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## 1. Introduction

Soil salinization currently threatens ~7% of the world's land surface and is an expanding environmental problem caused by both natural and human activities (Hasanuzzaman et al., 2014; Li et al., 2014; Wakeel, 2013). Salinity affects plant function and health, and the health of aquatic communities (Li et al., 2014). The significant negative impact that salts

Analysis was completed at the Analytical Services Unit (ASU) at Queen's University. A subsample was filtered through a 0.45  $\mu\text{m}$  filter prior to analysis by ion chromatography (IC) with a Dionex HPLC (High Performance Liquid Chromatography) system (ICS 3000), using an AG4A-SC guard column, an AS4A-SC analytical column, a carbonate/bicarbonate eluent, and a conductivity detector. The column flow rate was set to 2.0 mL/min. Prior to analysis, conductivity was measured.

The following calculation was used to determine the mass of salt ( $\text{Cl}^-$ ) that could be theoretically extracted from the site by the recretohalophytes (adapted from [McSorley et al., 2016a](#)):

$$\begin{aligned} &\text{Mass of chloride removed per harvest (kg)} \\ &= (\text{Cl Excretion} \times \text{Time} \times \text{Biomass} \times \text{Area}) \end{aligned}$$

and iii) dustfall samplers were designed, constructed, deployed, and assessed for their ability to collect windborne salt.

#### 2.5.1. Columns

Acrylic pipe with a diameter of four inches was cut into various heights (17.8, 25.4, and 35.6 cm). These were then secured to a small,

total chloride in the top 10 cm of the soil profile at the CKD site in Bath, ON was estimated to be  $395 \pm 165 \text{ g/m}^2$  (McSorley et al., 2016b). To determine the feasibility of using halophytes and haloconduction to remediate the site, the time required to achieve remediation was calculated. Typical phytoremediation timeframes in the literature can sometimes require decades (



difficult to differentiate the effects of temperature from the effects of distance.

To estimate losses due to precipitation, several cheesecloth trials

and is being deposited further distances away from the source of contamination.

#### 3.3.4. Comparison of methods



