Whelp Creek Watershed News

Spring 2008

Nutrient Beneficial Management Practices Evaluation Project

Keeping you informed

This newsletter provides information on the Nutrient BMP Evaluation Project being conducted by Alberta Agriculture and Rural Development in partnership with local agricultural producers and funding partners. The purpose of this 5-year study is to evaluate the environmental and economic effectiveness of nutrient and livestock BMPs in the Whelp Creek and Indianfarm Creek watersheds as well as at two irrigated fields near Picture Butte.

What are Beneficial Management Practices (BMPs)?

Practical approaches to conserving our natural resources without sacrificing productivity.

Local Information Meetings

Over 20 producers and landowners attended the information meeting in February in Lacombe to learn about the project and discuss water quality and nutrient management issues. Presentations focused on agri-environmental issues from global to local perspectives. An update on the Water For Life - Alberta Water Council was also presented along with several examples of grass roots initiatives of local watershed groups. Larry Nolan of Nolan Cattle Company, Picture Butte, provided a producer perspective on being proactive with environmental issues and why he decided to participate in the BMP project.

The meeting participants were interested in the water quality results and in finding cost effective solutions to issues while maintaining water quality for the future. Questions were raised and ideas put forward about sources of phosphorus, algae problems in water, manure application equipment and urban waste/storm water systems. Over half of the participants indicated on the evaluation forms that they were interested in the idea of forming a watershed group to discuss and address local issues.

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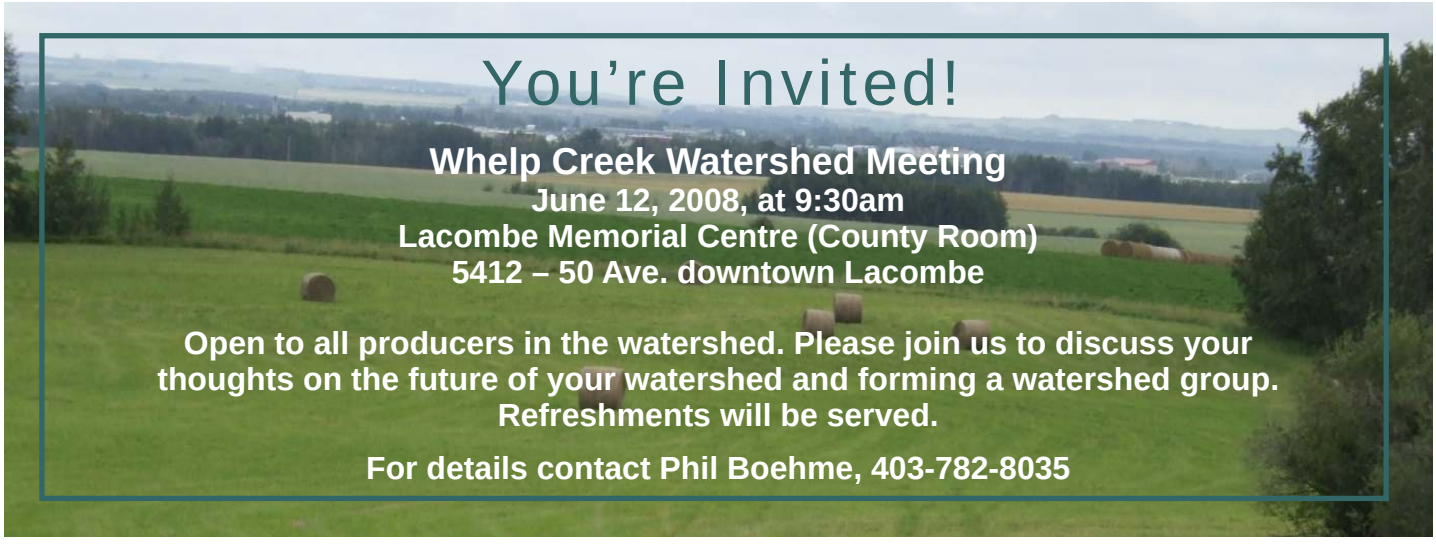
At the meeting one person commented about the project, "I like the fact that the landowners work with other groups to find a solution to the problems." Another person said they liked that "it tries to get people to work together instead of pointing fingers."



You're Invited!

Whelp Creek Watershed Meeting
June 12, 2008, at 9:30am
Lacombe Memorial Centre (County Room)
5412 – 50 Ave. downtown Lacombe

Open to all producers in the watershed. Please join us to discuss your thoughts on the future of your watershed and forming a watershed group. Refreshments will be served.

For details contact Phil Boehme, 403-782-8035

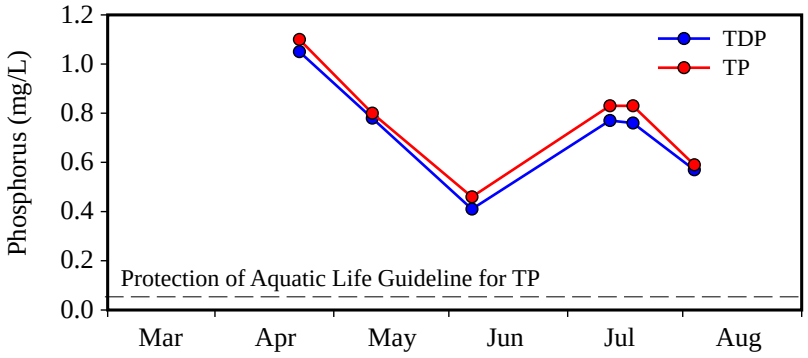
Whelp Creek Water Quality

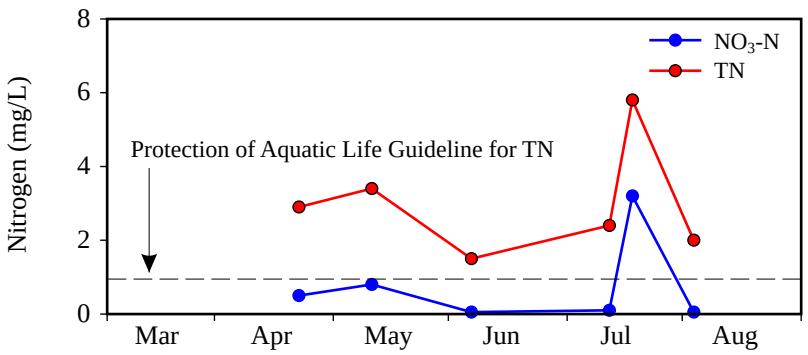
In 2007, water samples were collected from mid March to early July at the downstream (outlet) end of the Whelp Creek Watershed. Total phosphorus (TP) values ranged from 0.46 to 1.1 mg/L. Total nitrogen (TN) values ranged from 1.5 to 5.8 mg/L. These values were above the guidelines for the protection of aquatic life, which are 0.05 mg/L for TP and 1.0 mg/L for TN. Most of the TP was in the form of total dissolved phosphorus (TDP). Nitrate nitrogen (NO_3-N) was much less than TN.

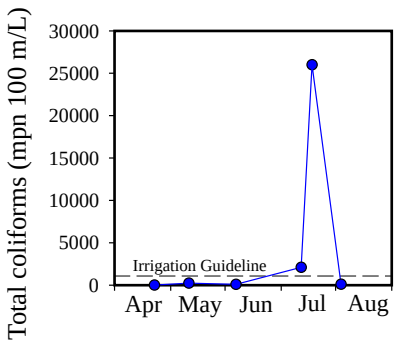
Bacteria concentrations in the water were measured by testing for total coliforms (TC) and *Escherichia coli* (*E. coli)*. These bacteria are indicators of possible fecal contamination and may indicate the presence of pathogens or disease-causing organisms in the water. In 2007, the total coliform bacteria concentration ranged from 1 to 26,000 *mpn 100 m/L and *E. coli* values ranged from 1 to 3700 mpn 100 m/L. These values reflect a wet spring and early summer.

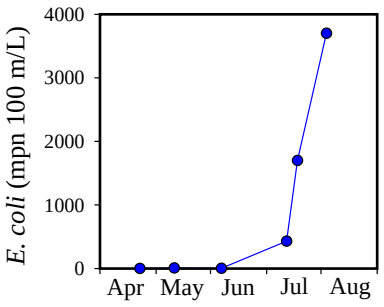
Water quality data collected in 2007 were preliminary and more detailed data are being collected this spring and summer now that monitoring stations have been installed. The water quality results in Whelp Creek are typical of other high agricultural intensity watersheds in Alberta, where studies have shown that water quality is compliant with the guidelines less than 20% of the time.

*Note: **mpn** is the **m**ost **p**robable **n**umber and is the unit associated with a standard laboratory method to determine bacteria concentrations.







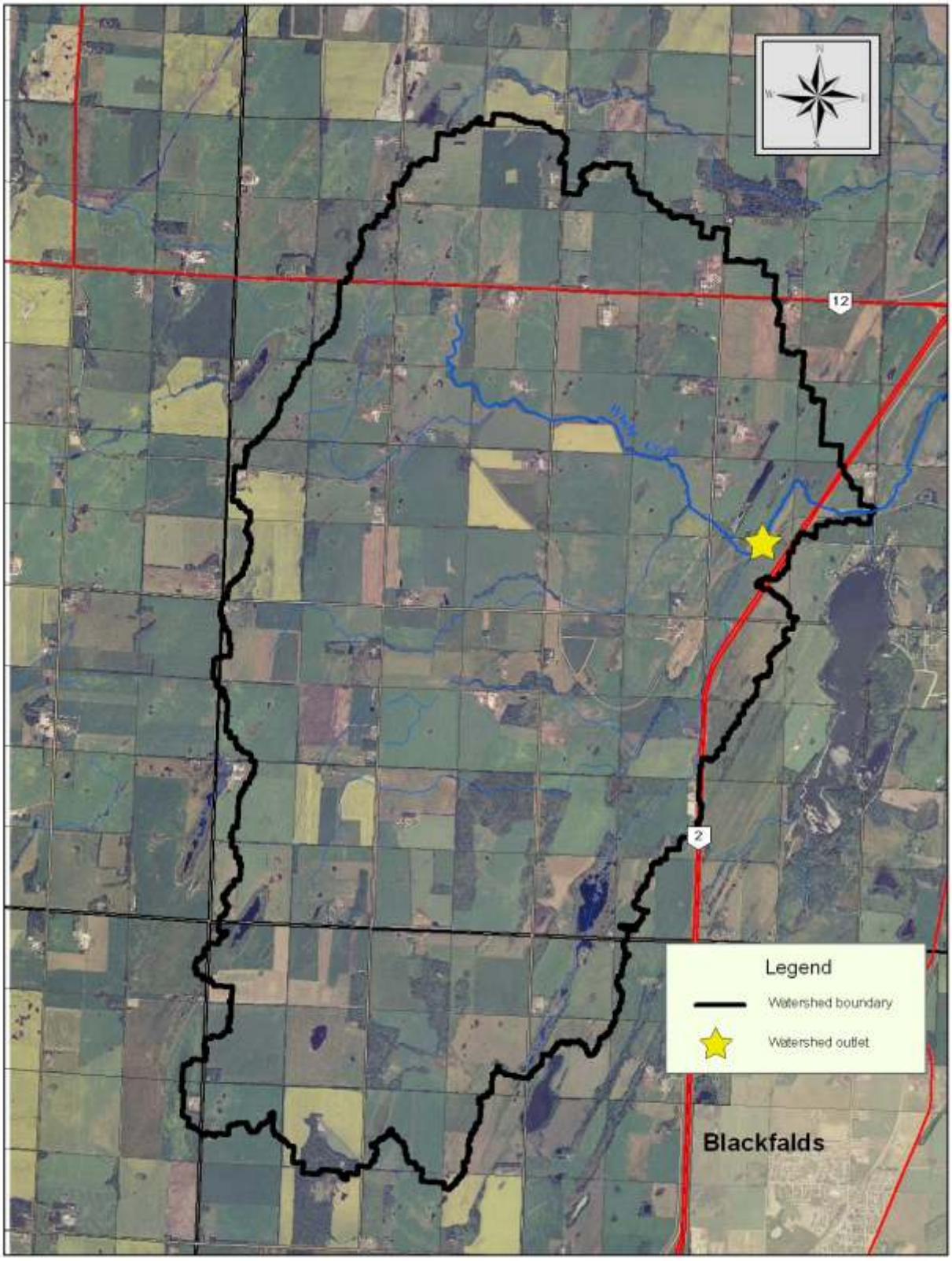


What are guidelines used for?

Aquatic Life Guidelines. These are used as a reference to help to protect plants and animals that live in our lakes and rivers by setting acceptable levels for substances that affect water quality. The guidelines are based on the most sensitive plants and animals found in Alberta waters.

Irrigation Water Quality Guidelines. These are used as a guide for water being applied on vegetable and fruit crops, which are for direct consumption such as lettuce or strawberries.

Whelp Creek Watershed



Watersheds

Everyone lives in a watershed! A watershed is an area of land including the hills, flat areas and low spots that drains into creeks, lakes and wetlands. Whelp Creek is part of the Battle River Watershed, which drains into the North Saskatchewan River Basin.

Future Field Work

Water monitoring will continue in 2008. There are 20 monitoring stations in Whelp Creek Watershed. Along with water quality, water flow will be measured. These data will be used to assess how water quality will change with the implementation of beneficial management practices. Soil, crop, and manure samples will be collected and the results will be related to runoff water quality and used for nutrient management planning. Riparian and rangeland assessments also will be carried out in the watersheds this year as well.

Downloading weather station data

Collecting spring runoff samples

Water monitoring station

Other Upcoming Events:

Alberta Soils Tour, July 22 - 23

The 1st day goes from Lacombe to Rocky Mountain House and the 2nd day will continue on to Drayton Valley and Leduc. Tour stops and topics include:

- The Lacombe Research Station
- Whelp Creek watershed BMP Project
- Oil site reclamation projects and regulations
- Land use, forestry issues and pasture health
- Peat extraction and soil remediation
- U of A - Breton Plots & Woodlot
- Soil issues and municipal responsibilities

Tour contact: Jason Cathcart, 780-427-3432

BMP Evaluation Project, contact:
Phil Boehme at 403-782-8035

The progress report for the project will be available on-line at: www.agric.gov.ab.ca
(Type the project title in the 'Search' option)

Many thanks to the participating producers for your interest and cooperation and to the project partners for the technical and financial support, including:

ACIDF Alberta Crop Industry Development Fund Inc.
Alberta Agriculture and Rural Development
PFRA Prairie Farm Rehabilitation Administration
Alberta Environment
Lacombe County