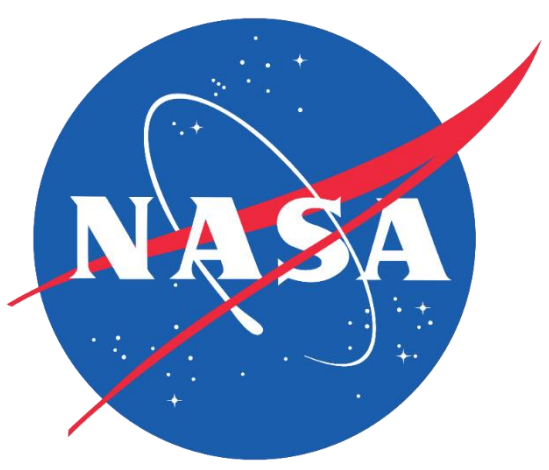




Lake Anna Water Resources

Using NASA Earth Observations to Identify Algal Event Risk Factors in Lake Anna and Help Inform Future Management Practices



Harmful Algal Blooms

HABs

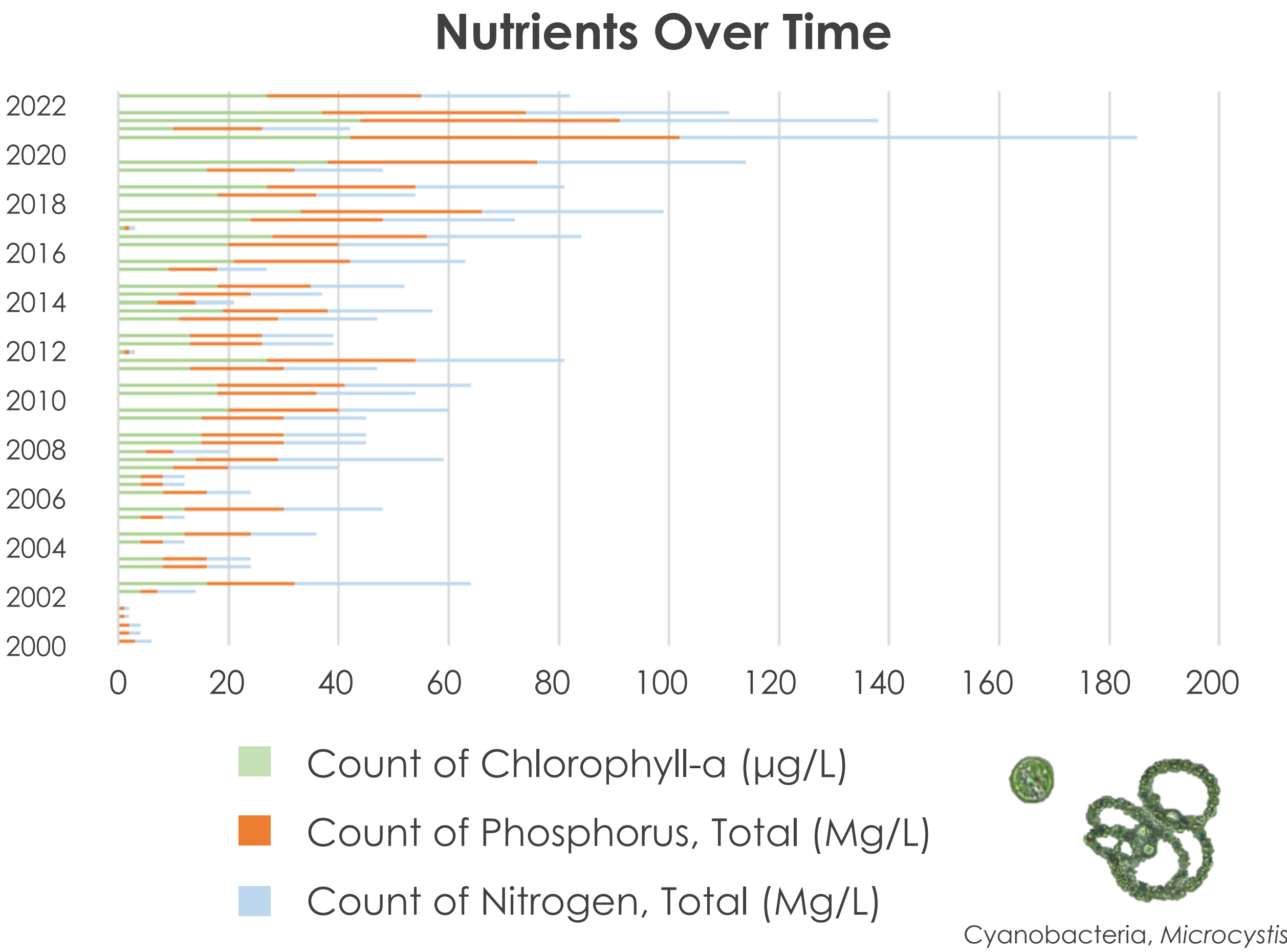
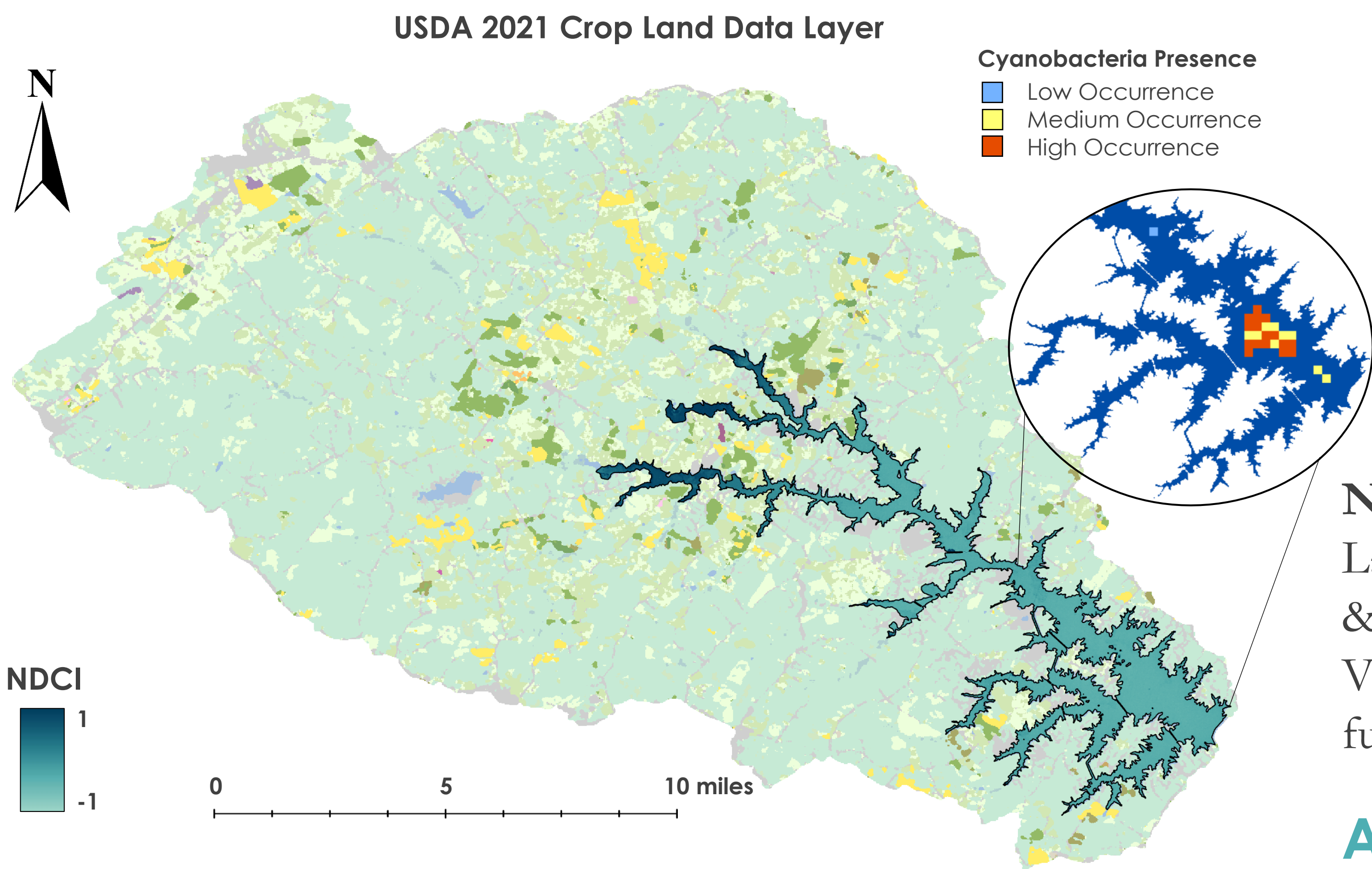
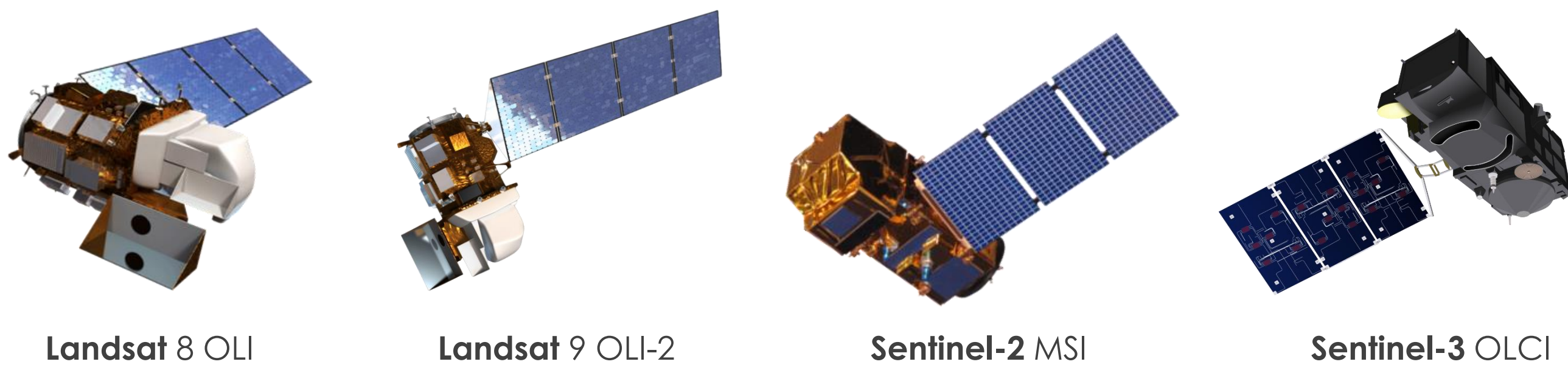
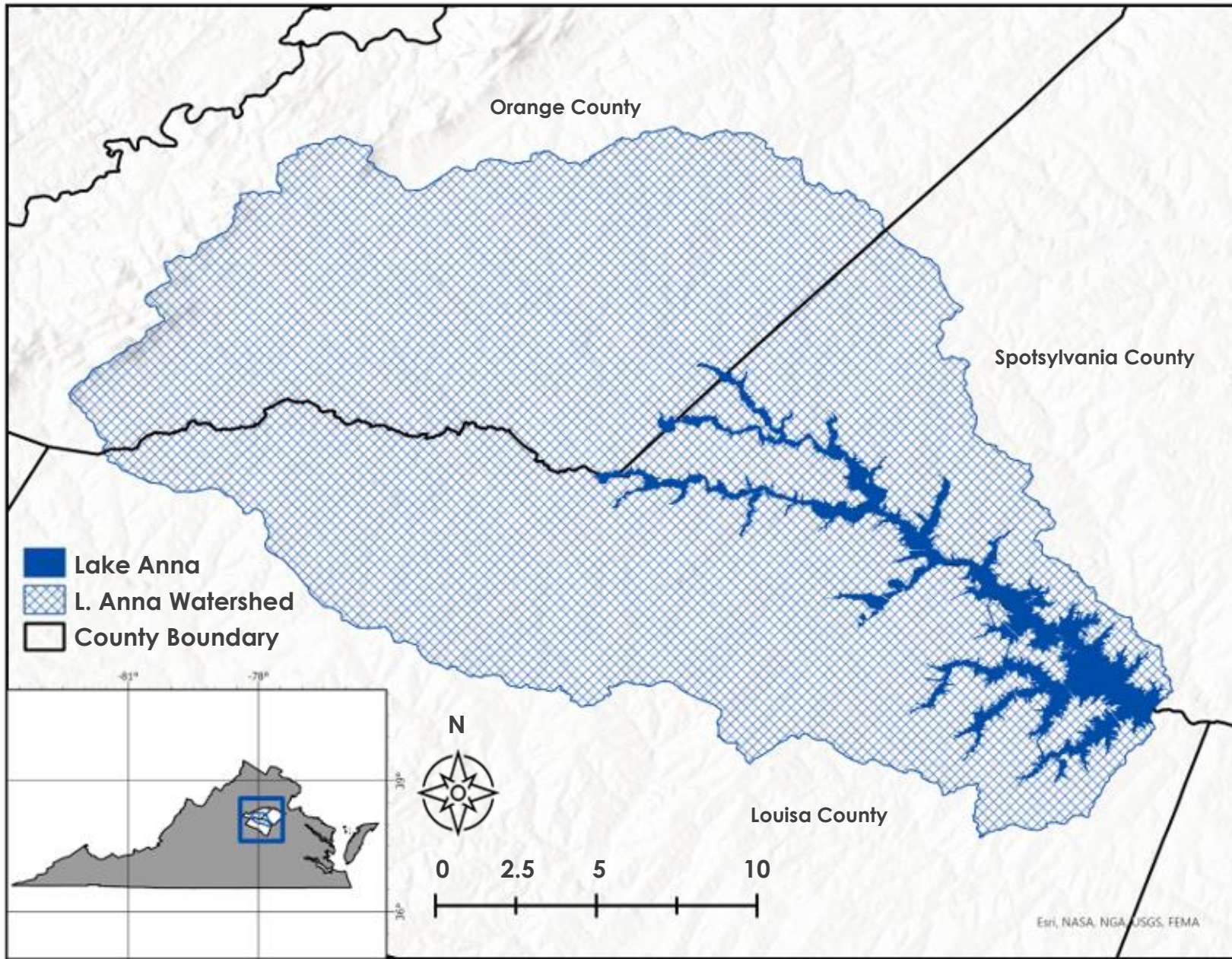
A **harmful algal bloom** (HAB) refers to the rapid growth or accumulation of certain species of algae in aquatic environments, such as lakes, rivers, or oceans. These blooms can have **negative impacts** on the **ecosystem**, **human health**, and the **economy**.

Community Concerns

HABs can produce toxins that are **harmful to marine life**, **birds**, **mammals**, and **humans**. When ingested or exposed to these toxins, they can cause health issues, including respiratory problems, skin irritation, gastrointestinal issues, and even neurological effects.

Cause

HABs occur due to various factors, including **excessive nutrient levels**, such as nitrogen and phosphorus in the water. Human activities, such as **agricultural runoff**, **industrial pollution**, and the **discharge of untreated sewage**, can contribute to the occurrence and severity of HABs.



NASA DEVELOP identified cyanobacteria blooms in lower Lake Anna. A synergistic approach combining Earth observations & continuous *in-situ* monitoring data could benefit the Virginia Department of Environmental Quality's (DEQ) future management efforts.

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Virginia DEQ

- Dr. Tish Robertson – Monitoring and Assessment Scientist
- Amanda Shaver – Water Quality Assessment Team Leader
- Bryant Thomas – Office of Ecology Manager

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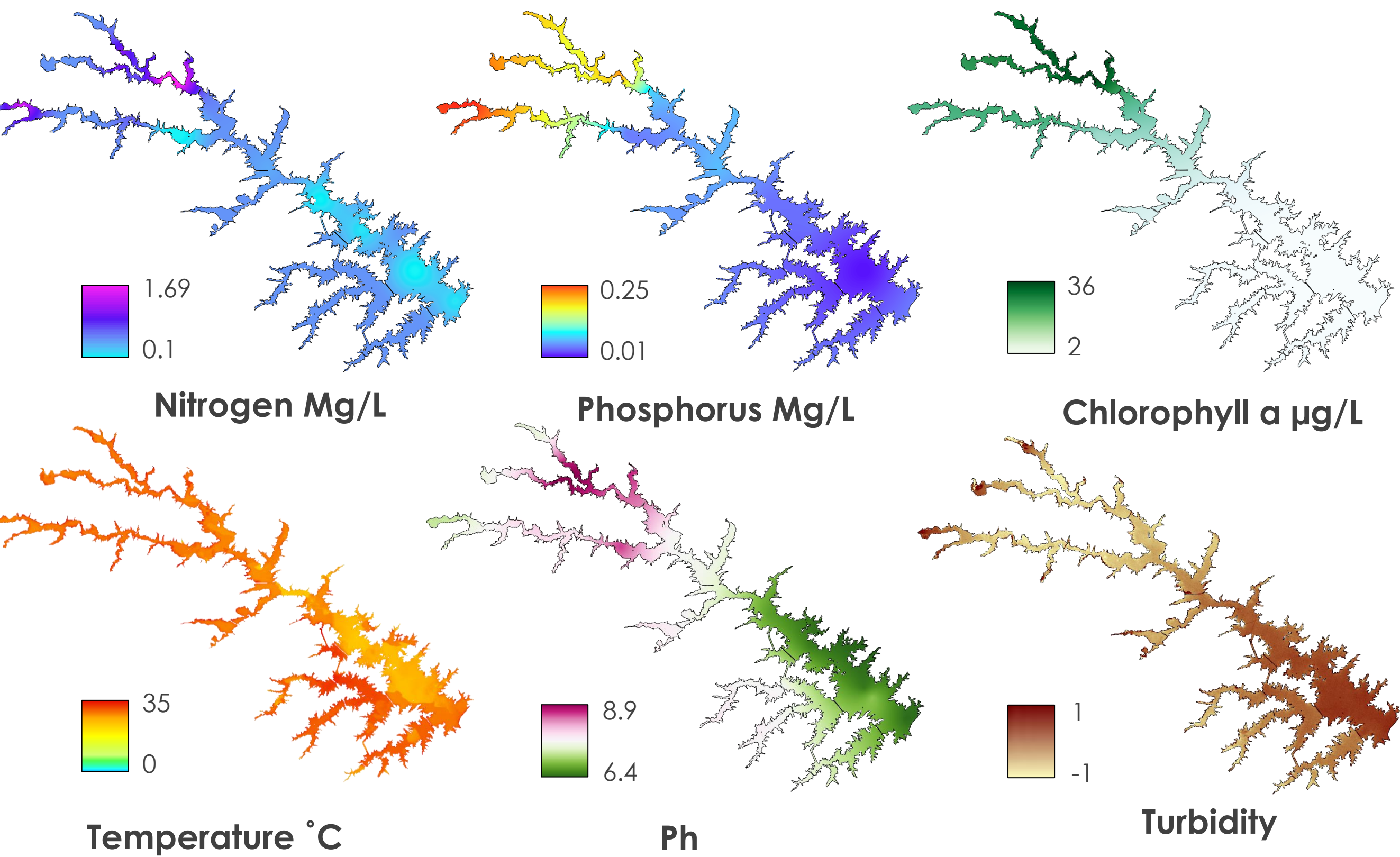
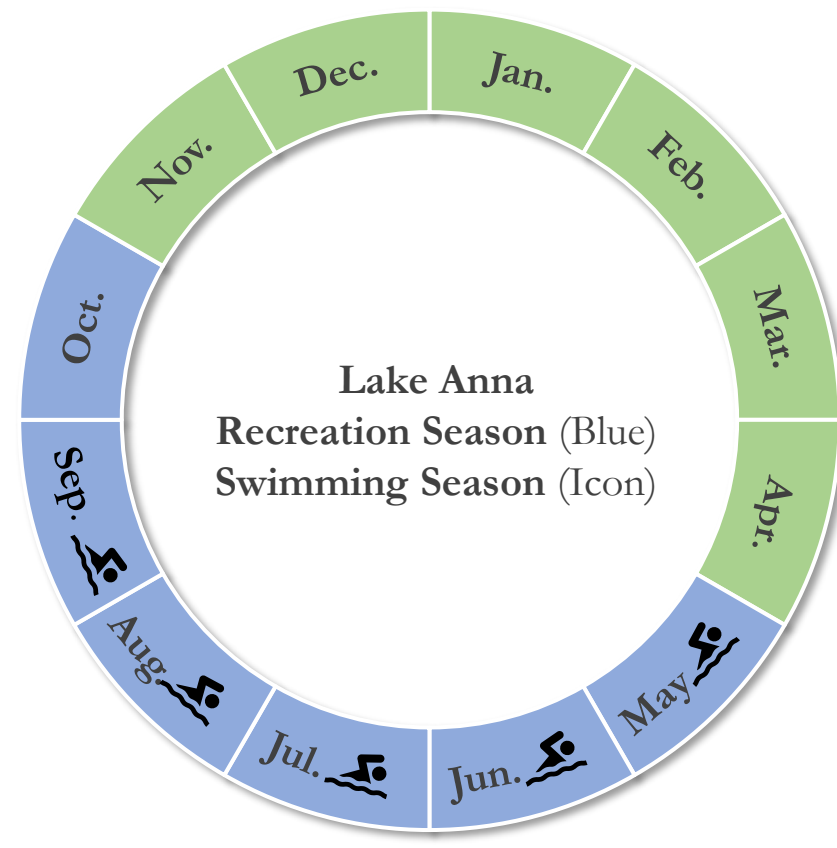
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