

Tuesday, June 24, 2025 at 10:20:03 Pacific Daylight Time

Subject: FW: Discussion of biosolids vs. sludge in LUBGWMA RAC
Date: Tuesday, June 24, 2025 at 10:08:47 AM Pacific Daylight Time
From: MOULUN Renee * ODA <Renee.MOULUN@oda.oregon.gov>
To: SUMMERS Sunny * ODA <Sunny.SUMMERS@oda.oregon.gov>, STAPLETON Isaak * ODA <Isaak.STAPLETON@oda.oregon.gov>
CC: MOULUN Renee * ODA <Renee.MOULUN@oda.oregon.gov>


From: STAPLETON Isaak * ODA <Isaak.STAPLETON@oda.oregon.gov>
Date: Tuesday, June 10, 2025 at 9:23 AM
To: MOULUN Renee * ODA <Renee.MOULUN@oda.oregon.gov>
Subject: FW: Discussion of biosolids vs. sludge in LUBGWMA RAC

See comments on bio-solids below. We may want to connect with DEQ on this topic.

Isaak Stapleton, Division Director
Oregon Department of Agriculture – Natural Resources
635 Capitol St NE, Salem, OR 97301-2532
CELL: 503.931.5608 | WEB: Oregon.gov/ODA
Pronouns: he/him

If you would like to discuss this topic and need a free language interpreter present, call 503-931-5608 to make arrangements or email Isaak.stapleton@oda.oregon.gov with your name, requested language, phone number and best time to call.

Si desea conversar con nosotros sobre este tema, y necesita un intérprete, usted puede llamar gratis a este número: 503-931-5608 o puede enviar un correo electrónico a Isaak.stapleton@oda.oregon.gov con su nombre, el idioma que usted habla, su número de teléfono para devolverle la llamada, y la hora en que podemos llamarle.

From: Karen Lewotsky <>
Date: Friday, May 23, 2025 at 1:09 PM
To: STAPLETON Isaak * ODA <Isaak.STAPLETON@oda.oregon.gov>
Subject: Fwd: Discussion of biosolids vs. sludge in LUBGWMA RAC

See below. Can you and I discuss how to move forward?

Hope your wife's surgery went well, and that she is resting as comfortably as possible.

Karen

Karen Lewotsky (*she/they*)
Oregon Environmental Council

----- Forwarded message -----

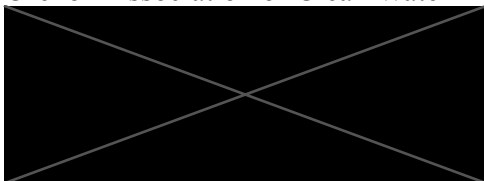
From: **Susie Smith** [REDACTED]
Date: Fri, May 23, 2025, 12:18 PM
Subject: Discussion of biosolids vs. sludge in LUBGWMA RAC
To: [REDACTED] >, pat.heins@deq.oregon.gov
<Pat.HEINS@deq.oregon.gov>

Hi Karen and Pat,

Karen, I spoke with Pat Heins this morning regarding your question based on discussions about fertilizers and sludges at the RAC. He shares my concerns and questions about what they are doing. Instead of me plucking definitions out of the rules and statutes, I think it would be better to get Pat involved, as he really is the expert in the state on the differences between biosolids and sludges and the different regulations that apply.

Could you two please coordinate on this?

Susie
Susie Smith
Special Projects and Events Manager
Oregon Association of Clean Water Agencies (ACWA)



Subject: Re: RAC comments

Date: Tuesday, June 24, 2025 at 11:02:48 AM Pacific Daylight Time

From: MOULUN Renee * ODA <Renee.MOULUN@oda.oregon.gov>

To: Dani Lightle <dani@ofsonline.org>, STAPLETON Isaak * ODA <isaak.stapleton@oda.oregon.gov>

CC: Svedin, Jeff <[REDACTED]>, Justin Green - Justin B. Green Consulting <[REDACTED]>
Paul Poister <[REDACTED]>, Harris, Greg <[REDACTED]>, MOULUN Renee * ODA
<Renee.MOULUN@oda.oregon.gov>, SUMMERS Sunny * ODA <Sunny.SUMMERS@oda.oregon.gov>

Hello all,

I wanted to thank you for sending your very helpful comments yesterday. I am sorry I didn't manage to address your comments completely in the rule draft that was released yesterday for Thursday's RAC discussion I but do look forward to going through them with you at the RAC meeting.

In particular, it would be helpful if you were ready to provide discussion on XX12(2)'s "environmental loss" method for determining whether an Annual Nitrogen Budget has been met or not. I agree that the present "Environmental Loss" equation is simplistic and perhaps not pragmatic. I had originally thought using California's A/R ratio would be a good idea:

A/R Ratio = Nitrogen Applied (from any source)

$$\frac{\text{Nitrogen Removed (via harvest and annually sequestered)}}{\text{Nitrogen Applied (from any source)}}$$

In turn, Nitrogen Removed (lbs/acre) = Crop Yield (units/acre) x C_N (lbs/unit)

The total nitrogen removed would be determined, in part, by multiplying a grower's crop yield by a crop-specific nitrogen coefficient (C_N) which would represent the amount of nitrogen in the harvested crop. In California, UC Davis has been instrumental in researching and providing the C_N for crops that are typically grown in the San Joaquin Valley. This background technical knowledge has been instrumental in making California's use of the A/R ratio workable.

However, I don't think there are nitrogen coefficients developed for the crops that would be grown in the LUBGWMA, though if I am wrong about this, I would be glad to hear it. I would like to hear the growers' thoughts on how difficult it would be to implement more of an A/R ratio concept – though I would caution that this leads to another discussion about acceptable A/R ratios – something I think California is struggling with.

Instead of an A/R ratio, we have gone with a more simplistic approach: the A-R Difference . Applied Nitrogen minus Removed Nitrogen is the "Environmental Loss" method outlined in the draft rules. This approach brings up it's own complexities and problems, and it would be good to discuss whether it is a feasible option at all. If you have other ideas about how to gauge the effectiveness of an ANB, I hope you will bring them to the RAC for discussion.

Again, thank you for the thought and effort that you are putting into the review of these rule drafts.

Renee

Renee Moulun, Senior Policy Advisor
Oregon Department of Agriculture – Natural Resources
635 Capitol St NE, Salem, OR 97301-2532
CELL: (971) 375-0231

From: Dani Lightle <[REDACTED]>
Date: Monday, June 23, 2025 at 1:11 PM
To: MOULUN Renee * ODA <renee.moulun@oda.oregon.gov>, STAPLETON Isaak * ODA <isaak.stapleton@oda.oregon.gov>
Cc: Svedin, Jeff <[REDACTED]> Justin Green - Justin B. Green Consulting <[REDACTED]>, Paul Poister <[REDACTED]>, Harris, Greg <[REDACTED]>
Subject: RAC comments

Hi Renee and Isaak,

Thanks for continuing to accept comments and information from the RAC group. Below, find comments and thoughts contributed by myself, Justin Green, Jeff Svedin, Paul Poister, and Greg Harris. If we can clarify anything, please let us know.

Dani

Proposed language changes, from the May RAC meeting

603-XX-XX08 Irrigation Water Management

- We agree with Carlos's comments during the RAC call that requiring all of the irrigation management information sources is not necessary. Proposed modification in red:

(2) A landowner subject to these rules shall base the volume of water needed for each irrigation event on at least **one of** the following information **sources** as relevant to a crop or field:

Available water-holding capacity of the soil for the crop rooting depth;
Management allowed soil water depletion;
Current soil moisture status;
Distribution uniformity of the irrigation event;
Water table contribution;

Computerized irrigation scheduling recommendation.

603-XX-XX09 Annual Nitrogen Budget

- We heard comments from Kaleb during the RAC meeting about a desire for a mid-season soil sample as an accountability check on producers. The current iteration of the draft rules provide accountability by requiring post-harvest soil testing, as well as an entire scheme for adaptive management measures.
- The usefulness of any of the soil tests depends on the timing of the soil sample, the crop in question, what data has been developed for a region/soil type, timing of the crop planting, history of use of organic soil amendments, etc. A pre-plant test wouldn't even be an option for a perennial crop in its second year or above.
- Agronomically, the best timing for soil sampling varies by crop, and sampling at the incorrect time in the plant growth stage may provide misleading results. ODA's own draft rule references cite publications that refer to this variability (for example, OSU Extension publication em9221).
- ODA should continue to defer to grower expertise on the appropriate timing of a soil test for their cropping system, so long as a soil test is being conducted. Proposed modifications in red:

(2) An annual nitrogen budget shall include all anticipated nitrogen management measures including the anticipated agronomic application rate for each crop. To determine agronomic rates:

A landowner shall test soil to determine plant available nitrogen prior to planting; **or**,
A landowner shall conduct soil sampling to determine plant available nitrogen and/or conduct plant tissue sampling and analysis to determine nitrogen need prior to mid-growing **or late-season** application, **as appropriate for the site, crop selection, and/or landowner experience** ~~and prior to late-season application~~;

We'd like to provide feedback in advance of this month's RAC meeting on Section -XX12, which we find to be quite problematic.

- Inclusion of variables that are unable to be measured by a producer. Subsection (2)(a) instructs measurement of atmospheric deposition. This is calculated through sophisticated equipment, typically by Federal government agencies such as EPA (through the CASTNET program) or NOAA (NADP program).
- Problems with calculation of environmental loss. Subsection (2)(c) provides a simplistic equation of Environmental N loss. To calculate N Removal, the subsection references volatilization and denitrification, which are unable to be measured on site without sophisticated equipment. Calculation of N removal in the crop requires additional laboratory analysis/cost; those costs are doubled if you also analyze harvested plant biomass. Finally, in some cropping systems, not all plant biomass is harvested (perennial crops such as vineyards, blueberry, and some grasses).
- Table 1 defines a trend as covering only 2 years. This is problematic on numerous levels – more than 2 datapoints are required to determine a trend. In annual rotational systems, N removal might occur with the next crop – for example, silage followed by a triticale cover crop which will take up the excess nitrogen from the silage.
- As an alternative for the budget evaluation, we propose evaluations should be focused on landowner comments on the crop year and future management adaptations to the certified plan (section XX09).