



COLORADO
Division of Water Resources
Department of Natural Resources
Dam Safety

May 12, 2025

Ms. Christina Files
Otter Pond Homeowner's Association
1826 Otter Pond Circle
Montrose, Colorado 81401
via email: otterpondhoa@gmail.com

When replying, please refer to:
OTTER POND DAM, DAMID 410208
Water Division 4, Water District 41

SUBJECT: Engineer's Inspection Report

Dear Ms. Files,

On May 9, 2025, our office inspected Otter Pond Dam in accordance with Section 37-87-107 of the Colorado Revised Statutes that assigns the State Engineer responsibility to determine the amount of water which is safe to impound in the reservoirs of all dams in the state of Colorado. Enclosed is a copy of the Engineer's Inspection Report for your use and reference. Please sign the signature block on page 3 to acknowledge your receipt of report and return a copy to me via email.

Conditions observed during the dam safety inspection resulted in a recommended safe storage level of **Full Storage**, indicating that the dam may be used to full capacity. Several observations are provided in the inspection report along with minor maintenance, repair, and/or monitoring action items listed on page 3 required to improve the safety of the dam at full storage.

If you have any questions concerning this inspection report or any other dam safety related matters, please do not hesitate to contact me at (970) 209-1624.

Sincerely,

Jason Ward, Ph.D., P.E.
Dam Safety Engineer

Enc. Engineer's Inspection Report

ec: John Batka, Chief, Dam Safety Branch
Scott King, WD 41 Water Commissioner



ENGINEER'S INSPECTION REPORT

INSPECTOR: JPW

OFFICE OF THE STATE ENGINEER - DIVISION OF WATER RESOURCES - DAM SAFETY BRANCH

1313 SHERMAN STREET, ROOM 818, DENVER, CO 80203, (303) 866-3581

DAM NAME:	OTTER POND	T:	480N	R:	0090W	S:	4	COUNTY:	MONTROSE	DATE OF INSPECTION:	5/9/2025
DAM ID:	410208	YRCompl:	1990	DAM HEIGHT(FT):	11.5	SPILLWAY WIDTH(FT):	36.0	PREVIOUS INSPECTION:	8/15/2022		
CLASS:	Significant hazard	DAM LENGTH(FT):	200.0	SPILLWAY CAPACITY(CFS):	114.0	NORMAL STORAGE (AF):	106.0				
DIV:	4	WD:	41	CRESTWIDTH(FT):	55.0	FREEBOARD (FT):	3.1	SURFACE AREA(AC):	14.0		
EAP:	5/17/2024	CRESTELEV(FT):	5920.0	DRAINAGE AREA (AC.):		OUTLET INSPECTED:	7/1/2024				

CURRENT RESTRICTION: -- NONE --

OWNER:	OTTER POND HOMEOWNERS ASSOCIATION	OWNER REP.:	CHRISTINA FILES
ADDRESS:	1826 OTTER POND CIRCLE	CONTACT NAME:	CHRISTINA FILES
	MONTROSE	CONTACT PHONE:	(970) 765-6669X
	CO		81401

INSPECTION PARTY :	Jason Ward	Christina Files and Tad King
REPRESENTING :	Dam Safety Engineer	Otter Pond HOA

FIELD CONDITIONS OBSERVED	WATER LEVEL: BELOW DAM CREST	2.9	FT.	Above Spillway	0.2	FT.	GAGE ROD READING	9.3
	GROUND MOISTURE CONDITION:	☒ DRY	☐ WET	☐ SNOWCOVER	OTHER			

DIRECTIONS: MARK AN X FOR CONDITIONS FOUND AND UNDERLINE WORDS THAT APPLY

UPSTREAM SLOPE

PROBLEMS NOTED ☒ (0) NONE ☐ (1) RIPRAP - MISSING, SPARSE, DISPLACED, WEATHERED ☐ (2) WAVE EROSION - WITH SCARPS
☐ (3) CRACKS WITH DISPLACEMENT ☐ (4) SINKHOLE ☐ (5) APPEARS TOO STEEP ☐ (6) DEPRESSION OR BULGES ☐ (7) SLIDES
☐ (8) CONCRETE FACING - HOLES, CRACKS, DISPLACED, UNDERMINED ☐ (9) OTHER

Full riprap coverage to dam crest. Riprap and slope have new as-constructed appearance following recent completion of SEO Construction No. C-2135. No problems observed.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

CREST

PROBLEMS NOTED ☒ (10) NONE ☐ (11) RUTS OR PUDDLES ☐ (12) EROSION ☐ (13) CRACKS - WITH DISPLACEMENT ☐ (14) SINKHOLES
☐ (15) NOT WIDE ENOUGH ☐ (16) LOW AREA ☐ (17) MISALIGNMENT ☐ (18) IMPROPER SURFACE DRAINAGE ☐ (19) OTHER

Paved crest has new as-constructed appearance following recent completion of SEO Construction No. C-2135. No problems observed.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

DOWNSTREAM SLOPE

PROBLEMS NOTED ☒ (20) NONE ☐ (21) LIVESTOCK DAMAGE ☐ (22) EROSION OR GULLIES ☐ (23) CRACKS - WITH DISPLACEMENT ☐ (24) SINKHOLE
☐ (25) APPEARS TOO STEEP ☐ (26) DEPRESSION OR BULGES ☐ (27) SLIDE ☐ (28) SOFT AREAS ☐ (29) OTHER

Downstream slope has new as-constructed appearance following recent completion of SEO Construction No. C-2135. No problems observed.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

SEEPAGE

PROBLEMS NOTED ☒ (30) NONE ☐ (31) SATURATED EMBANKMENT AREA ☐ (32) SEEPAGE EXITS ON EMBANKMENT
☐ (33) SEEPAGE EXITS AT POINT SOURCE ☐ (34) SEEPAGE AREA AT TOE ☐ (35) FLOW ADJACENT TO OUTLET ☐ (36) SEEPAGE INCREASED / MUDDY
DRAIN OUTFALLS SEEN ☐ No ☒ Yes Show location of drains on sketch and indicate ☐ (37) FLOW INCREASED / MUDDY ☐ (38) DRAIN DRY / OBSTRUCTED
☐ (39) OTHER

Damp ground area approximately 18-inches in diameter adjacent to top right edge of downstream outlet structure. Uncertain if seepage related, but surrounding soil appeared dry. Area is damp with no signs of flowing water or saturated conditions.

Dry conditions on remainder of slope and all along embankment contact with natural ground.

Steady drip from filter collar drain outfall.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

OUTLET

PROBLEMS NOTED ☒ (40) NONE ☐ (41) NO OUTLET FOUND ☐ (42) POOR OPERATING ACCESS ☐ (43) INOPERABLE
☐ (44) **UPSTREAM** OR **DOWNSTREAM** STRUCTURE DETERIORATED (45) OUTLET OPERATED DURING INSPECTION ☒ YES ☐ NO
INTERIOR INSPECTED ☒ (120) NO ☐ (121) YES ☐ (46) CONDUIT **DETERIORATED** OR **COLLAPSED** ☐ (47) JOINTS DISPLACED ☐ (48) VALVE LEAKAGE
☐ (49) OTHER

Outlet gate closed during inspection, but (45) operated at end of inspection with no problems observed. Gate appeared to fully close after exercised, but unable to fully evaluate due to combined spillway flow. All exposed outlet components appear in new as-constructed condition.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

SPILLWAY

PROBLEMS NOTED ☒ (50) NONE ☐ (51) NO EMERGENCY SPILLWAY FOUND ☐ (52) EROSION **WITH BACKCUTTING** ☐ (53) CRACK - **WITH DISPLACEMENT**
☐ (54) APPEARS TO BE STRUCTURALLY INADEQUATE ☐ (55) APPEARS TOO SMALL ☐ (56) INADEQUATE FREEBOARD ☐ (57) FLOW OBSTRUCTED
☐ (58) CONCRETE **DETERIORATED / UNDERMINED** ☐ (59) OTHER

Combined overflow drop spillway with outlet works approved and constructed under SEO Construction No. C-2135. Spillway flowing during inspection. Uniform conditions around square intake with no problems observed.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

MONITORING

EXISTING INSTRUMENTATION FOUND ☐ (110) NONE ☒ (111) GAGE ROD ☐ (112) PIEZOMETERS ☐ (113) SEEPAGE **WEIRS / FLUMES**
☐ (114) SURVEY MONUMENTS ☐ (115) OTHER
MONITORING OF INSTRUMENTATION ☐ (116) NO ☒ (117) YES PERIODIC INSPECTIONS BY: ☒ (118) OWNER ☐ (119) ENGINEER

No formal routine monitoring at this time other than Owner responsibilities outlined in Rule 13 such as Site Security, Owner's Observations, and Visual Monitoring of the dam. Internal inspection of the pipe performed at end of construction in 2024, so next outlet inspection due in 2034.

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

MAINTENANCE AND REPAIRS

PROBLEMS NOTED ☒ (60) NONE ☐ (61) ACCESS ROAD NEEDS MAINTENANCE ☐ (62) LIVESTOCK DAMAGE
☐ (63) BRUSH ON **UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE** ☐ (64) TREES ON **UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE**
☐ (65) RODENT ACTIVITY ON **UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, TOE** ☐ (66) DETERIORATED CONCRETE - **FACING, OUTLET SPILLWAY**
☐ (67) GATE AND OPERATING MECHANISM NEED MAINTENANCE ☐ (68) OTHER

CONDITIONS OBSERVED: ☒ Good ☐ Acceptable ☐ Poor

Go to next page for Overall Conditions and Items Requiring Actions

OVERALL CONDITIONS

The current inspection is the first safety inspection after completion of reconstruction of the dam under approved SEO Construction No. C-2135 in 2024. The reservoir was filled in accordance with the approved first-fill plan and has been full for approximately 9-months prior to the inspection. Results of the inspection indicate all components of the dam are in generally Good condition having new as-constructed appearance. The Owner should continue observation and visual monitoring of the dam in accordance with the guidelines of Rule 13 or the Rules and Regulations for Dam Safety and Dam construction available on the DWR website. Overall the dam is rated in Satisfactory condition and may be used for Full Storage when water is physically and legally available.

Based on this Safety Inspection and recent file review, the overall condition is determined to be:

☒ (71) SATISFACTORY

☐ (72) CONDITIONALLY SATISFACTORY

☐ (73) UNSATISFACTORY

ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE - ORDINARY REPAIR - MONITORING

☐ LUBRICATE AND OPERATE OUTLET GATES THROUGH FULL CYCLE

5/9/2025 - At least once every other year at the safety inspection.

☐ MONITOR

5/9/2025 - Visually monitor damp area adjacent to upper right corner of outlet structure for changes.

The State Engineer, by providing this dam safety inspection report, does not assume responsibility for any unsafe condition of the subject dam. The sole responsibility for the safety of this dam rests with the reservoir owner or operator, who should take every step necessary to prevent damages caused by leakage or overflow of waters from the reservoir or floods resulting from a failure of the dam.

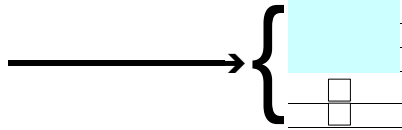
SAFE STORAGE LEVEL: RECOMMENDED AS A RESULT OF THIS INSPECTION

☒ (101) FULL STORAGE

☐ (102) CONDITIONAL FULL STORAGE

☐ (103) RECOMMENDED RESTRICTION

☐ (104) CONTINUE EXISTING RESTRICTION



FT. BELOW DAM CREST

FT. BELOW SPILLWAY CREST

FT. GAGE HEIGHT

NO STORAGE-MAINTAIN OUTLET FULLY OPEN

REASON FOR RESTRICTION

ACTIONS REQUIRED FOR CONDITIONAL FULL STORAGE OR CONTINUED STORAGE AT THE RESTRICTED LEVEL:

Engineer's
Signature

INSPECTED BY

Owner's
Signature

OWNER/OWNER'S REPRESENTATIVE

DATE: 05/30/2025

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, OUTLET, SPILLWAY

GOOD

In general, this part of the structure has a near new appearance, and conditions observed in this area do not appear to threaten the safety of the dam.

ACCEPTABLE

Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.

POOR

Conditions observed in this area appear to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD

No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.

ACCEPTABLE

Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in seepage. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.

POOR

Seepage conditions observed appear to threaten the safety of the dam. Examples:
1) Designed drain or seepage flows have increased without increase in reservoir level.
2) Drain or seepage flows contain sediment, i.e., muddy water or particles in jar samples.
3) Widespread seepage, concentrated seepage, or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MONITORING

GOOD

Monitoring includes movement surveys and leakage measurements for all dams, and piezometer readings for High hazard dams. Instrumentation is in reliable, working condition. A plan for monitoring the instrumentation and analyzing results by the owner's engineer is in effect. Periodic inspections by owner's engineer.

ACCEPTABLE

Monitoring includes movement surveys and leakage measurements for High and Significant hazard dams; leakage measurements for Low hazard dams. Instrumentation is in serviceable condition. A plan for monitoring instrumentation is in effect by owner. Periodic inspections by owner or representative. OR, NO MONITORING REQUIRED.

POOR

All instrumentation and monitoring described under "ACCEPTABLE" here for each class of dam, are not provided, or required periodic readings are not being made, or unexplained changes in readings are not reacted to by the owner.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD

Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.

ACCEPTABLE

Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.

POOR

Dam does not appear to receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam.

OVERALL CONDITIONS

SATISFACTORY

The safety inspection indicates no conditions that appear to threaten the safety of the dam, and the dam is expected to perform satisfactorily under all design loading conditions. Most of the required monitoring is being performed.

CONDITIONALLY SATISFACTORY

The safety inspection indicates symptoms of structural distress (seepage, evidence of minor displacements, etc.), which, if conditions worsen, could lead to the failure of the dam. Essential monitoring, inspection, and maintenance must be performed as a requirement for continued full storage in the reservoir.

UNSATISFACTORY

The safety inspection indicates definite signs of structural distress (excessive seepage, cracks, slides, sinkholes, severe deterioration, etc.), which could lead to the failure of the dam if the reservoir is used to full capacity. The dam is judged unsafe for full storage of water.

SAFE STORAGE LEVEL

FULL STORAGE

Dam may be used to full capacity with no conditions attached.

CONDITIONAL FULL STORAGE

Dam may be used to full storage if certain monitoring, maintenance, or operational conditions are met.

RESTRICTION

Dam may not be used to full capacity, but must be operated at some reduced level in the interest of public safety.

HAZARD CLASSIFICATION OF DAMS

High hazard

Loss of human life is expected in the event of failure of the dam, while the reservoir is at the high water line.

Significant hazard

Significant damage to improved property is expected in the event of failure of the dam while the reservoir is at the high water line, but no loss of human life is expected.

Low hazard

Loss of human life is not expected, and damage to improved property is expected to be small, in the event of failure of the dam while the reservoir is at high water line.

NPH hazard - No loss of life or damage to improved property, or loss of downstream resource is expected in the event of failure of the dam while the reservoir is at the high water line.



Note: right and left defined as looking downstream.

View along upstream slope from left abutment.



Upstream slope and right side of outlet gate access walkway.



Right side of trashrack bars and combined service/emergency spillway drop structure.



Left side of trashrack bars and combined service/emergency spillway drop structure.

Note reservoir staff gage reading of approximately 9.25-feet during inspection (which matches as-constructed drawing with spillway at gage height 9.1-feet and approximately 0.15-feet depth flowing over crest during inspection).



Stop nut flush with gate stem at full closure appears correctly set.



View across paved dam crest from walkway.



Downstream slope from left abutment.



Downstream outlet structure.



Close-up of filter collar drain outfall. Slow drip flow observed during inspection.



Internal view of filter collar drain outfall.

Localize area of damp ground
(not saturated and no flow)



Right side of downstream outlet structure.



Outlet flowing during gate exercise. Note discolored water.