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INSTITUTIONAL SOLUTIONS TO DRINKING WATER PROBLEMS:

MAINE CASE STUDIES

Institutional Solutions to Drinking Water Problems: Maine Case Studies

Introduction

Implementation of the Safe Drinking Water Act (SDWA) Amendments of 1986 has created major challenges for drinking water systems across the State of Maine. The capital cost of the Surface Water Treatment Rule alone will range from $300 million to $500 million. The Maine Rural Water Association (MRWA) estimates that the cost of compliance for larger systems with at least 1,000 connections will double customers' bills. Compliance costs for smaller systems will increase customers' bills by 200 percent to 400 percent, depending upon the availability of grant funds.

Beyond the initial capital outlay, the SDWA Amendments demand levels of operator training, water testing, and management capabilities that utilities will have difficulty meeting. New requirements have put enormous pressure upon the smaller water systems, which are run by volunteer boards and part-time operators. To make matters more difficult, water systems are also responding to new and expensive mandates in areas such as worker safety and financial reporting. Also, the rural communities served by these utilities are not only facing increased drinking water costs, they are handling other environmentally related expenses, such as waste treatment and solid waste facilities and landfill closings.

Most small public and private utilities will have great difficulty complying with the amended SDWA. If rural communities want economically viable water suppliers, they must be innovative and adaptive in creating or altering institutions to provide safe drinking water at affordable prices. Small towns can utilize a number of institutional and management formats to achieve goals such as securing state and federal grant money, streamlining the decision-making process, or developing new community public water supplies.

Water systems are public institutions which fit into the framework of the local political process. Special care must be given whenever this process is altered. In general, voters make good choices for their community when they are given reliable information on a range of alternatives. The timing, the method and the relative ease of change varies from town to town, but solutions are found.

This paper recounts how four Maine communities sought and found institutional solutions to drinking water problems. Each scenario describes the system, outlines the problems, reviews the chronology of events, points out the lessons learned and gives the system's current status. The analysis includes an example of a private water company restructuring into a public water district, a municipal water and sewer department converting into a quasi-municipal utility district, a tiny water district cooperating with a town to secure a grant, and a new water district formed to provide potable drinking water to several residents whose private wells are contaminated.

Case Study I

Quantabacook Water Company, Harrington, Maine
An Example of a Private Water Company Restructuring Into a Public Water District

Background

Small private water companies have the greatest difficulty complying with the requirements of the Safe Drinking Water Act. Generally they were organized early this century to serve a small number of residents in the developed or village portion of town. There is usually no fire protection provided.

These systems typically raised capital by selling a few shares of stock for a very nominal sum. They rarely pay dividends or compensate their directors. Most systems are too small to have either a full-time operator or even a business office. Their rates are usually fairly low (normally under $125 per year), and their distribution systems are reaching the end of their useful lives.

Being private, these utilities cannot take advantage of the Farmers Home Administration's (FmHA) low-interest loan or grant programs, nor do they qualify for grants through federal or state economic development agencies. With low annual revenues and a basically weak financial structure, commercial bankers are extremely reluctant to provide long-term financing. Even if financing were available, customer bills would easily quadruple into the $500 to $600 per year range.

The Safe Drinking Water Act Amendments have brought many of these utilities to a critical juncture; they simply cannot afford to comply. Their options are either to go out of compliance or to abandon service. Neither choice is attractive.

However, municipal water departments and quasi-municipal water districts are eligible for FmHA grants or loans. If the assets of a private company are transferred to a water district, the district may apply for, and it is hoped receive, FmHA support. Enough grant money and low-interest loans makes an impossible situation acceptable to the local community. Restructuring can make a non-viable water utility viable. Safe drinking water becomes affordable.

Maine, like many states, requires enabling legislation to create a water district. The Maine Legislature has created new districts in Long Pond, Morrill, Columbia Falls, Harrington, Searsmont, Winter Harbor and Rangeley during the last three years. All are communities with private water companies. Transition is complete in Long Pond and Morrill, close to completion in Columbia Falls and Harrington and far from completion in Searsmont, Winter Harbor and Rangeley. While the process of reorganization is fairly similar in each instance, the order, ease, and timing vary.

Key components affecting restructuring are (1) the legislature is in session, because only the legislature can pass enabling legislation; (2) whether there are people in the community taking an active role, because successful restructuring demands decision making and action; (3) local politics, because difficult relationships between the company and the town and attitudes about creating a new unit of government can take a long time to resolve; (4) the ease of negotiating a sales price between the company and the district, because there is not always consensus between the parties; (5) the amount of regulatory pressure, because government action often serves as a catalyst; and (6) the intangibles, such as the length of time necessary to move the paperwork through the Public Utilities Commission or the ability to get a quorum at a local referendum, because small details often consume great quantities of time. As a general rule of thumb it takes between nine months and three years to restructure a water system.

Below is an outline of the steps necessary to restructure a water company into a water district. Although individual states vary according to enabling legislation and the exact role of the Public Utilities Commission, the fundamental concept of creating quasi-municipal or municipal entities to take advantage of federal grants holds nationally. Utilities in different states must modify, combine or reorder these benchmarks depending on state law, rules, and local custom.

The staff of Maine Rural Water Association plays an active role in helping communities find institutional solutions to drinking water problems. This role includes equal measures of guide, councilor, advocate, and friend. The Association does not charge for its services because of the support it receives from the U.S. Environmental Protection Agency, Farmers Home Administration, and the State of Maine. The job requires an understanding of the regulatory framework of the water industry and the legal and institutional aspects of water systems. While rural water associations are an important source of this type of technical assistance, it can also be provided by trained individuals in regional development commissions, municipal associations, regulatory agencies, and private practitioners such as attorneys and engineers.

22 Steps to Restructure a Private Utility

1. Officers of the water company meet to identify the problem and discuss options. A Health Engineering Order or the Surface Treatment Rule's filtration requirement usually triggers events. Boards are often desperate for solutions. Technical Assistance (TA) provider puts problem into perspective and provides options to consider. Initial visit is critical to establish trust and competency. Usually requires two meetings. Options include abandonment, alternative methods of compliance and restructuring.

2. Officers make a decision. Time depends on the degree of regulatory pressure, cost of compliance and desire to restructure. TA provider can assist with research and explanations of various scenarios.

3. Contact local legislators and draft water district enabling legislation. TA provider is important liaison between legislators and legislative staff who draft bill. All work together to modify standard language.

4. Conduct public meeting about the water situation. Use the meeting to educate public, get support, and decide the number of trustees and how they are elected or appointed. TA provider can either run the meeting or be available for technical support. One or two meetings are necessary. Good local media coverage is important.

5. Meet with locally elected public officials to educate them about the water system and gain their support for enabling legislation. In general, officials like to hear from outside experts but do not want to be preached to.

6. Testify in legislature on behalf of the bill. Legislative committees often have certain requirements which the TA provider should be familiar with. Usually there is one hearing and one work session on a non-controversial charter. Controversial charters take longer.

7. Amend the bill as necessary. TA provider works with legislative staff to make necessary changes.

8. Bill passes legislature - water district is established.

9. Conduct one or two public meetings to explain drinking water regulatory requirements and the role of a district. TA provider and state agency officials are important participants in these types of meetings to answer questions.

10. Mail out information sheet to registered voters within district. TA provider can help prepare a concise one-page summary.

11. Conduct referendum on establishing a water district according to municipal election laws. Municipal officials may use a municipal association to solve election questions. Towns handle this area very well.

12. Elect or appoint a board of directors, according to the charter. Communities have ample experience with selecting boards.

13. Board organizes itself. TA provider, accountant or local attorney can help first board get organized. It takes two or three meetings to work out some of the early questions.

14. District hires engineer to evaluate system and recommend improvements.

15. District reviews engineering report and comments on compliance alternatives and costs.

16. District applies for FmHA grants and loans.

17. Company files with the PUC for permission to abandon service and transfer the assets. Difficult to predict how long this will take.

18. District and company negotiate sales prices. Most, but not all negotiations are amicable. District's charter gives it power of eminent domain.

19. FmHA approves grant and loan package. Based upon financial need and availability of funds.

20. PUC approves transfer.

21. District applies to PUC for new rates and approval to borrow funds from FmHA.

22. District purchases water company, finances improvements, comes into compliance.

The restructuring of the Quantabacook Water Company in Harrington, Maine is an example of the process of transforming a private drinking water system into a quasi-municipal water district.

The System

The Quantabacook Water Company has been supplying water since 1867 when a legislative charter authorized the company "to construct one or more aqueducts from the Quantabacook Spring to the village of Harrington." The town is located in Washington County, in an area commonly known as "Downeast Maine." This and the surrounding towns are economically hard pressed; much of the local income is generated by endeavors such as blueberry raking, wreath-making and fishing. The median household income for Harrington in 1980 was $10,259, well below the poverty level.

The water company serves approximately 145 residential customers located mostly in the village. The source is a spring whose dimensions are 31 feet by 21 feet, which yields about 100 gallons per minute. Water comes into town by gravity feed through 4,800 feet of old unlined four-inch cast-iron pipe. The system has no storage facility besides the spring's capacity, no fire protection, no water meters, and no chlorination facilities. The company has a three-member board of directors and 54 shares of stock outstanding. It has rarely paid a dividend on its stock. Revenue is around $10,000 per year and the average annual residential water bill is $75.00. The value of total utility plant in 1990 was $51,000.

The Problem

The system has been plagued by low water pressure, no water in various portions of town for extended periods, and unacceptable coliform tests. These problems are the result of a combination of factors, including insufficient supply, undersized mains, growth of water consumption, no storage, lack of a pressurized system and leaks. The company has been on a continuous boil water order since July 1991.

The Chronology

Throughout the mid-1980s, the Maine Public Utilities Commission, which regulates the finances and service standards of all water utilities, the Division of Health Engineering, the state agency which enforces the drinking water regulations, and local elected officials received dozens of calls from irate customers about low pressure or no water service. The company acknowledged the problem and believed the source was leaks and over-consumption by a few small businesses. The operator spent hours (largely unpaid) searching for leaks and had field assistance from the staff of Maine Rural Water Association. Although the company found and repaired leaks, the problem and complaints persisted.

In the spring of 1988 the Division of Health Engineering (DHS) conducted a sanitary survey out of concern about the low water pressure and the potential for cross connections. As a result of

the survey, DHS ordered the company to pressurize the system by June 1989 and to install proportion-to-flow disinfection equipment.

The executive director of MRWA began discussing with the board the merits of restructuring the company into a quasi-municipal water district. The board members knew they would have difficulty securing a normal commercial loan because of the utility's weak financial position. They also acknowledged that they should replace the entire distribution system and construct additional storage. They were also aware of the state's proposed wellhead protection program which would require them to conduct a hydrogeological investigation and possibly purchase several acres of land for protection.

While the board considered the merits of restructuring, the company moved slowly towards compliance with the engineering order. The directors were very concerned about the project cost and about depleting the $25,000 reserve fund. They were also apprehensive about the effect pressurizing the line would have on the aged distribution system.

The directors agreed in the early spring of 1989 to transfer the assets of the water company to a water district. They contacted their state representative, state senator, and the executive director of MRWA. The MRWA executive director and legislative research staff prepared a draft of enabling legislation to create the Quantabacook Water District Charter. A water district is a quasi-municipal corporation authorized by the state legislature. Its charter details the territory, powers, rights, and responsibilities of the district. After the legislature approves the charter, the municipality(ies) holds a referendum for the registered voters living within the district.

Before the legislature approves a district charter, it requires an endorsement from the town selectmen. The water company directors and MRWA sat down with the selectmen of Harrington to ask for their support. The directors reviewed the plight of the company and explained how a water district can rebuild the system at a fraction of the cost. The selectmen expressed concern about the town's liability for the debt. They were assured that the town faced no liability.

The selectmen endorsed the legislation and supported holding a water district charter referendum. The legislature unanimously passed the water district charter and created the Quantabacook Water District.

The Town of Harrington is fairly small. The relationship between the directors of the company and the selectmen was good. The water district, like the company, would serve only the developed

"village" portion of town, i.e. many people in town would still not be on "town" water.

In September 1989, the company conducted an informational meeting and sent out a mailing to voters regarding the proposed restructuring. A town meeting and referendum vote were scheduled for November 3. The meeting went badly and the district was voted down. Many people who were not on the water system had come to the meeting to express their concern about town liability for debt. They refused to pay for water they did not use. They were also concerned about whether FmHA would require fire hydrants. The vote was 80-64 to reject the water district.

The town selectmen invited an attorney from the Public Utilities Commission to a meeting in late November. The attorney answered many of the questions posed at the November 3 referendum. Another referendum was held in December, and the 75-20 vote endorsed the creation of a water district.

Meanwhile the company had still been moving slowly towards compliance with the Division of Health Engineering's orders. It hired a small engineering firm to design a booster station. The engineer submitted plans to Health Engineering and the Public Utilities Commission in September 1989. The company began construction soon after, did much of the work itself, and used the reserve funds to finance the work.

The station was located near the source of supply and went on line in January 1990. The aged distribution system was unable to withstand the increased pressure and developed many new leaks. The booster station was unable to maintain pressure and eventually was shut down. After repeated coliform bacteria violations, the Division of Health Engineering ordered the company to issue a boil water notice.

The district's enabling act specified the election process for the first board of trustees. Unfortunately, the standard language did not conform to local election laws. Therefore, in April 1990 officials sought and received from the Maine Legislature an amendment to the original charter which permitted the municipal officers of Harrington to appoint the first board.

The new board has organized, hired an engineering firm to analyze the system, negotiated a purchase price with the owners of the company, and applied to Farmers Home Administration for a grant and a loan. They negotiated a purchase price of $55,000 fairly easily; it is approximately the net book value of the company.

The engineering firm put together a $1.9 million project. The project includes the development of a larger and more reliable water source, replacing 21,000 feet of undersized main, construction of a 300,000 gallon storage tank for fire

protection, and purchasing the company. An application for a community facility loan and grant was submitted to the Farmers Home Administration in the summer of 1992.

The FmHA determined that the district is eligible for a $1.36 million grant and a loan of $536,500. The loan is at 5 percent interest and will be amortized over 40 years. Average water bills will go from $75.00 to approximately $261.00 per year. FmHA was concerned about the rate increase and required a town vote to endorse paying for fire protection. At a recently held town meeting, the voters supported fire protection and the construction of a standpipe.

Current Status

The water district is eagerly waiting for FmHA to release funds. Because of the enormous statewide demand for FmHA assistance, sufficient grant monies are not now available. It is possible money will be released from FmHA's "pool" prior to the next federal fiscal year. The pool is a national reallocation of unspent grant and loan monies.

If financing is not immediately available, the district will try again in October. It may be necessary to scale back the project and take less grant money in order to improve the likelihood of getting funded.

Once the district gets financing, the company will ask for PUC permission to abandon service and to transfer the assets to the water district. The PUC must approve the transfer and the purchase price. The company will then buy back its stock and dissolve.

If the district does not receive federal assistance, the water company is still faced with an extremely serious compliance problem. It presents a great challenge to the town and the ratepayers.

Lessons Learned

The water system serving the Village of Harrington has reached the end of its useful life and needs reconstruction. A water district with sufficient FmHA financial support can handle the improvements. People can have safe drinking water, reliable service, and fire protection at an affordable price. The water company cannot do this project. Restructuring makes fundamental economic sense. However, the decision to restructure is predicated on the availability of federal financial assistance. If that assistance does not develop, then other options must be examined.

The other lesson learned is that the process can be time consuming. Two pieces of legislation and three referendums were required to get to this point. Openness, education, and trust were required at

each juncture. Communities work at their own speed to accomplish these goals. Other towns have moved through the process faster.

The regulatory agencies have been remarkably patient with the company and the water district. There is a realization that the community is moving forward, albeit slowly, towards coming into compliance.

Case Study II

Fort Kent Water and Sewer Department - Fort Kent Utility District
An Example of a Municipal Water and Sewer Department Restructuring into a Quasi-Municipal Utility District

The System

The Town of Fort Kent is located on the Canadian border in northern Maine's Aroostook County. It has a diverse economic base, consisting of light industry, services, agriculture, and forest products. Its population is approximately 4,700 and its median household income in 1980 was $14,442.

Municipal business is run by five elected councilors and an appointed town manager. The water and sewer department is under the direction of a superintendent who reports directly to the town manager and council. He supervises a crew of six full-time employees.

The town purchased a privately owned water company in December 1977. The system pumps an average of 290,000 gallons per day from two gravel-packed wells. There is a 750,000 gallon buried concrete reservoir for fire protection. There are approximately 550 residential and 155 commercial water customers. Average water bills for 2,000 cubic feet are $43.83 per quarter.

The sewer system has approximately 1,100 customers. Average quarterly residential billing is about $56.25. The town has an activated sludge secondary treatment process. There are a total of six pump stations. The facility treats about 325,000 gallons of sewage per day.

The Problem

The town must spend millions of dollars to implement a corrosion control and wellhead protection program, upgrade the sewage treatment plant, repair a leaking oxidation ditch and find a suitable site for sludge disposal. Since the spring of 1991 the town council had been considering whether to keep the water and sewer department under municipal control or transfer its functions to an independent quasi-municipal utility district. Some of the councilors felt overwhelmed by the volume of environmental decision making required.

The Chronology

The councilors invited the Maine Rural Water Association (MRWA) executive director to attend a special meeting on October 15, 1991. They wanted to discuss the advantages and disadvantages of municipal versus quasi-municipal management of water and wastewater systems. The councilors also wanted technical information on restructuring utilities. The full council, town manager, and superintendent attended.

The meeting lasted several hours. The MRWA executive director brought along a copy of a 1987 handbook on selecting different organizational structures for running a water supply. He stressed the following points at this first meeting:

- Outside of the well-known infrastructure problems, both systems are well staffed and managed;
- Their water and sewer rates are below average;
- New regulatory requirements in water and wastewater demand more time and attention from boards;
- Water systems in Maine are managed by 85 quasi-municipal districts, 34 municipal departments, and 16 joint utility districts;
- Although each organization operates differently, no single type of organization is necessarily more efficient. Each community can develop a system which works;
- Restructuring the water and sewer department requires an act of the legislature, approval by the Maine Public Utilities Commission, and approval of the voters of Fort Kent;
- A utility district is a new unit of government, separate from town government; and
- Communities benefit from periodically evaluating the management of their infrastructure.

Many issues surfaced at the meeting. Approximate quotes are, "If it ain't broke, don't fix it;" "We don't have enough time to deal with all of this;" "Utility business doesn't always take first priority for councilors attention;" We should have a board that only concentrates on water and wastewater;" "We should keep utility business away from town politics;" and "What's the problem, anyway?"

At the end of the meeting the town council decided to seek input from the voters. On November 15, 1991, the following question was asked on a municipal referendum: "Shall the Town of Fort Kent examine whether the affairs of the water and sewer department be governed by an elected five (5) member utility district rather than by the present town council?" The returns were 584 in favor, 376 opposed.

After the referendum, the town manager organized a 19-member ad hoc citizens' committee to examine the advantages and disadvantages of restructuring the water and sewer department into a utility district. The large committee was extremely broad based. It was to make recommendations to the town council, with the MRWA executive director acting as facilitator.

The first meeting was held on January 9, 1992 at the town office. At the outset the group appointed a secretary and decided that town council members should not be present during discussions. The committee would make written recommendations to the council reflecting majority and minority opinions.

The superintendent outlined the operation of the water and sewer department. Many of the group were unaware how these services were provided. Next the MRWA executive director explained various organizational options for water and sewer systems. The group then reviewed an MRWA worksheet on how to compare utility districts with departments using the following criteria:

<u>Operating Expenses:</u>
- Salaries
- Benefits
- Rent
- Billing
- Supplies
- Utilities
- Insurance
- Regulatory
- Transportation
- Equipment
- Legal

<u>Financing:</u>
- Ease of Financing
- Cost of Financing

<u>Organizational Efficiency:</u>
- Ease of Administration
- Cost of Administration
- Utilization of Staff
- Utilization of Equipment

<u>Decision Making:</u>
- Ease of Decision Making
- Expense of Decision Making
- Speed of Implementation

<u>Responsiveness of Customer Needs</u>

<u>Responsiveness to Community Needs</u>

The town staff was to research the data sheet components and report back. Each member of the ad hoc committee was given an opportunity to express an opinion. The superintendent made arrangements for the committee to visit Fort Kent's water and sewer plants on January 18. Finally, the group divided into three subgroups and

planned to visit and interview joint utility districts in neighboring towns before the next meeting.

The ad hoc committee met again on February 6, 1992. Members filled in the comparison sheets based on the research of the town staff, input from the MRWA executive director, and the field interviews conducted by the three subgroups. Giving everyone an opportunity to visit a functioning utility district was extremely helpful.

Committee members worked well together and arrived smoothly at a unanimous decision. They recommended the water and sewer department be transferred to a joint utility district. The town council endorsed the ad hoc committee's recommendation and asked the MRWA executive director to draft a bill for the legislature creating the Fort Kent Utility District.

The bill passed unanimously and was signed into law by the governor on April 6, 1992. The legislation permits the Town of Fort Kent, upon approval of its voters, to convey the water and sewer department to a quasi-municipal utility district. The legislation grants certain powers and rights to the district, sets up a method of electing five trustees, and details a referendum procedure.

A referendum held in Fort Kent on May 6, 1992, asked: "Shall the Fort Kent Utility District be created?" The response was 61 in favor, 16 opposed. The first municipal utility in Maine was restructured into a joint utility district. Voters elected its first board of trustees on June 9, 1992.

The new board members face great challenges. They must learn a great deal about utility operations in a short period of time. They are excited by their task and a little surprised at the extent of their responsibility.

Current Status

The town and the district are working together on transferring the assets from one organization to another. There is an enormous amount of paperwork and some expense involved with transferring titles, insurance, easements, contracts, etc. The Public Utilities Commission eventually must approve the transfer. All, however, is moving forward.

Lessons Learned

This restructuring taught many positive lessons:

- Towns are capable of reorganizing the management of their infrastructure in a very positive manner.

- While politics does play a role in the process, it does not have to predominate.
- Getting a large, broad-based group involved early in the program is a good way of building consensus.
- Reorganization can be accomplished in a fairly short time period; in this case, less than a year.

Case Study III

Waterboro Water District - Waterboro, Maine
An Example of the Formation of a New Water District to Provide Potable Water to Residents with Contaminated Wells

The System

Located in southern Maine, the Town of Waterboro is primarily a bedroom community and recreational area with a smattering of light industry, agriculture, and services. Its population is approximately 5,000 and the 1980 median household income was $15,875.

Three sand-and-gravel aquifers are within the town's borders. Until the current system went on line in the spring of 1992, there was no community water supply, with the exception of a recreational community on Lake Arrowhead. Townspeople relied on private wells for their drinking water.

The Problem

The most densely populated area of Waterboro is the Village of South Waterboro. It is the commercial center of town and includes the junior and senior high schools. In 1980 hydrocarbon contamination appeared in six domestic wells. In 1988 the Maine Department of Environmental Protection (DEP) declared another portion of the village an "Uncontrolled Hazardous Waste Site," because of groundwater contamination from a number of volatile organic compounds.

The problems confronting the town were how to find sufficient funding for a water supply and create a political entity capable of supplying potable drinking water to the residents whose water was contaminated.

The Chronology

After hydrocarbons were discovered in shallow wells in 1980, the DEP conducted extensive groundwater studies of the area to determine the source, extent, and nature of the contamination.

The Department is responsible under Maine law for providing potable water to residents whose wells have been contaminated by

hydrocarbons. Initially, DEP installed carbon filters on the wells. As the number of affected households grew to 15, the DEP realized it must develop and pay for a community public water supply.

Between 1984 and 1986, the town and DEP were unable to reach an agreement about the location, size, and cost of the new water supply. The key sticking point was that the selectmen knew of another contaminated site (later to be declared an uncontrolled site) and wanted a water system large enough to serve both areas. DEP was unwilling to supply water to the second site until the area had been more fully studied. Another issue, of course, was money.

In the spring of 1987, the town raised $40,000 at town meeting for a hydrogeologist to locate potential well sites to assist the residents with contaminated wells. Four sites were eventually identified. Soon after, DEP became more involved by drilling a test well at one of the locations.

By this time three other communities in Maine had gone through the entire process of establishing new public water supplies due to groundwater contamination. Maine Rural Water Association (MRWA) had helped create two non-profit water associations and a municipal water department to provide drinking water to residents of Readfield, South Penobscot, and Friendship.

The MRWA executive director met often with the selectmen to discuss alternative management structures. The state legislature held a special session in the fall of 1988. In order to keep its options open, the town had legislation introduced to create a water district. The town could decide later whether it wanted a water district or a department. Since only the legislature can create a district, the town had to act while it was in session. The legislation had a sunset provision which gave the town until December 1990 to hold a referendum.

The town established an 11-person Water Quality Task Force in 1988. Members included a town selectman, a geologist, the town planner, members of the Finance, Hazardous Waste and Conservation Committees, and members of the public. Their mission was to negotiate contracts with DEP, select engineers, choose contractors, and make recommendations on organizational structure. The committee met often from 1988 to 1992.

The town and DEP finally agreed to develop a residential water supply for the 18 residences with contaminated water. Construction began at Christmas 1990 and was finished on February 15, 1992. DEP has currently invested approximately $1.1 million in this water system.

In November 1989 the selectmen applied for a Community Development Block Grant. They were very concerned about water quality problems

in other parts of town, especially in the area that would be declared an uncontrolled site. The selectmen also wanted to add customers to keep rates down and to provide public fire protection.

The application was successful and the town received a $738,000 block grant to increase the size of the water lines, run additional distribution lines, run new services into low-income residences, erect an above-ground standpipe, and install an additional well supply. To qualify for the grant, the town also put in $55,000 of its own money and borrowed an additional $100,000 from the Farmers Home Administration.

A recent town meeting authorized a loan of up to $150,000 to help the water system pay for the costs of putting in new services. This money will be paid back by homeowners as they hook onto the system.

After much debate, the Water Quality Task Force finally decided that a water district best suited Waterboro. Because the last charter expired at the end of 1990, the legislature had to reauthorize the water district in the spring of 1992. The town held a referendum in May, and although the vote supported the formation of the district, there was not a quorum.

Current Status

The town will hold a second referendum in November 1992. Town officials shortly will negotiate a subsidy paid by DEP which will keep annual rates down to $112 per customer for the next 20 years, adjusting for inflation. The subsidy is invested and should generate enough income to pay the difference between operating costs plus depreciation and water revenues.

Residents with contaminated wells started receiving service in February 1992 and appreciate the water supply. New customers are applying for service. Rates will go into effect once the subsidy is in place. The district expects to have at least 100 customers within the next five years.

Lessons Learned

The Town of Waterboro has learned that developing a new water supply and a new public institution is a long, difficult, and frustrating process. The town has also seen its persistence pay off; a functioning water supply is now providing water in the community.

The town was extremely wise to appoint a water quality task force. Its make-up included representatives of all the local government committees within the town and a spectrum of interested citizens. The committee was vital in steering the direction of the water system.

Waterboro was extremely bold in locating additional sources of funds from the Block Grant Program and from Farmers Home Administration. Not satisfied with just an 18-user system, the town wanted a true community supply to take care of the residents in the core of town. Waterboro, to its credit, was also willing to commit town funds to the project. The town had a vision and pursued it.

Case Study IV

Starks Water District - Starks, Maine
An Example of Cooperation Between a Water District and a Town

The System

Starks is a very small town in west central Maine. It is the proverbial wide place in the road. Median household income was only $9,612 in 1980 and the population is approximately 450.

The Starks Water District was created in 1961. Twenty-three families are on the system and pay an average of $105 per year for service. A small well in the center of town and a spring on a hill above the village supply water. Storage is in two 10,000 gallon buried steel tanks located next to the spring. There are two fire hydrants which are inadequate. A portion of the distribution line was replaced in the early 1980s, paid for with a Community Development Block Grant.

The Problem

The Division of Health Engineering put the water district on a boil order in the spring of 1988. The system suffered from bacterial contamination, low pressure, no storage, and insufficient supply.

A majority of the households were low income and could not afford any new debt to repair and rebuild the system. The problem facing the town was how to get enough grant money to correct the situation.

The Chronology

A routine sanitary survey was conducted on April 15, 1988 by the Division of Health Engineering. The survey revealed, among other things, that the spring house was not rodent proof, the foundation had a large crack that could allow surface water to enter, at least one of the steel tanks had a crack, and finally, there was very little water in the spring house. Health Engineering directed the district to design pneumatic storage for the system and provide for chlorination. Shortly thereafter, Health Engineering ordered the district to send out boil water notices because of numerous coliform bacteria violations.

The water district called a public meeting for April 20 to meet with ratepayers. The speakers included the trustees of the district, a representative of Health Engineering, and the executive director of the Maine Rural Water Association. After the problems were explained and discussed, a group of citizens made plans to go up to the spring the following Sunday to clean, repair, and weld. They were hoping for inexpensive repairs.

Unfortunately, the corroded steel tanks were beyond repair. Also, the spring was no longer producing sufficient water, and the transmission line leading into town was leaking badly. The system could not be repaired for a small sum.

The trustees decided to apply to the Farmers Home Administration (FmHA) for assistance. They first needed to hire an engineer to evaluate the system and prepare an engineering proposal. After interviewing three engineers, they settled on one who quickly put together a package for $150,000. The trustees submitted a preapplication for a water loan and grant in July 1988.

The district and MRWA met with FmHA officials familiar with the plight of Starks. Starks was still paying off a small loan from the agency. In short order Farmers Home Administration put together an attractive package which consisted of a $112,500 grant and a $37,500 loan. The only problem was that there were only 23 families on the system, many of whom were on fixed incomes. These people were unable to pay much more for their drinking water and could not retire the additional debt.

District trustees and the executive director of MRWA met often with the selectmen to get town support for the loan portion of the FmHA package. Since the district served only a fraction of the town's population and provided only a modicum of fire protection, the selectmen sympathized but did not think a town meeting would appropriate town money for a project benefiting so few people.

The district was still on a boil order when the trustees resigned in frustration. The system had no paid staff, so things pretty much ran themselves. Eventually a few of the trustees returned, and the selectmen appointed some replacements for those who didn't.

After the resignations, the selectmen called another town meeting. The town recognized the district's dilemma and voted to lend the district $10,000 for immediate improvements. This would eliminate temporarily the need for a boil order. To get off the boil order, the district would have to isolate the spring and rely entirely on one small well in the center of town. That well was a marginal producer, and when it went, there would be no more water.

MRWA continued to work with the town and the district. They needed to figure out a way to come up with the additional grant funds to be able to take advantage of the FmHA grant. They decided the town

should apply for a Community Development Block Grant. Under state rules, water districts are ineligible for this type of grant. However, a town can apply, and if successful, can contribute the facility, paid for with block grant funds, to a district.

The Block Grant application included a request for a new well, a new buried concrete reservoir, replacement of a deteriorated section of water main, and new services into low-income homes. This project piggy-backed onto the FmHA grant application, which would be used to replace other portions of the badly deteriorated system.

The town was successful in its bid for grant money and was awarded $150,000. It then was able to provide the district with the $37,500 loan portion of the FmHA grant/loan package, and the district could qualify for the $112,500 grant from FmHA.

The total package of approximately $300,000 essentially rebuilt the water system. For the first time in years the people of Starks have a reliable water supply.

Current Status

The rebuilt system works fairly well. Annual customer rates rose 163 percent to about $220.00 to pay for increased power bills and for the system's first part-time operator. There is now continuous service and adequate fire protection.

Lessons Learned

Units of government can work together to take advantage of a variety of grant programs. In this case, a small town and a smaller district located enough grant money to continue providing service. The town used its grant money to install pipe and new services, and contributed these facilities to the district.

Another lesson is that small systems often need sizable grant funds to remain viable. Here a grant was necessary because the district could not support new debt.

One option considered at the start of this project was abandoning the water system and drilling individual wells. However, because the homes in the village were close together and many homes had failing septic systems, the quality of the water was unknown. Keeping and repairing the existing system was the more appropriate course of action.