


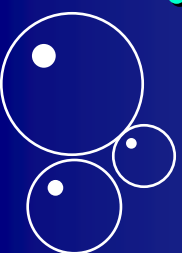

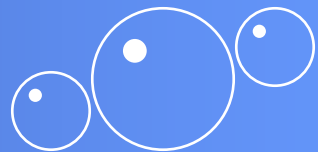





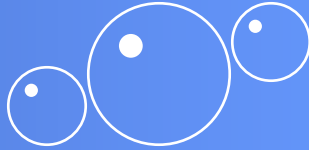


LMA WATER QUALITY MONITORING PROGRAM

- Began planning process in early January 06
 - Met with DHEC Jan. 18 to discuss & get ideas for formulating plan.
 - Initially plans were to focus on monitoring for fecal coliform and total phosphorus in coves.
 - Five different cove types were identified for monitoring.
 - Nine coves are currently being monitored on a monthly basis.
- 
- 
- 
- 
- 
- 



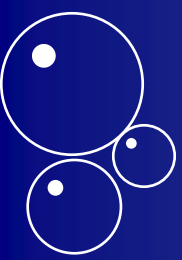

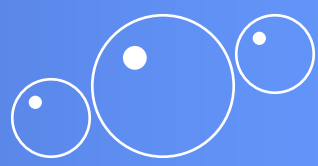


COVE TYPES

- TYPE I: Densely populated cove on septic/drain fields.
 - TYPE II: Reference cove undeveloped and sparsely populated.
 - TYPE III: Cove with marina(s)
 - TYPE IV: Agricultural watershed drains into cove.
 - TYPE V: Cove targeted for multi unit housing with accompanying docks/marina.
- 
- 
- 
- 



SAMPLE COLLECTION

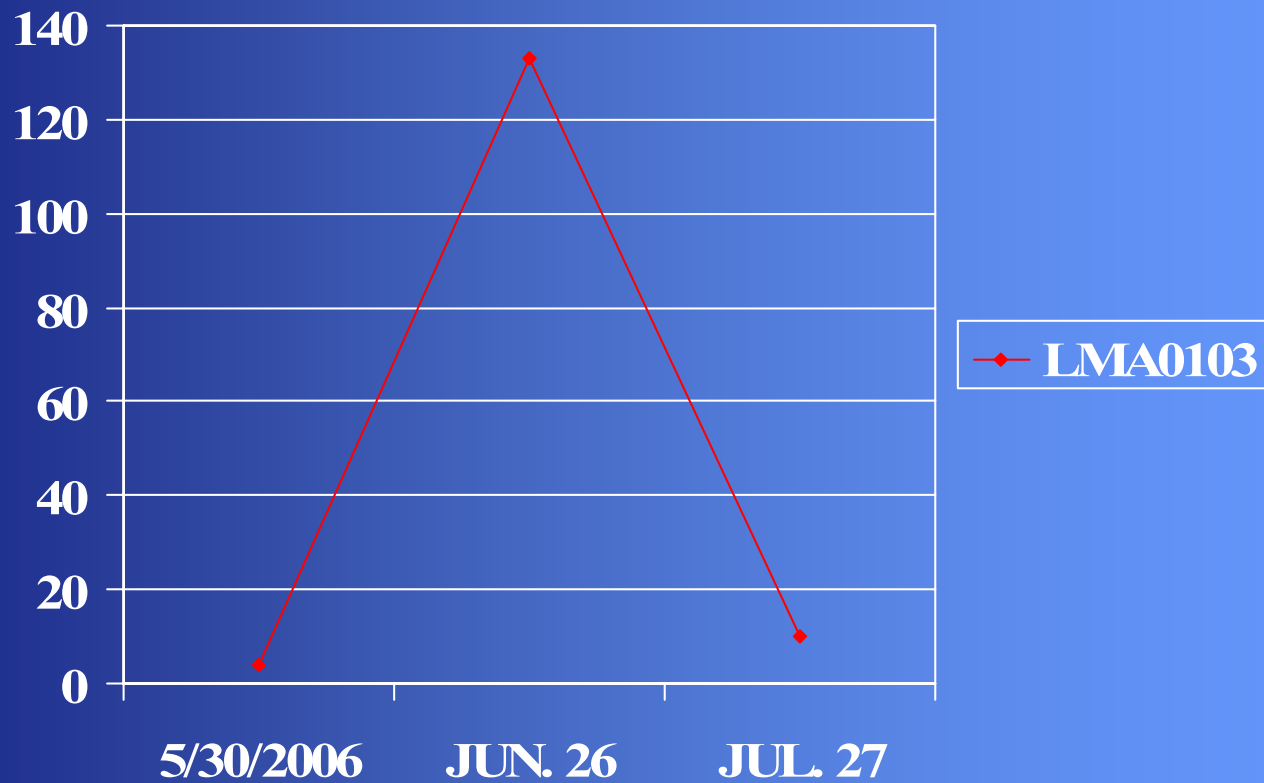
- LMA representative accompanied DHEC when they were collecting water samples to observe and learn from their sample collecting techniques.
 - LMA developed a protocol for collecting water samples.
 - Samples are placed on ice when collected & transported to the lab. within 6 hours of collection.
 - Chain-of-custody forms are carefully filled out and go with the samples to the laboratory.
 - Sample collection logs are maintained for each collection site.
 - Samples are analyzed by Data Resources Inc., a DHEC certified laboratory.
 - We maintain frequent contact with DHEC and share our results with them.
- 
- 
- 
- 
- 

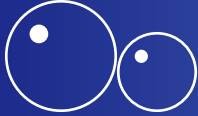
FECAL COLIFORM

COVES	May 30	June 26	July 27
LMA 0101	BDL	8	25
LMA 0102	2 est.	23	BDL
LMA 0103	4 est.	133	10
LMA 0104	7	14 est.	4 est.
LMA 0201	BDL	Not Sampled	Not Sampled
LMA 0301	BDL	40	23
LMA 0302	38	4 est.	10
LMA 0401	10 est.	5	5
LMA 0501	7	4 est.	40

BDL = Below Detectable Level

FECAL COLIFORM



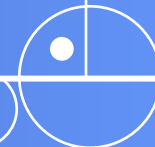


TOTAL PHOSPHORUS mg/l

COVES	May 30	June 26	July 27
LMA 0101	BDL	BDL	0.53
LMA 0102	BDL	BDL	0.11
LMA 0103	BDL	BDL	0.05
LMA 0104	BDL	BDL	0.15
LMA 0201	BDL	Not Sampled	Not Sampled
LMA 0302	BDL	BDL	0.10
LMA 0301	BDL	BDL	0.47
LMA 0401	BDL	0.14	0.10
LMA 0501	BDL	BDL	0.07




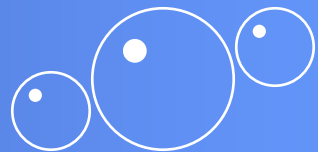


BDL = Below Detectable Level







DISSOLVED OXYGEN

- Nothing brings more concern about water quality than fish kills.
 - Summer/late summer fish kills are often the result of insufficient dissolved oxygen.
 - There is good documentation that high phosphorus levels contribute to low dissolved oxygen levels.
 - Phosphorus contributes to algae growth.
 - In deep water algae die and decompose lowering oxygen levels.
- 
- 
- 
- 



LAKE ERIE PHOSPHORUS/DO RELATIONSHIPS

1 “In general, less phosphorus in the water in the spring will result in fewer algae growing, which in turn means less organic matter to decompose. Less decomposition activity would take less dissolved oxygen from the water. As a result of phosphorus control programs, we could expect that the severity of oxygen depletion, the duration of the minimum oxygen levels and the amount of the Central Basin area affected would all be reduced.”



1 US EPA Dissolved Oxygen Depletion in Lake Erie



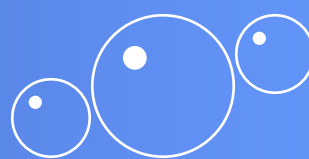


LMA's DESIRE IS TO LOWER POLLUTANTS COMING INTO THE LAKE

- Identify most prominent entry points and contributors to **ABOVE STANDARD** phosphorus levels.
- Educate home owners on proper lawn fertilization.
- In general, centipede lawns do not need phosphorus.
- Educate home owners on the need to establish buffer zones between the lake and maintained landscape.



LMA NEEDS TO EXPAND OUR WATER QUALITY MONITORING PROGRAM

- We will begin monitoring for chlorophyll-a at all sample sites where phosphorus exceeds the freshwater standard of 0.06 mg/l.
 - We would like to purchase 3 Eureka Multiprobes which will allow us to monitor for:
 - Temperature
 - Dissolved Oxygen
 - PH
 - Conductivity
 - Depth
- 
- 
- 
- 