

Algae Harvesting 101

A primer on algae harvesting

Uses of Algae

- There is an extensive industry in the growing and harvesting algae.
- It is used as an additive in many foods, fish foods, medical supplements and biofuels.
- It is used as fertilizer in some parts of the world.

Harvesting Algae

Delaware's inland bays



Harvesting is done when algae accumulation presents environmental and fisheries concerns

KLAMATH LAKE, OR

harvesting algae as a food source



Klamath Lake Operations

- Discussed operations with one operator
- Pickup is 14' wide
- Speed is 1 – 2 mph
- Low draft barges driven by 2x100 HP motors
- Picks up surface accumulation
- Tender barges transport algae to shore

Possible Benefits of Harvesting Algae for recreational lakes

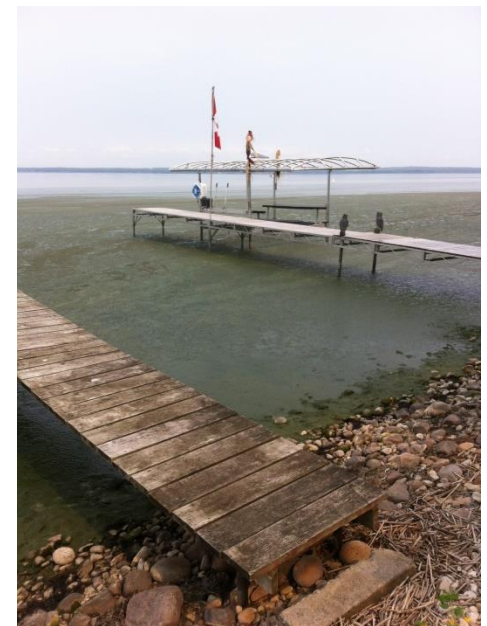
- Reduction in shoreline accumulation
- Reducing the nutrient cycle:
 - decaying algae – release of nutrients –
depletion of oxygen – formation of ammonia

But will this make a difference?

Application to Alberta's Lakes

Estimated values

- Using operating parameters from Klamath Lake and assuming 30 days operations (12 hours/day)
- Area covered 4.32 km² (10,600 acres)
- Phosphorous recovery 160 kg
- May help rectify a problem which is becoming more intense.



Feasibility Study

- To verify operational parameters
- To define disposal method
- Determine regulatory requirements
- Determine operating and capital costs
- Define social and environmental benefits
- Cost/benefit analysis – is it practical?

SV Grandview's Experience

- Recovered shoreline accumulation
- De-watered on lawn
- Recovered 3 dump truck loads
- High nutrient content
- Currently using as lawn fertilizer