Michigan Capitol Building. *Photo by Andrew Martin*

Creating a Regional Agreement to Increase Water Revenues: The Lansing Board of Water and Light – West Side Water Wholesale Purchase Agreement

Location:	Greater Lansing Area, Michigan
Issues Addressed:	Political Will for Regional Cooperation, Affordability and Assistance, Financing and Funding

In the early 1990s, the Lansing Board of Water and Light (LBWL) pumped approximately 23 million gallons per day (gpd) for its customers, not quite half of its 50 million gpd capacity. The loss of large industries, a small population decline (7,000 people over 10 years), and more efficient plumbing technology had lowered the community's water use. Worried about rising rates, LBWL used funding from the Tri-county Regional Planning Commission to convene a task force to explore options for generating new customers by providing water on a regional scale.

During this same period, West Side Water (WSW), a small utility that serves 2,000 customers in the western area of Lansing Charter Township, found itself in violation of the new Safe Drinking Water Act and needed to act quickly or pay fines. WSW pumped and distributed approximately 450,000 gpd from its single water pumping station, with about 150,000 gpd being sent to two large General Motors plants. Like LBWL, WSW drew drinking water from the Saginaw Aquifer, which has particularly hard water, but unlike LBWL, it did not have the technology and capacity to soften its water. As a result, WSW had heavy metals above regulation in the finished drinking water it supplied, putting it in violation of the Safe Drinking Water Act's Lead and Copper rule.

WSW began weighing options to overcome its treatment issues. By 1995, it had narrowed its options to three: Upgrade its treatment facilities to include softening, explore partnership with another small community facing the same issue, or buy treated and softened water from LBWL. Water softening required a capital investment beyond its means. Partnering with another small community was feasible since nearby Delta township faced a similar issue at the time, but the cost of building a new facility, even while sharing costs presented a major hurdle. Buying water from LBWL proved to be the most cost-effective and quickest fix. WSW would only need to install a relatively short transmission line to begin service.

MANAGING PUBLIC WATER INFRASTRUCTURE WITH RESOURCE CONSTRAINTS

Groundwater pump. *Flikr*

Finding mutually beneficial opportunities

The combination of LBWL's excess capacity and WSW's need for increased treatment led the two utilities to explore mutually beneficial options. They negotiated a forty-year agreement that stipulated LBWL would provide treated water to WSW. However, LBWL also realized that it could benefit from WSW's infrastructure, namely, its raw water transmission system and wells. These wells provided a water supply source that was less costly than other sources for LBWL. In the same agreement, therefore, LBWL purchased two million gallons per day of less expensive raw water pumped from WSW's wells. Each utility paid for the necessary construction – short extension lines – to take advantage of the other's assets. LBWL paid for the extension from WSW's wells to its system, and WSW paid for the service line extension from the LBWL system to its own. From negotiation to execution, the agreement took three years, from February 1993 until December 1995, to conclude.

For the town board that oversaw WSW, the sale of raw water helped to justify the capital improvement costs of the service line extension. As a small entity, WSW did not have the financial means to install an extension main without the raw water sale offsetting some of the costs. Additionally, LBWL and WSW agreed on a prorated payback plan for the service line extension to help WSW manage this comparatively large capital expenditure. Thus, the town council was comfortable in paying for the transmission line from LBWL to WSW service area.

In order to secure acceptance by the political decision makers, the two utilities laid out clear responsibilities. The strict purchase agreement allowed each entity to maintain autonomy over its own infrastructure, consumer rate-setting, and billing, which was an important provision for WSW's town board. It was important for both perception and reality that the two utilities maintain their autonomy. For example, ratepayers in WSW's service area continue to pay their utility bills to WSW, even though their water is coming from LBWL. As a result, both local governments readily approved the agreement.

The agreement established an effective working relationship between the operations departments of both utilities. This relationship, in turn, has allowed both providers to address challenging issues as they arise. For example, when a developer began building a new housing development in WSW's service area, WSW noticed LBWL had a service line closer to the new development than they did. The existing relationship allowed the two utilities to agree easily that LBWL service the homes at far less cost than if WSW had undertaken to do it. This type of working relationship has helped each realize additional value from the partnership.

In addition to the immediate monetary benefits to both utilities, the agreement provided long-term benefits to both. For LBWL, this agreement has paved the way for them to enter similar agreements with other utilities. With the addition of further communities, LBWL is closer to utilizing the full capacity of its system while maintaining low water rates for its customers.

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Water main tie-in. *Wikimedia Commons*

For WSW, selling its raw water provides an important financial buffer in the event that it loses customers. For example, in 2001, the two General Motors plants located in WSW's service area permanently shut down. Overnight WSW saw system-wide demand reduced by one-third. However, since WSW consistently sold two million gpd to LBWL and now purchased 150,000 gpd less from them, WSW offset the General Motors plant loss through fewer expenses and the consistent revenue stream from LBWL. WSW required operational changes to offset the loss of its largest customer, but the change did not have as substantial an impact as it otherwise would have due to the wholesale purchasing agreement with LBWL. The agreement provided a "safety net" for WSW and minimized the negative impacts of changes in demand.

Resources Required

Access to capital

Connecting LBWL and WSW's water infrastructure systems required a capital investment. WSW did not have the financial means to install an extension main, so LBWL agreed to finance the service line extension if WSW would enter into a prorated payback plan to cover the costs. WSW entered the agreement, and was able to do so in part because LBWL agreed to purchase raw water from them, which provided a steady revenue stream to offset some of the costs.

Lessons learned

- Communities considering such agreements need to invest significant time and resources in evaluating their current and future capacity and needs. Both Lansing Board of Water and Light and West Side Water analyzed their current and projected water use to determine if an agreement made sense.
- Forming agreements that maintain autonomy and limit the authority of partner communities can increase political will to implement sharing agreements. Autonomy was especially important for WSW's town board so that they, in turn, could reassure their constituents that their water service continue to be controlled by the local utility.
- It is important for each entity to recognize all the ways they can benefit from a regional collaboration. In this agreement, it was especially important for WSW to understand that LBWL valued its raw water. Existing infrastructure such as pumps, treatment plants, or transmission lines can be valuable assets in negotiating an agreement.
- A strong working relationship between water-sharing communities can help address issues that arise over time and result in new opportunities for collaboration. By meeting regularly, LBWL and WSW personnel maintain strong ties and can find other ways to partner.
- At least one of the entities in the partnership must have access to capital; this is necessary to facilitate any large capital expenses for the partners. The agreement would not have been possible without LBWL being able to arrange a prorated payback plan for service line extensions with WSW.

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PROCESS USED

1. West Side Water (WSW) evaluated current and prospective needs and possible options.
2. Both Lansing Board of Water and Light (LBWL) and WSW evaluated the technical and financial feasibility of a wholesale purchase agreement.
3. LBWL determined capital financing payback plan for service line connection.
4. LBWL and WSW crafted a water selling and purchasing agreement that maintains autonomy, diminishes liabilities while maximizing benefits, and clearly delineates responsibilities.
5. LBWL and WSW continue to meet regularly to promote and maintain a quality working relationship between operations groups.

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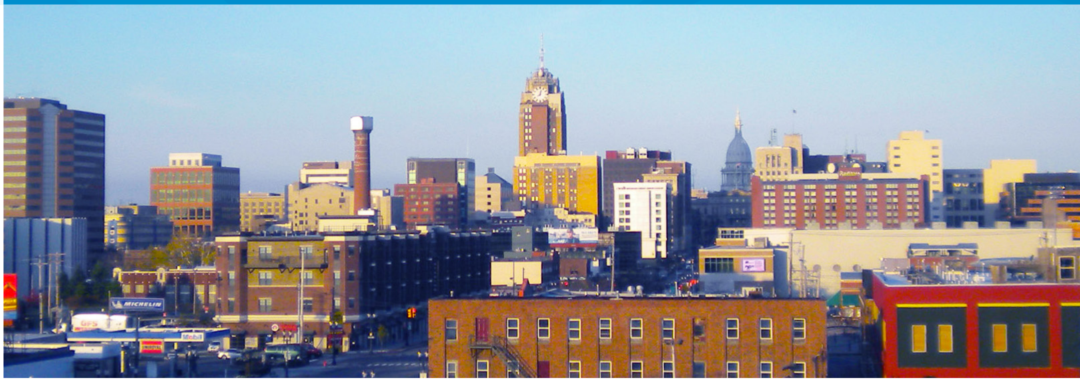

Lansing skyline. *Wikimedia Commons*

Project status

The LBWL-WSW agreement will run until 2035. The two water departments continue to meet regularly to address any issues arising with the agreement and to adjust areas that may be outdated or no longer useful.

After signing this initial agreement, LBWL signed similar wholesale purchase agreements with Delta Township and East Lansing-Meridian Water and Sewer Authority. This has brought LBWL closer to its system capacity and allowed smaller communities to receive high quality water from a large entity with the capability to provide it.

What other communities have implemented similar projects?

In Mid-Michigan, LBWL currently supplies wholesale water to West Side Water, Delta Township, and East Lansing-Meridian Water and Sewer Authority. Similar agreements occurred in Ohio in 2007, when Aurora (in Portage County) agreed to buy wholesale water from Cleveland's water department.