

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

JUL 03 2017

DEPARTMENT OF
WATER RESOURCES

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 63-321461. Owner City of Boise, Department of Parks and RecreationPhone No. 208-608-7600Current address 1104 Royal Boulevard, Boise, ID 837062. Examiner's name Terry Scanlan, P.E., P.G.EXAM DATE 6/14/20173. Accompanied by Mike WoodwardEmail mwoodward@cityofboise.orgAddress 1104 Royal Boulevard, Boise, ID 83706Relationship to permit holder Horticulture Manager, BPRDPhone No. 608-71894. Source Ground Water

tributary to _____

B. OVERLAP REVIEW1. Other water rights with the same place of use Boise Valley Irrigation Ditch Co. surface water2. Other water rights with the same source and point of diversion None**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
			NE	NW	14	4N	1E	Ada	Exam, Aerial Photo
			NW	NW	14	4N	1E	Ada	Exam, Aerial Photo

2. Place(s) of Use: Method of determination Exam, aerial photo

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
4N	1E	14					S	S											

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☒ see attached.

Scale: 1" = _____

- ☒ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☒ Aerial photo attached (required for irrigation of 10+ acres)
☒ Photo of diversion and system attached

4.

Well or Diversion Identification 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:** _____

West pond depth survey results: 7.37 af (1.0-ac surface area)

East pond depth survey results: 4.57 af (0.7-ac surface area)

E. NARRATIVE/REMARKS/COMMENTS

Two unlined ponds were developed for storage uses at Optimist Park. The excavated ponds fill naturally with ground water, tributary to the Boise River. Depletions to shallow ground water tributary to the Boise River caused by consumption of ground water are mitigated by non-use of 1.7 acres of water right 63-31832 (Boise Valley Irrigation Ditch Co.) as described by transfer No. 73768.

The ponds are utilized year-round for recreation (including fishing), wildlife, and aesthetic uses. Irrigation water from Boise Valley Irrigation Ditch Company is delivered to the ponds during the irrigation season and then pumped from the ponds into a pressurized irrigation system. The irrigation water is delivered on a continuous basis, so that irrigation storage is 24 hours or less. The east pond (Pond 2) has an automated headgate that closes when the pond is full; the west pond (Pond 1) overflows to a waste ditch. The pump station at the east pond is equipped with a 30-hp end suction pump, self-cleaning suction screen in the pond, and pressure filter on the discharge. The pump station in the west pond is equipped with a variable-speed 30-hp vertical turbine pump, self-cleaning suction screen, and pressure filter.

The permit allows development of one pond limited to 1.7 acres total surface area and 20.4 af total storage capacity located in the N1/2 NW1/4 of Section 14. Development found at the time of the exam includes a 1.0-acre pond located in the NWNW and NENW with volume capacity of 7.4 af, and a 0.7-acre pond located in the NENW with volume capacity of 4.6 af, for a total volume of 12 af. Pond volumes were determined by conducting a bathymetric survey using a float tube, weight, and measuring tape, then contouring measurements to determine approximate pond volumes. Both ponds have flat bottoms in the center, with a depth of 12 feet in the east pond and 15 feet in the west pond.

Exam Attachments:

Attachment A: Field Exam Maps

Attachment B: Volume Calculations

Attachment C: Exam Photos

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☐ Yes ☒ No If no, what must be done to meet the permit requirements?

Permit authorized development of one pond, but two ponds were developed with combined area and capacity that do not exceed the permit requirement. An amendment is recommended to allow two ponds.

All other conditions have been met.

F. FLOW CALCULATIONS

☐ Additional computation sheets attached

Measured Method:

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{I.R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = \underline{\hspace{2cm}}$$

$$V_{D,R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} = \underline{\hspace{2cm}}$$

2. Volume Calculations for Other Uses:

See pond depth contour maps provided in Attachment C

Pond 1: 1.0 acre surface area, 7.4 af capacity

Pond 2: 0.7 acre surface area, 4.6 af capacity

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion	Annual Volume
	From	To	Q (cfs)	V (afa)
Municipal Storage	1/1	12/31	n/a	12
Wildlife Storage	1/1	12/31	n/a	12
Recreation Storage	1/1	12/31	n/a	12
Aesthetic Storage	1/1	12/31	n/a	12
	Totals:		n/a	12

2. Recommended Amendments

- ☐ Change P.D. as reflected on page 1 ☐ Add P.D. as reflected on page 1 ☐ None
☐ Change P.U. as reflected on page 1 ☐ Add P.U. as reflected on page 1 ☒ Other

Allow two ponds rather than one

I. AUTHENTICATION

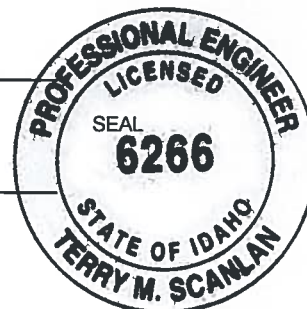
Field Examiner's Signature

Greg M. Scanlon

Date June 27, 2017

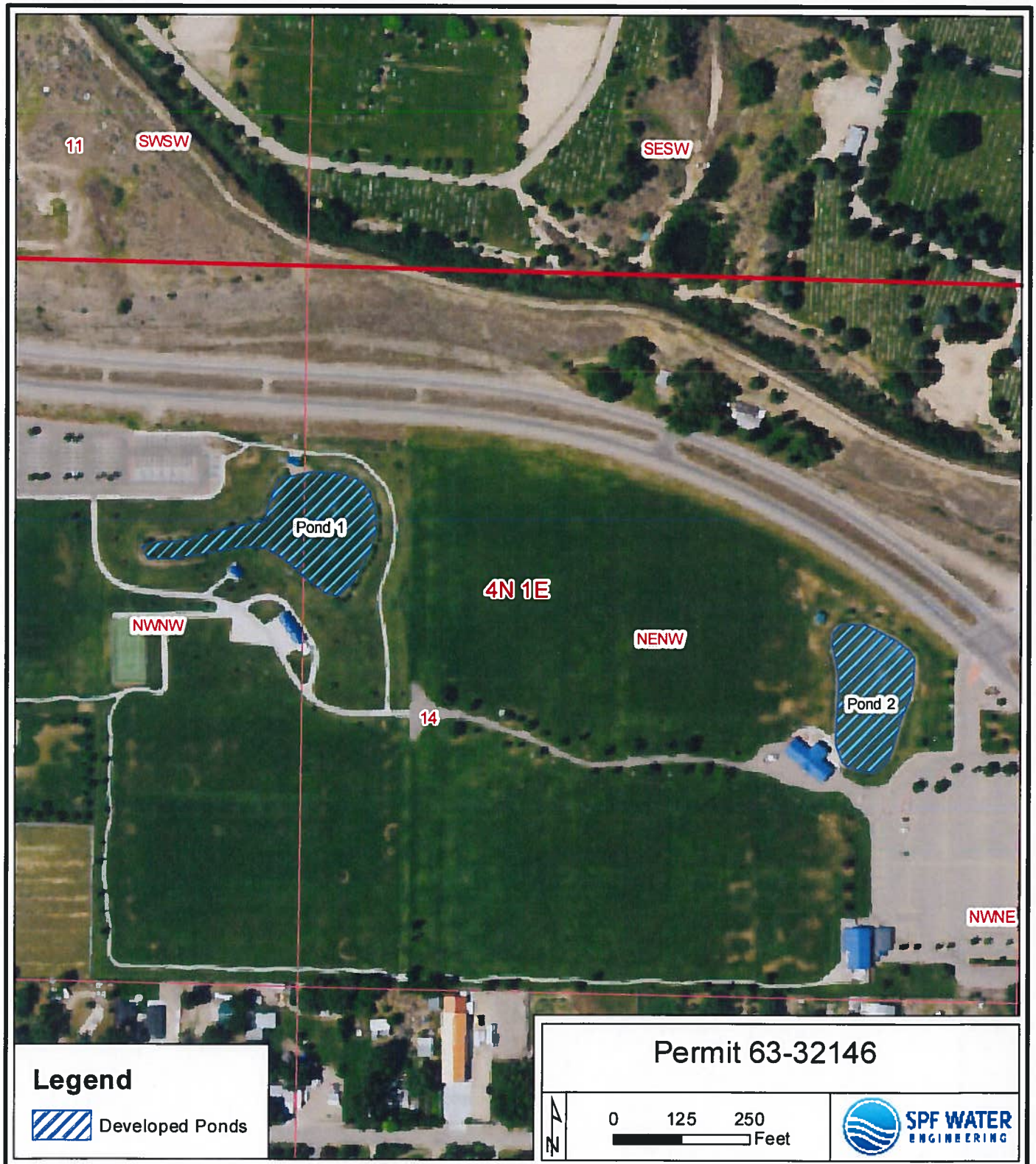
Reviewer

Date _____

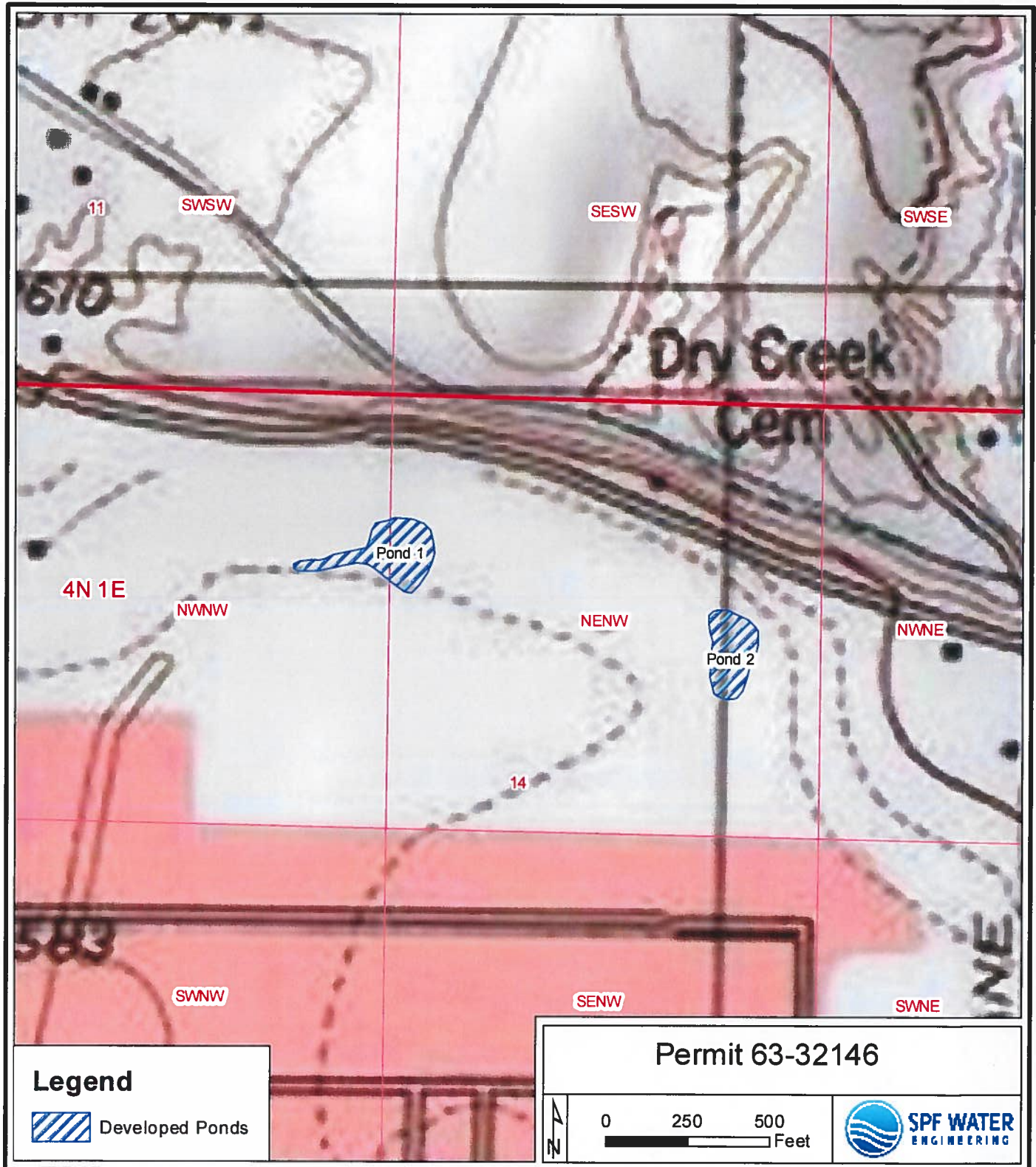


Attachment A
Field Exam Maps

Optimist Park



Optimist Park



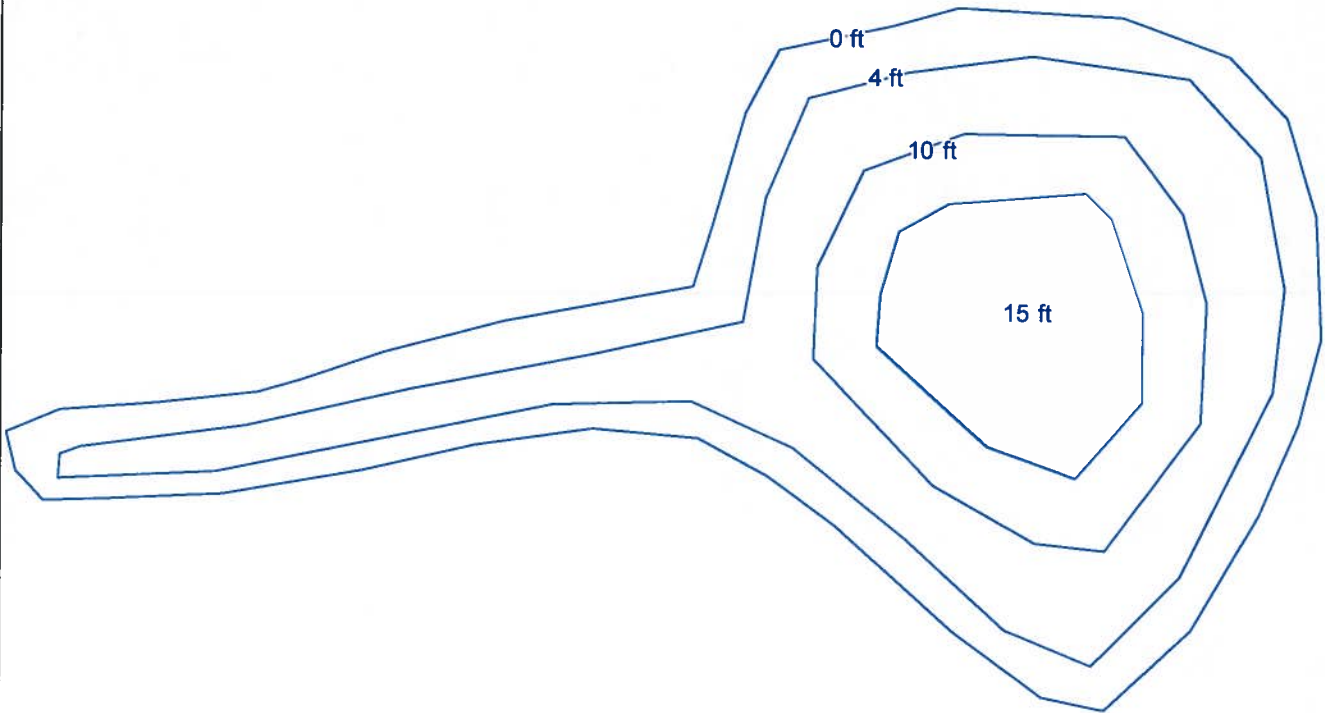
Attachment B

Volume Calculations

Optimist Park

West Pond Volume

Contour (ft)	Area (ac)	Average Depth (ft)	Area Volume (Ac-ft)
0-4	0.31	2	0.62
4-10	0.36	7	2.52
10-15	0.17	12.5	2.13
15	0.14	15	2.10
Total Volume			7.37



Legend

 West Pond Contours

Permit 63-32146



0 25 50
Feet

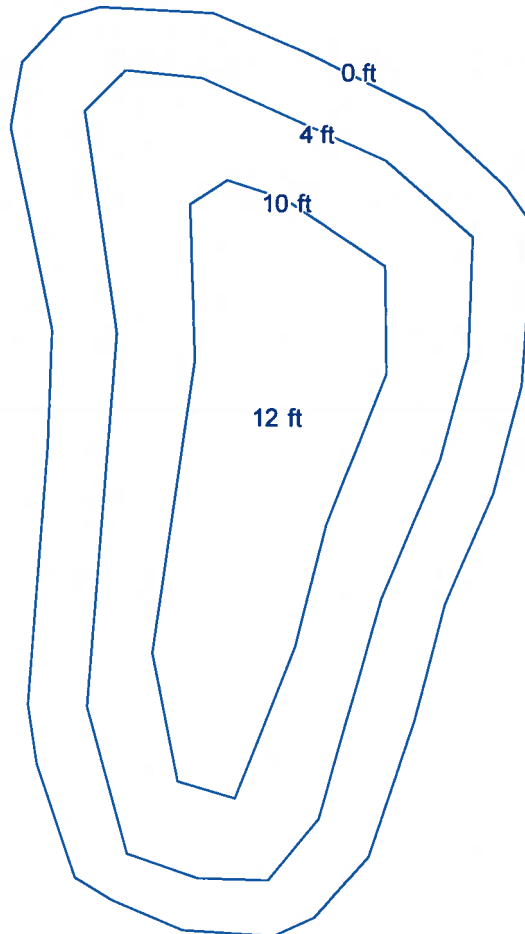


SPF WATER
ENGINEERING

Optimist Park

East Pond Volume

Contour (ft)	Area (ac)	Average Depth (ft)	Area Volume (Ac-ft)
0-4	0.26	2	0.52
4-10	0.27	7	1.89
10-12	0.18	12	2.16
Total Volume			4.57



Legend

 East Pond Contours

Permit 63-32146

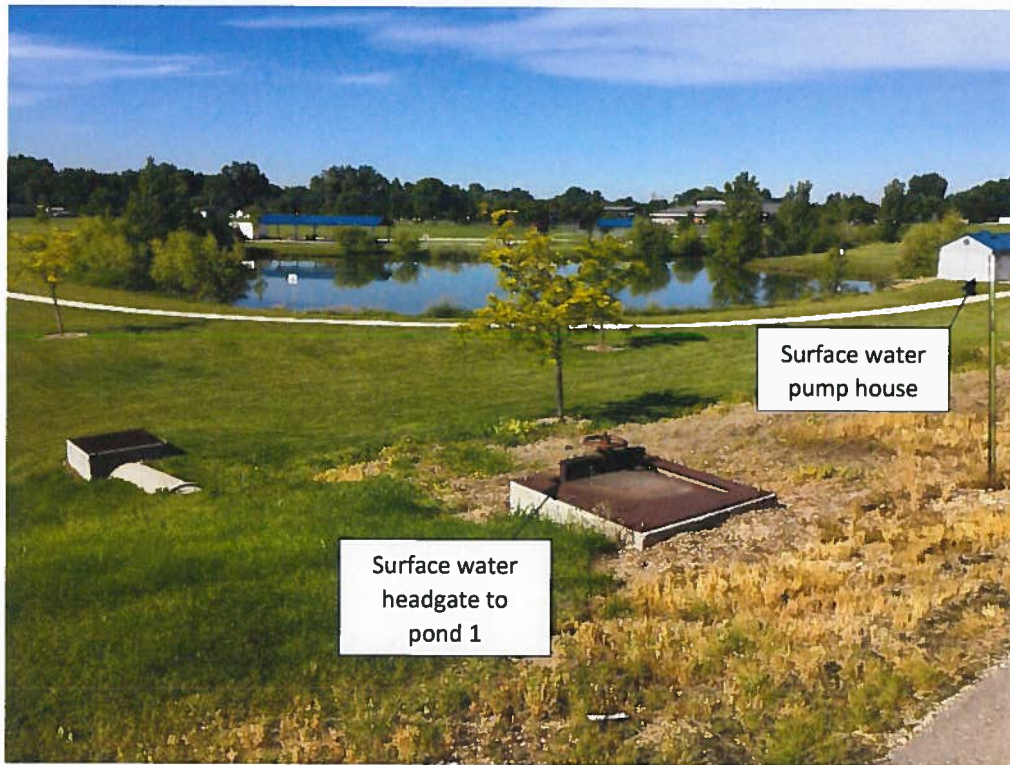


0 25 50 Feet



SPF WATER
ENGINEERING

Attachment C
Exam Photos



Pond 1



Surface water pump system for pond 1



Overflow outlet on north side of pond 1



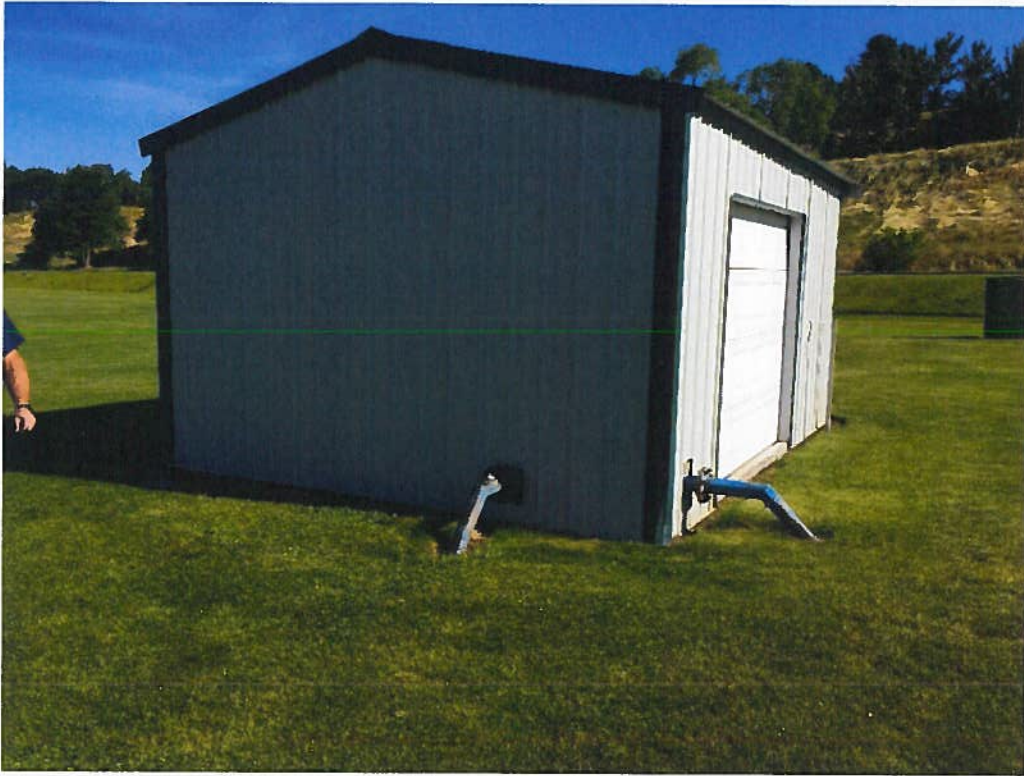
Pond 2



Surface water automatic headgate to pond 2



Surface water inlet on east side of pond 2



Surface water pump house for pond 2



Surface water pump system for pond 2