

Supplementary Material

for

Furén et al., Fractionation of metals in mature bioretention cells in the Midwestern United States by sequential extraction: A field study

Section 1 Site map

Section 2: Pictures of all evaluated facilities

Section 3: Box plots of all evaluated compounds

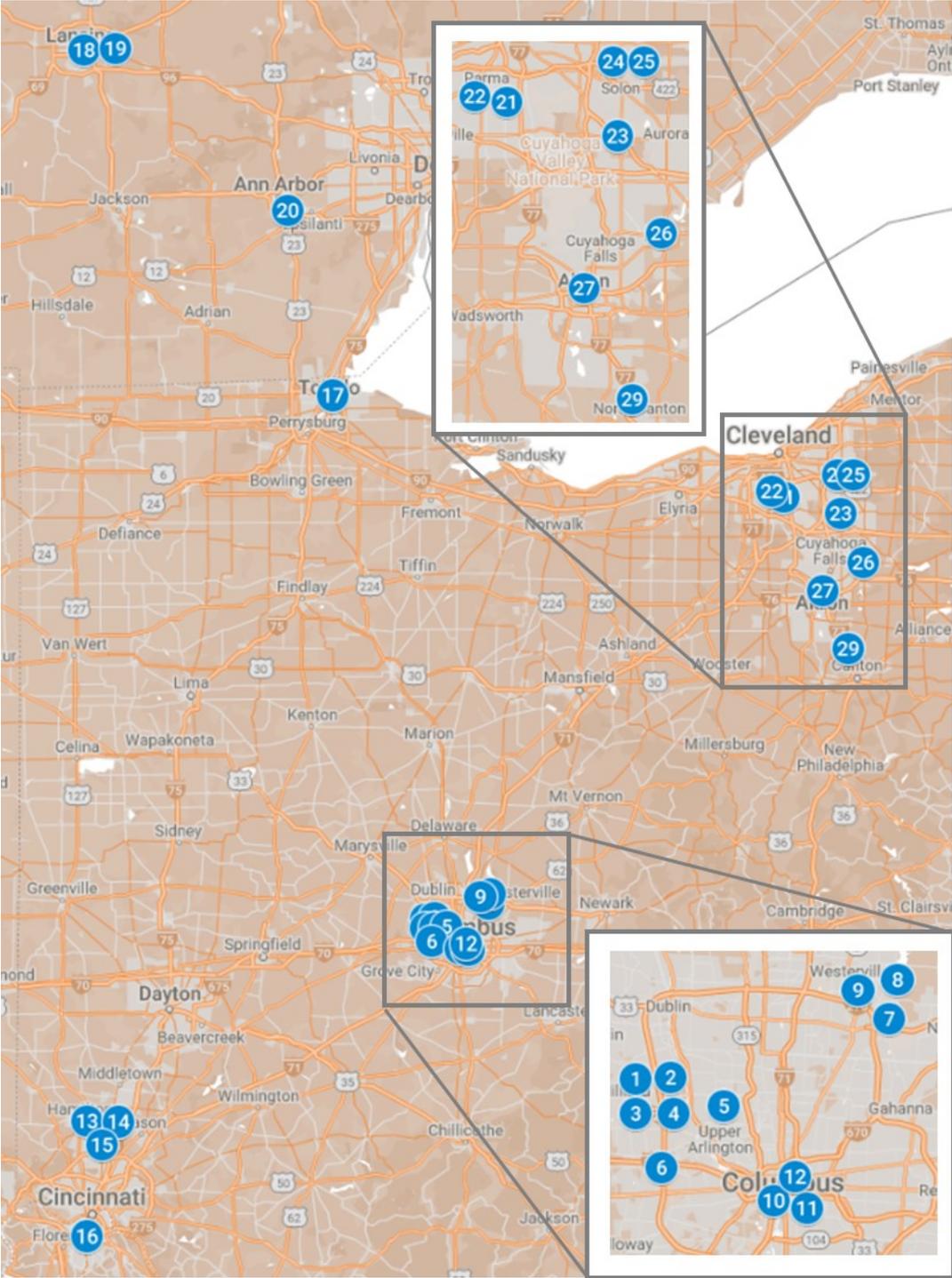
Section 4: PCA

Section 5: Concentrations and soil guidelines

Section 6: Complete data set

Section 7: Table fractionation in %

Section 1: Site map



3.1 Site map. Numbers on map (1-29) correspond to site numbers in table 1.

Section 2: Pictures of all evaluated facilities



Supplementary Figure 2.1: Photo of facility 1, cf. table 1.



Supplementary Figure 2.2: Photo of facility 2, cf. table 1.



Supplementary Figure 2.3: Photo of facility 3, cf. table 1.



Supplementary Figure 2.4: Photo of facility 4, cf. table 1.



Supplementary Figure 2.5: Photo of facility 5, cf. table 1.



Supplementary Figure 2.6: Photo of facility 6, cf. table 1.



Supplementary Figure 2.7: Photo of facility 7, cf. table 1.



Supplementary Figure 2.8: Photo of facility 8, cf. table 1.



Supplementary Figure 2.9: Photo of facility 9, cf. table 1.



Supplementary Figure 2.10: Photo of facility 10, cf. table 1.



Supplementary Figure 2.11: Photo of facility 11, cf. table 1.



Supplementary Figure 2.12: Photo of facility 12, cf. table 1.



Supplementary Figure 2.13: Photo of facility 12, cf. table 1.



Supplementary Figure 2.14: Photo of facility 12, cf. table 1.



Supplementary Figure 2.15: Photo of facility 12, cf. table 1.



Supplementary Figure 2.16: Photo of facility 12, cf. table 1.



Supplementary Figure 2.17: Photo of facility 12, cf. table 1.



Supplementary Figure 2.18: Photo of facility 12, cf. table 1.



Supplementary Figure 2.19: Photo of facility 12, cf. table 1.



Supplementary Figure 2.20: Photo of facility 12, cf. table 1.



Supplementary Figure 2.21: Photo of facility 12, cf. table 1.



Supplementary Figure 2.22: Photo of facility 12, cf. table 1.



Supplementary Figure 2.23: Photo of facility 12, cf. table 1.



Supplementary Figure 2.24: Photo of facility 12, cf. table 1.



Supplementary Figure 2.25: Photo of facility 12, cf. table 1.



Supplementary Figure 2.26: Photo of facility 12, cf. table 1.



Supplementary Figure 2.27: Photo of facility 12, cf. table 1.

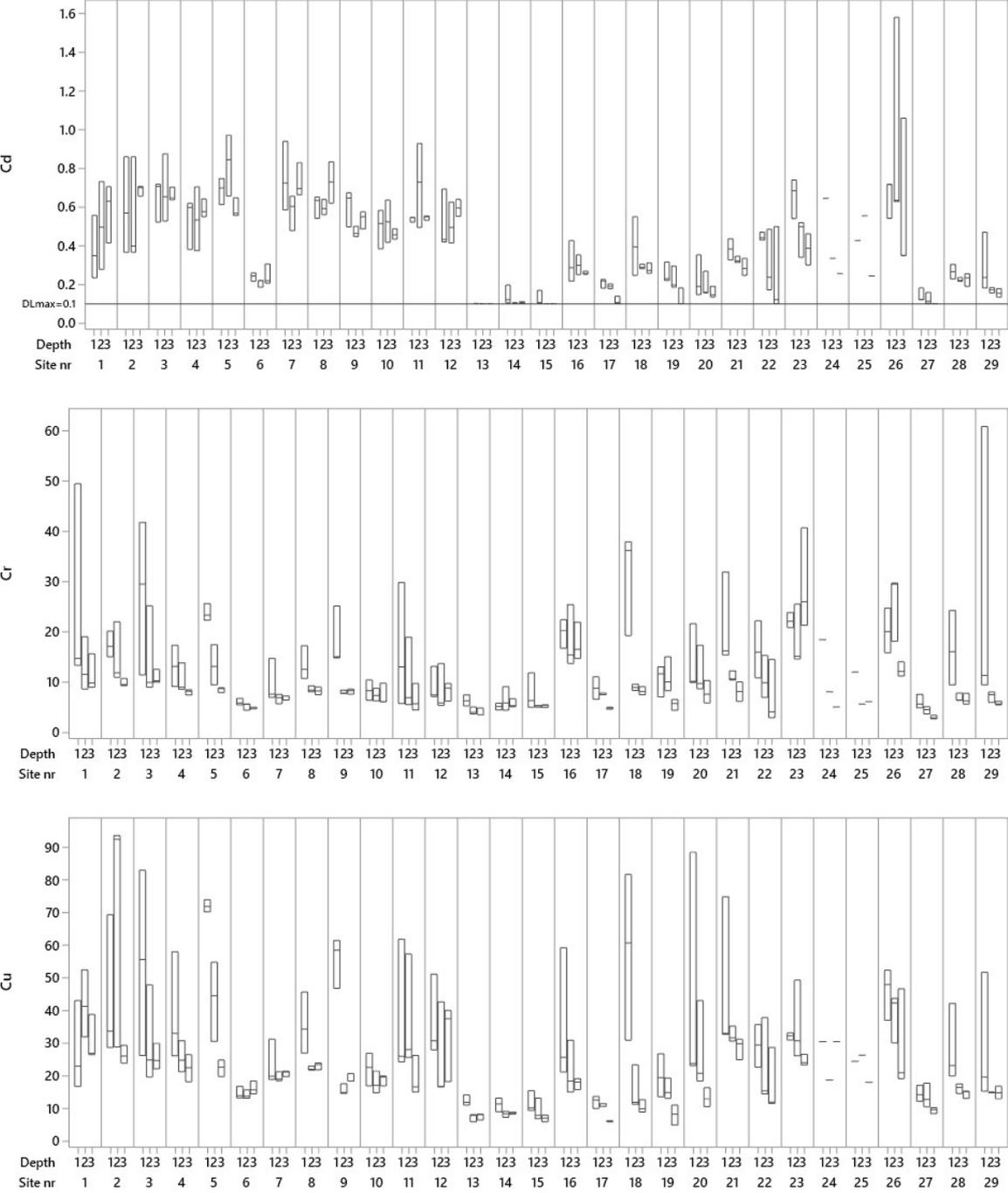


Supplementary Figure 2.28: Photo of facility 12, cf. table 1.

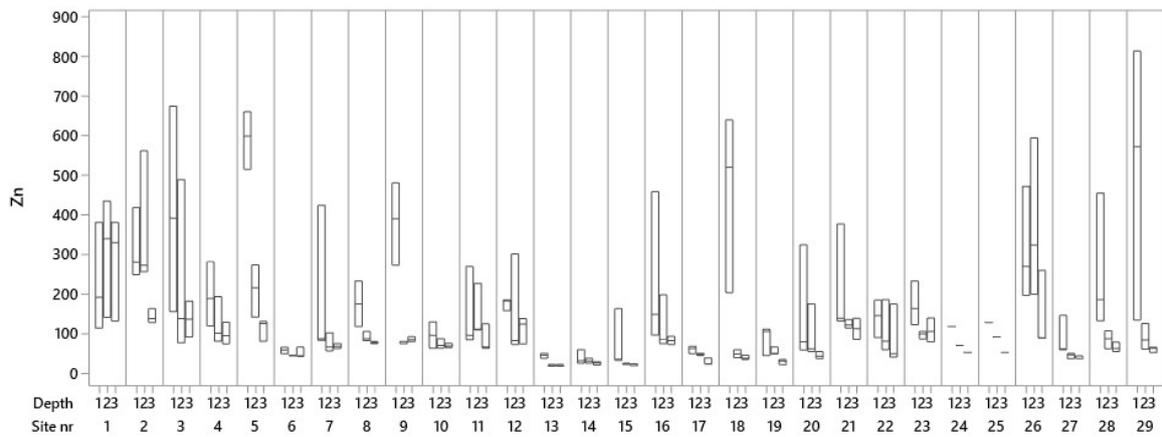
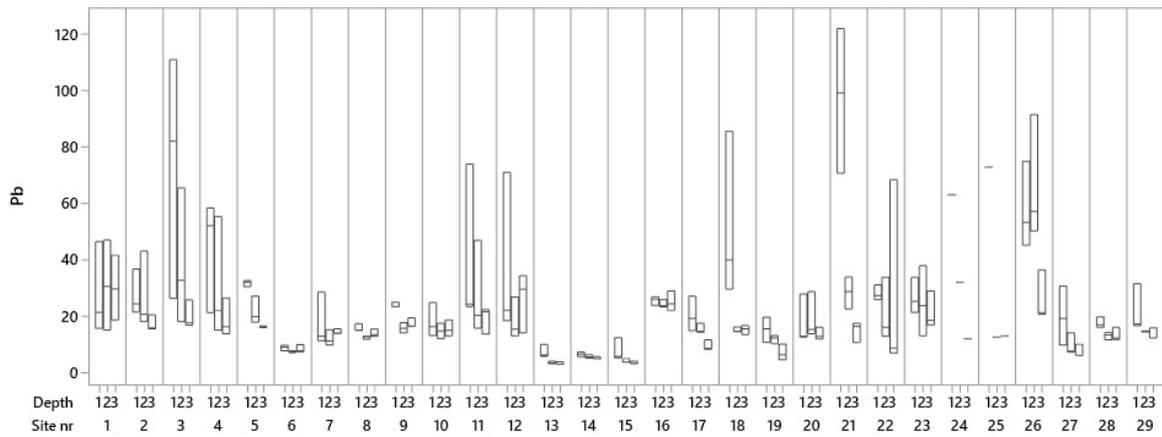
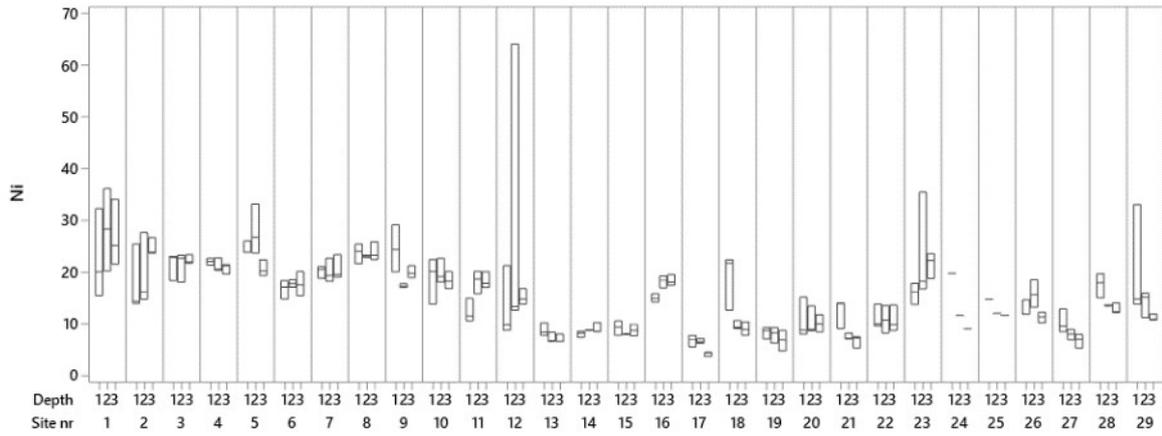


Supplementary Figure 2.29: Photo of facility 12, cf. table 1.

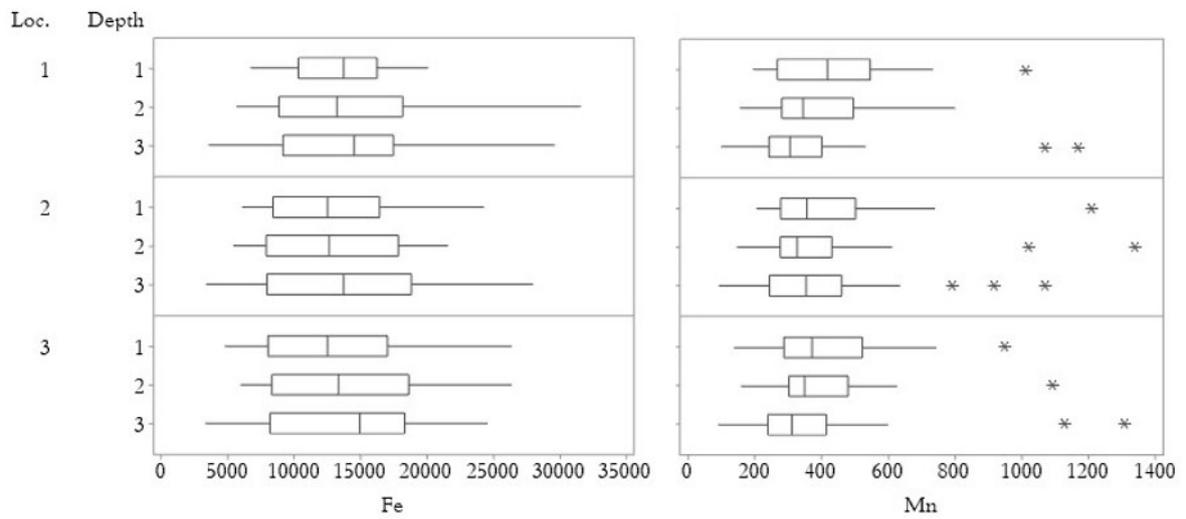
Section 3: Box plots of all evaluated compounds



Supplementary Figure 2.1. Box plot of concentrations at three different depths (layers) for all bioretention sites. Site 24 and 25 are small with only two sampling points (at 1m and 3m) and therefore no boxplot!.

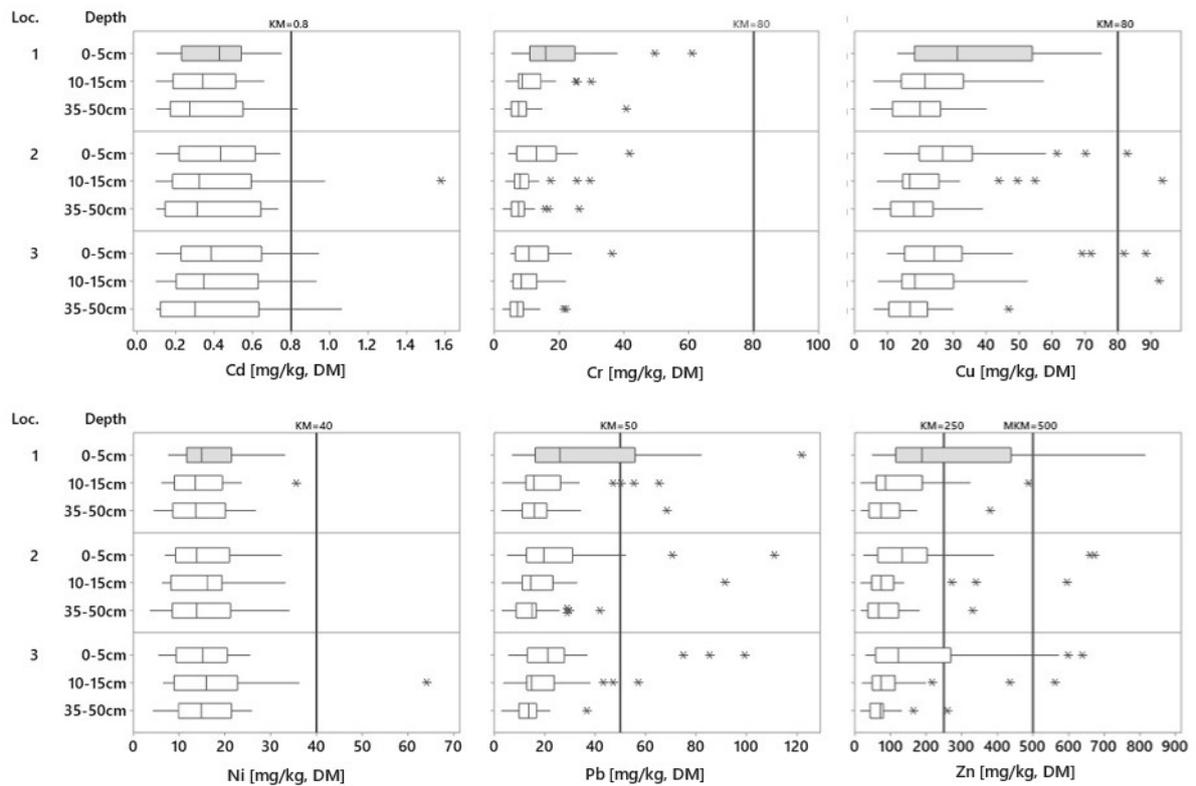


Supplementary Figure 2.1 (cont.). Box plot of concentrations at three different depths (layers) for all bioretention sites. Site 24 and 25 are small with only two sampling points (at 1m and 3m) and therefore no boxplot.



Supplementary Figure 2.2. Box plot of total Fe and Mn concentrations at three different locations and three depths (layers) for all sampled bioretention sites.

Section 4: Concentrations and soil guidelines



Supplementary Figure 4.1. Box plot of concentrations at three different depths (layers) for all bioretention sites compared to the Swedish national guidance limits for classification of soil, “soil for sensitive land use” (abbreviated KM) and “soil for less sensitive land use” (abbreviated MKM), published by the Swedish Environmental protection agency.

Supplementary Table4.1 Comparison of concentrations and SGVs according to the Swedish national guidance limits for classification of soil and the UK CL:AIRE.

SGVs [mg/kg, DM]	Cd	Cr	Cu	Ni	Pb	Zn
KM	0.8	80	80	40	50	250
MKM	12	150	200	120	400	500
CL:AIRE Residential	10	-	-	130	-	-
CL:AIRE Allotment	1.8	-	-	230	-	-
CL:AIRE Commercial	230	-	-	1800	-	-
Detection above SGVs						
KM	11	0	5	1	20	37
	4%	0%	2%	0.4%	8%	15%
MKM	0	0	0	0	0	10
	0%	0%	0%	0%	0%	4%
CL:AIRE Residential	0	-	-	0	-	-
CL:AIRE Allotment	0	-	-	0	-	-
CL:AIRE Commercial	0	-	-	0	-	-

Section 5. Table of fractionation in %

Supplementary Table 5.1 Distribution between fractions in percentage of detected metal content calculated on median concentrations.

	Cd	Cr	Cu	Ni	Pb	Zn
Fraction 1	63%	7%	4%	9%	20%	36%
Fraction 2	0%	1%	22%	2%	14%	10%
Fraction 3	14%	5%	4%	10%	23%	22%
Fraction 4	16%	38%	48%	47%	39%	26%
Fraction 5	7%	48%	22%	32%	4%	6%