

Long-term Contracting for Water and Wastewater Services

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Executive Summary

Providing safe and affordable drinking water and wastewater services for citizens is a necessary but costly endeavor. Simply staying apprised of the latest science and regulations takes considerable resources. Implementing changes as needed to provide quality drinking water and treated wastewater requires significant investment, manpower, and expertise.

Cities strive to cope with these challenges through a variety of means, one of which is contracting with private companies. Public-private partnerships (PPPs or P3s) allow local governments to stretch tax dollars by taking advantage of private-sector efficiencies and management approaches that can reduce costs. Recent regulatory changes now enable public-private partnerships on a long-term basis of up to 20 years. Long-term partnerships can create innovative solutions to water infrastructure problems, and in the current regulatory climate, contracting with a private company can provide a community with a long-term partnership that best serves citizen needs.

This how-to guide examines the rapidly growing phenomena of long-term contracts for water and wastewater services and provides lessons learned and best practices gleaned from the experiences of public and private practitioners. The goal is to provide public officials with a guide to long-term contracting so they need not "reinvent the wheel" as they pursue a privatization endeavor.

The reasons for shifting to long-term contracting are dominated by cost savings and improved compliance with environmental standards, but we find other motivations as well. These differing motivations are reflected in the variety of forms that long-term contracts take, from financing to outsourcing management, operations and maintenance.

Finally, we explain the best practices in long-term contracting, starting with the request for proposals and running through the elements of successful partnerships, all the way up to EPA approval of the privatization.

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Part I

Introduction

Proposed changes in federal drinking water standards in early 2001 highlighted a recurring problem in the water industry. While the political firestorm centered on arsenic levels, the practical spotlight was on how the ever-changing regulatory climate causes chaos for local governments. Local water-service operators, already facing financial limitations and unmet capital needs, often find it difficult to meet new regulations. According to the American Water Works Association (AWWA), meeting the stricter standards for arsenic will necessitate an estimated \$14 billion in capital investments nationwide, not to mention \$1.5 billion in additional annual operating costs.

The need for water infrastructure improvement is not simply confined to complying with arsenic standards. Water and wastewater services are already one of the largest expenditures in local government budgets, according to the U.S. Conference of Mayors. The U.S. Environmental Protection Agency (EPA) recently estimated the nation's 76,000 drinking water systems will require \$150 billion in investments over the next 20 years. AWWA estimates that the amount needed may be as high as \$250 billion, because the EPA estimate focuses on state revolving loan funds, which are often just pipelines and not representative of total needs. The 6,000 wastewater systems across the nation will require a similar level of investment for upgrades to treatment facilities and collection systems.

Local water-service operators, already facing financial limitations and unmet capital needs, often find it difficult to meet new regulations.

Providing safe and affordable drinking water and wastewater services for citizens is a necessary but costly endeavor. Simply staying apprised of the latest science and regulations takes considerable resources. Implementing changes as needed to provide quality drinking water and treated wastewater requires significant investment, manpower, and expertise. New water facilities are required in places where the economic boom of the 1990s stretched the existing infrastructure to capacity. Some facilities must be refitted to capitalize on technological changes and scientific advances. In other cities, plants and pipes are so old that they require constant maintenance and repair. With so many facilities in need of attention, many municipal officials want to maximize efficiency of their water and wastewater operations.

Cities strive to cope with these challenges through a variety of means, one of which is contracting with private companies. Public-private partnerships (PPPs or P3s) allow local governments to stretch tax dollars by taking advantage of private sector efficiencies and management approaches that can reduce costs. Recent regulatory changes now enable public-private partnerships on a long-term basis of up to 20 and more years. Long-term partnerships can create innovative solutions to water infrastructure problems, and in the current regulatory

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climate, contracting with a private company can provide a community with a long-term partnership that best serves citizen needs.

Public-private partnerships (PPPs or P3s) allow local governments to stretch tax dollars by taking advantage of private sector efficiencies and management approaches that can reduce costs.

One of the bigger developments on the landscape has been the advent of Design/Build/Operate contracts (DBO). Under a DBO, a private partner is contracted to design a treatment facility, undertakes the construction, and then is responsible for the day-to-day operations. While DBOs will be touched on in this guide, the growth of the DBO industry has become so widespread that the Reason Foundation will deal with them in detail in a future report. For the moment, we will look at the larger framework of long-term privatization contracts.

The Evolution of Long-term Contracts

Governments have been contracting with private operators for water and wastewater systems for decades due to cost pressures and capital needs. From the accounting firm hired to compute the water bills of residents, to the large engineering firm contracted to design the wastewater plant, all manner of water services have been contracted to outside vendors, in communities of all sizes.

Prior to 1997, contracts for the operation and maintenance of public water and wastewater systems were limited to five years with a no-penalty termination after three years. These contracts were re-procured every three to five years and many saw this limitation as advantageous, in that it helped keep vendors honest. The idea was to maintain continuous pressure aimed at reducing costs and maintaining competitive pressures. Contracts typically included private responsibility for day-to-day O & M (operations and maintenance) while the government retained ownership and maintained control over rates.

Long-term contracts can solve service delivery and compliance issues for local governments while offering continuity of service provisions, enabling contractors to invest in the new systems that will have efficiency, and cost savings benefits far into the future.

The extent of privatized water and wastewater services was fairly limited when new rules governing contracts were put into effect. A 1997 International City/County Managers Association (ICMA) survey found that 5.7 percent of responding cities privatized water distribution and 3.7 percent contracted water treatment. In addition, the survey found that 6.2 percent of responding cities privatized wastewater collection and treatment.

The landscape for contract operations was radically transformed in 1997. Long-term contracts for public utility operations were made possible when the Internal Revenue Service issued Revenue Procedure 97-13 which allows operators to enter into contracts of up to 20 years in length.

Prior to 1997, contracts for water and wastewater services not only were limited by the IRS to five years, but also needed a termination clause that allowed contract cancellation after only three years. In other words, a contractor could only be assured of a three-year involvement in a project. With such a narrow time frame, operators were limited in their ability to invest in infrastructure improvement. With the need for capital improvements that the water infrastructure requires, opportunities for building a mutually beneficial partnership over an extended term have become an attractive solution under the rule changes. The new federal rules also open the door to new possibilities of expanded efficiency and cost reductions.

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The 1997 changes were not the first time the tax law guidelines governing partnerships were changed. Before a 1986 tax law change, the privatization landscape included both short-term contract-operations arrangements and long-term (20-year) private-ownership arrangements. Under the latter, private-sector partnerships allowed for facilities to be upgraded or expanded, and new facilities to be designed, built, financed, operated, and owned by private partners. The 1986 tax law changes removed tax benefits for private ownership and the market became almost entirely short-term contract-operations arrangements. These arrangements were quite successful. Many companies in the business enjoyed a greater than 90 percent renewal rate in lieu of reprocurement.

Revenue Procedure 97-13 was issued as other events forced many city officials to examine public-private partnerships. State and federal grant programs that had financed many systems during the 1970s were virtually eliminated. At the same time, the EPA tightened many water regulations under the Clean Water Act and Safe Drinking Water Act. Long-term contracts can solve service delivery and compliance issues for local governments while offering continuity of service provisions, enabling contractors to invest in the new systems that will have efficiency and cost savings benefits far into the future.

The success of partnerships depends on ongoing communication, monitoring and oversight to ensure services contemplated by agreement are being delivered and problems and issues that arise will be identified and dealt with early on.

The 1997 IRS rules allow for longer contract terms, but also impose constraints designed to prevent the abuse of tax-exempt financing. The guidelines stipulate that contractors may not share in any net profits from system operations. Contractors may share in cost savings or revenue enhancements, but not both. It is this combination of rules that has led to the current trend of "gain-sharing provisions," producing valuable and some viable long-term contracts. On the other hand, because the industry has yet to fully embrace the notion of responsible long-term private partners, many public partners are reluctant to share the "upside" of contracts, but take steps to shield themselves from potential trouble, often at the detriment of performance. Burdening a contract with penalties under the guise of liquidated damages for non-performance can undercut the powerful force of the alternative: incentive clauses. Incentive clauses have been atypical in long-term contracting agreements and when they have been incorporated, they are often for nominal amounts. However, in the long run, incentives are better than penalties in achieving superior performance. This is a tough concept for most municipal officials and advisors to deal with. Most municipal officials view the profit motive as a negative with partnerships. This is not necessarily the case. Incentive clauses ensure the private partner seeks maximum efficiency, giving the public the benefit of lower-cost service. ⁸

Since the new IRS regulation's inception, numerous cities, large and small, have entered into long-term water and wastewater contracts. The size of municipalities with long-term contracts ranges from major cities such as Atlanta (population of approximately 415,000) to small towns such as Port Byron, Illinois (population 1,350). In the first two years after the new regulation went into effect, more than 80 cities began the competitive process for contracts with initial terms of more than 10 years, and 45 completed long-term O&M contracts.⁹

The trend of slow but steady growth in the number of long-term water and wastewater contracts continued into the 21st Century. In 2000, another 25 cities entered into long-term contracts of at least 10 years in length. ¹⁰ Table 1 lists some of the long-term contracts currently in existence across the United States.

Table 1: Selected Citie City	State	Description	Length (Yrs.)	Туре
Athens	NY	Water/Wastewater	10	O&M
Atlanta	GA	Water	20	Οαίνι
Atwater	CA	Wastewater	15	0&M
Bartlesville	OK	Wastewater	10	σαινι
Bessemer	AL	Water	20	DBO
Beverly Hills	CA	Water	20	DBO
Boonville	IN	Wastewater	10	DDO
Bowling Green	MO	Water/Wastewater	10	
Brockton	MA	Water/Wastewater	20	
Buffalo	NY	Water	10	
Chester Borough	NJ	Wastewater	20	
Cranston	RI	Wastewater	25	DBO
Danbury	CT	Wastewater	20	550
Edison	NJ	Water	20	
Evansville	IN	Water	10	
Floyd County	KY	Wastewater	20	DBO
Franklin	OH	Water	20	BOT
Freeport	TX	Water/Wastewater	15	501
Fulton County	GA	Wastewater	10	0&M
Gladewater	TX	Water/Wastewater	10	Odivi
Glen Falls	NY	Water/Wastewater	20	0&M
Hoboken	NJ	Wastewater	20	Odivi
Indianapolis	IN	Wastewater	10	
Jackson	AL	Water/Wastewater	10	
Kenner	LA	Wastewater	10	
Manalapan	NJ	Water	20	
Milwaukee	WI	Wastewater	10	
Monmouth	IL	Water/Wastewater	10	
Mount Vernon	IL	Wastewater	20	
New Haven	CT	Wastewater	15	
Newport	RI	Wastewater	20	DBO
No. Adams	MA	Water	10	0&M
No. Brunswick	NJ	Water	20	30
Norwalk	CT	Wastewater	20	0&M
Pine River	MN	Wastewater	10	30
Plymouth	NC	Water/Wastewater	10	
Quincy	WA	Wastewater	20	DBO
Reidsville	NC	Wastewater	10	0&M
Rockland	MA	Wastewater	10	30
Seattle	WA	Water	25	DBO
Springfield	MA	Wastewater	20	0&M
Tampa Bay	FL	Wastewater	20	DBO
Toronto	OH	Wastewater	10	
W. Melbourne	FL	Wastewater	10	
Wildwood	NJ	Water	20	0&M
Wilmington	DE	Wastewater	20	34.11

Sources: Public Works Financing, March 1998, p. 5 & March 2001, pp. 8-9.

Part 3

Why Contract Long-term?

unicipalities enter into long-term public-private partnerships for water and wastewater services to achieve a number of goals, including:

- Reducing costs, both capital and O&M costs;
- Increasing efficiency;
- Enhancing risk management;
- Meeting capital investment needs;
- Achieving regulatory compliance;
- Overcoming lack of local expertise through private-sector experience; and
- Saving time (If a DBO).

Some of these objectives may be contradictory. For example, it may not be possible to extract the greatest financial value and, at the same time, reduce rates. Similarly, cities may not be able to realize significant cost reductions and, at the same time, protect employees entirely. These choices are predicated on trade-offs, i.e. what can be exchanged for the guarantees afforded by a privatization agreement. For example, city officials may choose to sacrifice some immediate savings by mandating a no-layoff clause and reducing the workforce only through attrition, which is more plausible through long-term agreements. Also, officials may choose the stability and continuity of a 10- or 20-year contract over greater immediate financial gains possible through a short-term agreement.

The essence of public-private partnerships is the type and breadth of guarantees that are rare and difficult to achieve under public operation and management. Essentially, the guarantee aspect translates to an enhanced risk-management advantage. The more responsibility given to the private sector, the better the risk profile from the government's viewpoint. Guarantees in long-term water and wastewater contracts often include:

- Guaranteed annual operating budgets and costs;
- Guaranteed system operations, regulatory compliance, service quality;
- Guaranteed construction costs and facility start-up schedules;
- Guaranteed customer service and response; and
- Guaranteed revenues and revenue collection.

Achieving these guarantees and goals often requires a long-term commitment to improving the quality and efficiency of municipal water and wastewater service delivery.

In addition to direct cost, compliance, performance, and financial benefits, long-term contracts for water and wastewater services can enable local leaders to concentrate their energies on other programs and functions. The day-to-day management of utility systems has become a burden in many communities, draining professional and management resources that can be better focused on other municipal and community needs. In addition, partnerships lead to increased accountability, improved service levels, capital improvements, and additional benefits to the community.

A. Cost Savings

Cities entering into long-term water and wastewater contracts in the first two years after the regulation went into effect were estimating an annual operating savings of between 20 and 45 percent. A 1999 National Association of Water Companies study examined public-private partnerships in water and wastewater systems in 29 cities serving over 3 million customers throughout the United States and found that all of the privatizations resulted in lower rate increases than were planned prior to privatization, and at 17 percent (five) of the facilities, public-private partnering brought cost savings of between 10 and 40 percent, allowing them to avoid large increases in water rates.¹¹

Private firms that operate several facilities can use economies of scale to achieve better prices for chemicals, capital equipment, and supplies. Atlanta, one of the largest city in the United States to contract water treatment services, is projected to save up to 44 percent during its 20-year O&M agreement.¹²

In addition to direct cost, compliance, performance, and financial benefits, long-term contracts for water and wastewater services can enable local leaders to concentrate their energies on other programs and functions.

B. Accountability

As long-term agreements shift responsibility for compliance with environmental regulations to private providers, many municipal officials feel a "peace of mind" knowing an experienced private firm is handling operations and complying with regulations. The more discrete project components that are tied together, the greater degree of accountability can be achieved. Investor-owned utilities have also been able to provide a higher level of customer service at a lower cost by integrating customer-service functions such as call-in centers, billing and collections into parent company systems. ¹³

Through the risk-allocation provisions of a partnership, a community assigns to the private partner financial responsibility for certain cost overruns, non-compliance, missed schedules, and/or poor revenue collections. Under continued public operation, the only recourse is to raise rates, pay fines, incur additional debt, or subsidize operations.

C. Improved Compliance

With ever-changing government regulations, keeping up with the latest environmental standards can overwhelm system operations. Investing in the infrastructure is part of the answer, and private partners can help municipalities secure the necessary infrastructure for environmental compliance. The benefits of the partnership can extend far beyond capital improvements. The NAWC study found that outsourcing improved compliance with environmental standards. Prior to entering into a public-private partnership, 41 percent (12) of the facilities surveyed were not in full compliance with the federal Safe Drinking Water Act. One year after entering into a public-private partnership, all were in compliance with federal water standards.¹⁴

In 1993, an epidemic caused by the bacteria cryptosporidium spread throughout the Milwaukee city water system. Milwaukee residents were leery of another outbreak of the organism. When Milwaukee entered into a long-term contract with United Water in 1999 for the operations of the Milwaukee Water Works, the firm made increasing the quality of drinking water a priority. The result is a partnership that has provided Milwaukee residents with better water service, and compliance with federal regulations.

With ever-changing government regulations, keeping up with the latest environmental standards can overwhelm system operations.

Through an innovative ozonation process, the Milwaukee Water Works virtually eliminated any contaminants in the water, resulting in one of the highest municipal water ratings in the nation. Milwaukee Water Works has never violated a contaminant level or any federal or state water-quality standard, and the ozonation process has removed the odor and taste of Lake Michigan algae from the drinking water.

D. Improved Performance

Long-term contracts often result in improved performance and more efficient services. Private firms make greater up-front investments in advanced computers and cutting-edge technology, knowing the costs can be amortized over a longer period. Milwaukee's incentive-laden contract with United Water provides an excellent example. The contract set the permitted effluent discharge levels well below the levels permitted by state regulators, and performance exceeded even those levels, earning the contractor two annual \$50,000 bonuses so far.

E. Capital Improvements

Private firms can not only generate significant O&M savings, but can also reduce capital costs between 10 and 50 percent through the design/build/operate (DBO) approach. Savings can be plowed back into system improvements and other capital needs. Seattle, for example, saved more than 40 percent of projected capital costs for a new water treatment facility under a DBO approach. The NAWC study found that with O&M contracts at 31 percent (nine) of the facilities studied, private water and wastewater companies contributed capital for new facilities and equipment upgrades (for a total of \$55.3 million).¹⁵

F. Community Benefits

Long-term contracts can produce other important benefits for the community. Hiring the existing workforce promotes continuity and helps avoid nasty, divisive labor battles. Cities can also enhance local economic development through long-term contracts. Mount Vernon, Illinois, a small town with a population of 17,000, overcame a sewer connection ban through a 20-year wastewater contract with Environmental Management Corporation (EMC). The firm is operating significantly better than all EPA permit limitations, resulting in a lifting of the sewer ban and approximately \$300 million in private investment in the first 18 months after the first phase of construction.

It has often been seen that private sector companies become good "corporate citizens" and get involved in worthwhile community activities, charities, etc. This adds additional value to long-term partnership arrangements as companies "invest" in the communities they serve. However, cities should avoid social mandates in privatization contracts unless they have fully analyzed the potential costs they create. 16

Part 4

Contract Options

Partnership approaches can be applied to a wide variety of water and wastewater utility functions. Contracting can include not only the physical treatment facilities, but also collection and distribution systems, and activities such as:

- Billing and collection;
- Fleet management;
- Meter reading and replacement;
- Industrial pretreatment management;
- Other utility functions; and
- Capital improvement planning.

In addition, some communities have included water and wastewater services as part of long-term contracts for all public works services. Monmouth, Illinois, a small community of approximately 10,000, contracted with EMC for all public works services in a 10-year agreement.

An array of financial arrangements is also possible. Beginning with little or no funding or financial involvement by a contractor, outsourcing arrangements can be expanded to include:

- The payment of concession fees (one time up-front payment or annual payments, with repayment included in the service fee);
- Lease rentals or annual royalties by the contractor;
- Debt defeasance and refinancing of existing municipal debt:

- Funding of major capital improvements for the utilities or other municipal projects if permissible by state and local law;
- Creation of new revenue sources; and
- The improvement of billing and collection practices and results.

Buffalo, New York

Buffalo, NY, has a management contract with American-Anglican for operations, maintenance, and management of its water supply and treatment facilities. The water division workforce remained city employees and the private firm negotiated contracts with four unions representing water employees. American Anglican reimburses the city for employee pay and grievances are adjudicated by the commissioner of public works.

Partnerships can take many forms—short-term or long-term, with or without capital arrangements, with or without employee leasing, and, with or without facilities construction. The type of format utilized is dependent to a large degree on what is allowed under state enabling laws. For example, New Jersey has a very hospitable legislative climate and allows virtually all forms of outsourcing and contracting. In other states, the climate is either less enabling or less clear—Texas, for example, cannot use design/build procurements. ¹⁷ Depending upon the scope of the project, it may be necessary to pursue special legislation ¹⁸.

A. Management Contracts

Outsourcing management functions provides a way for communities "to get out of the business" of utility management without giving up ownership, rate-setting power, and capital improvement decision-making. Under a management contract, the private partner handles the administration of the utility, while holding limited power over the operation of the facilities. The workforce remains public employees, and the private partner acts as manager. The basic risks involved with operations remain the province of the public utility, but increased administrative efficiency helps reduce operating costs. Only in cases where a utility is sold is the rate-making authority passed to a private firm.

Hoboken, New Jersey

Hoboken, New Jersey faced the same problem many cities face after owning its own water system for more than 100 years. Time had taken a toll on its infrastructure, regulations became more costly, and lack of an on-going capital improvement program left the system with an \$800,000 annual deficit. In order to break even, a rate increase of 35 percent would have been needed in one year. In order to avert such a hike, in 1994 the city entered into an agreement with United Water in what was considered to be one of the pioneering agreements of public-private partnerships. Initially the city entered into a 10-year agreement, which later was renegotiated to a 20-year agreement.

The contract provides for concession fees of \$10 million to be paid in three payments. Capital improvements are scheduled at \$550,000 per year. The city also benefits from the installation of a state-of-the-art automated meter-reading system, ownership of which reverts to the city, at its option, at the end of 10 years. The city also receives a percentage of growth of future income.

Source: U.S. Conference of Mayors

Management contracts also enable municipalities to overcome potential employee opposition to privatization. Surveys on privatization consistently show that employee opposition is the leading obstacle to privatization of public services. A management contract can lessen opposition by allowing employees to remain on the public payroll. As employees become more comfortable with private management, they may be more willing to work for the contractor in a full O&M agreement.

B. Utility Operations & Maintenance (O&M)

Under an O &M agreement, a public entity contracts with a private firm for the operation of the facility. The workforce is employed on the payroll of the private partner, and the private partner oversees the entire public works operation.

A private firm can bring experience gained through years of operating numerous systems and advanced technologies to bear in the community. Persistent difficulties in achieving compliance and in providing consistent, long-term, quality service can be resolved by engaging such a contract operator. With an increasingly stringent regulatory climate, the risks of operational compliance and increased user demand can be transferred to a private operator.

As technologies become more sophisticated, operations become more complex, and the risk of non-compliance increases. In addition to assuring service quality and regulatory compliance, privatization can reduce O&M costs and help control future costs. Utility costs typically increase faster than general

Empowering Atlanta

When the city of Atlanta entered into a long term contract for water services with United Water, the company not only invested in the city's infrastructure, but in the local community as well. Under the contract, an empowerment zone in an impoverished neighborhood became the home of new housing and a world-class water resource and training center, and a bevy of new jobs. United Water set a goal of hiring 20 percent of its workforce from the empowerment zone, and pledged \$1 million dollars to the creation of Water Resource Development Institute at Clark University.

Source: city of Atlanta

inflation, but guarantees from an experienced operator can help contain costs over time.

Under contract operations, the contractor will quote a fixed, guaranteed operations and maintenance fee for current operations. The operator will assume maintenance and operational risks, while leaving ownership of the facilities with the municipality. This can include certain capital improvements, including financing options, and pre-defined additional services, (i.e., billing and collections).

With an increasingly stringent regulatory climate, the risks of operational compliance and increased user demand can be transferred to a private operator.

C. Utility Financing

Through a water or wastewater concession transaction, a community can realize immediate financial value from its utility assets. Up-front lease or concession payments from a private operator can provide the community with equity to retire existing debt, as well as with capital contribution for much needed upgrades. This is not free money, however. Repayment, with interest, is made through the private partner's service fee.

Most communities have invested substantial amounts of money in their water infrastructure over time, and concession fees can reflect the present value of long-term savings from private operations. This liquidity can also be structured as cash flows over time, rather than, or in addition to, up-front payments. This new source of revenue can be used for further investment in environmental infrastructure, or other municipal needs.

Under the terms of a 25-year contract in Cranston, Rhode Island, Poseidon Resources secured non-recourse financing to provide the city with an up-front payment of \$48 million. Poseidon committed to secure an additional \$30 million in private financing for an upgrade to the city's wastewater treatment plant to meet environmental mandates. Danbury, Connecticut officials, on the other hand, took only a portion of projected savings (\$10 million) up front from its 20-year contract with U.S. Filter with the remaining amount realized on an annual basis.

Concession arrangements can also provide off balance sheet financing for utility needs. With the contractor financing improvements or expansions, communities do not need to further burden their general obligation balance sheet. Also, since most utility work can be financed with tax-exempt debt, whether for govern-mental or private purpose, the cost of capital under privatization can be competitive with municipal financing. However, if equity is part of a private sector finance approach, this will tend to increase the disparity between municipal and private sector finance.

Up-front lease or concession payments from a private operator can provide the community with equity to retire existing debt, as well as with capital contribution for much needed upgrades.

Under a partnership agreement, a private operator will normally take delivery and collection risk and construct and finance required capital improvements, while leaving the ownership of the facility with the municipality. Pricing will be based on the current consumers' assumed growth, as well as anticipated future stabilized rates. Savings can be passed on through decreased user fees, up-front concession payments, annual concession payments, or a combination of the above at the direction of the current facility owners.

While the cash infusion may spark the dreams of local officials hiring more police and teachers and hundreds of other necessary purposes, concession fees are not always a positive financial arrangement. In order to realize a return on such a large up-front investment, the private partner must lock in rates over the term of a contract. These rates could be reduced in the future if the private partner is able to increase efficiency in the water system. However, with the concession fee as part of its initial investment, it takes the private partner that much longer to realize a return, slowing down any possible rate reduction of water system users. Such an arrangement may produce benefits if the concessions fees are used for long-term improvements to the water system. However, political leaders may find it irresistible to spend funds on popular programs, such as police and fire services, not related to water-system improvement.

Part 5

Structuring a Long-term Contract

Note elements of a contract are subject to negotiation, from costs and user rates to the extent of guarantees provided by the contractor. Negotiations should be aimed at achieving a win-win situation, under which the major objectives of both sides can be satisfied and both will benefit mutually. Both sides often compromise through negotiations in the interest of the relationship. Also, both will be called upon to live up to contractual obligations over the term of the contract. It is not as simple as the contractor supplying a piece of equipment and the municipality paying for it and taking possession. The following is a summary of the most important elements that need to be addressed in forming a successful long-term partnership.

A. Request for Proposals (RFPs)

A successful privatization agreement begins with the RFP process. This process helps ascertain needs and goals of the community. There are numerous RFP and process models available and many experienced advisors who can assist in designing and managing procurement. The best models:

- State specific goals and objectives and have a clear scope of work, while welcoming alternatives and options;
- Furnish complete and accurate information and data;
- Provide reasonable response times;
- Grant good and repeated access for facility tours and information gathering;
- Require relevant and measurable project experience and financial criteria;
- Choose terms and conditions that use established and understood standards as much as possible, and thoroughly explain innovative standards to bidders; and
- Set terms and conditions of the partnership, either in a term sheet or a draft agreement.

B. Request for Qualifications (RFQs)

As with any public-private partnership, the key is selecting a capable and experienced contractor who has worked with utilities of similar size, scope, budget, and complexity. Cities may consider issuing a request for qualifications (RFQ) to ensure that only experienced, qualified contractors seek the project. Experience with similar technologies and various regulatory climates gives a contractor the capability to achieve community goals.

C. Alternatives to Low-bid

Outsourcing procurements are unlike most municipal purchasing, in that contracts generally do not need to be (and should not be, except as required by state law) awarded on a low-bid basis. Best practices for government procurement and service contracting are steadily moving toward "best-value" techniques, where, rather than selecting a private partner based on low cost alone, governments choose the best combination of cost and quality, and other important selection criteria.

Governments are starting to realize what every shopper knows—sometimes if you pay more, you get more; that is, the best value is not always the cheapest. Indeed, the idea that selecting firms to provide complex services or projects should be based on qualifications and technical merits, as long as the price is a value for what is promised, is becoming mainstream. The Federal Acquisition Regulations were amended in 1996 (FAR 2.101) to allow best-value source selections in outsourcings. Federal Acquisition Regulations define "best value" as "the expected outcome of an acquisition . . . providing the greatest overall benefit in response to the requirement." And the American Bar Association's revised *Model Procurement Code* incorporates best-value procurements as the standard.¹⁹

Since most utility work can be financed with tax-exempt debt, whether governmental or private purpose, the cost of capital under privatization can be competitive with municipal financing.

D. Risk Sharing

A major stumbling block in the construction of a long-term public-private partnership is the allocation of risks, and the ensuing guarantees that accompany the contract. A private partner must guarantee its performance. However, recent trends have seen public entities requiring unlimited dollar guarantees, demanding amounts of such magnitude that they often dwarf municipal and utility budgets²⁰. These demands can be of such a dollar amount that only the largest corporate entities can afford to consider them. Not only does this leave otherwise qualified vendors out of the process, the guarantees are often of such an order as to be of no practical value or protection against loss.

The municipality and its private partner must review the risks and goals of the project, and determine the level of responsibility that the partner will incur over the life of the contract. Evaluating risks allows for the construction of a reasonable and prudent risk guarantee structure. Privatization attorney Dan Elias groups these risks into the following categories:²¹

- Permit Risks. Who is responsible for obtaining and maintaining permits, including construction permits and operations permits?
- Construction Risk. Who is responsible for completing construction activities according to plans, within budget and on time?
- Operations Risk. Who is responsible for the day-to-day operation of the system?

- Design and Technology Risks. Who is responsible for design and/or technology flaws?
- **Economic/Financial Risks.** Is there and will there be a sufficient income stream to pay for all expenses and debt service?
- Force Majeure (casualty and business interruption) and other uncontrollable circumstances.

 Insurance proceeds can provide the funds necessary to rebuild. However, is it possible and necessary to insure the expected income stream derived from operations?

It is important to strike the proper risk balance between the private operator and public entity. Determining specific goals to accomplish under the privatization agreement will help determine which responsibilities should remain under the province of the local entity, and which risks can be better managed by the contract operator.

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Douglas Herbst, former Chairman of the National Council For Public-Private Partnerships (NCPPP), sees the growth of unnecessarily large guarantees as thwarting some otherwise sound partnership plans. Herbst contends that "excessive contract security and unlimited liability should not be the reason that otherwise qualified and capable firms walk away from opportunities."²²

The bottom line, according to Herbst, is that contractors aren't banks or insurance companies, and can't be expected to assume unreasonable risk levels. However, insurance companies and banks can provide a window into the competency and security offered by a potential vendor. The contractor who posts bonds from a highly rated surety has offered strong evidence of financial capability, and contractors can only secure insurance coverage if its carriers are convinced that the contractor can do the job and bear the risks of the project.

E. Contract Term and Compensation

In IRS Order 97-13, compensation must not be based in any part on a share of net profits, defined as sharing in both revenue savings and expense reductions. Under the terms of the legislation enabling long-term contracts, contract length and compensation are tied together in a concept known as the periodic fixed fee (PFF.) A PFF is defined as a stated dollar amount for services rendered over a specified period of time. The more compensation is based on a fixed fee, the longer the allowable contract term.

Oklahoma-O.K!

Oklahoma City was a pioneer in the field of long-term water service contracts. As early as 1984, Oklahoma City entered into a partnership with U.S. Filter for the operation of its wastewater treatment plant. To date the private partner has invested over \$1 million to increase performance and reduce odor. The cost savings to Oklahoma City residents over the span of the partnership are over \$60 million.

Source: Oklahoma City

For example, since water and wastewater facilities are defined as "public utility property," a contract length of 20 years is allowable, provided that PFF guidelines can be met. The PFF for such an arrangement is mandated at 20 years or 80 percent of the useful life of the facility, whichever is less; 10- and 15-year contracts are subject to the same type of guideline.

Many contracts have fixed price guarantees for the length of the contract with annual increases limited to changes in the Consumer Price Index (CPI). Some cities lately have been seeking increases less than the CPI in an effort to capture real savings.

Compensation in addition to the PFF is known as variable compensation. It can take on a variety of forms including:

- Cost Incentives;
- Sharing in cost reductions (e.g. through operational changes or capital improvements);
- Sharing in increased revenues (e.g. through meter replacement programs.);
- Compensation adjustments (e.g. taking into account flow and loading variations); and
- Unit Fees (e.g. dollars per ton for biosolid management.).²³

Performance-based contracts have emerged as a state of the art contracting tool to give government managers better control over contractors and greater assurances of accountability.

F. Performance Guarantees

An operator should guarantee compliance with all applicable laws, including existing permits, and environmental, health, and safety regulations. More important, cities should follow the broader trend of shifting to performance-based contracting.²⁴ Performance contracts clearly spell out the desired result expected of the contractor but the manner in which the work is to be performed is left to the contractor's discretion. Contractors are given as much freedom as possible in finding ways to best meet the government's performance objective. Performance-based contracts have emerged as a state of the art contracting tool to give government managers better control over contractors and greater assurances of accountability.²⁵

With water and wastewater contracts, performance guarantees are typically subject to the following limitations:²⁶

- The design and physical capabilities of the privatized system;
- The occurrence of any disabling event beyond the reasonable control of the operator, such as extreme weather conditions; and
- A change in law, including a change in any of the existing permits, or a change in any applicable environmental, health, or safety regulation.

G. Labor

This is a crucial issue for community support, since most employees and unions will be resistant to the idea of the current public works staff working for a private entity. In most long-term contracts, private operators retain the existing employees because of the benefits of having an experienced workforce. If a reduction in employee size is needed to increase efficiency, a common practice is to handle staff reduction through attrition. When an employee leaves the facility, an overstaffed facility will not fill the position.

In practice, long-term contracts allow the operator to retain valuable experience on staff. The private sector often offers better employee training, development, and advancement than the public sector. It is through the transition from public employment to the private sector that opportunities for continuing education, training, and career advancement are created. For example, senior staff and line workforce at most private water companies come largely out of the public sector, working for municipalities and authorities before joining the company. Most companies emphasize continuing education through ongoing field training, classroom training, and tuition-reimbursed college-level education. Career advancement between projects and from the field into corporate positions is commonplace.

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Benefits packages can be tailored to meet specific local requirements, and to match those currently available to both unionized and non-unionized staffs. In negotiating this issue, the parties should recognize the costs of maintaining staff levels and benefits, recognizing a collective-bargaining agreement, and/or requiring the operator to negotiate a new agreement with the local union.

Some O&M agreements (the most well-known example is United Water's contract with the city of Milwaukee) give the local government the ability to terminate the agreement if the operator is prevented by labor unrest from performing its obligations. This provision in the Milwaukee contract received much press coverage when that contract was executed. Some have argued that such a provision provides labor with too much power and too much say in the privatization process. However, a local government that is particularly sensitive to employee concerns may decide to insist on such a provision. United Water developed a twelve-point principle when negotiating the contract with public employee groups in Milwaukee. The incentives for the union employees included continued participation in the Milwaukee Employee Retirement Systems through an agreement between United Water and the U.S. Department of Labor.

H. Equipment

A typical agreement should allow the operator to use all existing tools, equipment, and vehicles dedicated by the local government for the operation and maintenance of the privatized system. In turn, the operator should agree to return all such equipment in good condition, with normal wear and tear excepted.

The operator's maintenance responsibilities typically include all preventive and predictable maintenance functions in compliance with manufacturers' instructions for service and care and in conformity with good

engineering practice. Maintenance functions can also include groundskeeping, cleaning of buildings and equipment, and landscaping.

An annual budget for maintenance functions is a good method for addressing these issues. It provides the local government with the ability to monitor maintenance functions and capital improvement programs closely. The contract operator should submit an annual maintenance and capital improvement budget for review and approval. This budget should include the cost of consumables, replacement parts, structures and equipment. The full spectrum of options range from the private-sector partner taking all the risk for maintenance, repair and replacement for a set annual dollar amount, (subject to agreed upon annual escalation) all the way through a straight passing on of costs, with many options in between.

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Milwaukee officials developed specifications for addressing capital repair and replacement that clearly define the responsibilities of the private firm (United Water), and the sewerage district. For example, the parties agreed that all maintenance would be done by United Water as part of its operating fee and that the firm would pay the first \$5,000 for each capital repair or replacement item as an incentive to do adequate maintenance.

According to Milwaukee Metropolitan Sewerage District Executive Director Anne Spray Kinney, the successful experiences in Milwaukee demonstrate that long-term contracts are more effective in addressing maintenance and capital issues than short-term contracts. She stated that:

"A longer term contract may be better simply because even if it takes 2 or 3 years to resolve problems and establish procedures, there are still many years left on the contract for relative peace. In a short-term contract, by the time problems are worked through, the contracts period is nearly over. A more serious reason may be that a short-term contract operator has little incentive to maintain assets so they will last over the long term (after the contract is over)." ²⁷

I. Inspection and Review

The success of partnerships depends on ongoing communication, monitoring and oversight to ensure services contemplated by agreement are being delivered and problems and issues that arise will be identified and dealt with early on. To effect this, the operator should provide the local government with monthly and annual operating reports in sufficient detail to enable the local government to evaluate the operator's performance under the agreement. In addition, the local government should have the right to inspect any of the system facilities and audit operator's records at any time upon reasonable notice.

J. Insurance

The operator should be required to maintain general liability, automobile liability, and workers' compensation insurance and the local government should be included as an additional insured and certificate holder. The local government, if it remains the owner of the privatized system, should maintain all property and structures liability insurance, and flood and fire insurance including coverage for vandalism and malicious mischief for the insurable value of the system.

Senior staff and line workforce at most private water companies come largely out of the public sector, working for municipalities and authorities before joining the company.

K. EPA Privatization Guidelines

While most of the factors affecting privatization are local in nature, there are federal standards affecting those decisions. If a local government receives EPA funds for projects, the agency has requirements that a project must meet before it can be approved. The requirements are primarily concerned with the impact of the privatization effort to the extent that the agreement involves a lease/concession-type payment or the sale of assets. They also focus on protection for the environment and the system user, and compliance with requirements of EPA Executive Order 12808.²⁸

Compliance. The EPA reviews privatization proposals for compliance with the Clean Water Act, which strives to improve the condition of freshwater supplies by designating that wastewater discharges meet standards for recreational purposes and aquatic life support. The proposed partnerships should also include language that addresses the process that will be followed in the event the community wishes to expand the facility or make modifications to comply with future environmental requirements.

Impact of Privatization on User Fees. Partnership proposals should include documentation of the current and proposed user fee rate structure, and arrangements for increases in the future.

Executive Order 12803. The EPA will review guarantees in the contract for assurances that the privatized facilities will be used for their original purposes in the event the private entity becomes insolvent.

Part 6

Conclusion

The advent of long-term contracts enables communities to seek new solutions to their water-service delivery needs. With a properly structured agreement in place, a community can shift the burden of service management and operation to a private provider, and still retain the necessary control and benefit of system operation. With many cities facing continuing financial challenges, unfunded state and federal mandates, and aging infrastructures, long-term water and wastewater contracts are proving to be a viable option for high-quality and cost-effective water services.

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Selected Related Reason Public Policy Institute Publications

Reason Public Policy Institute Policy Brief No. 17, (Los Angeles: Reason Public Policy Institute, August 2001), www.rppi.org/pbrief17.html.

Adrian T. Moore, Geoffrey F. Segal, and John McCormally, *Infrastructure Outsourcing: Leveraging Concrete, Steel, and Asphalt with Public-private Partnerships*, Reason Public Policy Institute Policy Study No. 272, (Los Angeles: Reason Public Policy Institute, September 2000).

Adrian Moore, *Clearing Muddy Waters: Private Water Utilities Lower Costs and Improve Services*, Reason Public Policy Institute Policy Brief No.3, (Los Angeles: Reason Public Policy Institute, July 1997).

Holly June Stiefel, *Municipal Wastewater Treatment: Privatization and Compliance*, Reason Public Policy Institute Policy Study No. 272, (Los Angeles: Reason Public Policy Institute, February, 1994).

Roger Hartman, *Contracting Water and Wastewater Utility Operations*, Reason Public Policy Institute Howto Guide No. 8, (Los Angeles: Reason Public Policy Institute, June 1993).

Endnotes

- See www.awwa.org/pressroom/pr/000920.htm.
- John Holusha, "In Latest Cost-cutting Trend, Cities Turn to Private Sector for Wastewater Treatment," The New York Times, May 5, 1996, p. A14.
- ³ U.S. Environmental Protection Agency, *Drinking Water Infrastructure Needs Survey*, 2001, www.epa.gov/safewater/needs.htm.
- ⁴ American Water Works Association, Dawn of the Replacement Era: Reinvesting in Drinking Water Infrastructure, www.awwa.org/govtaff/infrastructure.pdf.
- During its 1998 annual meeting, the U.S. Conference of Mayors endorsed a resolution supporting the use of public-private partnerships. In part, the resolution reads, "The U.S. Conference of Mayors continues to support the use of public/private partnerships as one option for a) improving efficiency in operation and maintenance of public water and wastewater infrastructure, b) bringing existing facilities into compliance with environmental regulations, c) stabilizing rates, d) attracting private capital investment for improving, expanding and developing clean water and drinking water infrastructure, and e) assisting in meeting existing and future federal and state environmental mandates." See www.usmayors.org/USCM/home.html.
- Douglas Herbst and David Seader, "Providing Public Services Through Long Term Service Agreements," in *Local Government Innovation: Issues and Trends in Privatization and Managed Competition*, eds. Robin Johnson and Norman Walzer (Westport, CT: Quorum Books, 2000), pp.110-11.
- Figures are from Reason Foundation analysis of the 1997 International City/County Management Association survey data.
- Herbst and Seader, "Providing Public Services Through Long Term Service Agreements," pp. 118-19.
- William Reinhardt, "Water/Wastewater Privatization Hits a Growth Spurt," Public Works Financing, March 1999, p. 1.
- William Reinhardt, "U.S. Water/Wastewater Contract Services Show 16% Growth to \$1.7 Billion in 2000," Public Works Financing, March 2001, p.1.
- National Association of Water Companies, NAWC Privatization Study: A Survey of the Use of Public-Private Partnerships in the Drinking Water Utility Sector, (Washington, D.C.: National Association of Water Companies, 1999), pp. 41-43.
- Adrian T. Moore, "Water Privatization Hits the Mass Market," *Privatization International*, January 1999, pp.11-13.
- National Association of Water Companies, NAWC Privatization Study, p. 41.
- ¹⁴ Ibid., p. 39.
- ¹⁵ Ibid, p. 48.
- See Margaret M. Swanton, "Impacts of Social Mandates in Contracting," in *Local Government Innovation: Issues and Trends in Privatization and Managed Competition*, eds. Robin A. Johnson and Norman Walzer (Westport, CT: Quorum Books, 2000), pp. 141-66.
- For a review of issues related to privatization enabling legislation, see Adrian Moore, *The Law and Economics of Privatization*, Ph.D. dissertation, Department of Economics, University of California, Irvine, December 2000, pp. 9-15.
- Adrian T. Moore "Clear Trends: Improving Water and Sewer Systems Through Privatization," ALEC Policy Forum, December 1999, pp. 76-79.
- www.web.mit.edu/civenv/idr/MPCPage.htm.
- Douglas Herbst and David Mackenzie, "Unlimited, Irrevocable, Unreasonable Liability," Public Works Financing, January 2001, p. 18.
- Dan Elias, "Crafting an Agreement for Private Operation and Maintenance of Water or Wastewater Facilities," ICMA Service Report (Washington, D.C: International City/County Management Association, 1999), available at www.eliasgroup.com/crafting.html.

- Herbst & Mackenzie, "Unlimited, Irrevocable, Unreasonable Liability."
- Douglas Herbst, The Impact Of Recent I.R.S. Regulations For Management Contracts On Long-Term Public-Private Partnerships, Professional Services Group (PSG) monograph (Undated).
- Robert D. Behn and Peter A. Kant, "Strategies for Avoiding the Pitfalls of Performance Contracting," *Public Productivity and Management Review*, vol. 22, no. 4, 1999, pp. 470-89.
- Adrian T. Moore and Wade Hudson, "The Evolution of Privatization Practices and Strategies," in Local Government Innovation: Issues and Trends in Privatization and Managed Competition, eds. Robin A. Johnson and Norman Walzer (Westport, CT: Quorum Books, 2000), p.21. For more on the trends and best practices in using performance-based contracts, see the Moore and Hudson article, the Behn and Kant article cited above, and William D. Eggers, Performance-Based Contracting: Designing State-of-the-Art Contract Administration and Monitoring Systems, Reason Public Policy Institute, How-To Guide No. 17, (Los Angeles: Reason Public Policy Institute, 1997).
- ²⁶ Elias, "Crafting an Agreement."
- Anne Spray Kinney, "Milwaukee's O&M Contract Protects Its Public Assets," *Public Works Financing*, June 2001.
- U.S. Environmental Protection Agency, Guidelines for Privatization of Waste Water Treatment Facilities, (Washington, D.C., June 2000).





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