



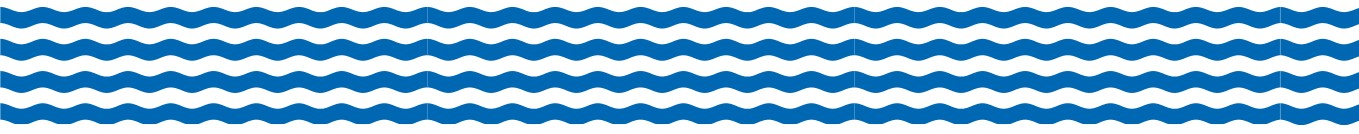
# HERBICIDE USE PROTOCOL 2022/2023 UPDATES

OPEN SPACE CONSERVANCY TRUST  
JANUARY 19, 2023



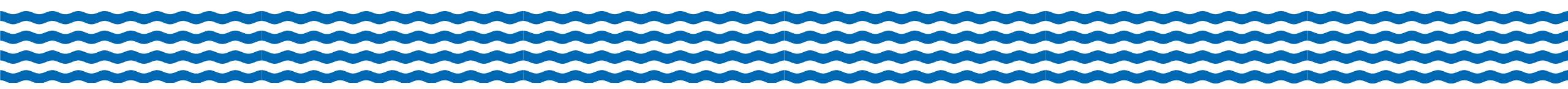
# Overview

- Summary of protocol changes
- Ecotoxicity categories
- Mode of Action
- Nearby municipality herbicide policies



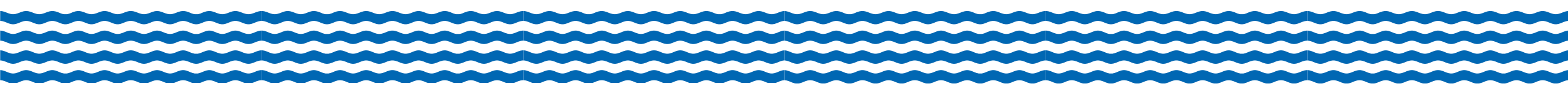
# Summary of Herbicide Use Protocol changes

- Allow alternative herbicides- triclopyr and imazapyr
- Limit herbicide treatment of English ivy to steep slopes
- Add cut and treat herbicide on blackberry stems
- Add treatment of targeted herbaceous weeds



# Takeaway points

- Decrease reliance on RoundUp products
- More effective treatment methods= less herbicide used over time
- Recommendations are consistent with King County Noxious Weeds best management practices and other municipalities



# EPA Ecotoxicity Categories: How toxic a pesticide is to different organisms at different concentrations.

## Ecotoxicity Categories for Terrestrial and Aquatic Organisms

Toxicity Category	Avian: Acute Oral Concentration (mg/kg-bw)	Avian: Dietary Concentration (mg/kg-diet)	Aquatic Organisms: Acute Concentration (mg/L)	Wild Mammals: Acute Oral Concentration (mg/kg-bw)	Non-Target Insects: Acute Concentration (µg/bee)
very highly toxic	<10	<50	<0.1	<10	
highly toxic	10-50	50-500	0.1 - 1	10 - 50	<2
moderately toxic	51-500	501-1000	>1 - 10	51 - 500	2 - 11
slightly toxic	501-2000	1001-5000	>10 - 100	501 - 2000	
practically nontoxic	>2000	>5000	>100	>2000	>11

*Table shows median lethal dose concentrations. Chemicals classified as more toxic are lethal at smaller doses.*

**Mode of Action:** describes the biological process or enzyme in the plant that the herbicide interrupts.

- Herbicides interrupt biochemical processes in plants
- Grouped by biological mechanism
- Over-reliance on a single Mode of Action can lead to herbicide resistance

**Imazapyr**

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ALS INHIBITORS  
(acetolactate synthase)

**Triclopyr**

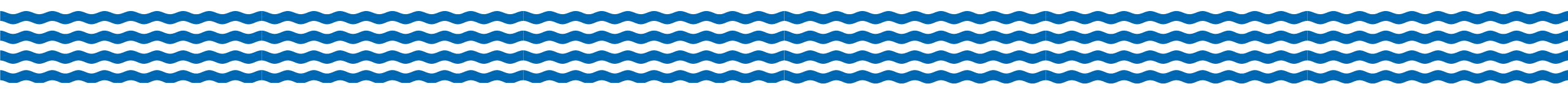
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SYNTHETIC AUXINS  
(TIR1, AFB5 and unknown auxin receptors)

**Glyphosate**

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EPSP SYNTHASE INHIBITOR  
(5-enolpyruvyl-shikimate-3-phosphate)



# Nearby municipalities

City of Seattle	Dramatically reduced RoundUp use. Utilize manual removal, imazapyr, triclopyr.
City of Bothell	Herbicide only permitted for public safety or to treat noxious weeds.
City of Portland	IPM strategy in place- in natural areas glyphosate, triclopyr, among others approved. Imazapyr approved in specific cases.
City of Kirkland	Seasonally limited synthetic herbicide use in high-use parks; King County Noxious Weeds BMPs followed in natural areas

