

# Class B, Class A, Exception Quality

by Sherry Bock

## What's the Difference?

Is there a difference between Class B and Class A biosolids? I would think everyone would immediately, without hesitation, answer yes. However if I ask, is there a difference between Class A and Exception Quality (EQ) biosolids?, not everyone would answer yes right away. At minimum, many would be hesitant to answer and some may even say, "no there isn't." Let's take a closer look.

When determining what type of biosolids are being produced and what regulations apply, at minimum three things need to be considered;

1. Pathogen Reduction;
2. Vector Attraction Reduction, and
3. Metal limits.

### Class B Biosolids

First, we'll start with Class B biosolids. The goal for Class B biosolids is to treat the biosolids so that pathogens have been significantly reduced but that the biosolids are not necessarily free of pathogens. Because they are not pathogen free, remember that certain site restrictions for harvest, grazing, and public access do apply. The majority of the biosolids land applied in Minnesota are Class Biosolids. Class B biosolids can meet pathogen reduction by one of the following methods:

- Fecal coliform testing
- Processes to Significantly Reduce Pathogens (PSRP)
  - Aerobic digestion (time and temp)
  - Anaerobic digestion (time and temp)
  - Lime stabilization
  - Composting
  - Air drying

For Class B biosolids, all of the vector attraction options are available to be used depending on what processes are at the facility and what equipment is available.

1. Volatile solids reduction
2. Bench scale digestion of anaerobically digested biosolids
3. Bench scale digestion of aerobically digested biosolids
4. Specific Oxygen Uptake Rate (SOUR)
5. Aerobic processes at greater than 40°C
6. Adding alkali
7. Reducing moisture of biosolids that contain only stabilized solids
8. Reducing moisture of biosolids that contain unstabilized solids
9. Injection
10. Incorporation

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## ***Class A, Class B Continued***

To be suitable for land application (this actually applies to both Class B and Class A), the biosolids must have metal concentrations at or below the following concentrations:

Ceiling concentrations of metals	
Pollutant (metal)	Concentration (mg/kg)
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

### Class A Biosolids

Now on to Class A biosolids. The real difference between Class A and Class B is the type of pathogen reduction. The goal for pathogen reduction for Class A biosolids is to treat the biosolids until virtually all pathogens are eliminated. The options for treating biosolids to meet Class A pathogen reduction include the following:

- Thermal process
- Thermal process plus high pH
- Actual measurement of pathogens/treatment process
- Actual measurement of pathogens/unknown process
- A Process to Further Reduce Pathogens (PFRP)
- A process equivalent to a PFRP

### **AND**

- The density of Salmonella sp. bacteria is less than 3 Most Probable Number (MPN) per 4 grams of total solids or
- The fecal coliform density is less than 1,000 MPN per gram of total solids.

For vector attraction reduction, Class A biosolids can use any of the methods that are listed for Class B biosolids. Also, the ceiling concentrations of metals is the same. Remember, the main difference between the two is the pathogen reduction options.

### Exceptional Quality Biosolids

On to Exceptional Quality (EQ) biosolids. Here is where we will see more differences. First, EQ biosolids must meet (1) a Class A pathogen reduction option. Then EQ biosolids must meet (2) vector attraction reduction by options one to eight, found under Class B vector attraction options (note: incorporation and injection are not allowed for EQ). Next, EQ biosolids must meet (3) the following pollutant concentrations.

Pollutant concentrations for exceptional quality biosolids	
Pollutant (metal)	Concentration (mg/kg)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

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## *MWOA Exec Board Meeting Minutes Continued*

f. Innovative Conference Participation

Rick Ashling and Kathy Crowson will collaborate and involve more MWOA members.

g. Discussed education seminar participation

8. Meeting adjourned (recessed) at 12:45pm

Meeting was reconvened at the Annual Conference, July 24<sup>th</sup>. Budget and attendee numbers were confirmed and meeting was closed.

Reminder – Director and Committee Chair annual reports due to Jerry Balbach for posting on website and publishing in WASTEWATCHER. ALL officers and committee chairs – update job descriptions and forward to Secretary/Treasurer.

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## *Class A, Class B Continued*

Lastly though, if you meet the three requirements above for EQ biosolids and would like the decreased regulation for producing an EQ biosolids, you must indicate so on your biosolids attachment that comes in with your permit application. Once the EQ language is in the permit, the biosolids can be managed with reduced regulation.

Now you'll be ready for the next refresher you attend when I ask about this during the quiz! ☺

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## **Program Update**

The Minnesota Pollution Control Agency will soon be proposing a change to the training requirements for the operators of Type IV landspreading facilities. The state rules ([Minn. Rules pt. 7048.1000, subpart 4](#)) currently require Type IV operators to take 9 hours of contact training every three years in order to renew their certification. The MPCA is proposing to reduce that training requirement to 6 hours, based on improvements in the training program and the online availability of supporting materials. If this change is successfully adopted, it will be reflected in the MPCA's 2019 Type IV operator training programs that fall after the rule change is finalized.

The MPCA's preliminary opportunity to comment will end at 4:30 on December 14, 2018. However, there will be a second opportunity to comment, either supporting or opposing this change, in the next few months. If you would like to be notified about the next comment period and when the change is finalized, you can subscribe to get e-mail notices by registering at

[https://public.govdelivery.com/accounts/MNPCA/subscriber/new?topic\\_id=MNPCA\\_354](https://public.govdelivery.com/accounts/MNPCA/subscriber/new?topic_id=MNPCA_354)

or you can contact [Carol.nankivel@state.mn.us](mailto:Carol.nankivel@state.mn.us), 651-757-2597. A webpage with information about this rule change and how to comment is at <https://www.pca.state.mn.us/water/amendments-operator-training-requirements>.

