

**DAM INSPECTION REPORT
FOR
HORSESHOE LAKE LEVEL
CONTROL STRUCTURE
2010 Inspection**

HILLSDALE COUNTY

Submitted to:
HILLSDALE COUNTY DRAIN COMMISSION
29 North Howell Street, Room 15
Hillsdale, MI 49242

Submitted by:
J.E. TIFFANY AND SONS, LLC
8588 Dell Road
Kingsley, MI 49649

July, 2010

TITLE SHEET

Name of Dam: Horseshoe Lake Level Control Structure
I.D. Number: 2507
County: Lenawee
Location: Section 31, Town 6S, Range 1E
Stream: Tributary to Bean Creek
Owner: Joseph and Margaret Pleva
Operator: Hillsdale County Drain Commission
29 N. Howell Street, Room 15
Hillsdale, Michigan 49242
Tel. (517) 437-4181

Hazard Potential Classification: N/A

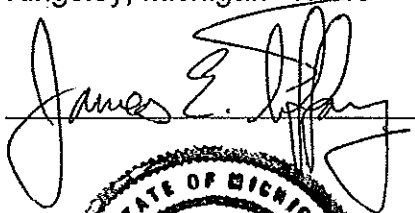
Inspected By: J.E. Tiffany and Sons, LLC
8588 Dell Road
Kingsley, Michigan 49649
James E. Tiffany, P.E.

Inspection Date: May 12, 2010

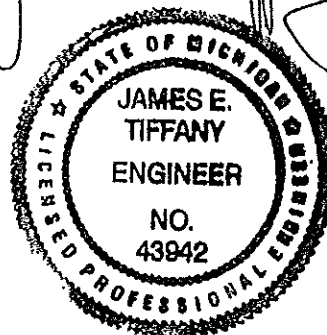
Professional Engineer in Responsible Charge of Inspection:

Name: James E. Tiffany, P.E.
Address: J.E. Tiffany and Sons, LLC
8588 Dell Road
Kingsley, Michigan 49649

Signature:



Professional Seal:





**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 315, Dam Safety, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Dams six (6) feet or more in height, as defined by Part 315, and impounding five (5) acres or more at the design flood elevation, must meet the inspection report format as outlined in Section 31518 of Part 315.

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

DAM NAME Horseshoe Lake Level Control Structure		DAM ID 2507	COUNTY Lenawee
DATE OF INSPECTION May 12, 2010	NAME OF WATERBODY Tributary to Bean Creek	SECTION, TOWN, RANGE Sec. <u>31</u> T <u>6S</u> R <u>1E</u>	LEVEL THIS DATE 966.71 (top of stoplogs assumed equal to 966.25)
DATE ELEVATION SET BY COURT 1982	LEGAL LEVEL 966.25	DRAWDOWN LEVEL N/A	HIGH WATER MARK ELEVATION N/A

EARTH EMBANKMENTS LEFT EMBANKMENT FT. RIGHT EMBANKMENT FT. TOTAL LENGTH FT.
(LOOKING DOWNSTREAM) Structure ties into high ground on each side

	UPSTREAM	CROWN	DOWNSTREAM
VEGETATIVE COVER	Tall grass, weeds and brush	Tall grass, weeds and brush	Tall grass, weeds and brush
EROSION	None	None	None
SEEPAGE			None
SLIDES, SLUMPS & CRACKS	None	None	None
ANIMAL BURROWS	None noted	None noted	None noted
WAVE ACTION PROTECTION	None		None
REMARKS*	-	-	-

CONTROL STRUCTURE

TYPE Sheet pile weir with 10" wide cap & 56" wide stoplog bay opening	YEAR CONSTRUCTED N/A	STRUCTURAL HEIGHT (top of dam elevation minus stream invert) Approx. 5.1'
LENGTH OF SPILLWAY N/A	FREEBOARD 1.95 ft	HYDRAULIC HEIGHT (design flood elevation minus stream invert) 3.5' (Assumes 1' rise above legal level)
VERTICAL PIPE SIZE N/A	HORIZONTAL PIPE SIZE N/A	HEAD (normal headwater minus normal tailwater) ≈ 1'

DESCRIBE CONDITION OF THE FOLLOWING ITEMS.

<p>STOPLOG VALVES AND GATES (open and close to check condition): Check location of top stoplog in relation to top of riser pipe intake box or fixed crest, for leakage, and condition of stoplogs, valves and gates.</p> <p>Stop logs in good condition. Some sediment infill upstream.</p>
<p>OUTLET PIPE: Check for damage from ice, logs, vandalism; inside discharge pipe for settlement and/or joint separation; condition of pipe coating.</p> <p>N/A</p>

CONTROL STRUCTURE (continued)

CONCRETE STRUCTURE: Check for erosion; location of cracking or spalling. If old or new; settlement; need for crack repairs.	
N/A	
WALKWAY & RAILING: Check if in place or removed, condition, and if adequate protection provided.	TRASHRACK OR LOG BOOM: Check if operable.
N/A	N/A
EMERGENCY SPILLWAY: Size, type, and condition.	
N/A	

INLET & OUTLET CHANNELS

	INLET	OUTLET
SIZE	Approx. 40' wide	Approx 20' wide at exist level
EXISTING CONDITION	Good	Good
EROSION	None	None
DEBRIS & OBSTRUCTIONS	None	None
RIPRAP PROTECTION	None noted except at left tpstream bank.	Downstream of stoplog bay and on left bank near structure.
REMARKS*	-	-

RECOMMENDATIONS

List work needed, how to be done, by whom, estimated cost, source of funds, recommended completion date. If emergency, to what extent. ADDITIONAL COMMENTS.

No Work Recommended

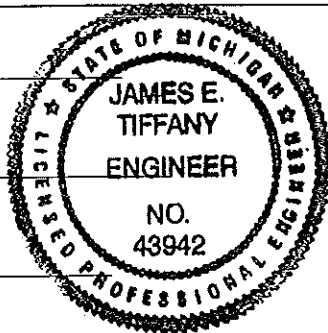
Inspection Ordered By:

Bill Word, Hillsdale Co. Drain Commissioner County Delegated Agent

James E. Tiffany, P.E.
INSPECTOR'S NAME (PRINTED)

James E. Tiffany
SIGNATURE

43942
P.E. REGISTRATION NO.



ADDRESS

J.E. Tiffany and Sons, LLC
8588 Dell Road

CITY, STATE, ZIP CODE

Kingsley, Michigan 49649

TELEPHONE NUMBER

(231) 263-8000

Please submit this completed report and photographs of the dam, downstream channel, and deficiencies cited in the report to:
 DAM SAFETY PROGRAM
 LAND AND WATER MANAGEMENT DIVISION
 MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
 PO BOX 30458
 LANSING MI 48909-7958

*NOTE: If space is inadequate for remarks, attach additional sheets as needed.



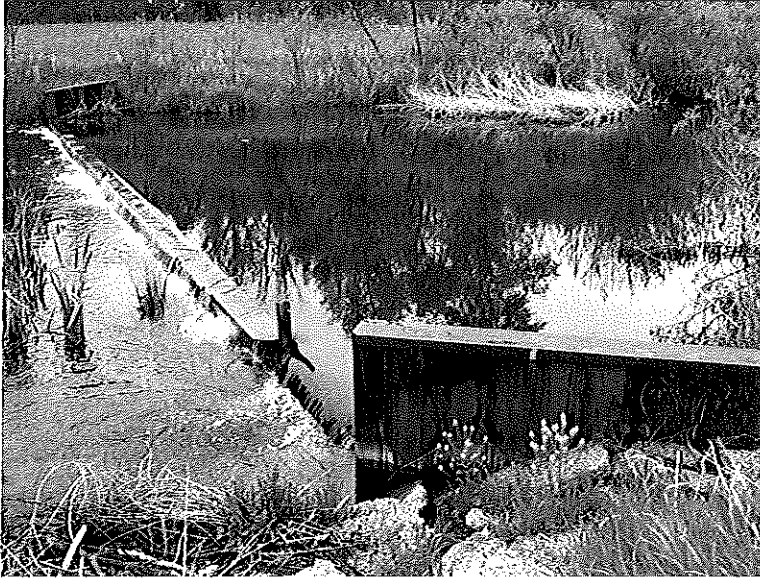
A. LOCATION MAP



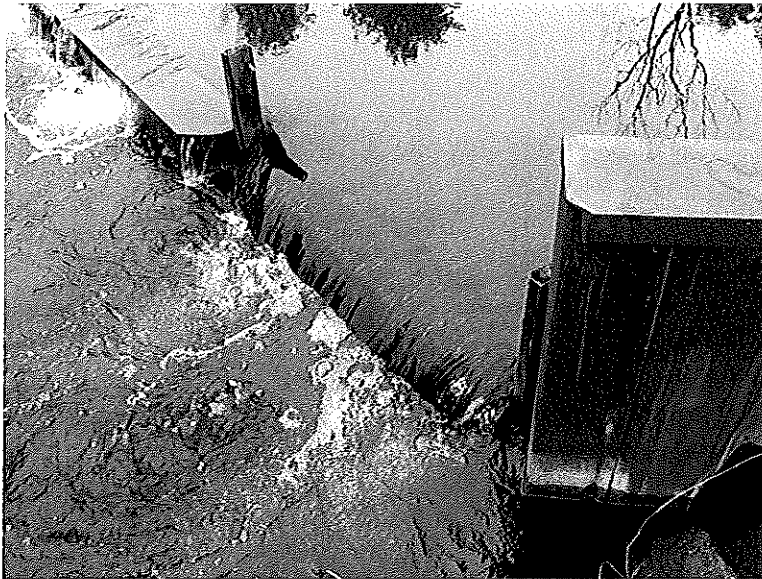


B. PHOTOGRAPHS





Lake Level Control Structure
from Left



Stop Log Bay



Downstream



Upstream