

# Water Dispatch

water information and commentary

April 2007

## Pine Beetle – tiny insect; huge impact

The Mountain Pine Beetle may have more impact on your farm than you might expect. At a recent Bow River Basin Council forum, four speakers gave attendees a new perspective on what the Mountain Pine Beetle may do to our watersheds.

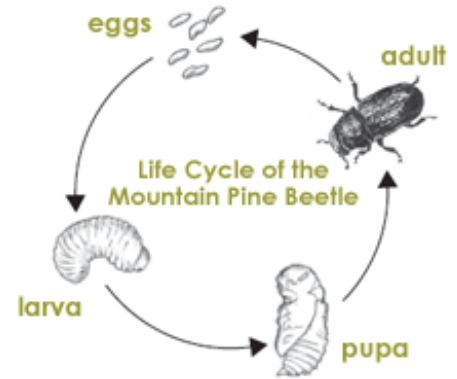
This little bug crawls under the bark of Lodgepole pines to lay eggs. It drags with it a toxic blue fungus. The larvae hatch and feed on the tree tissues responsible for circulating sap (phloem). A tree generally dies within one month of attack. Many trees on the eastern slopes are Lodgepole pines. Conifer trees in winter intercept quite a bit of snow before it gets to the ground. This snow often evaporates back into the atmosphere without ever becoming part of stream flow in a watershed. The snow or rain that gets to the ground comes slower with conifer canopy.

As more trees die from beetle infestation, more snow gets to the ground creating larger snow pillows in the mountains and more rain quickly becomes run off.

In the spring, lack of canopy means the

snow melts sooner and faster. Spring melt and rains also lack the forest population to draw the water deep into the ground or drink it before it runs off.

Sounds good for water supply right? Not really. It could mean that the winter snow supply we rely on to increase flows during irrigation season happens too early in the spring and leaves no reservoir for later in the season. It could also mean that spring flooding along rivers swells dramatically creating hazards for anything near the river. It also means that any substantial rain



storm may create flooding at any time of the year.

In watershed management circles, people say, “Take care of the sponge.”

This refers to preserving the natural ground cover to allow it to play its critical role in water supply, quality and timing. It may turn out that the Pine Beetle is the number one threat to our mountain watersheds and the river flow pattern we depend on for irrigation.

To read about Pine Beetles and watershed impacts, visit Sustainable Resource Development <http://www.srd.gov.ab.ca/forests/health/insects/mountainpinebeetle.aspx>

## Get it while it's hot

If you have any water source on your property, just about everyone with money to give away wants to help you keep it clean and sustainable.

Water source protection, conservation and sustainable development are a hot funding target right now. The federal and provincial governments have many programs aimed at this goal and on top of the government's money, you can layer funding from other sources. You can also pay yourself to do some of the work under most programs.

The WID Board even has a funding program to conserve water within the district through on-farm and water delivery efficiency projects. You can also check out programs through Partners in Habitat Development - [www.eid.ab.ca/Partners\\_in\\_Habitat\\_Development.htm](http://www.eid.ab.ca/Partners_in_Habitat_Development.htm) - and local watershed groups - [www.ab.stewardshipcanada.ca](http://www.ab.stewardshipcanada.ca).

Here is a sampling of some of the more broad based programs:

2006 - 2007 Canada Alberta Farm Water Program (CAFWP)

**WID contact:**  
**Brian Sander, 934-3542**  
**Wheatland County contact:**  
**Sarah Schumacher, 934-3321**

The purpose of this program is to provide financial and technical assistance toward the cost of long-term, on-farm water supply developments completed during the period April 1, 2006 - December 31, 2007.

This supply can relate to domestic use, livestock watering, *continued on pg 3*

# Everyone is watching irrigation districts

WID water users are under the microscope as they say. As water scarcity and water quality become fore-front issues in Alberta, provincial and federal government departments; the media and the public take note of where water use occurs and whether or not users act responsibly and work efficiently.

The WID Board and staffs consider this in everything they do and this season water users may notice that water supervisors/ditchriders run their areas tighter.

“We need to account for and use everything we divert,” says Brian Sander, WID Water Master. Real-time, flow measuring equipment will alert water supervisors to unexpected canal fluctuations.

Eventually, a water supervisor will be able to view data on-line in the morning and catch any abnormality that could indicate a problem.

This means they can start the day addressing any pressing problem for their water users, such as a blockage holding back water. It also means that in the future, they will be able to tell if a water user turned on or off without notice.

Sander mentions that as the district be-

comes more efficient in canal operation through accurate water measurement technology, only ordered water will be in the canals.

Sander states the dominant attitude in water management circles is, “This is our water. We have to be diligent and proactive to improve our efficiency and not overcompensate with extra flow.” He explains that pressure is increasing in southern Alberta to conserve more and use allocated water resources wisely.

To this end, the WID Board and staffs identified 40 locations where the district diverts larger volumes of water for minimal use. Sander says his staff will approach affected water users with ways to reduce this diversion while maintaining service to water users.

“It’s better that we divert water only when we need it because once it flows through the system back to the river it’s gone from our diversion license,” Sander says. His department plans to help farmers access programs and funding to increase on-farm efficiency as a way to increase total WID system efficiency.

“We have sites where the farmer wants to

convert from flood to a wheelmove. That’s a 50% gain in water efficiency,” he says. Also yard and garden or stock watering sites can benefit from a two-week back-up supply system and WID plans to aggressively pursue dugouts for these contracts. This can save users money as on-farm storage entitles you to a cheaper rate.

He also points out that during wet weather a lot of the water, if not all, is storm water run-off; which is dirty. If at times like this, water users don’t need the water, it would be best to close the canal gates and let the dirty water go by while saving allocation for a time when irrigators need the water.

Most of the job of making the WID system efficient falls to the district staffs. However, Sander says water users can make things smoother by ordering water 48 hours in advance; give 24 hours notice of shut off; notify the area water supervisor of blockages or severe weed problems. He also offered a piece of advice to irrigation equipment users, “Make sure equipment is ready to go when you need it, so that you don’t run into mechanical problems and lose your water order down the drain.”

## What’s new in infrastructure

The WID system received the following upgrades in 2006

- Secondary A canal; 12 Mile Spillway to Highway 24 rehabilitated
- Scheer Pipeline complete; over 10 kilometers long; the pipe begins with 30 inch pipe gradually reducing to 12 inch; stops seepage and flooding in area “That the biggest pipeline WID has to date,” Erwin Braun Operations Manager
- Replacement of the Hammer Hill Spillway Structure; the existing structure was past its life expectancy; largest spillway on Secondary A Canal east of Strathmore
- Alberta Transportation relocated 1.5 kilometers of South Branch B to accommodate Hwy 9 interchange on Hwy 1. “This relocation had to happen before the water season. Alberta Transportation paid the entire cost,” says Braun.
- New Structure at McElroy Lake to accommodate Chestermere Stormwater allowing the town to expand.
- Eagle Lake drain phase 1 New stormwater drainage channel from Strathmore to Eagle Lake

Projects on deck for fall 2007

- Eagle Lake drain phase 2
- Grove pipeline between Strathmore and Carseland
- Springvale/Stahville pipeline north of Rockyford
- Chestermere dam upgrade to meet or exceed current dam safety requirements
- Erosion control on upper Secondary C

Plant on pg 4: Buffalo Burr

### Ditchrider Contacts

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
Antoine Mortreuil	Crowfoot	325-4639
Jeff Maude	Strathmore	325-4601



Hammer Hill spillway replacement

The WID Board acknowledges and thanks the provincial government for recent rehabilitation grants

## *We are all upstream of another water user*

Water enters the Western Headworks canal from the Bow River in good quality. As it travels through the Western Headworks, storm water from Calgary enters the system before it gets to Chestermere Lake and again while in the lake from surrounding development.

When it leaves Chestermere Lake it continues to receive more storm water from urban development increasing on the east side of Rocky View. It also starts receiving agricultural run-off from the farmlands.

In 2006, the WID Board began a water quality program to set water quality objectives for the canals. As Operations Manager Erwin Braun says, "We need to focus on the quality of the product WID provides its water users."

The Board and staff will work to ensure urban development improves its water quality inputs into the system, but land-



owners adjacent to canals also have a role to play when it comes to agricultural water quality.

The 2006 report clearly shows water quality degrading as it moves through the agricultural lands and this became more pronounced during the past couple of years with increased run-off after the drought early in the decade.

The same things that affect water quality in our rivers and creeks affect canal water. The good news is that there are many programs aimed at reducing agricultural

impacts on surface water and lots of funding available to take action.

Just like river water quality, canal water quality can affect bottom lines. Five municipalities treat WID water for domestic drinking water and the costs go up as water quality degrades.

For farmers, some high value crops are sensitive to degraded water quality. Poor water quality can affect yields or even the possibility of growing certain crops.

For the WID, poor water quality increases weed growth in canals that cost big money to control.

"We can't just blame the urbanites; we contribute. We have to do our part," says Jim Webber WID Manager. "I think it's very important that WID users look after our water quality to show urban residents that we properly manage and protect our water."

## *Funding water projects*

*con't from pg 1*

fish farming and small scale irrigation. Also on Ropin' the Web [www.agric.gov.ab.ca/app52/programsservices/programsservices.jsp](http://www.agric.gov.ab.ca/app52/programsservices/programsservices.jsp) are the following programs: Seepage Damage from Irrigation Works provides a process for making a claim for loss or damage caused by seepage from the irrigation works of an irrigation district. The Water Pumping Program assists agricultural producers to get water for domestic and livestock use.

The Water Well Restoration or Replacement Program helps landowners who believe seismic or oil and gas activity has damaged a water well.

You will find federal government programs at [www.agr.gc.ca](http://www.agr.gc.ca) under Programs and Services. A list includes 13 programs under the environment heading alone. There are eight headings in the list of programs. For example, the National Water Supply Expansion Program (NWSEP) is a four-year, \$60-million initiative under the Agriculture Policy Framework (APF). The NWSEP supports the environment el-

ement of APF through the development, enhancement and protection of vital water resources to help address water constraints in agricultural areas of Canada.

The Greencover Canada program is a five-year, \$110-million Government of Canada initiative to help producers improve grassland-management practices, protect water quality, reduce greenhouse-gas emissions and enhance biodiversity and wildlife habitat. So you can see that if you have anything you want to do related to water on your land, there's probably someone ready to help you to do it.

## *AIPA Conference offered something different*

Alberta Irrigation Projects Association (AIPA) 2007 conference left its mark on the WID members that attended in early March. WID Manager Jim Webber says this conference focused more on practical solutions to issues arising from climate change and Alberta's growth. The theme was Every Drop Counts – Watershed Management Realities. Dr. Henry Vaux Jr. from California left a huge impression on the audience. This is partly because California also has intensive irrigation and rapid urban growth pressures in a semi-arid climate.

For Water Master Brain Sander the words ringing in his ears are that the urban municipalities warned California irrigation districts they would change State laws affecting water licenses to get the water they wanted. The irrigation districts decided to cooperate instead.

However, Operations Manager Erwin Braun heard a call to action that so impressed him he wrote it down. Vaux said, "Confront challenges as leaders; not followers and reactors."

Braun said he heard that agriculture does not have to give up water if society makes

collaborative choices.

Webber received this message too. He found Vaux entertaining as well as informative and took comfort from knowing that other jurisdictions have already dealt with many issues now facing us.

"We can learn from them and work jointly to address these challenges," Webber says. "The water business in southern Alberta is very sophisticated. It has a lot of expertise. We just need to set out the tasks and get to work. The time for pointing fingers has past."

## Wild flowers we don't need

According to my thesaurus, a weed is a wild flower. Lord, who wrote that? Unfortunately, some weeds do come into our lives through Wild Flower seed packages. Far more simply travel on tires, in streams, on the wind and in gravel, soil and seed supplies. This is why whenever unusual activity takes place on your land, you need to monitor the area for plants you don't recognize. For example: the Rockyford Xeriscape Demonstration site disturbed soil likely for the first time in 45 years. During the first year, an unusual plant came up in the herb bed. Wheatland County Weed Inspector Ron Bartholow identified the plant after considerable research as a Buffalo Burr – from Texas! It appeared to have come into the site in the soil of a potted plant. However, the following year, the project disturbed more soil on the other side of the house and up came another Buffalo Burr. This looks like dormant seed in the soil that patiently waited 45 years to grow.

Weeds can march across the landscape taking an economic toll on agricultural operations and often get established before most people know their operation is under attack.

The WID conducts a weed control program every year and cooperates with local weed inspectors in Rocky View and Wheatland County. They also keep staff up to date through workshops and training. We have two other organizations that can offer information and assistance locally; the Alberta Invasive Plant Council ([www.invasiveplants.ab.ca/index.html](http://www.invasiveplants.ab.ca/index.html)) and the Wheatland Weed Consensus Committee ([www.umbel.ca](http://www.umbel.ca)).

To help our water users spot the "wild flowers" currently creeping into our region, Water Dispatch talked to Tim Dietzler at M.D. of Rocky View and Ron Bartholow of Wheatland County to provide a heads up.

"If each of us does our part, we can reduce and prevent new infestations that cause problems for everyone," says Dietzler.

To get a free copy of a pocket-sized weed identification book, call either municipality. Wheatland County, Rocky View and WID all have people able to help you identify and control all unwanted plants – just call them.

**Annual Weed  
Legislation and ID Workshop**  
June 6, 2007 in Hanna  
\$30 and open to the public  
WID sending staff

**Name this plant**  
Look for the name on page 2



**M.D. of Rocky View**  
24 hr Weed Hot Line 520-1287  
Weed Inspector 230-1401  
Toadflax  
Hoary Cress  
Scentless Chamomile resurfacing in southern M.D.

**Wheatland County**  
**Call Ron Bartholow, 333-6948**  
Downey & Japanese Brome currently 50-60 small locations in Wheatland County  
Scentless Chamomile  
1 plant = 1 million seeds (approx.)  
White cockle - sites increasing  
Wild Caraway coming from south and west of county - Hwy 24 and 901. Looks like carrot gone to seed.  
Toadflax is a tough plant to kill and present in county. Increased in past few years. Use Alli or Escort and spot spray patches.  
Leafy spurge and Milkweed seen beside train tracks

### What flowers are in your neighborhood?



Nothing much is flowering now, but these Noxious Weeds are NOT pretty flowers! Often mistaken for benign, "natural" beauties, these invaders have the ability to crowd out cultivated crops and native plants.

The WID will control noxious weeds on canal right-of-ways if you let us know where they are. Take note of infestation sites and phone 934-3542.

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## Off to a good start

Just in case you haven't travelled north or west this winter, the snow in the mountains is above to much above normal this year (120% of average). Also, southern Alberta soil moisture levels are normal to extremely high, so the crops should get off to a good start this season.

According to Alberta Environment and Environment Canada, this summer may be cooler than average in our area, but normal down in the southeast corner of the province. The Water Supply Outlook says we should have normal precipitation in our area.

The snow in the mountains also means reservoirs are full. There is some concern of the Bow River flooding this spring if spring rains come before the snowpack substantially depletes. Alberta Environment says we can expect above average flow in the Bow River for this season.



*Erwin Braun and Brian Sander attended a demonstration of state-of-the-art flow measuring equipment last fall. Sander says, "To know how much and where our water goes is critical to run the district."*