

Idaho Aquaculture Association, Inc.

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IDEQ
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RE: Docket 58-0125-1401: Complete Draft IDPES Rules Version 2 Comments

The Idaho Aquaculture Association counts among its membership a majority of the smaller producers in the state. On behalf of our members, I would like to provide the following comments on Version 2 of the draft IDPES Rules.

- ❖ **Aquaculture settling basin residue (aquaculture solids, fish manure) should not be included in the IPDES definition of sludge. The IPDES definition of sludge does not conform to EPA's definition of sludge.**

It's quite clear that sludge to EPA means sewage sludge. In 40 CFR 503 and on their web site EPA consistently refers to "sewage sludge" which is defined as: "*any solid, semi-solid, or liquid residue removed during the treatment of municipal waste water or domestic sewage. Sewage sludge includes, but is not limited to, solids removed during primary, secondary, or advanced waste water treatment, scum, septage, portable toilet pumpings, type III marine sanitation device pumpings (33 CFR part 159), and sewage sludge products. Sewage sludge does not include grit or screenings, or ash generated during the incineration of sewage sludge.*" IDEQ references 40 CFR 503 (EPA's rule on sludge) throughout the draft rules, but has deleted "sewage" wherever "sewage sludge" was previously used. In addition, IDEQ has changed EPA's definition of sludge by adding "aquaculture settling basin residue". These changes go beyond the Idaho legislature's intent of the IPDES negotiated rulemaking which directs IDEQ to not develop rules more stringent than the federal rule.

Section 380, page 111, of the IPDES draft rule version 2 states: "*SLUDGE 01. Purpose. The purpose of this section and 40 CFR Part 503 is to: (a.) Establish standards, which consist of general requirements, pollutant limits, management practices, and operational standards, for the final use or disposal of sludge.*" Section 380.05 states: "*Non-Municipal Sludge Management. (a.) Sludge accumulated from non-municipal facilities and operations can be reused or disposed if in conformance with...*" Although the draft rules reference 40 CFR 503, which only pertains to sewage sludge, IDEQ makes a change by adding the non-municipal exemption (because sewage sludge, by definition, comes from POTWs). Once again this change goes beyond the Idaho legislature's intent with IPDES negotiated rulemaking to not develop rules more stringent than the federal rule.

Aquaculture settling basin residue is not the same as sewage sludge and should not be defined as such. For example, Tables 1 & 2 show that levels of metal pollutants in aquaculture settling basin residue do not come close to the EPA ceiling concentrations in sewage sludge and are typically well below ranges reported in sewage sludge.

Table 1. EPA ceiling concentrations for various metals in sewage sludge.

Pollutant	EPA Ceiling concentration (mg/Kg, dry weight basis) in sewage sludge
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

Table 2. Comparison of various metals in fish waste, municipal sewage sludge and cattle manure as reported in the literature.

Pollutant (mg/kg)	Fish waste solids ¹	Municipal sewage sludge ²	Cattle manure ²
Arsenic	0.3-0.8	0.03-53	6.1
Cadmium	<2.5-5.0	3.3-203	2.5
Copper	11-32	126-7,729	55
Lead	4.2-11.2	80-676	17.5
Mercury	0.03-0.11	1.6-20.7	0.1
Nickel	8-22	29-800	28
Zinc	117-545	475-10,900	298

¹ Krieger, R.I., D. Marcy, J.H. Smith, and K. Tomson. 1987. Levels of nine potentially toxic elements in Idaho fish manures. *Bulletin of Environmental Contamination and Toxicology*, 38:63-66.

² Mumma, R.O., D.C. Raupach, J.P. Waldman, S.S.C. and eight others. 1984. National survey of elements and other constituents in municipal sewage sludges. *Archives of Environmental Contamination and Toxicology*, 13:75-83.

In addition to very low levels of metals, aquaculture settling basin residue contains an abundance of useful soil nutrients (Table 3).

Table 3. Composting-related characteristics of manure samples, in order of approximate “age” or stage in the manure handling system¹.

Source ²	C %	N %	O.M. %	NO ₃ -N µg/g	NH ₄ -N µg/g	NH ₄ /NO ₃ Ratio	C:N Ratio	Moisture %	pH
Settling pond, CSI	24.0	3.4	31.1	14.0	439	31.36	7.1	80.0	7.0
Settling basin, MS (Trial 1)	19.5	2.1	28.2	7.2	244	33.89	9.5	76.7	6.8
Settling basin, MS (Trial 3)	19.0	3.2	13.4	11.4	414.0	36.32	5.9	85.0	7.1
Settling basin, MS	12.0	2.0	16.3	15.0	820	54.67	6.1	56.4	7.3
Drying beds (aged), CSI (Trial 2)	7.1	1.0	8.8	280	25	0.09	7.0	34.2	6.8
Drying beds (aged), BL	4.0	0.7	6.0	1680	64	0.04	5.7	46.8	7.2
Dairy manure, UI (Trial 1)	34.0	2.1	53	4.3	30.8	7.16	16.4	77.9	9.1
Aged dairy manure, UI (Trial 2)	37.0	1.4	57.3	30.0	67.0	2.23	26.0	76.6	7.9

¹Buyuksonmez, F., R. Rynk, T.F Hess, and G. Fornshell. 2005. Composting of trout manure. Journal of Residuals Science & Technology, 2:149-157.

² CSI: College of Southern Idaho; MS: Magic Springs; BL: Blue Lakes; UI: University of Idaho

Finally, since fish are cold blooded they do not contribute to fecal coliforms in their waste. In fact, the presence of fecal coliforms in fish is taken as an indication of pollution or contamination from a source other than the fish. These data and much more like it show that there is no basis to add aquaculture settling basin residue to EPA’s definition of sewage sludge.

The Idaho Aquaculture Association recommends that IDEQ:

- (a) re-insert “sewage” throughout the draft IPDES rule version 2 (July 10, 2015) where previously deleted as part of “sewage sludge”;
- (b) Remove “aquaculture settling basin residue” from the definition of sludge (definition # 86, page 14); and
- (c) Add a section that the handling and disposal of aquaculture settling basin residue is referenced by the Idaho Waste Management Guidelines for Aquaculture Operations (IDEQ) and by NPDES BMP requirements (III. Best Management Practices Plan. A. Purpose), the latter stating “*Through implementation of the best management practices (BMP) plan, the permittee must prevent or minimize the generation and discharge of wastes and pollutants from the facility to the waters of the United States and ensure disposal or land application of wastes in such a way to minimize negative environmental impact and comply with relevant Idaho solid waste disposal regulations.*” Best management practices, as part of EPA’s NPDES aquaculture discharge permit, already are under EPA’s authority and compliance requirements.

- ❖ **IDEQ must notify the new permittee in writing when an automatic transfer of authority to discharge has been granted, or if not granted, what delinquencies must be corrected to receive discharge authority.**

When the aquaculture general permit was issued, each permittee that submitted a Notice of Intent (NOI) in a timely manner was granted the authority to discharge under the general permit and received a letter stating such. During inspections, the permittee is required to produce this letter as proof that it has the authority to discharge. During the permit term, numerous facilities either have been sold or operators (permittees) have dropped/started lease agreements, necessitating a transfer. Section 202.02 (page 77, Automatic Transfers) of the complete draft version states the method to initiate a transfer of authority to discharge, but it does not require the permitting authority to issue a letter of confirmation, nor does it require the permitting authority to issue a letter stating the transfer of authority was denied for reasons other than modifications to the permit.

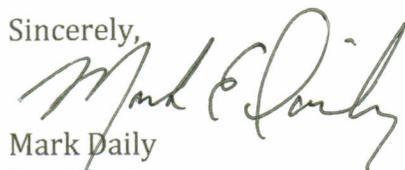
While sending a letter may appear to be an administrative matter, or at the very least a courtesy, EPA has been inconsistent in sending transfer confirmation letters, even sending one IAA member an email stating that it wasn't required under the permit to do so. In another instance, an IAA member still retains a recorded cell phone message confirming discharge authority with additional assurance that an email would follow, but that email was never received and the person who was responsible for writing it has since retired. Neither response was helpful, nor was it helpful when another permittee believed he had met the requirements in good faith, only to be threatened years later with fines because he was never granted discharge authority. While these may be extreme examples, transfer requests are common and a policy is needed to assure permittees that they are operating legally under the permit.

IAA recommends that Section 202 be modified:

- (a) to add language requiring IDEQ to send the new operator (permittee) a letter by the effective date stated in the transfer document confirming authorization to discharge has been transferred, and
- (b) if the transfer of authority has not been granted, to send the permittee a letter within 2 weeks of receipt of the transfer request stating delinquencies that must be corrected before a transfer of authority can be granted.

We thank you for considering our comments and stand ready to provide further input if needed.

Sincerely,



Mark Daily
President

Idaho Aquaculture Association, Inc.