

A landscape photograph of Lake Lawtonka. The lake is a deep blue color, reflecting the sky and the surrounding greenery. In the background, a large, rounded hill with a mix of green vegetation and brownish rock faces rises against a clear blue sky. The foreground is partially obscured by dark green trees and bushes.

# Lake Lawtonka

**Upwelling anomalies and related fish kills**

# Lawtonka Quick Facts

- State's oldest reservoir- 1905
- High recreational and water supply uses
- Impounds Medicine Cr. in Wichita Mountains
- Eutrophic



**Dam raised in  
1909, 1918, 1937  
(WPA) and in  
1953**



**Sporadic  
outflows**



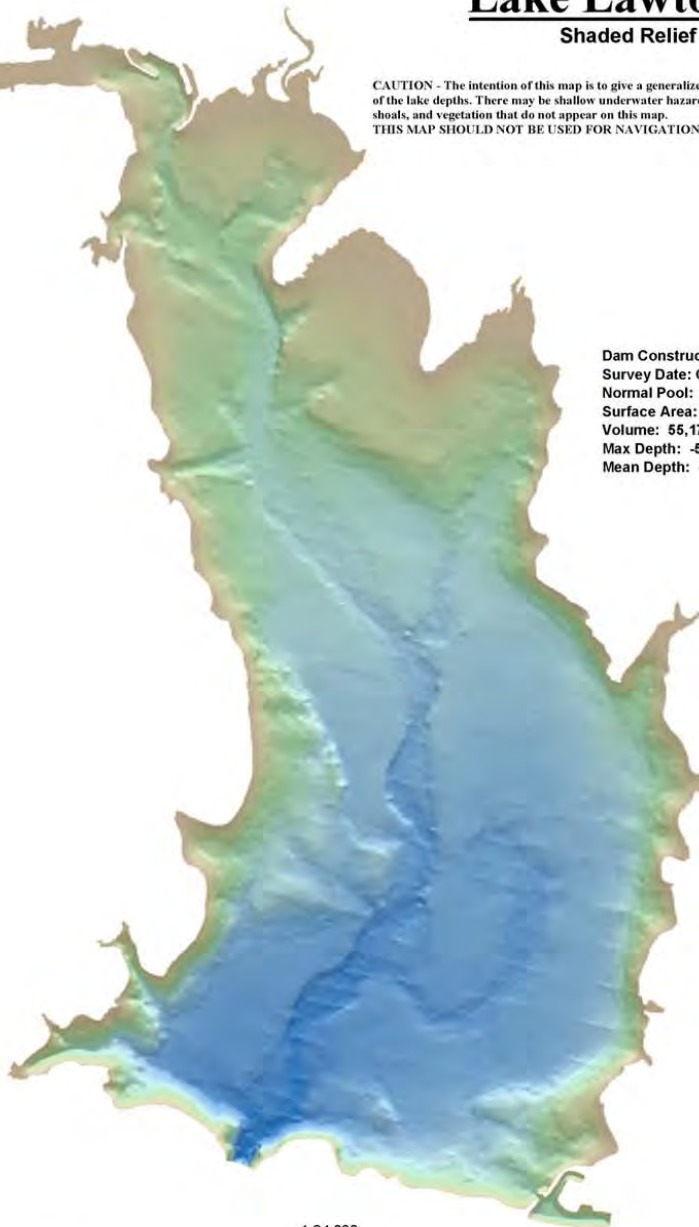
# Lake Lawtonka

Shaded Relief

CAUTION - The intention of this map is to give a generalized overview of the lake depths. There may be shallow underwater hazards such as rocks, shoals, and vegetation that do not appear on this map. THIS MAP SHOULD NOT BE USED FOR NAVIGATION PURPOSES.

Dam Construction: 1905  
Survey Date: October 2005  
Normal Pool: 1,343.35 ft  
Surface Area: 2,325 ac  
Volume: 55,171 ac-ft  
Max Depth: -58.4 ft  
Mean Depth: -23.6 ft

## Depth (Feet)



- 2400 acres

- Mean depth – 23 ft

- Maximum – 58 ft

Meers

Mt. Scott

Pipeline from Ellsworth

58

Medicine Park

Image © 2008 DigitalGlobe  
Image © 2008 TerraMetrics  
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Google







Dam



03.03.2011 16:19

**Intake**



**Gates**



03.03.2011 16:23









# Common Factors:

- Upwellings in late winter- crappie biting at dam
- After a north wind/ cold front (?)
- Mostly 12" drum
- With sediment
- Daytime
- Brief

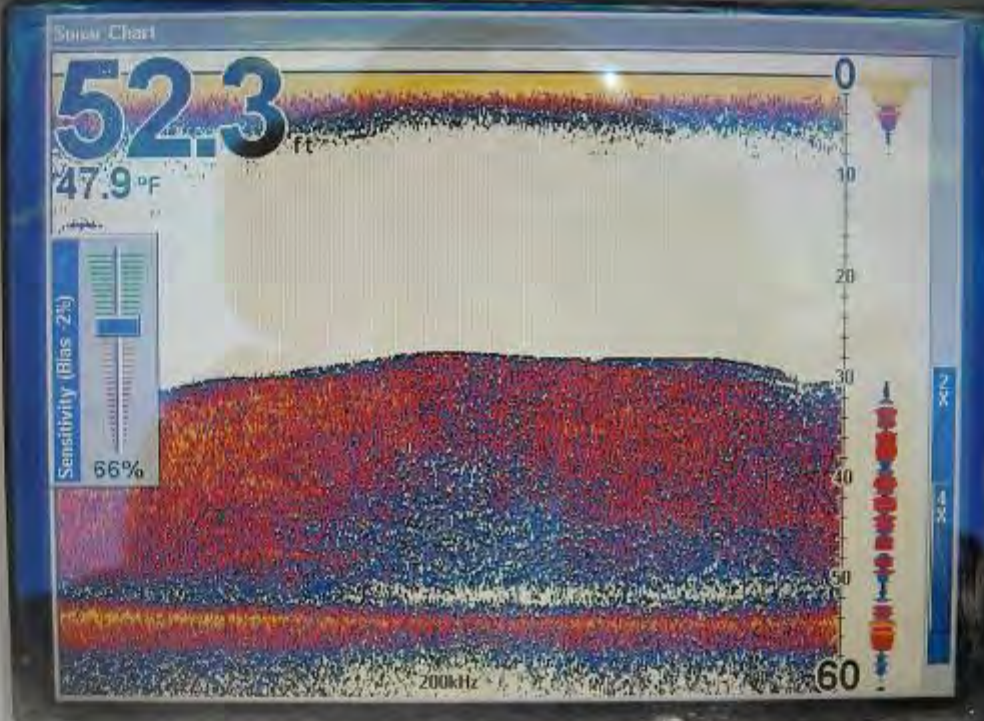






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# LOWRANCE



LCX-28c

ZOUT

ZIN

MOB

PAGES

WPT

MENU

EXIT

ENT  
ICONS

PWR  
LIGHT

03.03.2011 16:35



**Upwellings**



**Dam**



**Intake**



- No apparent water quality differences
- No other apparent fish health issues
- 12,000 fish in 2011- 2-3 upwellings
- 20,000 fish in 2004 - 5-6 episodes
- Summer mortalities also unexplained
- Significant concern



# Theories



Faults, springs, wells...

A scenic sunset over a large body of water, likely a lake or bay. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water's surface. In the background, a dark silhouette of a mountain or hill is visible against the sky. The foreground shows dark silhouettes of trees and foliage, suggesting the photo was taken from an elevated position. The overall mood is peaceful and serene.

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