

Residential, Commercial, Industrial, Municipal (RCIM) Work Group

Charge from Groundwater Management Area Advisory Committee

Working Group Members

Robert Farrell, Chair (Port of Sunnyside), Elizabeth Sanchez (Yakama Nation), Ryan Ibach (Yakima Health District), Jan Whitefoot (Concerned Citizens of Yakama Reservation), John Van Wingerden (Port of Sunnyside), Stuart Turner (Turner & Co.), Tom Ring (Yakama Nation), Kathleen Rogers (Citizen Rep), Sanjay Barik (Ecology), Dan DeGroot (Yakima Dairy Federation)

Meetings/Calls Dates

Meeting: June 25, 2015 10:00 am – 12:00 pm
Radio KDNA, 121 Sunnyside Ave., Granger, WA 98932
Call in: 509-574-2353 (pin 2353#)

Participants

Present: Robert Farrell, Chair (Port of Sunnyside), Sanjay Barik (Ecology), Jim Davenport (Yakima County), Lee Murdock (Yakima County), Yakima County Support Staff – Greta Smith

Key Discussion Points

- **Discuss nitrogen loading to residential lawns**
- **Discuss nitrogen loading at hobby farms**
- **Discuss nitrogen loading resulting from vegetative by-products of food processing industries.**

Residential Lawns: Bob Farrell shared the information he received from a commercial applicator for residential lawns. That source stated that liquid nitrogen is used, 5 pounds per acre, 1.8 % nitrogen per gallon, 9 lbs. nitrogen per acre per year on residential lawns. Assuming that only 1 of 10 residential lawns employs a commercial applicator, the nitrogen load would be .9 lbs per acre per year.

Another source believes that homeowners who do not employ commercial application purchase (2) 25 pound bags, 16-16-16, and apply it all to their lawn regardless of lawn size. It was assumed that homeowners over fertilize or over irrigate. Based on these figures, it was determined that RCIM's previous estimate of 5 pounds per acre per year for residential lawns (based on 1/10 of alfalfa fertilization (50 pounds per acre per year)) is probably high, and that a better estimate may be 2-3 pounds per acre per year for residential lawns

Jim will put these figures in a matrix that can be used when applying the Kimsey formula that has been used for septic system nitrate loading calculations. These figures are an estimate and can be adjusted.

Hobby Farms: Bob Farrell shared his findings on nitrogen loading on hobby farms. He spoke with a hobby farmer who stated that he has about 40 chickens and 30 turkeys. He cleans their coop every 5 – 6 months and uses the waste in his garden. He also has 15 acres with 40 head of cattle. He does not add additional fertilizer to the field where they are kept. It is naturally fertilized from the cattle. He has no other crops. He is probably a more serious hobby farmer than others. A second hobby farmer has 5 acres from which he takes 3 cuttings of grass hay a year. He fertilizes 1 time every 3 years, but does not notice a significant net profit gain from doing so due to consideration of additional fuel and labor costs.

It was also pointed out that most hobby farmers eschew commercial fertilizer preferring to be more organic in nature. It was determined that the RCIM's previous estimate of hobby farmers' use of 50% of the amount of fertilizer used by professional alfalfa farmers be reduced to a range of 20%-50%, as a function of hobby farm acreage. E.g., 0-2.5 acres = 20%; 2.5 -5 acres = 30%; 5 -10 acres = 40%

The working group reviewed the GWMA area map and the information it provides based on the work Mike Martian has done with GIS. All data gets put into GIS format with layers from USGS, water data, EPA, etc. and are plotted on the map. When all the layers of the GIS map are complete, it will be possible to estimate the total of the nitrogen loading assumptions. There was discussion regarding where Hobby farms should be included – would the acreage be included in the layer regarding residential lawns or in the layer with USDA information describing nitrogen loading by specific irrigated crops?

Food Processing: Kathleen and Bud Rogers provided a list of food processors in the GWMA area. Most of them are wineries and are permitted by the Department of Ecology.

Resources Requested

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Recommendations for GWAC

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Deliverables/Products Status

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Proposed Next Steps
