Existing Water System Partnerships: Case Study Summaries

Gaining Operational and Managerial Efficiencies through Water System Partnerships

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Title for Case Study: Teamwork and Bulk Purchasing for Economic Benefits

Community/Utility Name: Northeast/Merrimack Valley Consortium of Water and Wastewater Facilities

(MVC), MA

Partnership Type: Informal Cooperation

Summary: In the mid-1980s, 35 municipal systems in Massachusetts began to purchase laboratory supplies and chemicals together. The systems take turns fulfilling key roles in the buying process so that each can maintain institutional knowledge and autonomy.

Key Benefits: Bulk contracts; information sharing; reduced costs **Funding for Partnership**: Pooled resources from participating systems

Key Players: MVC member water systems, originally led by the chief operator of the Tewksbury water

treatment plant

Title for Case Study: Contractual Assistance to Lower Nitrate Levels

Community/Utility Name: City of Panora Water System, IA

Partnership Type: Contractual Assistance

Summary: Panora, a system with high nitrate levels, installed a connection to the Lake Panorama Water Company. It can now purchase water to blend with its own source water and reduce nitrate levels. It also participated in a joint water study with other systems and pilot tested remote monitoring by Des Moines Water Works.

Key Benefits: Improved water quality; increased efficiency; enhanced staff expertise

Funding for Partnership: Not specified

Key Players: City of Panora Water System; Lake Panorama Water Company; Des Moines Water Works;

Xenia Rural Water District

Title for Case Study: Interconnection of Independent Rural Systems **Community/Utility Name**: Tripp County Water User District (TCWUD), SD

Partnership Type: Joint Powers Agency

Summary: TCWUD expanded its service area by establishing interconnections with eight systems that had been struggling to provide safe drinking water. The systems continue to operate their own distribution systems while benefiting from TCWUD's infrastructure and higher quality source water.

Key Benefits: Improved water quality; access to additional water supply; reduced costs; more

sustainable water management

Funding for Partnership: Drinking Water State Revolving Fund; Consolidated Water Facilities

Construction Program

Key Players: Rosebud Sioux Tribe; seven nearby communities; TCWUD

Title for Case Study: Using a Common Source to Resolve Quality and Quantity Concerns **Community/Utility Name**: Logan-Todd Regional Water Commission (LTRWC), KY

Partnership Type: Joint Powers Agency

Summary: Twelve nearby systems were dealing with water quality and quantity concerns. They joined forces to treat and transport water from a common source while maintaining independent ownership and operating responsibilities.

Key Benefits: Higher quality source water; efficiency; economies of scale

Funding for Partnership: Drinking Water State Revolving Fund; U.S. Department of Agriculture Rural

Development funding; state budget surplus grants

Key Players: Logan County Chamber of Commerce; 12 water systems; local and state officials

Title for Case Study: Partnership to Encourage Sustainable Aquifer Use **Community/Utility Name**: Canyon Regional Water Authority (CRWA), TX

Partnership Type: Joint Powers Agency

Summary: Eleven water systems in Texas faced over-pumping of the Edwards Aquifer. The Texas Water Development Board encouraged the systems to form the CRWA to manage water use and plan for long-term sustainability.

Key Benefits: Shared infrastructure; improved expertise; economies of scale

Funding for Partnership: Texas Water Development Fund

Key Players: Texas Water Development Board; Edwards Underground Water District

Title for Case Study: Improving Managerial Capacity through Ownership Transfer

Community/Utility Name: Ellsworth Estates Water Company/the Connecticut Water Company (CWC),

Partnership Type: Ownership Transfer

Summary: After the Ellsworth Estates Water Company lost one of its two operators, it struggled with a lack of managerial capacity. The State of Connecticut mandated an ownership transfer. CWC first operated Ellsworth as a satellite system and later built an interconnection.

Key Benefits: Shared infrastructure; trained and certified operators; access to funding; economies of

scale

Funding for Partnership: CWC **Key Players:** State of Connecticut

Title for Case Study: Ownership Transfer of a Seasonal System

Community/Utility Name: White Sand Beach Water Company, Inc. (WSBWC)/ the Connecticut Water

Company (CWC), CT

Partnership Type: Ownership Transfer

Summary: Confronted with technical and financial challenges, the seasonal system WSBWC sold itself to CWC and an interconnection was established to a CWC satellite system.

Key Benefits: Shared infrastructure; improved water quality and quantity; access to funds; shift towards

sustainable rates

Funding for Partnership: CWC

Key Players: WSWBC; CWC; Sound View Water System

Title for Case Study: Ownership Transfer to Address High-Nitrate Source Water

Community/Utility Name: Prairieton Water Company/Indiana American Water Company (IAWC), IN

Partnership Type: Ownership Transfer

Summary: The Prairieton Water Company faced source water quality concerns, particularly high nitrate

levels. It transferred ownership to IAWC and connected to its system.

Key Benefits: New infrastructure; higher quality water source; improved expertise; reduced costs;

change from flat fee to metered pricing

Funding for Partnership: Drinking Water State Revolving Fund **Key Players:** State of Indiana; Prairieton Water Company; IAWC

Title for Case Study: Utah Regional Management Plan Encourages Partnerships

Community/Utility Name: Mountain Regional Water Special Service District (MRWSSD), UT

Partnership Type: Ownership Transfer

Summary: Utah's Regional Management Plan encouraged regionalization of water systems. MRWSSD combined more than 12 small systems to achieve economies of scale and improve service. The

Regionalization Plan also encouraged sustainable water management.

Key Benefits: Shared infrastructure; improved water quality; improved expertise; economies of scale

Funding for Partnership: Pooled resources from participating systems **Key Players:** State of Utah; regional planning committees; local champions

Title for Case Study: Creating a Regional Distribution System from Sixty Systems in Texas **Community/Utility Name**: Possum Kingdom Water Supply Corporation (PKWSC), TX

Partnership Type: Ownership Transfer

Summary: Over 60 non-compliant systems merged to create the PKWSC. These systems' customers are now served through a single, regional distribution system.

Key Benefits: Shared infrastructure; improved water quality and quantity; expertise; economies of scale;

sustainable public health protection

Funding for Partnership: Drinking Water State Revolving Fund; U.S. Department of Agriculture Rural

Development funding

Key Players: State of Texas; member systems

System Partnership Solutions to Improve Public Health Protection Vol I

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Title for Case Study: Contractual Assistance to Solve Operational Challenges

Community/Utility Name: Lee County Water Plant, Sanford, NC

Partnership Type: Contractual Assistance

Summary: The Lee County Water Plant faced multiple monitoring and reporting violations. It lacked regular supervision from a qualified operator but did not have the resources to hire one. Lee County entered into a management, operation, and maintenance contract with a private firm to ensure the system's ability to provide safe water.

Key Benefits: Improved public health protection; long-term production of safe drinking water; cost

savings

Funding for Partnership: Lee County, NC

Key Players: Lee County Water Plant; private-sector operations and maintenance firm

Title for Case Study: Fighting High Nitrate Levels with Interconnection

Community/Utility Name: Aurora, SD Partnership Type: Contractual Assistance

Summary: Aurora lacked the capacity to maintain acceptable nitrate levels. It shared the cost with a nearby system, Brookings, to construct a pipeline to connect the two systems. Aurora maintains its prepartnership water source for fire protection and provides its residents with safe drinking water from the Brookings system.

Key Benefits: Improved public health protection; more reliable water supply; avoided costs of installing

nitrate treatment

Funding for Partnership: Cost-sharing between Aurora and Brookings, SD

Key Players: Aurora, SD; Brookings, SD

Title for Case Study: A New System to Extend Service to Rural Residents **Community/Utility Name**: Jefferson Communities Water System, FL

Partnership Type: Joint Powers Agency

Summary: The Lloyd Water Works Authority only served a portion of Jefferson County's residents and the system did not have the capacity to extend services to the other residents, who consumed water from private wells with high concentrations of coliform bacteria. Those residents, with help from local authorities, created the Jefferson Communities Water System to serve more people in the surrounding communities.

Key Benefits: Safe, reliable drinking water; community investment in drinking water

Funding for Partnership: Drinking Water State Revolving Fund; U.S. Department of Agriculture Rural

Development

Key Players: Jefferson Communities Water System; local residents, media, and government

Title for Case Study: New Owners Solve Contamination Concerns

Community/Utility Name: Pittsfield, NH **Partnership Type:** Ownership Transfer

Summary: The Pittsfield Aqueduct Company was oversized relative to current demand, distributed water from unfiltered surface water supply, and was unable to secure a low-interest loan for a new treatment plant. The nearby Pennichuck water utility purchased the system, finished construction of the treatment plant, and improved the distribution system.

Key Benefits: Protection from microbiological contaminants; improved monitoring and operations;

enhanced public education; lower water rates

Funding for Partnership: Pennichuck water utility; state grant; refinanced loan; HUD Community

Development Block Grant

Key Players: Pennichuck water utility; Pittsfield Aqueduct Company

Title for Case Study: Ownership Transfer Provides Drinking Water to Rural Households

Community/Utility Name: Clarion Township General Authority (CTGA), PA

Partnership Type: Ownership Transfer

Summary: CTGA purchased water from the Pennsylvania-American Water Company (PAWC) but needed to upgrade its distribution system and extend service to nearby rural households with contaminated private wells. When CGTA became unable to meet its financial obligation to PAWC, the larger system purchased CTGA for the amount of debt that CTGA owed to PAWC.

Key Benefits: Protection from microbiological contaminants; reduced water loss; lower water rates **Funding for Partnership**: System sold for the amount of debt owed; PENNVEST (Pennsylvania's Drinking

Water State Revolving Fund) loan **Key Players:** CTGA; PAWC; PENNVEST

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Title for Case Study: Prolonged Quantity Challenges Addressed by Purchased Water in Rural Oklahoma

Community/Utility Name: Atoka County Rural Water District (RWD) #1 in Wardville, OK

Partnership Type: Contractual Assistance

Summary: The Atoka County RWD, which faced water shortages and frequent turbidity health violations, extended their system to tie into Pittsburgh County RWD #11 and entered an agreement to purchase water from them in 2005.

Key Benefits: Improved water quality; access to additional water supply; reduced costs to customers

Funding for Partnership: Oklahoma Water Resources Board emergency grant

Key Players: Atoka County RWD #1; Pittsburgh County RWD #11

Title for Case Study: School District Public Water Systems Join to Improve Reliability

Community/Utility Name: Region 18 School District in Old Lyme, CT **Partnership Type**: Contractual Assistance & Joint Powers Agency

Summary: Region 18 School District operated three separate water systems for the schools in the district. Each school experienced recurring violations of the maximum contaminant level (MCL) for total

coliform bacteria. The district chose to construct one new system to serve all three schools.

Key Benefits: Improved water quality; access to trained and certified operators; shared infrastructure

Funding for Partnership: Connecticut Department of Education

Key Players: Region 18 School District; Connecticut Department of Public Health; Connecticut

Department of Education

Title for Case Study: 20 Neighboring Water Systems Create a Public Wholesale Water Supply District

(PWWSD) in Kansas

Community/Utility Name: PWWSD #23 in Fredonia, KS

Partnership Type: Joint Powers Agency

Summary: Many of the systems in and around Fredonia, KS suffered from water shortages made worse by drought and noncompliance of the Surface Water Treatment Rule (SWTR). They joined together to create PWWSD #23, which purchased Fredonia's surface water treatment plant and made significant upgrades to meet new SWTR requirements.

Key Benefits: Improved water quality; access to additional water supply; more sustainable water management; economies of scale

Funding for Partnership: U.S. Department of Agriculture's (USDA) Rural Development Loans and Grants

Program

Key Players: Water systems in Fredonia, KS

Title for Case Study: Expanding Water Service along Route 7 in Connecticut

Community/Utility Name: Brookfield, CT and New Milford, CT **Partnership Type**: Contractual Assistance and Ownership Transfer

Summary: The two towns, located along Route 7 in CT, had over 300 public water systems, many of which had contamination concerns. United Water Connecticut (UWC) agreed to expand a water main to Faith Church, a school and 1,200-seat ministry located on the Brookfield/New Milford border, which allowed UWC to expand water service to both towns.

Key Benefits: More reliable water supply; development, growth, and fire protection needs of the corridor are met; more sustainable water management

Funding for Partnership: UWC; Faith Church; Connecticut Department of Public Utility Control **Key Players:** Brookfield and New Milford CT; UWC; Faith Church; Connecticut Department of Public Health; Connecticut Department of Public Utility Control

Title for Case Study: South Carolina System Requests Support through Ownership Transfer

Community/Utility Name: Isle of Pines Water System in Lexington, SC

Partnership Type: Ownership Transfer

Summary: The system suffered from a poor-quality groundwater source, an untrained operator, and frequent distribution line breaks. The Lexington County Public Works Department received a Drinking Water State Revolving Fund (DWSRF) loan to extend the town of Chapin's drinking water service to Isle of Pines and assume ownership of the system.

Key Benefits: Higher quality source water; trained and certified operator; reduced service disruptions

Funding for Partnership: DWSRF

Key Players: Isle of Pines Water System; South Carolina Public Service Commission; South Carolina

Capacity Development; Lexington County Public Works Department; Town of Chapin

Title for Case Study: County Commission Forms Regional System to Provide Service to 6,500 Residents **Community/Utility Name**: Eastern Wyoming Public Service District (EWPSD) in Wyoming County, WV **Partnership Type:** Ownership Transfer

Summary: 15 aging water systems suffered from microbiological contamination, irregular water service, inadequate disinfection, and aging distribution systems. EWPSD was formed to join the 15 drinking water systems through interconnection and construction of a single regional water treatment plant. **Key Benefits:** Access to additional water supply; trained and certified operators; economies of scale;

shared infrastructure

Funding for Partnership: Drinking Water State Revolving Fund

Key Players: Logan County Public Service District; Eastern Wyoming Public Service District; Public Service Commission of West Virginia; West Virginia Capacity Development

Restructuring Small Drinking Water Systems: Options and Case Studies

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Title for Case Study: Regional Provider of Equipment, Supplies, and Training Supports Systems through

Informal Cooperation

Community/Utility Name: Tremonton, UT Partnership Type: Informal Cooperation

Summary: As the largest water system in the area, Tremonton provides assistance through informal cooperation to 30 smaller neighboring systems by distributing chlorine, lending equipment parts and

supplies, and establishing an organization to provide training to system operators.

Key Benefits: Improved water quality

Funding for Partnership: Tremonton, UT; Utah section of National Rural Water Association; Rural

Community Assistance Partnership (RCAP)

Key Players: Tremonton, UT; 30 smaller neighboring systems; Utah section of the National Rural Water

Association; RCAP

Title for Case Study: Two Cities Provide Specialized Expertise to Aid Systems in Surrounding

Communities

Community/Utility Name: Great Falls and Helena, MT

Partnership Type: Informal Cooperation

Summary: Great Falls and Helena both provide equipment and services to install water taps for smaller neighboring communities lacking equipment and expertise. By billing the communities for employee time, travel, and use of equipment, these larger cities are able to help smaller systems tap their water for improved service.

Key Benefits: Engagement with local communities, shared infrastructure

Funding for Partnership: Not specified

Key Players: Great Falls and Helena, MT; small neighboring communities

Title for Case Study: Getting Support to Solve a Water-Loss Mystery **Community/Utility Name**: Cherokee Rural Water District #13, Cookson, OK

Partnership Type: Contractual Assistance

Summary: Cherokee #13 was experiencing high water loss and could not determine the cause. It hired Water Systems Management, Inc. (the for-profit subsidiary of the Oklahoma Rural Water Association) to conduct a water audit. Water Systems Management, Inc. made several recommendations that helped Cherokee #13 identify the source of the water loss and save money.

Key Benefits: Reduced water loss; cost savings; extended pump life

Funding for Partnership: Cherokee #13

Key Players: Cherokee #13; Water Systems Management, Inc.; Oklahoma Rural Water Association

Title for Case Study: Purchasing Water to Address High Mineral Levels

Community/Utility Name: Ipswich, SD **Partnership Type:** Contractual Assistance

Summary: The WEB Water Development Association had been created several years before by several

South Dakota counties. Ipswich's water supply had high mineral concentrations and elevated temperatures. Ipswich decided to connect to the WEB Water Development Association's water line,

which already ran through the town.

Key Benefits: Acceptable mineral levels; improved water quality; lower water rates

Funding for Partnership: Ipswich, SD

Key Players: WEB Water Development Association, Inc.; Ipswich, SD

Title for Case Study: Residents Create New System to Improve Water Quality **Community/Utility Name**: Lakewood Benefited Water District, Norwalk, IA

Partnership Type: Contractual Assistance

Summary: Residents of a subdivision served by its own water system wanted higher quality water. They created the Lakewood Benefited Water District to purchase the development's water system from the developer with a Farmers Home Administration loan. They then connected their new system to the Des Moines water system.

Key Benefits: Improved water quality; increased engagement with the water system

Funding for Partnership: Farmers Home Administration loan

Key Players: Lakewood Benefited Water District; Des Moines water system; local residents

Title for Case Study: Purchasing Water Addresses a Public Health Problem **Community/Utility Name**: Washington County Sanitary District, MD

Partnership Type: Contractual Assistance

Summary: Private Wells were the suspected source of a Hepatitis A outbreak in a part of Washington County. The Maryland Department of the Environment ordered the Washington County Sanitary District to find a better source of water for those households. Washington County designed a distribution system through which the affected residents could receive water from nearby Hagerstown, MD.

Key Benefits: Safety from major pathogens; cost-effective water service

Funding for Partnership: Grants; loans; connection fees

Key Players: Washington County Sanitary District; Maryland Department of the Environment;

Hagerstown, MD

Title for Case Study: Laboratory Services Contracts Improve Compliance

Community/Utility Name: South Kaweah Mutual Water Company and Three Rivers Mutual Water

System, CA

Partnership Type: Contractual Assistance

Summary: In the late 1980s, the South Kaweah Mutual Water Company absorbed the Three Rivers Mutual Water System. However, after the merger, the system still struggled to meet sampling requirements and ultimately hired FGL Labs to manage the sampling and testing process.

Key Benefits: Monitoring and reporting compliance; cost savings **Funding for Partnership**: South Kaweah Mutual Water Company

Key Players: South Kaweah Mutual Water Company; Three Rivers Mutual Water System; Tulare County

Health Department

Title for Case Study: Pooled Purchasing Power Reduces Lab Costs

Community/Utility Name: Water Well Technologies, Inc. (WELLTECH), OH

Partnership Type: Contractual Assistance

Summary: WELLTECH, an operations and maintenance company, organized a group of over 100 water systems to purchase laboratory testing services in bulk. The arrangement saves money for the systems because many laboratories offer volume discounts.

Key Benefits: Reduced monitoring costs for systems; expanded business opportunities for WELLTECH **Funding for Partnership**: Systems pay for sampling, but they pay less than before the consortium's

creation

Key Players: WELLTECH; local water systems; laboratories

Title for Case Study: Utilization of Contract O&M Firm Paved the Way for Cleaner Water and Improved

Service in Freestone, CA

Community/Utility Name: County Service #33 Freestone, California

Partnership Type: Contractual Assistance

Summary: Because the Freestone water system had a history of poor water quality and operation and maintenance (O&M), the citizens of the village sought the creation of a County Service District (CSD). The CSD took over the responsibilities of O&M and installed telemetry equipment in the treatment plant to improve the monitoring process and reduce labor hours.

Key Benefits: New infrastructure; improved water quality; lower water rates

Funding for Partnership: County Service District; ratepayers **Key Players:** Village of Freestone, CA; County Service District

Title for Case Study: Small Drinking Water Systems Contract with a Shared O&M Program for

Management Assistance

Community/Utility Name: Program of Shared Operation and Management (POSOM) in Florence,

Montana

Partnership Type: Contractual Assistance

Summary: In Florence, MT, the Midwest affiliate of the Rural Community Assistance Program (RCAP) set up a POSOM to help meet the needs of very small systems that are staffed by volunteers. The systems contract with the POSOM for operation, maintenance, and compliance needs.

Key Benefits: Economies of scale; reduced operating cost; improved expertise

Funding for Partnership: Monthly or annual contracting payments to POSOM

Key Players: RCAP; POSOM in Florence, MT

Title for Case Study: Full Contract Operation Reduces Operating Costs for Small System in Oklahoma

Community/Utility Name: Beckham County Rural Water #2 in Erick, Oklahoma

Partnership Type: Contractual Assistance

Summary: After losing its only employee, the Board in charge of the small water district contracted with Water Systems Management (WSM), a for-profit subsidiary of the Oklahoma Rural Water Association, to manage its system. Contracting with WSM was deemed a more cost-effective option than hiring a system operator.

Key Benefits: Reduced operating costs; sustainable water rates

Funding for Partnership: Beckham County; ratepayers

Key Players: WSM, Beckham County Water Board, Oklahoma Rural Water Association

Title for Case Study: Privatized Water Services Address Supply Concerns

Community/Utility Name: Village of Pecatonica, Illinois

Partnership Type: Contractual Assistance

Summary: The drinking water system in Pecatonica, IL did not have a sufficient supply to provide adequate fire protection for the town. Water supply concerns as well as infrastructure needs led the village to contract all public works services, including water, out to St. Louis-based Environmental Management Corporation (EMC).

Key Benefits: Managerial and financial expertise **Funding for Partnership:** Village of Pecatonica, IL

Key Players: Pecatonica, IL; EMC

Title for Case Study: Centralized Administration Provides Cost-Effective Service in Central Missouri **Community/Utility Name**: Boone County Public Water Supply Service (PWSS), Inc. in Columbia, Missouri **Partnership Type**: Joint Powers Agency

Summary: The Boone County PWSS provides cost-effective services to 10 water districts in Boone County, Missouri. A Board of Directors, made up of the presidents of the participating water districts, approves the service company's annual budget and budget funds are raised by charging each district a monthly fee.

Key Benefits: Shared infrastructure; improved water quality and quantity; expertise; economies of scale

Funding for Partnership: Boone County, MO

Key Players: Boone County PWSS

Title for Case Study: Joint Powers Agency Streamlines Member Systems' Operations in Montgomery County, Texas

Community/Utility Name: The Woodlands Joint Powers Agency in Montgomery County, Texas

Partnership Type: Joint Powers Agency

Summary: The Woodlands community was served by ten individual municipal utility districts (MUDs). Through an interlocal agreement, the MUDs serving residential areas formed a Joint Powers Agency to operate the systems. The Joint Powers Agency provides staff to all of the MUDs and the board is made up of representatives of the residential MUDs ensuring coordinated efforts.

Key Benefits: Shared staff; economies of scale

Funding for Partnership: Not specified

Key Players: Woodlands Joint Powers Agency; participating MUDs

Title for Case Study: Transferring Ownership to a Public Water District Kept this System Going

Community/Utility Name: Quantabacook Water Company (Harrington, ME)

Partnership Type: Ownership Transfer

Summary: The state of Maine ordered the Quantabacook Water Company to pressurize their system and install disinfection equipment. The system chose to transfer its assets to a public water district so the new water district would be able to develop a larger water source, replace an undersized main, and install a storage tank for fire protection.

Key Benefits: New infrastructure; improved water supply

Funding for Partnership: Quantabacook reserve fund; commercial loan; Farmers Home Administration

grant and loan

Key Players: Quantabacook Water Company; Harrington, ME; Maine Rural Water Association

Title for Case Study: Annexation Ensures Safe Water for Low-Income Housing

Community/Utility Name: Trailer Village Mobile Home Park

Partnership Type: Ownership Transfer

Summary: After Phase I sampling detected high concentration of tetrachloroethylene (PCE) in drinking water wells, the mobile home park ownership decided to connect to the nearby Centralia, WA water system. Centralia annexed the mobile home park, laying new water and sewer infrastructure and a new city well to serve the park.

Key Benefits: Engagement with local community; new infrastructure; improved water quality **Funding for Partnership:** Loan from state-funded Public Trust Fund; loan from a state Community

Development Block Grant

Key Players: Trailer Village Mobile Home Park; Centralia, WA

Title for Case Study: Ownership Transfer as Economical Solution to Supply and Quality Concerns

Community/Utility Name: The East Prospect Water Authority (East Prospect, PA)

Partnership Type: Ownership Transfer

Summary: Facing increasing operating costs, water quality concerns, and water shortages, East Prospect decided to transfer ownership to The York Water Company, a larger private water utility, whose transmission main was close by. York replaced East Prospect's and other small systems' water sources and laid new pipe to connect these smaller systems.

Key Benefits: New infrastructure; improved water quality and quantity

Funding for Partnership: The York Water Company **Key Players:** East Prospect, PA; the York Water Company

Title for Case Study: State-Facilitated Ownership Transfer Improves Quality of Water Service

Community/Utility Name: Greenacres Water Supply

Partnership Type: Ownership Transfer

Summary: Realizing that they could not afford the improvements demanded by the Connecticut Department of Health Services, Greenacres Water Supply agreed to sell to the Bridgeport Hydraulic Company (BHC) with facilitation by Connecticut's takeover statute. The state ordered BHC to distribute the system improvement costs across its entire customer base.

Key Benefits: Regulatory compliance; distribution of financial burden

Funding for Partnership: BHC

Key Players: Greenacres Water Supply; BHC; Connecticut Department of Health Services; Connecticut

Department of Utility Control

Title for Case Study: Providing Wholesale Water and Technical Services Allows for an Economical Option

for Small Systems in Northern Arkansas

Community/Utility Name: Community Water System

Partnership Type: Contractual Assistance

Summary: Built to serve an area in northern Arkansas that lacked drinking water service, the Community Water System (CWS) sells wholesale water and provides contract administrative and technical support to over half a dozen rural water systems. CWS has also laid new pipe to these rural water systems and supplies a stable and abundant source of water, ensuring a long-term reliable water supply at an affordable price.

Key Benefits: New infrastructure; improved water quality and quantity; outreach to rural communities

Funding for Partnership: Not specified

Key Players: Community Water System; rural water systems in northern Arkansas

Title for Case Study: Small Drinking Water Systems in Northern California Join Together to Provide

Reliable, Affordable Service

Community/Utility Name: North Lakeport-County Service District

Partnership Type: Ownership Transfer

Summary: The California Department of Health Services identified North Lakeport as a candidate for a regional water system and invited the Lake County Special District Office to apply for low-interest grants and loans via Safe Drinking Water Bond Laws. 51 small water systems merged to create a county service district. This district now provides reliable drinking water and affordable service to its customer base.

Key Benefits: Improved water quantity and quality; regulatory compliance

Funding for Partnership: California's Safe Drinking Water Bond Laws; CA State low-interest loans and

grants; Lake County assessment district

Key Players: North Lakeport, CA; Lake County, CA; California Department of Health Services

Title for Case Study: Repeated Restructurings Expand Water Service throughout Region

Community/Utility Name: Warren Rural Electric Cooperative (Warren REC), KY

Partnership Type: Multifaceted Restructuring

Summary: Over time, Warren REC has repeatedly restructured and expanded its service area in rural water districts. It now provides planning, operation, and management services to four rural water

districts: Warren, Butler, Grayson, and Simpson counties.

Key Benefits: Expanded drinking water service; growth opportunities for Warren REC

Funding for Partnership: Warren REC

Key Players: Warren REC; Warren County; Butler County; Grayson County; Simpson County

Title for Case Study: Creative Restructuring Helps Bring Community Water to Rural Areas

Community/Utility Name: Pioneer Electric Cooperative (PEC), AL

Partnership Type: Multifaceted Restructuring

Summary: Since 1975, PEC has worked with nearby systems to expand access to safe drinking water. It has helped to organize, manage, and operate water systems in rural southern Alabama. PEC's goal is to provide water to all homes in the counties in which it operates.

Key Benefits: Access to clean drinking water; operations and maintenance assistance to systems **Funding for Partnership**: PEC; Farmers Home Administration; Community Development Block Grant

Program

Key Players: PEC; Butler County Water Authority; South Dallas Water Authority; West Dallas Water

Authority; Lowndes County Water Authority

Title for Case Study: Need for Expanded Customer Base Drives Multifaceted Restructuring

Community/Utility Name: Roaring Creek Water Company (RCWC), PA

Partnership Type: Multifaceted Restructuring

Summary: Consumers Water Company, located in Maine, acquired RCWC in Pennsylvania. RCWC needed a new treatment plant and repairs to its dams, so Consumers Water Company also acquired two systems that were connected to RCWC to reduce the cost of repairs per connection. RCWC later acquired two other consecutive systems in Pennsylvania.

Key Benefits: Repaired dams; new treatment plant; increased water supply; reduced turbidity

Funding for Partnership: Consumers Water Company; RCWC

Key Players: Consumers Water Company; RCWC; Butler; Treverton; systems serving Mount Carmel and

Ralpho Township

Title for Case Study: Multifaceted Restructuring Addresses Needs of Small Systems **Community/Utility Name**: Consumers New Hampshire Water Company, NH

Partnership Type: Multifaceted Restructuring

Summary: Fourteen poorly maintained small systems made up the Policy Water Company (PWC). The Southern New Hampshire Water Company (now Consumers New Hampshire Water Company), a subsidiary of Consumers Water Company, purchased the PWC and upgraded the systems with plans to

build interconnections.

Key Benefits: Regulatory compliance; improved water quality; funding for operations and maintenance

Funding for Partnership: Southern New Hampshire Water Company

Key Players: Fourteen small systems; PWC; Consumers New Hampshire Water Company

Title for Case Study: Internal Changes, Contract O&M, and Ownership Transfers Ensure Safe Water

Community/Utility Name: Lonaconing, MD Partnership Type: Multifaceted Restructuring

Summary: When Maryland increased surface water treatment requirements, Lonaconing responded by

building treatment plants, expanding to serve neighboring towns, contracting for operation and

maintenance services, and ultimately becoming a regional water system. **Key Benefits:** Regulatory compliance; improved water quality and quantity

Funding for Partnership: Maryland Department of the Environment; Farmers Home Administration

Key Players: Lonaconing; Nikep-Moscow; Barton; Maryland Department of the Environment

Title for Case Study: Municipal Ownership of New Systems Prompts Multifaceted Restructuring

Community/Utility Name: Derry Waterworks, NH **Partnership Type:** Multifaceted Restructuring

Summary: Thirty-five small, struggling systems existed outside the town of Derry, NH. When officials decided that all new drinking water systems should be municipally owned and operated, Derry

developed a plan to expand its service area and acquire satellite systems.

Key Benefits: More reliable water service; consistent water rates; regional coordination

Funding for Partnership: Derry Waterworks

Key Players: Derry Waterworks; local systems and developers

Title for Case Study: Internal Change Leads to Series of Restructurings **Community/Utility Name**: Homestead Municipal Utility District (MUD), TX

Partnership Type: Multifaceted Restructuring

Summary: Homestead MUD included two failing systems. Following a lawsuit, Homestead MUD was ordered to undergo an audit. The audit recommended a new manager for the system who was able to secure loans to make improvements. Since then, Homestead MUD has restructured internally to provide improved service.

Key Benefits: Distribution system repairs; improved water quality; professional management **Funding for Partnership**: Farmers Home Administration; Texas Water Development Board

Key Players: Homestead MUD; Community Resource Group; State of Texas; Texas Water Development

Board; Texas Natural Resource Conservation Commission

Title for Case Study: Restructuring to Meet Changing Local Needs

Community/Utility Name: Rolesville, NC

Partnership Type: Multifaceted Restructuring

Summary: In its first restructuring, Rolesville hired Crosby Water and Sewer Inc. to operate its wells and conduct other operation and management activities. Over time, however, Rolesville and Crosby discovered that it would be less expensive to close most of Rolesville's wells and purchase water from nearby Wake Forest.

Key Benefits: Lower monitoring costs; cost-efficient water service

Funding for Partnership: Rolesville

Key Players: Rolesville; Wake Forest; Crosby Water and Sewer Inc.