

Introduction

Maine is shaped by the thousands Great Lakes and Ponds across its landscape. The value and use of these water bodies has changed significantly since 1996, when UMaine researchers estimated that Maine lakes had a net economic value of over \$11 billion per year¹. Since the completion of that study, drivers including increased development, the spread of invasive species, and climate change put lakes across the state at risk of water quality and habitat degradation. Faced with these new challenges, decision-makers across the state are seeking current, peer-reviewed information to identify cost-effective ways to manage the uses of these waterbodies while protecting water quality, wildlife habitat, and property values. **The goal of this study is to estimate the current economic contribution of Maine Lakes to the state's economy and effectively communicate these findings to be used by policymakers and the public to guide management decisions.**



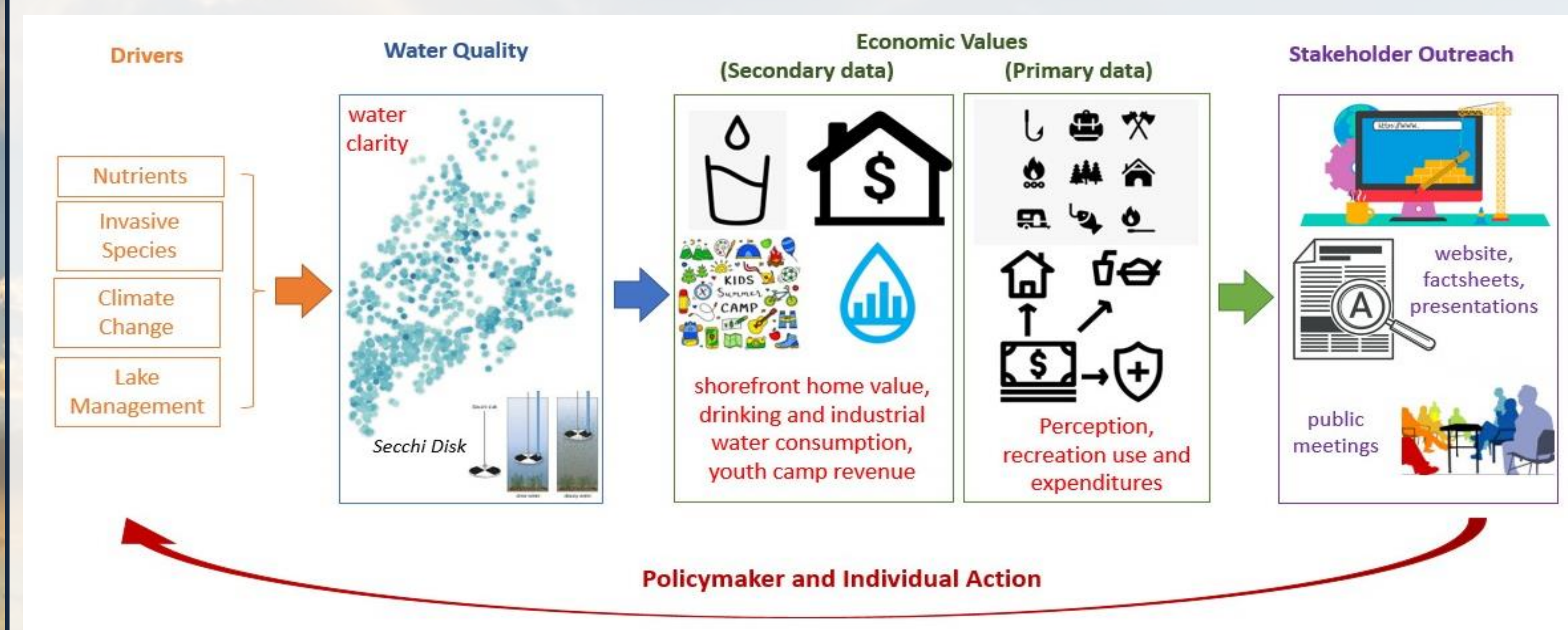
Motivation

The **communication** of these findings is critical to ensure can be utilized effectively by a diverse set of stakeholders. Arguments to weaken regulations or against conservation measures are often based on the false premise that conservation is costly compared to the revenue that businesses generate, but these data find the opposite. By learning about the economic and societal benefits of environmental protections for lakes, policymakers can more effectively advocate for current conservation bills addressing lake conservation issues, such as no-wake zones and invasive species. Town officials and homeowners will want to know how their property values and tax bases are affected by lake clarity to protect value. Organizations such as lake associations may use the data to inspire action and interest new members in joining conservation efforts, including those who may be more motivated by economics than environmentalism.

References

- Boyle, K., Schuetz, J., & Kahl, J.S., (1997). Great Ponds Play an Integral Part in Maine's Economy. Water Research Institute, University of Maine. REP 473, April 1997
- Haynes, A. S., Derrick, G. E., Redman, S., Hall, W. D., Gillespie, J. A., Chapman, S., & Sturk, H. (2012). Identifying trustworthy experts: how do policymakers find and assess public health researchers worth consulting or collaborating with?. PLoS ONE, 7(3), e32665.

Framework



The "stakeholder outreach" component of the project framework focused on a communication plan to distribute the findings to a diverse set of stakeholders. By making them accessible for decisionmakers and public, these findings can help inform lake management decisions and strengthen arguments for conservation efforts.

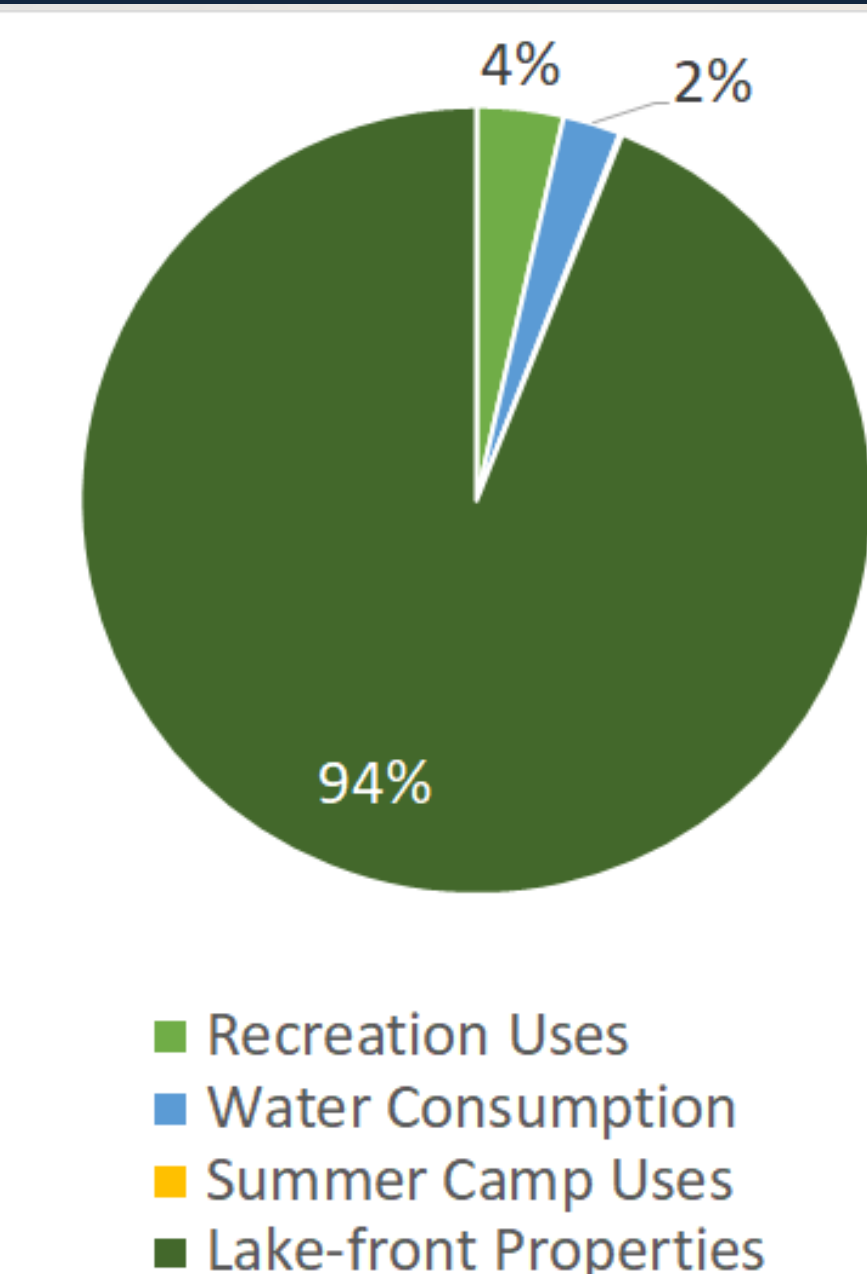
Key Results

The total net economic value of Maine's Lakes is \$14 billion.



Methods

- Property values** was estimated using a hedonic analysis model conducted on lakefront properties sold between 2017 and 2022 in various geographic regions throughout the state. The model accounted for multiple housing attributes to determine how much of a property's value was attributed solely to its lakefront location, as well as the impacts of Covid-19 on housing values.
- The value of **summer camps** was based the average cost of attendance and the expenditure of visitors to the 73% of Maine summer camps that are located on lakes.
- Recreation** values were estimated based on the willingness to pay per trip in a travel cost and perceptions survey of Maine residents (n = 768).
- The value of **drinking water** represents the surplus value to residential users above the cost generated by Maine Public Utilities that draw their water from surface water sources.



Communication Plan

The communication plan was developed to distribute information to policymakers and the public.

Policymakers

A **Summary for policymakers**, a two-page pamphlet with simplified information relevant to policy decisions, was distributed by the research team to Maine House Representatives during a **nonprofit lobby event**. This in-person delivery was critical in distributing information because policymakers prefer briefings from researchers who also communicate them orally.²

An update to the original SPM will be released in April 2024, and include the latest results.

The Public

- All study materials were posted on a Maine Lakes **website** to make the information transparent and accessible. This included the full project report, an executive summary, recordings of past presentations, and links to related lake resources.
- The team gave multiple **presentations** throughout the research process, which increased public engagement and collected feedback that helped to inform the study. By appearing on **Maine Calling**, Mainers can connect directly with the researchers and learn about how this valuation is applicable to their lakes.

Acknowledgements

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