

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED
OCT 28 2011
Department of Water Resources
Eastern Region

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. 11-07390

1. Owner Boy Scouts of America, Trapper Trails Council Phone No. 801-479-5460
Current address 1200 E. 5400 S., Ogden, Utah 84403
2. Examiner's name Paul H. Scoresby, PE (Certification No. 12-131) EXAM DATE 9-30-11
3. Accompanied by Jeremy Bell Email jeremy.bell@scouting.org
Address 1200 E. 5400 S., Ogden, Utah 84403
Relationship to permit holder Employee Phone No. 801-479-5460
4. Source Fern Creek tributary to Stauffer Creek

B. OVERLAP REVIEW

1. Other water rights with the same place of use 11-07280
2. 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
	4		NW	NW	6	12S	43E	Bear Lake	IDWR Locator Tool

2. Place(s) of Use: Method of determination IDWR Locator Tool

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12S	43E	6						X											

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.

A large grid of graph paper, consisting of a 10x10 array of squares. A central rectangular box, spanning approximately 4 squares in width and 2 squares in height, contains the text "See attached maps, drawing and photographs." The grid is composed of solid lines, with a dashed horizontal line running through the middle of the grid, dividing it into two 5x5 sections. The central text box is positioned in the upper half of the grid, specifically in the second row from the top, spanning the fourth, fifth, sixth, and seventh columns from the left. The text is in a simple, black, sans-serif font. The grid lines are thin and black, and the background is white. The overall layout is clean and organized, typical of a technical drawing or map-making template.

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
NA					

*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
NA						

2. Measurements:

The volume of the pond was estimated. Aerial photos and ground photos with the use of CAD software were used to estimate the volume of the pond.

E. NARRATIVE/REMARKS/COMMENTS

The diversion works consist of a dam in the Fern Creek drainage that causes the water to pond up behind the dam and then run out through a natural looking spillway and return to the natural stream bed. The dam was reported to be 10 feet in height referenced from the upstream side. The dam was constructed of native materials. It has a spillway type outlet that was constructed using native materials. Time has allowed natural vegetation to regenerate on the dam slopes and in the spillway making it natural in appearance. The spillway exit ensures that the pond remains at almost the same water level year-round. This was the case on the day of the field examination. No signs of erosion around the spillway were evident, even after a high run-off snow melt earlier in the year as reported by Mr. Bell. The pond can be drained with a small six inch diameter PVC pipe that was installed at base of dam (see attached photos). The valve for the drain pipe is not visible. Mr. Bell reported that the valve on the drain pipe was under water. The dam appears to be sound in its construction. There were no visible signs of impending failure such as erosion or piping water underneath the dam or eroded dam slopes.

There is another intermittent unnamed tributary to Fern Creek that empties into the reservoir on the northwest side. It is shown on the the attached USGS map. It usually dries up with the end of spring run off.

The dam was constructed below the spring in Fern Creek. The diversion for Water Permit No. 11-7280 is upstream of the dam at the spring.

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 holder has not met Condition No. 5 of permit. No permanent measuring devices have been installed. The permittee requests a waiver of Condition No. 5 for the following reasons:

1. The permit does not specify a rate of diversion. The reservoir is in-line with the stream.
2. The dam has now functioned as intended by the permit holder since construction 17 years ago without any recognizable need for water measurement in or out of the reservoir.
3. Flow measurement devices upstream and downstream would seem to serve little purpose. Evaporation could be estimated. Any seepage caused by the reservoir would probably re-enter Fern Creek further down the canyon.
4. The Boy Scouts of America do not regulate the depth of the pond and have no intention of doing so. Pond elevation changes little with seasonal changes in stream flow, which is normally a few inches.

F. FLOW CALCULATIONS☐ Additional computation sheets attached

Measured Method:

Not applicable.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses:

See attached CAD drawing and GIS maps that estimate the surface area and volume of the pond. The estimated volume is 11.64 AF. This estimate was arrived at assuming 2:1 (horizontal:vertical) berm slope and slope of the natural ground at reservoir edges, which should overestimate the actual volume of the reservoir. The permitted volume was 49.0 AF.

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Recreation Storage	01/01	12/31	NA	11.64 AF
Totals:			NA	11.64 AF

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**I. AUTHENTICATION**

Field Examiner's Signature

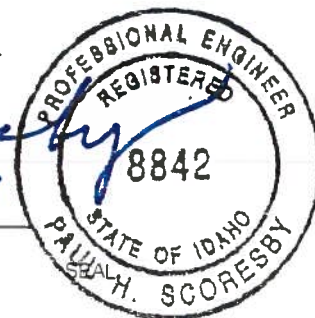
Date

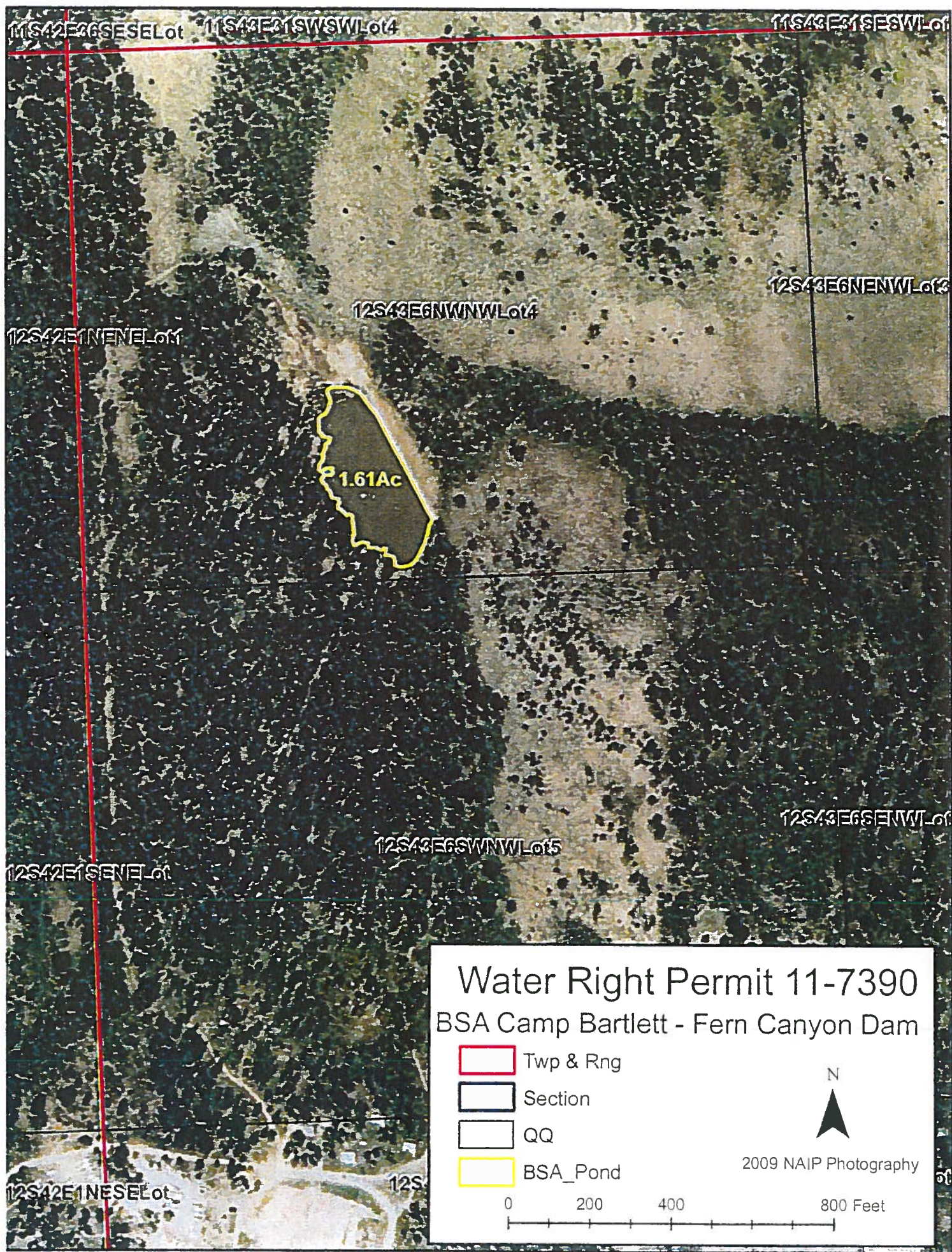
Paul H. Scoresby
10-20-11

Reviewer

Date

Keith C Wilson
10/20/11



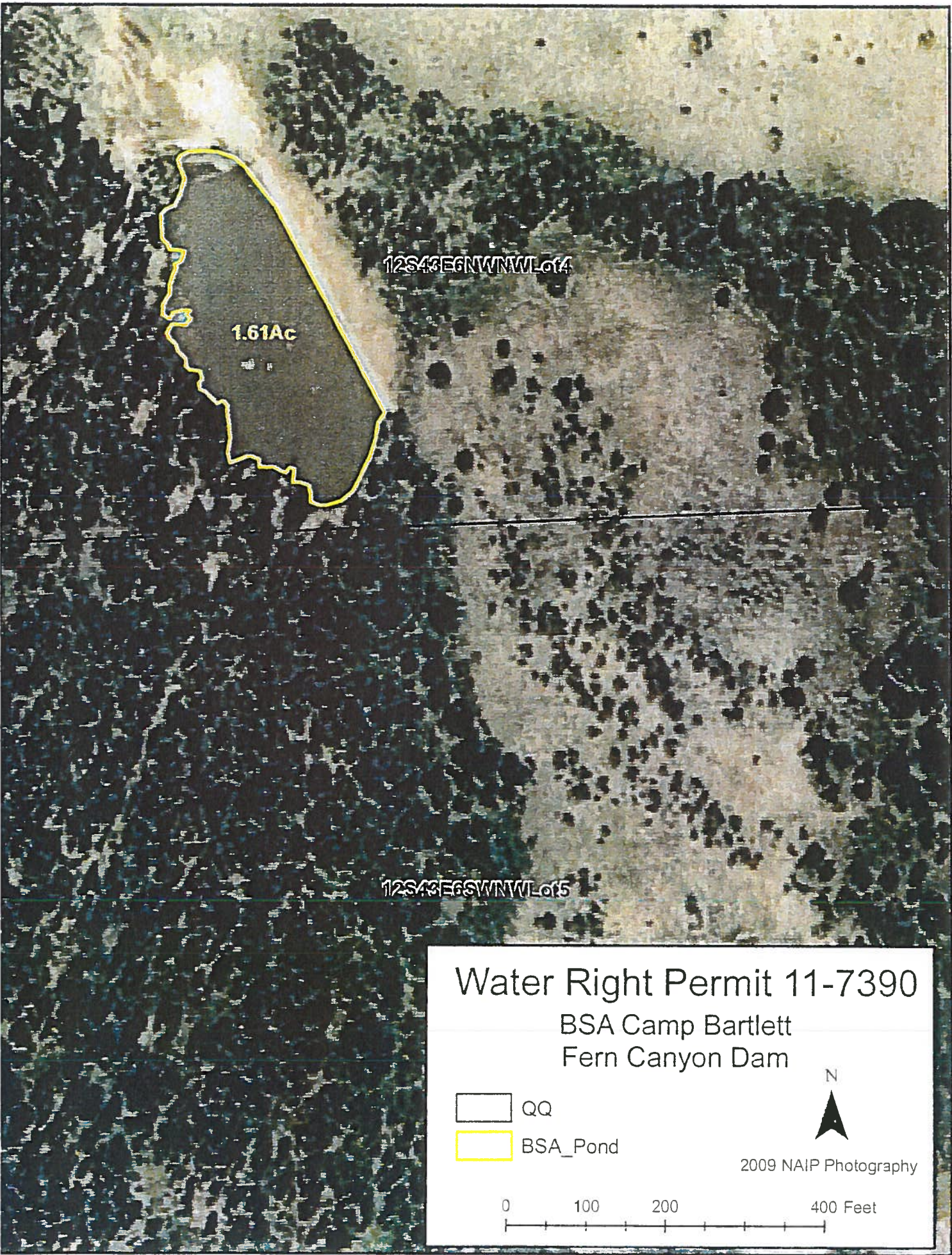


Water Right Permit 11-7390
BSA Camp Bartlett - Fern Canyon Dam

 Twp & Rng
 Section
 QQ
 BSA_Pond

N
2009 NAIP Photography

0 200 400 800 Feet



1.61Ac

12S43E6NWNWLot4

12S43E6SWNWLot5

Water Right Permit 11-7390

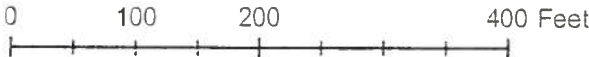
BSA Camp Bartlett
Fern Canyon Dam

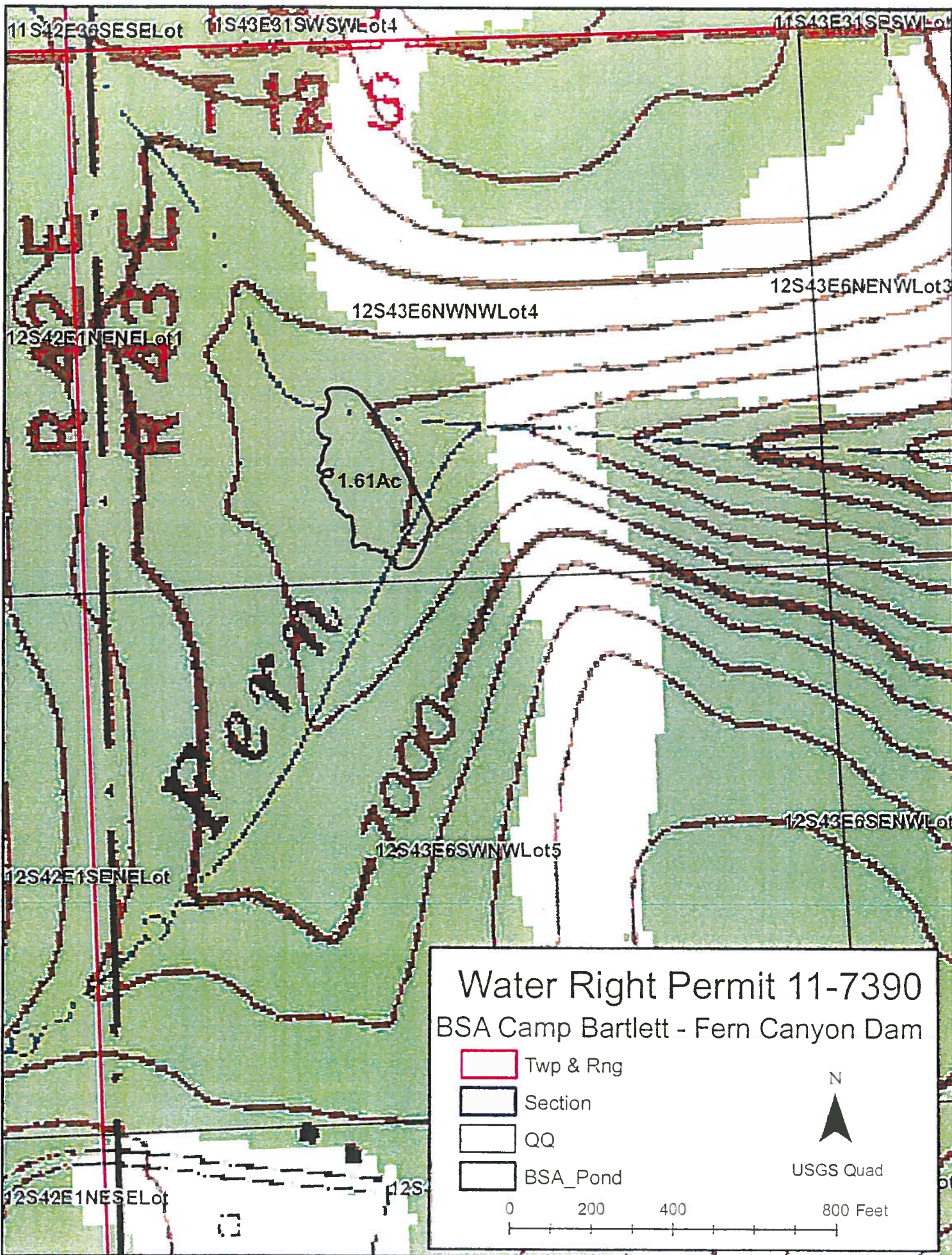
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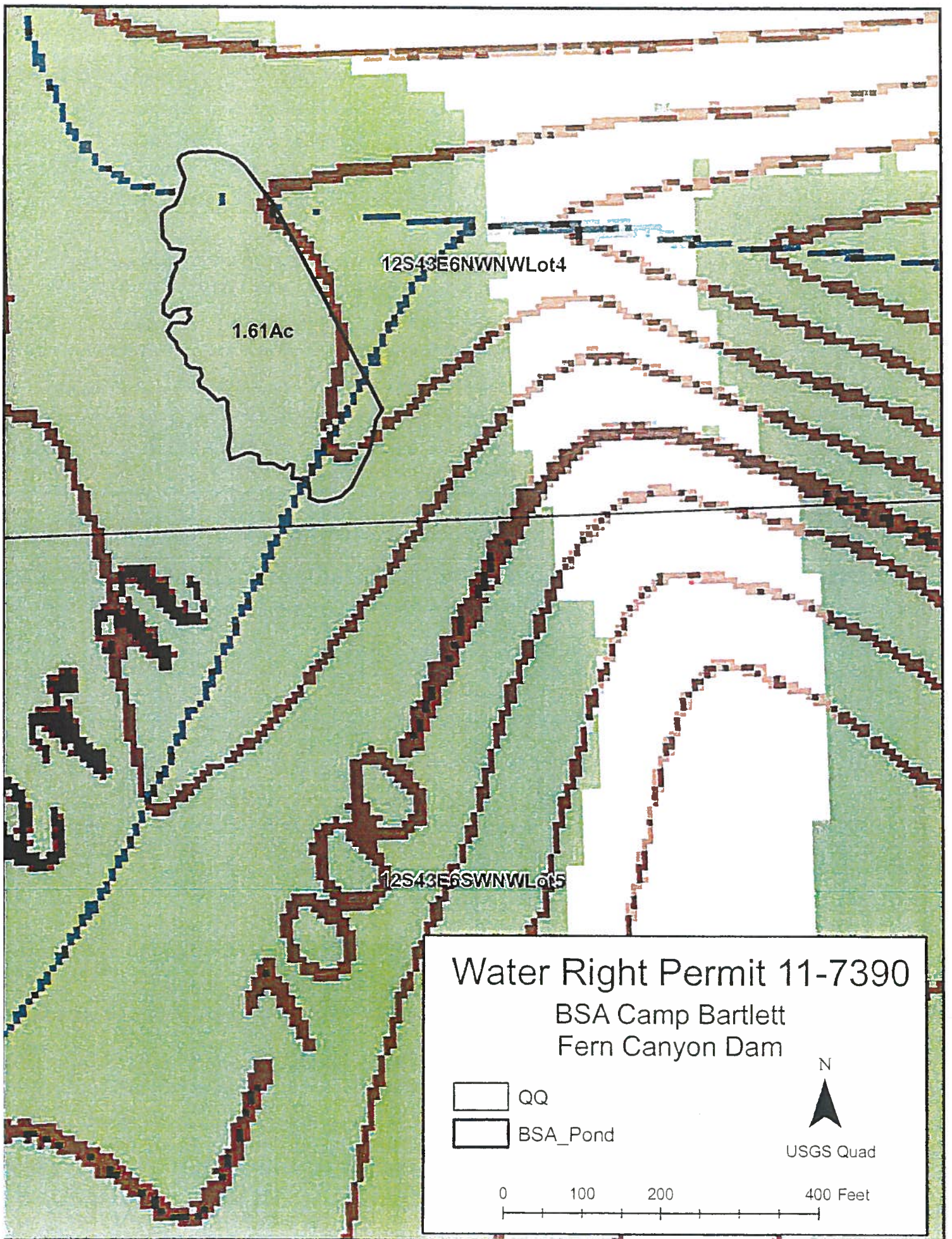
BSA_Pond



2009 NAIP Photography







Water Right Permit 11-7390

BSA Camp Bartlett
Fern Canyon Dam

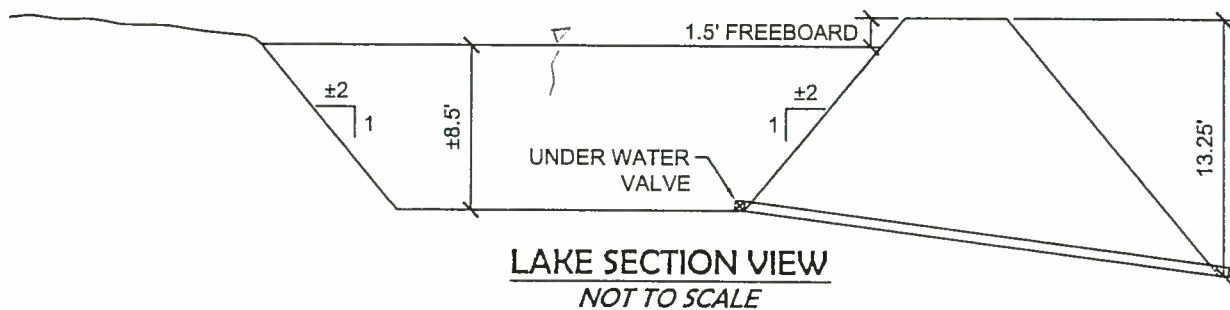
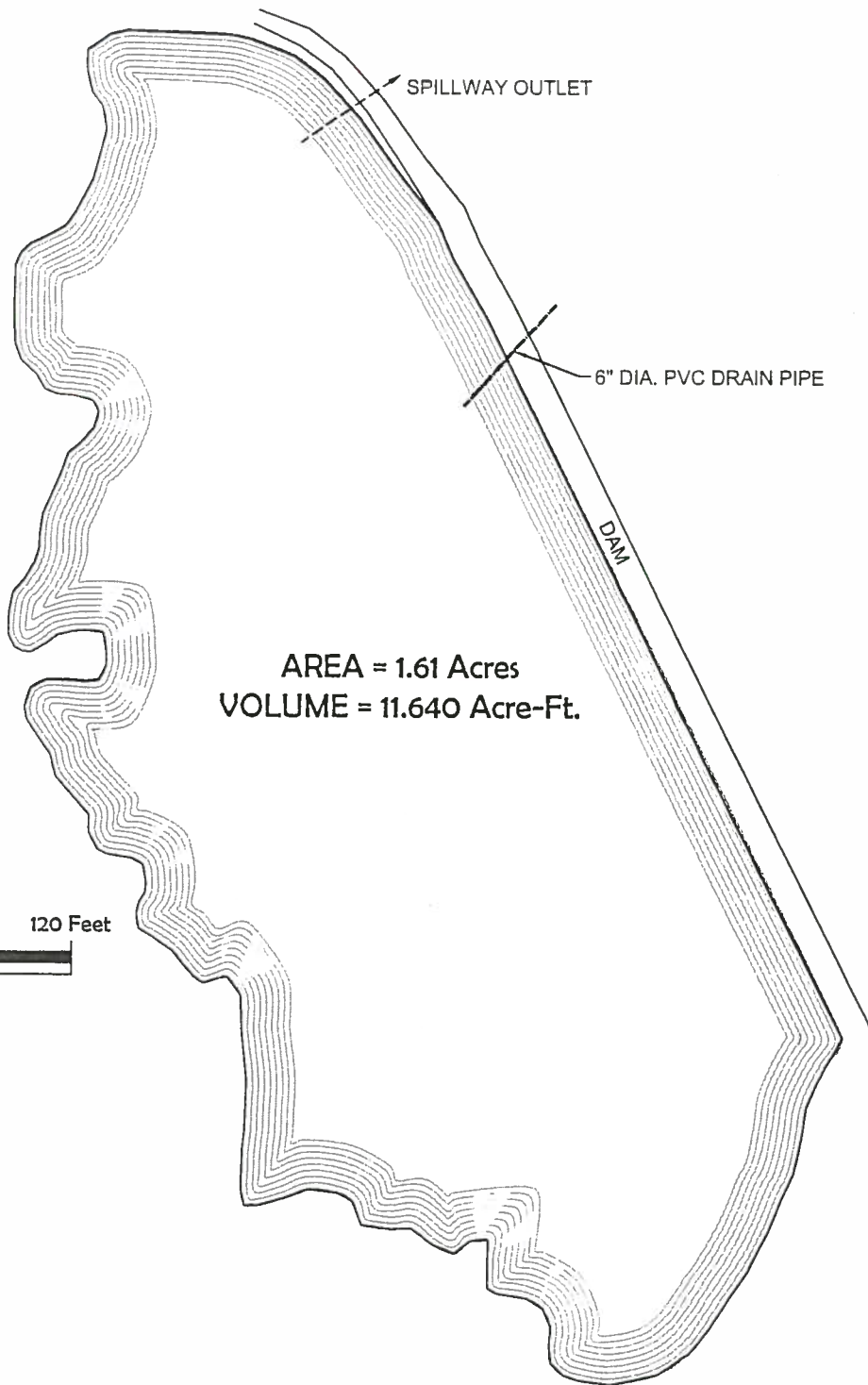
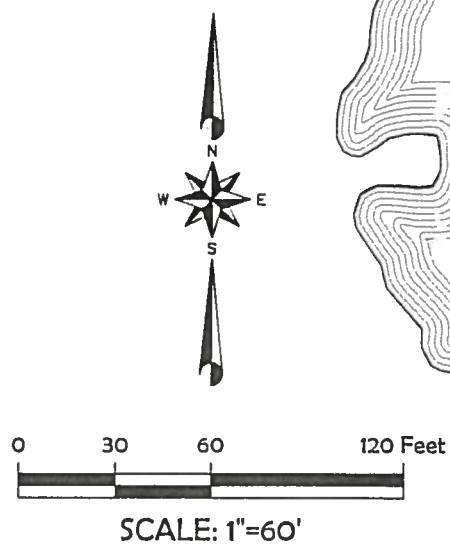
QQ

BSA_Pond

N

USGS Quad

0 100 200 400 Feet



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PROJECT NO. 11105
DATE: OCTOBER 2011
DRAWN BY: L. LUSK
DESIGNED BY: P. SCORESBY
CHECKED BY: P. SCORESBY
SCALE: AS NOTED



Schiess & Associates
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Maine File 522-1344 Andover 360-6283

CAMP
BARTLETT

FERN CANYON DAM
LAKE VOLUME CALCULATION

SHEET

NO. OF

REV. NO.



Dam crest standing on northeast end near spillway and looking southeast



Reservoir looking straight south from northeast end of the dam



Dam spillway and continuation of Fern Creek. The walk bridge across spillway is in the center of the photo.



Another photo of spillway at walk bridge



6" PVC drain at downstream toe of dam



1994 construction photo of 6" PVC drain on the reservoir side of the dam prior to filling reservoir



Fern Creek approximately 40 feet upstream of the reservoir. A walk bridge is visible in center of the photo

1994 construction photo showing relative height of the dam prior to filling reservoir

