

Possum Kingdom Lake

Segment: 1207 Brazos River Basin

Basin number:	12
Basin group:	D
Water body description:	From Morris Shepard Dam in Palo Pinto County to a point immediately upstream of the confluence of Cove Creek at Salem Bend in Young County, up to the normal pool elevation of 1000 feet (impounds Brazos River)
Water body classification:	Classified
Water body type:	Reservoir
Water body length / area:	19,800 Acres
Water body uses:	Aquatic Life Use, Contact Recreation Use, General Use, Fish Consumption Use, Public Water Supply Use

Additional Information: The aquatic life, contact recreation, public water supply and general uses are fully supported. The fish consumption use was not assessed.

2004 Concerns:			
Assessment Area	Use or Concern	Concern Status	Description of Concern
Bluff Creek arm of lake	Public Water Supply Concern	Concern	chloride
Bluff Creek arm of lake	Public Water Supply Concern	Concern	chloride in finished drinking water
Bluff Creek arm of lake	Public Water Supply Concern	Concern	increased costs due to demineralization
Bluff Creek arm of lake	Public Water Supply Concern	Concern	sulfate
Bluff Creek arm of lake	Public Water Supply Concern	Concern	sulfate in finished drinking water
Bluff Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids
Bluff Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Bluff Creek arm of lake	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Caddo Creek arm of lake	Public Water Supply Concern	Concern	chloride
Caddo Creek arm of lake	Public Water Supply Concern	Concern	chloride in finished drinking water
Caddo Creek arm of lake	Public Water Supply Concern	Concern	increased costs due to demineralization
Caddo Creek arm of lake	Public Water Supply Concern	Concern	sulfate
Caddo Creek arm of lake	Public Water Supply Concern	Concern	sulfate in finished drinking water
Caddo Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids
Caddo Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Caddo Creek arm of lake	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Deep Elm Creek arm	Public Water Supply Concern	Concern	chloride
Deep Elm Creek arm	Public Water Supply Concern	Concern	chloride in finished drinking water

2004 Concerns: Assessment Area	Use or Concern	Concern Status	Description of Concern
Deep Elm Creek arm	Public Water Supply Concern	Concern	increased costs due to demineralization
Deep Elm Creek arm	Public Water Supply Concern	Concern	sulfate
Deep Elm Creek arm	Public Water Supply Concern	Concern	sulfate in finished drinking water
Deep Elm Creek arm	Public Water Supply Concern	Concern	total dissolved solids
Deep Elm Creek arm	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Deep Elm Creek arm	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Downstream portion of lake	Public Water Supply Concern	Concern	chloride
Downstream portion of lake	Public Water Supply Concern	Concern	chloride in finished drinking water
Downstream portion of lake	Public Water Supply Concern	Concern	increased costs due to demineralization
Downstream portion of lake	Public Water Supply Concern	Concern	sulfate
Downstream portion of lake	Public Water Supply Concern	Concern	sulfate in finished drinking water
Downstream portion of lake	Public Water Supply Concern	Concern	total dissolved solids
Downstream portion of lake	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Downstream portion of lake	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Elm Creek arm of segment	Public Water Supply Concern	Concern	chloride
Elm Creek arm of segment	Public Water Supply Concern	Concern	chloride in finished drinking water
Elm Creek arm of segment	Public Water Supply Concern	Concern	increased costs due to demineralization
Elm Creek arm of segment	Public Water Supply Concern	Concern	sulfate
Elm Creek arm of segment	Public Water Supply Concern	Concern	sulfate in finished drinking water
Elm Creek arm of segment	Public Water Supply Concern	Concern	total dissolved solids
Elm Creek arm of segment	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Elm Creek arm of segment	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Jewell Creek arm of lake	Public Water Supply Concern	Concern	chloride
Jewell Creek arm of lake	Public Water Supply Concern	Concern	chloride in finished drinking water
Jewell Creek arm of lake	Public Water Supply Concern	Concern	increased costs due to demineralization
Jewell Creek arm of lake	Public Water Supply Concern	Concern	sulfate
Jewell Creek arm of lake	Public Water Supply Concern	Concern	sulfate in finished drinking water
Jewell Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids
Jewell Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Jewell Creek arm of lake	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	chloride
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	chloride in finished drinking water
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	increased costs due to demineralization

2004 Concerns: Assessment Area	Use or Concern	Concern Status	Description of Concern
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	sulfate
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	sulfate in finished drinking water
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	total dissolved solids
Portion of lake adjacent to northeast corner of state park	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Portion of lake adjacent to northeast corner of state park	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	chloride
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	chloride in finished drinking water
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	increased costs due to demineralization
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	sulfate
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	sulfate in finished drinking water
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	total dissolved solids
Portion of lake containing Costello Island	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Portion of lake containing Costello Island	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	chloride
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	chloride in finished drinking water
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	increased costs due to demineralization
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	sulfate
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	sulfate in finished drinking water
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	total dissolved solids
Portion of lake south of FM 2951	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Portion of lake south of FM 2951	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Portion of segment west of SH 16	Public Water Supply Concern	Concern	chloride
Portion of segment west of SH 16	Public Water Supply Concern	Concern	chloride in finished drinking water
Portion of segment west of SH 16	Public Water Supply Concern	Concern	increased costs due to demineralization
Portion of segment west of SH 16	Public Water Supply Concern	Concern	sulfate
Portion of segment west of SH 16	Public Water Supply Concern	Concern	sulfate in finished drinking water
Portion of segment west of SH 16	Public Water Supply Concern	Concern	total dissolved solids
Portion of segment west of SH 16	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Portion of segment west of SH 16	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga

2004 Concerns:			
Assessment Area	Use or Concern	Concern Status	Description of Concern
Rock Creek arm of lake	Public Water Supply Concern	Concern	chloride
Rock Creek arm of lake	Public Water Supply Concern	Concern	chloride in finished drinking water
Rock Creek arm of lake	Public Water Supply Concern	Concern	increased costs due to demineralization
Rock Creek arm of lake	Public Water Supply Concern	Concern	sulfate
Rock Creek arm of lake	Public Water Supply Concern	Concern	sulfate in finished drinking water
Rock Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids
Rock Creek arm of lake	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Rock Creek arm of lake	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga
Veale creek arm of segment	Public Water Supply Concern	Concern	chloride
Veale creek arm of segment	Public Water Supply Concern	Concern	chloride in finished drinking water
Veale creek arm of segment	Public Water Supply Concern	Concern	increased costs due to demineralization
Veale creek arm of segment	Public Water Supply Concern	Concern	sulfate
Veale creek arm of segment	Public Water Supply Concern	Concern	sulfate in finished drinking water
Veale creek arm of segment	Public Water Supply Concern	Concern	total dissolved solids
Veale creek arm of segment	Public Water Supply Concern	Concern	total dissolved solids in finished drinking water
Veale creek arm of segment	Narrative Criteria Concern	Concern	harmful algal blooms/golden alga

Monitoring sites used:		
Assessment Area	Station ID	Station Description
Bluff Creek arm of lake	11866	POSSUM KINGDOM RESERVOIR NEAR JOHNSON ROAD
Bluff Creek arm of lake	14018	POSSUM KINGDOM LAKE USGS SITE P03
Caddo Creek arm of lake	14019	POSSUM KINGDOM LAKE USGS SITE P05
Deep Elm Creek arm	11868	POSSUM KINGDOM RESERVOIR DEEP ELM CREEK ARM
Downstream portion of lake	11865	POSSUM KINGDOM RESERVOIR NEAR DAM
Downstream portion of lake	14021	POSSUM KINGDOM LAKE USGS SITE AR
Downstream portion of lake	14022	POSSUM KINGDOM LAKE USGS SITE AC
Elm Creek arm of segment	11867	POSSUM KINGDOM RESERVOIR NEAR END OF FM 2951
Elm Creek arm of segment	14026	POSSUM KINGDOM LAKE USGS SITE DC
Jewell Creek arm of lake	14023	POSSUM KINGDOM LAKE USGS SITE BR
Jewell Creek arm of lake	14024	POSSUM KINGDOM LAKE USGS SITE BC
Portion of lake containing Costello Island	14027	POSSUM KINGDOM LAKE USGS SITE EC
Portion of lake south of FM 2951	14020	POSSUM KINGDOM LAKE USGS SITE CC
Portion of segment west of SH 16	14028	POSSUM KINGDOM LAKE USGS SITE FC
Rock Creek arm of lake	14029	POSSUM KINGDOM LAKE USGS SITE GC
Veale creek arm of segment	14025	POSSUM KINGDOM LAKE USGS SITE P07

Published studies:		
Publication	Date	Author
IMS 32 Possum Kingdom Reservoir	Jan. 1975	Ottmers, D.

(-based on data from 03/01/1998 to 02/28/2003)

Historical fish kills: Date	Location	Fish Killed	Suspected Cause
1/11/2001	Possum Kingdom Reservoir	200027	Biotoxin