



Minnesota Aquatic Invasive Species
Research Center

EDNA SURVEY RESULTS

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eDNA Phase II



ABOUT OUR PROJECT

We are working to develop efficient strategies for monitoring aquatic invasive species (AIS) in Minnesota lakes using environmental DNA. Environmental DNA, or eDNA, is simply DNA left in an environment (in this case, lake water) by organisms that live there. We are studying the effectiveness of eDNA sampling conducted by volunteers in hopes that we can increase our sampling capacity and improve early detection of AIS. Early detection allows us to have a better chance at effective management, keeping the lakes we all love healthy.

OUR PURPOSE

Volunteering for this project will help the research team gather important information on the effectiveness of eDNA sampling conducted by citizen scientists. It will also allow the research team to receive valuable feedback on how they can reform the process for future iterations.

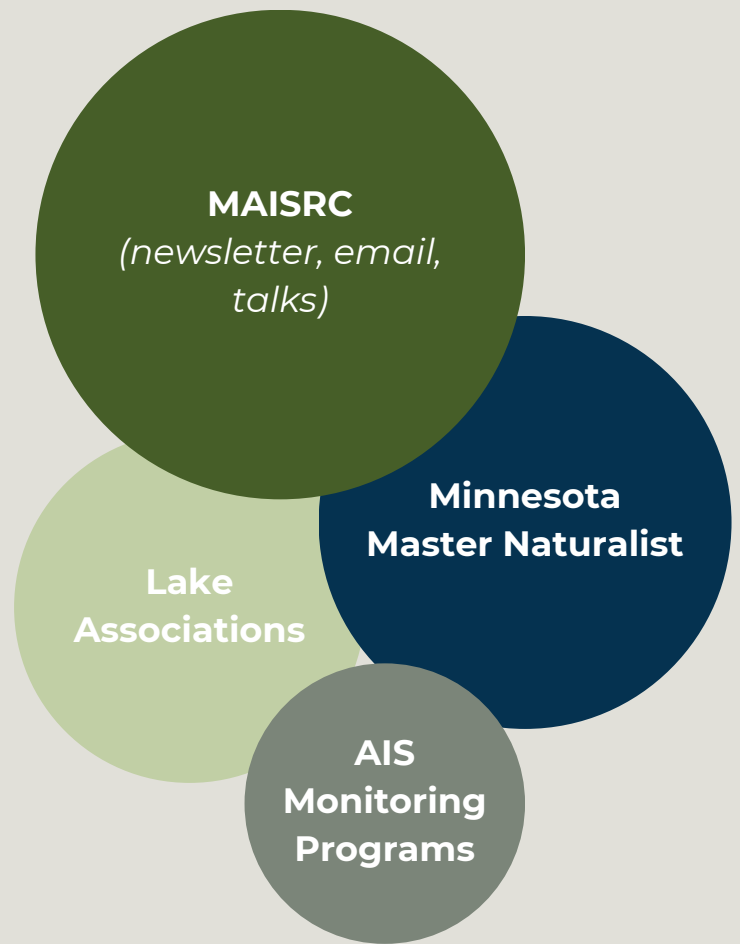
OVERVIEW

This report gathers thoughts from our volunteers about the project. It includes how they felt about the process and the feedback they gave us.

We had
85
survey responses

HOW DID YOU HEAR ABOUT OUR STUDY?

These are the top 4 programs that volunteers heard about this project. Others heard from direct contact with MAISRC members or family relatives



WHY DID YOU WANT TO VOLUNTEER?



love the lake and want to protect it



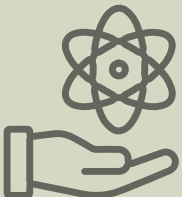
want to learn more about AIS and water quality



want to contribute to citizen science



curious about the process of eDNA monitoring



support AIS research



active in AIS monitoring

POST SAMPLING SURVEY RESULTS

FROM A SCALE OF 1-5:

How effective did you feel with eDNA sampling?



of surveyors selected a 4 or above, saying they felt effective to very effective

How easily were you able to find & access a sampling location?



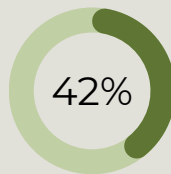
of surveyors selected a 4 or above, saying they found it easy to very easily

How easy was it to collect the water sample?



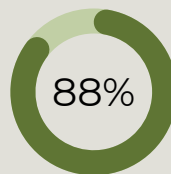
of surveyors selected a 4 or above, saying it was easy to very easy

Did you sample with a partner?



of surveyors sampled with a partner

Was the sampling equipment easy to use?



of surveyors selected a 4 or above, saying it was easy to very easy

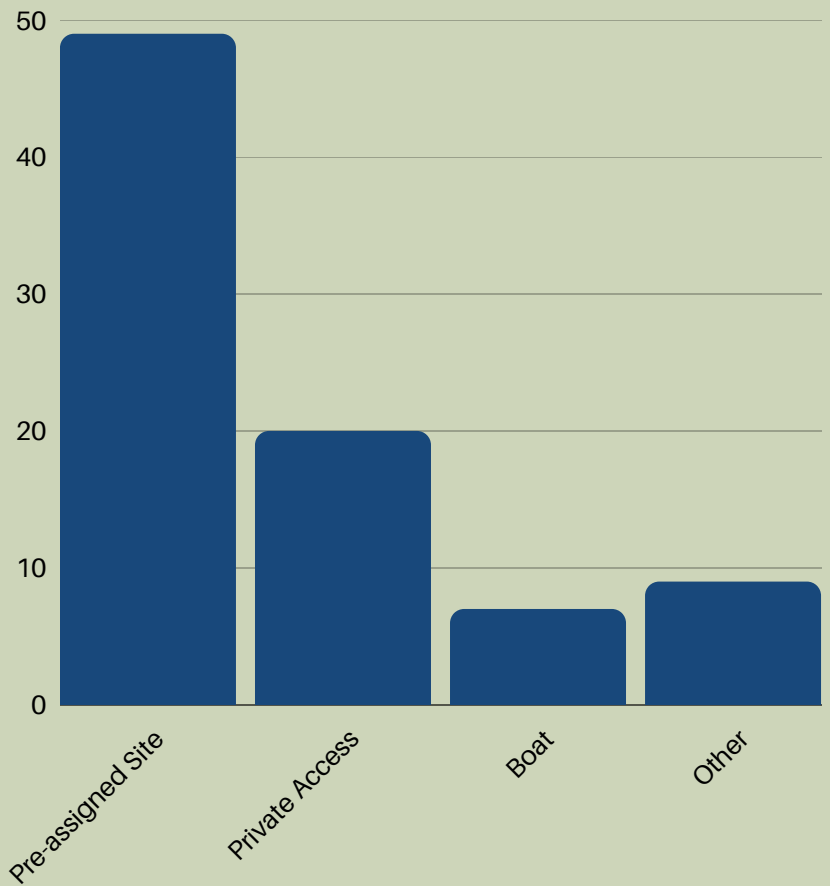
Would you participate in eDNA sampling again?



the 72 surveyors who answered all said YES!

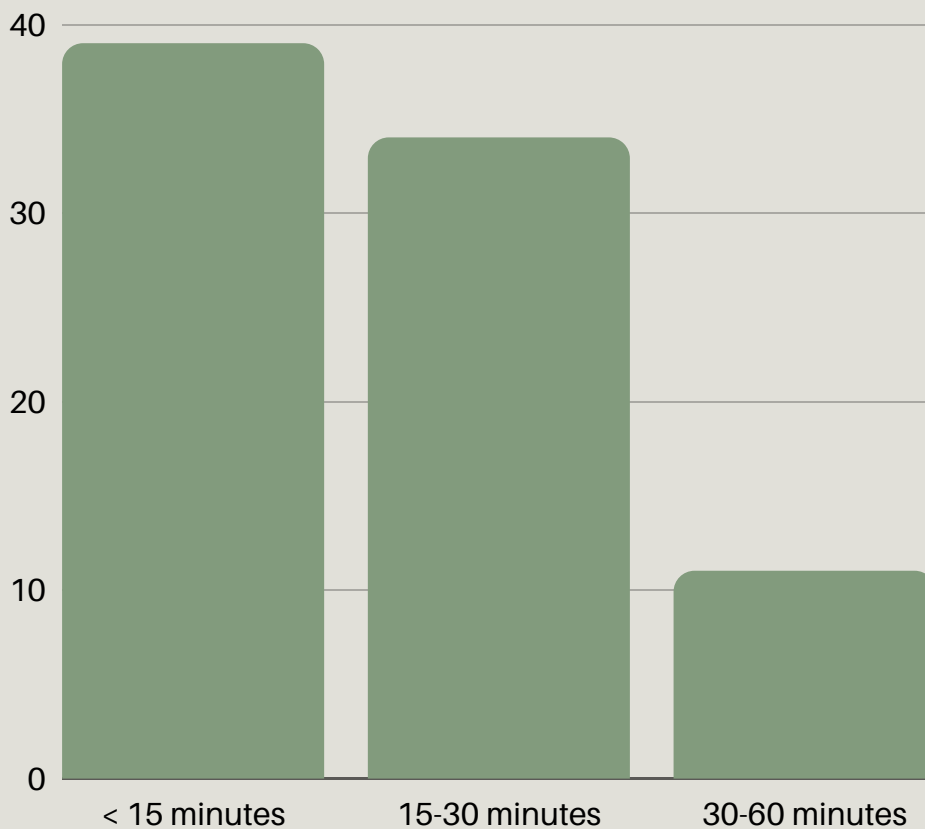
WHERE DID YOU COLLECT YOUR SAMPLE?

Others included a combination of pre-assigned and public access. Two went to sulfate hot spots.



HOW LONG DID IT TAKE YOU TO SAMPLE?

86% of volunteers took less than 30 minutes to sample

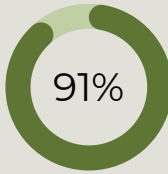


QUESTION

RESULTS

VOLUNTEER FEEDBACK

How useful were the written instructions?



of surveyors selected a 4 of above, saying it was useful to very useful

- embed pictures with instructions
- make more detailed map of sampling locations
- clarify how instruments work
- clarify how to avoid contamination
- provide more guidance on how to mail pictures

How useful were the instructional videos?



of surveyors selected a 4 of above, saying it was useful to very useful

- create separate troubleshoot video
- improve audio quality
- add subtitles
- create video on how to properly return equipment

ADDITIONAL FEEDBACK FROM VOLUNTEERS

- include troubleshooting tips or FAQ
- send sampling kits sooner (at least 2 weeks before sampling)
- provide tips on how to avoid contamination (what can volunteers touch, can equipment be set down)
- encourage volunteer to work with someone for additional assistance

WHEN ASKED WHY YOU VOLUNTEERED, YOU RESPONDED

**"WE CARE ABOUT OUR LAKES
AND WATERS"**



**"I ENJOY SCIENCE,
ESPECIALLY
WATER SCIENCE.
THIS WAS FUN!"**

**"I HAVE BEEN
PASSIONATE ABOUT
WATER QUALITY FOR MY
ADULT LIFE. I HOPE THAT
THIS RESEARCH PROVED
TO BE VERY SUCCESSFUL
IN AIS DETECTION"**



*We couldn't have
done this project
without your
support*

*Thank you to all our
volunteers!*

Minnesota Aquatic Invasive Species Research Center

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