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HUBER's Screw Press Q-PRESS® at Cardston's Wastewater Treatment Plant

The City of Cardston's Wastewater Treatment Plant is aging yet still performs well in providing the services that its population needs. The close knit community has had some issues with odors from the WWTP but it is a trade-off for free fertilizer the plant provides to local barley farmers.

One of the ways that Cardston has maintained WWTP performance is by employing leading technology within the wastewater treatment process. What the citizens of Cardston didn't know was that when the WWTP chose to install HUBER's Screw Press Q-PRESS®, it would not only improve performance, but it would also change the plant's role in the community.

Water and Wastewater Utilities Foreman, Bart Atwood, had researched liquid separation solutions and formulated these goals for implementing new press technology:

- Upgrade to current technology
- Improve the quality of end-products (water and biosolids)
- Reduce odors that caused community complaints
- Reduce costs associated with separation/pressing
- Increase efficiency for operators

Challenge:

Atwood's existing belt press represents the old approach to liquid separation. There are new approaches to this process that include the screw press and centrifuge. Atwood's research led him to the conclusion that the screw press type of solution would best help him meet his goals.

After visiting several installations of HUBER's Q-PRESS® – and observing its simple yet effective operation firsthand – Atwood made the decision to bring the HUBER technology into the Cardston plant.

Solution:

Atwood and his team immediately noticed the small footprint of the Q-Press. The new screw press took up less than half the space that the old belt press had occupied. This was striking for the operations team but not as striking as the fraction of time they needed to spend managing the screw press. While the belt press needed constant attention, the screw press required nothing past being turned on and off.

It seemed to Atwood that he had gotten an additional team member because one of his operators was freed from the duty of tending the belt press.

There was another notable difference with the new technology: No odor. "This is as odorless as this type of process could possibly be. Unlike with the belt press, I wouldn't be afraid to stick my nose down and sniff the water or the biosolids going through our screw press," says Atwood of his odor-free operation.

The screw press more effectively separates the water from the biosolids – practically creating a dry solid end-product. The resulting water is cleaner than the water that comes into the headworks and produces no gaseous odor as it is fed back into the channel as the water does in the belt press process. This was critical for Atwood in fulfilling his goal of improving the plant's impact on the community.

The premiere piece of equipment in the plant

Q-PRESS® performs so efficiently that it has become the star of the show for Atwood's team. According to Atwood, "The screw press also demands less from our transportation resources. There is less bio solid to take to haul away. Since we store our biosolids for 2 years prior to using them for land application as fertilizer, the screw press also helps us reduce our costs to store our biosolids."

The cost savings alone could earn it notoriety. After all, the savings impact man hours, transportation, storages and resources.

- It saves Atwood's team time because it requires *no* operational management.
- It saves in trucking costs, spreading costs and storage costs because the biosolids are dryer and easier to handle. Prior to the Q-PRESS®, Atwood's trucks ran two times a day. After implementing Q-PRESS® this schedule was reduced to two times per week.
- It helps Cardston conserve water and electricity by requiring less of each to operate.

The automation bonus

The automation built into the Q-PRESS® gives Atwood's team freedom. They are able to control shutdown and startup by just logging in. So issues that would have previously brought them into the plant from home during the night can be stopped remotely and addressed by the morning shift without impact to performance, maintenance or daily flow.

Obvious benefits keep aging plant competitive

Cardston WWTP has realized the powerful benefits of the Q-PRESS®. Although Cardston WWTP is older (30 years of operation) than some of the treatment plants of neighboring cities, it maintains its competitiveness – even in sensitive areas such as compliance. Cardston WWTP's chemical compliance test results have improved since installing the Q-PRESS®. Their compliance was never jeopardized with previous technology, but, as Atwood notes, it is always good to have a wider margin in that area.

HUBER Screw Press Q-PRESS® is a solution that performs liquid/solid separation that:

- Requires less space
- Operates quietly
- Is *really* odorless
- Conserves water and power
- Is simple to maintain, operate

Industry insight enables HUBER to gear its solutions to the demands and concerns of the wastewater treatment plant environment. For example, consider corrosion and simplicity. Corrosion is a big concern within an environment that is wrought with it. HUBER manufactures everything from stainless steel so that corrosion is never a factor. Performance in a WWTP plummets when any component isn't simple for users to manage. HUBER designs simplicity into every aspect of its solutions.

Becoming a good community citizen

Of utmost importance to Atwood of implementing HUBER's Q-PRESS® is how it has helped the plant become a better citizen of the Cardston community. While the conservation benefits in both water and energy have caught the attention of the neighbors, the most shocking change has been in the absence of odor surrounding the plant and its fertilizer. No longer do residents complain about foul smells emitted from the plant nor do they hold their noses when a plant truck makes a fertilizer delivery to a local farmer.

Four performance factors help Cardston WWTP become a better citizen:

1. Water usage has dropped from 150 cubic meters a day to 100 cubic meters a week.
2. Electricity demands are much less than with the previous belt press system.
3. Fewer truck routes to deliver biosolids reduce fuel consumption.
4. Cleaner processing eliminates odors that are offensive to neighbors

Durability, reliability and support

Q-PRESS® is rock solid. Its stainless steel design keeps the screw press in mint condition. Its performance gives Atwood and his team total confidence that the Q-PRESS® will just work. They can depend on it.

HUBER's customer support is also rock solid. The Cardston team can depend on immediate responses at the rare points that they actually need answers or help. HUBER's support experts are available with assistance. When deeper expertise is required, HUBER connects the best resources with the customer.

HUBER's experience with municipalities and with wastewater processes is extensive as is its knowledge of the technologies it provides. This industry-technology insight allows HUBER to work with organizations to ensure that systems are geared to perfectly match up to immediate tactical challenges and long-term strategic goals.

Related Products:

- [HUBER Screw Press Q-PRESS®](#)

Related Solutions:

- [HUBER Solutions for Sludge Dewatering](#)



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