

Water Dispatch

water information and commentary

April 2006

Beavers: Proud Canadians or canal rats?

The trouble with these Canadian icons making their homes in canals is that they cause flood damage to canals and crop fields and cut off water to downstream users. In one case a few years back, a beaver pond undermined the train tracks and caused a derailment. This region has buck brush beavers that are content with willows, buck brush and straw to build their dams.

Rockyford area ditchrider Wes Sproule has a bit of a love/hate relationship with the critters in his area.

“In a lot of places I leave them unless someone complains. If they’re not bothering me, I like going by and seeing them,” he says. He adds that he traps the largest ones (up to 80 lbs) each year to keep the population in check and because the larger ones are the real workers. Beaver litters average about six to nine pups a year, so the population maintains. Sproule

says even if you trapped all the beavers, the population would regenerate within a few years from migration and increased birth rates.

He has had places in the canal system where he breaks the dam every morning to get the water flowing and times when they dam a pipeline intake or culvert so quickly the canal overflows by morning.

Still, Sproule admires the beaver’s ability to engineer strong dams and they work like... well beavers.

“I have a lot of respect for them. They are hardworking individuals, very strong and some of their technology is pretty good,” he says. “Pound for pound, they can drag branches a grown man would struggle to move.” He also knows the beavers watch him too. “If you break open the dam, one will come to investigate quite shortly.”



Partners in Habitat Development

Turns this...

The Langdon Partners in Habitat Development (PHD) project illustrates how these projects establish wildlife habitat. The WID will hire two students this year to maintain the 17 existing PHD projects in the district and start four new ones.



...into this

Western Irrigation District produces this newsletter to keep all users of water informed about water issues and WID efforts to protect and manage the resource in this region. Contact WID, 934-3542.

Double Duty Ditchriders

Working as an irrigation district ditchrider is two jobs in one. In the summer, these are the staff out driving the canal banks to ensure everyone gets the right amount of water – not so much that it causes a flood and not so little that there’s not enough to run someone’s pivot.

In the winter, ditchriders become the district’s construction team and spend those months installing pipelines, delivery turnouts and other maintenance and rehabilitation projects.

“The beauty of the job is the diversity. Five months of the year, I run the water. The rest of the year, I’m a truck driver, a hoe operator, an investigator and a manager,” says Dwight Gittel, Chestermere area ditchrider. He makes the running water part of the job sound easy, but it definitely has its challenges. Twice in the past three years, Gittel found missing persons on the headworks screen at the Bow River. He also lives with an alarm system that monitors the levels in the headworks canal, A, B & C canals and Chestermere Lake. He says he’s become so sensitive to rain, that it wakes him in the night and he makes a judgment call about whether or not he needs to get out there and manage



Dwight Gittel marks 30 years with WID

the water.

“People aren’t up at 3 a.m. to see you out there,” he chuckles. Rain definitely adds to the challenge for all the ditchriders. Don Brownlee remembers a canal in his area disappearing into the run-off.

“I went out at about 10 p.m. and could not find the ditch. I went to the structure at the

end and all I could see was the hand-rail,” Brownlee says. He says it’s scary to be out in the middle of the night cleaning a trash rack to get the water flowing, but he does it because it’s not his biggest fear.

“My biggest fear is flooding someone out,” he says. Both men enjoy their jobs though because Brownlee is in his 26th season and Gittel celebrates 30 years with WID this year.

Neither one of them could say enough good things about the farmers in their areas and the other district staff.

“It’s the people you work with that really make the job,” Brownlee says and shares some stories about the hospitality and generosity of his farmers. One farmer always came to his house to order water and always brought a flower for his wife and a beer for him.

If you press them, they talk about the dogs, water thieves, endlessly cleaning trash racks and old, inaccessible canals, but it’s hard to get a ditchrider to complain about their job. “In the summer, I look forward to every morning. I get in the truck and relax,” says Brownlee.

Really good reasons to keep manure away from canals

Manure, whether on the hoof, on the land or in a pile, contributes to weed growth, weed seeds and bacterial contamination in irrigation water. Manure contains phosphorous, nitrogen, pathogens and bacteria. While humans can’t do a lot to keep wild-life manure from entering canals, they can do a lot to keep livestock manure out.

First of all, if you’re dealing with livestock manure, refer to the Manure Management regulations under the Agricultural Operations Practices Act (AOPA). It contains regulations on how to handle manure for all the reasons a livestock operator handles manure.

If you have a big operation with a catchment pond, make sure when you use that water to irrigate that you don’t allow it to run off into a nearby creek or canal.

“Phosphorous tends to move with surface

water. Nitrogen shows up as nitrate problems in ground water because it tends to travel down the soil column,” says agriculture water specialist Ken Williamson. Keep in mind that the irrigation system draws and returns flows to the natural system. Just like a creek, you want to be mindful of your downstream users. Animal (and human) waste contains Beaver Fever, E.Coli and other harmful pathogens. Some people water vegetable gardens with irrigation water. If you’re one of them, wash your produce in drinking water before you consume it.

Another excellent reason to keep as much manure as possible away from canals is according to Jay White of Aquality Consulting canals provide cushy habitats for weeds. We feed them their favorite food, keep the waters shallow and warm, drain

the canals for the winter ensuring their seeds will germinate next season and provide them with all the light they can soak up. “The control of aquatic weeds is extremely difficult because you really need to get to the source. They are incredibly hardy and breed extremely well through producing 100,000’s of seeds,” White says. His best recommendation is to keep phosphorous out of the water to starve them. There are three different approaches to fighting aquatic weeds; chemical, biological and physical. Chemical options are severely limited in and around water. Physical controls are costly and labor intensive. Biological controls require very careful experimentation to protect the natural environment. All of which brings us back to White’s best recommendation, “If you have a nutrient starved system, you won’t have excessive plant growth.”

Winter snowpack

This year the Bow River Basin has saturated soils and a lean snow pack in the mountains. All the crops should get off to a great start and then we're back to waiting to see what Mother Nature throws at us over June-September.

If we have enough rain, the lean snow pack won't be so bad. If we have a hot, dry summer, the Bow River will get very low in August. The snow pack provides late summer flows to the river. But, if it melts too soon or there isn't enough of it, the river drops quickly. At the end of March, the Bow River snow pack was 70-80 percent of normal. When Alberta Environment staff went to measure the snow pillow March 28, they followed their own tracks made at the end of February.

The snows that the plains received in March, "stayed mainly in the plain." This snow contributed to spring run-off only on the plains and disappeared by early April.

The trouble with stormwater

The Western Irrigation District Board and staff chomp into more new problems than any other district. It's a consequence of operating on the quickly changing land base east of Calgary.

This year, the WID takes on the challenge of setting stormwater rules for all those "instant communities" popping up within its boundaries. The challenge is that urban landscapes shed water faster than rural landscapes and the water washes everything off the pavement into the nearest drain. "There is a lot of pressure from development to grow and expand and urban stormwater is nasty stuff," says Patsy Cross of Madawaska Consulting. "It's time to put some rules in place and build lines of communication."

The WID Board asked Cross to lead a project that will define water quality in the WID system; optimum canal function; water quality minimums and stormwater implications for the system.

"It's a massive, impossible task, but we're going to do it anyway," Cross chuckles. Stormwater rules are under development in Alberta, but the WID Board can't wait for someone else to figure this out because the ultimate requirement is that WID water users receive irrigation quality water at the farm gate. The canal system starts at the headgates with large canals that grad-

ually get smaller as they fan out across the landscape. This means that storm surges may enter a large or medium size canal, but end up in a small canal.

"We're looking at a canal; working out the maximum loading it can take and how much stormwater the canal can take at any particular point. Then development will have to design with conditions that meet the requirement going into the canal," says Jim Webber, WID manager.

Cross mentions that developers can use good stormwater management practices such as permeable surfaces, wet ponds and other stormwater reduction mechanisms. The trouble with stormwater retention ponds is that in a year like 2005 they could overflow directly into the system.

Too often at present, developers simply find a drain and draw an arrow to it called stormwater. By the time WID staff receive notification about the development, the development design is progressing without a lot of consideration for stormwater limits. "We're on the receiving side of the arrow saying, no you can't do it unless you have proof that it's not going to harm us," Webber says. He points out that the WID system and the natural drainage system east of Calgary are heavily integrated and developers cannot tie into any channel without the risk of stormwater ending

Weed Alert

Irrigation farmers can help keep weed infestations at bay through cooperating with Wheatland County Weed Inspector Ron Bartholow and WID operations staff.

Canals are natural highways for weed seeds along with roads and natural streams. Bartholow takes ride-alongs with ditchriders to identify plants and works on specific issues in areas when necessary. He's very open to receiving calls from landowners who want help identifying plants.

He asks that landowners watch for several major weeds this season along weed seed highways.

Scentless Chamomile for instance, "I noticed out at Chestermere Lake along the edges is just white, so I have a feeling there will be a lot of those seeds moving down the canals into our area," he says.

Also, watch for Purple Loosestrife, Hoary Cress, Canada Thistle, Yellow Toadflax, Ox-eye Daisy and Black Henbane.

He says Hoary Cress is, "really a tough one to fight, so farmers could watch for it and let me know about it. Also, a couple of years ago we had a big spray job done on Ox-eye Daisy just out of Strathmore along the canal."

He is also seeing an increase in Black Henbane. Of course, all these can move onto the land during irrigation. If you find any of these plants or any plant you can't identify, please call Ron, 333-6948.



up in a canal. The M.D. of Rocky View took on the opportunity to work with WID on this project. They are open to a master stormwater plan for the WID catchment as well and the end goal of the project is to create a Developers' Handbook that they can give to developers at the initial application stage. Webber says the WID learned a great deal about stormwater impacts during the legal process it went through with the City of Calgary regarding Chestermere Lake.

"We have a big say how this land develops, if it develops and what standards the developers need to put in place," Webber says. "It's usually the very last thing considered. Now, the WID Board says it's the first thing to consider."

Time eater floating your way



Damon's system

It's almost a crime the way slime can hold an irrigator hostage and work him like a slave. Middle of the night trips out into a dark field, weekends tethered to the farm for fear of slime related damage to equipment, lost irrigating hours and parched crops. An irrigation intake can demand more time than an infant child, coughing and sputtering to have its screen cleaned of weeds and slime. Some irrigators found inventive solutions. Karl Reinhardt and Paul Damon took matters into their own hands and built themselves automatic windmill screen cleaners. Reinhardt harnessed the power of flowing water for his and Damon used a nearby power source. "These irrigators are very happy with how these sys-

Reinhardt's system



tems free up their time and take away that worry about the pump shutting down at 2 a.m. They don't have to worry about cleaning their screen every couple of hours," says WID water master Brian Sander. If you too would like to shed the shackles of slime, contact Sander and he will lead you to a system that works for you. He can take you to show you the existing systems irrigators have in place and let you know what he's seen that works. You can also visit www.aquasystems2000.com for a ready-made solution.

Summer safety



Above: The WID will extend the fence down the length of Strathmore Wildflower development to increase safety for young residents of the area. The drop structure would be fatal to any small child that accidentally fell into the canal.



Below: WID Water Master Brian Sander with the Wildflower spillway in the background. Under the ice at the bottom of the spillway are large concrete blocks that slow the water and protect the canal from erosion.



Brian Sander

Ditchriders 2006

	Area	Cell
Brian Sander	Water Master	325-0493
Dwight Gittel	Chestermere	899-4638
Don Brownlee	Carseland	899-4641
Pat Smith	Gleichen/Cluny	325-4642
Wes Sproule	Rockyford	325-4640
Chris Premack	Crowfoot	325-4639
Jeff Maude	Strathmore	325-4501



Rural Connector disconnected

Water Dispatch replaces the Rural Connector newsletter that was a partnership between Western Irrigation District and Wheatland County agricultural service board. Communication needs changed for Wheatland County and the WID Board commissioned the Water Dispatch to keep all regional water users informed. Water issues will continue to take center stage in this region as development quickens and the provincial Water for Life strategy starts to impact how water gets managed in southern Alberta.



Bow River Basin Council
State of the Bow River Basin Roadshow

The Bow River Basin Council (BRBC) produced a comprehensive State of the Basin report that details the river's health from the Bow Glacier to its confluence with the Oldman River

Come hear about the health of the Bow River

<p>Strathmore 7 p.m. April 27 Strathmore Travel Lodge Hwy #1 Information booths: Town of Strathmore/Epcor Water Services; Rosebud River Watershed Partners, Wheatland County Agricultural Service Board; Down to Earth Gardening xeriscape consultant; Cows & Fish; Wheatland Surface Rights Action Group and Environmental Farm Plan Co.</p> <p>Okotoks 9 a.m. April 28 Good Shepherd School 52 Robinson Dr</p> <p>Cochrane 7 p.m. April 25 Cochrane High Library 529 - 4th Ave N</p>	<p>Brooks 7 p.m. April 26 Heritage Inn Brooks 1239 2nd St W</p> <p>Canmore 7 p.m. April 24 Canmore Collegiate High School Theatre 1800 8th Ave.</p>
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Come know your river!