

Table S1: Methods of analysis used by ALS [20].

Analyte	NATA Method
Alkalinity	WD037
Chloride	WD045G
Ion Balance	# APHA 1030E
MS Soluble Metals	WG020A
MS Total Metals	WG020A
NH ₃ as N (DA)	WK055G
NO ₃ -N	EK058GV
SO ₄ DA	WD041G
Ca ²⁺ , Mg ²⁺ , K ⁺ , and Na ⁺	WG005A; EA065-69
TDS at 180°C +/- 5°C	WA015

Table S2: R studio packages used throughout analysis.

Bar graphs	ggplot2 RColorBrewer	Data frame assembly	BiocManager dada2 phyloseq DECIPHER DESeq2 doParallel R.utils dplyr tidyverse
Statistics	edgeR fossil adespatial ade4 devtools Vegan tidyverse		tibble readxl tidyr
CCA	vegan RColorBrewer		