

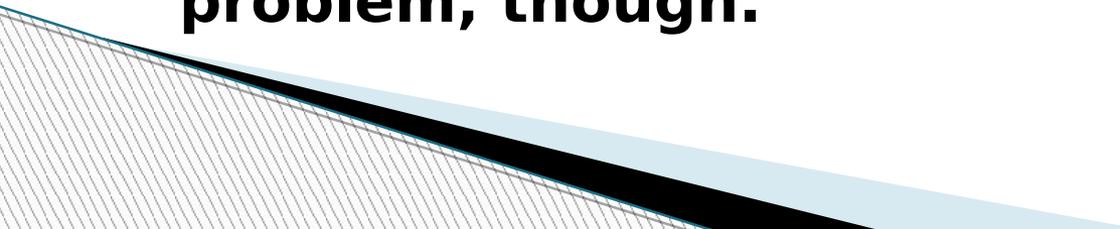
# Musky Bay and how do we pay for it?

{ **Dredging/Chemical Sequestering/Lake Districts** }

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Lake Plan Coordinator  
Report to COLA Board  
March, 2013



# The Problem(s) with MB

- ▶ **Too much P, too much organic production, too little oxygen.**
  - ▶ **“Hot” sediment -stored P, which re-cycles.**
  - ▶ **Weeds, CLP, winterkill, degraded spawning habitat, impaired use.**
  - ▶ **Endangers rest of LCO.**
  - ▶ **MB is NOT a lake unto itself.**
  - ▶ **Costs a lot already.**
  - ▶ **No quick, easy, cheap solutions.**
  - ▶ **But “Do Nothing” is NOT an option.**
  - ▶ **Lack of “Impairment” status is no longer a problem, though.**
- 

# COST ??

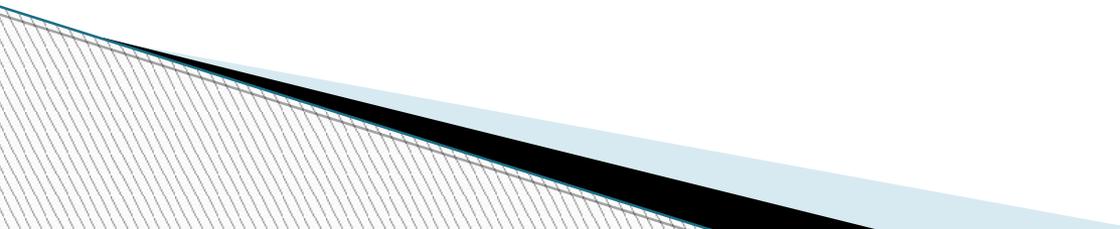
- ▶ In lost fish and fishing opportunity and CLP treatment it is already “costing” us:
- ▶ \$ fish dead from winterkill every 5 years!
- ▶ \$ Lost fishing opportunity due to wk and summer weeds!
- ▶ \$43,000 year to treat CLP!
- ▶ \$13,000/year Musky rearing/stocking
- ▶ \$40,000/year fishery damage
- ▶ ~ \$100,00 TOTAL COST IMPAIRMENT, NOW

# Future Shock Dollars

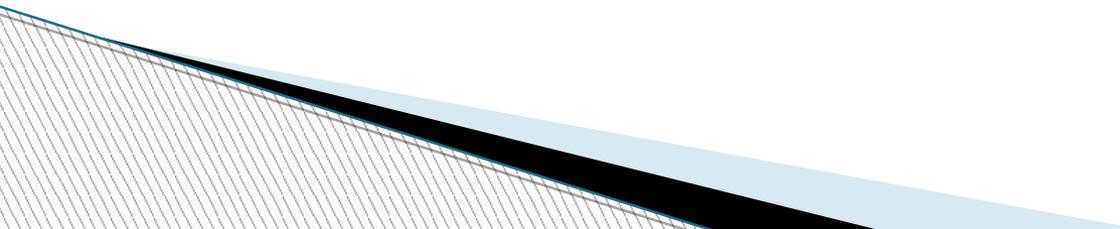
- ▶ **MB fishery lost- \$ 180 T**
- ▶ **LCO coldwater lost- \$160T**
- ▶ **LCO water quality- 4 ft. loss clarity**
- ▶ **LCO water quality, economic:- \$1.5M lost Sawyer County as a whole (Total)**
- ▶ **TOTAL 1 ½ MILLION/Yr. LOSS**
- ▶ **IF WE JUST SIT AROUND AND WAIT THIS IS WHAT IT IS GOING TO COST OUR CHILDREN!**

- ▶ *\*these are based on a 4X multiplier effect of fish replacement or fishing trip cost, a moderate “worst case”. Willingness to pay methods might be 2-4 x of these figures. Loss of economic activity to Sawyer County considered a total, since they already include the fishery costs, plus other non-fishery costs.*

# Objectives/Assumptions

- ▶ TMDL study will find MB impaired and endangering LCO
  - ▶ TP of 12 ppb
  - ▶ Eliminate in-puts
  - ▶ Manage internal load stored in “hot” sediments- 306 acres x 1 ft. (~500T yds)
  - ▶ Level 1 Objective-Restore Musky Spawning
  - ▶ Level 2- Restore Water Quality
- 

# Rx Options

- ▶ **Do Nothing- Give up or wait till it is too late**
  - ▶ **Just Eliminate source**
  - ▶ **Treat enriched sediment in MB**
  - ▶ **Total dredging**
  - ▶ **Partial-Musky spawning sites**
  - ▶ **+ Seal off sediments with a metal (Al, Fe)**
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# MY Rx

- ▶ Eliminate sources
- ▶ Partial dredging for musky spawning
- ▶ Chemical sequestering of enriched sediment
- ▶ Reasoning- No sense doing anything unless the sources are eliminated.
- ▶ Reasoning- Musky need oxidized substrate
- ▶ Whole Bay dredging is just too expensive and with no nearby spoils site the logistics are mind-boggling. Sequestering is a cheaper option.



**REMOVE**

~

**500,000  
Cubic  
-yards**

**STORE/SETTLE** ~

**750,000 Cubic-  
yards**

# Cost to Dredge- All MB

\$/yd Min	\$/yd Max.	MB Min. \$Million	MB Max \$Million	MB *Predicted
\$4.00	\$34.00	\$2 M	\$17 M	\$ 7 M



**\$600 T/yr.  
over 15  
years**

**\* I used \$14 to account for high cost of spoils management**

# Cost Alum Treatment

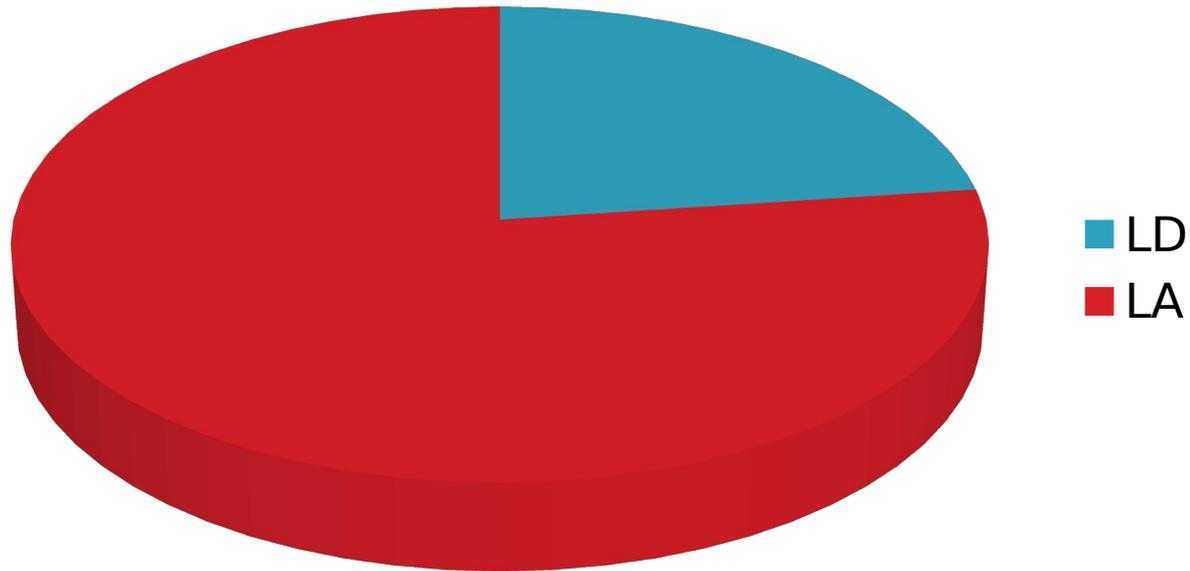
Min \$/a	Max.\$/a	Mean \$/a	MB <sub>min</sub>	MB max	MB pred.
\$250	\$2400	\$850	\$78T	\$7 <sub>00</sub> T	\$500T*
					\$700T**



**\*high dosage, similarity to Little St Germain, which is max value \*\* total cost when paired with partial dredging, for musky spawning, adds 200T**

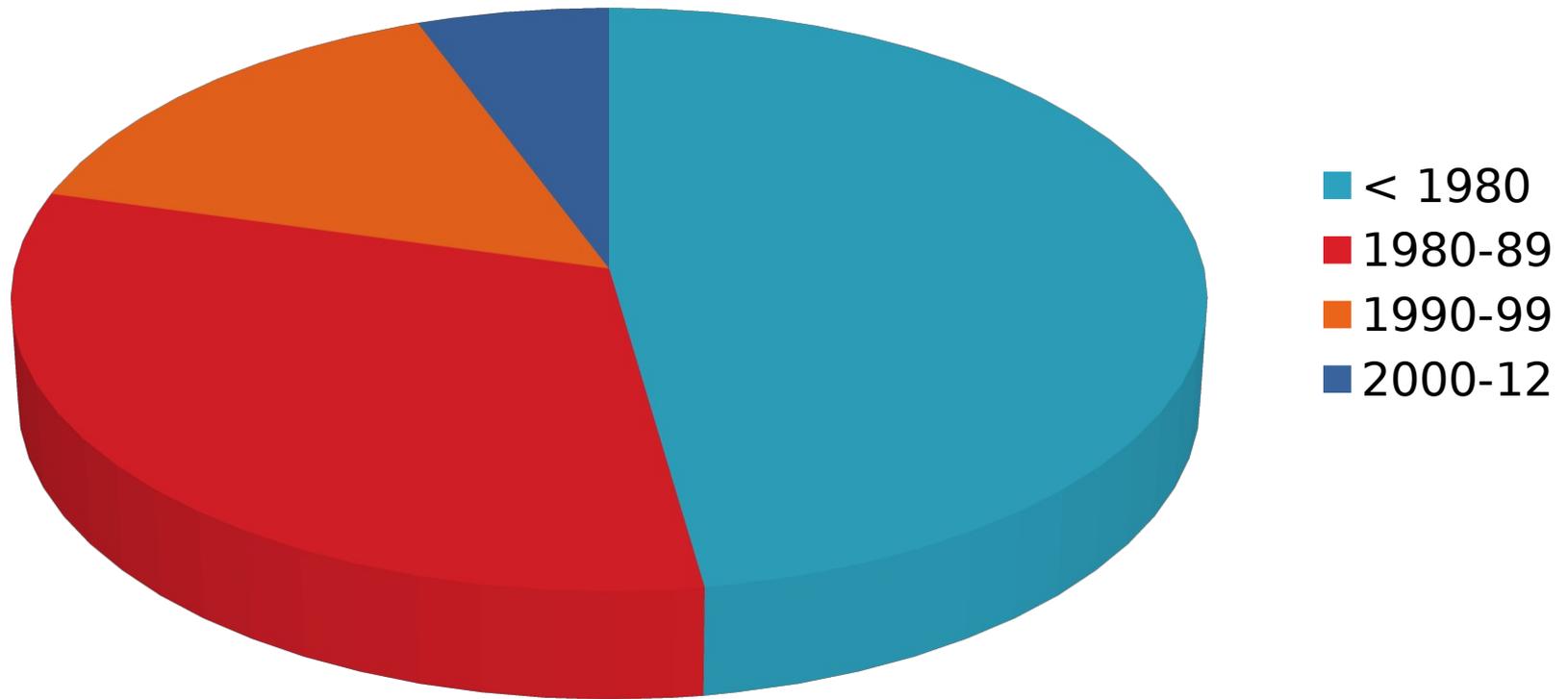
# Lake District Statewide

- ▶ Make up about 22% all lake groups (183/798)



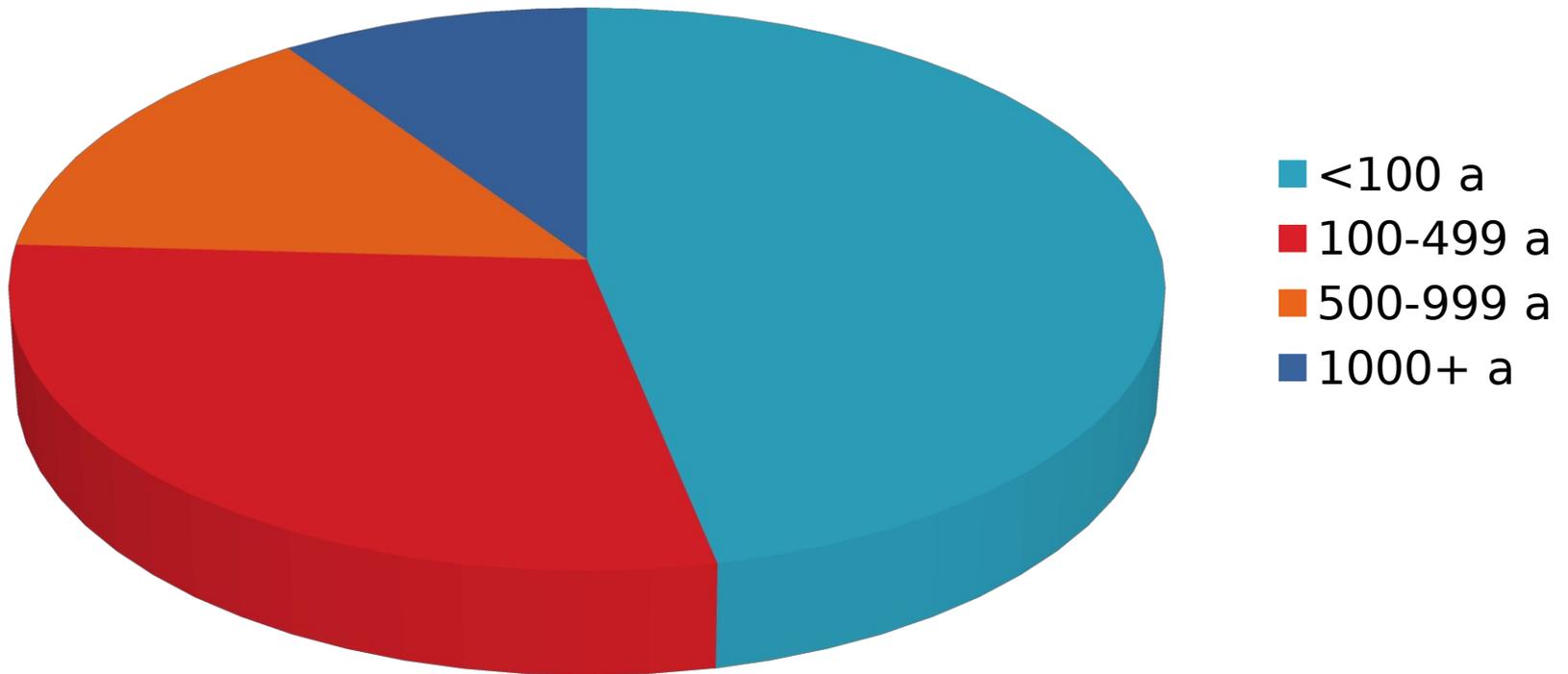
# Wi. LD- Year of Formation

## Lakes



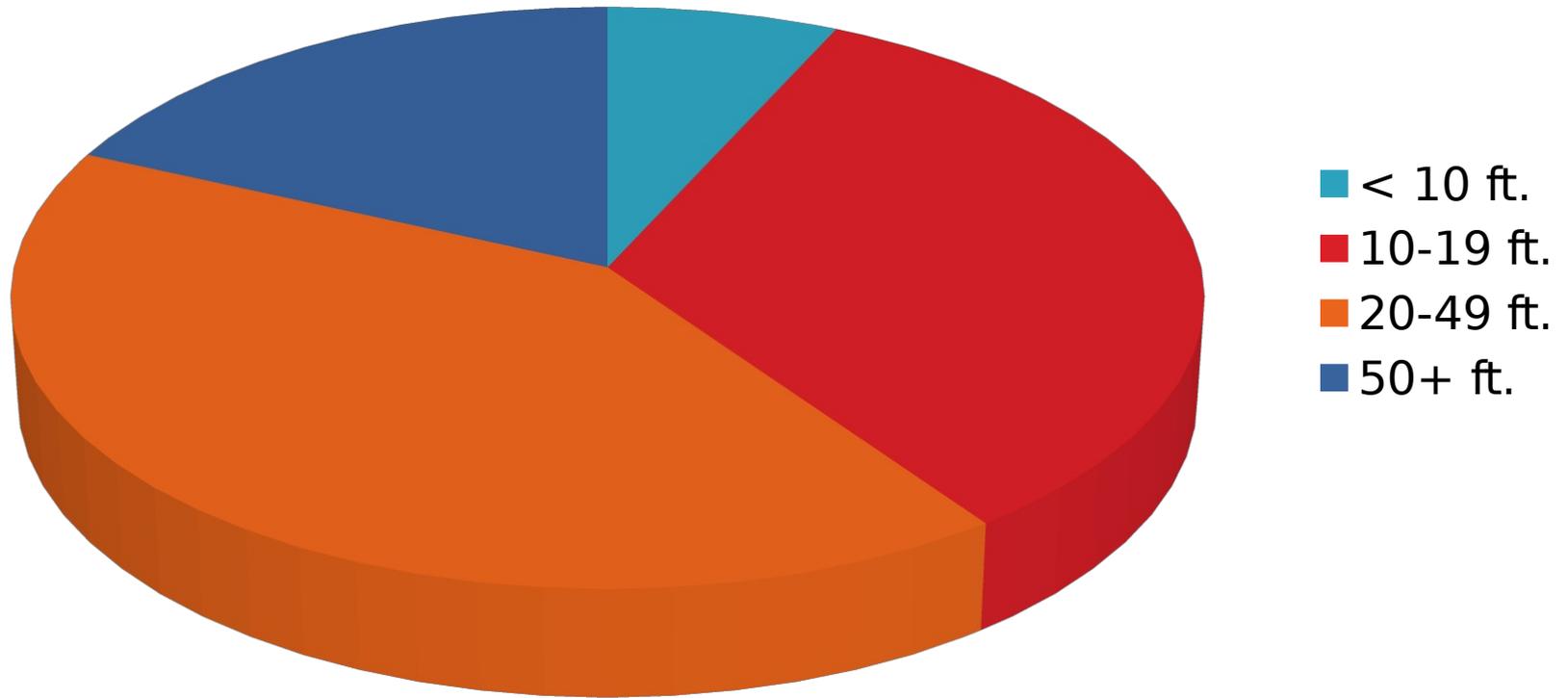
# LD Statewide-Lake Size

## Lakes

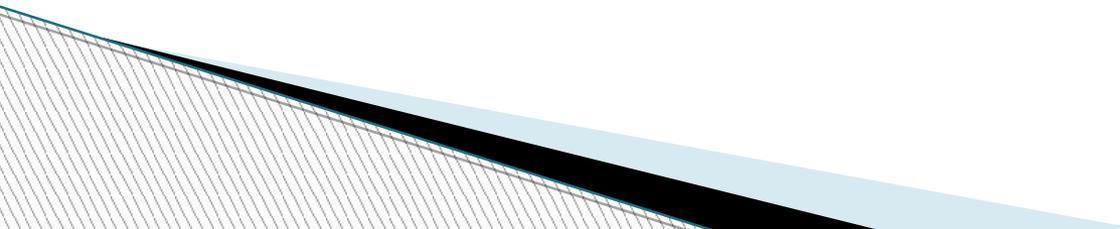


# Wi. LD- Depth

## Lakes



# The LDQ- Front End

- ▶ Sent out 103 (55%)
  - ▶ Got back 41 (40%/22%)
  - ▶ 1-20 week return time, averaged 3 weeks
  - ▶ 36% got additional follow-up
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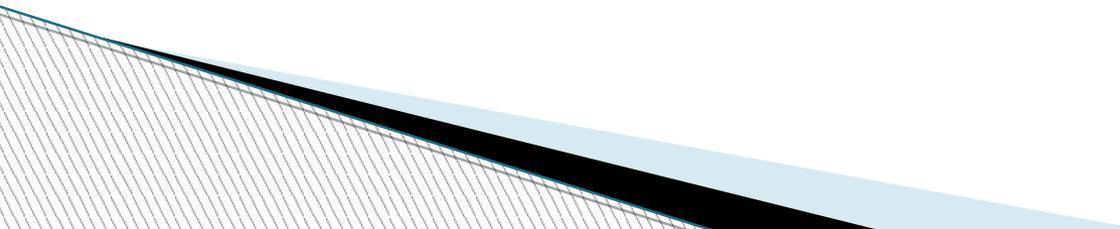
# LD Taxes

	<b>Tax-Payers /lake</b>	<b>Mil Rate</b>	<b>Tax Revenue</b>	<b>Tax per Payer</b>	<b>% Lake Budget Generated</b>
Mean	770	0.55	\$104T	\$95	62%
Range	40-5300	.05-3.5	\$1T-2.2M	\$0-700	50-100%

# LD Worth it?

- ▶ YES, definitely - 70%
- ▶ YES, with reservations-5%
- ▶ No Alternative- 5%
- ▶ No response- 20%
- ▶ Definitely NOT- NONE

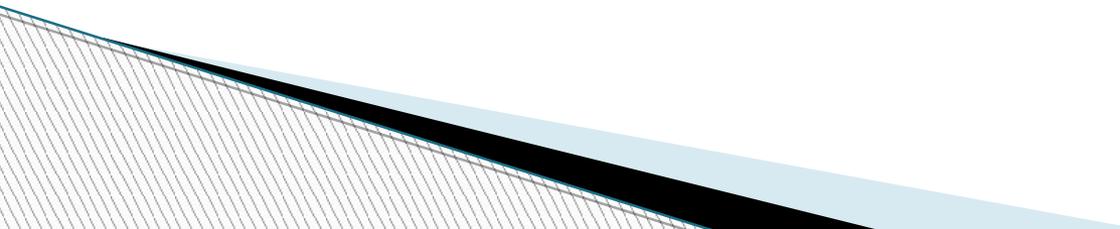
“It’s only Rock n’ Roll...But I  
Liiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiike it!



# LD- Could it be done NOW?

- ▶ Probably NOT- 10%
- ▶ Not sure- 20%
- ▶ Probably, YES- 10%
- ▶ No response- 60%
- ▶ Definitely, YES- NONE

“Welcome to the Tea Party!”



# LD Tax Burden Matrix

Taxpayers	\$100T	\$200T	\$400T	\$800T
650	\$150	\$300	\$600	\$1200
2000	\$50	\$100	\$175	\$350
4000	\$25	\$50	\$90	\$180
16000	\$6	\$12	\$46	\$92

# LD Selling Points

- ▶ How else?
- ▶ Local Control
- ▶ Grant share priority
- ▶ Low interest loans
- ▶ Works for others
- ▶ Suited to watershed
- ▶ Nonresident Power
- ▶ Anti-Govt.
- ▶ Anti-Tax
- ▶ Unfair burden
- ▶ Too Expensive
- ▶ Poor fit individual lake focus
- ▶ A lot of work
- ▶ Other Alternatives?
- ▶ Nonresident Power?

PRO

CON

# LD Recommendation

- ▶ We can probably self-fund for now
  - ▶ LD on a one lake basis- NO
  - ▶ Longterm? It makes sense on a watershed basis.
  - ▶ **Summary Conclusion:** Alum, Spawning Habitat, Future Watershed LD
- 