Saskatchewan Salt Phytoremediation Project

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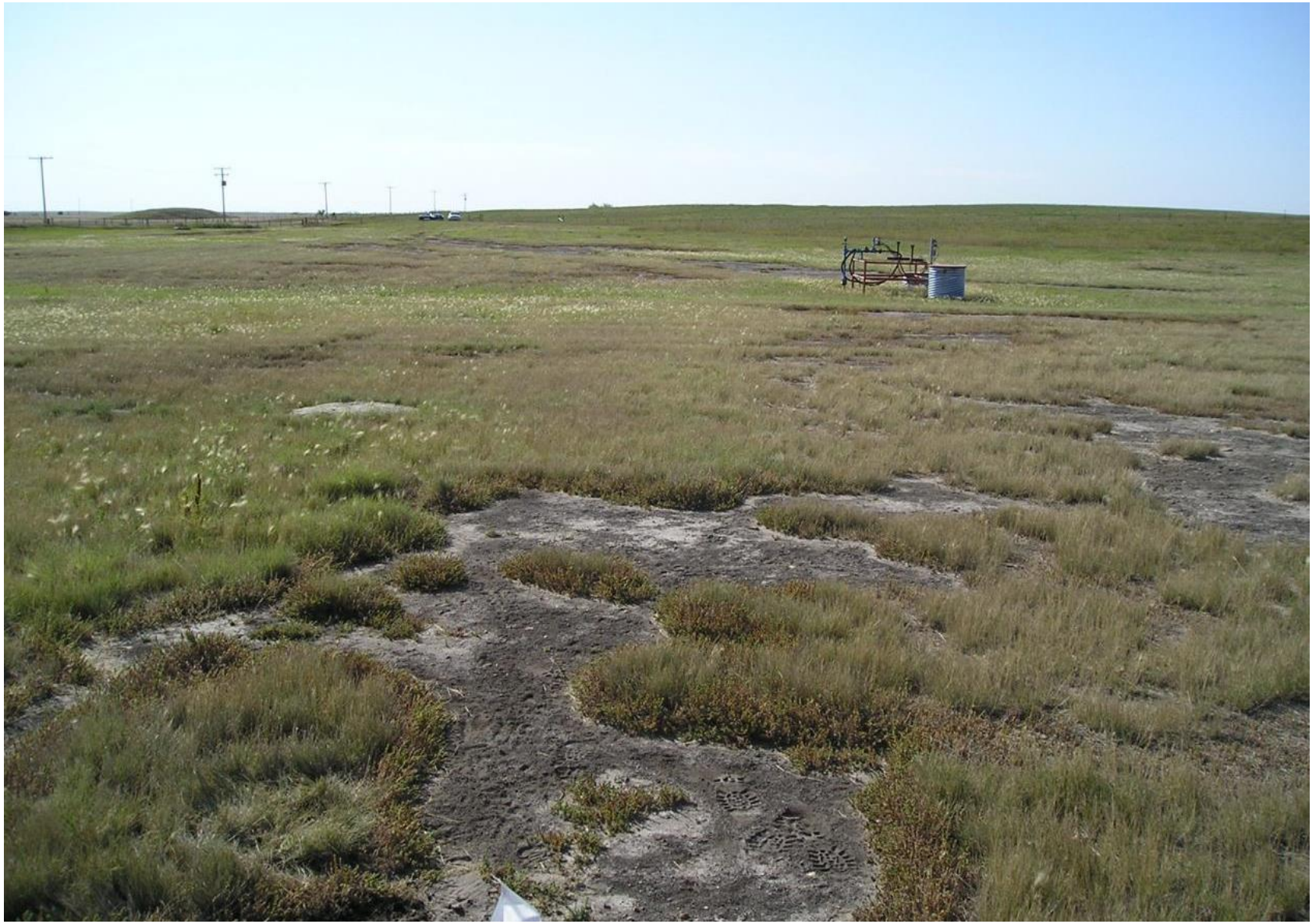
Initial Assessment



Historical Salt Spill - ECe ~ 10 dS/m.

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Seed Bed Preparation – Year 1

Straw is tilled into the impacted area.

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Monitoring – Year 1

Plant growth one month after seeding.

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Monitoring – Year 1

Plant growth two months after seeding.

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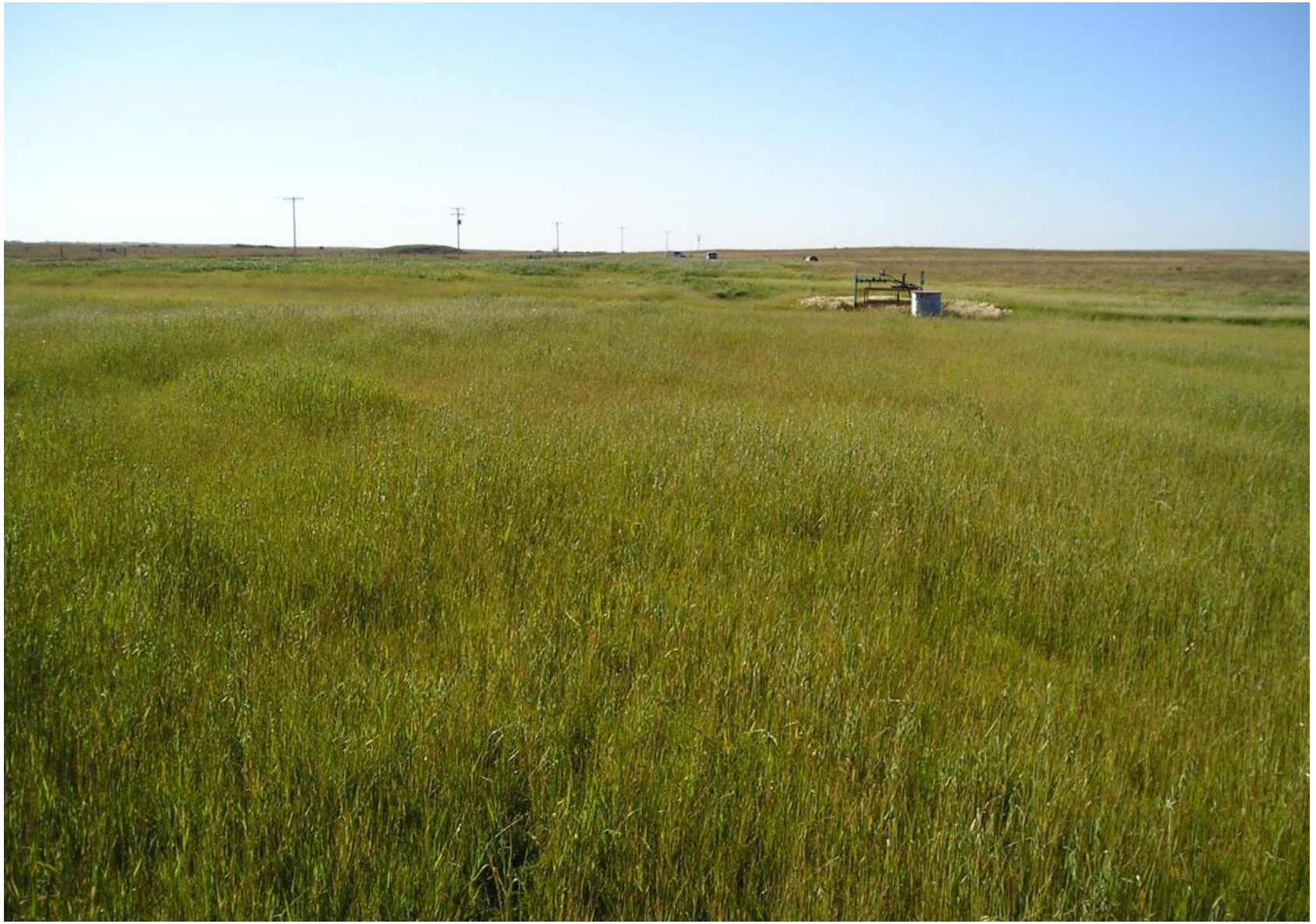
Monitoring – Year 1



Plant growth three months after seeding.

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Monitoring – Year 1

Following harvest of first year growth.

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Seed Bed Preparation - Year 2

Areas of substandard growth are tilled.

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Monitoring - Year 2

Plant growth year 2.

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Monitoring – Year 3

Plant growth.

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Monitoring – Year 3

Baling vegetation for removal from site.

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Monitoring – Year 3

End of season plant growth.

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Remediation Results

Site	Analysis	Date	Average (dS/m)	% Remediation
Completed Sites				
Nota	ECe	Spring 2008	7.7	70.13%
	ECe	Fall 2010	2.3	
Provost	ECe	Spring 2009	14.5	44.83%
	ECe	Fall 2009	8	
Sites in Progress				
Weyburn	ECe	Fall 2010	13.5	22.22%
	ECe	Fall 2011	10.5	
Weyburn	ECe	Fall 2010	6.9	14.49%
	ECe	Fall 2011	5.9	
Weyburn	ECe	Fall 2010	13.5	10.37%
	ECe	Fall 2011	12.1	
Weyburn	ECe	Fall 2010	14.3	11.89%
	ECe	Fall 2011	12.6	
Red Earth	ECe	North, Sp 2010	5.2	13.46%
	ECe	North, F 2011	4.5	
	ECe	South, Sp 2010	4.2	9.52%
	ECe	South, F 2011	3.8	
Kindersley	ECe	Spring 2008	5.5	27.27%
	ECe	Fall 2009	4	
Cannington Manor	ECe	Spring 2007	17.6	32.95%
	ECe	Fall 2008	11.8	

Approximately 1 ECe unit per year.

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Remediation Results

Parameter	Value
Annual Drop in EC_e	10% to 20%
NaCl Uptake into Foliage	29 g/kg dry weight
NaCl removed from the field in foliage	150 kg/ha
Change in EC_e accounted for by foliar uptake of salt	0.95

Data derived from 12 commercial project sites.

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