Our New Website

How We Can Help You

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

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

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...)

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.

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.

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A Connection to the Whatcom Dairy Community
Nutrient Management Tips

**Specifications**

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 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 bars. 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 your 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 consult NRCS engineers first.

### 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.
- **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.

### Cost Share

- 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

### What Does an Inside Slope Look Like?

- **Good**
  - 2.5:1 inside slope, 8 foot banks
  - Inside slope, 6 foot banks

- **Bad**
  - 1:1 inside slope, 6 foot banks

### 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

- **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.