

# ***CROSSGATES LAKE***

## **Lake Front Property Owner Discussion**

**May 14, 2015**

# AGENDA

1. Welcome / Introduction
2. Statement of Problem
3. Recommended Action
4. Questions / Discussion
5. Property Owner Opinion

# Crossgates Lake

***--- 3 out of last 5 Years ---  
FISH KILLS***

**2010, 2011, 2014**

# Lake Front Owner Discussion





# Lake Front Owner Discussion



# Lake Front Owner Discussion



## Wildlife officials respond to dead fish in Brandon lake

**Posted: Aug 04, 2010 5:26 PM CDT**

Wednesday, August 4, 2010 6:26 PM EDT

Feb 18, 2013 3:30 PM CST

Monday, February 18, 2013 4:30 PM EST

BRANDON, MS (WLBT) – Wednesday told you how the extreme heat caused fish to die at Crossgates Lake in Brandon. Thousands of fish came floating to the surface gasping for air.

They died from a lack of oxygen in the water.

Thursday spoke with the Mississippi Department of Wildlife Fisheries and Parks.

They say it's common to see fish kills in the lake every year.

"I think it's probably a design problem that is too shallow, and when the water gets real hot it has less capacity to hold oxygen and the fish are using more oxygen," said Fisheries Coordinator Dennis Riecke.

Riecke said he believes the best solution would be to aerate the water or use a recirculating system.

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# Lake Front Owner Discussion

BRANDON, MS (Mississippi News Now) -

A WLBT viewer called 3 On Your Side to express concerns about a certain species of ducks dying at the Crossgates Lake community in Brandon.

Betty Owens was frustrated after getting nowhere with officials. We checked it out. Crossgates Lake is home to a number of geese and duck species. It was clearly noticeable only one species, Muscovy ducks, were susceptible to a deadly plight.

We found a baby duck and female in a thicket. Owens says they had not moved or eaten since Saturday. Carcasses of young and adult ducks littered the shoreline.

The Crossgates resident said the problem started about one month ago. "We saw dead mother ducks with dead baby ducks, part of them were dead part alive. One had 13," said Owens. "There were probably 15 with another one and we probably seen 6 or 7 mother ducks with baby ducks around them."

Brandon Mayor Tim Coulter said a diagnostic laboratory tested one animal and discovered botulism. The Mayor says droppings of geese and other ducks is believed to be the culprit. Due to the drought, there has been no rain to cleanse the area.

Following our call to the USDA, officials said they will run tests. Last year, Brandon passed an ordinance against feeding wild ducks and geese.

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## Dead and dying ducks at Crossgates Lake



# Mississippi: Scores of Fish Found Dead in Crossgates Lake in Brandon.

“BRANDON — Scores of dead fish floated in Crossgates Lake Friday, permeating the air with the stench of decay in an almost identical scenario as one that played out last summer.

‘I don’t know what’s going on with that lake,’ said Dennis Riecke, fisheries coordinator with the state Department of Wildlife, Fisheries and Parks. ‘They have fish kills there just about every year.’

A fish kill refers to large quantities of fish dying for any number of reasons, including low water levels and decreased oxygen levels in the water.

‘Crossgates Lake appears to have experienced a ‘turn over’ following heavy rains on Tuesday night,’ said Robbie Wilbur, spokesman for Mississippi Department of Environmental Quality. ‘Many lakes, especially in the South, stratify into layers during the summer months. When this happens, the top layer is made up of warm oxygenated water, and the lower layer is cool water, often with little or no oxygen.’”



## More Dead Fish in Brandon, Mississippi

July 11, 2011

ClarionLedger.com (excerpts): , MS - Scores of dead fish floated in Crossgates Lake on Friday, permeating the air with the stench of decay in an almost identical scenario as one that played out last summer. "I don't know what's going on with that lake," said Dennis Riecke, Fisheries Coordinator with the State Department of Wildlife, Fisheries and Parks. "They have fish kills there just about every year." fish kill refers to large quantities of fish dying for any number of reasons, including low water levels and decreased oxygen levels in the water. "Crossgates Lake appears to have experienced a 'turn over' following heavy rains on Tuesday night," said Robbie Wilbur, spokesman for Mississippi Department of Environmental Quality. "Many lakes, especially in the South, stratify into layers during the summer months. this happens, the top layer is made up of warm oxygenated water and the lower layer is cool water, often with little or no oxygen." said a thunderstorm's high winds, mixed with cool rain and run off into the lake, can cause a turn over, which in turn can dilute available oxygen to the point where fish can no longer survive. "That appears to be what happened in the Crossgates Lake fish kill," he said. Alderwoman Yvonne Bianchi lives off the lake and she said the fish kill wasn't a surprise with the current hot weather. "Every time it's extremely dry, we have the same problem," Bianchi said, adding last year's fish kill occurred in similar conditions. "If the lake was aerated, we wouldn't have this problem." said she drove across the lake on Friday to view some of the areas where the dead fish were floating. "There were buzzards eating the dead fish and a dead duck on that side," she said. DEQ officials are looking into a similar event that hit portions of Deer Creek in the Mississippi Delta Wednesday. "Deer Creek is experiencing extremely low water levels due to the drought and is probably exacerbated by irrigation withdrawals," Wilbur said.



# Lake Front Owner Discussion

RANKIN COUNTY NEWS, BRANDON, MS

WEDNESDAY, **AUGUST 6, 2014**, SECTION 2, PAGE 5

RANKIN COUNTY NEWS, BRANDON, MS, WEDNESDAY, AUGUST 6, 2014, SECTION 2, PAGE FIVE



**VULTURES ENJOY DEAD FISH** - Last week, dead fish filled the Crossgates Lake. This fish kill happens every few years when the lack of oxygen in the lake water causes the fish to die. Reaping the results of the fish kill are the smelly dead fish floating in the lake and the vultures eating the spoils as the dead fish wash to the banks of the lake. Another result of the fish kill is the smell of dead fish and the messed up sidewalks due to the vultures.

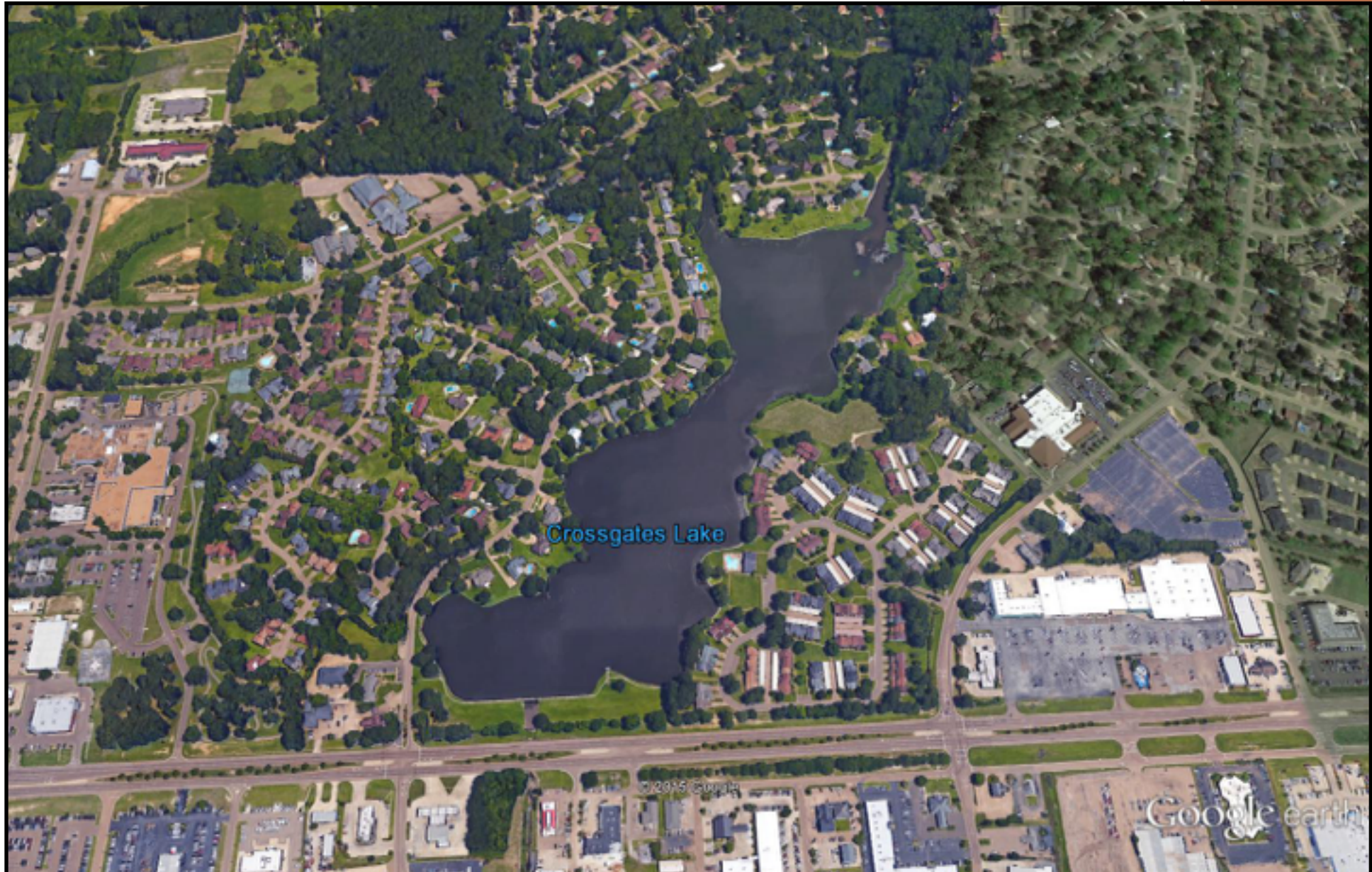


## Lake Front Owner Discussion

# INFORMATION SOURCES

1. **MDEQ**
2. **MDWFP**
3. **CORP OF ENGINEERS**
4. **MS SOIL / WATER CONS. COMM.**
5. **USDA - NRCS**
6. **USM - MSU EXT. SERVICES**

# Lake Front Owner Discussion





# Lake Front Owner Discussion

**March 30  
2002**

Satellite Imagery





# Lake Front Owner Discussion

**March 30  
2003**

Satellite Imagery





# Lake Front Owner Discussion

October 3  
2004

Satellite Imagery



Partially Drained Lake  
for Levee Repair



# Lake Front Owner Discussion

March 3  
2006

Satellite Imagery





**September 19  
2007**

## Satellite Imagery

September 19  
2007

Satellite Imagery

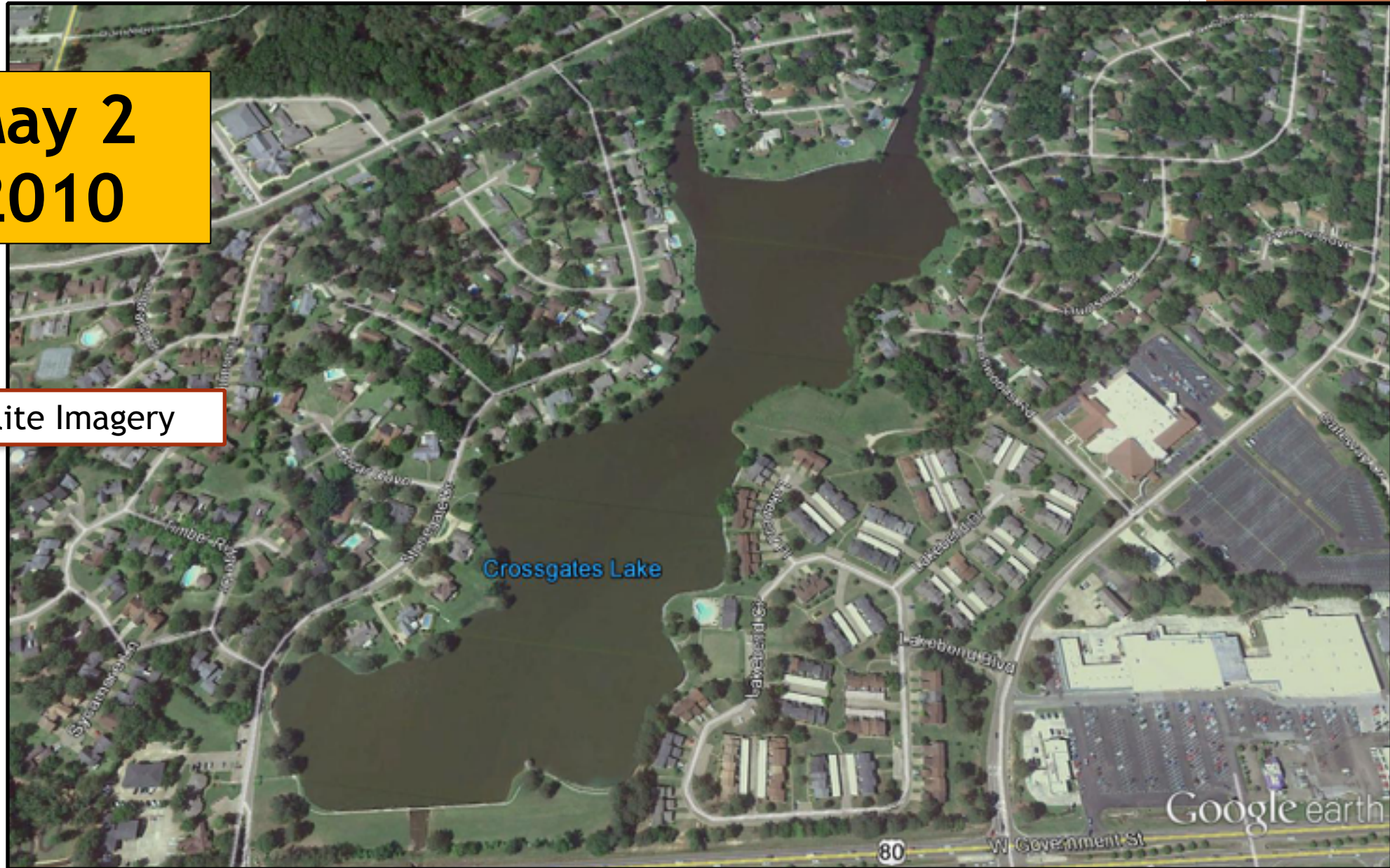
This satellite image shows Crossgates Lake, a large body of water in the center. The lake is surrounded by dense green trees and some residential areas. To the right of the lake, there are several large, light-colored buildings, likely industrial or commercial. A road labeled 'W Government St' runs along the bottom right. The image is labeled 'Crossgates Lake' in blue text. The date 'September 19 2007' is displayed in a yellow box in the top left corner. The text 'Satellite Imagery' is in a white box with a red border on the left. The 'Google earth' logo is in the bottom right corner. A small text at the bottom center reads 'Image USDA Farm Service Agency'. A road sign for '80' is visible at the bottom.



# Lake Front Owner Discussion

May 2  
2010

Satellite Imagery

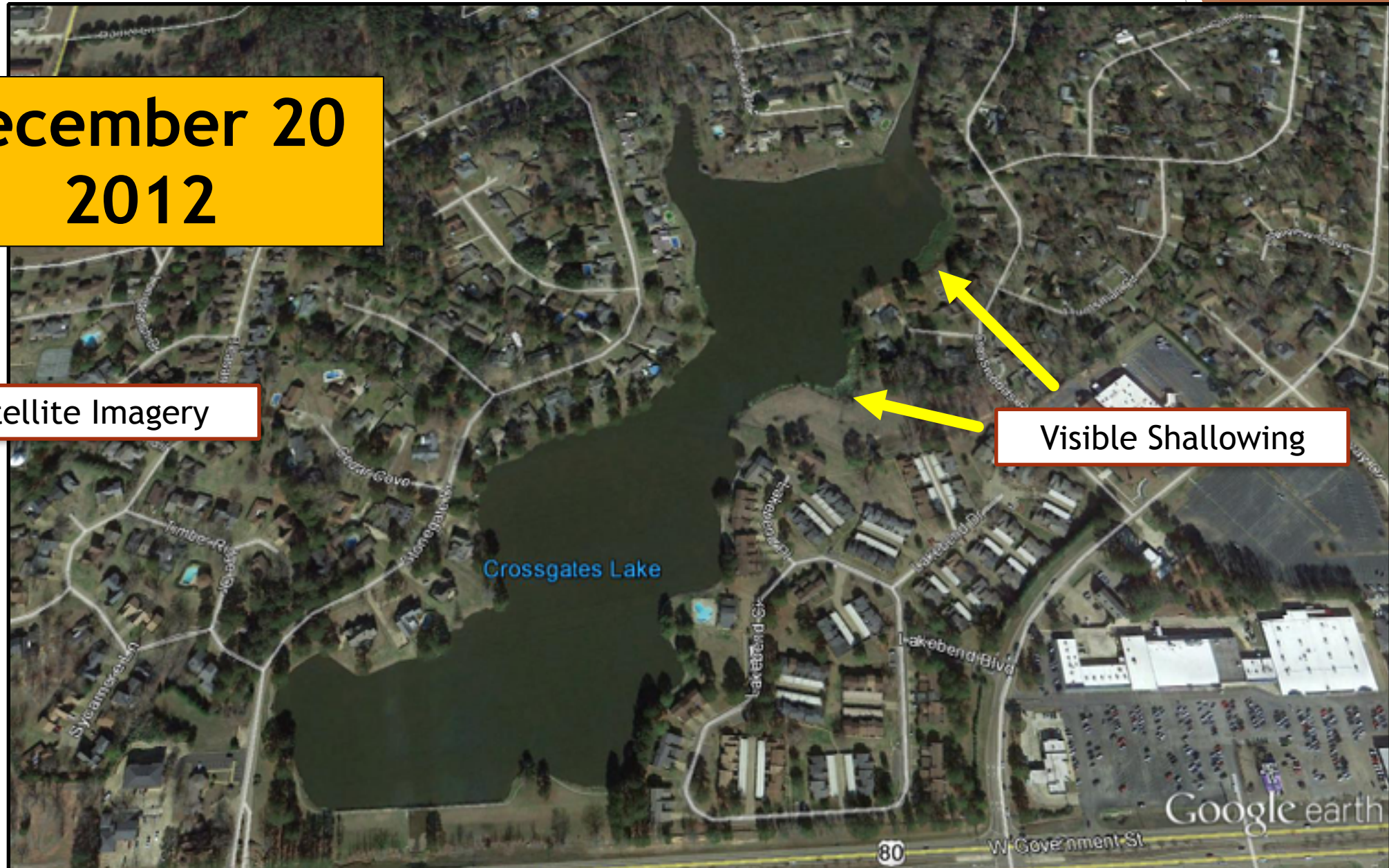




# Lake Front Owner Discussion

**December 20  
2012**

Satellite Imagery





# Lake Front Owner Discussion

January 24  
2014

Satellite Imagery





# Lake Front Owner Discussion

**April 9  
2014**

Satellite Imagery

Visible Shallowing





# Lake Front Owner Discussion





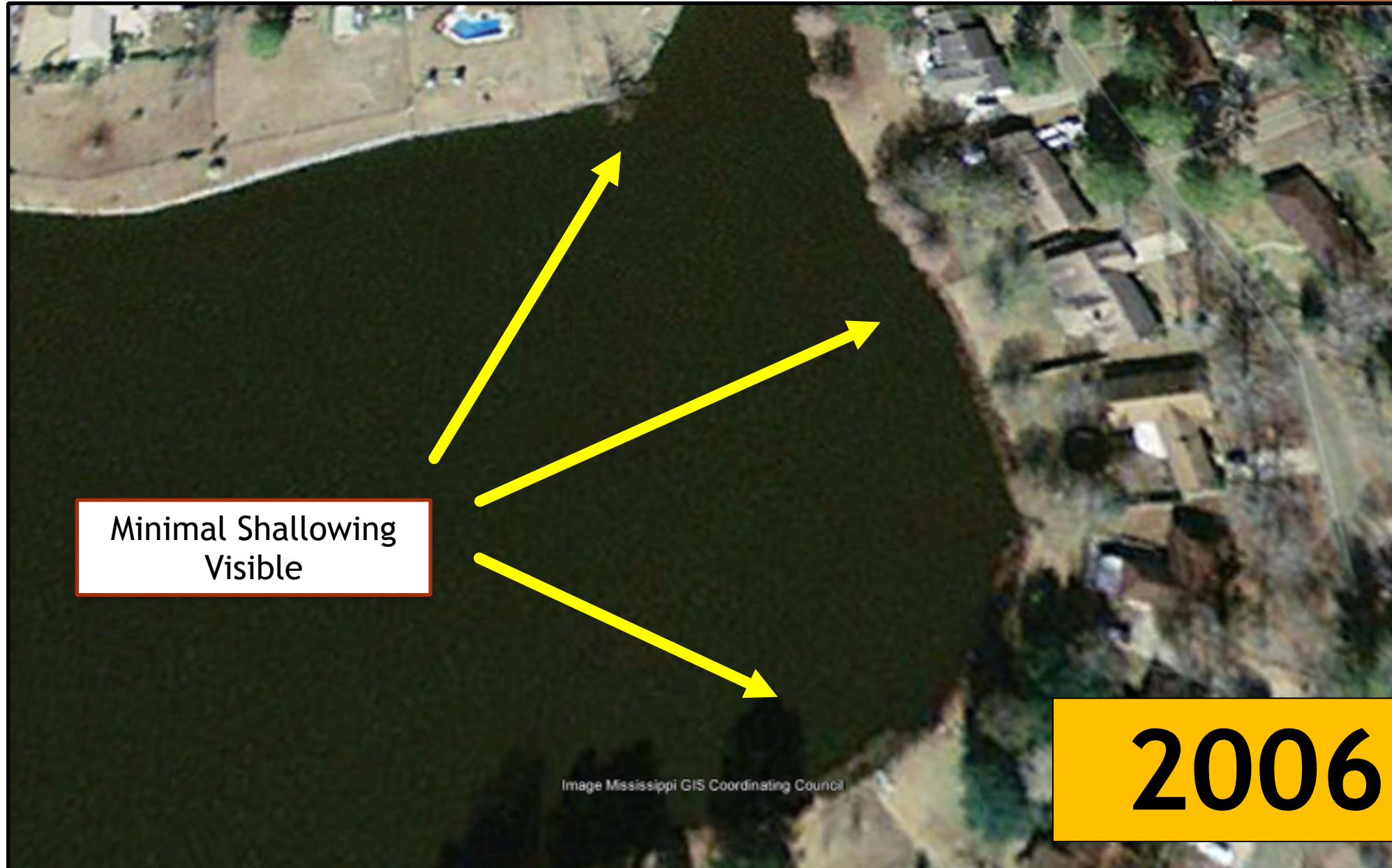
# Lake Front Owner Discussion



Sedimentation Fields

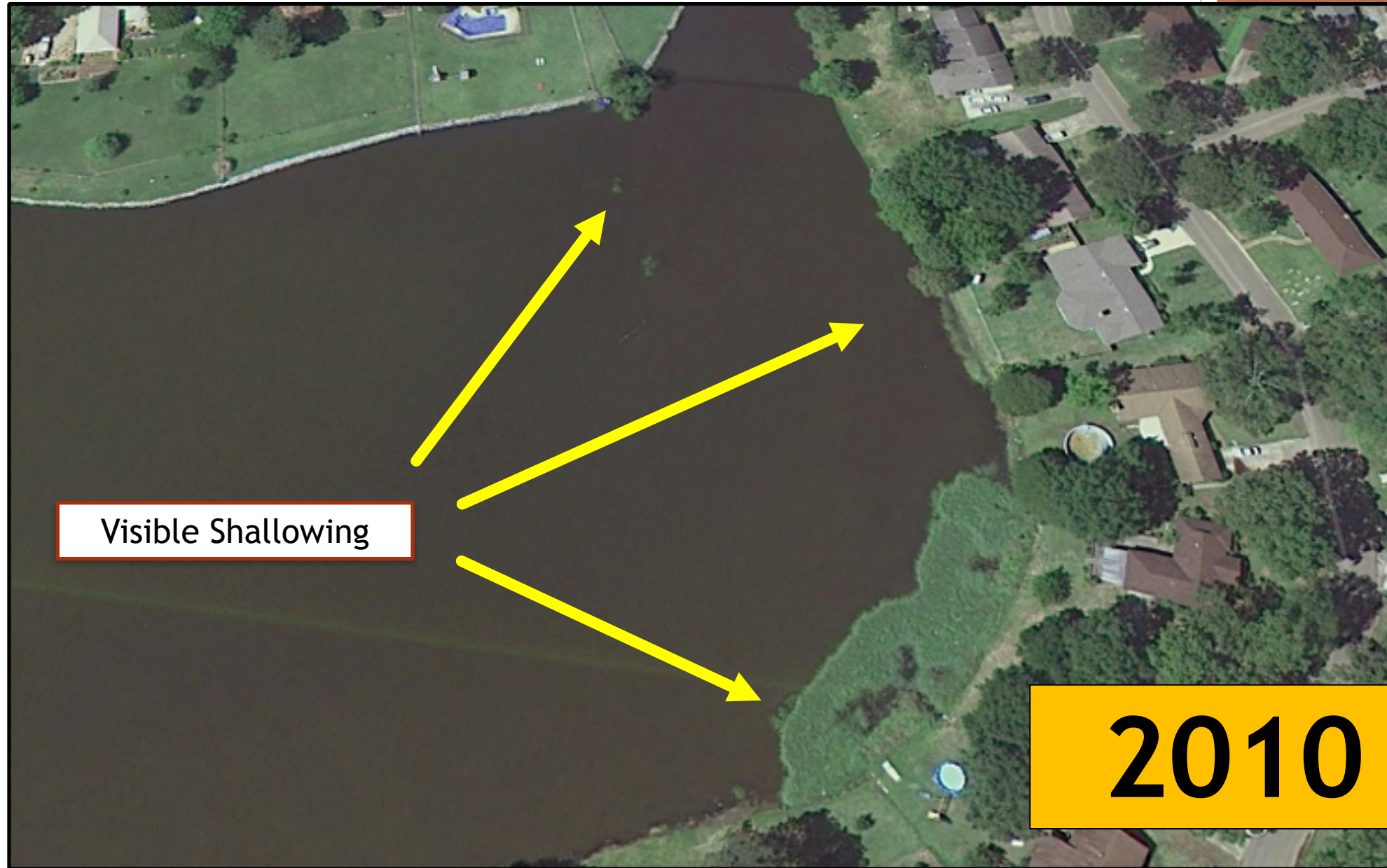
2004

# Lake Front Owner Discussion



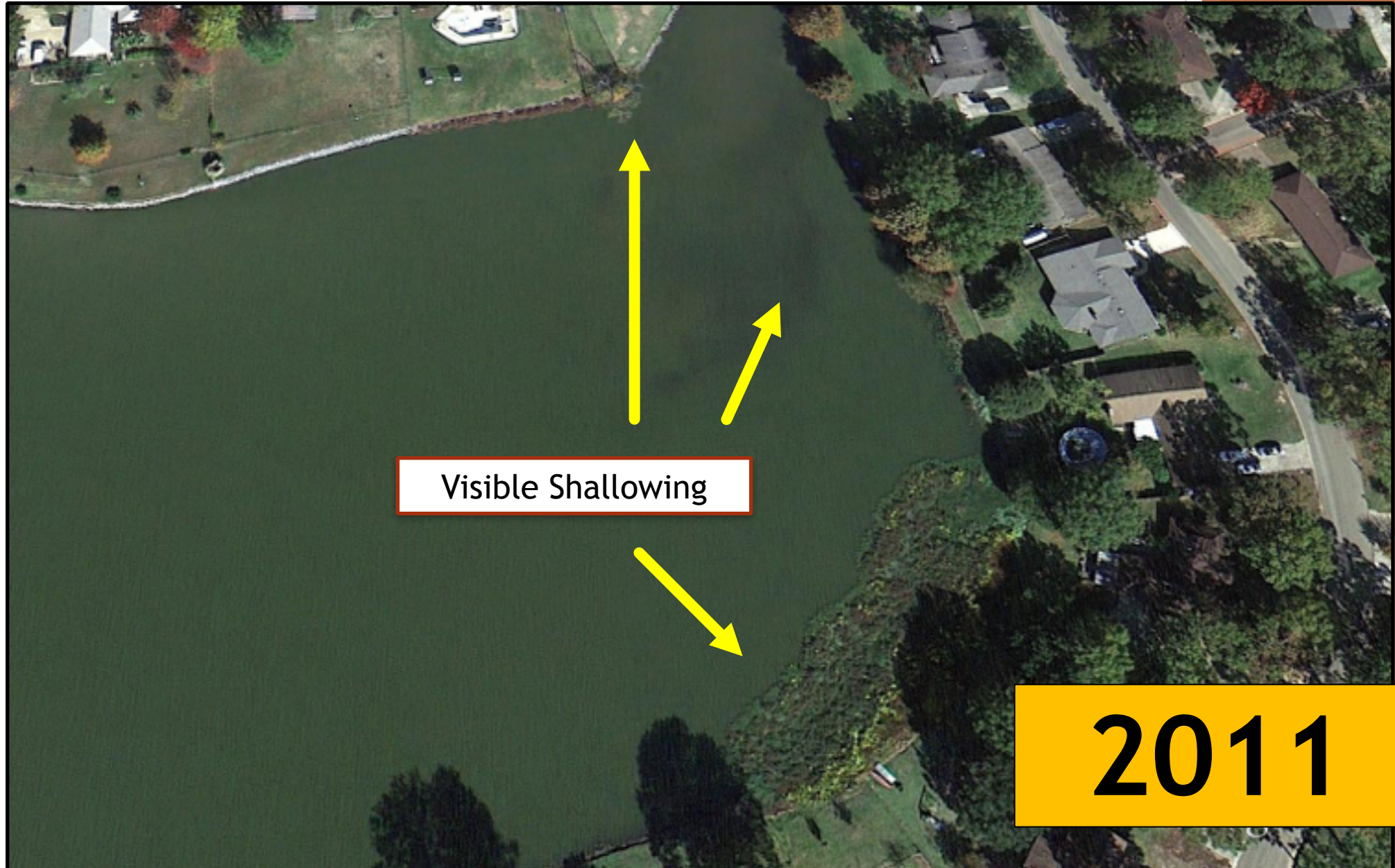


# Lake Front Owner Discussion





# Lake Front Owner Discussion

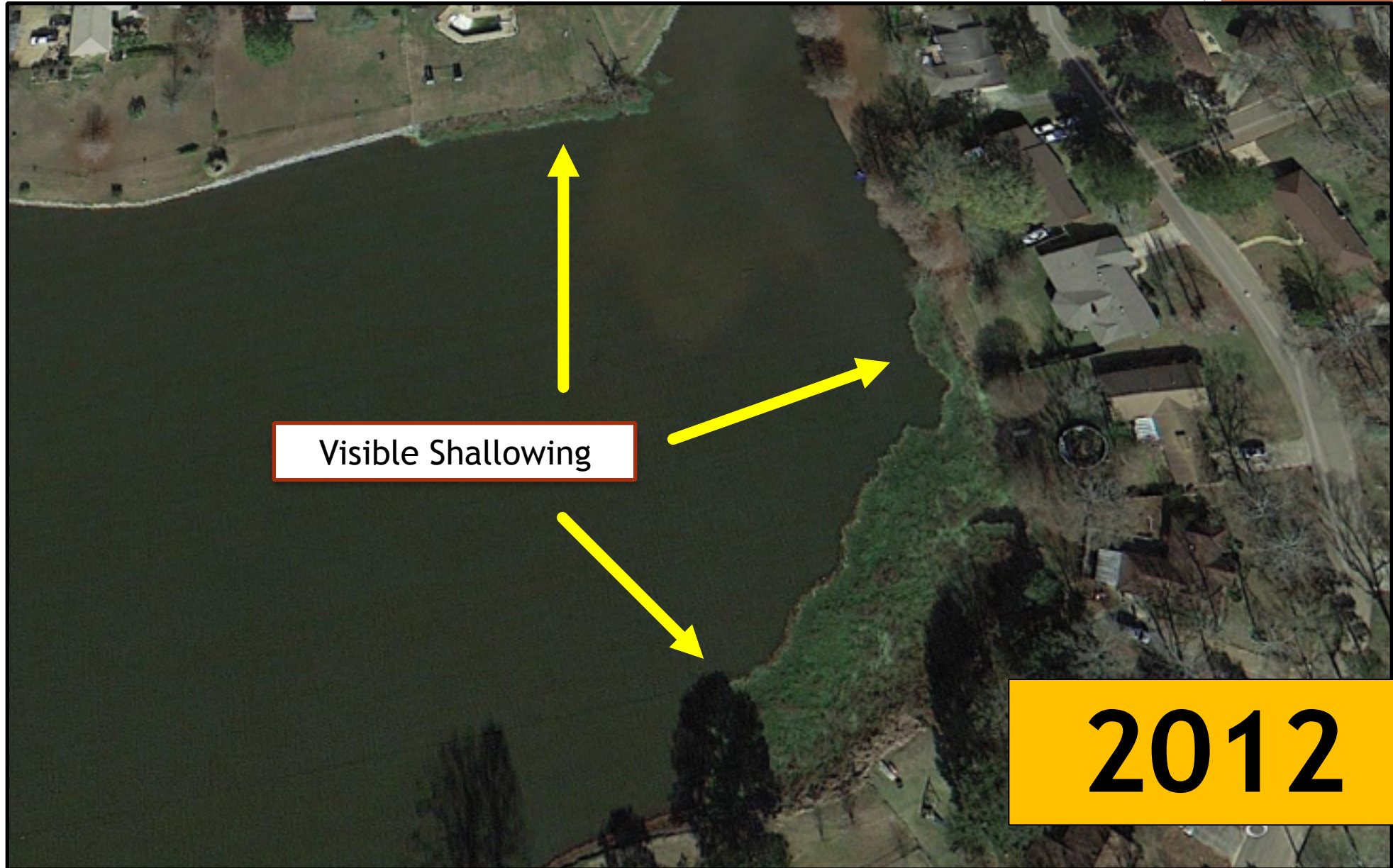


Visible Shallowing

2011

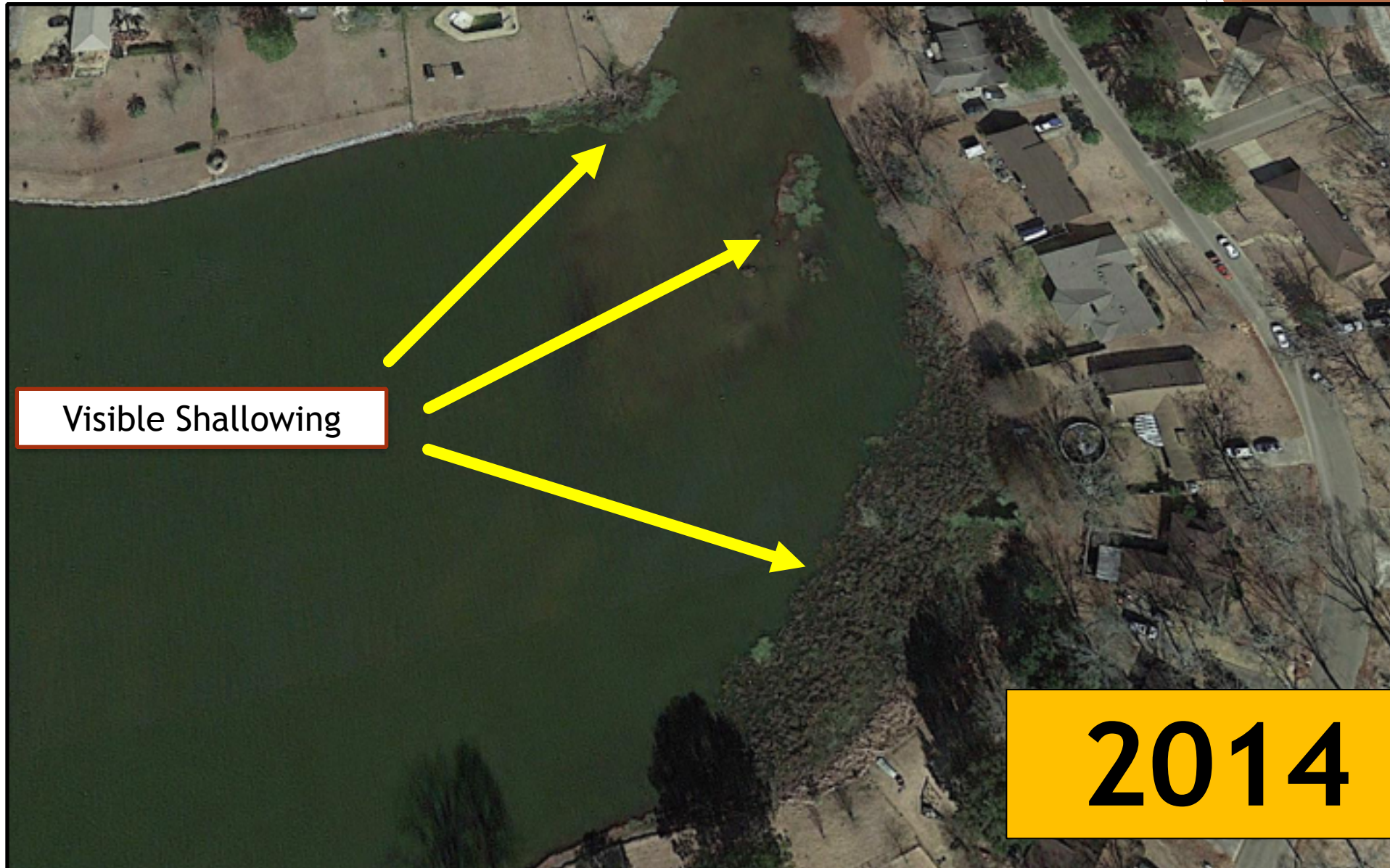


# Lake Front Owner Discussion





# Lake Front Owner Discussion





# Lake Front Owner Discussion



**2006**

**2015**



**VISIBLE CHANGE FROM  
2006 TO 2015**



# Lake Front Owner Discussion

FACEBOOK  
POST  
THURSDAY  
MAY 14, 2015





# STATEMENT OF PROBLEM

1. Sedimentation
2. Vegetation
3. 500-750 acre drainage basin
4. Lack of bank control
5. Repetitive Fish Kills



## Lake Front Owner Discussion

# POSSIBLE SOLUTIONS

1. **Mechanical Aeration**
2. **Sub-Surface Spray System**
3. **Dredging w/ Barge**
4. **Mechanical Removal**



# RECOMMENDED ACTION

## Mechanical Removal

1. lower water level
2. allow time for drying
3. physically remove  
sedimentation/top soil

# Mechanical Removal

## 1. LOWER WATER LEVEL

- begin immediately to allow maximize drying time
- gain access to open channels
- small equipment to cut “bleeder” ditches



# Mechanical Removal

## 2. DRY SEDIMENTATION

- 10 months w/ a drought?
- 12 months w/ dry summer  
dry fall season?
- Recommendation:  
16 months/two summers

# Mechanical Removal

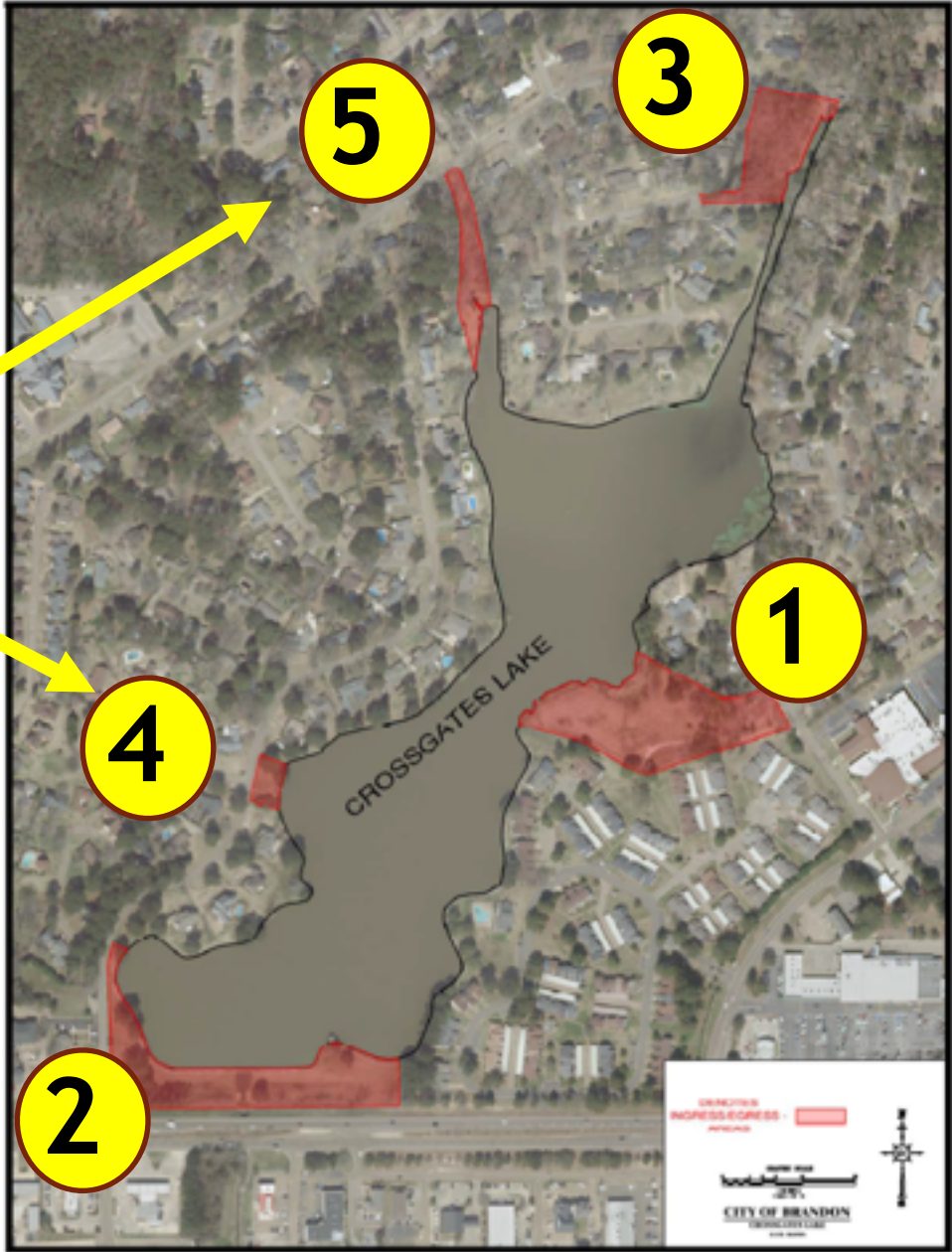
## 3. PHYSICALLY REMOVE

- must be dry enough for heavy equipment (i.e. - dozer, track hoe, dump trucks)
- must have time to work



# Lake Front Owner Discussion

Access Points



## Lake Front Owner Discussion

# GOALS:

1. **Remove sedimentation**
2. **Deepen 35-40% of lake bed**
3. **Remove vegetation**
4. **Open “bleeder” channels**
5. **Re-Establish Lake for 30 years**



## Lake Front Owner Discussion

**Thank you for  
your attendance  
and comments!**