

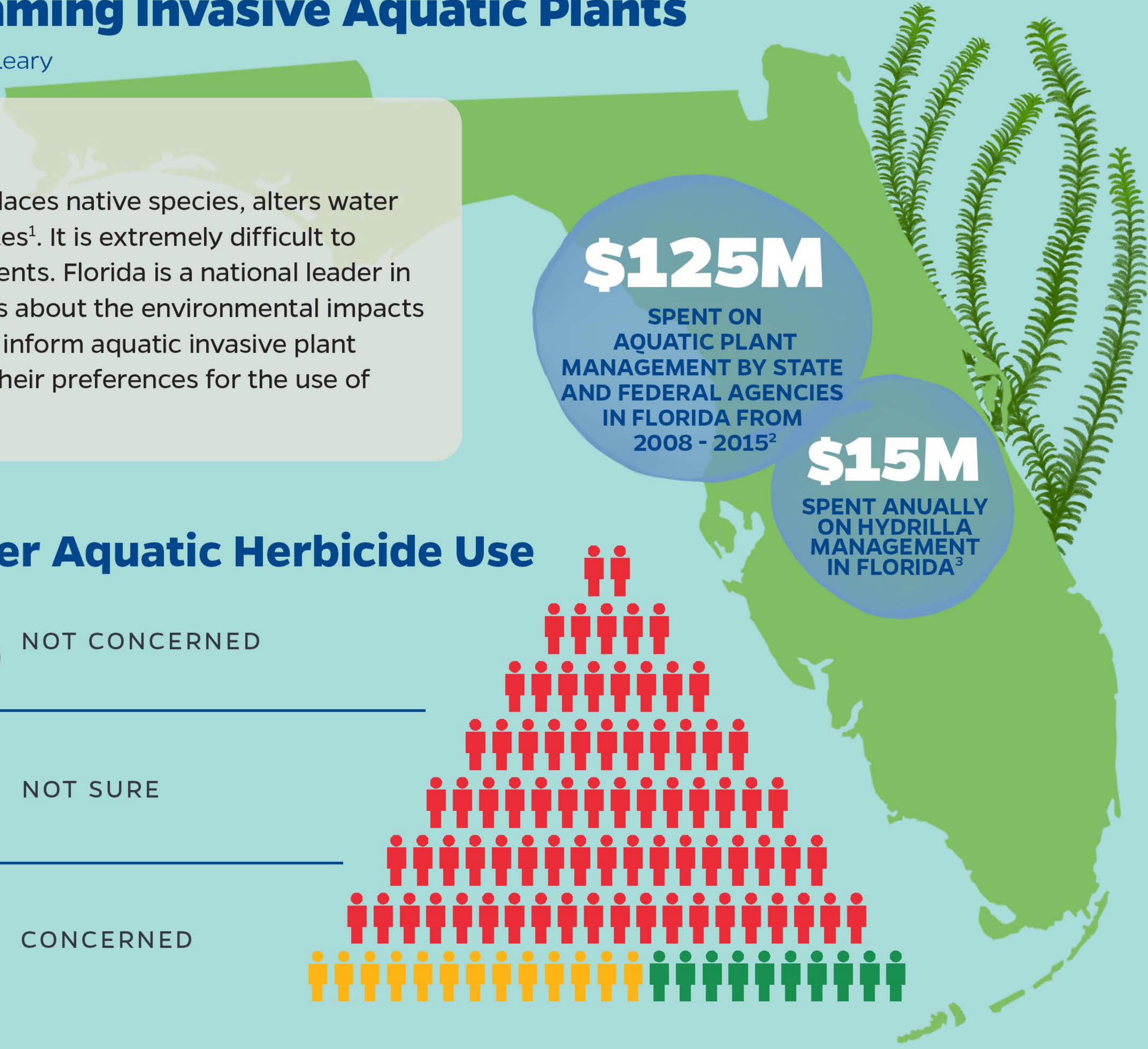
BALANCING ACT:

Unveiling Public Perspectives on Taming Invasive Aquatic Plants

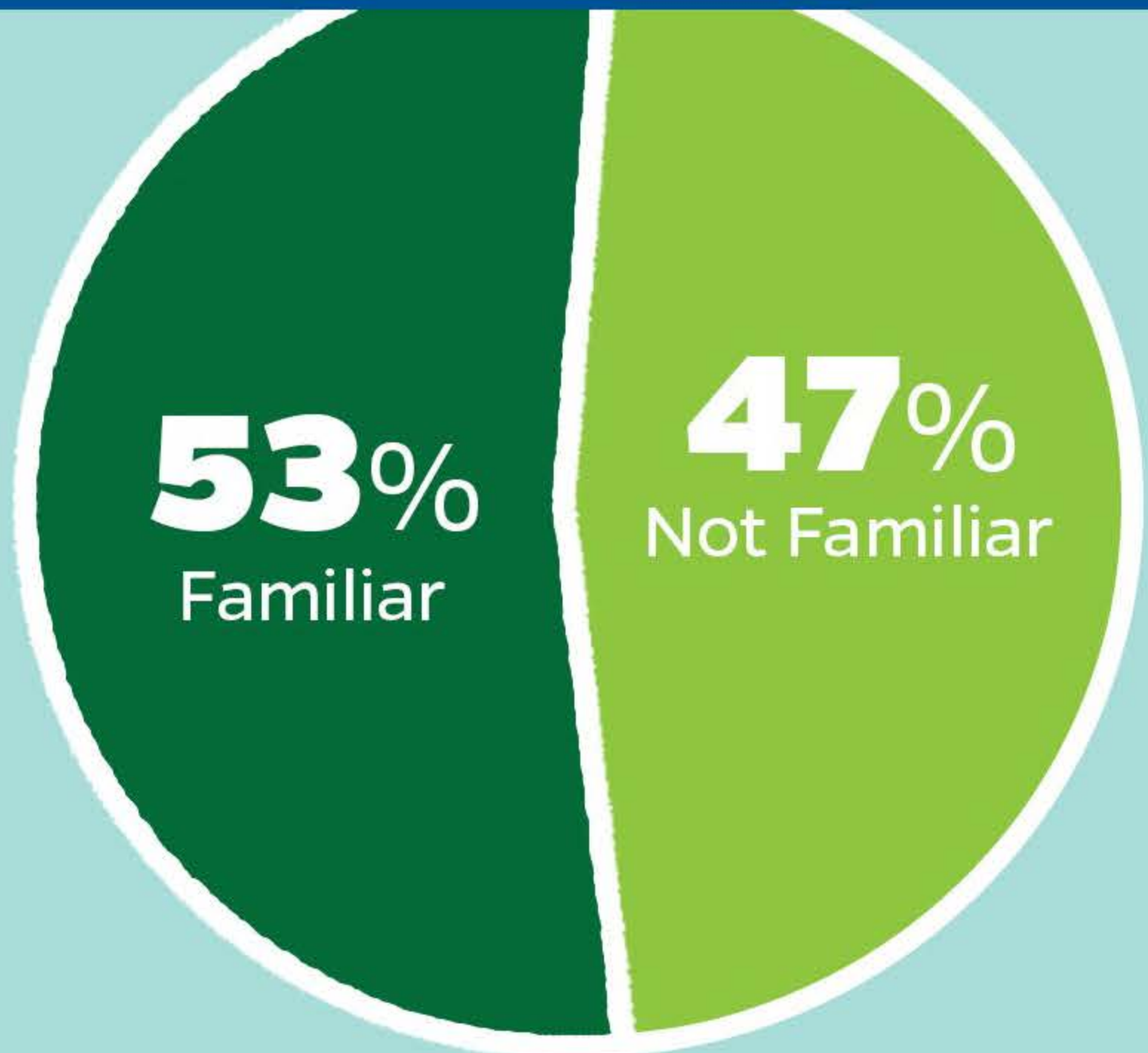
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Background

Hydrilla (*Hydrilla verticillata*) is an invasive aquatic plant that displaces native species, alters water quality, and impedes recreational activities across the United States¹. It is extremely difficult to manage, costing millions of dollars for state and federal governments. Florida is a national leader in aquatic invasive plant management but has faced public concerns about the environmental impacts of herbicides, similar to other states trying to manage hydrilla. To inform aquatic invasive plant management policy, we surveyed 3,000 Florida residents about their preferences for the use of aquatic herbicides and mechanical harvesting to control hydrilla.



FAMILIARITY WITH HYDRILLA

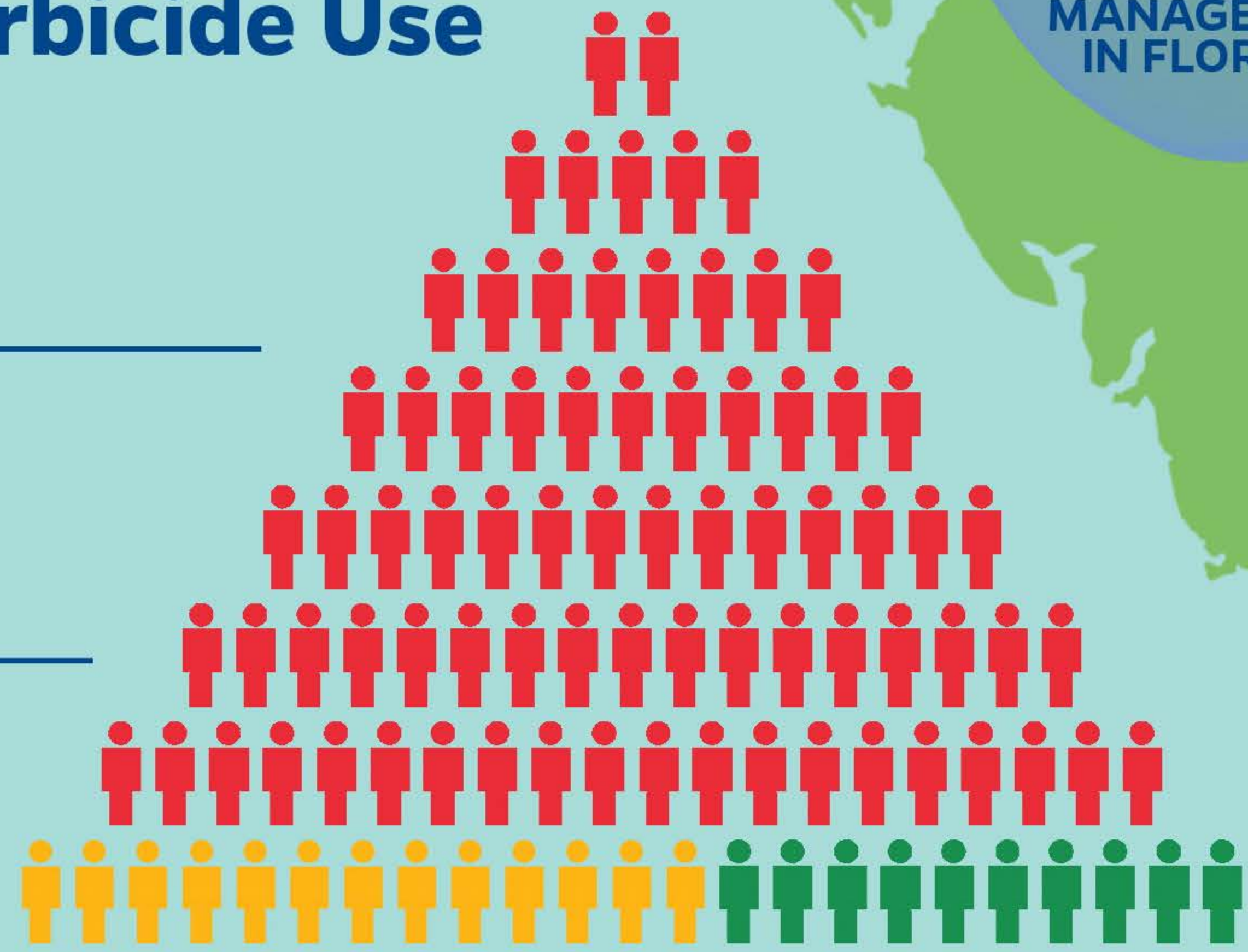


Concern Over Aquatic Herbicide Use

10% NOT CONCERNED

13% NOT SURE

77% CONCERNED



APPLYING HERBICIDE

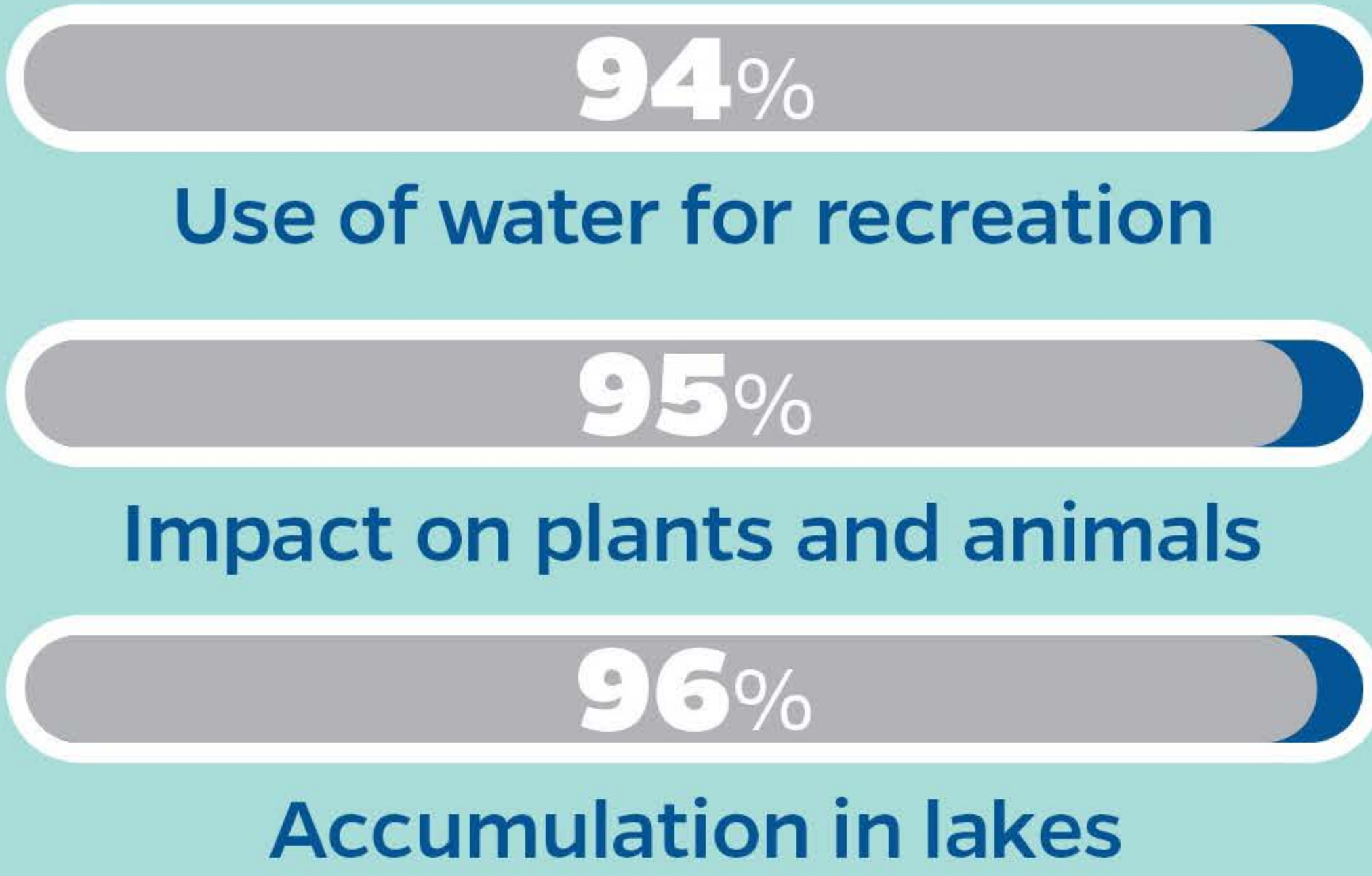
PROS

- Undergo 8-10 years of testing for EPA approval
- Water is safe for recreational use after most treatments
- Prevents plant regrowth for up to 300 days
- Cost effective
- No impacts on non-target species

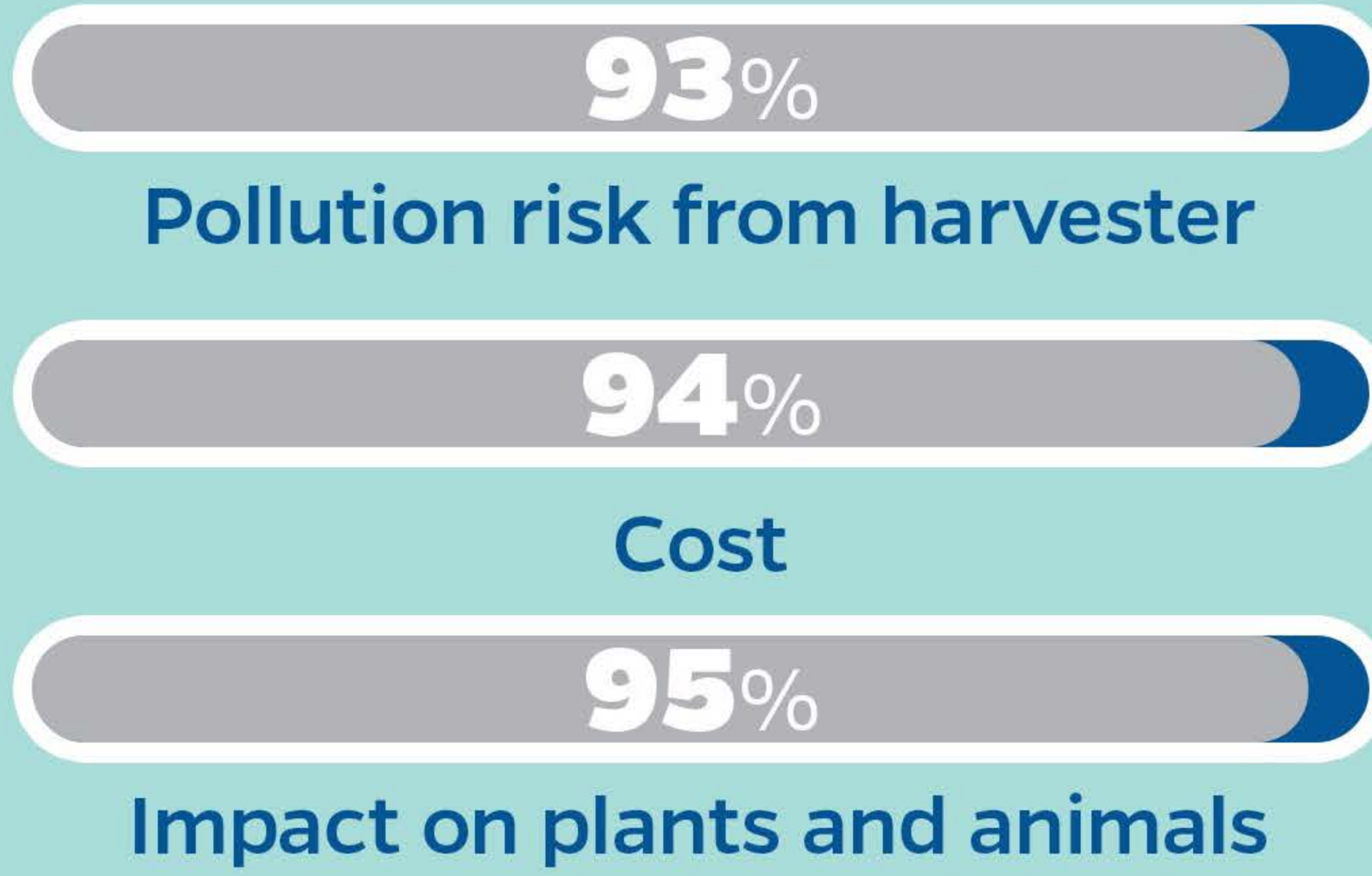
CONS

- Decaying plants cause muck buildup
- Waiting periods may be required before using water for irrigation, drinking, and livestock water use

PRIMARY CONCERNS



PRIMARY CONCERNS



MECHANICAL HARVESTING

PROS

- Removes plants from water
- Reduces muck build up
- No water use restrictions after application
- Prevents plant regrowth for up to 100 days

CONS

- 2-3x as expensive compared to aquatic herbicides
- Often kills non-target plants and animals also present in the water
- Potential for pollution from diesel powered harvesters

WHAT ARE THE PUBLIC PREFERENCES FOR HYDRILLA MANAGEMENT?

USE BOTH AQUATIC HERBICIDE AND MECHANICAL HARVESTING

52%

CONTINUE USING AQUATIC HERBICIDE

15%

SWITCH TO MECHANICAL HARVESTING

27%

OTHER

6%

1. USGS. (2020, February 3). *Hydrilla (hydrilla verticillata) - species profile*. Nonindigenous Aquatic Species Database. Retrieved January 30, 2023, from <https://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=6>

2. Gettys, L. A., & Enloe, S. F. (2019, April 28). *Hydrilla: Florida's worst Submersed Weed*. askIFAS. Retrieved January 30, 2023, from <https://edis.ifas.ufl.edu/publication/AG404?downloadOpen=true>.

3. Matthew A. Weber, Lisa A. Wainger, Nathan E. Harms & Geneviève M. Nesslage (2021) *The economic value of research in managing invasive hydrilla in Florida public lakes*, *Lake and Reservoir Management*, 37:1, 63-76, DOI: 10.1080/10402381.2020.1824047

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