PACIFIC INSTITUTE

BEYOND PRIVATIZATION:
RESTRUCTURING WATER SYSTEMS TO IMPROVE PERFORMANCE

Gary Wolff, Eric Hallstein

DECEMBER 2005

EXECUTIVE SUMMARY

Challenges

FOUR RELATED CHALLENGES are prompting water utility restructuring in the United States and Canada, according to our research: chronic under-investment, regulatory standards and requirements, heightened national security concerns, and limited financial resources.

Chronic Under-Investment

Water-related services are capital-intensive compared to other utilities such as electricity, natural gas, and telecommunications. Measured by the ratio of net utility plant capital costs to annual operating revenues, water utilities are more than twice as capital-intensive as electricity and nearly three times as capital-intensive as natural gas. Due to many years of under-investment — often in underground assets like water pipes and sewers — the US Environmental Protection Agency (EPA) estimates that $68 billion of water and wastewater infrastructure investment is needed over the next twenty years in the seven US states covered in our research (ASCE, 2005).

Regulatory Standards and Requirements

Municipalities and drinking water utilities are still responding to the 1996 amendments to the Safe Drinking Water Act (SDWA), and a significant number of EPA Region 5[1] (upper Midwest) community water systems still do not meet all EPA health-based standards. Region 5 faces the challenge of ensuring safe water to over 41,000 non-community (e.g., schools, rest stops) water systems, roughly 40% of the non-community water systems in the entire US. These non-community systems typically serve a limited number of people on a year-round basis and require extensive technical assistance relative to the number of people served.

Furthermore, Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin contain 358 of the roughly 750 combined wastewater/storm

1 Iowa is located in EPA Region 7.

water systems in the US (Environmental Integrity Project, 2005). Many of these systems have not yet met minimum federal standards for preventing discharges or received approval for long-term plans to prevent stormwater overflows.

Heightened National Security Concerns

The US EPA Action Plan (2004b), a collaborative effort between the EPA, federal partners, the water industry, public organizations, and the emergency response community, identifies critical research and technical support needs in the area of infrastructure protection. Implementation of the plan will affect nearly every municipality in the US, almost certainly without full federal funding.

Limited Financial Resources

Cities are financially hard-pressed. The most recent National League of Cities financial survey (Pagano, 2004) found that 63% of municipal finance officers believed their cities were less able to meet financial needs than in the previous year, and 61% felt that they would be less able to meet needs in 2005 than in 2004. An even higher percentage (74%) of responding Midwest financial officers felt economic conditions were deteriorating rather than improving. Even those cities and special districts that provide water sector services paid for primarily by their customers (rather than via taxes) are reluctant to raise rates, both because it is politically unpopular and because water and wastewater rates have increased on average two percentage points faster than the rate of inflation since at least 1998.

Average rate increases of about 3% above the rate of inflation for the next 20 years could fund current estimates of needed improvements. Some communities, however, cannot afford to pay that much, and other communities require even higher rate increases to meet their needs. In addition to direct financial limitations, public or political perception problems often exist as well, which involve shortsighted emphasis on minimizing rate increases without considering the benefits that might be obtained if rates were raised and spent effectively.

Average rate increases of about 3% above the rate of inflation for the next 20 years could fund current estimates of needed improvements. Some communities, however, cannot afford to pay that much, and other communities require even higher rate increases to meet their needs.

Privatization: A Silver Bullet?

Numerous strategies have been proposed to meet these challenges, including privatization, regionalization, consolidation, and municipalization.[2]

The Privatization Debate

Privatization[3] of water and wastewater services is hotly debated. Proponents have typically argued that the private sector will deliver more or better services per dollar of cost and often claim that private sector involvement is the best solution for all challenges. Opponents argue that the profit motive will eventually lead to higher rather than lower costs; that workers will lose their jobs or benefits; and that local control over decisions will be diminished or lost. Proponents argue that

2 See Sidebar 1 for definitions of these and related terms.

3 See Gleick et al. (2002) for discussion of the many variations of private involvement, and for some specific suggestions about how to simultaneously manage water as an economic and a social good.

water services should be supplied by businesses, like food, energy, and other essential goods. Opponents often feel that water is too essential and fundamental a public good to allow much private involvement. Experience summarized or cited in this report helps to clarify these issues. But some of the issues are still unfolding. For example, no one knows how current or future versions of the General Agreement on Trade in Services (GATS) will affect municipal-level utility decisions when international water companies are involved.

The number of contracts for operation of publicly owned assets tripled in the US between 1997 and 2002 (Reinhardt, 2003). The three largest contracts in the US for operation of publicly owned wastewater assets are located in the Upper Midwest: Gary and Indianapolis, Indiana; and the Milwaukee, Wisconsin Metropolitan Sanitation District. One of the largest, most recent, and most closely watched contracts for operation of publicly owned water assets in the US is also in the region: Indianapolis, Indiana. At least six large or medium-sized companies operate in the region, including the three largest water companies in the world: Veolia Environment, United Water (a branch of Suez, headquartered in Paris), and American Water (a branch of the German firm RWE).

Nonetheless, the heightened interest in privatization has not led to widespread privatization of water systems. There are only about 91 contracts for operation in the region out of more than 4,000 publicly owned systems (see Appendix B), although as noted above some of these contracts are very large even by national standards. And in Ohio, only three changes in system ownership took place in the 1990s; two municipalizations[4] versus one privatization (personal communication, Grossman, 2005).

There are, nonetheless, nearly 4,000 small private water systems in the region, mostly owned by local businesses or groups in situations where water is incidental to the business, such as mobile home parks or homeowners associations. Based on national statistics, these small systems probably serve only 15% of the population in the region. In some states, such as Michigan and Minnesota, these systems are so uncontroversial that they are not economically regulated at the state level, though they are subject to water quality regulation. Even in states that regulate investor-owned water companies, most systems are below the state-by-state size thresholds for economic regulation. Only about 200 investor-owned water and wastewater systems are economically regulated in the upper Midwestern focus area of this study.

Beyond the Debate Over Privatization

Our analysis of utilities in the Midwest and elsewhere shows that some accepted wisdom should be rethought. Specifically, we find that private sector involvement is not the bright line between success and failure. Researchers have statistically analyzed the question of economic efficiency but have found no clear evidence that private companies are more economically efficient (see Appendix B). As discussed at greater length in this report, both public and private forms of organization have economic advantages and disadvantages. Neither seems to have an inherent efficiency advantage, overall. The bottom line seems to be that public and private agencies both benefit from improvements driven by some form of

… both public and private forms of organization have economic advantages and disadvantages. Neither seems to have an inherent efficiency advantage, overall.

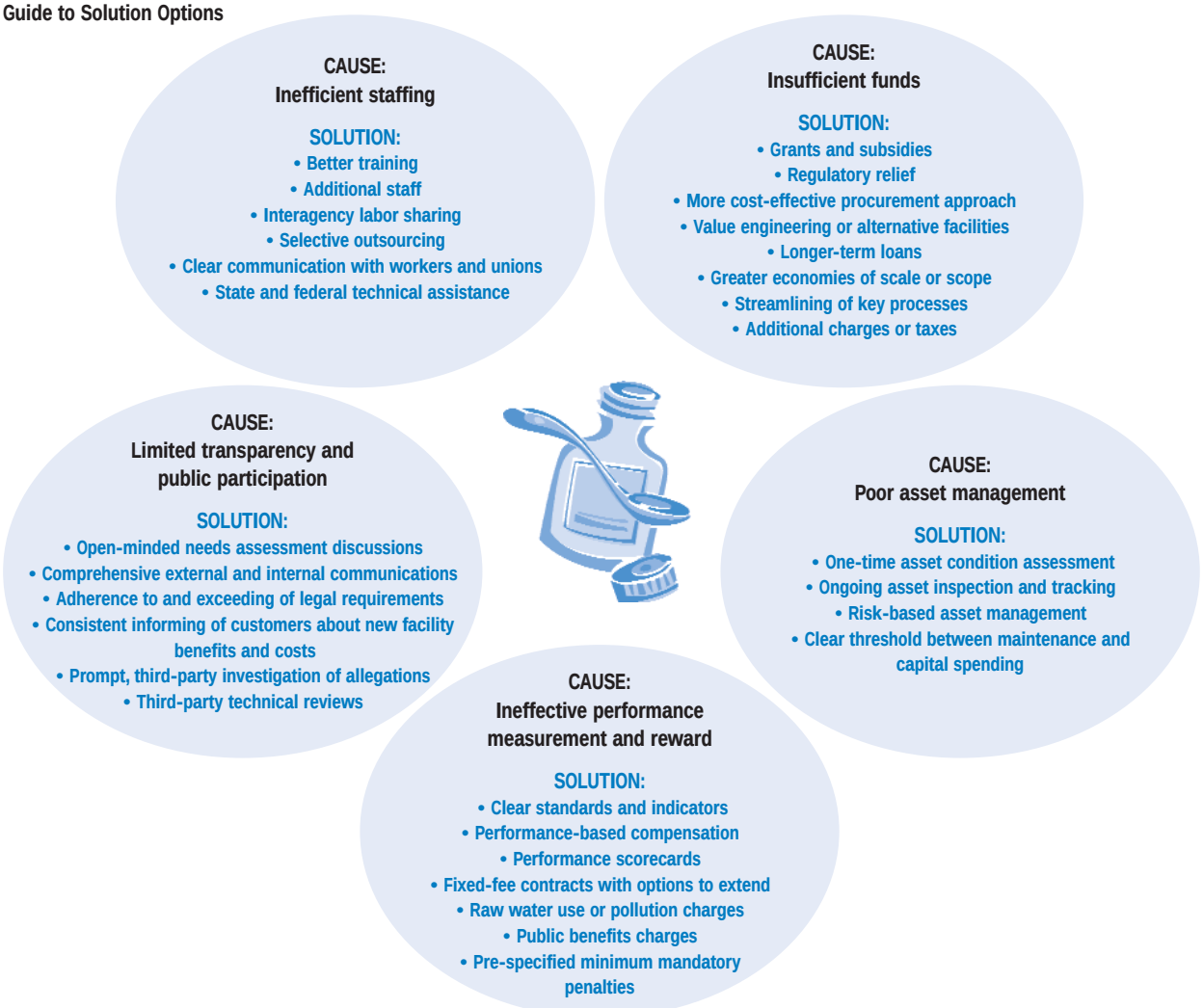
4 Municipalization—public purchase of investor-owned water utilities—is not uncommon. At least two cities in Illinois (Pekin and Peoria) have tried to purchase their local divisions of American Water, and Beloit and Ripon, Wisconsin have either recently purchased or are in the process of purchasing privately owned water systems in their communities.

competition or comparative measurement. A decision on whether or how to involve the private sector needs to be made on a case-by-case basis based on local values and conditions. What works for one community may not work for another.

Six Determinants of Success

Our research found six characteristics of high-performance organizations, all of which may be present in public or private (or mixed) forms of organization. Five of the determinants are permanent features of successful organizations: effective staffing, consistently sufficient funding, detailed asset management systems, performance measurements and rewards aligned to organizational objectives, and decision processes that are transparent and open to the public. Figure ES-1 shows these determinants in their negative form—that is, as causes of problems that require solutions. The bulleted items in each bubble in the figure are solution categories discussed in detail later in this report.

Figure ES-1
Guide to Solution Options



The sixth determinant is relevant to the process of restructuring. Successful organizations avoid what we call "false starts." Figure ES-2 shows a process that will be effective if one begins at the "effective start." An ineffective and sometimes disastrous beginning is labeled "false start." The false start is typically a situation where one or more community leaders decide they know the problem and the answer (often, "hire a private company") and proceed to push that solution through the political process. Because many members of the community are not yet clear that a problem exists, what its symptoms are, what the causes of the symptoms are, and what the range of solution options is, they are often disengaged from the restructuring process, at least initially. When they become involved, they are often disgruntled because these questions have not been answered. Political and legal fights may then erupt, often focused around the role of the private sector. Lawsuits may be filed or referenda to restrict the power of elected officials may be placed on the ballot.[5]

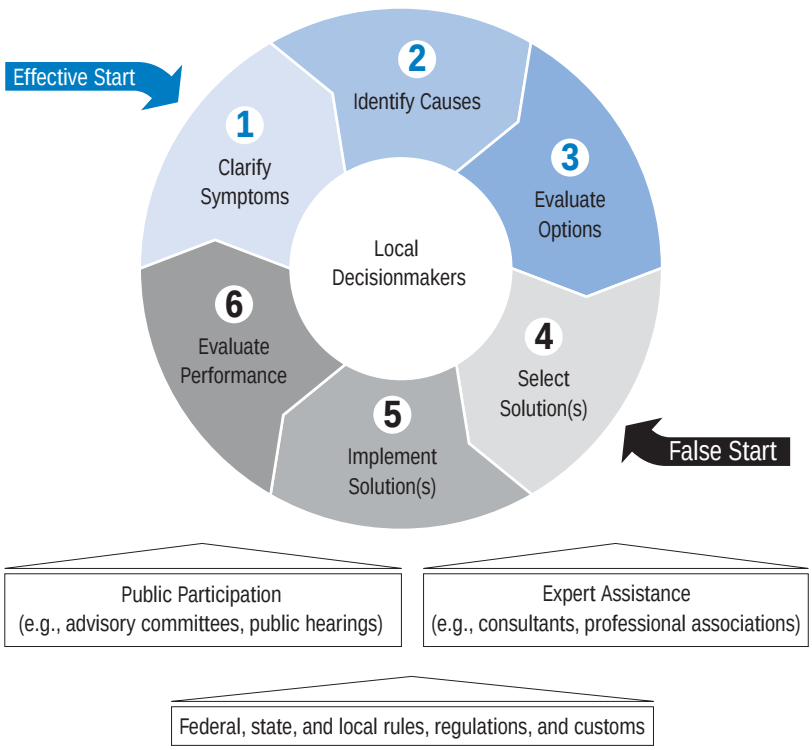


Figure ES-2
Avoiding False Starts When Restructuring

– Focus of Manual

– Limited Discussion

Figure ES-2 shows six steps that our research found are typical of successful processes regardless of a municipality's size, problems, or choice of solution. The first three steps are often neglected and are therefore discussed extensively in this report. False starts or incomplete processes can lengthen, increase the cost, or increase the contentiousness of restructuring. Process is an area where some communities have been penny-wise but pound-foolish. A complete, well-thought-out process that is rigorously followed will benefit any community, regardless of size.[6]

5 New Orleans, Louisiana and Stockton, California voters approved referenda that require direct approval of the voters for city contracts in excess of a specified dollar sum. Both referenda were in response to false starts in water system restructuring. A judge nullified the contract with a private company in Stockton for operation of the water, wastewater, and stormwater systems shortly after it was awarded, but appeals of the decision have been filed and are not yet resolved.

6 Small communities facing severe resource constraints will still fare better if they perform each step in a very simple way rather than skipping any of the steps.

Figure ES-2 depicts a cyclical process, because even after successful restructuring there is need for continuous improvements and adjustments to avoid another major restructuring in the future. Commonly, restructuring becomes necessary when this sort of a continuous, iterative improvement cycle has broken down and originally small problems have become large ones. The resulting crisis and sense of urgency often leads decisionmakers into the "false start" mistake.

There are many ways to succeed so long as major mistakes discovered in other venues are avoided.

Recommendations

This report recommends actions that decisionmakers should make, and others that they should avoid, grouped under the six determinants of success. The "Do" items emphasize positive actions, while the "Don't" items highlight larger mistakes to avoid during water system restructuring. Our primary objective is to help communities learn from the experiences of others. There are many ways to succeed so long as major mistakes discovered in other venues are avoided.

Some of the recommendations clearly demonstrate that the choice of public or private form of organization is not critical to performance.[7]

For example, in the area of **adequate funding**, we recommend: *Do look for and capture economies of scale and scope*. Small communities are perhaps the most challenged, financially, in the focus area of this study. One very effective way to reduce cost is to identify and capture economies of scale or scope through cooperative arrangements or outright consolidation with other public agencies or private companies. The Lansing, Michigan Board of Water and Light achieved greater economies of scale in its core operations through a combination of retail contracts to manage other operations, wholesale contracts to resell water, and asset transfers from other municipalities to the Board. Other functions without economies of scale, like water distribution, remained with the towns. Similarly, the "hub and spoke" area project in Minnesota has allowed the towns of St. Michael, Albertville, and Hanover to benefit from economies of scale captured by a private company that serves all three towns. As in the Lansing example, however, some functions remain in the hands of each town because there were no economies of scale affecting those functions.

In the area of **performance measurements and rewards**, we recommend: *Do measure and reward (or penalize) performance.* Management structures that do not measure and reward achievement of performance objectives inevitably become inefficient. Performance bonuses are one way of rewarding private companies, as is allowing them to keep any cost reductions they achieve below a fixed fee that is paid for their services. Both of these techniques have been used successfully in the Milwaukee Metropolitan Sewerage District (MMSD) contract for operations. Performance penalties in a contract, such as those for odor complaints in the Sioux City contract, are also beneficial. But performance measurement, rewards, and penalties are also appropriate in public systems. The City of Baltimore CitiStat system has saved more than $100 million since its inception in 2001. And Louisville Water, a public corporation, has

7 Although that choice is an important value decision in some communities.

used bonuses at all levels of the utility to increase efficiency and to create a culture of performance among its staff. In the case of public utilities, even if cash bonuses are not legal or appropriate, promotions and continued employment can be clearly linked to achievement of performance objectives.

In the area of **transparency and public participation**, we recommend: *Do communicate clearly and consistently with workers and unions if jobs will be transferred between employers.* The MMSD developed a standard form contract that was reviewed and approved by the union prior to solicitation of proposals for operations. The Indianapolis wastewater contract; the Butler County and Akron, Ohio public agency restructurings discussed in this report; and the transition from private to public operation in Hamilton, Ontario had similarly consistent communications with workers.

Unfortunately, the Indianapolis water transition involved conflicting communications about benefit levels for workers that created tension that could have been avoided. The operations contract called for the value of benefits to be maintained while the mayor had previously stated that benefits would be unchanged. To this day, the contractor and the union differ on how to calculate the value of benefits. As a result of this inconsistent communication, a federal mediator has been required to help with the labor contract negotiation, seventeen complaints have been filed with the National Labor Relations Board, former employees have sued over their dismissal, and the loss of staff and turnover in management have been so significant that some people are asking whether the utility has sufficient institutional memory to function well in the future.

It is important to note that these examples do not show any pattern with respect to the question of public versus private operations. Successful labor transitions took place from public-to-private, public-to-public, and private-to-public management. The unsuccessful example was a private-to-private transition, but we know that such transitions have taken place successfully in other circumstances. The bright line between success and failure for labor transitions is **not** public versus private; instead, the key is clear and consistent communication with workers and unions.

A final example, with regard to **avoiding false starts**, is our recommendation: *Do not assume the private sector is inherently more efficient or less costly*. Statistical analysis does not support this claim (see Appendix B). There are cost factors that both drive up and drive down private company costs relative to public agency costs. When cost savings exist, they result from some specific circumstance that can be identified and evaluated, not an inherent advantage of private over public. For example, the successful bidder in Stockton, California is far more experienced than other bidders and public agencies at operation of a particular type of wastewater process—experience that allowed them to bid $20 million less for capital improvements than the second-lowest proposal and to provide financial guarantees for their proposed method of wastewater treatment.

When cost savings exist, they result from some specific circumstance that can be identified and evaluated, not an inherent advantage of private over public.

Conclusion

… allowing values and beliefs to overshadow the factual and analytical part of the decision often leads to costly outcomes that polarize and divide communities.

The debate over water privatization has overshadowed discussion of methods for achieving real, tangible performance improvements regardless of whether the utility is public, investor-owned, or somewhere in between. While values and beliefs certainly have their place in any decision about utility restructuring, allowing values and beliefs to overshadow the factual and analytical part of the decision often leads to costly outcomes that polarize and divide communities. Experience in the upper Midwest shows better-performing utilities:

- have staff in the right numbers and of the right kind
- know what assets they own and the condition of those assets
- are consistently funded at adequate levels because they use a wide range of techniques to control costs and to maintain financial credibility with their communities through continuous communication
- measure performance and provide rewards or penalties as appropriate in order to ensure that staff at all levels are encouraged to either improve the quality or reduce the cost of service
- make decisions in open processes, with transparency and public participation and periodic third-party reviews, thereby avoiding even the appearance that corruption or "private agendas" are driving the decision process, and
- if restructuring is needed, avoid a false start by identifying the symptoms and underlying causes of the problems people are facing—and discussing the full range of solutions that might be implemented—*before* deciding to undertake potentially controversial actions such as changing from a public to private or a private to public utility structure.

The choice of public versus private structure is important because it involves social values such as public health, affordability of essential services, and the general approach of each community to satisfaction of basic needs. But our research shows that with respect to performance—how much or how many services get delivered per dollar of rates paid by customers—the choice of public versus private is not nearly as relevant as the bulleted points above.