

The Monitor

Spirit Creek Watershed Monitoring Committee Newsletter Summer 2002



SCWMC now on World Wide Web

By Don Olson, Secretary & Web Site Co-ordinator

The Spirit Creek Watershed Monitoring Committee (SCWMC)'s Web site is up and running and can be accessed at www.spiritcreek.ca.

It is important that the findings and results of this committee, through the monitoring programs on the water, soil and air concerning large intensive agricultural operations, be available to interest groups, government agencies and other interested organizations.

The general public is becoming far more aware of large intensive agricultural operations and is seeking assurance that potential problems are addressed. The results from the committee's monitoring program will help address public concerns directly by providing reliable facts and publication of the data to everyone.



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Working with agriculture and the rural community to ensure our environment is protected.

Water sampling report



By Ray Riesz, Water Chair

The fall sampling of wells and dugouts was conducted in October 2001. A total of 25 wells and 59 dugouts were sampled in a three-mile

radius of the three Big Sky Farms' hog barns located in the RM of Invermay. The samples were again analysed by the Provincial Lab and the results forwarded to the participating landowners. A copy of the summary of the results is available from the committee.

In mid-April 2002, runoff samples were collected. Low precipitation last fall and winter resulted in a very limited runoff. We were, however, able to obtain samples from 13 of the 15 runoff sites. The two sites that were not sampled had absolutely no runoff this year. The laboratory analyses show that while nutrient values (phosphorous and nitrogen) were lower this year, bacteria counts (total coliform, fecal coliform and fecal strep) showed a sharp increase. This may be due to the low water flow resulting in only minor dilution.

Even though nutrient values were somewhat lower this spring, they are still high enough to cause excessive weed and algae growth in the receiving water bodies.

Some forms of algae can be harmful to wildlife, livestock and humans. Surplus nitrogen can also be lost through leaching.

It is in times of drought like this that we realize how vulnerable and how important water is. We must all do our part in preserving and protecting this valuable resource.



Spring runoff location SCWS #10A -upstream

At present, we have just completed collecting spring samples from the wells and dugouts that were sampled last fall with the exception of three wells that were still frozen. The results of the analyses will be forwarded to the landowners as soon as they become available from the Provincial Laboratory. As usual, a summary will be available from the committee to anyone upon request.

When the analysis of spring sampling is completed, we will have gathered sufficient information on the existing water quality to establish a baseline to which future sampling can be compared. Therefore this coming fall we plan to reduce the sampling area to a two-mile radius of the hog barns. This will enable us to concentrate our monitoring on the locations that will be near land receiving hog manure as well as on any abnormalities that may require further sampling such as heavy rainfall or runoff events.

We want to thank all those who have participated or are participating in this water-monitoring program. Without your cooperation it would be impossible to get an accurate profile of the water quality in the area.

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Special note: Due to the Monitor being posted on SCWMC's website, fewer copies will be printed and distributed in 2003.

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Soil nutrient monitoring

By Jim Davis, Soil Chair

The 2001 Benchmark Program was completed in October 2001. Four quarter sections were sampled for the program. Two quarter sections were near the finisher barn and one quarter section near each of the breeder and nursery barns.

The locations are:

<i>Finisher Barn</i>	<i>NW 06-33-06 W2</i>	<i>Breeder Barn</i>	<i>SW 05-32-07 W2</i>
	<i>SE 13-33-07 W2</i>	<i>Nursery Barn</i>	<i>SE 02-32-08 W2</i>

Each quarter was sampled at 12", 24", 36" and 48" depths. A total of 96 samples were taken to provide factual representation of the sampled land. Samples were shipped to Enviro-Tech Laboratories at Saskatoon and each was analyzed for eleven parameters typically found in agricultural soils.

Our consultant, Keith Head of Head and Associates, received the analyses and submitted a report to the Committee in November 2001. Each participating landowner was also given a copy of the report. The report provides the benchmark nutrient values at the depths sampled and will be used for comparison of future samples.

Signs identifying each of sample quarters were erected in May 2002. Head will select two additional quarters for sampling in Fall 2002. The committee will request permission to sample from the landowners and this will also be used as benchmark values.



Spirit Creek on-line

(Continued from cover)

The Web site was designed by four students of the New Media Communications Program, at the SIAST Woodland Campus in Prince Albert.

The Committee's Web site has six categories:

- Current Events;
- About Us – mandate, history, role of committee;
- Newsletter – past issues of *The Monitor*;
- Research – results of the water, soil and air programs;
- Contact Us – e-mail address and committee members; and
- Links – currently SaskPork and Saskatchewan Agriculture, Food and Rural Revitalization.

Big Sky Farms update

By Florian Possberg, CEO, Big Sky Farms

All six production units plus Rama feed mill are in full operation, providing employment for 41 full-time and 14 part-time staff. Start-up of these units has been very successful with 114,632 pigs weaned to May 29 from the Korchinski unit. First pigs were weaned in July last year. About 2,300 hogs now go to market weekly.

The Rama feed mill supplies all new barn feed plus some rations for Lintlaw and Preeceville units. Five full-time and one part-time staff receive grain, process the feed, deliver feed to barns and wash trailers for internal transfer of pigs. Monthly grain purchases include over 60,000 bushels barley, 35,000 bushels wheat and 32,000 bushels corn. Supplies of wheat are very limited due to the high quality and poor crop last year. Corn replaces wheat in some feeds. Grain delivered monthly comes from 50 to 60 area farmers.

Big Sky Farms would like to thank our staff, suppliers and neighbours for their support.

Current activities continued

citizens and, most important, the rural residents who live around the hog barns. Without the support of all of these organizations and residents, our monitoring would not be effective or complete.

Spirit Creek Watershed Monitoring Committee is committed to ensuring responsible development of our natural resources. We look forward to working with all of you and keeping you informed.

If you have any questions or concerns, please do not hesitate to call me at (306) 783-4828 or visit our Web site at www.spiritcreek.ca.

Report on current activities

By Don Walters, Chair

The last 20 months have been very busy for our Committee. We are working on establishing a baseline of the water and soil before any manure is injected.



Odour generated from the hog operations is a very real issue in Saskatchewan. A one-year odour impact research study has been implemented at the Rama Hog barns; this includes the breeder, nursery and feeder barns. This research is being done by a research team and, most importantly, by some 140-plus residents.

At the conclusion of the Odour Research, our goal is to produce odour control options that are credible, relevant, and user friendly to the local residents, government and industry. Our research will look at what is acceptable and what is not acceptable.

Our Committee and VIDO (Veterinary Infectious Disease Organization) from Saskatoon are involved in a Research Project. We are hoping to establish the bacteria and endotoxin of the dust in the air around the feeder barn at Rama. The air samples taken will be important in establishing the distance of travel and size of particles.



VIDO Air Sampler - upwind location

Our newest addition is a Wireless Weather Station, which is situated between the nursery, farrowing and feeder hog barns. The Weather Station has the most up-dated local weather information with more features than we require. The Weather Station has multiple weather variables, which gives us the up to the minute weather reporting. The Weather Station provides the current, high and low temperatures for each day, wind direction, wind speed, humidity, rainfall, etc. Our Committee feels that proper local weather documentation is a very important part of our odour study.



VIDO Air Sampler - barn location

We are working very closely with all stakeholders. This includes Saskatchewan Agriculture, Food and Rural Revitalization, SaskWater, Saskatchewan Environment, Saskatchewan Health, the University of Saskatchewan, SaskPork, Big Sky Farms, Veterinary Infectious Disease Organization, Provincial Water Laboratory, Enviro Test Laboratories, rural municipalities, concerned