

Our New Website

With a page just for you!

Our website has been remodeled and now contains more resources and information for you to use. Included are links to weather forecast sites that can help you predict coming precipitation events and soil temperatures; a tool to help you assess your field conditions and time your application events to avoid potential pollution events; links to helpful tools, information, and current research; and much more. Check it out at: www.WhatcomCD.org/dairy



Updates at Your Fingertips

If you would like email updates on current weather alerts, manure application tips and timing, and other important information, please send us your email address (wcd@whatcomcd.org) and we will put you on the list.

(This list will NOT be distributed)

Contact us at: (360) 354-2035 x3 www.WhatcomCD.org

References

For more information on topics presented in this issue, you can refer to the publications located in your NMP or on our website, or come in and pick them up at the WCD office.



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Lynden, WA 98264

Look inside for your **NEW Application Risk Management Manure Application Calendar for 2011**. Track your annual management activities, record your manure application dates and rates, and have useful manure application references at your fingertips. Enjoy!

Coming Spring 2011...

In The Next Issue:

- *Watching the Weather: Why it is important and how will it help me?*
- *When Can I Start to Apply Manure?*
- *The Aminopyralid/Clopyralid Issue - What now?*
- *Watershed stewards - How to keep your watershed clean*

In This Issue:

- *What can the CD do for you?*
- *Yearly planning for Nutrient Management*
- *Wintertime tips for managing your storage lagoon*
- *Our new website*



Photo: Jorinde van Ringen

A Connection to the Whatcom Dairy Community

Whatcom Dairy News

Our Newsletter is Back!

This quarterly newsletter is being sent to you in an effort to keep you up to date on important information, discuss topics of interest, and provide you with seasonal tips for manure and crop management.

Staying connected and keeping up to date on the most current guidelines and management issues will keep you ahead of the curve and avoid risk.

We want you to succeed!

If there are any topics of interest you would like us to address in future issues, please feel free to let us know.

For more information go to:
www.WhatcomCD.org



How We Can Help You What can WCD do for you?

The Whatcom Conservation District (WCD) has been helping farmers for years, but there still seems to be a little confusion about who we are and how we can help you.

WCD is a non-regulatory agency that offers free planning and nutrient management advice to all farmers. We are not regulators, inspectors, or informants. Our job is to help you meet State and local regulations set forth by EPA, WSDA, and Whatcom County, by utilizing NRCS guidelines to minimize your risk of having a pollution event. In addition, we are

here to offer education and outreach, and link you to financial assistance programs that can help you install best management practices and new technologies for manure management. If you would like to find out more, please feel free to drop by the office and chat with one of our planners, or check out our new webpage that has been designed just for you!

Nutrient Management Tips Start planning now for next year's crop needs

Winter is a good time to review your nutrient management from last year and start planning your crop needs and manure management for next year.

Things to review when planning your nutrient use for the year:

Crop yields – Your crop yield (lbs/acre) is the best indicator for how much nutrients your crop needs. The greater the yield, the greater the nutrient need. However, applying more nutrients will NOT

necessarily increase your yields. The weather, soil moisture and soil type play a big part in annual crop needs and yields.

Fall nitrate test – This gives you an idea of how well you balanced your manure nutrients to your crop needs for the year, as well as identifies fields that may respond to changes in timing or amount of manure application. For more information, (Continued on next page...)

Nutrient Management Tips

refer to: *Post-harvest Soil Nitrate Testing. Sullivan and Cogger, 2003. OSU Extension, 8832-E.*

Weather - The weather can play a big part in annual yield and manure application timing. Be sure to consult the weather forecast prior to applying manure. Go to our website for links to local forecasts.



Manure Nutrient Records – Your manure nutrient concentration will vary from year to year. It is recommend that you take a manure test prior to each application so that you can match your nutrient availability to your crop needs. At minimum, take three manure tests per year, preferably in the spr-

ing, summer, and fall as each season will have a different concentration of nutrients per gallon due to rain dilution.

Overall - By doing a nutrient budget at the start of every year you can better manage and utilize your available nutrients.

Adjust your annual nutrient budget if:

- You have more than a $\pm 10\%$ change in animal numbers,
- Install new manure management technologies (i.e., solid separator),
- Gain or loose crop acres,
- Import (bedding) or export manure,
- Collect additional slab area.



Cover Crops

Your cover crop may be more valuable than you think. Your cover/relay crop pulls nutrients (nitrogen, phosphorous) from the soil all winter long and prevents it from leaching into groundwater or running off your field. A cover crop can also help provide an additional source of feed, reduce water erosion, and increase infiltration. Instead of tilling it under next spring, think about grazing or harvesting it first.

Lagoon Maintenance

Wintertime Tips and Management

One of the most important lagoon management issues in Whatcom is maintaining your storage volume through the winter months. Most lagoons are emptied in the fall in anticipation of the winter collection period, so now the goal is to keep your storage capacity maximized, while also minimizing your risk for a lagoon breach.

The number one factor that compromises your storage volume is the collection of rainwater. It is difficult to avoid collection of surface water on the lagoon, but you can minimize the collection of slab and roof water. **Now is the time to check your gutters** and make sure they are clear of debris, intact, and braced for winter snow and ice loads. Replace any cracked, broken, or fallen gutters, and make sure they are clear and properly connected to divert water away from collection areas. Replace any missing roof panels as they will allow rainwater to enter your barn and dilute your manure. Additionally, **make sure that clean (no manure or silage leachate) slab areas are diverted away from manure collection areas** and into grassed areas adjacent to the farm. This can be

done with temporary sandbag placement, ecology blocks, or dirt burms. Don't let rainwater steal your storage space!

Just to give you an idea of the importance of clean water diversion away from your lagoon, a 40x40 foot slab or roof area can contribute almost 50,000 gal (a tank full) of water to your lagoon per year. In addition to compromising storage volume, clean water increases pumping costs and dilutes manure that is applied in spring. Ideally, you want to apply thicker, concentrated manure in the spring when plant needs are high.

Another big factor to consider is maintaining a safeguard for rainfall events and dike integrity. In your nutrient management plan it specifies that you are to **maintain a freeboard space of 12 inches**, as well as space

to accommodate a 24 hour, 25 year storm event, which for most areas in Whatcom County is 3.5 inches. This means that **your lagoon level should never come within 15 inches of the lowest point of the dike at any time of the year**. The freeboard (12 inches) is NOT to accommodate an unexpected seasonal rain event, broken gutter, or extra slab area collected; it is a structural design consideration that makes sure you are not adding undue stress to the top of your lagoon dike, which can lead to a blow out. A catastrophic break or breach of the dike will not only lead to a discharge, but also a big hassle and expense to fix it.

There are no alternatives to good storage maintenance practices. If you are reaching into your freeboard space in the late winter, you need to check your clean water conveyance system, or reevaluate your storage capacity in relation to your farm size.

Be safe and be smart this winter; maintain your freeboard space by practicing good water management.

For more information on how to minimize water collection in your lagoon, or what the requirements are for your lagoon, contact

What is a Properly Maintained Lagoon?

If WSDA hasn't checked done your annual lagoon inspection yet, now is the time prepare for a problem free report. The following information will provide you with some guidelines on how to make sure your lagoon maintenance meets WSDA expectations and prolongs the life and safety of your lagoon.

Here are a few tips to make sure you are in compliance with State law and your lagoon is properly maintained:

Standards. All lagoons are held to NRCS standards, which are dictated by when your lagoon was first installed. If you have made any modifications to your lagoon from when it was originally built that were not approved by an NRCS engineer, your lagoon may no longer meet NRCS specifications. If that is the case, you may have to bring your lagoon to current NRCS standards. This requirement is in place so that the structural integrity of your lagoon is not compromised, and you are not at risk for a catastrophic lagoon breach and possible discharge event.

By signing your nutrient management plan, you have agreed to follow NRCS standards including proper maintenance and operation of your lagoon. See guidelines on the right.

If your lagoon has been modified or you have any questions, it is recommended that you have a lagoon assessment or come in and speak to your planner and/or an NRCS technician to see if you need to bring it up to date. After 38 years in service, Bill Bensen is still at NRCS to help.

Specifications. NRCS guidelines state that for most lagoons, the lagoon dike needs to be at minimum 8 feet wide, and that the inside slope of your lagoon should be no steeper than 2 horizontal to 1 vertical foot. These guidelines ensure that there is enough strength in your dike to resist a collapse or breach of your dike. They also account for safety, erosion, and liner seal considerations.



Cost Share. Cost share is available on lagoon management items such as pumps, liners, and hoses. The list changes yearly, so come on in to see what technologies are available today.

Remember:

- Avoid collection of clean water
- Don't modify lagoon without consulting NRCS engineers first
- Properly maintain vegetation on bank slopes
- Maintain a 15 inch freeboard space year-round for safety

Maintenance of Your Lagoon

Good lagoon maintenance practices will keep your lagoon safe and increase its longevity. These include:

Vegetation Management – Maintain your dike vegetation with brief, controlled grazing events; frequent mowing to control invasive plants; selective spraying; and reseeding with an erosion control mix so that you don't have any exposed dirt susceptible to wind and water erosion.

Bank/Dike Management – Proper maintenance of your dike is imperative for the safety and longevity of your lagoon. Do not steepen the slopes of your lagoon dike; if you add material to the outside bank, make sure it is well compacted and seeded; don't add material to the inside unless it is an approved liner; prevent animals from overgrazing and eroding the dike; manage pests such as moles and rats as they can compromise bank integrity.

Lagoon Liner - Pay attention to your lagoon liner. Your lagoon liner is what keeps your lagoon contents from seeping into groundwater, or softening your lagoon dike, which can cause a catastrophic dike failure. Minimize agitation close to the liner to limit erosion, remove solids without excavating into the liner, and watch for inside bank erosion from pipe influent.

Solid Maintenance – A layer of solids on your lagoon surface is okay. In fact, a crust can decrease odor and volatilization, but too much crust is hard to break up. Prior to application, break up your crust via agitation, biological products, or physical removal.

What Does an Inside Slope Look Like?



2.5:1 inside slope, 8 foot banks



1:1 inside slope, 6 foot banks