

Glyphosate in the Indian River Lagoon

Introduction: Glyphosate is an herbicide commonly used by farmers, local governments, and private property owners to control weeds. Understanding how human activity influences the health of the Indian River Lagoon (IRL) is an essential step in restoring this important ecosystem. One of the ways ORCA does that is by monitoring the degree to which glyphosate enters and accumulates in the IRL.

About the data: These data were collected as part of ORCA's Citizen Science A Day in the Life of the Indian River Lagoon (ADIL) project. Citizen science groups including students and community members, under the direction of an environmental partner, collected single water column samples from a specific site within the IRL or its contributing waterways – all on the same day in October. These samples have been collected for four consecutive years (2019, 2020, 2021, 2022). Glyphosate was measured in the water samples by ORCA scientists using a commercially available analytical kit. Quality control measures were followed to ensure the accuracy of the data. Glyphosate concentrations are reported as parts per billion or ppb (this can also be reported as nanograms/liter). This is a subset of a larger dataset of glyphosate ADIL data.

Variables:

- Site of sample collection
- County of sample
- Year of sample collection
- Glyphosate concentration

References:

[Glyphosate. EPA website.](#)

[Glyphosate. National Pesticide Information Center.](#)

Examples of questions you could answer creatively with this data set:

Level 1: Which sites had the highest concentration of glyphosate each year?

Level 2: At the sites where glyphosate was measured annually for four years, was there a difference in concentrations between years?

Level 3: Was the distribution of glyphosate within the IRL and its contributing waterways consistent from year to year?