In some respects the water treatment business, especially as it relates to groundwater, is starting to experience changes at warp speed. Due to the frequency of these changes, many water agencies have been prompted to consider leasing wellhead treatment systems, a concept that until recently was rarely considered in the drinking water business.

Not many years ago quantity was the dominate driver and quality played a secondary role in the drilling or rehabbing of a well. According to Jeff Wold, with the Weber Group, a well drilling and pump maintenance company, “My customers used to consider a new or rehabbed well that produced 800 gpm, a throwaway. Nowadays, if they can get 800 gpm out of a well they are pretty darn happy!”

The higher priority placed on quality is gaining popularity with water agencies as the new MCL for Arsenic moves closer to the January 23 deadline. When I started working for the City of Mesa, fourteen years ago, a low priority was given to wellhead treatment or rehabbing of a well that violated an MCL. There were a number of wells that were not used because they exceeded the Nitrate MCL. The standard practice at that time was to look for another site and drill a new well. The trend in the last few years with the changing regulatory environment and scarcity of affordable land has been to save the well even if that means wellhead treatment.

**WHY LEASE?**

The Arizona Water Company, the second largest private water company in Arizona, has made a serious commitment to leasing as a strategy to meet the upcoming Arsenic MCL without being tied to a “flavor of the month” treatment technology. Bill Garfield, President, Arizona Water Company put it this way, “If you compare the total costs to lease versus outright purchase of a treatment system and the outcome is a wash, then leasing looks attractive because it provides the possibility to upgrade to a more cost effective technology in the future that could provide savings to our rate payers.”

In addition to flexibility, leasing can provide assurance that the treatment system will work as stated with a performance guarantee provision. A performance guarantee requires the vendor to guarantee the performance of the treatment system. If water produced is not within the desired water quality parameters, the water agency can withhold payment until the issue is resolved. If the issue can’t be resolved because the treatment unit is not capable of delivering the promised water quality, then an early termination of the lease kicks in. The vendor is obligated to remove the unit at his own expense and the water agency is not responsible for any early termination fees or penalties.

The reliability of wells is a topic that is often debated. You always hope your wells will run for fifty years with no change in production or quality. Some of them will and some of them won’t. A lease can
be designed with a provision that provides a hedge against an untimely demise of the well, either due to a physical condition of the well or through migration of new pollutants that can’t be removed by the existing treatment system. This type of provision is triggered if the well can no longer be used either due to a physical collapse of a well or a change in water quality such that the treatment unit will no longer meet design parameters. In either case, the water agency would have the right to terminate the lease with no penalties levied.

A lease purchase option is another way to provide flexibility with the leasing approach. If you do enter into a lease to provide treatment for a well that proves to be very consistent and stable over a five-year period, you could exercise the purchase option and buy the unit at a depreciated value and terminate the lease. You are not required to purchase the unit. You only exercise the option if you are confident that the unit is performing as promised and a better, cheaper technology has not come along in the interim that could replace it.

**NOT ALL LEASES ARE CREATED EQUAL**

Michelle De Haan, Senior Scientist with Damon S. Williams Associates (DSWA) has worked with a number of water agencies within the state of Arizona to assist them in formulating plans to meet the impeding new Arsenic MCL. Two of DSWA's clients, the City of Chandler and the City of Mesa, directed DSWA to evaluate leasing as an option. Based on the DSWA evaluations of leasing wellhead treatment systems, three leasing options were identified that can be utilized to secure water treatment systems. The leasing options identified are: Direct Lease, 3rd Party Lease, and Lease Purchase Financing (LPF).

**DIRECT LEASE**

A Direct Lease is a lease held between the water agency and the vendor. The vendor owns the equipment and the water agency makes monthly lease payments for use of the equipment. If the lease has a performance guarantee provision it is readily enforceable because if there is a lack of performance issue the water agency withholds payment until the issue is resolved.

**3RD PARTY LEASE**

A 3rd Party Lease is a lease executed between the water agency and a supplier through a bank. In this type of arrangement, the bank is the lien holder of the equipment and it is much more difficult to try to enforce a performance guarantee. If performance of the treatment system becomes an issue, the water agency can not simply withhold payment because the bank is not responsible for the equipment performance. This type of lease would require legal action against the vendor to correct a performance issue.

**LEASE PURCHASE FINANCING**

Lease Purchase Financing (LPF) originated so municipalities could have the ability to purchase equipment on an installment basis at tax-exempt interest rates. This type of financial arrangement can be viewed as a typical bank loan or term loan; however, the payments are based on the annual appropriation of funds. This appropriation clause is why this type of financing instrument is called a “lease”. Upon receipt of the final payment, the water agency acquires the equipment outright with no residual or balloon payment. Another way to look at this financial instrument is as an installment loan with a financial entity. The principal advantage of the option is that it achieves the same objective as issuing a bond without the underwriting costs. Again, the disadvantage with this arrangement is the water agency has a financial obligation to pay the financial institution that owns the equipment. If there is a dispute over performance of the system, the water agency would again have to take legal action against the vendor to resolve the issue.

DSWA compiled a list of vendors and their leasing preferences in the course of their work performed for Chandler and Mesa. The DSWA findings at the time of the study are displayed in the following table.

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Direct Lease</th>
<th>3rd Party Lease</th>
<th>Lease Purchase Financing (LPF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basin Water</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Calgon</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mobile Process Tech</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>NCS</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Severn Trent</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>US Filter</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

This list is not inclusive of every vendor in the marketplace who may be currently offering an option to lease wellhead treatment equipment, but it provides a good summary of leasing options available in the marketplace.

**SCORE CARDS AND OBSERVATIONS**

At the time of this writing, Arizona Water Company has eleven systems ordered to treat Arsenic, two Coagulation/Filtration (C/F) systems have been purchased from Layne Christensen and nine Ion Exchange (IX) systems have been secured with direct leases from Basin Water.

To date Mesa has secured one IX system from Basin Water with a direct lease to treat Arsenic and Nitrates. They are still weighing their options to lease or purchase other systems. According to Alan Martindale, Compliance Manager at the City
of Mesa “At this point in time, we view leasing as a third-tier option, but that is hardly set in stone, given the volatility of the Arsenic issue.”

Chandler put out an RFP for leasing thirteen Adsorption systems. To satisfy internal legal and purchasing concerns the RFP became very restrictive. The vendors took a lot of exceptions in submitting their proposals and as a result Chandler’s purchasing department determined all the bids to be non-responsive and the bids were thrown out. Based on that experience, Chandler has taken a different approach and is moving forward with the purchase of the ten Adsorption units needed to meet the impending Arsenic MCL.

If you think the merits of leasing are a good fit with your organization then consider a Direct Lease with a vendor. This type of lease will provide you with the most flexibility and protection in meeting your objectives. It is important to structure your RFP to focus on total cost, performance, and actual operating experience. Zeroing in on a particular treatment methodology has the down side of limiting your options in the marketplace. This approach seems to have worked quite well for the Arizona Water Company. The private water company focused on total cost and performance. In the end, they were very successful in securing eleven treatment systems.

This whole leasing proposition is a paradigm shift from conventional thinking. If you decide to pursue leasing, the first thing you need to do is start educating the decision makers, the legal folks, and the purchasing/financing departments as to what you are trying to accomplish. You need to stress the facts that a well crafted lease provides the best hedge against any future wellhead treatment upsets.

City of Avondale  
2000 GPM Basin Water Nitrate Removal System

This article was written by Harry E. Brown, who worked in the municipal water sector for 25 years and currently works for Basin Water, a water treatment technology company out of their Mesa office. Harry can be reached at 602-809-7565 or by email: HBrown@BasinWater.com.