Amphibian Habitat Enhancement at Maplewood Flats Conservation Area

By Jackson MacPherson, BSc









Land Acknowledgment

I acknowledge that we conducted our research on Musqueam, Tsleil-Waututh, and Squamish unceded territory and acknowledge their role as stewards of this land in the past, present and future.





North Vancouver 1942

North Vancouver 2019







Stressors on Site







Industrial activity

Invasive vegetation

Public access

Northern Red Legged Frog (*Rana aurora*)

Species of Special Concern



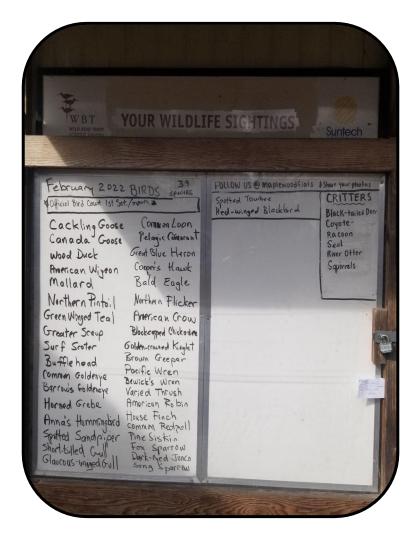


Umbrella Species

By improving conditions for *Rana auror*a we will directly or indirectly benefit countless species











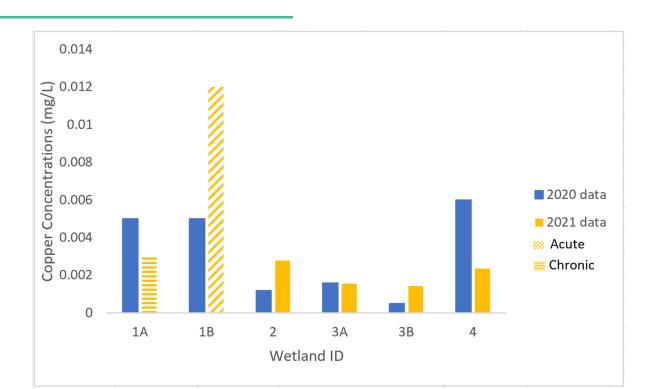
Water Quality

	Wetland 1a	Wetland 1b	Wetland 2	Wetland 3a	Wetland 3b	Wetland 4	CCME freshwater Guidelines
Dissolved Oxygen (mg/L)	2.19	2.55	3.77	5.05	3.43	1.36	Minimum 6.5
Conductivity (µs/ cm)	239	234	262	274	223	219	200-1000 (typical range of freshwater)
рН	6.87	7.03	7.11	7.06	6.96	6.81	6.5 to 9
Temperature (°C)	12.6	12.3	12.5	12.8	12.5	13.4	4 - 21

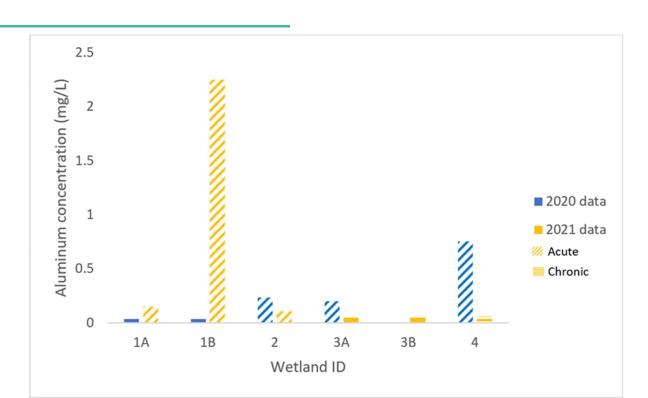
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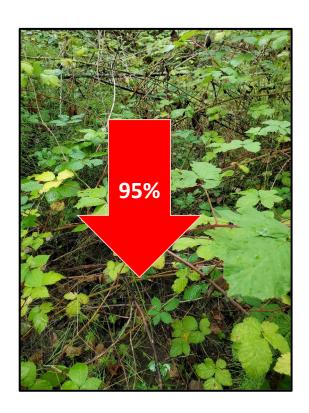
Surface Water Heavy Metal Concentrations: Copper



Surface Water Heavy Metal Concentrations: Aluminum



Restoration Goals and Objectives







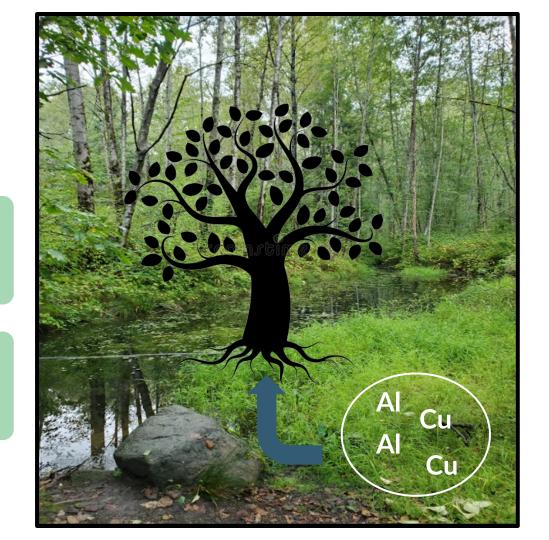
Phytoremediation



Less invasive than traditional heavy metal reduction treatments

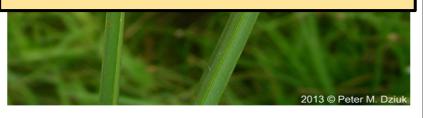


Provides competition against invasive plant recolonization





- Phytoremediator
- Egg mass anchorage







E. Sargeant





Collaborations





B U R E A U V E R I T A S



Could not have done it without these lovely folks!

