

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

McCarroll, Governor • David A. Shaw, Director

DIVISION OF GEOLOGY AND LAND SURVEY  
P.O. Box 250 111 Fairgrounds Rd. Rolla, MO 65401-0250  
(314) 368-2175 FAX (314) 598-2111

October 6, 1993

Lake Tishomingo Property Owners Association  
c/o Mr. Jack M. Folluo  
5699 Lake Tishomingo Road  
Hillsboro, Missouri 63050

RE: Lake Tishomingo Dam (MO 30039) Jefferson County

Dear Mr. Folluo:

As a result of my inspection of the Lake Tishomingo Dam on September 20, 1993, I am pleased to inform you that Registration Permit R-156 has been renewed and is enclosed for your use. This permit will be valid for a period of five years at which time the dam will be re-inspected by the Dam and Reservoir Safety Program at no cost to you.

I have enclosed a copy of my inspection checklist and a summary of the inspection. Please refer to the summary for additional information on the inspection. Please note that a couple of recommendations have been made to help in the maintenance and inspection of your dam. I would also like to point out that as homes are built downstream, Dam and Reservoir Safety Council regulations require you to upgrade your spillway capacity.

I want to strongly recommend that you use siphons to lower the lake for maintenance of shoreline facilities. A number of similar lake developments use a permanent facility to lower the lake. Lowering the lake not only allows maintenance to take place but it also kills weeds which grow in the shallow waters of a lake. Your engineer can design such a facility and we can then issue a construction permit for it.

Thanks for your cooperation in renewing this permit.

Sincerely,

DIVISION OF GEOLOGY & LAND SURVEY

*R. C. Adams*

Russell C. Adams P.E.  
Acting Chief Engineer  
Dam & Reservoir Safety Program

RCA/mjp  
Enclosures

*Approved  
Oct 6, 1993*

**STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
DAM AND RESERVOIR SAFETY COUNCIL**

**REGISTRATION PERMIT**

Pursuant to Chapters 236.400 through 236.500 of the Revised Statutes of Missouri and the rules established by the Dam and Reservoir Safety Council, and on the basis of an inspection performed by the Department of Natural Resources for the Lake Tishomingo Dam, Jefferson County, **PERMISSION IS HEREBY GRANTED** to the Lake Tishomingo Property Owners Association, hereafter known as the permittee, whose address for the purpose of notices and other communications pertaining to this permit is 5699 Lake Tishomingo Road, Hillsboro, Missouri 63050 which address is subject to change by written notice from the permittee, **TO OPERATE** said dam and reservoir located in Section 5, Township 41 North, Range 4 East, having identification number of MO 30039. The dam has a height of 63 feet and a reservoir area of 120 acres at the water storage elevation. The approximate UTM Coordinates are 4,243,500 meters North and 709,600 meters East, Zone 15, subject to the following provisions:

**GENERAL PROVISIONS:**

1. No liability shall be imposed upon or incurred by the State of Missouri and/or the Dam and Reservoir Safety Council, or any of their officers, agents, employees, and members, officially or personally, on account of the granting hereof or on account of any damage to any person or property resulting from any act or omission of the permittee or any of its agents, employees, or contractors, or closed corporations or successors relating to any matter hereunder. This permit shall not be construed as stopping or limiting any legal claim or right of action of the state against the permittee, its agents, employees or contractors for any damages or injury resulting from any such act or omission by them or for violation of or failure to comply with the provisions of the permit or applicable provisions of law.
2. The permittee shall comply with all Federal, State and local laws and regulations, and shall obtain such other permits as may be required.

3. In cases where the doing by the permittee of anything authorized by this permit shall involve the taking, using or damaging of any property rights or interest of any other person or persons, or of any publicly owned lands or improvements thereon or interests therein, it is the sole responsibility of the permittee, before proceeding therewith, to obtain the written consent of all persons, agencies, or authorities concerned, and to acquire all property, rights and interests necessary therefore, including flood easements or permissions for all properties which may be inundated by the dam on a temporary or permanent basis in the upstream impoundment area below the top of dam elevation.
4. The permittee shall notify the Dam and Reservoir Safety Council in writing upon the sale or other transfer of interest in the dam or reservoir.
5. Based on conditions existing at the time of issuing this permit, the Downstream Environment Zone is Class II. Future development in the vicinity of the dam and flood plain below the dam may result in a change in classification. This change will necessitate hydraulic and structural upgrading of the dam so the dam is in compliance with the rules and regulations of the Missouri Dam and Reservoir Safety Council. Permittee or its representative, successors or assigns shall perform any such upgrading upon a change in classification and upon a notification from the Missouri Dam and Reservoir Safety Council.
6. The permittee shall not alter, enlarge, reduce, repair or remove the dam, reservoir or appurtenances without first obtaining a construction permit from the Dam and Reservoir Safety Council.
7. The permittee shall immediately notify in writing the Chief Engineer of any conditions relating to structural stability of and seepage through the dam discovered during the term of this permit which differs from those conditions identified in the inspection report submitted with the permit application.
8. The terms and provisions of this permit shall extend to and bind the successors in authority of the Dam and Reservoir Safety Council and the legally assigned successors in interest of the permittee.
9. Maintenance of the dam and reservoir herein permitted shall be the responsibility of the permittee.
10. The term of this permit shall be five (5) years from the date of issue expiring on October 6, 1998. The permittee shall apply for renewal not less than sixty (60) days prior to this expiration date.

Executed at Rolla, Missouri on  
this 6th day of October, 1993.

**DAM & RESERVOIR SAFETY COUNCIL**

By: R. C. Akema  
Acting Chief Engineer  
Dam and Reservoir Safety Program

DEPARTMENT OF NATURAL RESOURCES  
DAM & RESERVOIR SAFETY PROGRAM

DAM INSPECTION REPORT  
COVER SHEET

DATE: SEPTEMBER 20, 1993

NAME OF DAM LAKE TISHOMINGO DAM I.D. # MO 3003

LOCATION County: JEFFERSON COUNTY Section 05 Twp. 41 N Rge. 04 EAST

OWNER LAKE TISHOMINGO PROPERTY OWNERS ASSOCIATION 314/285-4364  
TELEPHONE NUMBER  
(Day & Night)

ADDRESS 5699 LAKE TISHOMINGO ROAD  
HILLSBORO, MO 63050

PERMIT # R-156 DOWNSTREAM ENVIRONMENT CLASS II

TYPE OF DAM EARTHFILL

TYPE OF SPILLWAY (s) Principal Open channel on the left abutment

Emergency None

WEATHER CONDITIONS Cloudy 70°

HEIGHT OF DAM 63 Ft.

POOL ELEVATION 2 inches below normal pool

TAILWATER CONDITIONS None

INSPECTION TEAM  
DNR Personnel

Russell C. Adams PE Civil Engineer  
Name Title

Ralph P. Hess Engineering Technician III  
Name Title

Name Title

Owner's Representative

Jack Folluo POA representatives  
Name Title  
George Jenkerson  
W.D. Pindle

## INSPECTION SUMMARY

### LAKE TISHOMINGO DAM (MO 30039) Jefferson County

On September 20, 1993 a site visit was made by Ralph Hess and myself for the purpose of observing the condition of the Lake Tishomingo Dam prior to renewal of Registration Permit R-156. Homeowners accompanying us on the inspection were Jack Folluo, George Jenkerson and W.D. Pindle. The owner has maintained the dam in good condition by regular mowing of the crest and backslope.

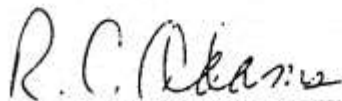
The spillway appears to be unchanged. Some underseepage was observed flowing under the concrete spillway control slab. It was recommended to the homeowners that this be investigated as it is a loss of water from the lake. This is not a severe problem because the spillway channel appears to be excavated in rock. The discharge channel has several trees which should be cut before they become a problem.

The embankment appears to be in good condition. The owner reported a change in the seepage problem associated with the valve and pipe, and the drain system on the right side of the dam. It was strongly recommended that a "v" notched weir be installed to better document the flow rates from seepage. Runoff in the left groin area is causing erosion of part of the dam fill. This runoff should be controlled before serious damage occurs. It was recommended that several terraces be constructed on the left abutment to direct flows away from the dam.

The downstream environment zone was investigated and two new homes were found. Although these homes do not change the downstream classification, the Lake Tishomingo property owners association should be reminded that further development in the area below the dam in the future could affect the dam's spillway requirements.

A discussion during the site visit was held regarding lowering the lake so that dock maintenance could be accomplished. It was strongly recommended that the property owners use a siphon to lower the lake rather than digging through the concrete sill in the spillway channel. In addition it was suggested that the owner's engineer be asked to design a permanent installation with the ability to lower the lake 4 feet. This can be located in the spillway entrance and would involve a concrete inlet structure, valve or gate and an outlet pipe. The pipe should be designed so that drawdown is achieved over a time period long enough that upstream slope failure does not occur.

Based on the condition of the dam, it is my recommendation that the permit be renewed for a five year period.



Acting Chief Engineer-Dam Safety

NAME OF DAM: LAKE TISHOMINGO DAM

I.D.# (MO 30039)

INSPECTION DATE: SEPTEMBER 20, 1993

INSPECTION OF PRINCIPAL SPILLWAY  
Open Channel on the Left Abument

ITEM	CONDITION	DEFICIENCIES
TRASH RACK	N.A.	
INLET	N.P.	
CONDUIT	N.A.	
STILLING BASIN	N.P.	
OUTLET CHANNEL	N.P.	

GENERAL

CONDITION OF CONCRETE	N.P.	
CONDITION OF OTHER MATERIALS	N.A.	
EROSION	N.P.	
SEEPAGE	O.R.	seepage observed under the spillway slab
ALIGNMENT	N.A.	
RIPRAP	N.A.	
FILTER AND DRAINS	N.A.	
VEGETATION	M.R.	Several trees should be cut before they become a problem
SEDIMENTATION	N.P.	
OBSTRUCTIONS	N.P.	

CONDITION CODE:

N.P. No observable problem      D.O. A major defect is in evidence      O.R. Regular observation required  
M.R. Maintenance required      E.C. Imminent failure is expected      N.A. Not applicable



NAME OF DAM : LAKE TISHOMINGO DAM

I.D.# (MO 30039)

INSPECTION DATE: SEPTEMBER 20, 1993

INSPECTION OF EARTH EMBANKMENT

ITEM	CONDITION	DEFICIENCIES
SLOPE STABILITY:		
MEASURED SLOPE ANGLES	N.P.	
SURFACE CRACKING	N.P.	
SLOUGHING OR SLIDING	N.P.	
SETTLEMENT	N.P.	
SEEPAGE AND ZONES OF SOFTNESS	O.R.	Strongly recommend construction of a weir to monitor seepage rates
UNIFORM CREST	N.P.	
UNIFORM SLOPES	N.P.	
OTHER:		
RIPRAP	N.P.	
FILTER AND DRAINS	N.P.	
ANIMAL DAMAGE	N.P.	
SURFACE RUNOFF CONTROL	M.R.	Erosion in the left groin area; recommend terraces to move runoff away from the dam
VEGETATION COVER	N.P.	

CONDITION CODE:

N.P. No observable problem      D.O. A major defect is in evidence      O.R. Regular observation required  
M.R. Maintenance required      E.C. Imminent failure is expected      N.A. Not applicable

NAME OF DAM: LAKE TISHOMINGO DAM

I. D. # (MO 30039)

INSPECTION DATE: September 20, 1993

SUMMARY OF MAINTENANCE DONE AND/OR  
REPAIRS MADE SINCE LAST INSPECTION

INSPECTION DATE: September 20, 1993

LAST: October 5, 1988

1. EARTH EMBANKMENT	Regular mowing
2. PRINCIPAL SPILLWAY	NONE
3. OUTLET WORKS	N/A
4. EMERGENCY SPILLWAY	N/A
5. OTHER	NONE

COMMENTS: