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## Fletcher, Tony

**From:** Fletcher, Tony
**Sent:** Friday, May 08, 2015 10:06 PM
**To:** Ayotte, Tara; Taylor, Dan
**Cc:** Hyland, Mark
**Subject:** RE: #105 Silver Lake Dam - HH - Bucksport - Inspection 5/8/15

Tara, Dan,

I inspected Silver Lake dam and its downstream watercourse today.

Condition Assessment;

The weather was fine and mild. The lake was close to the top of the steel bulkheads in the spillway. The road access gate from the left was locked but the dam is used as a path for pedestrians. The embankments were clear of grass and recently cut. Graffiti has been painted on the concrete spillway structure.

Defects noted;
1) Rutting along the of the top of the dam,
2) Seepage along the toe of the left embankment,
3) A steady leak at the base of the left concrete wing wall,
4) Uneven downstream areas near the top of the right embankment about 20 yards from the left concrete retaining wall,
5) Leaking central sluice gate.
6) Sediment in spillway cannel obscuring channel,
7) Crazing of the concrete wing walls,
8) Concrete cracking of the mass gravity spillway structure.

These defects have existed for many years, and although they appear benign and show little sign of development, they should not be taken lightly by the dam owner. My recommendation is that the dam owner inspect these defects regularly every 6 months, log observations and take action should any defect develop further.

Item 2 should be investigated and reported upon by an engineer specializing in embankment dams.

Tara, please send the dam owner a letter asking them for SOP's and to keep a log. If they want some engineers to contact, WP or MBP do a good job.

Hazard Assessment;

I followed the course downstream, went to the cutoff dike, and then looked at the saddle near the school where a breach flow may be diverted.

Points of note;
1) Silver Lake Dam must remain classified a high hazard dam because its failure could devastate the Town,
2) The dams saddle dike to the right of the dam dike needs a breach investigation,
3) The saddle area near the school needs to be investigated for overtopping,
4) The dam EAP should be updated asap.

Tony

## Fletcher, Tony

**From:** Fletcher, Tony
**Sent:** Wednesday, June 19, 2002 1:37 PM
**To:** Brown, Patricia E
**Subject:** FW: #105 Silver Lake Dam

-----Original Message-----
**From:** Fletcher, Tony
**Sent:** Monday, June 10, 2002 8:53 AM
**To:** Cleaves, Art W.; Burgess, Steven P.; Brown, Patricia E
**Subject:** #105 Silver Lake Dam

To: Mr. Art Cleaves, MEMA
Mr. Steve Burgess, MEMA
Pat Brown, MEMA.

From: Tony Fletcher, Maine State Dam Inspector

Circulation: Please forward to Dam owner with covering letter for their attention.

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PAUL R. LEPAGE
GOVERNOR
BG JAMES D. CAMPBELL
COMMISSIONER

STATE OF MAINE
DEPARTMENT OF DEFENSE, VETERANS AND EMERGENCY MANAGEMENT
MAINE EMERGENCY MANAGEMENT AGENCY
72 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0072

PHONE: 207-624-4400/800-452-8735
FAX: 207-287-3178

ROBERT P. MCALEER
DIRECTOR

**DAM SAFETY**

May 2, 2013

Verso Paper
Jim Brooks
PO Box 1200
Bucksport, ME 04416

**Subject:** **# 105 Silver Lake Dam Condition Assessment**

Dear Jim:

Your dam was seen by the State Dam Inspector and the Assistant State Dam Inspector between August 1, 2011 and December 31, 2011. Here is a summary of the site assessment and recommended actions.

***General Information***

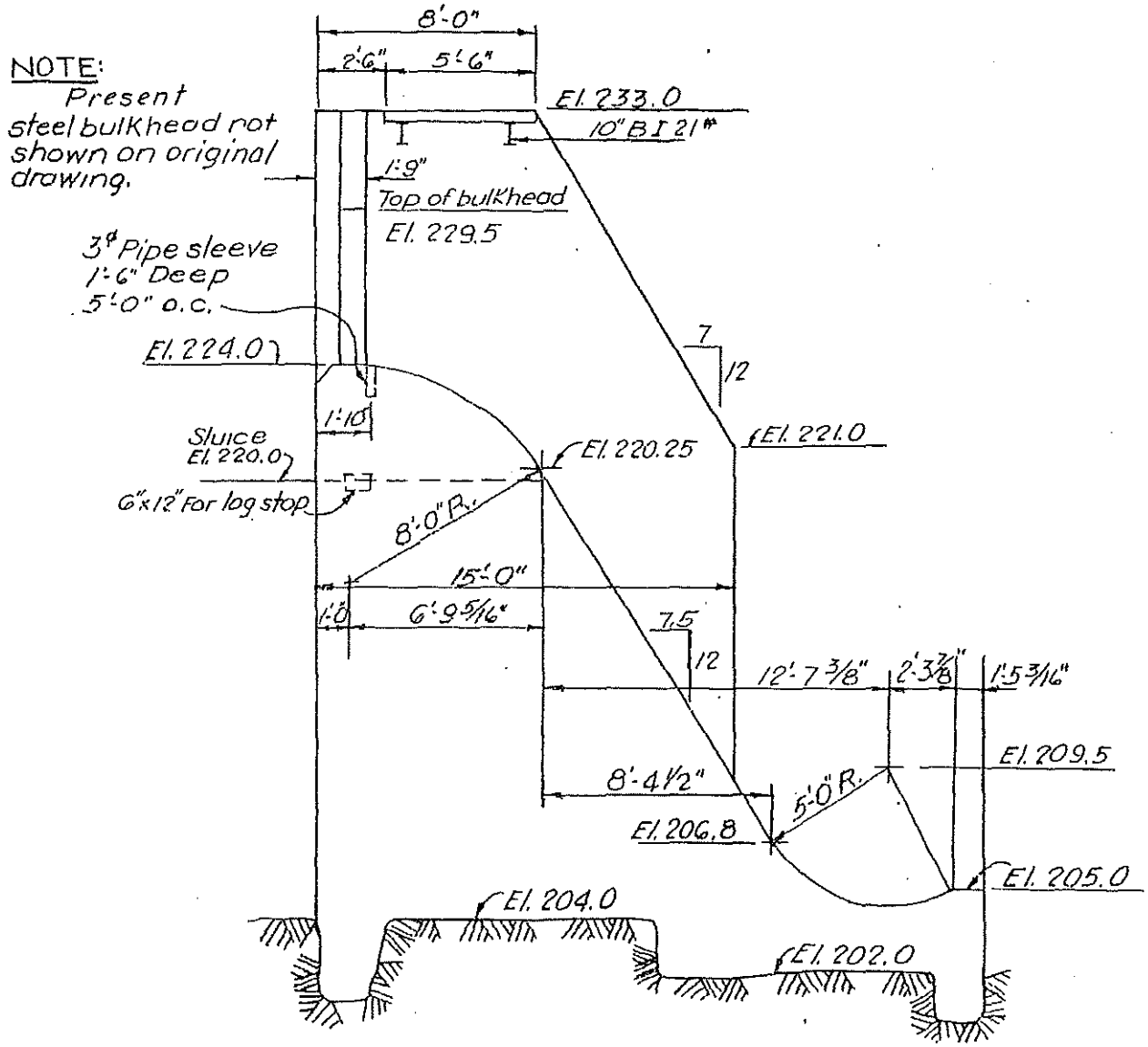
Silver Lake Dam is a 29' high, 465' long, earth dam, with a central concrete gravity spillway, built to provide storage for water pumped from an outside source to supply the Town and the Verso Paper Mill in Bucksport. The dam is located in the Town of Bucksport in a 5.5 sm watershed, normal pool 670 ac, normal storage 7,700 acre feet. The dam is owned by Verso Paper. The dam features, left and right earth dikes, two concrete retaining walls, a concrete MG spillway in 3 parts, two emergency spillways with steel bulkheads on their crest, a 6' wide principal spillway with stoplogs between the emergency spillways. A breach of the dam would impact Central, Pond and Franklin Streets, Route 1 and 12 houses. The dam is a high hazard. The EAP is current and tested. The MEMA inspection done on 5/4/11 required dam owner to remove all brush from the dam, clear all sediment from the toe area, monitor seepage from the left dike, monitor concrete deterioration, consider installing piezometers, providing an operation and maintenance plan.

***Condition Assessment***

Inspection done 12/16/11 by Tony Fletcher (MEMA). Rain left the dam wet. Vegetation has been cut off the dikes and spillway stilling basin. Sediment has not been cleared from the spillway stilling basin. A wet area had formed in the lower groin area of the left dike near the end of the retaining wall.

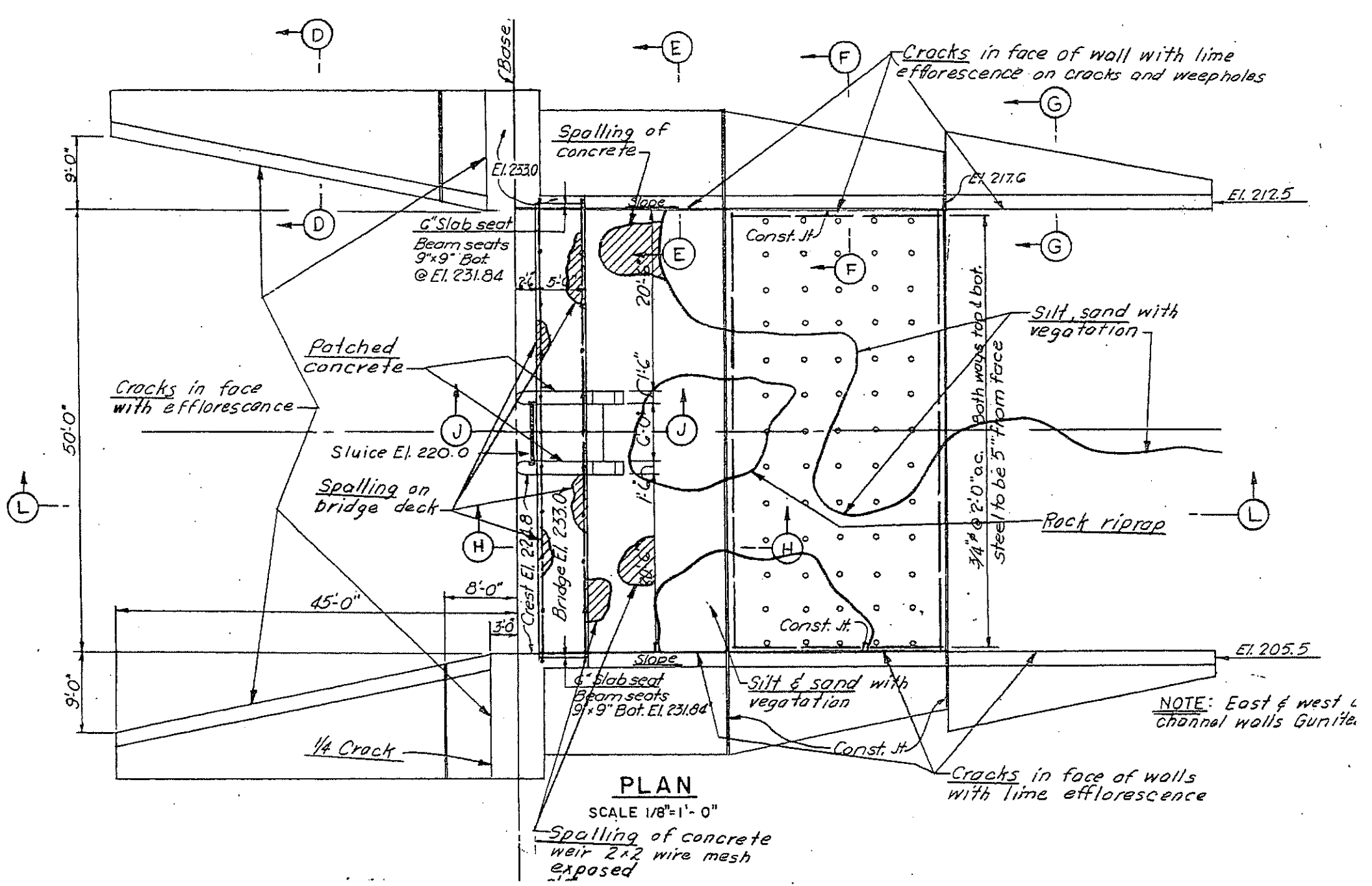
***Recommendation***

Action by dam owner: Clear silt from spillway, expose toe drains, monitor wet areas over winter, and consider installing piezometers in the dikes, monitor concrete deterioration. Action by MEMA: Monitor dam seepage.




SECTION H-H

SCALE 1/4"=1'-0"


Base
Cracks in face of wall with lime efflorescence on cracks and weepholes
Spalling of concrete
El. 253.0
El. 217.6
El. 212.5
Slope
6" Slab seat
Beam seats 9"x9" Bot. @ El. 231.84
Const. Jt.
Silt, sand with vegetation
Patched concrete
Cracks in face with efflorescence
Sluice El. 220.0
Spalling on bridge deck
Both ways top & bot. 3/4"ø @ 2'0" o.c. steel to be 5" from face
Rock riprap
Crest El. 224.8
Bridge El. 233.0
8'-0"
45'-0"
3'-0"
Const. Jt.
El. 205.5
Slope
6" Slab seat
Beam seats 9"x9" Bot. El. 231.84
Silt & sand with vegetation
Const. Jt.
1/4 Crack
Cracks in face of walls with lime efflorescence
NOTE: East & west channel walls Gunite
PLAN
SCALE 1/8"=1'-0"
Spalling of concrete weir 2x2 wire mesh exposed

For File

To: Mr. Art Cleaves, MEMA
Mr. Steve Burgess, MEMA
Pat Brown, MEMA.

From: Tony Fletcher, Maine State Dam Inspector

10 June 02

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