

DAM SAFETY INSPECTION REPORT

RUNYAN LAKE DAM DAM INVENTORY NO. 1981 LIVINGSTON COUNTY, MICHIGAN

Owner & Operator

Livingston County Drain Commissioner
Brian Jonckheere
2300 East Grand River Avenue
Howell, Michigan 48843
(517) 546-0040

Hazard Potential Classification

Low

Inspector

Gould Engineering, Inc.
Martin K. Spees, PE #54605
2040 E. Maple Avenue
Flint, MI 48507
(810) 743-9120
marty@gouldengineering.com
www.gouldengineering.com

Inspection Date

July 21, 2009

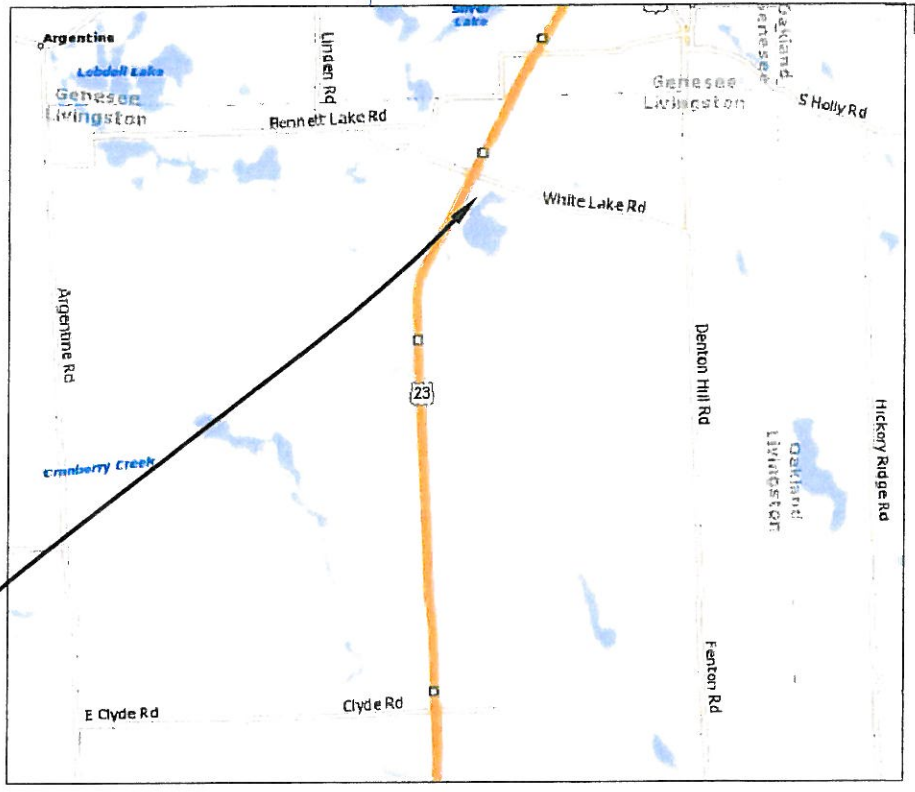
Reviewed By:



Steven J. Nagy, PE #23750
Principal
Gould Engineering, Inc.
2040 E. Maple Avenue
Flint, MI 48507
(810) 743-9120
steve@gouldengineering.com
www.gouldengineering.com



RUNYAN LAKE DAM LOCATION MAP



RUNYAN LAKE DAM



OUTLET CHANNEL

ge
inc.

GOULD ENGINEERING, INC.
2040 E. MAPLE AVENUE FLINT, MICHIGAN 48507
PHONE 810-743-9120 FAX 810-743-1797



JOHN ENGLER Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING PO BOX 30473 LANSING MI 48900 7073

INTERNET www.deq.state.mi.us

RUSSELL J HARDING Director

REPLY TO

LAND & WATER MANAGEMENT DIVISION
PO BOX 30450
LANSING MI 48908 7956

August 24, 2000

Ms Latisha C Owens-Johnson
Wade-Trm, Inc
601 N Saginaw Street
Suite 2A
Flint, MI 48503

Dear Ms Owens-Johnson

We have estimated the flood frequency discharges requested in your July 25, 2000 letter (Process No 20000365-1), as follows

- 1 Hay Creek at Bass Lake Control Structure, Dam ID 1978, Section 28, T1N, R5E, Hamburg Township, Livingston County, has a total drainage area of 12.8 square miles and a contributing drainage area of 12.1 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 440 cubic feet per second (cfs) and 550 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 1000 acre-feet and 1200 acre-feet, respectively. (Watershed Basin No 15/Quad U27NE)
- 2 Tributary to the Red Cedar River at Cedar Lake Level Control Structure, Dam ID 1979, Section 28, T2N, R4E, Marion Township, Livingston County, has a drainage area of 2.2 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 240 cfs and 290 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 250 acre-feet and 290 acre-feet, respectively. (Watershed Basin No 14A/Quad T27SW)
- 3 Tributary to Thompson Lake at Lake Chemung Control Structure, Dam ID 1980, Section 4, T2N, R5E, Genoa Township, Livingston County, has a total drainage area of 4.7 square miles and a contributing drainage area of 4.6 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 420 cfs and 500 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 550 acre-feet and 600 acre-feet, respectively. (Watershed Basin No 32C/Quad T27SE)
- 4 Tributary to Chilson Creek at West Crooked Lake Dam, Dam ID 902, Section 28, T2N, R5E, Genoa Township, Livingston County, has a total drainage area of 5.0 square miles and a contributing drainage area of 4.5 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 750 cfs and 850 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 490 acre-feet and 550 acre-feet, respectively. (Watershed Basin No 15/Quad T27SE)

Ms Latisha C Owens-Johnson
Page 2
August 24, 2000

- 5 Portage River (Hell Creek) at HiLand Lake Dam, Dam ID 602, Section 32, T1N, R4E, Putnam Township, Livingston County, has a drainage area of 79.7 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 490 cfs and 550 cfs, respectively. (Watershed Basin No. 15/Quad U27NW)
- 6 South Ore Creek at Long Lake Control Structure, Dam ID 806, Section 33, T3N, R6E, Hartland Township, Livingston County, has a total drainage area of 4.4 square miles and a contributing drainage area of 4.3 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 420 cfs and 500 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 430 acre-feet and 490 acre-feet, respectively. (Watershed Basin No. 15/Quad T28SW)
- 7 Runyan Creek at Runyan Lake Level Control Structure, Dam ID 1981, Section 9, T4N, R6E, Tyrone Township, Livingston County, has a total drainage area of 16.3 square miles and a contributing drainage area of 12.9 square miles. The design discharge for this dam is the 1% chance (100-year) flood. The 1% and 0.5% chance peak flows are estimated to be 550 cfs and 700 cfs, respectively. The 1% and 0.5% chance flood volumes are estimated to be 950 acre-feet and 1100 acre-feet, respectively. (Watershed Basin No. 32C/Quad S28SW)

Please include a copy of this letter with your inspection reports or any subsequent application for permits. These estimates should be confirmed by our office if an application is not submitted within one year. If you have any questions concerning the hydraulics or the requirements for the dam safety inspection reports, please contact Mr. Paul Wessel, Dam Safety Program, Land and Water Management Division, at 517-335-6748.

Sincerely,



Richard C. Sorrell, P.E., Chief
Hydrologic Studies Unit
Land and Water Management Division
517-335-3176

RCS AA bmw
cc Mr Paul Wessel, DEQ



**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 Runyan Lake		DAM ID 1981	COUNTY Livingston
DATE OF INSPECTION July 21, 2009	NAME OF WATERBODY Runyan Lake	SECTION, TOWN, RANGE Sec. 9 T 4N R 6E	LEVEL THIS DATE 894.1
DATE ELEVATION SET BY COURT 1964	LEGAL LEVEL 894.0	DRAWDOWN LEVEL 894.0	HIGH WATER MARK ELEVATION 895.5

EARTH EMBANKMENTS LEFT EMBANKMENT _____ FT. RIGHT EMBANKMENT _____ FT. TOTAL LENGTH _____ FT.
(LOOKING DOWNSTREAM)

	UPSTREAM	CROWN	DOWNSTREAM
VEGETATIVE COVER	Grass	None	Grass
EROSION	None	None	None
SEEPAGE			
SLIDES, SLUMPS & CRACKS	None	None	None
ANIMAL BURROWS	None	None	None
WAVE ACTION PROTECTION	Grass shoreline		Brush and natural vegetation
REMARKS*			

CONTROL STRUCTURE

TYPE Concrete weir and steel sheet piling	YEAR CONSTRUCTED 1965	STRUCTURAL HEIGHT (top of dam elevation minus stream invert) 2 Ft
LENGTH OF SPILLWAY 30 Ft	FREEBOARD ±1.5 Ft	HYDRAULIC HEIGHT (design flood elevation minus stream invert) 2 Ft
VERTICAL PIPE SIZE None	HORIZONTAL PIPE SIZE None	HEAD (normal headwater minus normal tailwater) 2 Ft

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 riser pipe intake box or fixed crest, for leakage, and condition of stoplogs, valves and gates. None
OUTLET PIPE: Check for damage from ice, logs, vandalism; inside discharge pipe for settlement and/or joint separation; condition of pipe coating. None

CONTROL STRUCTURE (continued)

CONCRETE STRUCTURE: Check for erosion; look for cracking or spalling. If old or new; settlement; need for repairs. Good condition with minor amounts of mineral deposits on concrete weir	
WALKWAY & RAILING: Check if in place or removed, condition, and if adequate protection provided. None	TRASHRACK OR LOG BOOM: Check if operable. None
EMERGENCY SPILLWAY: Size, type, and condition. None	

INLET & OUTLET CHANNELS

	INLET	OUTLET
SIZE	±30 Ft Wide	±10 Ft Wide
EXISTING CONDITION	Good	Good
EROSION	None	None
DEBRIS & OBSTRUCTIONS	Tree limb hung up on weir	None
RIPRAP PROTECTION	None	None
REMARKS*	Remove tree limb hung up on weir	Rip rap will help stabilize slope at wingwalls

RECOMMENDATIONS

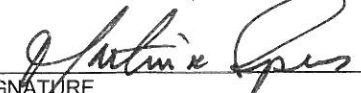
List work needed, how to be done, by whom, estimated cost, source of funds, recommended completion date. If emergency, to what extent. **ADDITIONAL COMMENTS.**

Remove tree limb hung up on weir and any natural vegetation and add rip rap at concrete wingwalls.

Inspection Ordered By: Brian Jonckheere, Drain Commissioner

Livingston County Delegated Agent

Martin K. Spees, PE
INSPECTOR'S NAME (PRINTED)


SIGNATURE

54605

P.E. REGISTRATION NO.

Gould Engineering, Inc.
2040 E. Maple Avenue
ADDRESS

Flint, MI 48507
CITY, STATE, ZIP CODE

810-743-9120

TELEPHONE NUMBER

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.

RUNYAN LAKE DAM PHOTOS



AT DAM LOOKING EAST TOWARD RUNYAN LAKE



AT DAM LOOKING WEST TOWARDS OUTLET

RUNYAN LAKE DAM PHOTOS CONT.



LOOKING WEST TOWARD DAM



AT DAM LOOKING NORTH TOWARD DEBRIS ON WEIR

LETTER OF TRANSMITTAL



Gould Engineering, Inc.

.040 East Maple Avenue
Flint, Michigan 48507-4256
Phone: 810.743.9120
Fax: 810.743.1797
www.gouldengineering.com

To: Livingston County Drain
Commission

Date: August 28, 2009

2300 E. Grand River, Suite 105
Howell, MI 48843

Attention: Mr. Ken Recker, PE
RE: 2009 Dam Inspections

RECEIVED
AUG 31 2009
LIVINGSTON COUNTY
DRAIN COMMISSIONER

We are sending you: Attached Prints Copy of Letter

Copies	Date	Description
1	8-28-09	Final Inspection Reports for Bass Lake Dam, Cedar Lake Dam, Long Lake Dam, Runyan Lake Dam, West Crooked Lake Dam, Thompson Lake Dam

THESE ARE TRANSMITTED as checked below:

For Approval For Your Use As Requested For Review and Comment

Remarks:

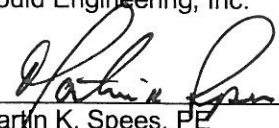
These are final reports for your files and future reference. A copy of these reports is being submitted to MDEQ on your behalf and you will get a copy of that transmittal letter.

If you should have any questions please do not hesitate to contact our office.

We look forward to working with you again in the near future and please don't hesitate to contact our office for professional services.

Gould Engineering, Inc.

Copy To: _____
File

Signed: 
By: Martin K. Spees, PE
Its: Field Engineering Services Coordinator and Design Engineer

If enclosures are not as noted, kindly notify us at once.

LETTER OF TRANSMITTAL



Gould Engineering, Inc.

2040 East Maple Avenue
Flint, Michigan 48507-4256
Phone: 810.743.9120
Fax: 810.743.1797
www.gouldengineering.com

To: Department of Environmental
Quality – Land and Water
Management Division
PO Box 30458
Lansing, MI 48909

Date: August 28, 2009
Attention: Mr. Byron Lane
RE: 2009 Dam Inspections
Livingston County Drain
Commission

We are sending you: Attached Prints Copy of Letter

Copies	Date	Description
1	8-28-09	Final Inspection Reports for Bass Lake Dam, Cedar Lake Dam, Long Lake Dam, Runyan Lake Dam, West Crooked Lake Dam, Thompson Lake Dam

THESE ARE TRANSMITTED as checked below:

For Approval For Your Use As Requested For Review and Comment

Remarks:

This information is being submitted to your office per requirement as set forth in Public Act 451 of 1994, Part 315 Dam Safety on behalf of the Livingston County Drain Commissioner. These are final reports for your files and future reference.

If you should have any questions please do not hesitate to contact our office.

Gould Engineering, Inc.

Copy To: Ken Recker, PE, LCDC
Rod Soos, LCDC
File

Signed: _____
By: Martin K. Spees, PE
Its: Field Engineering Services Coordinator and
Design Engineer

If enclosures are not as noted, kindly notify us at once.