

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 94-07413

Exam Date: 8/5/2015

1. Current Owner:
MICHAEL R SCHLEPP 26175 S HWY 3 CATALDO ID 83810 (208)689-3593
And
BRENDA L SCHLEPP 26175 S HWY 3 CATALDO ID 83810 (208)689-3593
2. Accompanied by: Michael Schlepp, Brian Heck
Relationship to Permit Holder: Owner, Project Manager

3. SOURCE: ROBINSON CREEK

TRIBUTARY: COEUR D'ALENE RIVER

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 SYSTEM1. LOCATION OF POINT(S) OF DIVERSION:

ROBINSON CREEK SE¼NW¼ Sec. 23, Twp 48N, Rge 02W, B.M. KOOTENAI County

Method of Determination: GPS and maps. POD location at 47° 29.585, 116° 33.489

2.

PLACE OF USE: WILDLIFE

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
48N	02W	13							X L 3			X							
48N	02W	14				X L 8				X L 11		X L 12	X	X L 9	X L 10	X	X	X	
48N	02W	22				X L 9								X	X	X	X	X	
48N	02W	23	X	X	X		X	X L 1	X	X									

Method of Determination: GPS and maps.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.

 Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.

XX

Aerial Photo Attached (required for irrigation of 10+ acres).

X

Photo of Diversion and System Attached

4.

Well or Diversion ID No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. Measurements: UNABLE TO PERFORM FLOW MEASUREMENT AT TIME OF EXAM BECAUSE OF NEGATIVE FLOW FROM LAKE COEUR D'ALENE.

E. FLOW CALCULATIONS

Measured Method:

 Additional Computation Sheets Attached

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} =$$

2. Volume Calculations for Other Uses: SEE ATTACHED POND ANALYSIS SHEETS. APPLICANT WILL BE ALLOWED 1 REFILL IF WETLAND NEEDS TO BE DRAINED TO PROMOTE WETLAND GROWTH

G. NARRATIVE/REMARKS/COMMENTS

IDWR CONDUCTED FIELD EXAM 08/05/15 AND OBSERVED A LARGE WILDLIFE WETLAND. APPLICANTS HAD APPLIED FOR A DIFFERENT DIVERSION RATE EACH MONTH OF THE YEAR FROM ROBINSON CREEK. APPLICATION WAS PROTESTED AND PART OF AGREEMENT TO END PROTEST WAS THAT APPLICANT LEAVE 1.0 CFS IN ROBINSON CREEK. APPLICANT HAD BUILT SYSTEM THAT WOULD LEAVE 1.0 CFS IN CREEK AND WOULD ALSO FILL WETLAND AT DESIRED RATES. DURING EXAM, THE WETLAND WAS RECEIVING NEGATIVE FLOW FROM LAKE COEUR D'ALENE. IN 2016 IDWR MET WITH MANAGER OF WETLAND TO DISCUSS HOW TO LICENSE PERMIT. IT WAS AGREED THAT IDWR WOULD COME UP WITH ANNUAL VOLUME BASED UPON AREA, DEPTH, SEEPAGE, AND EVAPORATION AND GIVE ANNUAL VOLUME ALONG WITH 1 REFILL. DRAFT LICENSE WOULD BE SENT TO APPLICANT FOR APPROVAL OF ANNUAL VOLUME.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
WILDLIFE	02/01 to 02/28	2.36 CFS	
WILDLIFE	03/01 to 03/31	4.04 CFS	
WILDLIFE	04/01 to 04/30	3.88 CFS	
WILDLIFE	05/01 to 05/31	2.00 CFS	
WILDLIFE	06/01 to 06/30	1.50 CFS	
WILDLIFE	07/01 to 07/31	0.81 CFS	
WILDLIFE	08/01 to 08/31	0.48 CFS	
WILDLIFE	09/01 to 09/30	0.77 CFS	
WILDLIFE	10/01 to 10/31	1.07 CFS	
WILDLIFE	11/01 to 11/30	1.14 CFS	
WILDLIFE	12/01 to 12/31	0.95 CFS	
WILDLIFE	01/01 to 01/31	1.10 CFS	
<u>Totals:</u>		4.040 CFS	2,677.20 AF

2. Recommended Amendments

Change P.D. as reflected above Add P.D. as reflected above X None

Change P.U. as reflected above Add P.U. as reflected above X None

I. AUTHENTICATION

Field Examiner's Name Adam Fendrick Date 5-23-2016

Reviewer Morgan Case Date 6/9/2016

East Pond

Total Storage Calculations

FILE NUMBER	94-7413
REVIEWER	Adam Frederick
DATE	5/5/2016

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	275.1	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	3	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	825.3	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. <i>Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.</i>

Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). <i>Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.</i>
Estimated Seepage Loss (AF)	30.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	322.3	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	1177.7	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

West Pond

Total Storage Calculations

FILE NUMBER	94-7413
REVIEWER	Adam Frederick
DATE	5/5/2016

This spreadsheet has been designed by Idaho Department of Water Resources to estimate the total seepage, evaporation and fill capacity required for a pond.

User Input
Calculated value
Formula Explanations

Surface Area (AC.)	92.6	"Surface Area" is automatically carried over from the "Seepage Loss" sheet.
Average Pond Depth (FT.)	3	"Average Pond Depth" depicts the actual depth of the pond either measured or estimated. Note: If you know the maximum depth and not the average depth, the Field Examiner's Handbook suggests multiplying the maximum depth by 0.4 to get the average depth, or you can use any method that seems reasonable to attain average depth.
Pond Capacity (AF)	277.8	Pond Capacity is calculated by multiplying the Pond Surface Area by the Average Pond Depth. If you know the capacity, divide the capacity by surface area and enter the average pond depth in the space above. Note: If pond capacity is determined using a method shown on the "Pond Capacity" sheet, the user may need to modify the value of "Pond Capacity" (cell B9) manually. Note that if the value is modified manually, the formula will be altered for future use.
Multiple Fill Volume Above Initial Fill to Fulfill From Storage Needs- "Multiple Fills" (AF)	0	The "Multiple Fill Volume Above Initial Fill" is the acre-feet of water required to meet a <i>from storage</i> component if the <i>from storage</i> component exceeds a one time fill. This section should not include the amount of water needed to fill the pond initially or the amount of water needed to maintain the pond level due to evaporation or seepage. For example: if a pond has a capacity of 5 acre feet and 2.5 acre feet of seepage and evaporation, but the pond is used for irrigation that requires 10 acre feet of from storage for the irrigation use, then you would insert 5 acre feet into this location (10 acre feet needed - 5 acre feet from the initial fill = 5 acre feet of additional storage needed). Note: You must have a "From Storage" component exceeding the initial fill on the permit to include a volume in this space.
Estimated Seepage Loss (AF)	10.1	The "Estimated Seepage Loss" is automatically carried over from the "Seepage Loss" sheet.
Estimated Evaporation Loss (AF)	108.5	The "Estimated Evaporation Loss" is automatically carried over from the "Evaporation Loss" sheet.
Total Volume Required (AF)	396.4	The "Total Volume Required" is calculated by adding the Pond Capacity, Multiple Fills, Seepage Loss, and Evaporation Loss amounts to determine the total amount of storage required.

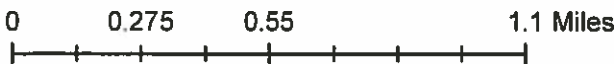
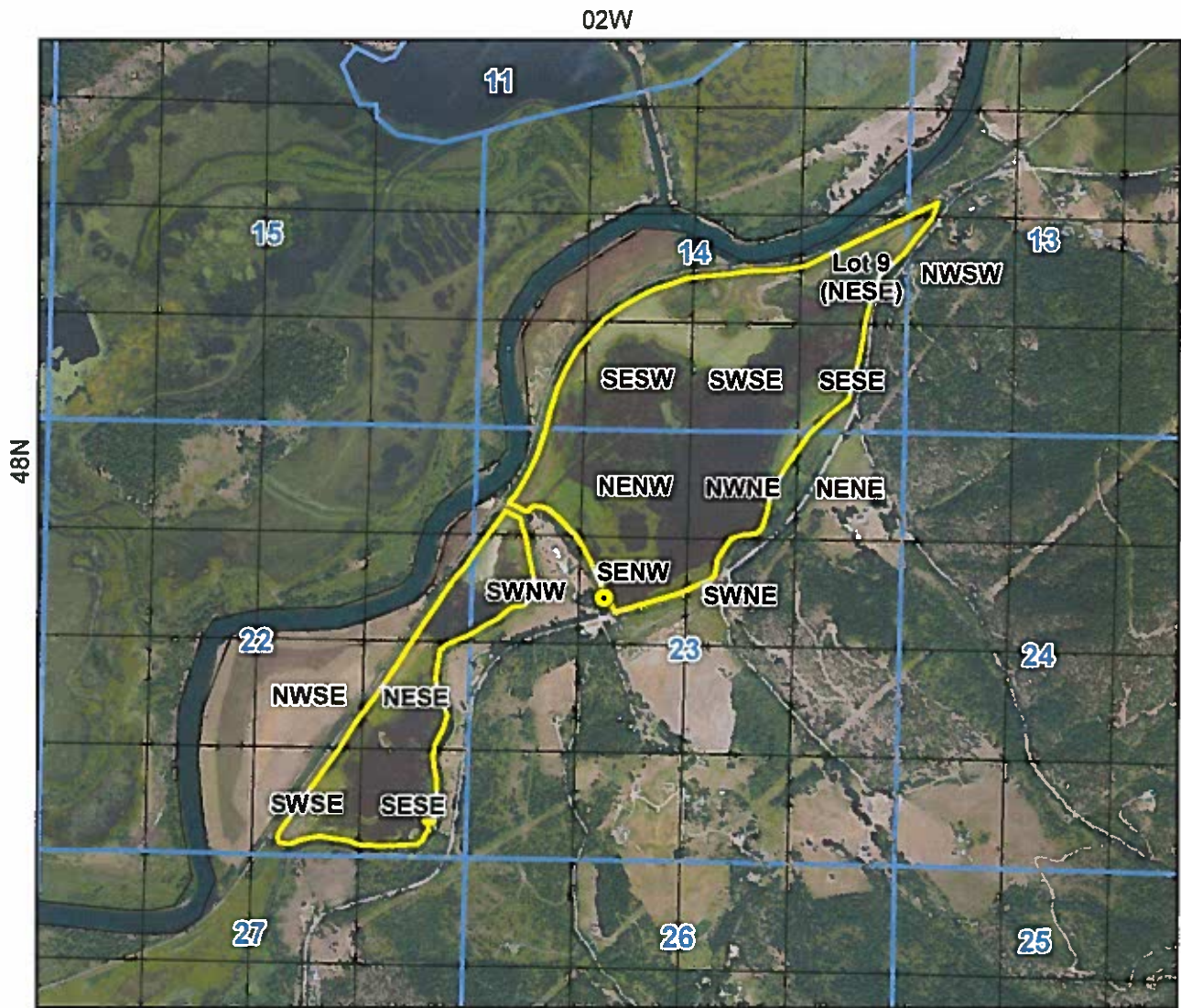
Table A7-5 [continued]. Discharge of standard Cipolletti weirs in ft³/sec. Shaded entries determined experimentally. Others computed from the formula $Q=3.367Lh_1^{1.5}$

Head H_1 , ft	Weir Length, L , ft				Head H_1 , ft	Weir Length, L , ft				Head H_1 , ft	Weir Length, L , ft			
	2.0	3.0	4.0	5.0		3.0	4.0	5.0	5.0		3.0	4.0	5.0	5.0
.61	3.21	4.81	6.42	8.02	1.06	11.3	14.7	18.4	31.2	1.51	11.3	14.7	18.4	31.2
.62	3.29	4.93	6.57	8.22	1.07	11.4	14.9	18.6	31.5	1.52	11.4	14.9	18.6	31.5
.63	3.37	5.05	6.73	8.42	1.08	11.6	15.1	18.9	31.9	1.53	11.6	15.1	18.9	31.9
.64	3.45	5.17	6.90	8.62	1.09	11.7	15.3	19.2	32.2	1.54	11.7	15.3	19.2	32.2
.65	3.53	5.29	7.06	8.82	1.10	11.9	15.5	19.4	32.5	1.55	11.9	15.5	19.4	32.5
.66	3.61	5.42	7.22	9.03	1.11	12.1	15.8	19.7	32.8	1.56	12.1	15.8	19.7	32.8
.67	3.69	5.54	7.39	9.23	1.12	12.2	16.0	20.0	33.1	1.57	12.2	16.0	20.0	33.1
.68	3.81	5.66	7.55	9.44	1.13	12.4	16.2	20.2	33.4	1.58	12.4	16.2	20.2	33.4
.69	3.90	5.79	7.72	9.65	1.14	12.5	16.4	20.5	33.8	1.59	12.5	16.4	20.5	33.8
.70	3.98	5.92	7.89	9.86	1.15	12.7	16.6	20.8	34.1	1.60	12.7	16.6	20.8	34.1
.71	4.06	6.04	8.06	10.1	1.16	12.9	16.8	21.0	34.4	1.61	12.9	16.8	21.0	34.4
.72	4.15	6.17	8.23	10.3	1.17	13.0	17.0	21.3	34.7	1.62	13.0	17.0	21.3	34.7
.73	4.24	6.30	8.40	10.5	1.18	13.2	17.3	21.6	35.0	1.63	13.2	17.3	21.6	35.0
.74	4.33	6.43	8.57	10.7	1.19	13.4	17.5	21.9	35.4	1.64	13.4	17.5	21.9	35.4
.75	4.42	6.56	8.75	10.9	1.20	13.6	17.7	22.1	35.7	1.65	13.6	17.7	22.1	35.7
.76	4.51	6.69	8.92	11.2	1.21	13.7	17.9	22.4	36.0	1.66	13.7	17.9	22.4	36.0
.77	4.60	6.82	9.10	11.4	1.22	13.9	18.1	22.7	36.3	1.67	13.9	18.1	22.7	36.3
.78	4.69	6.96	9.28	11.6	1.23	14.1	18.4	23.0			14.1	18.4	23.0	
.79	4.78	7.09	9.46	11.8	1.24	14.3	18.6	23.2			14.3	18.6	23.2	
.80	4.87	7.23	9.64	12.0	1.25	14.4	18.8	23.5			14.4	18.8	23.5	
.81	4.96	7.36	9.82	12.3	1.26	14.6	19.0	23.8			14.6	19.0	23.8	
.82	5.05	7.50	10.0	12.5	1.27	14.8	19.3	24.1			14.8	19.3	24.1	
.83	5.14	7.64	10.2	12.7	1.28	15.0	19.5	24.4			15.0	19.5	24.4	
.84	5.24	7.78	10.4	13.0	1.29	15.2	19.7	24.7			15.2	19.7	24.7	
.85	5.34	7.92	10.6	13.2	1.30	15.4	20.0	25.0			15.4	20.0	25.0	
.86	5.44	8.06	10.7	13.4	1.31	15.5	20.2	25.2			15.5	20.2	25.2	
.87	5.54	8.20	10.9	13.7	1.32	15.7	20.4	25.5			15.7	20.4	25.5	
.88	5.64	8.34	11.1	13.9	1.33	15.9	20.7	25.8			15.9	20.7	25.8	
.89	5.74	8.48	11.3	14.1	1.34	16.1	21.0	26.1			16.1	21.0	26.1	
.90	5.84	8.62	11.5	14.4	1.35	16.2	21.3	26.4			16.2	21.3	26.4	
.91	5.94	8.77	11.7	14.6	1.36	16.4	21.6	26.7			16.4	21.6	26.7	
.92	6.04	8.91	11.9	14.9	1.37	16.6	21.9	27.0			16.6	21.9	27.0	
.93	6.14	9.06	12.1	15.1	1.38	16.8	22.2	27.3			16.8	22.2	27.3	
.94	6.25	9.21	12.3	15.3	1.39	17.0	22.5	27.6			17.0	22.5	27.6	
.95	6.36	9.35	12.5	15.6	1.40	17.2	22.8	27.9			17.2	22.8	27.9	
.96	6.47	9.50	12.7	15.8	1.41	17.4	23.1	28.2			17.4	23.1	28.2	
.97	6.58	9.65	12.9	16.1	1.42	17.6	23.4	28.5			17.6	23.4	28.5	
.98	6.69	9.80	13.1	16.3	1.43	17.8	23.7	28.8			17.8	23.7	28.8	
.99	6.80	9.95	13.3	16.6	1.44	18.0	24.0	29.1			18.0	24.0	29.1	
1.00	6.91	10.1	13.5	16.8	1.45	18.2	24.3	29.4			18.2	24.3	29.4	
1.01	7.02	10.3	13.7	17.1	1.46	18.3	24.6	29.7			18.3	24.6	29.7	
1.02	7.13	10.6	13.9	17.3	1.47	18.5	24.9	30.0			18.5	24.9	30.0	
1.03	7.24	10.8	14.1	17.6	1.48	18.7	25.2	30.3			18.7	25.2	30.3	
1.04	7.35	10.9	14.3	17.9	1.49	18.9	25.5	30.6			18.9	25.5	30.6	
1.05	7.46	11.1	14.5	18.1	1.50	19.1	25.8	30.9			19.1	25.8	30.9	

Table A7-5. Discharge of standard Cipolletti weirs in ft³/sec. Shaded entries determined experimentally. Others computed from the formula $Q=3.367Lh_1^{1.5}$

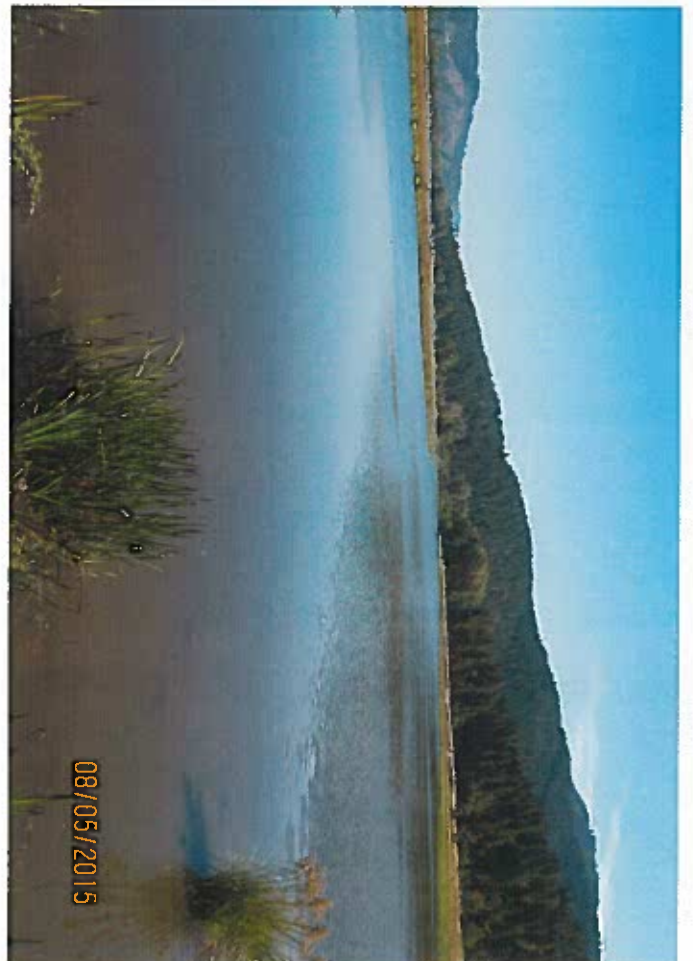
Head H_1 , ft	Weir Length, L , ft				Head H_1 , ft	Weir Length, L , ft				Head H_1 , ft	Weir Length, L , ft			
	2.0	3.0	4.0	5.0		3.0	4.0	5.0	5.0		3.0	4.0	5.0	5.0
.18	1.29	1.89	2.49	3.09	1.18	11.8	15.1	18.4	31.8	1.58	11.8	15.1	18.4	31.8
.19	1.39	2.00	2.61	3.21	1.19	12.0	15.4	18.7	32.1	1.59	12.0	15.4	18.7	32.1
.20	1.51	2.12	2.73	3.33	1.20	12.2	15.7	19.0	32.4	1.60	12.2	15.7	19.0	32.4
.21	1.62	2.24	2.85	3.45	1.21	12.4	16.0	19.3	32.7	1.61	12.4	16.0	19.3	32.7
.22	1.74	2.36	2.97	3.57	1.22	12.6	16.3	19.6	33.0	1.62	12.6	16.3	19.6	33.0
.23	1.86	2.48	3.09	3.69	1.23	12.8	16.6	19.9	33.3	1.63	12.8	16.6	19.9	33.3
.24	1.98	2.60	3.21	3.81	1.24	13.0	16.9	20.2	33.6	1.64	13.0	16.9	20.2	33.6
.25	2.10	2.72	3.33	3.93	1.25	13.2	17.2	20.5	33.9	1.65	13.2	17.2	20.5	33.9
.26	2.22	2.84	3.45	4.05	1.26	13.4	17.5	20.8	34.2	1.66	13.4	17.5	20.8	34.2
.27	2.34	2.96	3.57	4.17	1.27	13.6	17.8	21.1	34.5	1.67	13.6	17.8	21.1	34.5
.28	2.46	3.08	3.69	4.29	1.28	13.8	18.1	21.4	34.8	1.68	13.8	18.1	21.4	34.8
.29	2.58	3.20	3.81	4.41	1.29	14.0	18.4	21.7	35.1	1.69	14.0	18.4	21.7	35.1
.30	2.70	3.32	3.93	4.53	1.30	14.2	18.7	22.0	35.4	1.70	14.2	18.7	22.0	35.4
.31	2.82	3.44	4.05	4.65	1.31	14.4	19.0	22.3	35.7	1.71	14.4	19.0	22.3	35.7
.32	2.94	3.56	4.17	4.77	1.32	14.6	19.3	22.6	36.0	1.72	14.6	19.3	22.6	36.0
.33	3.06	3.68	4.29	4.89	1.33	14.8	19.6	22.9			14.8	19.6	22.9	
.34	3.18	3.80	4.41	5.01	1.34	15.0	19.9	23.2			15.0	19.9	23.2	
.35	3.30	3.92	4.53	5.13	1.35	15.2	20.2	23.5			15.2	20.2	23.5	
.36	3.42	4.04	4.65	5.25	1.36	15.4	20.5	23.8			15.4	20.5	23.8	
.37	3.54	4.16	4.77	5.37	1.37	15.6	20.8	24.1			15.6	20.8	24.1	
.38	3.66	4.28	4.89	5.49	1.38	15.8	21.1	24.4			15.8	21.1	24.4	
.39	3.78	4.40	5.01	5.61	1.39	16.0	21.4	24.7			16.0	21.4	24.7	
.40	3.90	4.52	5.13	5.73	1.40	16.2	21.7	25.0			16.2	21.7	25.0	
.41	4.02	4.64	5.25	5.85	1.41	16.4	22.0	25.3			16.4	22.0	25.3	
.42	4.14	4.76	5.37	5.97	1.42	16.6	22.3	25.6			16.6	22.3	25.6	
.43	4.26	4.88	5.49	6.09	1.43	16.8	22.6	25.9			16.8	22.6	25.9	
.44	4.38	5.00	5.61	6.21	1.44	17.0	22.9	26.2			17.0	22.9	26.2	
.45	4.50	5.12	5.73	6.33	1.45	17.2	23.2	26.5			17.2	23.2	26.5	
.46	4.62	5.24	5.85	6.45	1.46	17.4	23.5	26.8			17.4	23.5	26.8	
.47	4.74	5.36	5.97	6.57	1.47	17.6	23.8	27.1			17.6	23.8	27.1	
.48	4.86	5.48	6.09	6.69	1.48	17.8	24.1	27.4			17.8	24.1	27.4	
.49	4.98	5.60	6.21	6.81	1.49	18.0	24.4	27.7			18.0	24.4	27.7	
.50	5.10	5.72	6.33	6.93	1.50	18.2	24.7	28.0			18.2	24.7	28.0	
.51	5.22	5.84	6.45	7.05	1.51	18.4	25.0	28.3			18.4	25.0	28.3	
.52	5.34	5.96	6.57	7.17	1.52	18.6	25.3	28.6			18.6	25.3	28.6	
.53	5.46	6.08	6.69	7.29	1.53	18.8	25.6	28.9			18.8	25.6	28.9	
.54	5.58	6.20	6.81	7.41	1.54	19.0	25.9	29.2			19.0	25.9	29.2	
.55	5.70	6.32	6.93	7.53	1.55	19.2	26.2	29.5			19.2	26.2	29.5	
.56	5.82	6.44	7.05	7.65	1.56	19.4	26.5	29.8			19.4	26.5	29.8	
.57	5.94	6.56	7.17	7.77	1.57	19.6	26.8	30.1			19.6	26.8	30.1	
.58	6.06	6.68	7.29	7.89	1.58	19.8	27.1	30.4			19.8	27.1	30.4	
.59	6.18	6.80	7.41	8.01	1.59	20.0	27.4	30.7			20.0	27.4	30.7	
.60	6.30	6.92	7.53	8.13	1.60	20.2	27.7	31.0			20.2	27.7	31.0	

State of Idaho
Department of Water Resources
Water Right License
94-7413

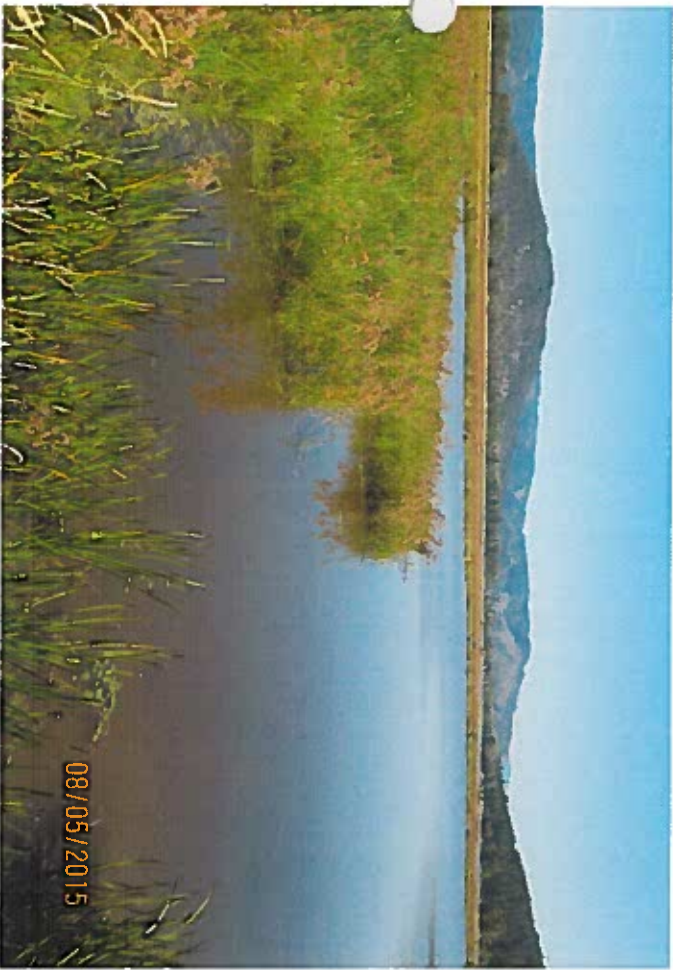
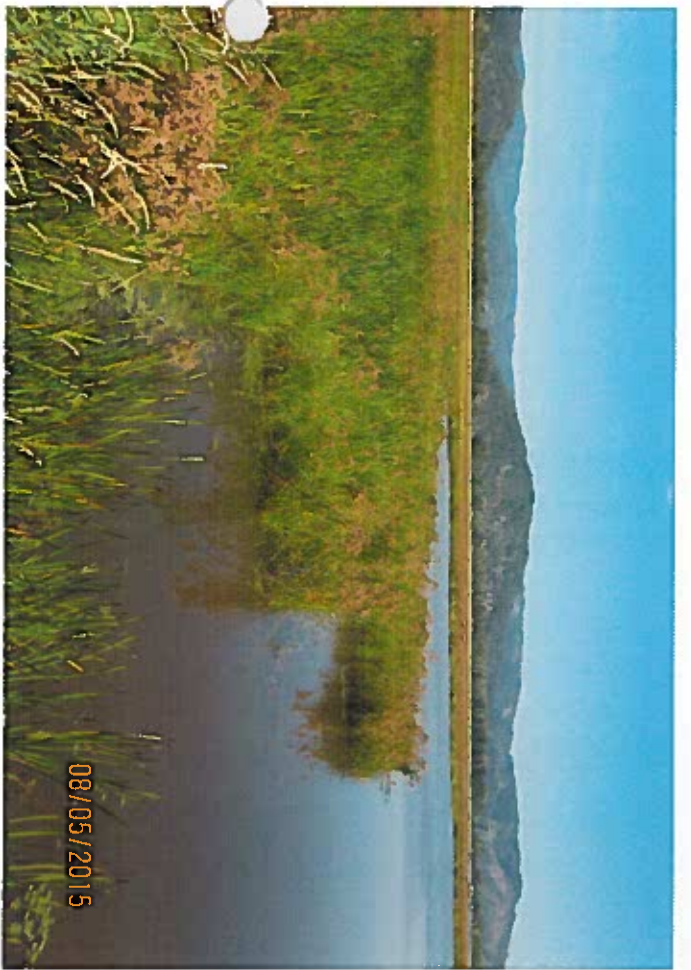


-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

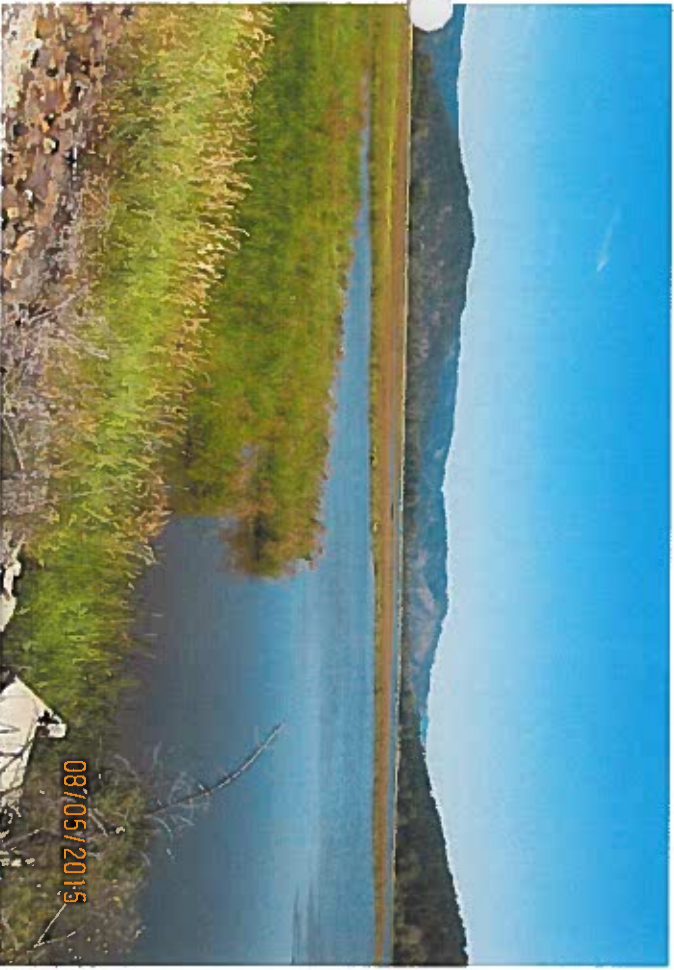
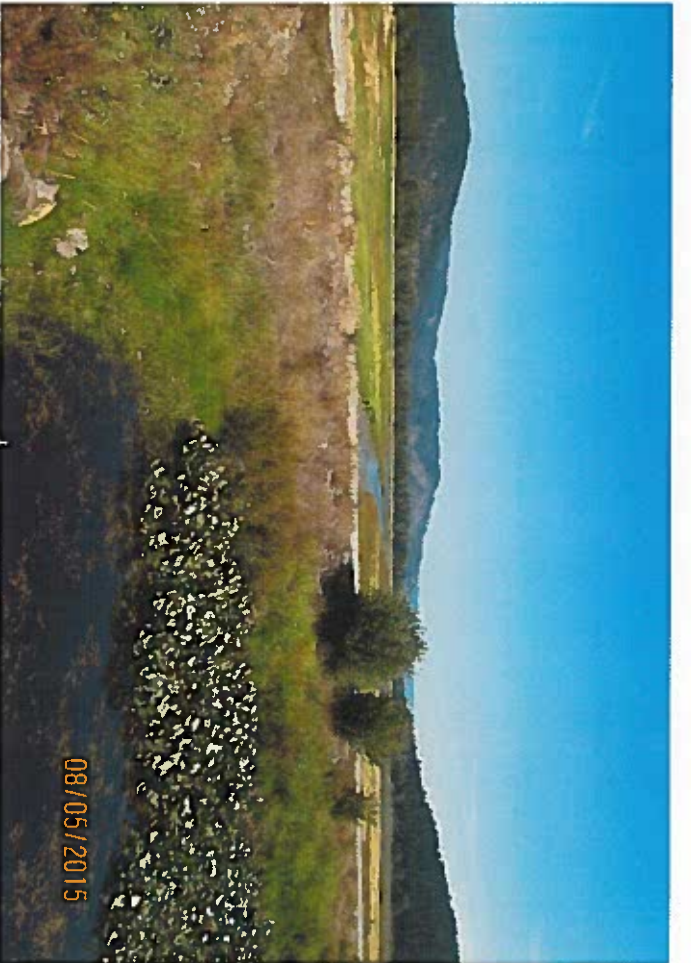




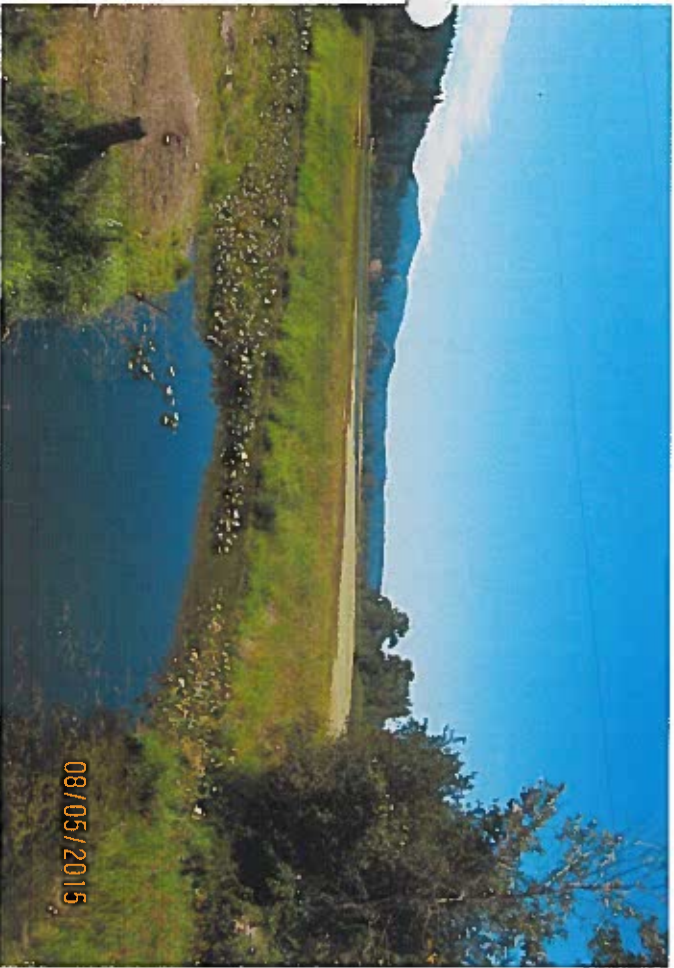
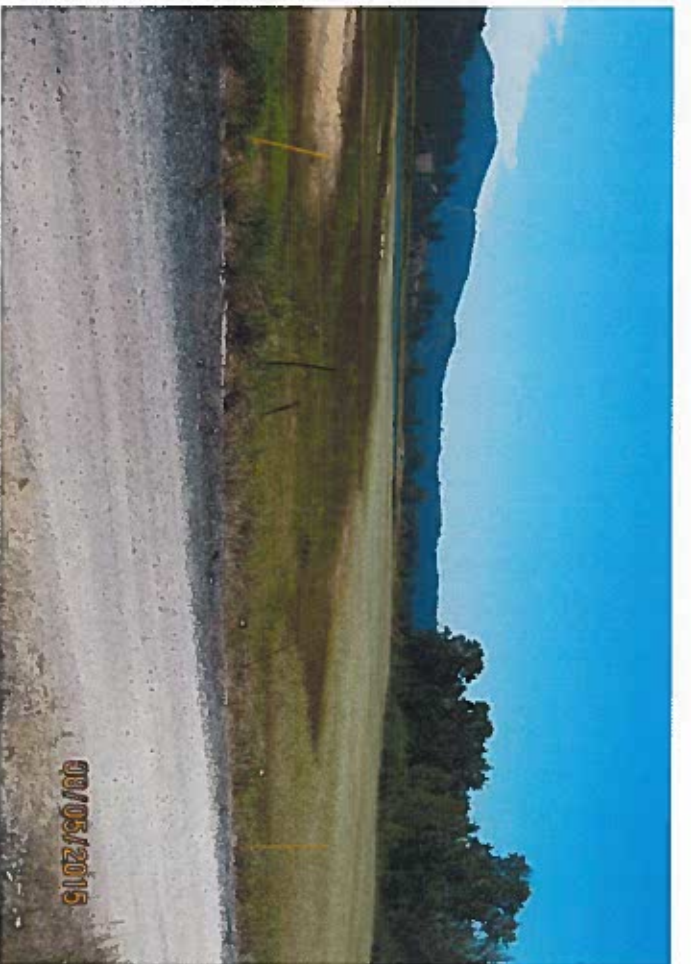
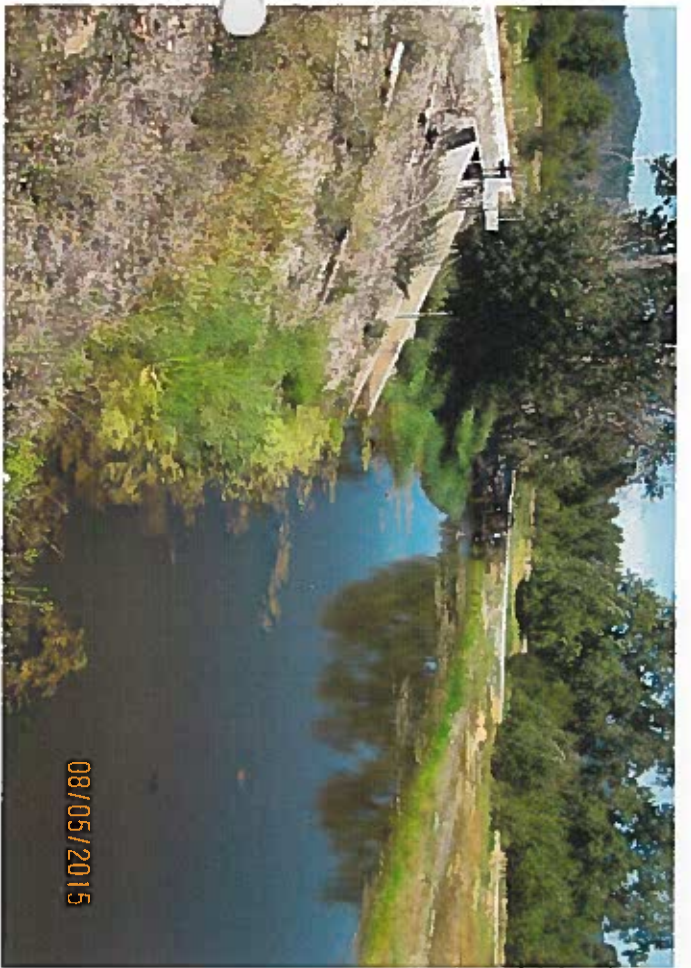
94.7417



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94-7413



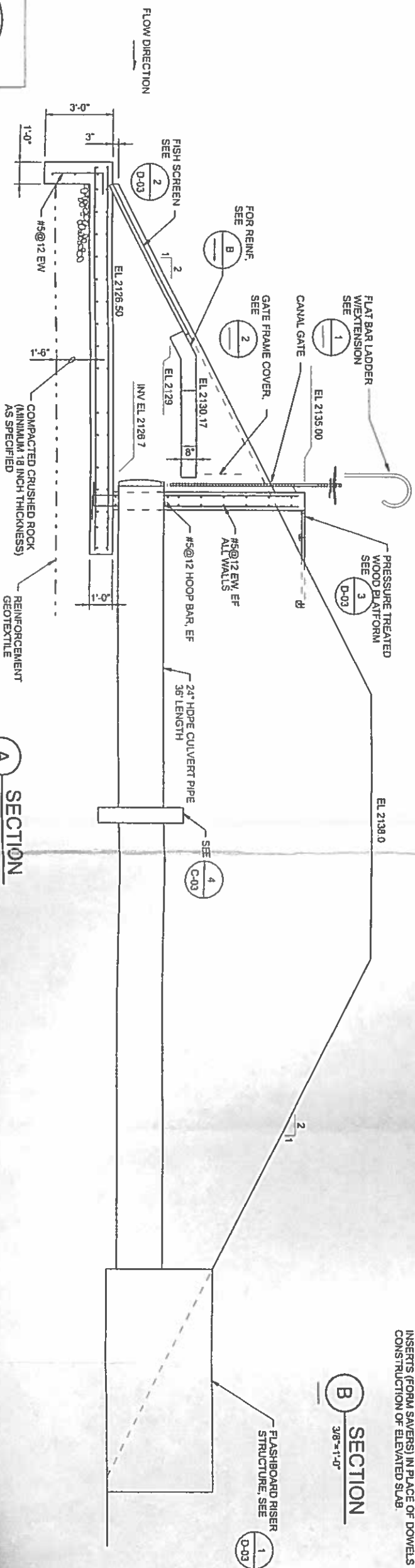
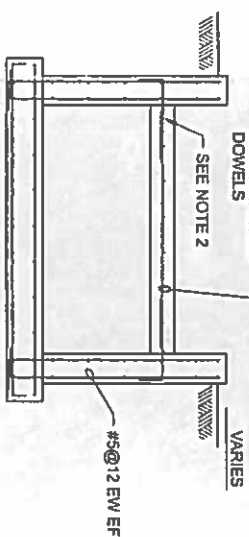
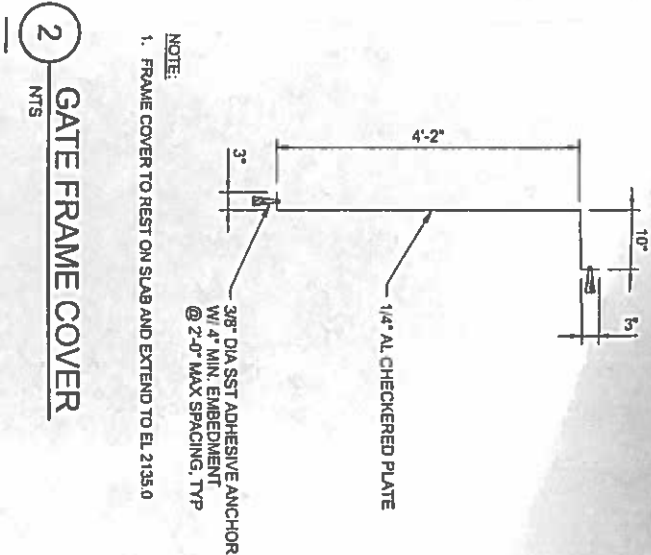
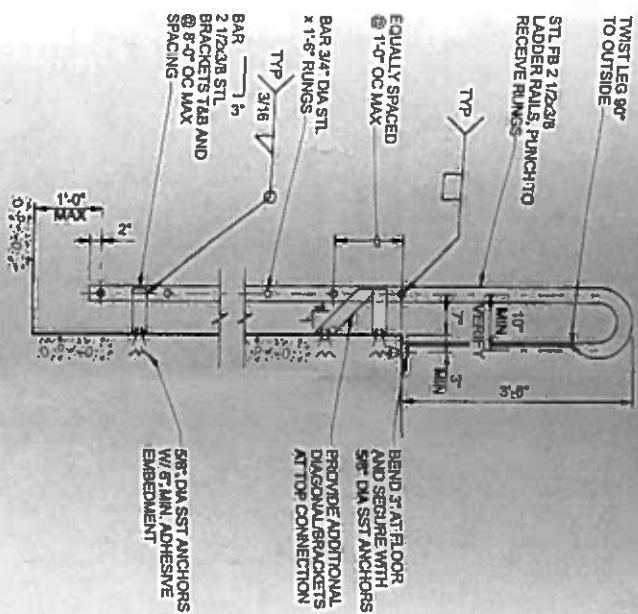
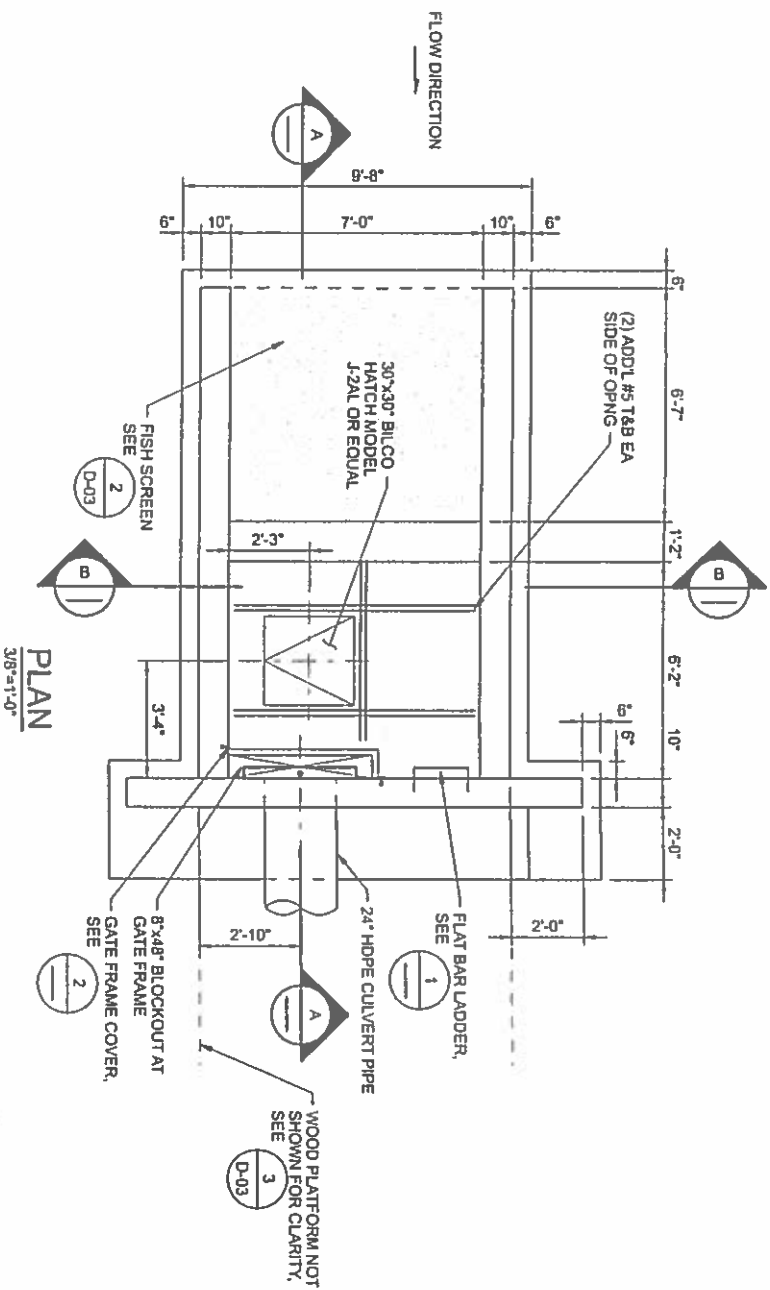
94-7512





94-7412

- GATE INLET/OUTLET STRUCTURE DESIGN CRITERIA**
1. UNDRAINED AT-REST EQUIVALENT FLUID PRESSURE: 99 PCF
 2. DRAINED AT-REST EQUIVALENT FLUID PRESSURE: 70 PCF
 3. SLIDING COEFFICIENT OF FRICTION: 0.5
 4. 2 FEET OF EQUIVALENT SOIL SURCHARGE LOADING AT GATE WALL
 5. MINIMUM SAFETY FACTOR SLIDING: 1.5
 6. MINIMUM SAFETY FACTOR OVERTURNING: 1.5
 7. MAXIMUM WATER ELEVATION: SEE SCHEDULE



- NOTES:**
1. FOR DIMENSIONS AND ELEVATIONS NOT SHOWN SEE PLAN AND SECTION A.
 2. CONTRACTOR OPTION: CONTRACTOR MAY USE THREADED INSERTS (FORM SAVERS) IN PLACE OF DOWELS FOR CONSTRUCTION OF ELEVATED SLAB.



ROBINSON CREEK DIVERSION STRUCTURE
3/8"=1'-0"