



**DEDICATED TO
ENVIRONMENTAL
PRESERVATION**

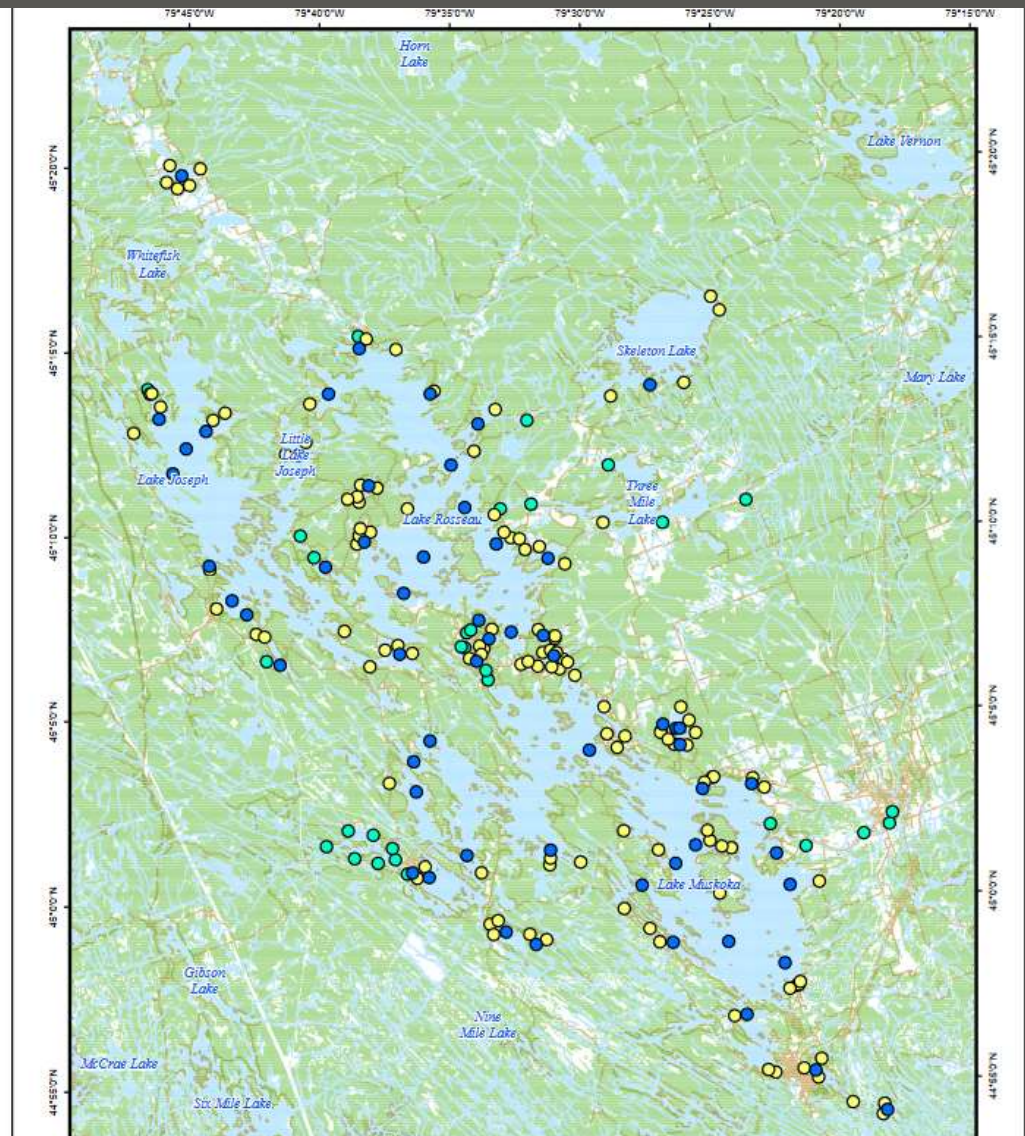
SINCE 1894

FOUNDING PRINCIPLE : PRESERVE MUSKOKA ENVIRONMENT



MANY SAMPLING SITES

- Intent to discover issues at an early stage so remediation may be pursued
- Wide coverage of main Muskoka Lakes
- Testing Deep Water in major bays
- Testing Near Shore near potential contamination sources



WHY PROTECT RECREATIONAL WATER QUALITY DMD0



PRESERVE WATER CLARITY FOR
SWIMMING



PROTECT SWIMMERS FROM
EXPOSURE TO PATHOGENS
[SWIMMER'S ITCH, INFECTIONS]



GUARD AGAINST PROLIFERATION
OF ALGAE AND CYANOBACTERIA
[BLUE GREEN ALGAE]

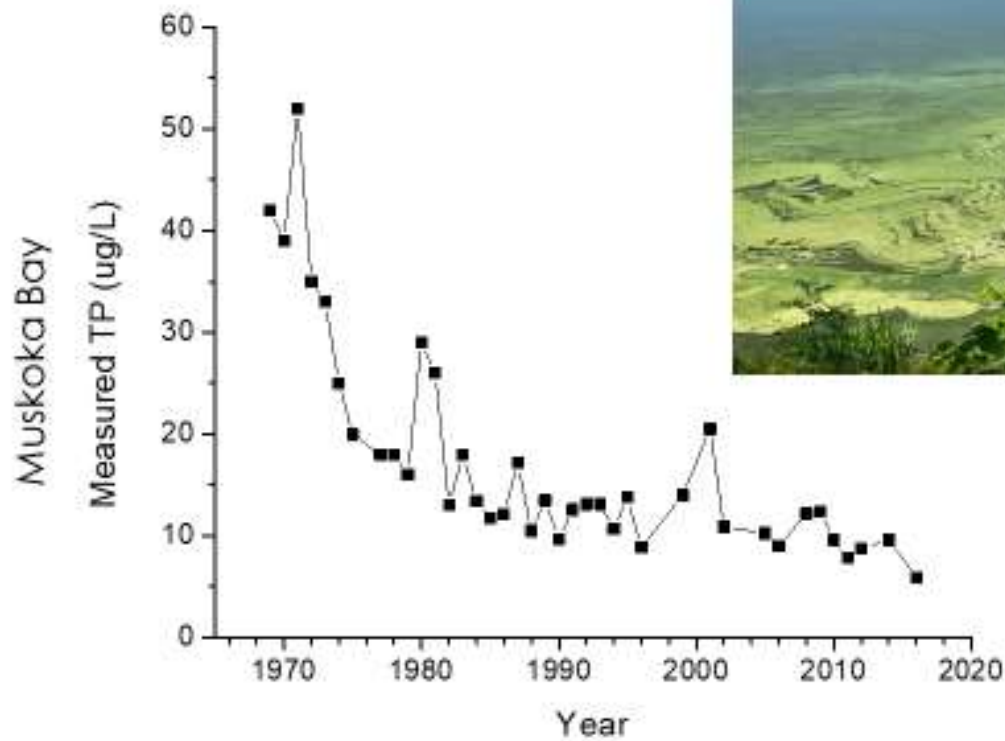


PRESERVE FISH AND WILDLIFE
FOR RECREATION AND TOURISM

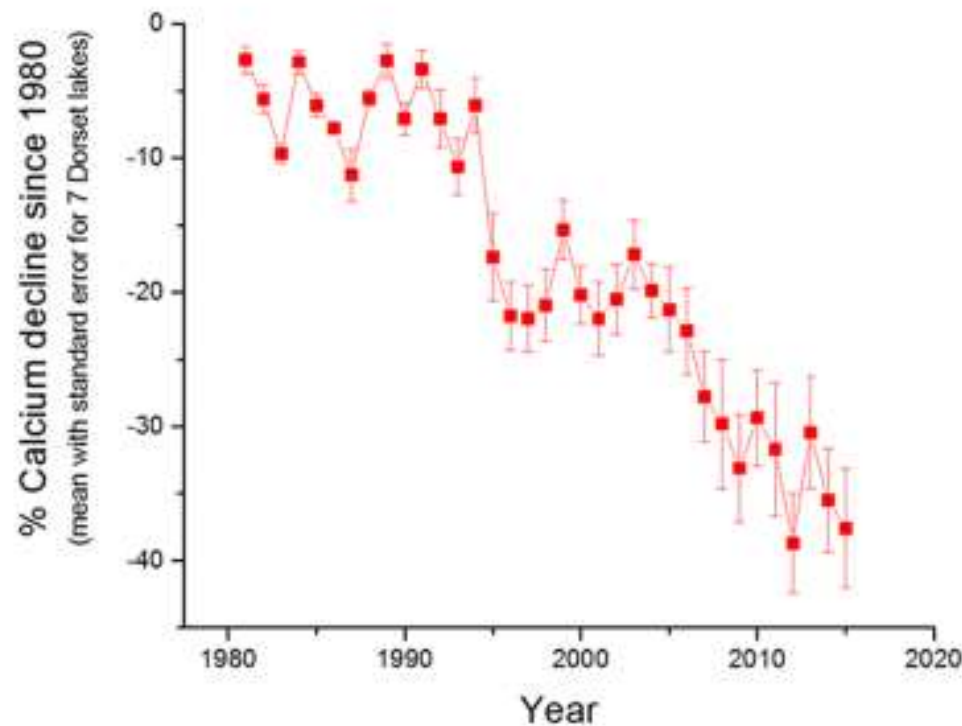
Slide 4

DMD0 Hard to read the second icon; third icon is a beehive that does not represent algae - better icon?
Deb Martin-Downs, 2022-05-05T14:24:07.454

1. Where are our lakes now? Phosphorus is pretty well managed

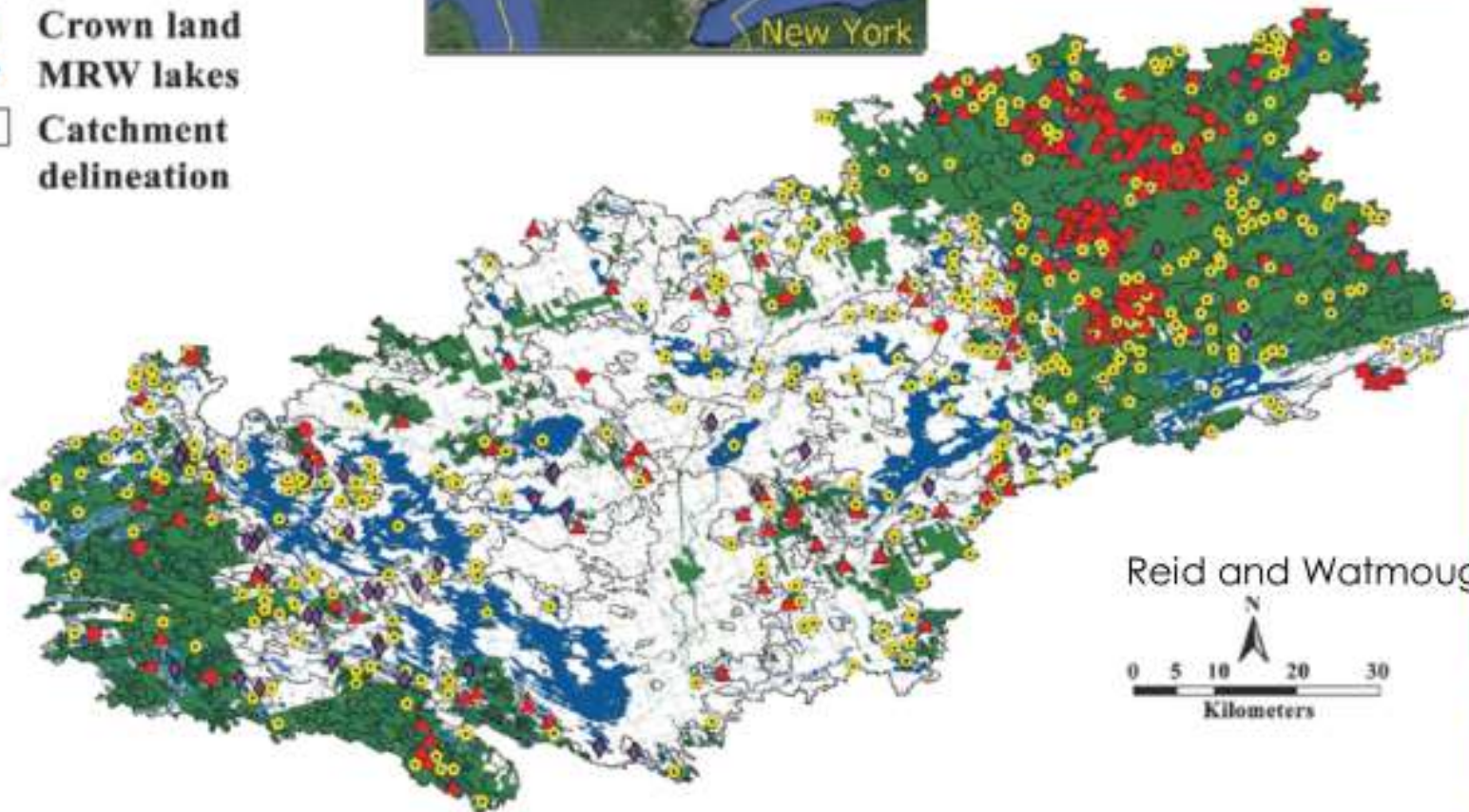


But calcium levels have fallen to damaging levels in about half of Muskoka's lakes*

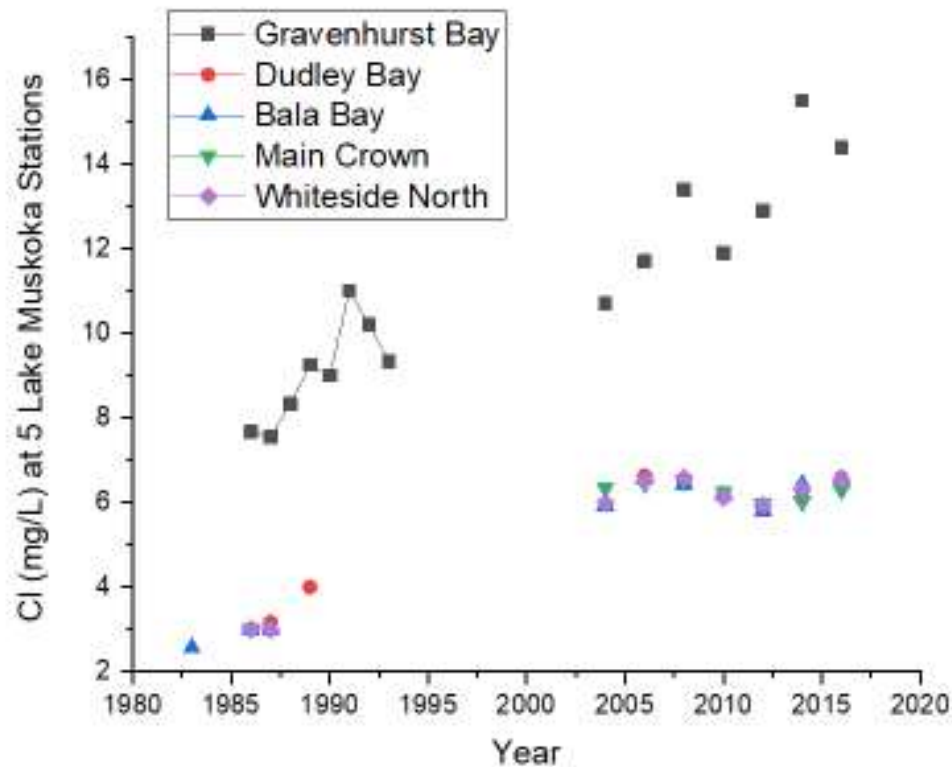


Ca in Muskoka Lakes

- $\leq 1 \text{ mg L}^{-1}$
- ▲ $>1 - 2 \text{ mg L}^{-1}$
- ⬡ $>2 - 4 \text{ mg L}^{-1}$
- ◆ $>4 \text{ mg L}^{-1}$
- Crown land
- ✦ MRW lakes
- Catchment delineation



Chloride levels from road salt are rising e.g. in Lake Muskoka*



WATER QUALITY THREATS DMD0

Phosphorus levels
> 20 ug/L

E. Coli levels >
200 cfu/L

Harmful Algae
Blooms [HAB] with
toxins above 20
ug/L

Damage to
zooplankton by
salt [Chloride > 10
ug/L]

Damage to
zooplankton by
calcium reduction
[Ca < 2 ug/L]

Shoreline
preservation

Climate change

Slide 9

DMD0 I think we need to have a slide or explanation of the parameters - what is phosphorus, ecoli zoops
I see a zoop one but one on each of the main threats would be helpful
Deb Martin-Downs, 2022-05-05T14:25:13.920

WHY ARE ZOOPLANKTON IMPORTANT



- They eat the algae
- They feed the small fish
- The small fish feed the big fish and so on...