



ISABELLA COUNTY DRAIN COMMISSIONER

Gary J. McBride
200 North Main, Mt. Pleasant, MI 48858

Phone 772-0911 Ext. 247

COPY

Date: May 9, 2005

To: Byron Lane, Chief
Department of Environmental Quality
Dam Safety Program
Land and Water Management Division

From: Gary J. McBride
Isabella County Drain Commissioner

Dear Mr. Lane:

Enclose you will find the Dam safety inspection forms for the Lake Isabella Stevenson Lake and Weldman Mill Pond Dams. These inspections were performed by our County Engineer Bruce E. Rohrer in November 2004.

If you have any questions regarding these inspections please feel free to contact our office.

Sincerely yours,

Gary J. McBride
Gary J. McBride

GJM/cs

cc: Tim Wolff
Lake Isabella Manager

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**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
LAND AND WATER MANAGEMENT DIVISION
DAM INSPECTION REPORT**

This form is to be used for inspection reports required by Part 307, Inland Lake Levels, for those dams that do not meet the size criteria as defined by Part 316, Dam Safety, of the Natural Resources and Environmental Protection Act, 1994 PA 453, as amended. Dams 6' (6) feet or more in height, as defined by Part 316, and impounding five (5) acres or more at the design flood elevation, must meet the inspection report format as outlined in Section 313.14 of Part 316.

A person failing to comply, or falsely representing dam conditions, is guilty of misconduct in office.

DAM NAME Lake Isabella		DAM ID	COUNTY Isabella
DATE OF INSPECTION 11-03-04	NAME OF WATERBODY Lake Isabella	SECTION, TOWNSHIP, RANGE Sec. 36 T. 15N R. 6W	LEVEL FINS DATE 895.50
DATE ELEVATION SET BY COURT	LEGAL LEVEL 895.00	DRAWDOWN LEVEL	HIGH WATER MARK ELEVATION

EARTH EMBANKMENTS (LOOKING DOWNSTREAM) LEFT EMBANKMENT _____ FT. RIGHT EMBANKMENT _____ FT. TOTAL LENGTH **2,480** FT.

	UPSTREAM	CROWN	DOWNSTREAM
VEGETATIVE COVER	Stable	Compacted gravel	Good overall, isolated areas need reseeding
EROSION	None	None	Isolated minor problems.
SEEPAGE			Appears to be insignificant. Minor stains observed along south retaining wall abutment
SLIDES, SLUMPS & CRACKS	No	No	
ANIMAL BURROWS	None observed	None observed	None observed
WAVE ACTION PROTECTION	Rock riprap-stable		
REMARKS*	Small trees & brush on slope. Sprayed last year, most are dead.		

CONTROL STRUCTURE		
TYPE Earth dike with semi-circle gravity ogee shaped concrete spillway.	YEAR CONSTRUCTED 1968	STRUCTURAL HEIGHT (top of dam elevation minus stream level)
41.5 foot radius	FREEBOARD 6.5'	HYDRAULIC HEIGHT (design flood elevation minus stream level)
VERTICAL PIPE SIZE 60"	HORIZONTAL PIPE SIZE 60" diameter with 4'4" drawdown sluiceway 12" dia. baseflow	HEAD (normal headwater minus normal spillwater) 1.2'

DESCRIBE CONDITION OF THE FOLLOWING ITEMS:

STOPLOG VALVES AND GATES (open and close to check condition). Check location of top stoplog in relation to top of head pipe intake box or fixed trash bar for leakage and operation of stoplogs, valves and gates.

Both gates are operable.

OUTLET PIPE. Check for damage from ice, logs, and other debris. Check for proper operation of gate. Check for proper condition of gate rollers.

CONCRETE STRUCTURE CRACKS: Several minor spalls in face of spillway observed, possibly caused by large caliber rifle bullets. No appreciable settling observed. A vertical crack has developed next to a construction expansion joint on the north upstream side located 20' 1/2 east of transition curve. Crack is 3-4" west of joint and concrete has begun to break out. The 1955 dam inspection report indicates the crack was observed but concrete had not begun to break out. Adequate - Chainlink fence top rail needs repair at top of upstream slope south side of spillway.

Not applicable

EMERGENCY SPILLWAY: The emergency spillway is incorporated in the principal weir spillway with top of dam set at elevation 903.0. Total spillway capacity is estimated at 35 percent of the probable maximum flood (pmf). See National Dam Safety Inspection Report, Inventory No. 434 prepared by U.S Army Corps of Engineers, July 1979.

INLET & OUTLET CHANNELS

SIZE	INLET	OUTLET
EXISTING CONDITION	Not applicable	51' bottom - 2 on 1 sideslopes
EROSION		Stable
DEBRIS & OBSTRUCTIONS		Very minor
REPRAP PROTECTION	None	None
REMARKS	Additional riprap may be necessary in future next to south wingwall at end of principal spillway.	
	The safety cable and posts marking the weir crest location for boaters are broken. The LEPA sets two buoys upstream from the weir to warn boaters during boating season. The buoys had been removed approximately a week before this inspection.	The south toe drain outlet is damaged and will not drain in willow. The south toe drain outlet at damaged and willow. 1982 Lee Gatehouse advised that drain quit flowing shortly after dam construction. Not able to locate it.

RECOMMENDATIONS

- Spalled vertical joint of principal spillway noted above should be repaired. Spalling at top of same joint on south side of spillway should be repaired. Both expansion joints should be recoated with polysulfide joint sealant.
- Cut and spray minor brush and willows along upstream face of embankment.
- Repair and stabilize pathways on downstream slope just south of principal spillway. Replace missing planks along upper edge of paved golf cart path on downstream face of earth fill south of principal spillway.
- Establish safety signs warning boaters of principal spillway weir crest.

Gary J. McBride

Isabella

County Geologist

Bruce E. Rohrer

INSPECTOR'S NAME (PRINTED)

ADDRESS 6465 South Leaton Rd.

SIGNATURE

CITY, STATE, ZIP CODE Shepherd MI 48803

19324

REGISTRATION NO

TELEPHONE NUMBER (989) 772-0911

DATE SAFETY PROGRAM
 GEOLOGICAL AND LAND MANAGEMENT DIVISION
 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 PO BOX 34483
 LANSING MICHIGAN 48234

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NOTE: PLEASE REFER TO THE STATE OF MICHIGAN'S REGULATIONS CONCERNING THE PROTECTION OF THE ENVIRONMENT

STATE OF MICHIGAN