



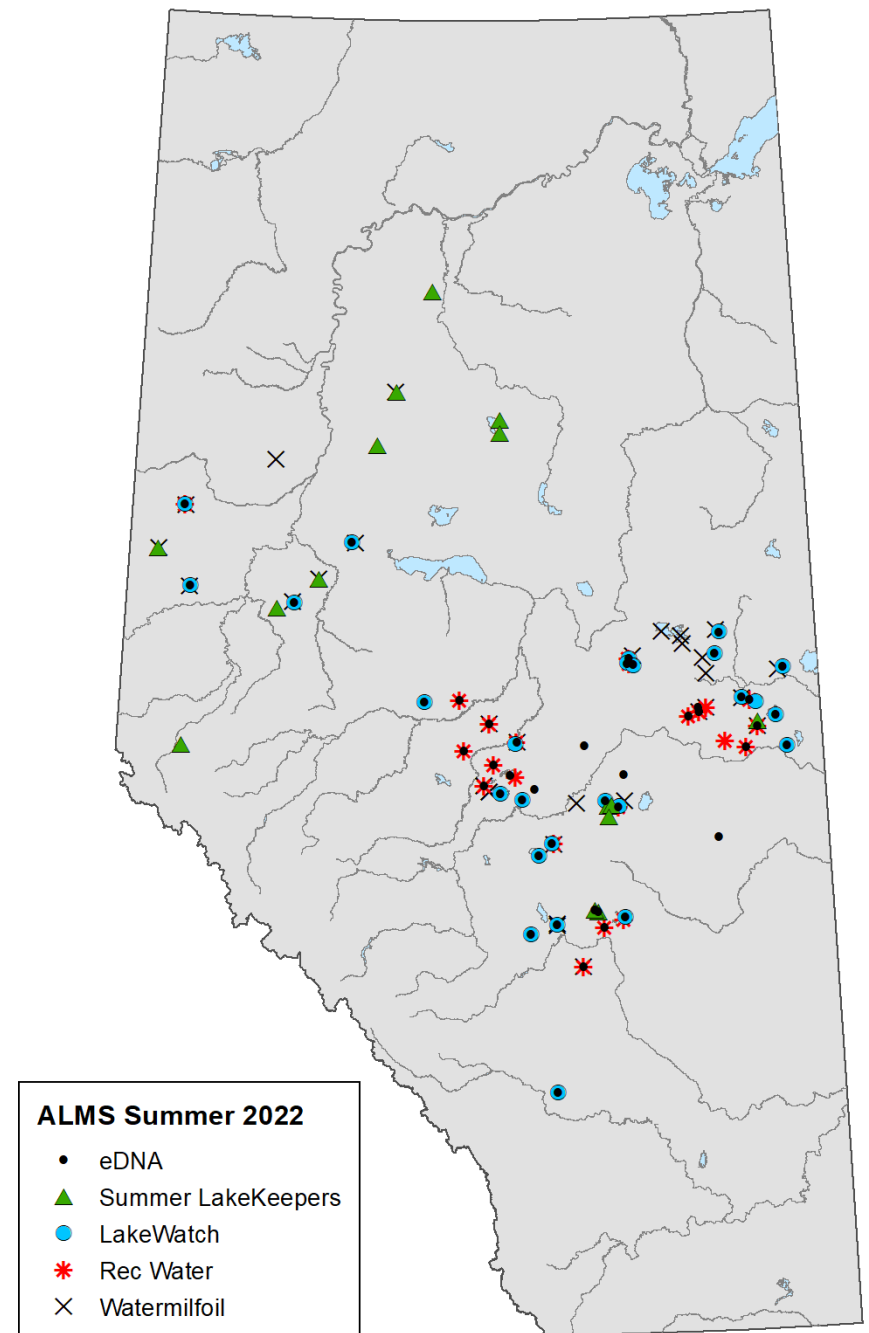


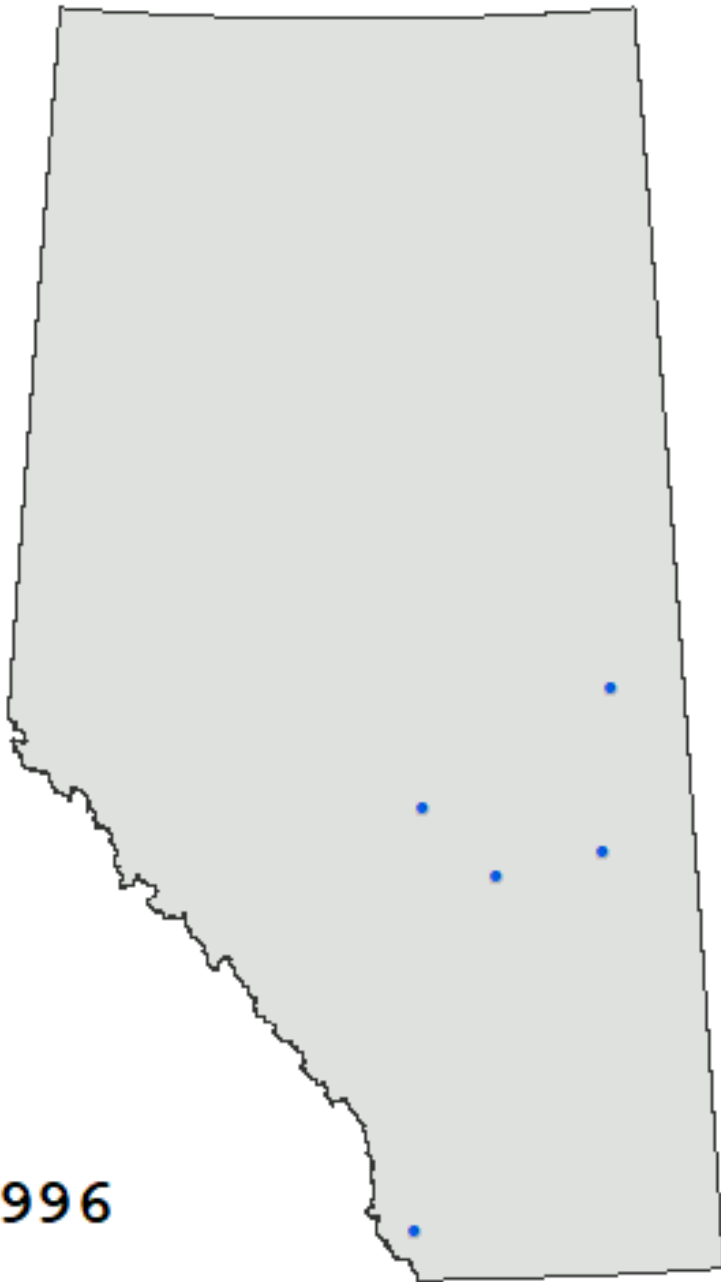
Do We Monitor Alberta's Lakes?



ALMS Summer 2022

- LakeWatch Program
- LakeKeepers Program
- Recreational Water Monitoring Program
- Watermilfoil Monitoring
- eDNA Monitoring



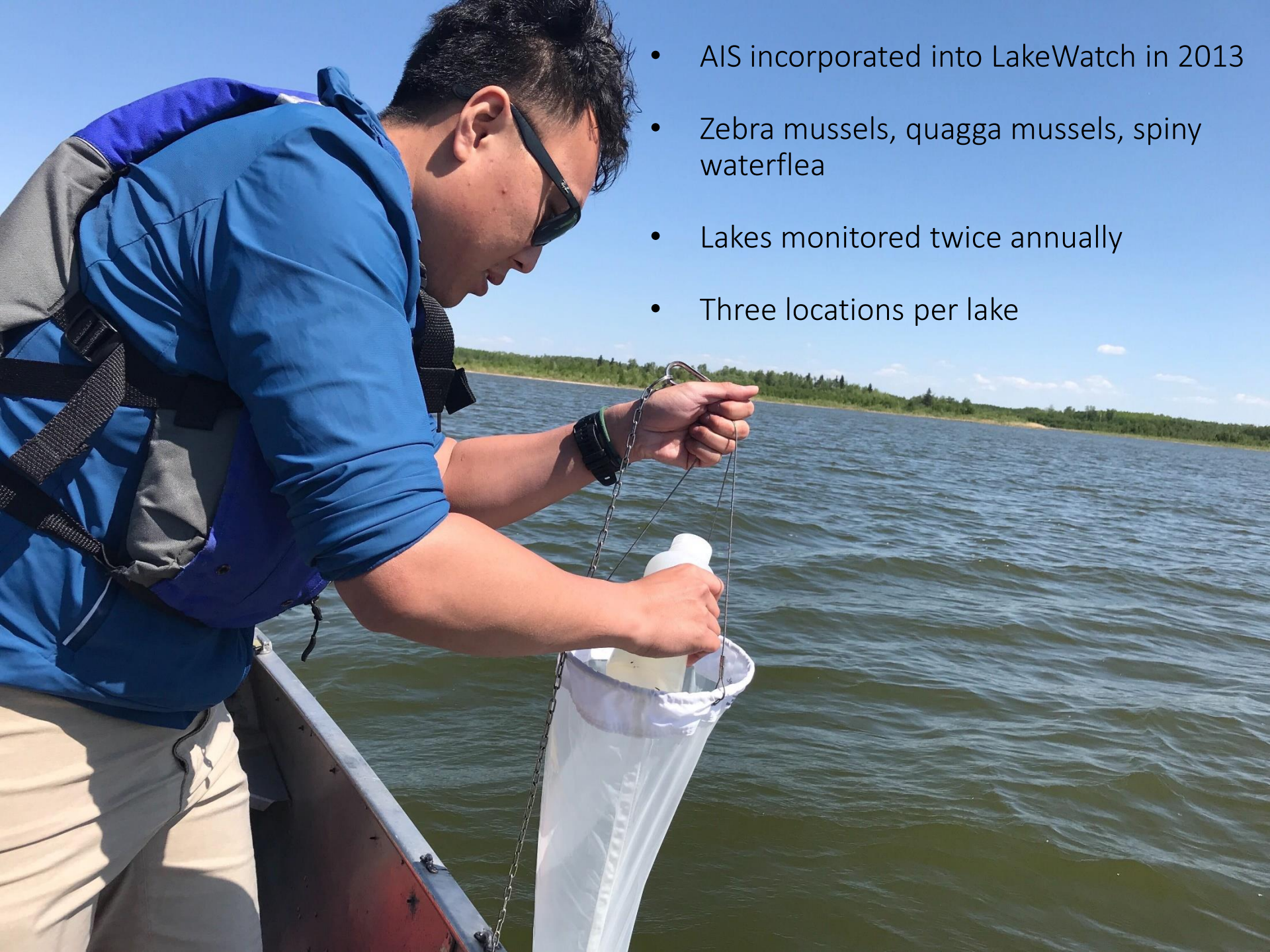


1996

- Participatory program
- Established in 1996
- Currently intensive monitoring on 30 lakes annually.
- Long term trends in water quality.

Are we looking for aquatic invasive species?

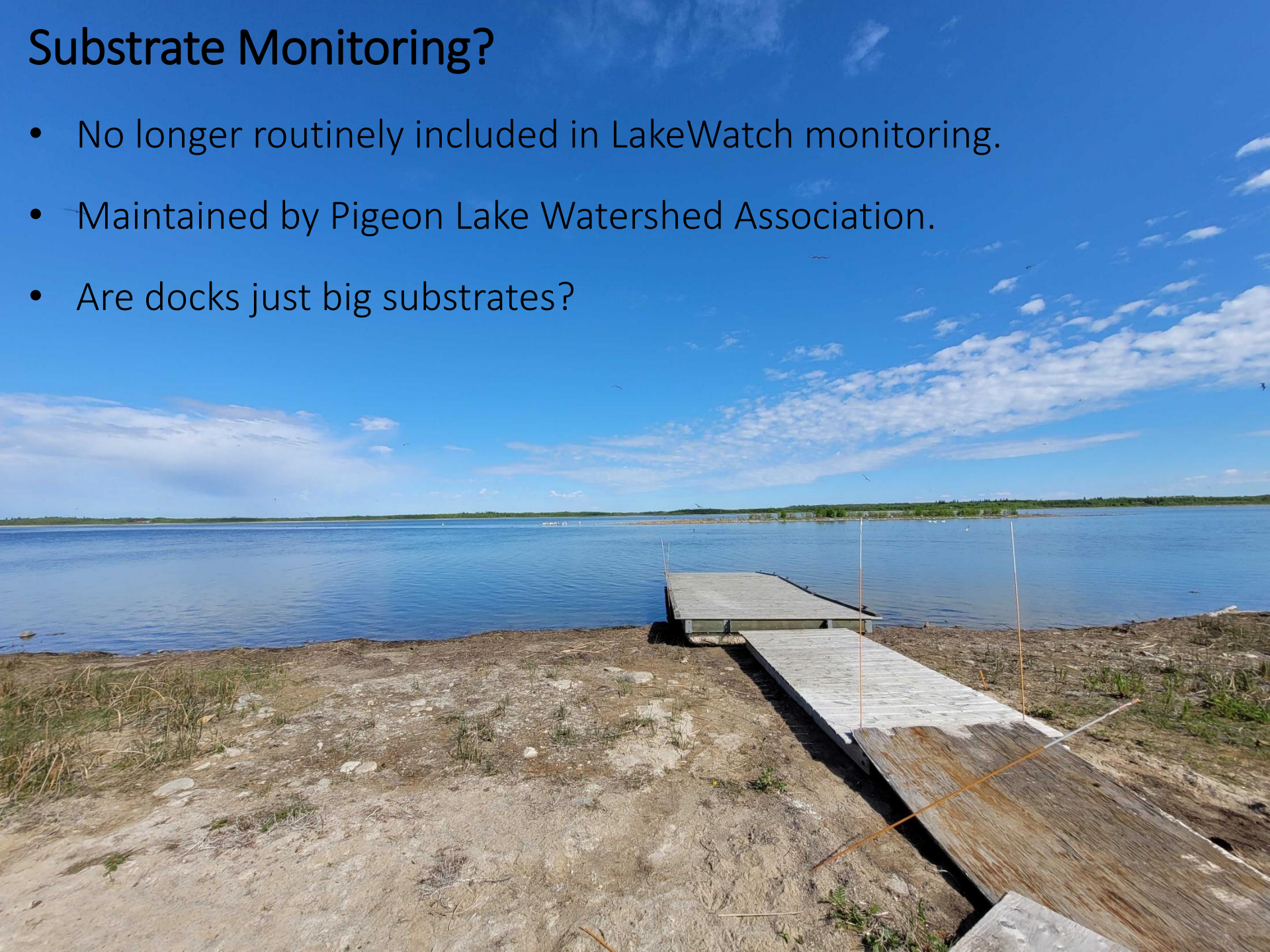




- AIS incorporated into LakeWatch in 2013
- Zebra mussels, quagga mussels, spiny waterflea
- Lakes monitored twice annually
- Three locations per lake

Substrate Monitoring?

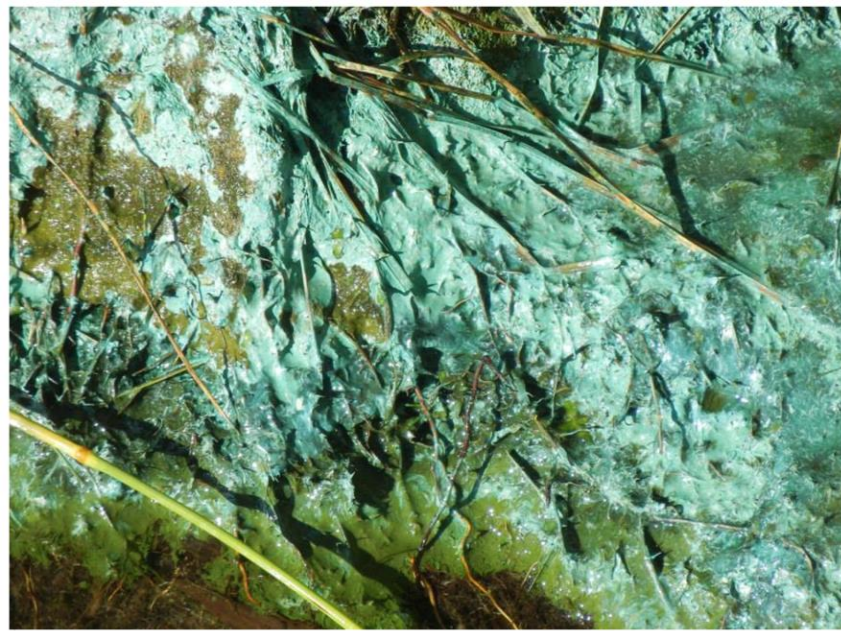
- No longer routinely included in LakeWatch monitoring.
- Maintained by Pigeon Lake Watershed Association.
- Are docks just big substrates?





LakeKeepers

- More traditional citizen science approach.
- Large geographic reach.
- Opportunity to include AIS more routinely.

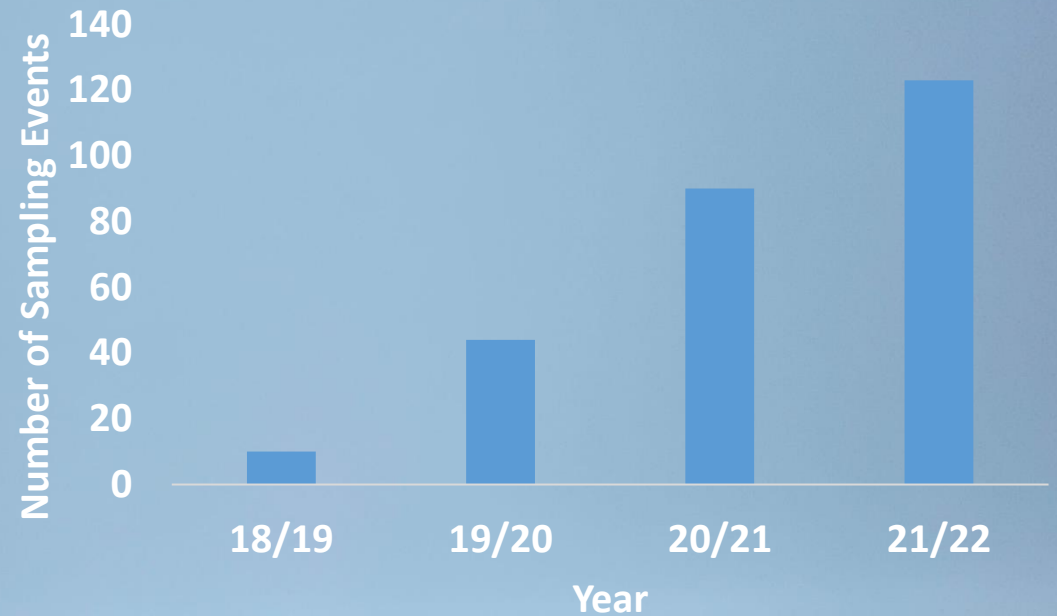




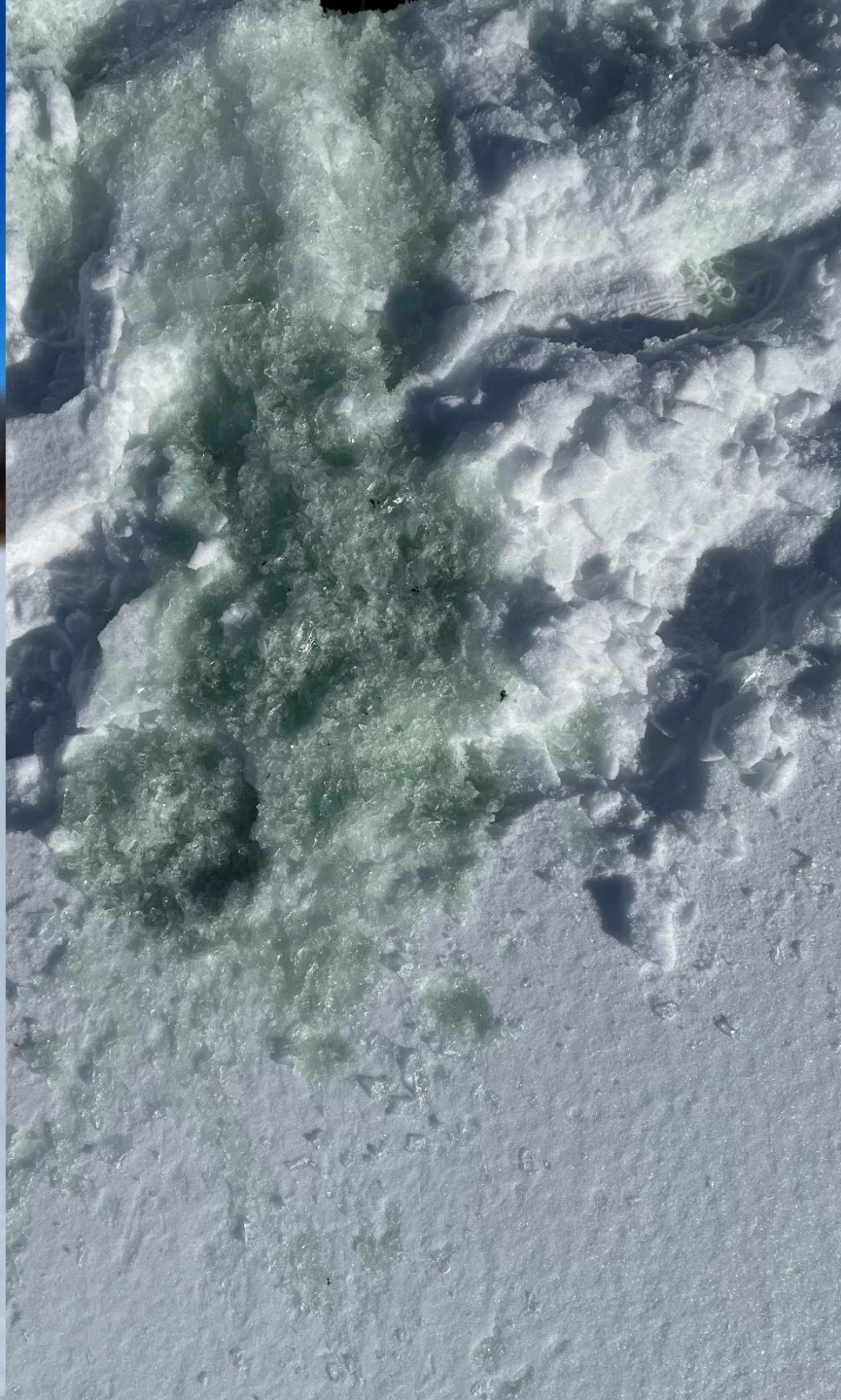
LakeKeepers

Winter Edition





- Winter lake monitoring now one of our biggest programs.
- AIS monitoring in the winter?



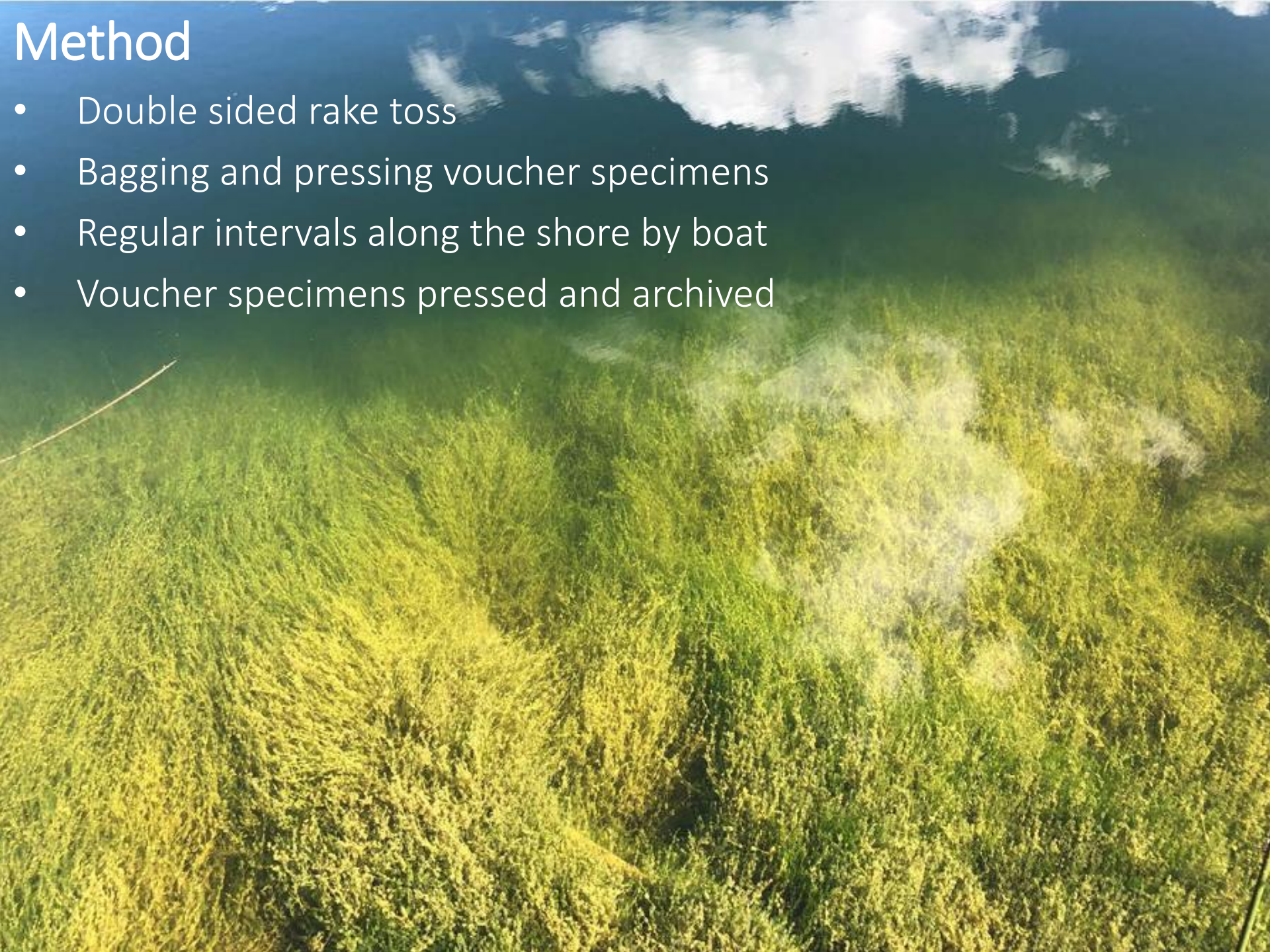
Aquatic Plant Monitoring

- Formal program in 2014, 2015
- Surveys in partnership with lake residents.
- Surveys still conducted by request.



Method

- Double sided rake toss
- Bagging and pressing voucher specimens
- Regular intervals along the shore by boat
- Voucher specimens pressed and archived



Did we find any invasive species?



Did we find any invasive species?

Rarely: Some occurrences of flowering rush and himalayan balsam.



Bioblitz program led to the development of an aquatic plant field guide.

<https://alms.ca/plant-id-book/>

ALBERTA LAKE MANAGEMENT SOCIETY

White-stemmed Pondweed

Potamogeton praelongus

Can be mistaken for Richardson's Pondweed, but the leaves of the White-stemmed Pondweed are longer, up to 35 cm long

The white, zig-zagged stem of the white-stemmed pondweed can be up to 3 m long

The boat-shaped tips of the leaves split when pressed

The base of the leaf wraps partly around the stem



Fries' Pondweed

Potamogeton friesii

Has a similar appearance to Flat Stemmed Pondweed and Small Pondweed, but can be distinguished by its **rounder stem** and **larger size**, respectively

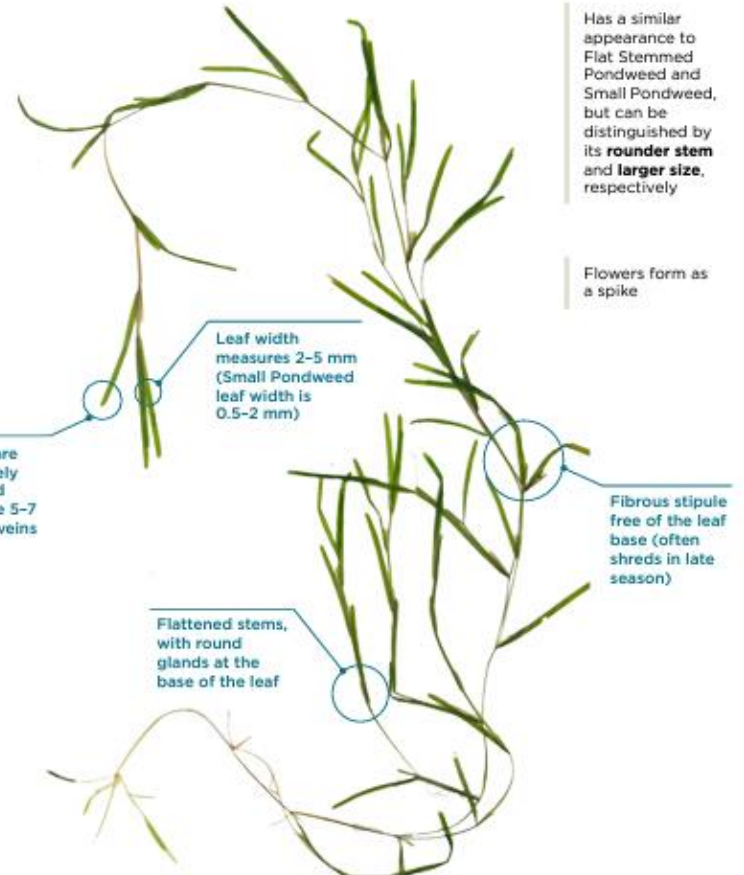
Flowers form as a spike

Leaf width measures 2-5 mm (Small Pondweed leaf width is 0.5-2 mm)

Leaves are alternately arranged and have 5-7 parallel veins

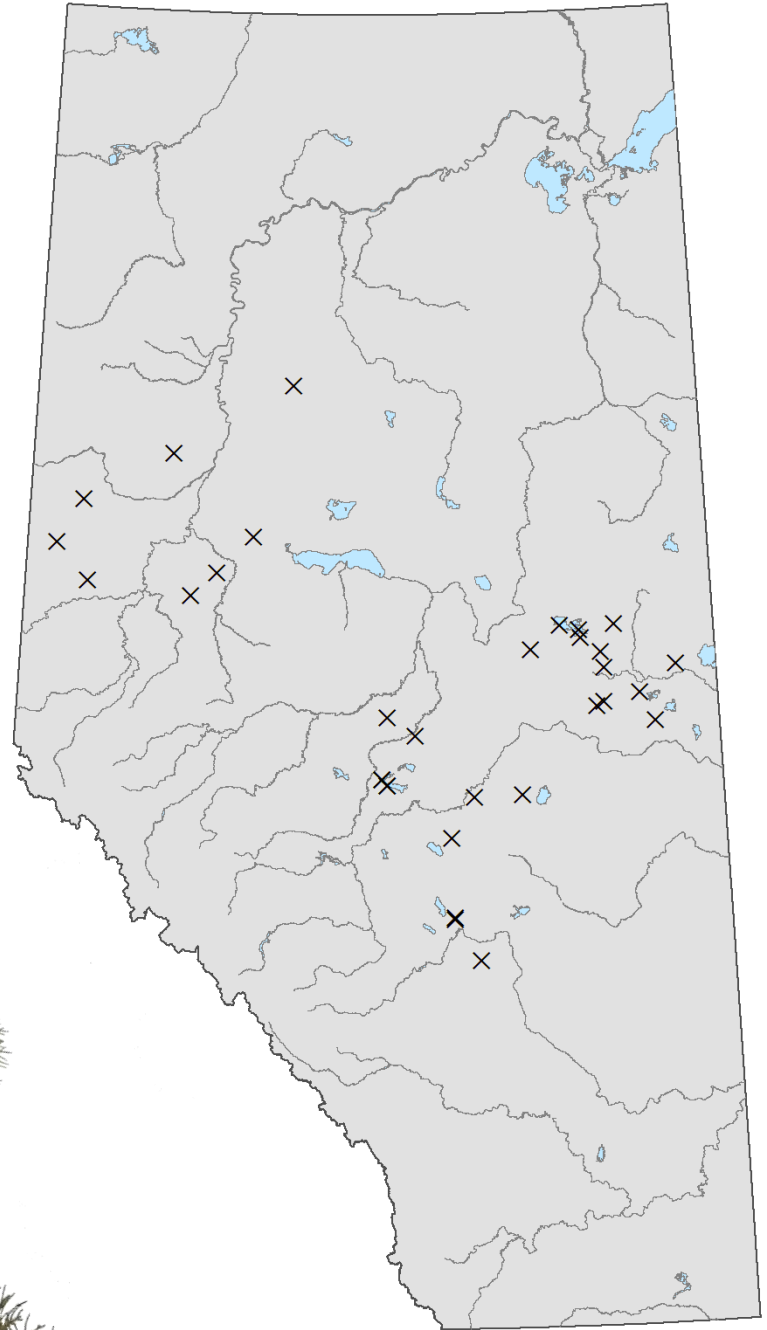
Flattened stems, with round glands at the base of the leaf

Fibrous stipule free of the leaf base (often shreds in late season)



Eurasian Watermilfoil Monitoring

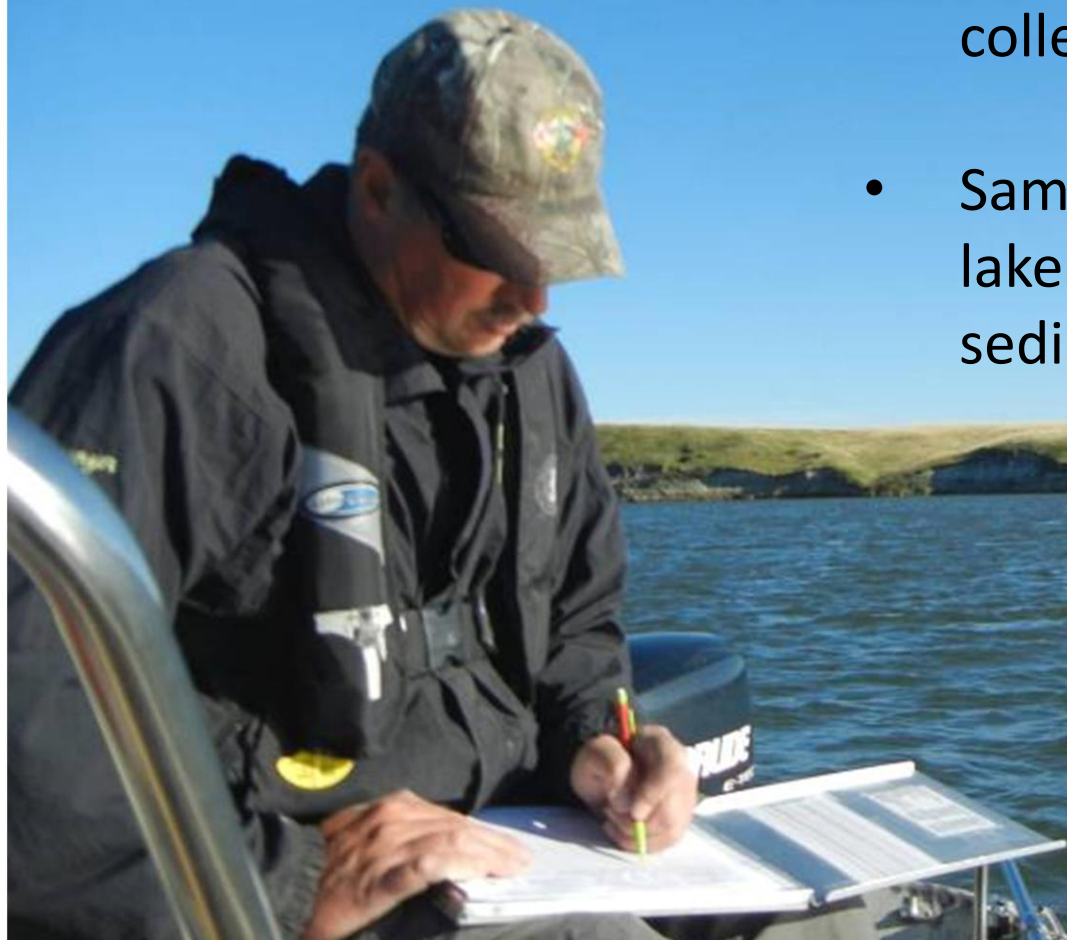
- Alberta Plant Health Lab partnership
- Approximately 30 watermilfoil specimens submitted annually since 2019.
- No invasive Eurasian watermilfoil detected.



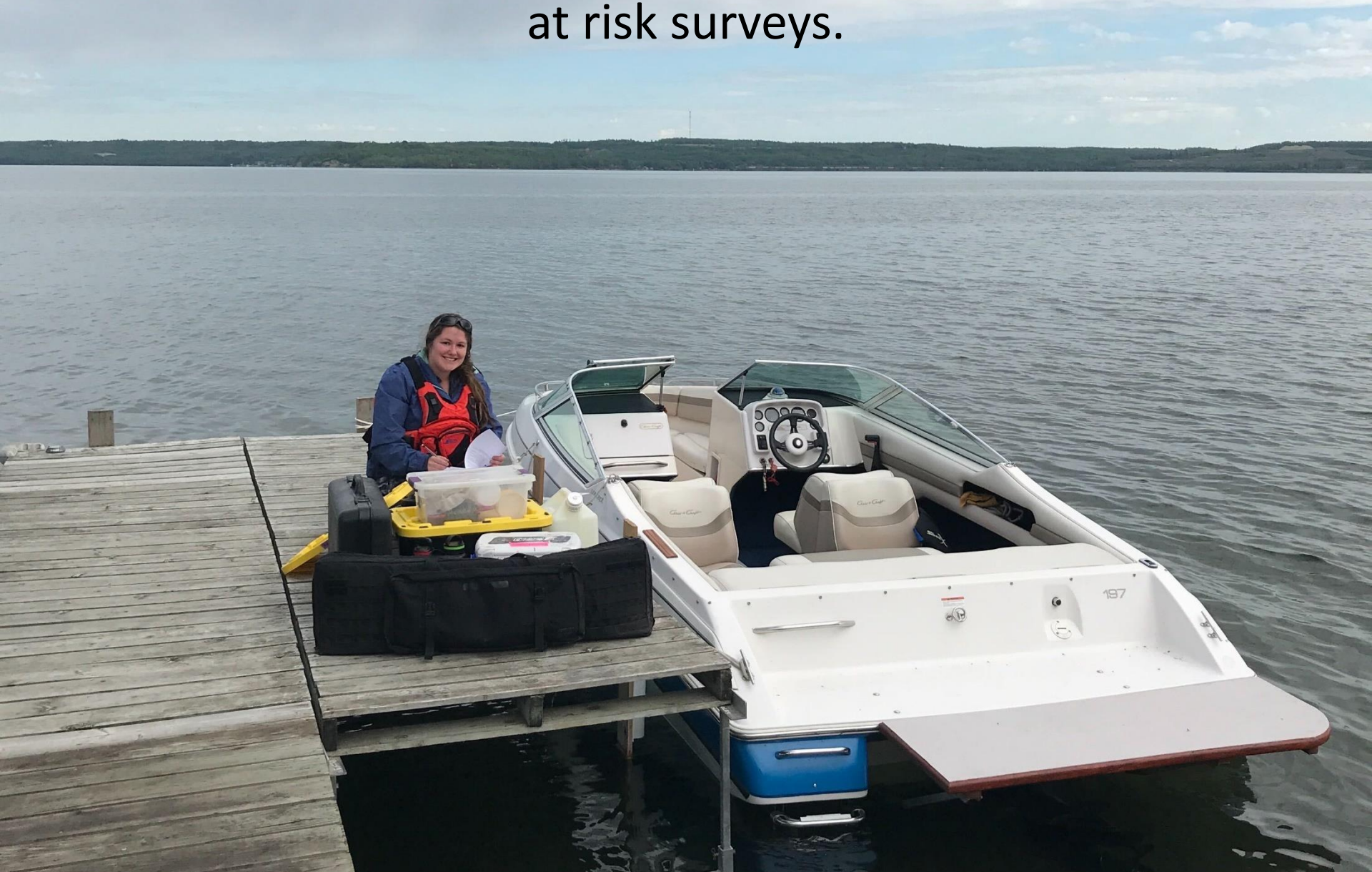
What about eDNA targets in water samples?



- eDNA samples for research submitted to Dr. Hanington at the University of Alberta.
- 252 samples from 69 lakes were collected in 2022.
- Samples included beach water, lake composite water, and sediments.



In 2023, ALMS will support research by Dr. Hanington which will utilize eDNA backpacks for invasive species and species at risk surveys.



Alberta



Cabela's

OUTDOOR FUND





Thank You!

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