

**National Regulatory Research Institute**

**Certification Requirements As a Path to  
Improve Small Water Utility Operations:**

**The Issues Facing Regulatory Commissions**

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## **Executive Summary**

Regulating struggling small water utilities is a special challenge for state commissions. The utilities' financial, managerial and technical deficiencies make it difficult for commissions to induce effective, efficient operations, reasonable rates, and high standards of customer service. One approach used by state commissions is certification requirements. This paper presents the issues and challenges faced by regulatory commissions in establishing and incorporating performance standards into certification requirements. It also addresses the question of how commissions can ensure continuous high performance from small water utilities once they receive certification. This paper describes utility performance standards based on current water industry standards and practices and proposes ideas for additional research on this topic. We ask commentators to recommend areas of emphasis for NRRI's research over the next three months.

This paper is available electronically at:

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# Certification Requirements As a Path to Improve Small Water Utility Operations:

## The Issues Facing Regulatory Commissions

### I. The regulatory challenge

Regulating small water utilities is a special challenge for state commissions.<sup>1</sup> Many small water utilities<sup>2</sup> struggle to achieve reasonable economies of scale, financial stability, effective management, technical proficiency and reliable infrastructure. Small systems accounted for 90% of all systems in 2000 that violated one or more national primary drinking water standards in three quarters within a three-year period.<sup>3</sup> Such utilities' financial, management and technical deficiencies make it difficult for commissions to induce effective, efficient operations, reasonable rates, and high standards of customer service. The challenges for small water utilities and commissions that regulate them are likely to become even more acute in coming years as utilities face the need to replace aging infrastructure and comply with more stringent federal regulations.

Managerial, financial, technical and infrastructure challenges are not exclusive to small water utilities, and there are many small utilities that maintain efficient, effective operations. Many of the principles presented in this paper are drawn from successful large water utilities and current water industry standards and practices. These concepts can be applied to utilities of any size to resolve operational and managerial difficulties. In this paper, we specifically address the

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<sup>1</sup> For additional discussion of these challenges, see: Stanford, Melissa J., *Small Water Systems: Challenges and Recommendations*, National Regulatory Research Institute, Report No. 08-02, February 7, 2008. Available at: [http://nrri.org/pubs/water/nrri\\_small\\_water\\_systems\\_08-02.pdf](http://nrri.org/pubs/water/nrri_small_water_systems_08-02.pdf)

<sup>2</sup> The U.S. Environmental Protection Agency classifies water systems according to the number of people they serve. Classified as very small are systems that serve between 25 and 500 people; small, between 501 and 3,300 people; medium, between 3,301 and 10,000 people; large, between 10,001 and 100,000 people; and very large, 100,001 or more people. When we refer to *small water utilities* in this paper, we mean utilities that serve between 25 and 3,300 people.

<sup>3</sup> Office of the Inspector General, *Impact of EPA and State Drinking Water Capacity Development Efforts Uncertain*, Report No. 2003-P-00018, September 30, 2003.

problems facing small utilities since regulatory commissions report the greatest challenges with those entities.

In its February 2008 report on small water systems,<sup>4</sup> NRRI identified certification requirements as one approach state commissions could use to improve conditions at small water utilities. In April 2008, NRRI sponsored a web-based meeting on small water system issues,<sup>5</sup> attended by about 60 people representing 13 state regulatory commissions and other organizations. Meeting participants prioritized issues for which they thought additional research would be beneficial to regulatory commissions. Establishing standards, expectations and certification requirements for small water systems emerged as a priority issue for additional research.

This paper presents the issues and challenges faced by regulatory commissions in establishing performance standards (Part II) and incorporating them into certification requirements (Part III). It also addresses the question of how commissions can ensure continuous high performance from small water utilities once they receive certification (Part IV). This paper introduces ideas for additional research on this topic, which NRRI will conduct over the next three months. In Part V, we describe the objectives of that research and the methods we will use to achieve them.

## **II. What requirements and performance standards must small water utilities satisfy to serve the public interest?**

### **A. Federal drinking water standards and rules**

Standards and regulations for water utilities are established by a variety of federal and state agencies.<sup>6</sup> The U.S. Environmental Protection Agency (EPA) promulgates and enforces rules under the Safe Drinking Water Act (SDWA).<sup>7</sup> These rules cover primary and secondary

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<sup>4</sup> Stanford, Melissa J., *Small Water Systems: Challenges and Recommendations*, National Regulatory Research Institute, Report. No. 08-02, February 7, 2008.

<sup>5</sup> A summary of the meeting is available at:  
[http://nrri.org/pubs/water/Small\\_Water\\_Systems\\_Research\\_Priorities.pdf](http://nrri.org/pubs/water/Small_Water_Systems_Research_Priorities.pdf)

<sup>6</sup> For additional discussion of water utility regulation, see: Denig-Chakroff, David, *The Water Industry at a Glance*, National Regulatory Research Institute, April 2008, p. 12. Available at: [http://nrri.org/pubs/water/Water\\_industry\\_at\\_a\\_glance.pdf](http://nrri.org/pubs/water/Water_industry_at_a_glance.pdf)

<sup>7</sup> Pub. L. 93-523; 42 U.S.C. § 300f et seq. December 16, 1974.

drinking water quality standards,<sup>8</sup> source water protection, operator certification, funding water system improvements, providing consumer information about safe drinking water, assessing system vulnerabilities (e.g., to terrorism and natural disasters), and emergency response planning.

Direct oversight of EPA requirements for public water utilities is conducted through state drinking water programs. States that adopt standards at least as stringent as the federal standards can obtain authority from the EPA to implement the SDWA within their jurisdictions. The state agencies responsible for this oversight (typically a state environmental, health or natural resources agency) are referred to as *primacy* agencies, because they have primary responsibility for enforcing the federal SDWA.

## **B. State and local drinking water standards and regulations**

Nothing in federal law prevents states and local jurisdictions (e.g., towns, cities, counties, water districts) from imposing drinking water standards and regulations that are broader or more stringent than federal requirements. Some towns and cities, for example, establish water treatment requirements for aesthetic reasons (e.g., removing iron and manganese to address color, taste and odor issues). Some states and local governments impose water use restrictions to meet regional conservation and efficiency goals.

## **C. State commission regulatory requirements**

State commissions are responsible for ensuring that the utilities they regulate serve the public interest. The commissions do this by setting regulatory requirements that point utilities toward efficiency, reliability, accountability and high-grade customer service. The authorities most commissions use to accomplish these goals for the water utilities they regulate are (1) rate making, (2) requiring annual financial and operating reports, (3) reviewing mergers and acquisitions, (4) responding to customer complaints, (5) requiring management audits, (6) approving financial issuances, (7) authorizing service areas and expansions, and (8) certifying new systems.<sup>9</sup>

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<sup>8</sup> Federal primary drinking water quality standards apply to constituents in water that pose a health risk. Primary standards are binding on all drinking water utilities that serve the public. Secondary standards apply to constituents that can cause aesthetic annoyance like unpleasant appearance, taste and odor, such as iron and manganese. Secondary standards serve as guidelines for utilities and are nonbinding.

<sup>9</sup> Beecher, Janice A., *1995 Inventory of Commission-Regulated Water and Wastewater Utilities*, School of Public and Environmental Affairs—Indiana University, Pub. No. 95-E18, November 1995.



To carry out their responsibilities for water utilities, state commissions must understand and give consideration to federal, state and local drinking water standards and requirements. When a utility makes a reasonable request for a certificate of public convenience and necessity (CPCN) or seeks reasonable rate recovery for a facility or project needed to meet a primary water quality standard (a federal mandate), for example, a commission must consider that as a legitimate expense in the public interest.<sup>10</sup> When a utility requests a CPCN or seeks rate recovery, however, for a facility or project designed to meet or exceed a nonbinding federal secondary water quality standard or a local water conservation goal, a commission should evaluate the request to determine if the cost is in the public interest.

Commissions' regulatory responsibilities for water utilities, however, go well beyond consideration of the requirements and desires of other jurisdictional federal, state and local agencies. Commissions have a responsibility to determine if a utility's overall service provides a public benefit and if the cost for that service is reasonable. A utility's performance in the areas of finance, management, technical applications and infrastructure affects both the cost and level of service the utility provides to the community. Utility performance standards are a necessary means of making these public interest determinations.

#### **D. Performance standards for water utilities**

This part discusses water utility performance standards in terms of four categories: (1) financial security, (2) effective management, (3) technical proficiency, and (4) reliable infrastructure. We will discuss performance in each of these areas generally and give examples of standards that state commissions could establish. This is not meant to be an exhaustive list of performance standards. It is meant to provide a starting point for discussion and additional planned research discussed in Part V below.

##### **1. Financial security**

Utilities must be financially secure to reliably provide safe, high-quality drinking water and excellent customer service at a reasonable price. To achieve financial security, they should satisfy the following performance standards.

- a. Have reasonable rates commensurate with similarly situated utilities.** A water utility's rates should be comparable to other water utilities in the same geographic area with water systems of similar design, size and age.<sup>11</sup>

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<sup>10</sup> Even in this example, however, there may be alternative ways to meet a particular federal requirement. It is within a state commission's purview to evaluate the alternatives to determine which provides the greatest public benefit.

<sup>11</sup> There may be disparity, for example, between the rates of a ground water utility and a neighboring surface water utility due to the differences in the processes each use to produce safe

If rate differences between two similarly situated utilities cannot be adequately explained and, particularly, if a struggling utility's rates are much lower than a similarly situated utility, financial security and stability could be at risk.

- b. Have access to financial resources.** Financial security requires utilities to have (1) sufficient revenue to cover operating expenses and debt service, (2) creditworthiness, (3) access to financial markets or other assured sources of funding for capital expenses, and (4) adequate insurance.
- c. Provide complete and accurate financial records and maintain effective financial controls.** A utility should undergo annual financial audits conducted by a qualified independent auditor to ensure that financial statements are accurate and complete and that sufficient financial controls are in place.
- d. Submit rate filings at a frequency that avoids large rate increases.** A utility should have a history of rate filings that keeps pace with rising costs. It should avoid long periods between rate cases followed by a spike in rates.
- e. Maintain operating and capitals budgets with multi-year projections.** Financial security requires planning. A utility should prepare annual operating and capital budgets. Those budgets should also show 3-to-5-year budget projections. Capital budgets should be used to project the need for capital improvement financing (e.g. bond issue). Operating budgets should be used to project the need for a rate filing.
- f. Negotiate cost effective commodity and service purchase agreements and consulting contracts.** A utility should have effective and open public bidding processes in place to purchase frequently needed services (e.g. telephone, janitorial, grounds maintenance) and commodities (e.g. fuel, pipe, hydrants, chemicals, vehicles, business supplies). It should also have an effective, competitive process for hiring consulting services (e.g., engineering, architectural, auditing).

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drinking water. The rates of a large utility are likely to be lower than those of an otherwise comparable small utility, because of the greater economies of scale enjoyed by the larger utility. Rates can vary with vintage of facilities and with infrastructure improvement efforts.

## 2. Effective management

Utilities need effective management to run efficient organizations. To achieve effective management, they should satisfy the following performance standards.

- a. **Comply with federal regulations.** A water utility should have a history of compliance with all federal regulations. That history should include meeting federal deadlines for water quality monitoring and reporting and for distributing annual water quality (*consumer confidence*) reports<sup>12</sup> to customers.
- b. **Attract and retain qualified personnel.** A utility should be able to attract and retain well-qualified personnel. It should provide competitive salary and benefits packages. Managers should create a productive, respectful work environment with effective communication throughout the organization.
- c. **Provide effective employee training and continuing education programs.** Employees should be well trained for the skills they are asked to perform. They should also have the opportunity to train for higher level positions in the organization to be qualified for advancement. All employees must have frequent and regular safety training for the positions they hold.
- d. **Provide excellent customer service.** A utility should have a reputation of providing excellent customer service. It should have a history of satisfied customers as measured by low numbers of customer complaints and quick resolution of complaints.
- e. **Display good public relations.** A utility should have a reputation of working cooperatively with the community it serves. It should provide timely, accurate information about service outages, water quality issues, watering restrictions, and other matters that affect the community. It must maintain good working relationships and frequent communications with local media, local government

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<sup>12</sup> The federal Consumer Confidence Report Rule (40 CFR, Part 141, Subpart O) requires every water utility that serves the public to prepare and distribute to its customers a brief annual water quality report summarizing information regarding its water source, any detected contaminants, compliance history and educational information.

officials, neighborhood associations and other appropriate stakeholders.

- f. Maintain an effective emergency response plan.** A utility must have a complete and effective emergency response plan, updated annually. Frequent training, exercises and drills should be conducted so employees are prepared when an emergency occurs. A utility should also develop mutual aid and assistance partners and networks with other utilities, local public works agencies, or other appropriate organizations.
  
- g. Have a comprehensive strategic business plan.** A utility should conduct and maintain a strategic business plan. It should assess the utilities performance and make recommendations for improvement in areas such as:
  - (1) core business practices and services
  - (2) optional services that may be provided
  - (3) service quality
  - (4) workforce flexibility
  - (5) employee training and continuous improvement programs
  - (6) succession planning and management
  - (7) community outreach and communication
  - (8) performance measurement and benchmarking
  - (9) customer satisfaction

### **3. Technical proficiency**

Utilities must be technically proficient to operate effectively and efficiently. They must implement appropriate new technologies into all aspects of their operations. To achieve technical proficiency, utilities should satisfy the following performance standards.

- a. Maintain staff with technical proficiency in all utility functions and operations.** A utility must have qualified, skilled, experienced system operators, maintenance staff and field crews to achieve a smooth, efficient operation. It must have or have access to well-qualified water system engineers and water quality specialists. It must have qualified accounting and support staff.

The key to a well-run utility is maintaining a qualified and skilled workforce.

- b. Maintain effective water quality monitoring and reporting systems.** Water quality sampling and monitoring equipment and protocols should meet high technical and professional standards. Water quality testing results must be accurate and reliable.
- c. Use appropriate automated technology for office, business and engineering functions.** Smooth business operations require efficient and effective systems and programs for accounting, billing, finance, data processing and general office functions. Engineering functions, whether conducted in-house or contracted out, should be carried out with specialized software programs for system design and distribution system hydraulic modeling.
- d. Use appropriate practices, technology and equipment for system and field operations.** Efficient operation of a water system requires adherence to many industry standards and “best practices.” A utility should maintain comprehensive, written, standard operating procedures for all of its operating functions. It should stay current on effective industry practices and the availability of new technology and equipment. It should evaluate their potential applicability to its system and incorporate those that increase efficiency and effectiveness.
- e. Maintain an effective metering program.** Accurate metering of water, from source of supply withdrawal to delivery to all customers, is crucial to a utility’s efficiency. It determines a utility’s ability to measure water loss in its system and ensures that the utility receives the revenues it is due. Many technological alternatives are available for meter reading, including a variety of automatic meter reading systems. An effective meter maintenance and meter replacement program is also important. A utility should maintain and continually evaluate its metering program to ensure it is cost-effectively providing complete and accurate information.

#### **4. Reliable infrastructure**

Sound, reliable infrastructure is imperative to the productive, efficient operation of water systems. To maintain reliable infrastructure, utilities should achieve the following performance standards.

- a. Maintain an effective preventative maintenance program.** Reliability depends on a well maintained system. A utility cannot provide reliable service if it does not conduct preventative

maintenance and have in place a comprehensive preventative maintenance program.

- b. Prepare a capital improvements plan.** A capital improvements plan (CIP) evaluates new infrastructure needs and costs based on projected future growth and demands on a water system. A CIP should have both short-term (e.g., 3-to-5 year) and long-term (e.g., 10-to-20 year) components. The CIP should be used to develop the utility's capital budget (Part D.1.e. above).
- c. Have an asset management plan.** An asset management plan (sometimes referred to as an *infrastructure improvement plan*) evaluates *existing* infrastructure. Such plans generally consist of a complete assessment of utility facilities and assets, including a determination of the condition and remaining useful life of each component of the system, right down to each segment of buried pipe. The goal of these plans is to determine a reinvestment timeline that will allow continued operation of critical infrastructure throughout its useful life, but will ensure replacement before it fails and before maintenance costs increase dramatically. The results of the plan feed into both a utility's operating and capital budgets (Part D.1.e. above).
- d. Have a water supply plan or integrated resource management plan.** A water supply plan, like a CIP, projects future growth and demand to determine future water needs to meet that demand. It then evaluates the costs and benefits of water supply alternatives. An integrated resource management plan evaluates a combination of new water supply, conservation and efficiency measures to manage and meet future water demand.
- e. Maintain a facility security plan.** A reliable water system requires that its facilities are secure from outside breach or attack (from vandals to terrorists). A comprehensive security plan is needed for all facilities.

### **III. How can commissions incorporate performance standards into utility certification requirements?**

Commissions typically issue rules governing water service and require water utilities they regulate to obtain certificates of public convenience and necessity (CPCN) to establish service or to construct new facilities or infrastructure. Commission rules and their CPCN process can be used to establish performance standards for water utilities. Commissions should ensure that their rules governing water service contain requirements for the specific performance standards they

wish to implement. CPCN applications should require sufficient information to evaluate a utility's ability to meet the performance standards in its rules. Commissions should provide guidelines for evaluating CPCN applications to ensure that performance standards are achieved. Part III.A provides an example of a rule governing water service that incorporates performance standards. Part III.B is an example of guidelines for CPCN application review that include performance standards.

#### **A. Example of water service rule**

An example of a commission water service rule that incorporates performance standards is the California Public Utilities Commission (CPUC) General Order 103, *Rules Governing Water Service Including Minimum Standards for Design and Construction*.<sup>13</sup> Even though the rule title cites "design and construction," the purpose of the rules (described in G.O. 103, Part I.1.a.) --

is to promote good public utility practices, to encourage efficiency and economy, and to establish minimum standards to be hereafter observed in the design, construction *and operation* of waterworks facilities by water utilities operating under the jurisdiction of the Commission. The standards herein prescribed are intended as minimum standards applicable after adoption and continued full utilization of existing facilities is contemplated. [Emphasis added.]

An example of operating performance standards in the California rule is contained in Article II, *Standards of Service*, Part 1, *Quality of Water*:

a. General. Any utility serving water for human consumption or for domestic uses shall provide water that is wholesome, potable, in no way harmful or dangerous to health and, insofar as practicable, free from objectionable odors, taste, color and turbidity. Any utility supplying water for human consumption shall hold or make application for a permit as provided by the Health and Safety Code of the State of California, and shall comply with the laws and regulations of the state or local Department of Health Services. It is not intended that any rule contained in this paragraph II 1 shall supersede or conflict with an applicable regulation of the State Department of Health Services. A compliance by a utility with the regulations of the State Department of Health Services on a particular subject matter shall constitute a compliance with such of these rules as relate to the same subject matter except as otherwise ordered by the Commission.

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<sup>13</sup> Provided by Fred L. Curry, Chief, Water and Sewer Advisory Branch, Division of Water and Audits, California Public Utilities Commission, correspondence, June 6, 2008.

b. Water Supply. In the absence of comparable requirements of the State Department of Health Services, the following general rules shall apply:

(1) Source. Water supplied by any utility shall be:

- (a) Obtained from a source free from pollution; or obtained from a source adequately purified by natural agencies; or adequately protected by artificial treatment.
- (b) From a source reasonably adequate to supply a continuous supply of water.
- (c) Of such quality as to meet the United States Environmental Protection Agency Drinking Water Standards.

(2) Operation of Supply System.

- (a) The water supply system, including wells, reservoirs, pumping equipment, treatment and filtration works, mains, meters and service pipes shall be free from sanitary defects.
- (b) No physical connection between the distribution system of a public potable water supply and that of any other water supply shall be permitted except in compliance with the Regulations Relating to Cross-Connections of the State Department of Health Services contained in Title 17 of the California Administrative Code.
- (c) The presence of algae, crenothrix and other growths in the water shall be controlled by proper treatment.

c. Testing of Water.

(1) Test. Each utility shall have representative samples of the water supplied by it examined by the state or local Department of Health Services or by an approved water laboratory as defined in Title 17 of the California Administrative Code, at intervals specified by the state or local Department of Health Services, in accordance with the United States Environmental Protection Agency Drinking Water Standards.

(2) Reports of Tests. The Commission shall be promptly notified in writing by the utility and supplied with a preliminary report describing the situation when matters of water quality are under review by the state or local Health Department as a result of not meeting the United States Environmental Protection Agency Drinking Water Standards. A final report shall be submitted to the Commission within a reasonable time after final disposition of the matter.



The CPUC rule both (1) refers to standards and requirements of other state (“State Department of Health Services”) and federal (“United States Environmental Protection Agency”) agencies, and (2) establishes its own performance standards (e.g., “The commission shall be promptly notified in writing by the utility and supplied with a preliminary report describing the situation when matters of water quality are under review by the state or local Health Department...”).

The CPUC *Water Action Plan*, December 15, 2005, recommends implementation of additional performance standards for water utilities, including the following two examples:

2. Strengthen the CPUC’s role in water quality regulations and monitoring procedures.

Decision (D.) 00-11-014 directed the CPUC’s Water Division to prepare a draft Order Instituting Rulemaking (OIR) to develop water quality regulations and monitoring procedures and other modifications to General Order 103 as required by the Hartwell Decision.<sup>14</sup> This proposed OIR has not yet been issued. This OIR will determine the proper level of CPUC involvement in its water quality regulatory function with respect to the utilities and the California Department of Health Services. The CPUC’s jurisdiction must be appropriate and complementary to the Department of Health Services’ function as the primary agency for water quality in California.

3. Require water utilities to provide water quality reporting to the CPUC in their General Rate Case Filings.

Consistent with the CPUC’s objective for ensuring safe water supplies, water utilities will be required to document water quality as part of their General Rate Case (GRC) filings and highlight any areas where water quality fails to meet the applicable standards that are currently in place or would be in effect during the rate case cycle. The report will also be required to include proposals to resolve any water quality problems and identification of the investment or other costs required to rectify the problem. The water utility will be required to attach to its GRC any Department of Health Services reports filed from the most recent year.

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<sup>14</sup> In February, 2002, the Supreme Court of California decided in the *Hartwell Decision* that the CPUC has regulatory authority to promulgate water quality standards applicable to the water utilities it regulates. *Hartwell Corporation et al. v. The Superior Court of Ventura County*, 02 C.D.O.S. 1064, (2002).

## **B. Example of certificate review guidance**

An example of guidelines for reviewing CPCN applications for performance standards is CPUC Water Standard Practice, SP U-10-W (Part B.6):

The Commission favors one large utility over two smaller utilities, other things being equal; therefore, if there is an established utility within the immediate area of a real estate development, the applicant should explore the possibility of having the existing utility provide the service. The Commission will not certificate a developer to establish a new utility merely because the developer owns or controls the land to be served. In fact, Resolution No. M-4708, August 28, 1979 says the Commission will (for a Class D less than 501 service connection) water company:

(a) "Deny certificates of operations which are likely to be unviable or marginally viable or provide inadequate service, whether or not an existing entity can provide service to the subject area;

(b) deny certificates for a potentially viable system if another entity, such as a public utility or public district, is able to serve the proposed area;

(c) cancel unexercised certificates for operations unlikely to be viable systems if developed; likewise cancel certificates for constructed systems serving no customers when the owner requests a transfer and sale of the utility which would not be likely to result in a viable operation;

(d) support and promote the conversion of unviable or marginal water utilities to public ownership or their mergers with more viable entities when opportunities arise and customer service is more likely to improve through such change than without it

(e) grant certificates for proposed water system only when (1) need for the utility is demonstrated by applicant showing that no other entity is willing and able to serve the development and concrete present and/or future customer demand exists and (2) viability is demonstrated, ordinarily through the following tests:

- proposed revenues would be generated at a rate level not greatly exceeding that set for comparable service by other water purveyors in the general area;

- that utility would be self-sufficient, i.e. expenses would be supported without their being allocated between the proposed utility and other businesses;

- the applicant would have a reasonable opportunity to derive a fair return on its investment, comparable to what other water utilities are currently being granted."

Sufficient specific information must be required in the CPCN application for commissions to evaluate the standards set forth in their guidelines.

#### **IV. How can commissions ensure utility adherence to performance standards?**

A commission can establish performance standards and evaluate a utility's ability to meet those standards during its certification review process. What can a commission do, however, about a failing utility that was certificated before performance standards were established? What can it do about a utility that meets performance standards initially, but the performance of which deteriorates over time?

##### **A. Establish and track performance measures**

The best way for a commission to maintain performance standards is to ensure that water utilities understand what the standards are and establish performance measures to track their performance on a regular basis. Evaluating performance measures on at least an annual basis should prevent a utility from going so far astray in its performance that it can't take corrective action to quickly resolve a deficient performance standard. The Public Service Commission of West Virginia is conducting a performance measures trial for all water and wastewater utilities it regulates.<sup>15</sup> It has established performance measures that each utility must report as part of its annual report to the Commission. When the trial period is over, West Virginia will evaluate the responses and make a decision as to any statutory and rule making changes it might propose. Some examples of the West Virginia performance measures include:

1. Training hours per employee
2. Total number of customers per total number of employees
3. Total amount of water delivered per total number of employees
4. Debt service coverage ratio

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<sup>15</sup> Amy Swann, Director, Water/Wastewater Division, Public Service Commission of West Virginia, correspondence, June 9, 2008 and June 30, 2008.

5. Number of drinking water violations per number of systems
6. Water loss
7. Number of leaks and breaks per mile of distribution system pipe
8. Ratio of planned maintenance to corrective maintenance

**B. Induce and enforce performance standards**

Whatever means a commission may have or acquire to enforce performance standards on water utilities, it should first work closely with struggling small water utilities to help them get the technical and managerial assistance they may need to achieve the established standards. Commissions should work closely with the EPA office in their region and the EPA primacy agency in their state. These agencies also have responsibility for ensuring that the water utilities in their jurisdiction maintain the technical, managerial and financial capability to provide safe drinking water to the public.

If reasonable efforts to provide assistance are insufficient to induce a utility to meet performance standards, a commission should have tools in place to resolve the situation. Commissions should evaluate their individual statutory authorities and rules to determine if additions or changes are needed. The following is an example of authority granted the Illinois Commerce Commission under the Illinois Compiled Statutes (ILCS), Public Utilities Act (220 ILCS 5/8-502):<sup>16</sup>

Sec. 4-502. Small public utility or telecommunications carrier; acquisition by capable utility; Commission determination; procedure.

(a) The Commission may provide for the acquisition of a small public utility or telecommunications carrier by a capable public utility or telecommunications carrier, if the Commission, after notice and an opportunity to be heard, determines one or more of the following:

(1) the small public utility or telecommunications carrier is failing to provide safe, adequate, or reliable service;

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<sup>16</sup> Provided by Bill Johnson, Economic Analyst, Illinois Commerce Commission, correspondence, June 10, 2008.

(2) the small public utility or telecommunications carrier no longer possesses sufficient technical, financial, or managerial resources and abilities to provide the service or services for which its certificate was originally granted;

(3) the small public utility or telecommunications carrier has been actually or effectively abandoned by its owners or operators;

(4) the small public utility or telecommunications carrier has defaulted on a bond, note, or loan issued or guaranteed by a department, office, commission, board, authority, or other unit of State government;

(5) the small public utility or telecommunications carrier has willfully failed to comply with any provision of this Act, any other provision of State or federal law, or any rule, regulation, order, or decision of the Commission; or

(6) the small public utility or telecommunications carrier has willfully allowed property owned or controlled by it to be used in violation of this Act, any other provision of State or federal law, or any rule, regulation, order, or decision of the Commission.

(b) As used in this Section, "small public utility or telecommunications carrier" means a public utility or telecommunications carrier that regularly provides service to fewer than 7,500 customers.

(c) In making a determination under subsection (a), the Commission shall consider all of the following:

(1) The financial, managerial, and technical ability of the small public utility or telecommunications carrier.

(2) The financial, managerial, and technical ability of all proximate public utilities or telecommunications carriers providing the same type of service.

(3) The expenditures that may be necessary to make improvements to the small public utility or telecommunications carrier to assure compliance with applicable statutory and regulatory standards concerning the adequacy, efficiency, safety, or reasonableness of utility service.

(4) The expansion of the service territory of the acquiring capable public utility or telecommunications carrier to include the service area of the small public utility or telecommunications carrier to be acquired.

(5) Whether the rates charged by the acquiring capable public utility or telecommunications carrier to its acquisition customers will increase unreasonably because of the acquisition.

(6) Any other matter that may be relevant.

## V. A plan for research

NRRI will research the issues raised in this paper to provide regulatory commissions with ideas, options and tools they can use to address the challenges of regulating small struggling water utilities.

### A. Objectives

NRRI objectives for research into these issues include:

1. **Performance standards.** The research will provide a list and discussion of specific performance standards recommended for small water utilities.
2. **Performance measures.** For each performance standard recommended, the report will provide one or more performance measures that commissions and utilities can use to track progress toward or achievement of the standard.
3. **Options for authorities and actions.** The research will provide options for statutory language, rules, guidelines and practices that commissions can use to address the challenges of regulating struggling small water utilities.
4. **Model rule.** NRRI will develop a model rule for state commissions' consideration that they could adopt or modify to address the particular issues they face.

### B. Methods

This paper has provided examples of statutes, rules and guidelines used by state commissions to address the issues and challenges of regulating small water utilities. Additional research will be conducted to review other examples of authorities used and actions taken by regulatory commissions. NRRI will evaluate these authorities and actions to identify options for successful practices that could be adopted by other commissions facing similar challenges.

An advisory team will be established for this research project. It will consist of representatives of state commissions with experience addressing the challenges of regulating small water utilities. It will also include representatives of private and small water utilities. The role of the advisory team will be to advise NRRI on issues addressed in the research and to review and provide feedback on drafts of the research report.