IOWA DEPARTMENT OF NATURAL RESOURCES
Biosolids Cumulative Loading Report

NPDES ID #:

Facility Name: _____ **Year:** _____

Has any field received biosolids pollutant exceeding pollutant concentration as defined in Iowa Administrative Code 567-67.7(1)a Table 1? If yes, please complete the cumulative loading report below. On page 2, you can find a guidance of how to do CPLR calculation.

	Pollutant	Previous CPLR (lbs./acre)	This year CPLR (lbs./acre)	Total CPLR (lbs./acre)	CPLR Limits (lbs./acre)
Field ID No.	Arsenic				36
	Cadmium				34
	Copper				1335
	Lead				267
	Mercury				15
	Nickel				373
	Selenium				89
	Zinc				2490
Field ID No.	**Pollutant**	**Previous CPLR (lbs./acre)**	**This year CPLR (lbs./acre)**	**Total CPLR (lbs./acre)**	**CPLR Limits (lbs./acre)**
	Arsenic				36
	Cadmium				34
	Copper				1335
	Lead				267
	Mercury				15
	Nickel				373
	Selenium				89
	Zinc				2490

You are allowed to duplicate the cumulative loading rate table if you have more fields than what is provided above.

Biosolids Cumulative Loading Calculation Guidance

For a given year where biosolids are land applied, if **any** pollutant exceeds pollutant concentration (from Table 1 below), the cumulative concentration of **all** pollutants must be recorded. The following instructions are a guide for calculating the cumulative pollutant loading rate (CPLR) based on the information reported to the EPA and DNR.

Table 1 – Pollutant Concentrations, IAC 567-67.7(1)a

Pollutant	Monthly Average Concentration (mg/kg)*
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	100
Zinc	2800

*Dry weight basis

Calculation Instructions

Total Amount Applied (DNR Form 542-0858) (total per field, metric dry tons): _____ (1)

Parameter Concentration* (EPA Form->Monitoring Data->Monthly Average Pollutant Concentration) (per each pollutant, mg/kg dry-weight basis): _____ (2)

**Note: If the parameter concentration for a given pollutant is below detection levels, then use the method detection level for that pollutant as the parameter concentration for this calculation.*

Field Size (DNR Form 542-0858) (actual acres): _____ (3)

CPLR from most recent year when pollutant rate from Table 1 was exceeded (if applicable) (per each pollutant, lb/ac): _____ (4)

CPLR = (4) + (1) x (2) x 0.0004536 / (3) (lb/acre)

Example
Biosolids are applied to two fields in the spring. The biosolids exceed pollutant concentrations for arsenic, therefore the CPLR for all pollutants for this year must be recorded. In 2016, biosolids were applied with excessive levels of copper, however no pollutant concentrations were exceeded in 2017, so item (4) will come from the CPLR from 2016.

Year: 2018

Field No. 1
Field Size: 10 acres
Application Amount: 50 metric dry tons

Pollutant	Parameter Concentration (mg/kg)	Pollutant Concentration Limit (mg/kg)	Previous CPLR (2016) (lb/ac)	CPLR (2018) (lb/ac)	Total CPLR (lb/ac)	CPLR Limit (lb/ac)
Arsenic	50	41	0.52	0.1134	0.6334	36
Cadmium	2	39	0.0036	0.0045	0.0081	34
Copper	800	1500	1.55	1.8144	3.3644	1335
Lead	15	300	0.022	0.0340	0.0560	267
Mercury	1.2	17	0.0056	0.0027	0.0083	15
Nickel	60	420	0.14	0.1361	0.2761	373
Selenium	20	100	0.055	0.0454	0.1004	89
Zinc	900	2800	1.6	2.0412	3.6412	2490

Field No. 2
Field Size: 20 acres
Application Amount: 80 metric dry tons

Pollutant	Parameter Concentration (mg/kg)	Pollutant Concentration Limit (mg/kg)	Previous CPLR (2016) (lb/ac)	CPLR (2018) (lb/ac)	Total CPLR (lb/ac)	CPLR Limit (lb/ac)
Arsenic	50	41	0.43	0.0907	0.5207	36
Cadmium	2	39	0.0071	0.0036	0.0107	34
Copper	800	1500	2.40	1.4515	3.8515	1335
Lead	15	300	0.013	0.0272	0.0402	267
Mercury	1.2	17	0.0055	0.0022	0.0077	15
Nickel	60	420	0.29	0.1089	0.3989	373
Selenium	20	100	0.10	0.0363	0.1363	89
Zinc	900	2800	6.51	1.6330	8.1430	2490