringent enforcement of environmental regulations by EPA and state officials. This

TABLE 1

Oklahoma State Revolving Fund
Maximum Available Through Capitalization Grants

Fiscal Year	*Federal Authorized*	*Actual Federal Appropriation*	*State Match (20 Percent)*	*Total Available*
1988	$ 9,400,000	$ 9,278,000	$1,855,600	$10,762,480
1989	$ 9,800,000	$ 7,597,400	$1,519,480	$ 8,812,984
1990	$ 9,800,000	$ 7,862,000	$1,572,400	$ 9,119,200
1991	$19,600,000	$16,580,619	$3,316,124	$19,233,518
1992	$14,700,000	$14,112,000	$2,822,400	$16,369,920
1993	$ 9,800,000	na	$1,960,000	$11,368,000
1994	$ 4,900,000	na	$ 980,000	$ 5,688,000
1995	0	0	0	na

SOURCE: Hodge 1991; OSDH and OWRB 1991a; OSDH and OWRB 1991b.

TABLE 2

Annual Needs v. Available Funds

Fiscal Year	*Annual Needs*	*Total Available Funds*	*Gap*
1990	$23,076,954	$28,694,664	+$ 5,617,710
1991	$29,407,636	$21,269,403	-$ 8,138,233
1992	$27,636,160	$17,052,000	-$10,584,160
1993	$57,306,250	$11,368,000	-$45,938,250
1994	$33,908,400	$ 5,688,000	-$28,220,400
1995	$29,619,000	0	-$29,619,000

Total Available Funds includes estimated carryovers where appropriate and OSDH — OWRB predicted estimates.

SOURCE: Hodge 1991; OSDH and OWRB 1991a; OSDH and OWRB 1991b.

would force localities to comply as fines mounted and would provide the catalyst for local politicians to work on this politically unpalatable problem. The case of Oklahoma exemplifies the limited capacity of states to address the needs of municipalities trying to meet national policy standards.

The following two municipal cases highlight some of the major intergovernmental components in the evolution of wastewater treatment policy. Interviews with two municipal officials, John Craddock, Director of Water Quality Control in Muncie, Indiana, and William Bart Hines, Director of Public Works in Norman, Oklahoma, illuminated the wide range of municipal fates in this new, uncertain arena. Muncie possesses one of the few local water quality control agencies in the United States and has successfully met or exceeded its water quality standards overall. This example of the fruitful mingling of local professionalization and environmental improvement provides useful insights into which direction state and local officials should take to meet national water quality mandates without national funds.

Craddock (1991) notes that since 1972 Muncie has had its own water quality control agency that sets local standards. This has been the major reason why Muncie can operate from 50 to 95 percent below its NPDES permit limits. The potw was constructed in the 1930s and upgraded in the 1950s and 1960s using the advice of local and state policy professionals. Improvements contin-

ued to be made, in particular, the creation of the local agency, but the transformed scope of conflict under Reagan and Bush put the city to the test. An illustrative example of the changed nature of intergovernmental interactions involves the $450,000 lawsuit brought by the EPA in 1984 against the Muncie Sanitary District for discharging excessive levels of pollutants into the White River from 1981 to 1984. The lawsuit was only initiated after investigatory and legal action by the Indiana Department of Environmental Management and the Indiana Attorney General's Office. Craddock argues that the 1981 Act required the federal agency to be a third party in the dispute. This does not bode well for other municipalities whose states are not as concerned with environmental and health policy. The lawsuit brought against the city in 1984 resulted in the city financing $3 million worth of cso corrections and plant rehabilitation. Because of Muncie's commitment to water quality, its major problems since 1972 have been correcting mechanical difficulties and reducing discharges of toxic materials (a future concern of the national legislation), not policy problems. Craddock speculates that (using EPA data) up to 50 percent of municipalities are not meeting their NPDES permit limits and that these limits will probably be tightened with the next Clean Water Act. The case of Muncie illustrates the importance of a local commitment towards wastewater treatment and water quality in general; the usefulness of having local policy professionals; and a cooperative approach to intergovernmental relations if problems arise.

The next case involves Norman, Oklahoma. In the early 1980s Norman attempted to obtain WTCG funds for a $26.6 million proposal to upgrade its present plant to more advanced secondary treatment; expand its sludge management capabilities; and construct the needed interceptors and collectors (EPA 1983). This example illustrates the complexities generated by the changed scope of conflict on wastewater treatment and the problems other municipalities will face. The Norman city council was forced to rewrite the required environmental impact statement several times because of objections raised by the public at hearings, objections from the OSDH, and concerns expressed by the EPA. The revisions and mobilizations of support required the creation of a citizens advisory committee, extensive local commitment, and the machinations of several local facilitators who struggled to please all sides. Muncie's future seems to be positive, but Norman's fate seems to be anything but positive according to William Bart Hines, the Norman Director of Public Works. Hines argues that the unpredictability of federal funding and the poor decisions of local officials led to the construction of a poorly designed, limited treatment plant that will plague Norman for years to come.

Hines (1991) states that the WTCG was an environmental success and unfortunately was turned over to the inadequate fiscal bases of the municipali-

ties when Reagan reduced allocations and placed a double burden on local government of high program costs and taxes. Although some localities misused the program by constructing "cadillac" plants, most cities such as Norman struggled to achieve the basic minimum. Norman's poor design and poor local decisions have placed the city on a "collision course to disaster" because the city is only barely meeting its permit requirements, and then not all the time, for the current capacity. Since Norman continues to grow the system will soon be unable to meet any of the standards. The two main problems are the dire lack of funds (he longs for a return of the grant system) and the problems of eligibility in an intergovernmental situation characterized by EPA mandates without money and state control. This usually means that cities like Norman do not get their "share." Norman seems to be in an especially troublesome situation that is compounded by the fact that Cleveland County (Norman is the county seat) lacks a wastewater policy and that none of the surrounding autonomous, "unfriendly" cities are willing to help each other solve this impending disaster. The shortcomings of municipal action in light of national policy changes, the uncooperative and suspicious nature of intergovernmental relations, and the dire environmental consequences of these illustrate the negative implications of the changes wrought under Reagan.

CONCLUSION

The reforms of the WTCG enacted under Reagan have created a troublesome situation of national policy being carried out by state governments without federal assistance (after 1994). This policy situation continued under Bush, who affirmed his aversion to pork barrel projects like the old WTCG. The new scope of conflict has aroused local uncertainties and suspicions. These will become increasingly directed at state governments as they manipulate the SRF program to their own political gain. The commitment of states to wastewater treatment appears to be highly variable (Lester 1986). Privatization has been touted as the best option because it is believed to be cheaper and it is driven by market forces, not intergovernmental relations (Johnson and Heilman 1987; O'Toole 1989). State and local officials are extremely concerned about the situation after 1994 when they will be solely responsible for wastewater treatment meeting national standards. This concern is aggravated by tensions between states and localities and continued budgetary constraints faced by all three levels of government. Dilger (1989) notes that local governments alone will have to come up with $90 billion over the years 1987 to 2000 to meet the national standards. He feared that unless there is a Democratic president and Congress in the 1990s that are

favorable towards the program, the standards will be lowered due to state and local pressure and the deadline for compliance will be pushed back once again. The election of Bill Clinton in 1992 probably will spark renewed federal interest in wastewater treatment in spite of the large national deficit, but the attention may easily exceed the availability of funds.

From the very beginning the cost of improving wastewater treatment has been underestimated. This *national* policy concern benefitted from a cooperative scope of conflict in the 1970s (except for Nixon's impoundment of funds) that was first demoralized through budget cuts and then transformed into an artificial intergovernmental construct of national policy, state "control," and local burden under Reagan. The abandonment of the program by Washington after the creation of the still inadequate SRF fund, which it will cease to support after 1994, may well be followed by abandonment by the states, which will return the issue of wastewater treatment back to localities that are already overburdened by the other legacies (cutbacks, taxes) of the Reagan years. Under this "new" federalism, the problem of wastewater treatment seems headed for disaster. Based on the above cases, the only possible solution to the dilemma seems to be a restructuring of intergovernmental relations so that Washington will continue to provide funding for a national policy, preferably through the SRF program which stimulates mutual commitment and responsibility, combined with local professionalization. The lessons learned from the analysis of the wastewater treatment construction grants program against the backdrop of changes in intergovernmental relations could readily be applied to other infrastructure problems like bridge construction and maintenance and the national highway system. Water quality is a national, state, and local concern that deserves the attention of all three arenas. Increased regulation and increased funding may finally resolve this issue. Wastewater treatment is a preventive program, neither redistributive nor developmental, that necessitates some sort of cooperative, interdependent federalism that would reflect the universality of the problem. National wastewater treatment will prevent environmental degradation, health problems, interlocal and interstate conflicts, but it will require the commitment and cooperation of the public, the professionals, and the politicians.

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