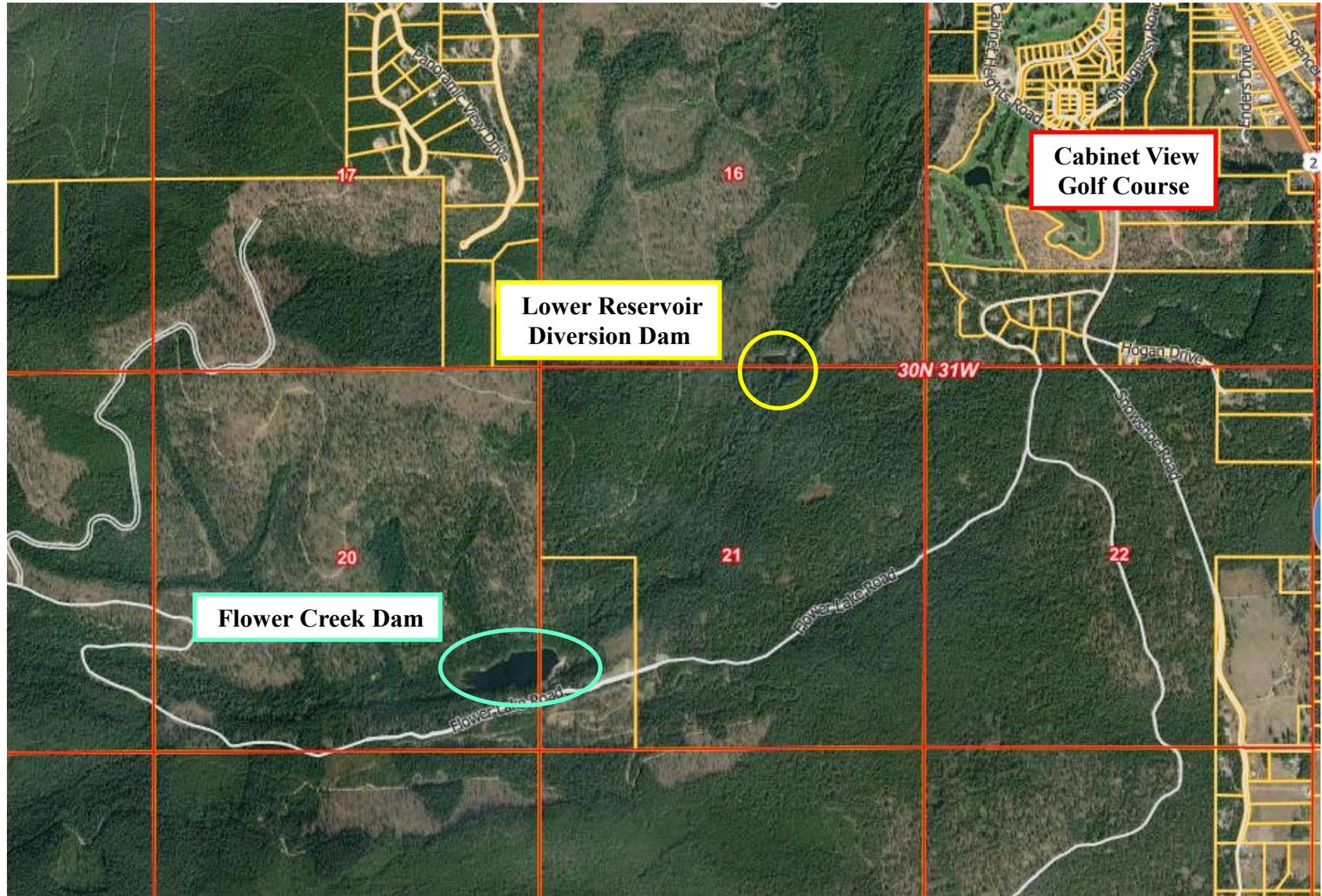


# Flower Creek Dam and Lower Reservoir/Diversion Dam



# Flower Creek Lower Reservoir Pre-sedimentation Basin/Diversion Dam

Northern Retaining Wall



Spillway



Sedimentation Basin



Intake Manifold



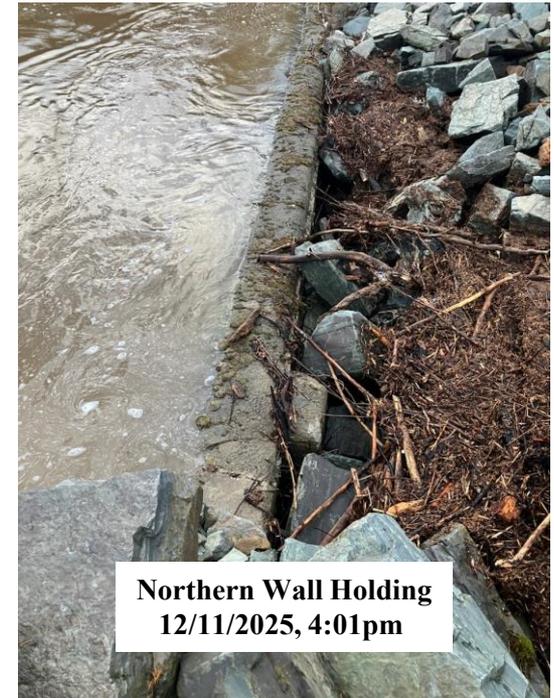
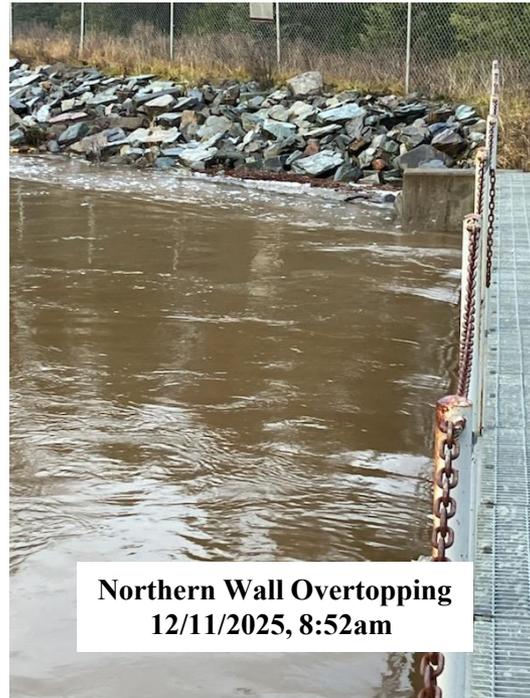
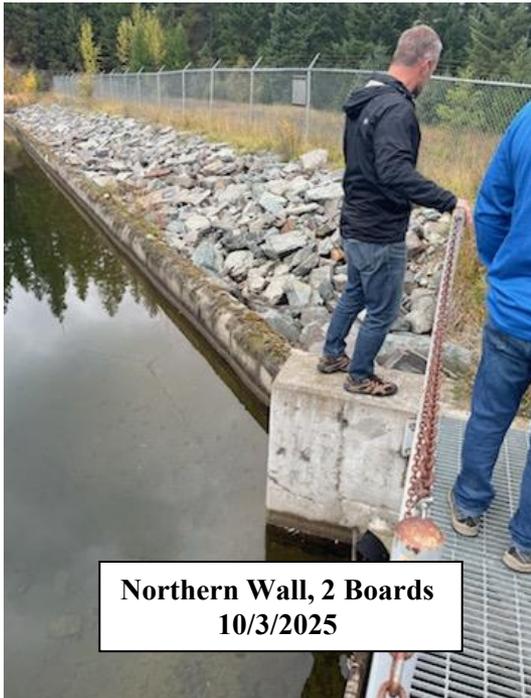
**Spillway October 2025**



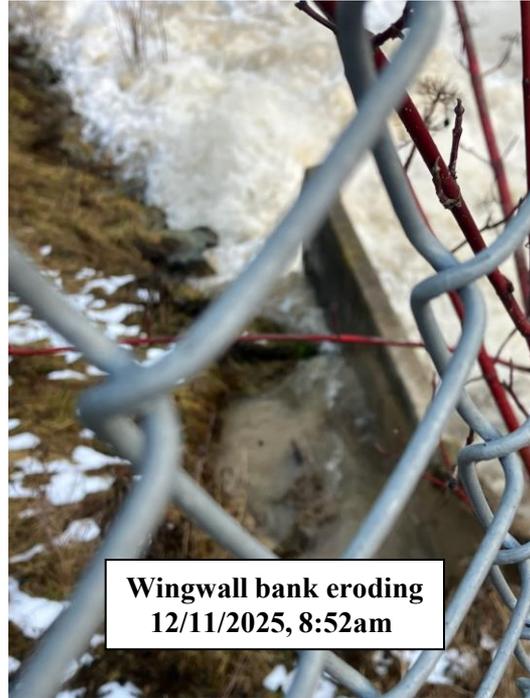
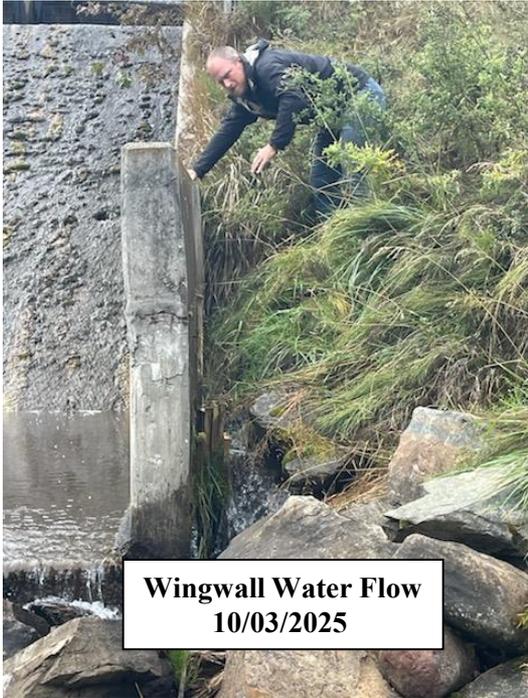
**Reservoir November 2025**



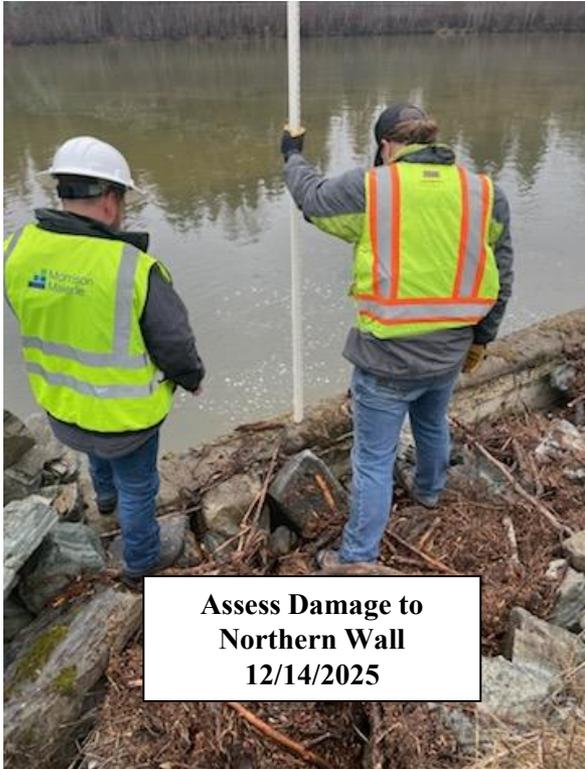
## Lower Reservoir Northern Retaining Wall



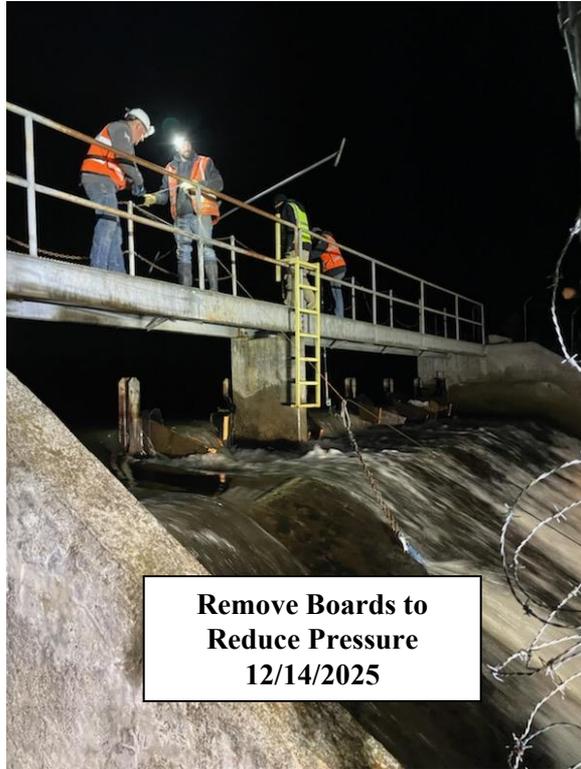
## Lower Reservoir Spillway



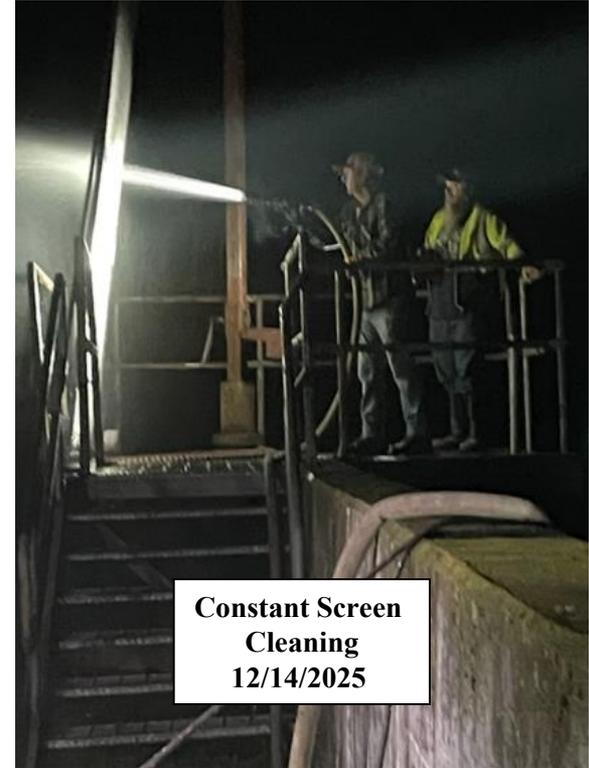
# Emergency Protective Measures



**Assess Damage to  
Northern Wall  
12/14/2025**



**Remove Boards to  
Reduce Pressure  
12/14/2025**



**Constant Screen  
Cleaning  
12/14/2025**

# Emergency Protective Measures

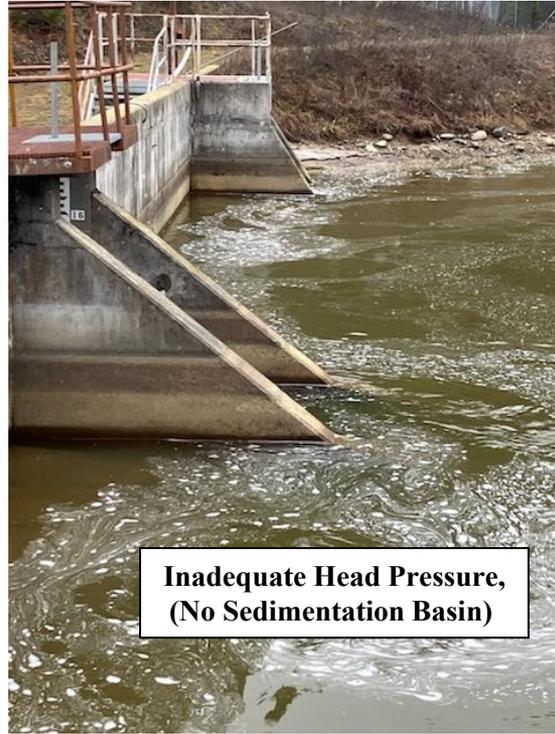


**Bypass  
Sedimentation Basin  
12/14/2025**

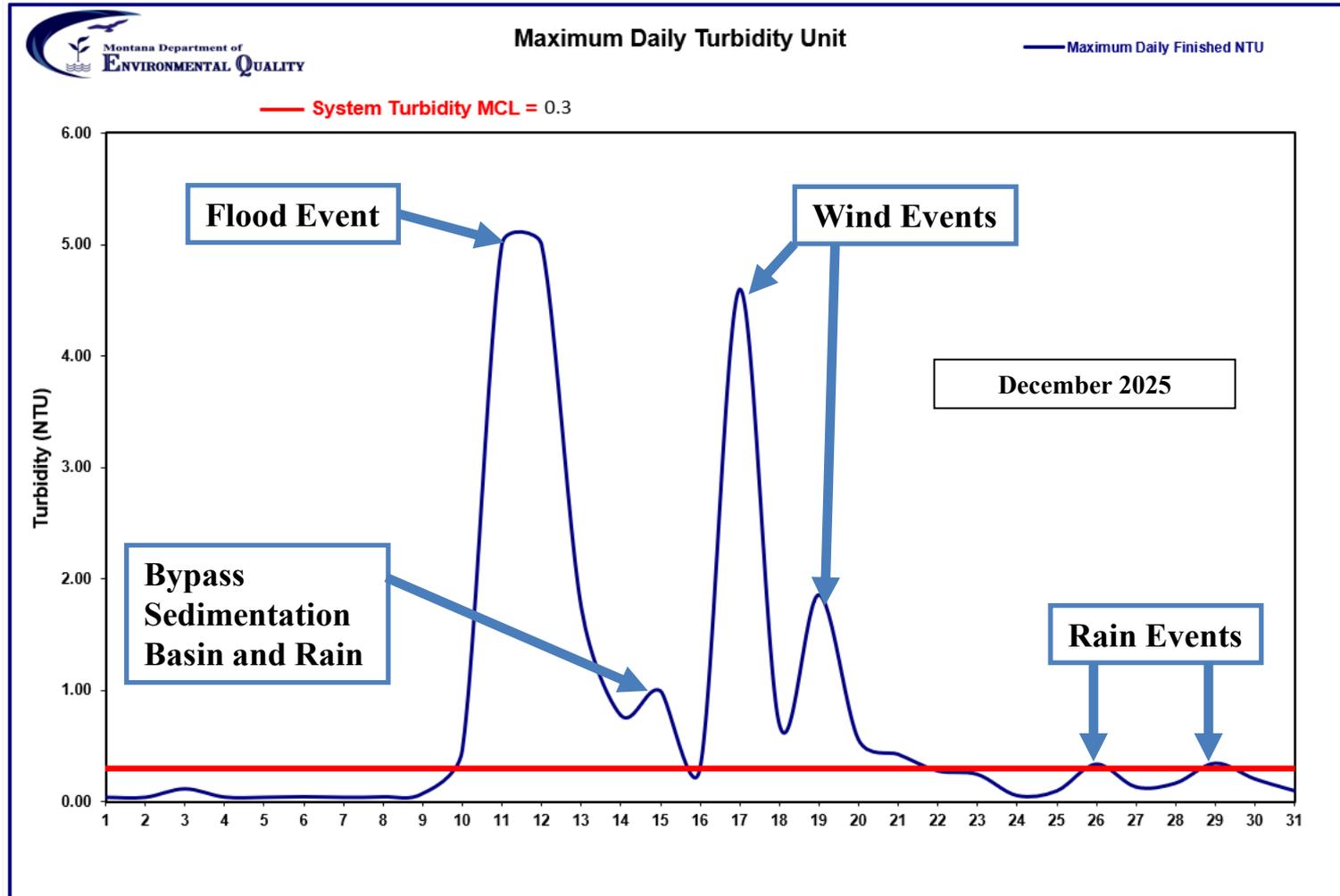


**Stabilize Boil  
12/15/2025**

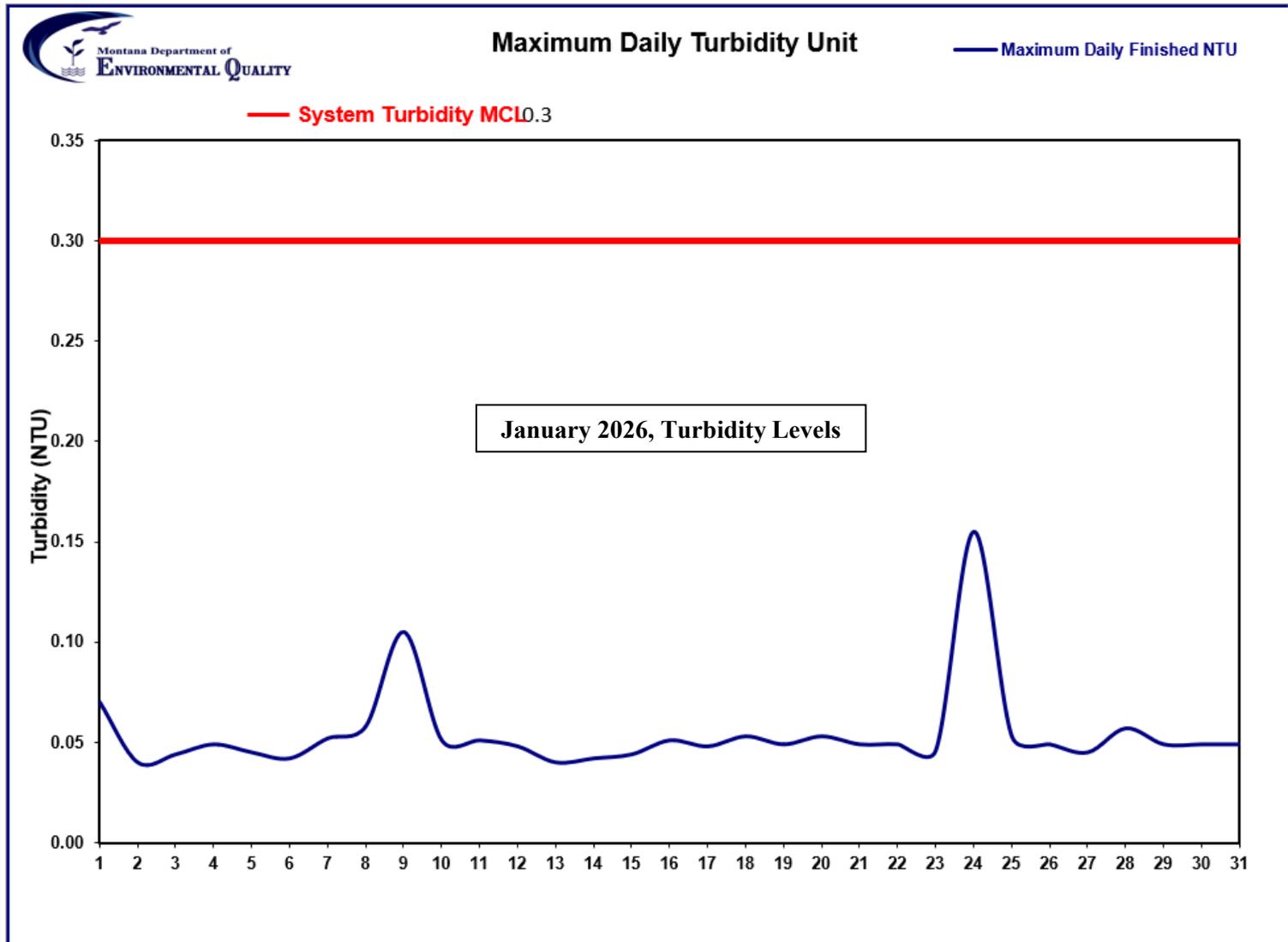
# Emergency Protective Measures Negative Effects



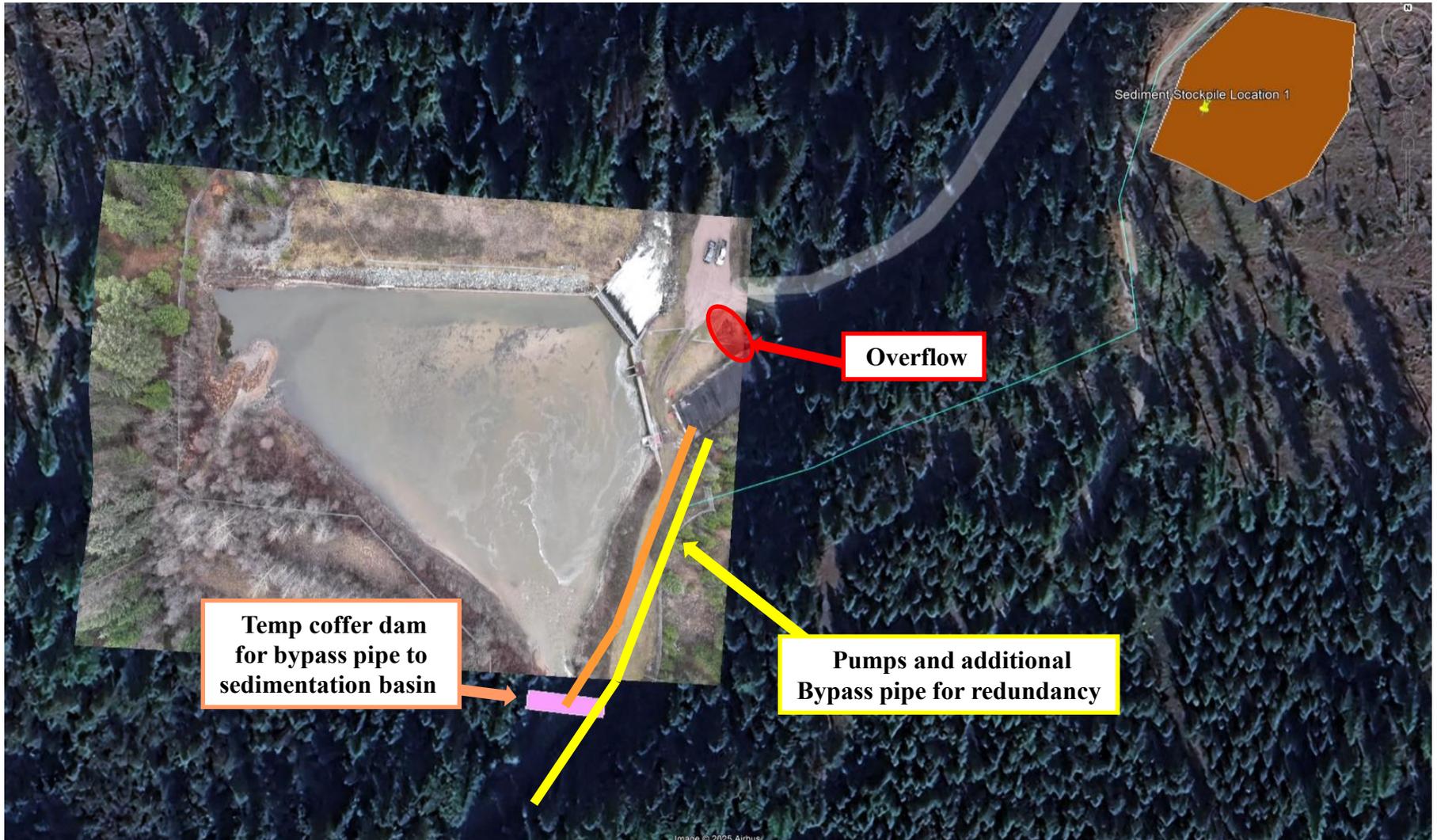
# Emergency Protective Measures Negative Effects



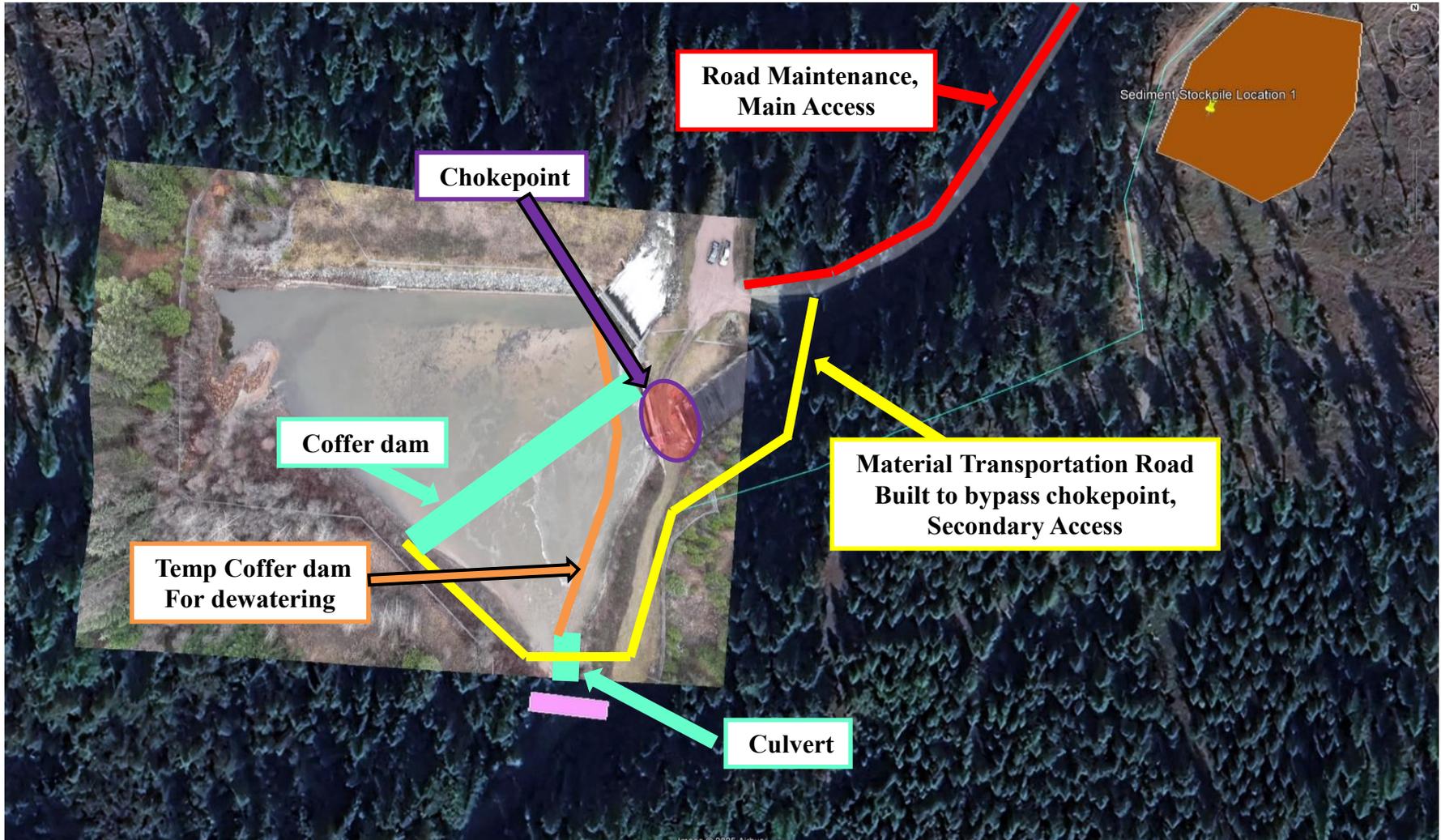
# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions

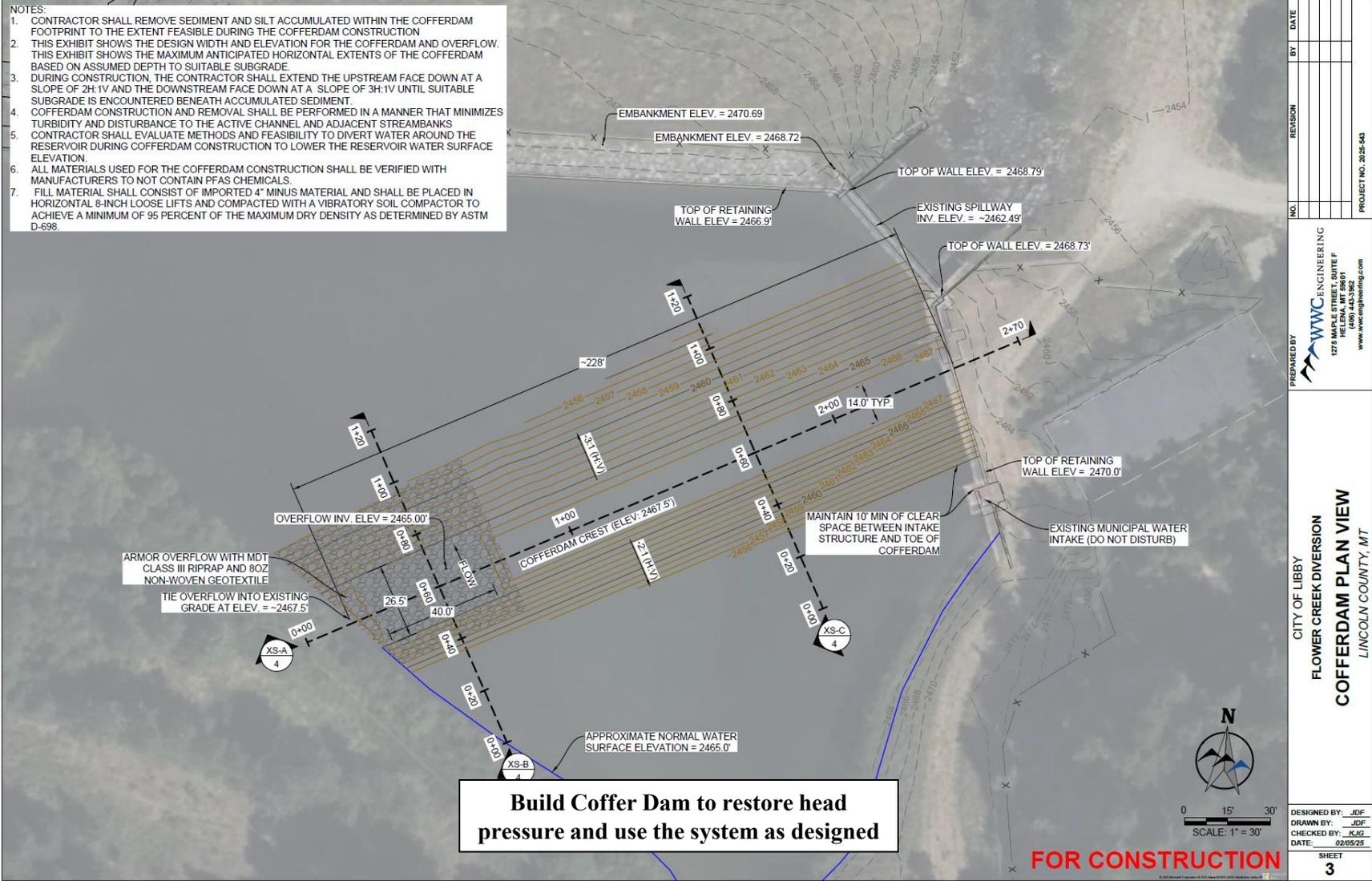


# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions

- NOTES:
1. CONTRACTOR SHALL REMOVE SEDIMENT AND SILT ACCUMULATED WITHIN THE COFFERDAM FOOTPRINT TO THE EXTENT FEASIBLE DURING THE COFFERDAM CONSTRUCTION
  2. THIS EXHIBIT SHOWS THE DESIGN WIDTH AND ELEVATION FOR THE COFFERDAM AND OVERFLOW. THIS EXHIBIT SHOWS THE MAXIMUM ANTICIPATED HORIZONTAL EXTENTS OF THE COFFERDAM BASED ON ASSUMED DEPTH TO SUITABLE SUBGRADE.
  3. DURING CONSTRUCTION, THE CONTRACTOR SHALL EXTEND THE UPSTREAM FACE DOWN AT A SLOPE OF 2H:1V AND THE DOWNSTREAM FACE DOWN AT A SLOPE OF 3H:1V UNTIL SUITABLE SUBGRADE IS ENCOUNTERED BENEATH ACCUMULATED SEDIMENT.
  4. COFFERDAM CONSTRUCTION AND REMOVAL SHALL BE PERFORMED IN A MANNER THAT MINIMIZES TURBIDITY AND DISTURBANCE TO THE ACTIVE CHANNEL AND ADJACENT STREAMBANKS
  5. CONTRACTOR SHALL EVALUATE METHODS AND FEASIBILITY TO DIVERT WATER AROUND THE RESERVOIR DURING COFFERDAM CONSTRUCTION TO LOWER THE RESERVOIR WATER SURFACE ELEVATION.
  6. ALL MATERIALS USED FOR THE COFFERDAM CONSTRUCTION SHALL BE VERIFIED WITH MANUFACTURERS TO NOT CONTAIN PFAS CHEMICALS.
  7. FILL MATERIAL SHALL CONSIST OF IMPORTED 4" MINUS MATERIAL AND SHALL BE PLACED IN HORIZONTAL 8-INCH LOOSE LIFTS AND COMPACTED WITH A VIBRATORY SOIL COMPACTOR TO ACHIEVE A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698.



**Build Cofferdam to restore head pressure and use the system as designed**

NO.	REVISION	BY	DATE

PROJECT No. 2025-540

PREPARED BY: **WVC ENGINEERING**  
1275 MAPLE STREET, SUITE F  
HELENA, MT 59601  
(406) 443-8888  
www.wvcengineering.com

CITY OF LIBBY  
FLOWER CREEK DIVERSION  
**COFFERDAM PLAN VIEW**  
LINCOLN COUNTY, MT

DESIGNED BY: JDF  
DRAWN BY: JDF  
CHECKED BY: KAG  
DATE: 09/25/25

SHEET  
**3**

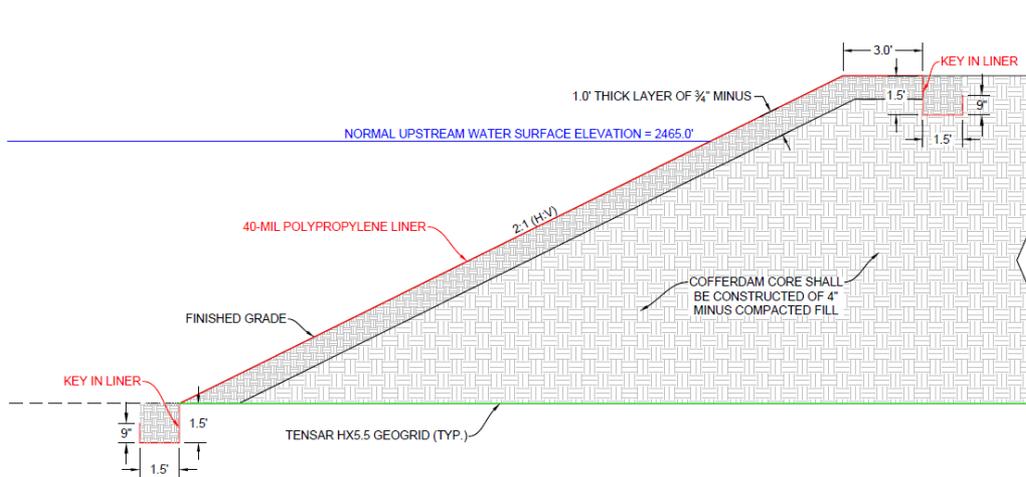
K:\hele\city\_of\_libby\2025\540 flower creek diversion engineering\05-25-25\wvc\2025-540 SITE.DWG DATE: 09/25/25 1:14:28 PM



# Emergency Protective Measures Solutions/Actions

**NOTES:**

1. REMOVE ANY PROTRUDING OR JAGGED MATERIAL FROM LINER ANCHOR TRENCH BEFORE PLACING LINER.
2. ANCHOR TRENCH SHALL BE BACKFILLED WITH  $\frac{3}{4}$ " MINUS MATERIAL AND COMPACTED TO 95% STD. PROCTOR.
3. EXCESS 40-MIL POLYPROPYLENE LINER BEYOND WHAT IS NEEDED FOR THE ANCHOR TRENCH AT THE UPSTREAM TOE SHALL BE DRAPED ON THE RESERVOIR FOOTPRINT UPSTREAM FROM THE COFFERDAM TO FURTHER LIMIT SEEPAGE.
4. CONTRACTOR SHALL SECURE THE 40-MIL POLYPROPYLENE LINER TO THE EXISTING CONCRETE HEADWALL ON THE EAST SIDE OF THE COFFERDAM.



1 UPSTREAM COFFERDAM LINER  
5 SCALE: NOT TO SCALE

**Build Cofferdam to restore head pressure and use the system as designed**

**FOR CONSTRUCTION**

NO.	REVISION	BY	DATE

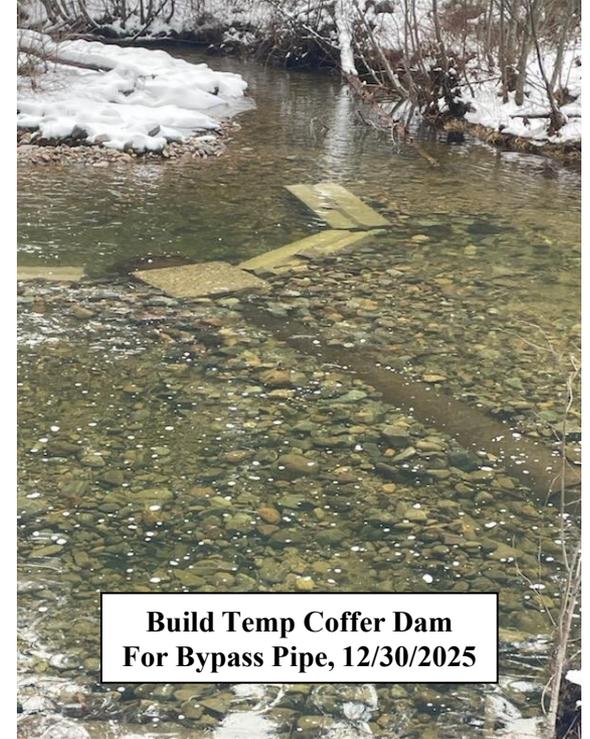
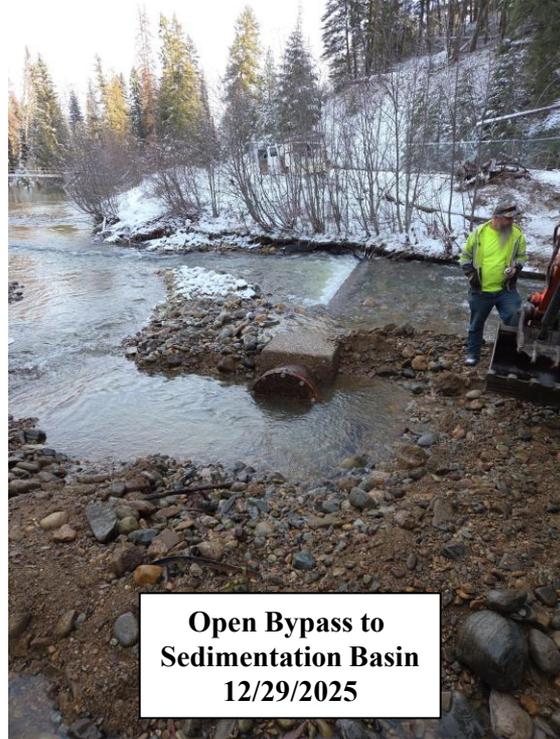
PREPARED BY  
**WWC ENGINEERING**  
 1275 MAPLE STREET, SUITE F  
 LINCOLN COUNTY, MT  
 (406) 442-3182  
 www.wwcengineering.com

CITY OF LIBBY  
 FLOWER CREEK DIVERSION  
**DETAILS**  
 LINCOLN COUNTY, MT

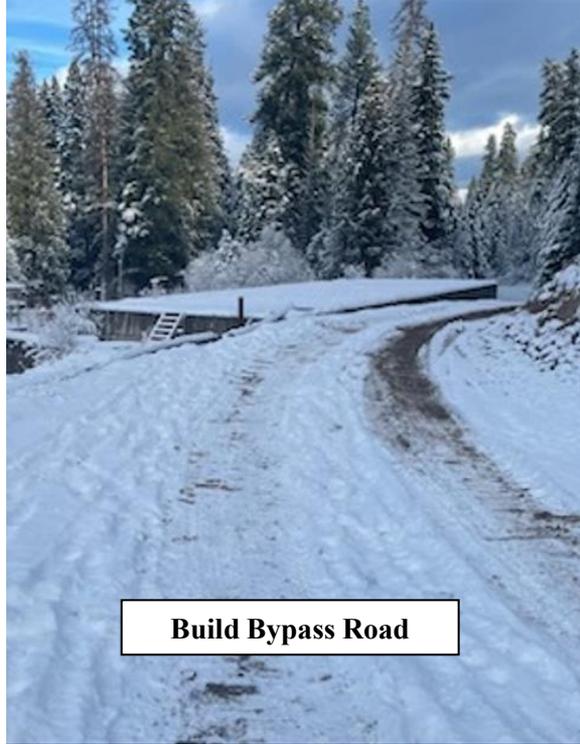
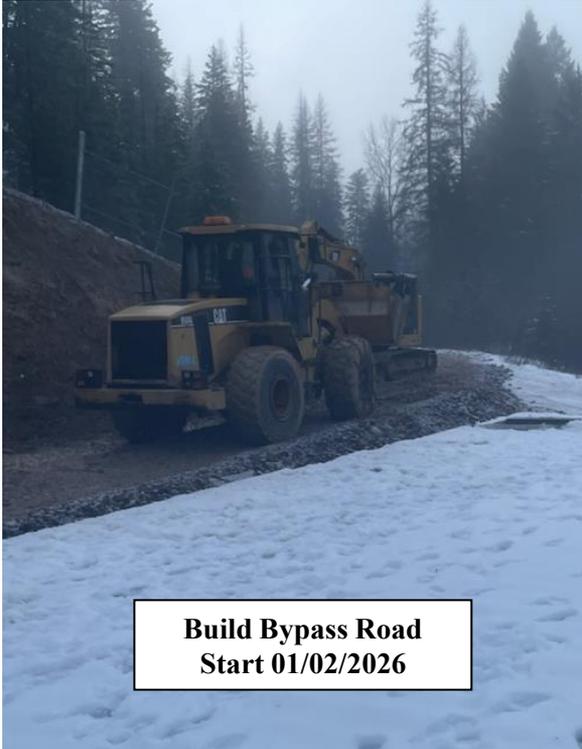
DESIGNED BY: JDF  
 DRAWN BY: JDF  
 CHECKED BY: KJS  
 DATE: 02/05/23

SHEET  
**5**

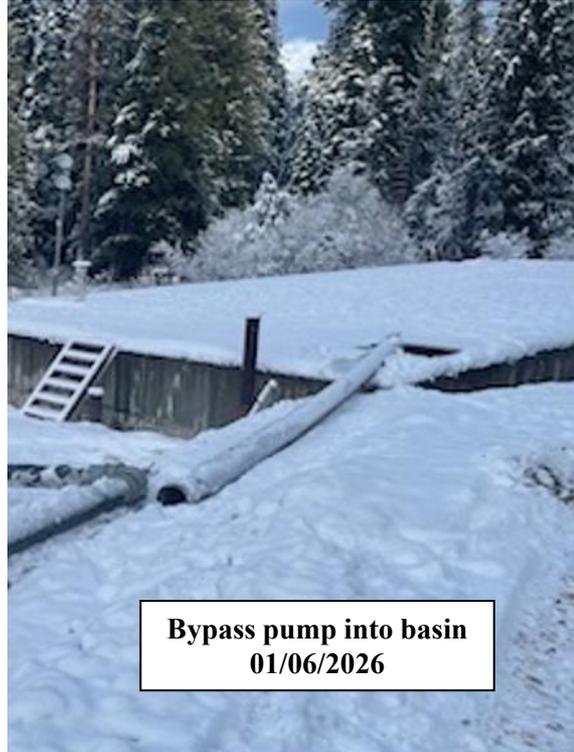
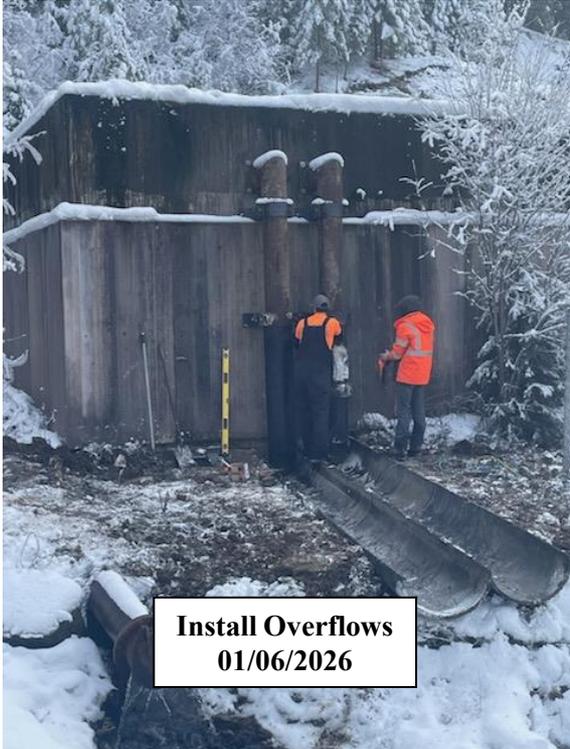
# Emergency Protective Measures Solutions/Actions



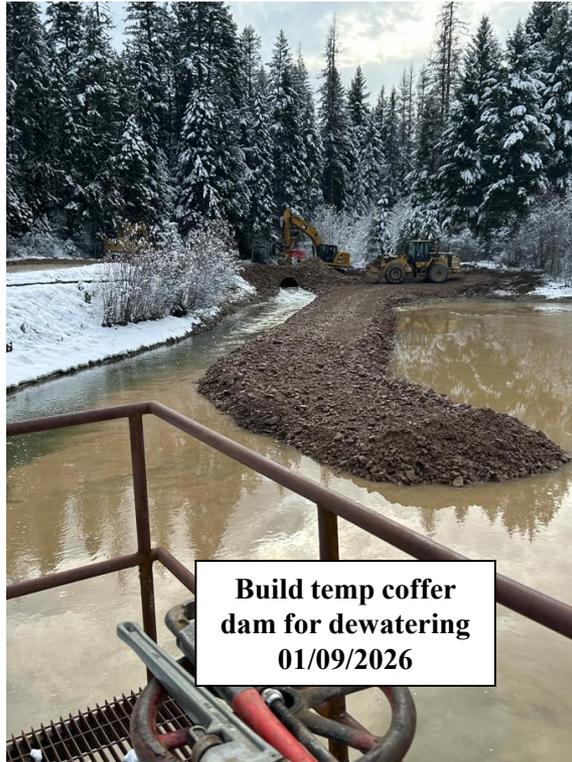
# Emergency Protective Measures Solutions/Actions



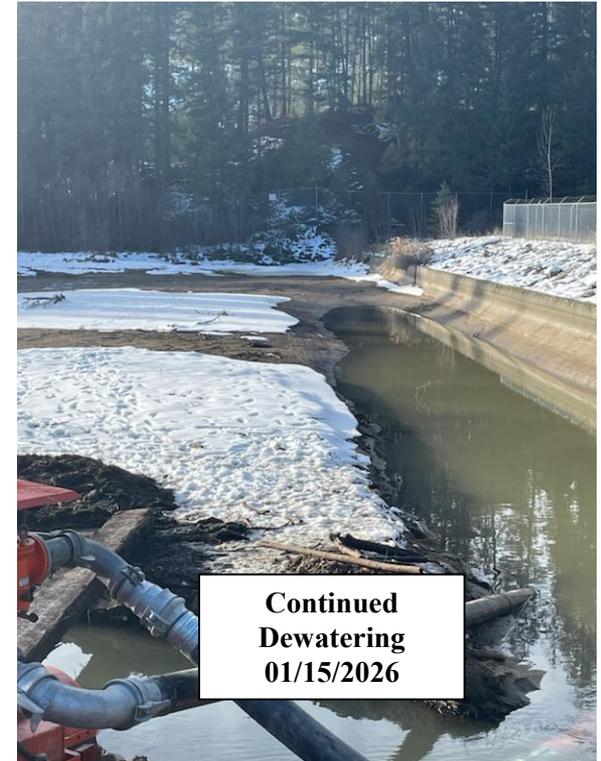
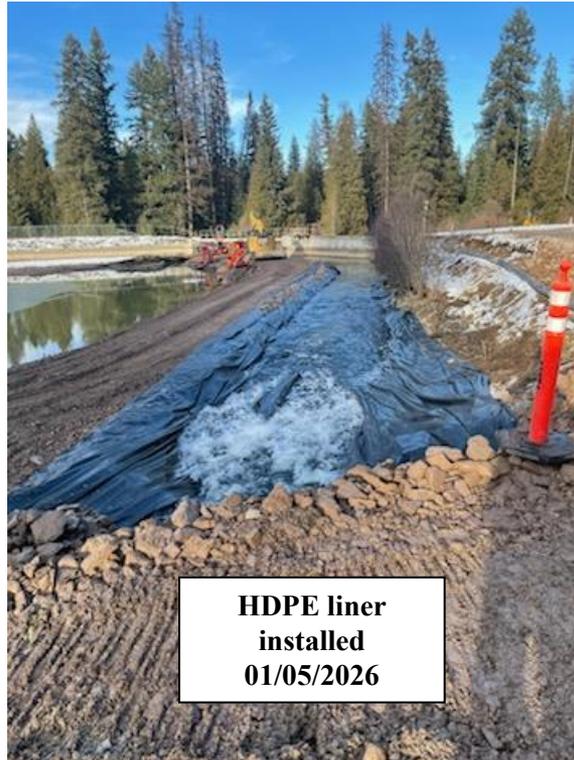
# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



**Continued  
Dewatering  
01/16/2026**



**Northern  
Retaining wall  
expelling water  
01/16/2026**

# Emergency Protective Measures Solutions/Actions



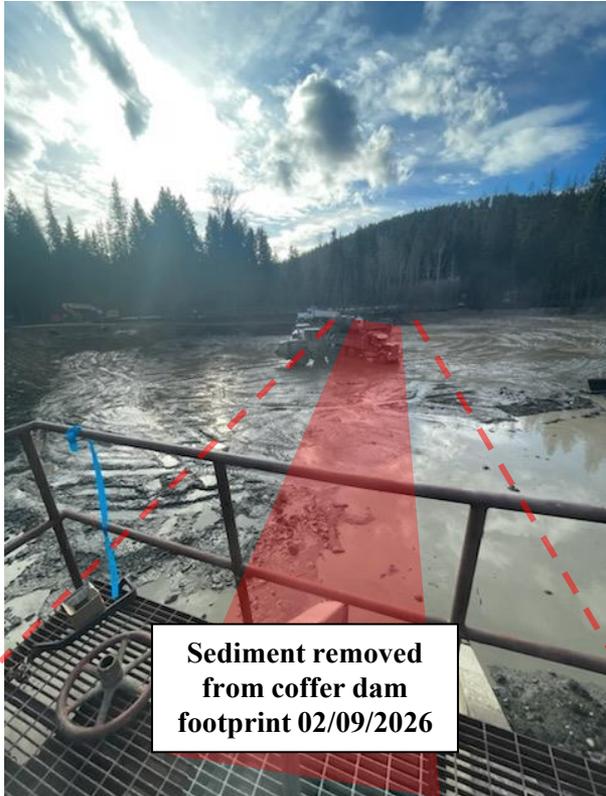
# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



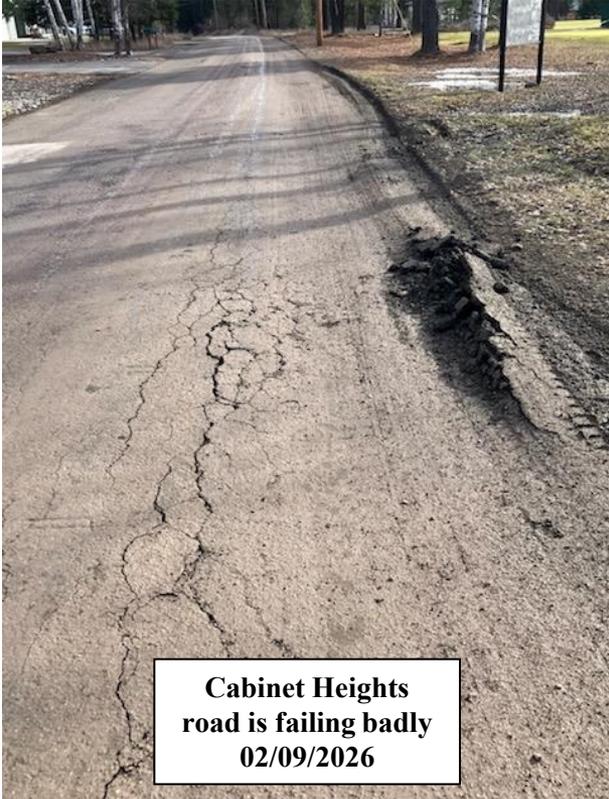
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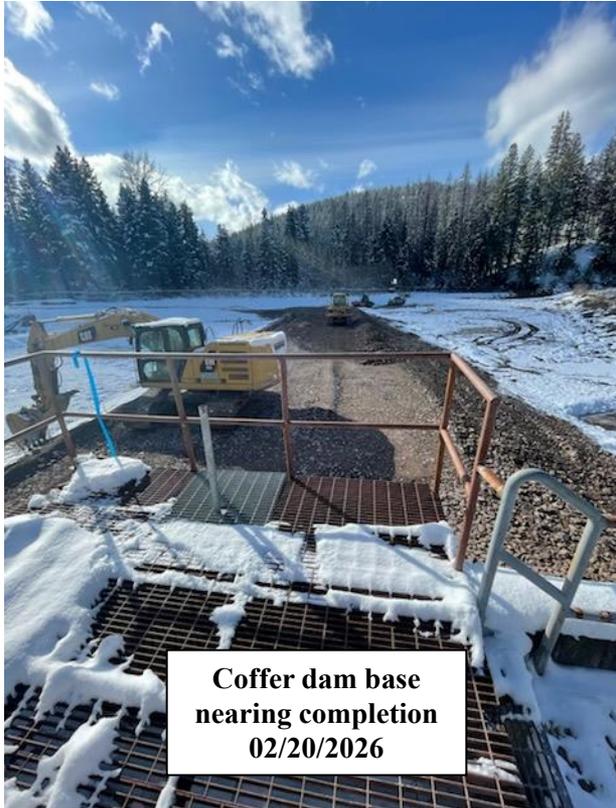
**Main access road is  
failing badly  
02/09/2026**



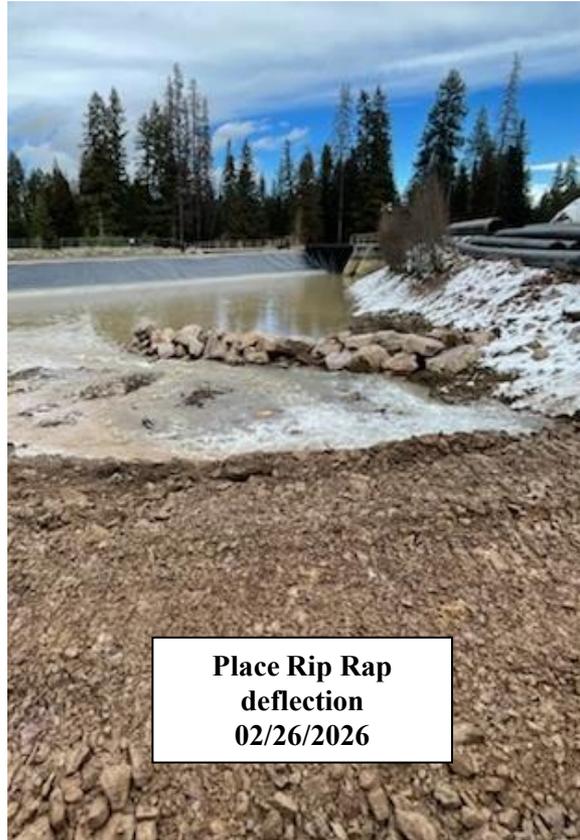
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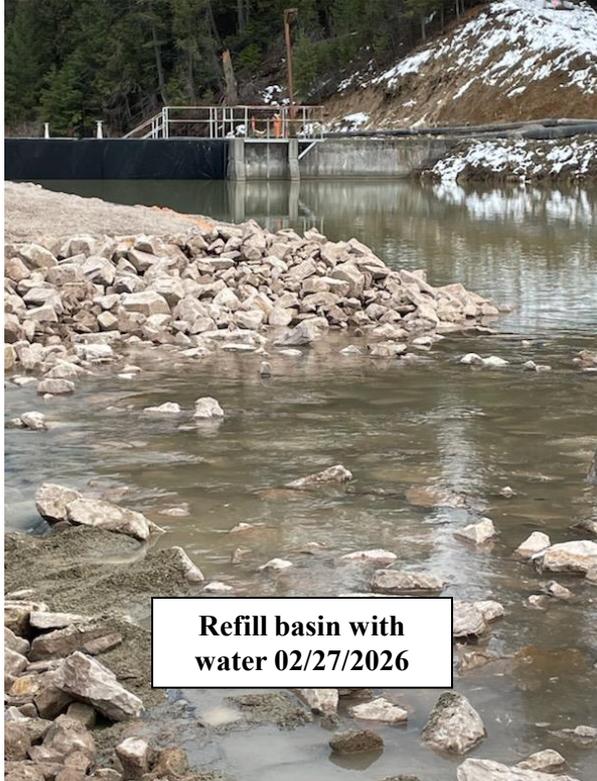
# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



# Emergency Protective Measures Solutions/Actions



**Refill basin with  
water 02/27/2026**



**Refill basin with  
water 02/27/2026**



**Remove culvert  
03/02/2026**