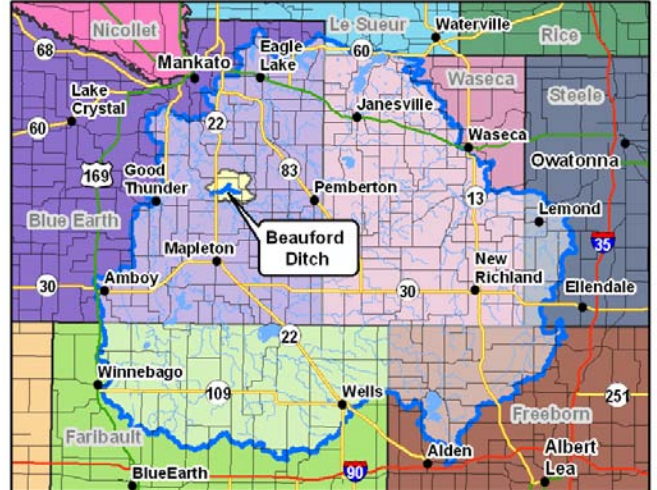


# Acetochlor Impairment Response Plan For the Le Sueur River and Little Beauford Ditch

## Issue in brief:

- The Le Sueur River and Little Beauford Ditch<sup>1</sup> in south central Minnesota have violated the state water quality standard for the herbicide acetochlor.
- The Le Sueur River violated the standard in 2001 and 2005. The Little Beauford Ditch violated the standard in 2005. The surface water acetochlor standard is a concentration of 3.6 ppb (parts per billion) over four days.
- The violations of the acetochlor water quality standard resulted in the Minnesota Pollution Control Agency placing the two water bodies on the state's list of impaired waters in 2008. These are the only water bodies listed as impaired in Minnesota due to pesticides in current use.
- Since 2005, neither the Le Sueur River nor the Little Beauford Ditch have violated the surface water standard for acetochlor. The highest acetochlor concentration measured in Le Sueur River since 2005 is 2.05 ppb; in the Little Beauford Ditch is 1.46 ppb.
- The Minnesota Pollution Control Agency (MPCA) and Minnesota Department of Agriculture (MDA) both have a responsibility to address these acetochlor water quality impairments. The MPCA is responsible for seeing that water quality impairments are corrected; the MDA is responsible for proper use of pesticides. The two agencies are working together on addressing the acetochlor impairments.



Le Sueur River Watershed  
(The Little Beauford Ditch is a subwatershed of the Le Sueur)

## Acetochlor Impairment Response Plan:

The MPCA and MDA have developed a proposed “Acetochlor Impairment Response Plan” for the Le Sueur River and Little Beauford Ditch. It outlines specific activities to be completed or evaluated in response to the water quality impairments. Some of the activities are in direct response to the acetochlor water quality impairments; others are in response to MDA’s on-going responsibility to assure pesticides are used in a manner that does not cause unreasonable adverse effects on the environment.

Water quality impairments are typically addressed through development of a Total Maximum Daily Load (TMDL) plan. The Acetochlor Impairment Response Plan is not a TMDL plan, but a process to determine whether a TMDL plan may be needed. The Acetochlor Impairment Response Plan lists two potential actions that may result from completing the plan:

1. *If water monitoring results indicate no additional acetochlor standard violations, and the outcomes of the Acetochlor Impairment Response Report suggest current actions are adequate to prevent future violations, the Le Sueur River and/or Little Beauford Ditch may be considered for removal (delisting) from the state’s list of impaired waters.*
2. *If water monitoring results indicate a new violation of the acetochlor standard, or the outcomes of the Acetochlor Impairment Response Report suggest current actions are inadequate to prevent future violations, the acetochlor impairment may be addressed through the Total Maximum Daily Load (TMDL) planning process.*

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<sup>1</sup> The Little Beauford Ditch is commonly referred to as the Beauford Ditch. Since it appears on the state’s impaired water listing as the Little Beauford Ditch, it is referred to by that name in this information sheet.

### Activities outlined in Response Plan:

1. Technical advisory group and stakeholder group involvement.
2. Computer modeling of acetochlor runoff and Best Management Practice effectiveness.
3. Develop recommendations from computer modeling results.
4. Watershed scale water monitoring.
5. Sub-watershed scale water monitoring.
6. Collect farming system information in watersheds.
7. Track Best Management Practice use and adoption.
8. Evaluate effectiveness of reduced rates Best Management Practice on loss to tile water.
9. Evaluate effectiveness of filter strips Best Management Practice on loss to surface water.
10. Develop an “Acetochlor Impairment Response Report” by May 2012.



### Activity #9 - Filter Strip BMP Study

After a season of calibration, a vegetative filter strip will be planted in front of this monitoring station to measure its effectiveness in removing acetochlor. A joint effort of the Acetochlor Registration Partnership and Minnesota Department of Agriculture.

### Response Plan responsibilities and budget:

The Minnesota Department of Agriculture (MDA) is responsible for carrying out the activities in the Acetochlor Impairment Response Plan and reporting back to the Minnesota Pollution Control Agency (MPCA) who has overall responsibility for correcting the acetochlor water quality impairments. Completing the plan will cost \$681,000 in state funding and a substantial but unspecified amount of funding from the Acetochlor Registration Partnership (Dow AgroSciences and Monsanto).

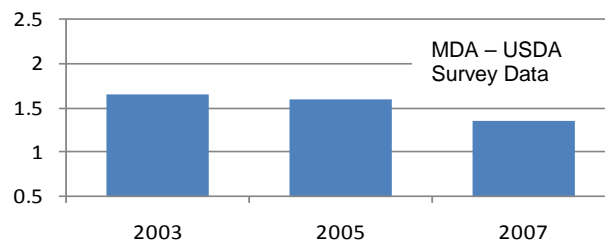
### About acetochlor:

Historically a corn herbicide, acetochlor is now also labeled for use on soybeans. It is most effective on grassy weeds and is applied before weeds germinate. Common acetochlor products include Harness, Keystone, SureStart, Surpass, Volley, and Warrant.

MDA-USDA telephone surveys of corn growers conducted from 2003 to 2007 found that corn acres in south central Minnesota treated with acetochlor did not vary much and ranged from 34% in 2003 to 33% in 2005 and 2007. (Data from 2009 not yet available.)

The same surveys shows the average acetochlor application rate (as active ingredient) to decrease from 1.65 lbs/ac in 2003 to 1.35 lbs/ac in 2007 (see chart). This might be due to more acetochlor being applied at reduced “Roundup Ready” rates.

Average acetochlor rate, lbs/ac, a.i.  
South central Minnesota



(7-15-10)

### For more information:

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