

# In Balance

a newsletter for the Whatcom County Dairy Industry



## Introducing In Balance

Whatcom Conservation District's mission statement reads as follows:

*The Whatcom Conservation District promotes conservation education and provides technical assistance to foster a healthy relationship between the environment and people.*

In keeping with this principle, we hope you will take the time to read **In Balance**, a publication intended to help agricultural producers make informed decisions about resource management issues. If you have questions, comments or concerns about information presented in this newsletter please don't hesitate to contact us. –

**Whatcom Conservation District Dairy Team**

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Chris Clark, Bill Sickner, &  
Chuck Timblin

 *Happy Holidays to you and your families from Whatcom Conservation District staff!* 

## Dairy Farmers' Efforts Contribute to Significant Water Quality Improvements

Water quality in tributaries of the Nooksack River has continued to show significant improvement since the beginning of a monitoring program that started in the fall of 1998 and will continue until at least 2005. Results indicate that fecal coliform counts have been reduced by an average of 63% in the five watersheds included in the monitoring program. Dairy farmers have contributed to this dramatic turn around in water quality over the last three years by implementing practices that have reduced fecal coliform levels in field runoff.

*"...fecal coliform counts have been reduced by an average of 63%..."*

Two practices that deserve the most credit for lowering bacteria counts associated with farming activities are filter strips (or buffer strips) and nutrient management. Countywide, filter strips are now being maintained on over 3000 acres of farmland adjacent to streams and ditches. Filter strips have helped lower the number of surviving fecal coliform by increasing the time and distance the bacteria must travel between field areas where manure is applied and surface water.

In the past three years, nutrient management plans covering 50,000 acres of county farmland have been written. The adoption of nutrient management practices have further reduced fecal coliform counts in two ways. First, manure applications are timed to occur during the growing season when the opportunity for nutrient uptake by crops is at its peak. Second, applications of manure are eliminated during winter months due to increased potential for bacteria to enter surface waters via field runoff during that period.

*The watershed showing the most improvement is Bertrand Creek Watershed.*

The goal of the Department of Ecology (DOE) is to reduce fecal counts in all the watersheds listed in the table below to 50 colonies or less by 2005. To date the watershed showing the most improvement (and also the one with the most dairies) is Bertrand Creek Watershed. Since 1998 the fecal count has been reduced by 73% and it has never exceeded the quarterly goal set by the DOE.

Watershed	# of dairies in watershed*	FC count**— 3rd Qtr 1998	FC count— 3rd Qtr 2001	% reduction from 3rd Qtr 1998	TMDL goal for 3rd Qtr 2001***	% of time FC counts have ex- ceeded TMDL in last 3 years
Kamm Creek	16	580	190	67%	160	8%
Scott Ditch	19	250	70	72%	170	62%
Bertrand Creek	37	300	80	73%	130	0%
Fishtrap Creek	30	450	160	64%	150	69%
Ten Mile Creek	29	300	180	40%	120	46%

\* Some dairies have land in more than one watershed

\*\* FC count: Fecal coliform (FC) bacteria colonies per 100 mL of water

\*\*\*TMDL: Total Maximum Daily Load. A plan to clean up fecal coliform in the Nooksack River watershed was adopted by the Washington Department of Ecology (DOE) and the U.S. Environmental Protection Agency in 2000. This water clean up plan, called a "total maximum daily load" (TMDL), sets forth the goals, objectives, and tactics for meeting water quality standards in the Nooksack watershed. The TMDL goal listed in the chart is the FC count goal established by the DOE for this stream.

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## 2002 Cost-Share Sign Up Set for January

Agricultural producers interested in receiving cost-share funds for conservation practices will need to sign up for this year's Environmental Quality Incentive Program (EQIP) during January 2002 at the Farm Service Agency (FSA) located in the Ag Service Center (6975 Hannegan Road, phone 354-5658). A competitive rating process among all EQIP applicants in northwest Washington will determine eligibility for



Crew from Len Honcoop Gravel installing pipeline at the Bob Sterk Farm north of Lynden.

for funds. Total funds available for the 2002 program will be about \$650,000, an amount similar to funding during the last few years.

## Biogas Forum Set for January in Lynden

On-farm biogas recovery from manure could offer opportunities to increase farm income and reduce farm operating costs by tapping into resources that already exist on your farm. Potential revenue sources from biogas include electricity, heat, green energy credits and organic fiber products. Biogas recovery can also reduce odor and may provide opportunities to export excess nitrogen and phosphorous.

On Tuesday, January 22, 2002 a **Dairy Biogas Forum** will be held at Homestead Farms Golf Resort and Convention Center in Lynden from 10:00 a.m. to 3:00 p.m. A registration fee is required. Speaking will be nationally recognized experts in biogas facility design and operation, energy marketing, organic byproducts and greenhouse gas credits as well as state, regional and local regulatory agency representatives. Sponsors include WSU Cooperative Extension, Whatcom Ag Preservation Committee, ReSources and WCD. Call Henry Bierlink (Ag Preservation Committee 347-1337) for more information.

## Nutrient Management Plans Must Now Include Phosphorous Evaluation

New federal guidelines for nutrient management plans require an evaluation of each field's vulnerability for losing phosphorous (P). The evaluation, called the P index, includes six P transport factors (e.g. flooding hazard, distance to perennial surface waters) and five P source factors (e.g. soil test P, application rate and method) that are rated to determine whether nutrient management changes are needed. With eleven P index factors to consider, even fields with high levels of soil test P may have ten other index factors that are low or medium. Therefore those fields' overall P loss vulnerability may be low enough to warrant no changes in P management. Thus, even with the new P evaluation requirement, nitrogen is still likely to remain the rate-limiting nutrient for manure applications in most Whatcom County fields.

These new P evaluation requirements will not apply to plans that have been written to satisfy the state's Dairy Nutrient Management Act (RCW 90.64). They will apply however to plans for all future participants in federal and state cost-share programs, and they may also be required for dairies placed under National Pollutant Discharge Elimination System (NPDES) Permits.



## Farmwest Review - B.C. Researchers look at long term effects of manure use

For more than a decade, agronomists at Ag Canada's research facility in Agassiz have been studying the long-term effects of manure use on grass. Listed below are some of their conclusions (to learn more, check out their website: <http://www.farmwest.com>):

- Based on equivalent rates of mineral-N, manured plots yielded .9 to 1.35 tons per acre more grass dry matter than fertilized plots.
- The application of manure increased soil organic matter, total soil carbon and total soil N.
- The optimum manure application rate on a productive grass stand (6 tons of dry matter or more per acre) is 245 pounds per acre of plant available nitrogen.
- High rates of manure reduced the density of the grass stand and increased the amount of bare soil (but not yield).