


DAM INSPECTION CHECKLIST
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF DAM SAFETY

Name of Dam: **QUEEN ESTHER LAKE**

DEP ID NO: **08-070**

LOCATION		
Municipality: ATHENS TOWNSHIP	County: BRADFORD	
DEP Classification Data: C-3		
PHYSICAL DATA	ELEVATIONS	
Type of Dam: Earth	Normal Pool:	
Height of Dam: 10.5 feet	Pool at Inspection:	
Normal Pool Storage Capacity: 12.0 acre-feet	Tailwater at Inspection:	
DAM OWNER INFORMATION		
Owner name: QUEEN ESTHER ESTATES LOT OWNERS ASSOCIATION	Address: 1065 QUEEN ESTHER DR, SAYRE, PA 18840	
Contact: Dick Endres Dam Lead; Mike Fantini, Assist. Dam Lead, Fanmanf16@Gmail.Com, 571-419-7990		
Email: dickemdres@gmail.com	Phone: 321 427-6062	
PERSONS PRESENT AT INSPECTION		
Name	Representing	Email Address
Dick Endres		
INSPECTION DETAILS		
Date of Inspection: 2023-05-11	Temperature 71.0°F	
Weather: (Today) Sunny	Weather: (Previous Week)	
DEP INSPECTOR AND SUPERVISOR SIGNATURES		
Inspector Name: GEORGE W GROSE		05/15/2023
Supervisor Name:		

EMBANKMENT

Condition Observed	Comments	N/A	No ISSUE	Monitor	Investigate	Repair
CREST						
1. SURFACE CRACKING		N/A	✓ No ISSUE	Monitor	Investigate	Repair
2. SINKHOLE, ANIMAL BURROW		✓ N/A	No ISSUE	Monitor	Investigate	Repair
3. LOW AREA(S)	None noted	N/A	✓ No ISSUE	Monitor	Investigate	Repair
4. HORIZONTAL ALIGNMENT	Horizontal alignment appears uniform and regular. No deficiencies noted	N/A	✓ No ISSUE	Monitor	Investigate	Repair
5. RUTS AND/OR PUDDLES		N/A	✓ No ISSUE	Monitor	Investigate	Repair
6. VEGETATION CONDITION	Low grass cover	N/A	✓ No ISSUE	Monitor	Investigate	Repair
7. RETAINING WALL		✓ N/A	No ISSUE	Monitor	Investigate	Repair
INBOARD FACE (U/S SLOPE)						
8. SLIDE, SLOUGH, SCARP		N/A	✓ No ISSUE	Monitor	Investigate	Repair
9. SLOPE PROTECTION		✓ N/A	No ISSUE	Monitor	Investigate	Repair
10. SINKHOLE, ANIMAL BURROW		N/A	✓ No ISSUE	Monitor	Investigate	Repair
11. EMB. - ABUT. CONTACT		N/A	✓ No ISSUE	Monitor	Investigate	Repair
12. EROSION	Some bank erosion at the waters edge. Monitor for any additional erosion and repair as necessary	N/A	No ISSUE	✓ Monitor	Investigate	Repair
13. VEGETATION CONDITION	Low grass cover. Some old woody veg noted along the waters edge that has either been killed with herbicide or cut and killed.	N/A	✓ No ISSUE	Monitor	Investigate	Repair
14. INLET WORKS	Owner continues to maintain the riser section clear of debris	N/A	✓ No ISSUE	Monitor	Investigate	Repair

OUTBOARD FACE (D/S SLOPE)

15. WET AREA(S) (NO FLOW)	Dam soil and some moss located between the drawdown valve and the end of the auxiliary spillway. Monitor this area during differing times of the year to determine if there is any change.	N/A	No ISSUE	✓ Monitor	Investigate	Repair
16. SEEPAGE		N/A	No ISSUE	✓ Monitor	Investigate	Repair
17. SLIDE, SLOUGH, SCARP		N/A	✓ No ISSUE	Monitor	Investigate	Repair
18. EMB. - ABUT. CONTACT		N/A	✓ No ISSUE	Monitor	Investigate	Repair
19. SINKHOLE, ANIMAL BURROW	Minor vole and or mole activity noted along the upper third of the slope and approx 1/3 distance left of auxiliary spillway. Monitor these areas and repair as necessary	N/A	No ISSUE	✓ Monitor	Investigate	✓ Repair
20. EROSION		N/A	✓ No ISSUE	Monitor	Investigate	Repair
21. UNUSUAL MOVEMENT	None noted this inspection	N/A	✓ No ISSUE	Monitor	Investigate	Repair
22. VEGETATION CONDITION	Mostly grass cover with some woody veg throughout. Owner is actively removing woody veg on annual basis	N/A	No ISSUE	✓ Monitor	Investigate	✓ Repair
23. MANHOLES		✓ N/A	No ISSUE	Monitor	Investigate	Repair

INSTRUMENTATION

24. PIEZOMETERS/OBSERV. WELLS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
25. STAFF GUAGE AND RECORDER		✓ N/A	No ISSUE	Monitor	Investigate	Repair
26. WEIRS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
27. SURVEY MONUMENTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
28. DRAINS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
29. FREQUENCY OF READINGS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
30. LOCATION OF RECORDS		✓ N/A	No ISSUE	Monitor	Investigate	Repair

SPILLWAYS

Condition Observed	Comments	N/A	No ISSUE	Monitor	Investigate	Repair
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ERODIBLE CHANNEL

31. SLIDE, SLOUGH, SCARP		✓ N/A	No ISSUE	Monitor	Investigate	Repair
32. EROSION		✓ N/A	No ISSUE	Monitor	Investigate	Repair
33. VEGETATION CONDITION		✓ N/A	No ISSUE	Monitor	Investigate	Repair
34. DEBRIS		✓ N/A	No ISSUE	Monitor	Investigate	Repair

NON-ERODIBLE CHANNEL

35. SIDEWALLS	Earthen sidewalls	N/A	✓ No ISSUE	Monitor	Investigate	Repair
36. CHANNEL FLOOR	Grouted Riprap floor. Some minor vegetations throughout. Recommend workto clear any woody vegetation	N/A	No ISSUE	✓ Monitor	Investigate	Repair
37. UNUSUAL MOVEMENT		N/A	✓ No ISSUE	Monitor	Investigate	Repair
38. APPROACH AREA	Clear lake	N/A	✓ No ISSUE	Monitor	Investigate	Repair
39. WEIR OR CONTROL	Some minor cracking and spalling. Monitor and repair as necessary	N/A	✓ No ISSUE	✓ Monitor	Investigate	Repair
40. DISCHARGE AREA	Recomend removing vegetation from outlet for clear unobstructed flow	N/A	No ISSUE	Monitor	Investigate	✓ Repair

DROP INLET

41. INTAKE STRUCTURE		✓ N/A	No ISSUE	Monitor	Investigate	Repair
42. TRASHRACK		✓ N/A	No ISSUE	Monitor	Investigate	Repair
43. STILLING BASIN		✓ N/A	No ISSUE	Monitor	Investigate	Repair

OUTLET WORKS

Condition Observed	Comments	N/A	No ISSUE	Monitor	Investigate	Repair
44. INTAKE STRUCTURE	Unobstructed flow over the riser pipe	N/A	✓ No ISSUE	Monitor	Investigate	Repair
45. TRASHRACK	Trashrack is free of debris and appears to be in good working condition	N/A	✓ No ISSUE	Monitor	Investigate	Repair
46. STILLING BASIN		✓ N/A	No ISSUE	Monitor	Investigate	Repair
47. PRIMARY CLOSURE	Primary closer for drawdown is located on the downstream toe. It is unclear when the last time it was exercised and recommended investigating.	N/A	No ISSUE	Monitor	✓ Investigate	Repair
48. SECONDARY CLOSURE		✓ N/A	No ISSUE	Monitor	Investigate	Repair
49. CONTROL MECHANISM	Recommend cycling the valve once annually. If valve has not been exercised in many yrs consult with a professional prior to cycling	N/A	No ISSUE	Monitor	✓ Investigate	Repair
50. OUTLET PIPE	Appears that the outlet from the riser has some structure loss at the outlet. Recommend investigating and possible investigating the structural capacity of the entire riser and discharge pipe	N/A	No ISSUE	✓ Monitor	Investigate	Repair
51. OUTLET TOWER		✓ N/A	No ISSUE	Monitor	Investigate	Repair
52. EROSION ALONG DAM TOE		N/A	✓ No ISSUE	Monitor	Investigate	Repair
53. SEEPAGE	None noted	N/A	✓ No ISSUE	Monitor	Investigate	Repair
54. UNUSUAL MOVEMENT		N/A	✓ No ISSUE	Monitor	Investigate	Repair

DOWNSTREAM AREA AND MISC.

Condition Observed	Comments	N/A	No ISSUE	Monitor	Investigate	Repair
DOWNSTREAM AREA						
55. ABUTMENT LEAKAGE		N/A	✓ No ISSUE	Monitor	Investigate	Repair
56. FOUNDATION SEEPAGE		N/A	✓ No ISSUE	Monitor	Investigate	Repair
57. SLIDE, SLOUGH, SCARP		N/A	✓ No ISSUE	Monitor	Investigate	Repair
58. DRAINAGE SYSTEM		N/A	✓ No ISSUE	Monitor	Investigate	Repair
59. DOWNSTREAM HAZARD DESCRIPTION		N/A	No ISSUE	✓ Monitor	Investigate	Repair
MISCELLANEOUS						
60. RESERVOIR SLOPES		✓ N/A	No ISSUE	Monitor	Investigate	Repair
61. ACCESS ROADS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
62. SECURITY DEVICES		✓ N/A	No ISSUE	Monitor	Investigate	Repair

CONCRETE/MASONRY DAMS

Condition Observed	Comments	N/A	No ISSUE	Monitor	Investigate	Repair
UPSTREAM FACE						
63. SURFACE CONDITION		✓ N/A	No ISSUE	Monitor	Investigate	Repair
64. CONDITION OF JOINTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
65. UNUSUAL MOVEMENT		✓ N/A	No ISSUE	Monitor	Investigate	Repair
66. ABUTMENT - DAM CONTACTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
DOWNSTREAM FACE						
67. SURFACE CONDITIONS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
68. CONDITION OF JOINTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
69. UNUSUAL MOVEMENT		✓ N/A	No ISSUE	Monitor	Investigate	Repair
70. ABUTMENT - DAM CONTACTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
71. DRAINS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
72. LEAKAGE		✓ N/A	No ISSUE	Monitor	Investigate	Repair

CREST

73. SURFACE CONDITIONS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
74. HORIZONTAL ALIGNMENT		✓ N/A	No ISSUE	Monitor	Investigate	Repair
75. VERTICAL ALIGNMENT		✓ N/A	No ISSUE	Monitor	Investigate	Repair
76. CONDITION OF JOINTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair
77. UNUSUAL MOVEMENTS		✓ N/A	No ISSUE	Monitor	Investigate	Repair

ADDITIONAL COMMENTS

It appears that maintenance will be required in the future beyond normal annual maintenance. It is recommended to begin preparing for those potential items by having set aside funds to draw from. Significant repairs can be costly for small organizations. Monitor the bank erosion along the upstream toe at waters edge. It is recommended to develop a reference measurement to determine if the erosion is active or not. If this appears to be active, stabilize. Monitor and remove animal burrows as necessary to avoid subsidence. Monitor the damp area between the draw down valve and the end of the auxiliary spillway. It is recommended to determine the last time the drawdown was cycled and to determine if it will cycle. This is important if an emergency requires drawdown or if maintenance requires drawdown. The outlet of the drawdown facilities was not determined during this inspection. It is recommended to investigate, location and maintain clear and unobstructed. Clear vegetation located at the end of the auxiliary spillway and along the right bank of the riser discharge channel. This channel is also actively eroding and need stabilization. If left unstable it could migrate into the dam embankment and cause failure. Continue to maintain the vegetation on all faces. Woody vegetation control is ongoing and planned approach. It is recommended to actively develop and implement a maintenance schedule to be standard use for the future operations.

INSPECTION IMAGES



6. VEGETATION CONDITION crest



13. VEGETATION CONDITION upstream



44. INTAKE STRUCTURE



39. WEIR OR CONTROL



lat: 41.99113, Long: -76.59760, 2023-05-11 10:29:38

36. CHANNEL FLOOR



lat: 41.99700, Long: -76.59760, 2023-05-11 10:30:21

22. VEGETATION CONDITION



lat: 41.99100, Long: -76.59860, 2023-05-11 10:46:59

40. DISCHARGE AREA



lat: 41.99170, Long: -76.59960, 2023-05-11 11:34:41

50. OUTLET PIPE



50. OUTLET Channel beyond discharge