

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 21-13115

Exam Date: 6/19/2012

1. Current Owner: EAGLE RIDGE RANCH LLC
2880 N 55 W
IDAHO FALLS ID 83402
(208)552-1162

2. SOURCE

BLUE LAKE

TRIBUTARY

SHEEP CREEK

B. OVERLAP REVIEW

1. Other water rights with the same place of use: None
2. Other water rights with the same point of diversion: None

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

BLUE LAKE NW1/4SW1/4 Sec. 14,

Twp 13N, Rge 42E, B.M. FREMONT County

Method of Determination: Site visit.

2. PLACE OF USE:

RECREATION STORAGE

Twp Rge Sec	NE				NW				SW				SE				Totals
	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
13N 42E 14									X	X							
13N 42E 15													X				
													L 3				

Method of Determination: Aerial photos and site visit.

D. FLOW MEASUREMENTS

On-stream reservoir. No measurement required.

E. VOLUME CALCULATIONS

Analysis provided with application for permit, suggesting a reservoir capacity of 120 acre-feet is reasonable.

Surface area of Blue Lake is 22.5 acres. $120 \text{ af} / 22.5 \text{ acres} = 5.3 \text{ feet}$ (average depth of reservoir)Average Depth = $120 \text{ af} / 22.5 \text{ acres} = 5.3 \text{ feet}$ Max Depth = $120 \text{ af} / 22.5 \text{ acres} / 0.4 = 13.3 \text{ feet}$

(2010 Dam Safety Report lists hydraulic height of Blue Lake (Jacobs) Dam at 13.8 ft)

F. NARRATIVE/REMARKS/COMMENTS

Field exam completed in June 2012. Reservoir is primarily covered by water right 21-4140 (100 af). Dam was raised in the 1990s, resulting in a stored volume of 120 acre-feet. The depth measurements and calculations provided with the application for permit confirm a reservoir capacity of 120 acre-feet. License will be issued for the additional 20 acre-feet.

Mitigation for evaporation only required for the additional surface area added to Blue Lake under Permit 21-13115. According to calculations provided with application, surface area of the original Blue Lake was 20 acres. Current reservoir has a surface area of 22.5 acres. Evaporation from reservoir is mitigated by holding 18.2 acres of water right 21-4126 unused.

WD01 confirmed that measuring devices are not needed at this time to regulate diversion under this water right.

Have conditions of permit approval been met? ☒ Yes ☐ No

G. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
RECREATION STORAGE	01/01 to 12/31		20.00 AF
<u>Totals:</u>			20.00 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☒ None

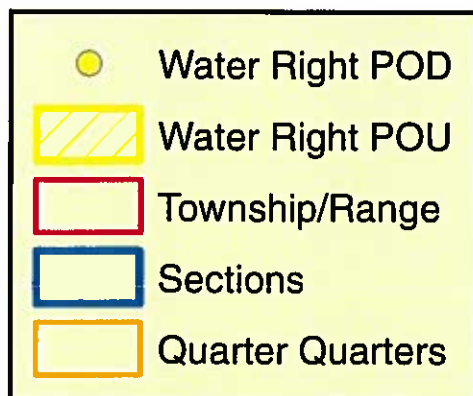
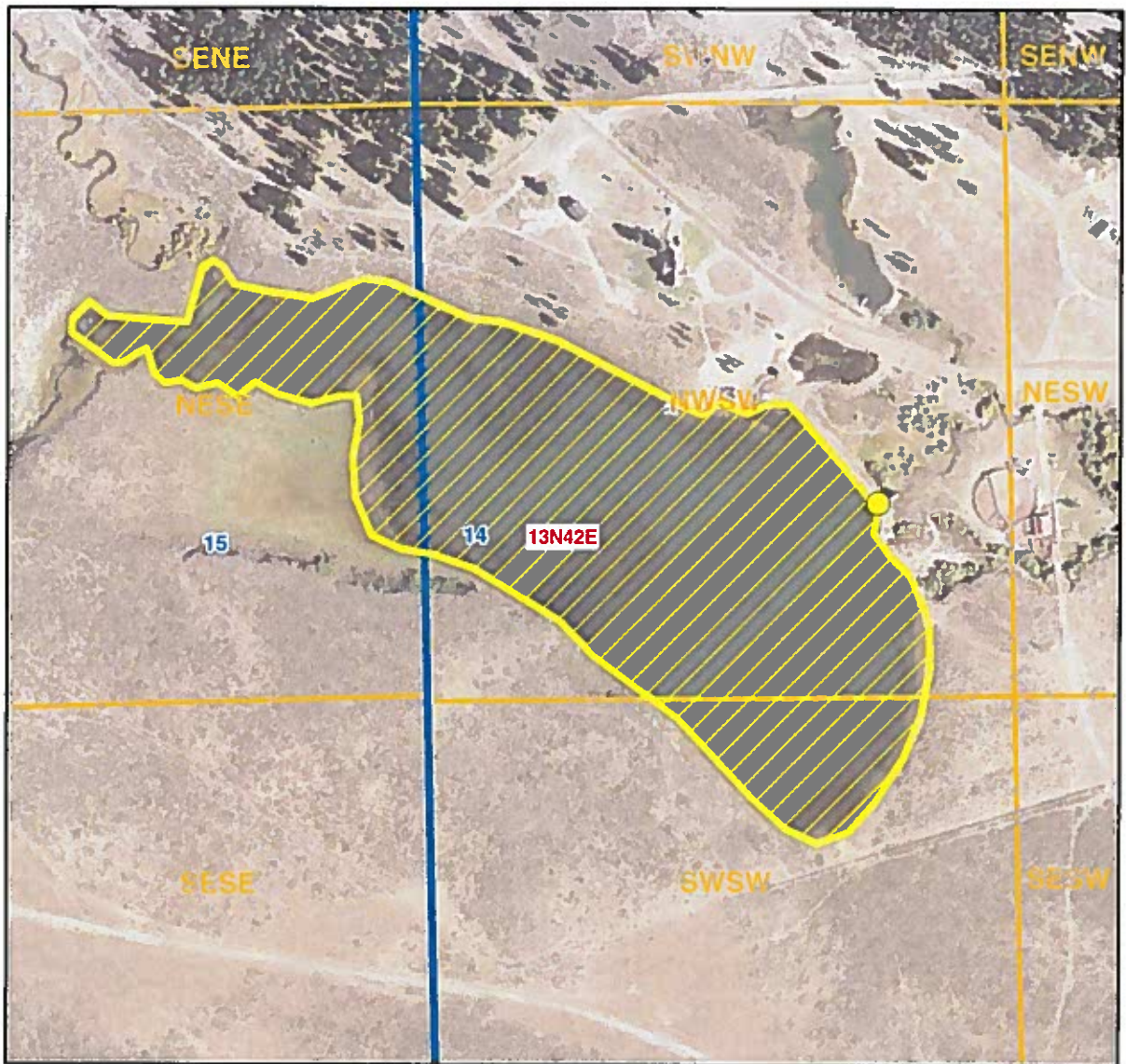
☐ Change P.U. as reflected above ☐ Add P.U. as reflected above ☐ Other

H. AUTHENTICATION

Field Examiner's Name Kerrie Mathews Date June 2012

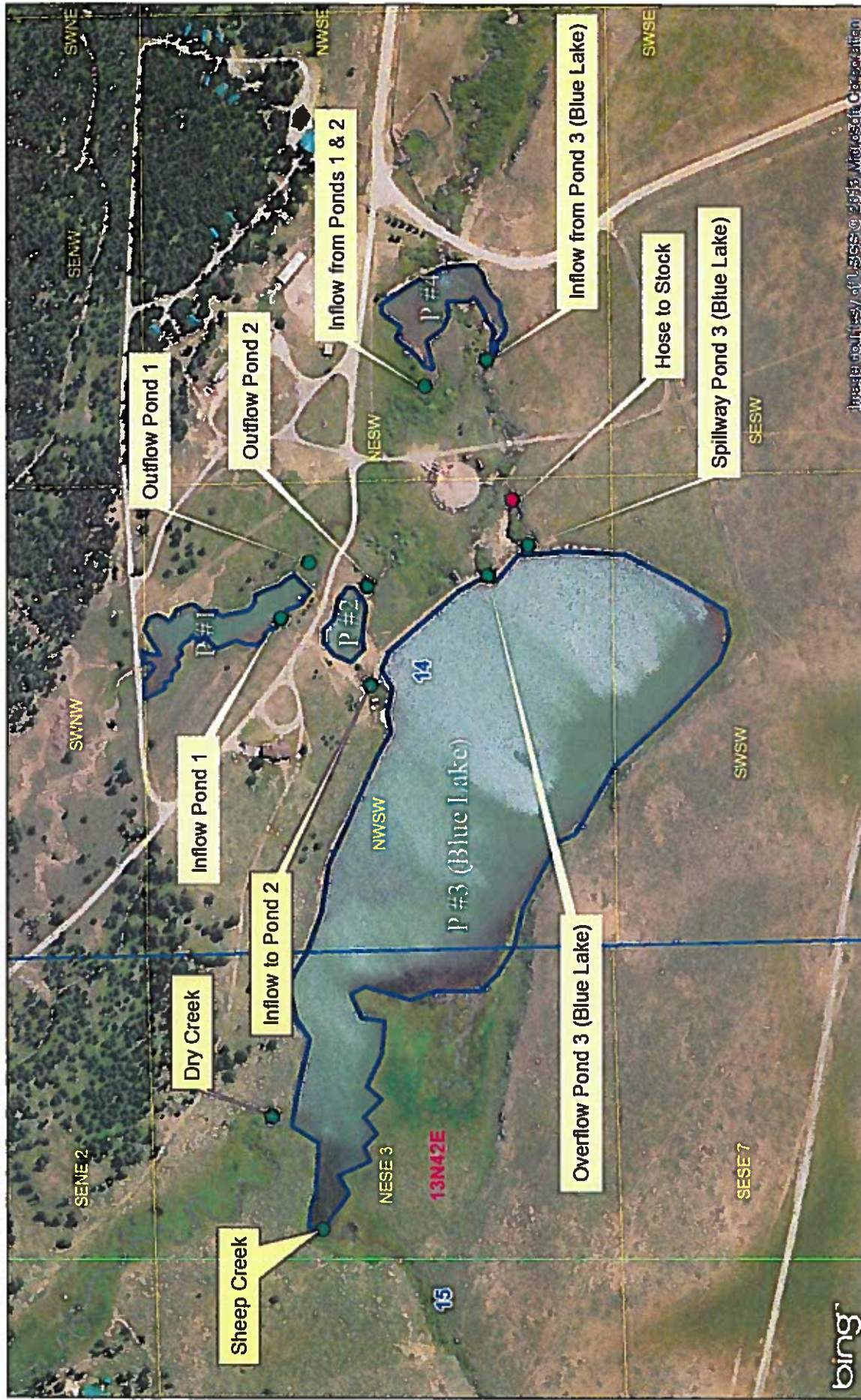
Reviewer James Cefalo Date Jan 11, 2016

Water Right License 21-13115



0 400 800 Feet





- Ponds
- Township/Range
- Sections
- QQ



Eagleridge Ranch

21-13113, 21-13114 & 21-13115

Field Exam 06-19, 2012

PERMIT 21-13115 – FIELD EXAM JUNE 19, 2012

INFLOWS TO POND 3 (BLUE LAKE)



Dry Creek

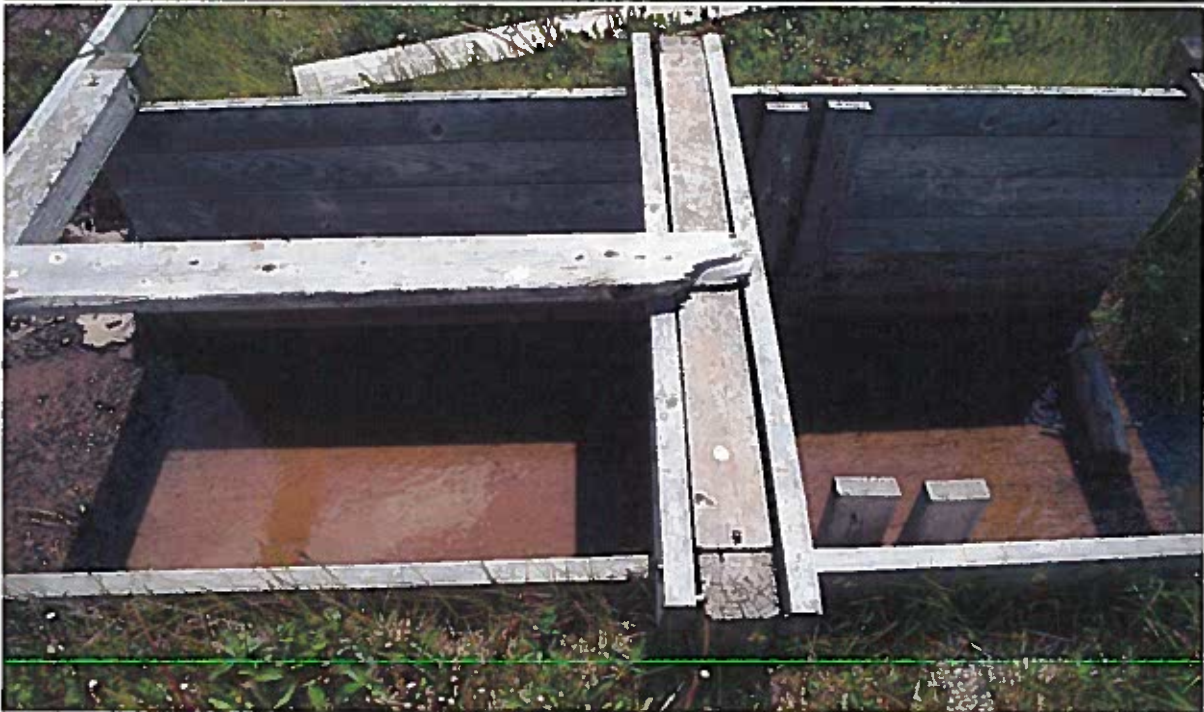


Sheep Creek

POND 3 (BLUE LAKE)



OUTFLOWS POND 3 (BLUE LAKE)



Outflow to Pond 2

OUTFLOWS POND 3 (BLUE LAKE) CONT.



Outflow to Pond 4 at dam

Pond Calculations **Permit 21-13115**

Pond Size

Vol = surf area x max depth x slope factor

Surface Area 22.5 acres

(only 2.8 acres require mitigation for evaporation)

Max Depth 13.33 feet

Sloped Sides Factor 0.4

Volume 120.0 acre-feet

Evaporation (Precipitation Deficit from ET Idaho Tables)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
mm/day	0	0	0	0.38	1.33	1.61	3.39	2.68	1.56	0.34	0	0
day/month	31	28	31	30	31	30	31	31	30	31	30	31
mm/month	0.00	0.00	0.00	11.40	41.23	48.30	105.09	83.08	46.80	10.54	0.00	0.00
ft/month	0.00	0.00	0.00	0.04	0.14	0.16	0.34	0.27	0.15	0.03	0.00	0.00
surface area	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
acre-feet	0.00	0.00	0.00	0.10	0.38	0.44	0.97	0.76	0.43	0.10	0.00	0.00

Total Evaporation Acre-Feet 3.18

**IDAHO DEPARTMENT OF WATER RESOURCES
--- DAM SAFETY RECORD OF INSPECTION ---**

Inspector: Joe Kaufman	Dam Owner: Frank Vandersloot	Hazard: Significant
Pool Level: Full	NID Dam Ht:	Hydraulic Ht: 13.8
Reservoir Storage: 75 AF	Surface Area: 20 acres	NAT DAM ID: ID00466
Others Present: Tony Olenichalk and Matt Daulton		Weather Conditions: 80 deg and sunny

PRIMARY DAM ▲

Type of Construction: ☒ - Earthen ☐ - Rockfill ☐ - Concrete ☐ - Timber Crib ☐ - Other:

Instrumentation: ☐ - Piezometers ☐ - Inclinometers ☐ - Seismic ☐ - Other:

Is there another dam, dike, or hydraulic structure impounding a portion of this reservoir? ☐ - Yes ☒ - No

If "Yes", explain:

	Seepage	Erosion	Animal	Vegetation
Upstream Slope	Dry	None Observed	Isolated Burrows	Bare to Sparse
Crest	Dry	None Observed	None Observed	Bare to Sparse
Downstream Slope	Dry	None Observed	Isolated Burrows	Dense Grass/Weeds
Downstream Toe	Saturated	None Observed	None Observed	Mixed Vegetation
Left Abutment	Dry	None Observed	Isolated Burrows	Dense Grass/Weeds
Right Abutment	Dry	*See Remarks Below	Select One	Mixed Vegetation

Observations and Remarks:

*Erosion on Right Abutment : Appears to be historic head cut from old spillway approaching the right abutment. New concrete emergency spillway likely to prevent further erosion that might make its way to the embankment. Historic spillway is still lower than the Dam crest and will likely run water if current outlet works are overwhelmed.

Willows are encroaching on the toe and downstream face of the embankment, recommend removal of willows that obstruct the view of the toe or downstream embankment.

While there are isolated burrows, current control is satisfactory and should continue.

Embankment was rebuilt in 2006. Since the last inspection rip rap has been placed on the upstream slope.

Condition Assessment (Unsatisfactory rating requires department action)

☒ - Satisfactory ☐ - Fair ☐ - Poor ☐ - Unsatisfactory ☐ - Not Rated (See Remarks)

Is This Structure Suitable for the Continued Impoundment of Water? ☒ - Yes ☐ - No

If "No", explain:

PRIMARY OUTLET ☐Size/ Diameter: 4.5 ft wide Date Last Operated: Current Date Last Inspected: CurrentType of Conduit: ☐ - Steel ☐ - Plastic ☐ - Concrete ☐ - Cast Iron ☐ - CMP ☐ - Other _____Location: ☐ - Left Side ☐ - Center ☒ - Right Side ☐ - Other Primary outlet is a concrete spillwayOperating Mechanism: ☐ - Manual ☐ - Electric ☐ - Gas/Diesel ☒ - Other Flash BoardsValve/Gate: ☐ - Upstream Control ☐ - Internal Control (wet well) ☐ - Downstream Control (pressurized)Is there another outlet or discharge feature associated with this reservoir? ☒ - Yes ☐ - NoIf "Yes", explain: secondary spillway on left side and emergency spillway at center.**Observations and Remarks:**

A significant leak appears to have developed since the reconstruction in 2006. As pictured the leak is on the right side of the primary outlet and appears to be water infiltrating the concrete wall at the joint line between the old and new concrete, it then flows along the outside of the wall and discharges into the same channel. There has been some erosion, but currently the leak contained no visible material (estimate 20 gpm) and appears stable. The Dam owner is lowering the reservoir pool to below the suspect joint and is planning immediate repair. Required draw down is approximately 0.5 ft.

Condition Assessment (Unsatisfactory rating requires department action)☐ - Satisfactory ☐ - Fair ☒ - Poor ☐ - Unsatisfactory ☐ - Not Rated (See Remarks)**PRIMARY SPILLWAY** ☒Type of Construction: ☐ - Earthen ☐ - Rock ☒ - Concrete ☐ - Other _____Location: ☐ - Left Side ☒ - Center ☐ - Right Side ☐ - Other _____Controlled Entrance: ☐ - Yes ☒ - No If "Yes", describe: _____Inflow Design Flood (Q=cfs): 333 cfs (Q100) Static Freeboard (feet): 3Is an auxiliary spillway or discharge feature associated with this reservoir? ☒ - Yes ☐ - NoIf "Yes", explain: Spillway and pipe on left side feeds lower pond.**Observations and Remarks:**

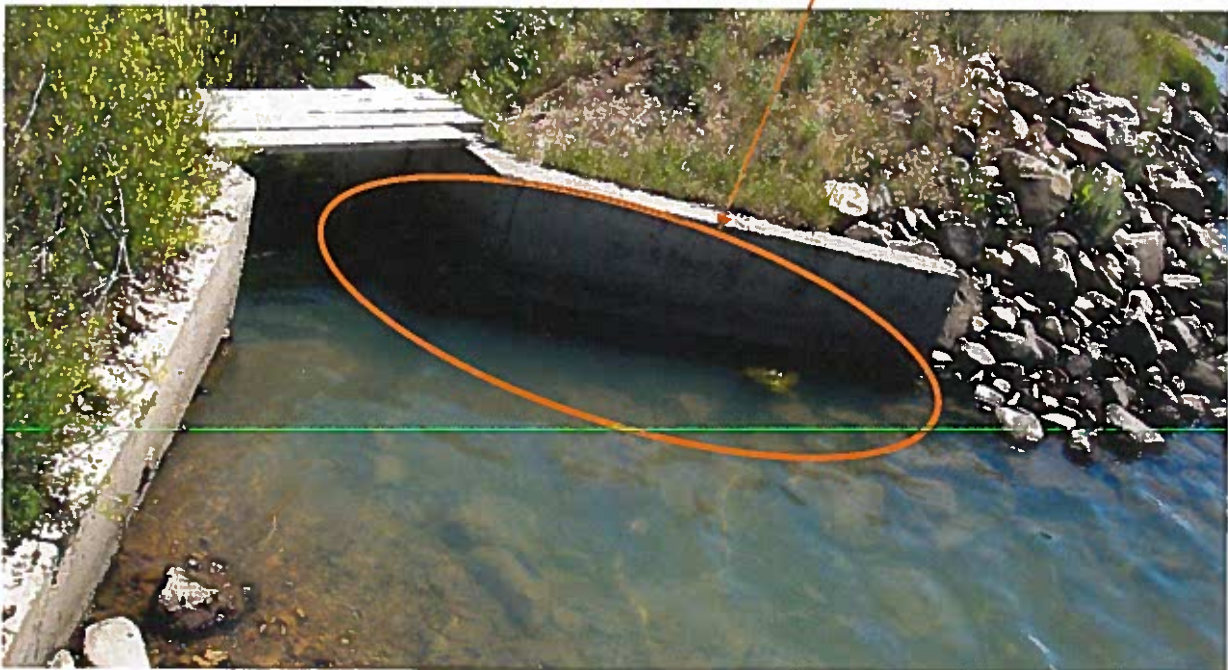
Minor erosion downstream of spillway.

Condition Assessment (Unsatisfactory rating requires department action)☒ - Satisfactory ☐ - Fair ☐ - Poor ☐ - Unsatisfactory ☐ - Not Rated (See Remarks)



Above: Primary spillway: est 20 gpm leak discharging from right side. Suspected infiltration point at concrete joint.

Below : Upstream view of Primary spillway.



Jacobs Dam Inspection on August 4th, 2010 D21-4140



Above: Upstream slope of Dam with new rip rap from left abutment.

Below: Emergency spillway at center of Dam.





Above: Historic headcut on right abutment. Right abutment is lower than the crest of the dam.

Below: Outlet at left side of Dam.

