

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 72-16896

Exam Date: 5/22/2019

1. Current Owner:
J R SIMPLOT CO
C/O VIC CONRAD
1099 W FRONT ST
PO BOX 27
BOISE ID 83707-0027
2. Accompanied by: N/A
Phone No:
Address:
Relationship to Permit Holder:
3. SOURCE: YANKEE FORK

TRIBUTARY:
SALMON RIVER

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 72-7404 & 72-7405. 72-7404 is 5 cfs from the Yankee Fork for non-consumptive recreation and recreation storage and fully overlaps the place of use. 72-7405 is 3.3 cfs from ground water, which is characterized in the conditions as shallow underflow hydrologically connected to the Yankee Fork, for non-consumptive wildlife use. 72-7405 overlaps the majority of the place of use of this permit except for the portion in the NWNE.
2. Other water rights with the same point-of-diversion: 72-7404

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

YANKEE FORK NW¼ NE¼, Sec. 29, Twp 12N, Rge 15E, B.M. CUSTER County

Method of Determination: GPS, aerial photography in ArcMap

2. PLACE OF USE:

PLACE OF USE: FISH HABITAT

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	15E	29		X	X											X			

PLACE OF USE: RECREATION

Twp	Rng	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
12N	15E	29		X	X											X			

Method of Determination: GPS, aerial photography in ArcMap (2013 & 2015 NAIP)

3. ATTACHMENTS

- 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.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4. WELL INFORMATION

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

*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
Compound Weir						

2. Measurements:

On the day of the field exam, I observed water flowing through the inlet structure and measured a height of 2.60 feet on the staff gage.

Staff from Trout Unlimited, the entity which has been coordinating restoration efforts at the site, provided a photograph of the inlet structure during a peak flow event. Based on the high water mark, it indicates the channel reached a height of 4.8 feet on the staff gage.

E. FLOW CALCULATIONS

Measured Method: Staff gage reading in rated stream section

I was provided a copy of the rating table for this diversion (see attached). It is my understanding that the rating table was developed by the Bureau of Reclamation. Based on the measured height on the staff gage (4.8 feet), that corresponds to a maximum flow rate of 307.4 cfs.

The permit holder also holds overlapping right 72-7404 for 5 cfs. The additional amount of water that was developed under this permit is thus 307.4 cfs – 5 cfs = 302.4 cfs.

Per IDAPA 37.03.02, Rule 35.01.o the amount of water shall be limited to the smaller of the following amounts:

- Permitted amount: 295 cfs
- Amt. upon which the license exam fee is paid: up to 295 cfs

- Capacity of diversion works: unknown; information submitted by applicant indicates it was designed for approximately 300 cfs
- Amt. beneficially used: 302.4 cfs

In this case, the permitted amount is the limiting factor at 295 cfs.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: N/A

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

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

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

2. Volume Calculations for Other Uses: RECREATION & FISH HABITAT

I was provided with hourly data collected from the site between May 2014 – May 2016, providing a time series of the measured feet of head on the staff gage. Using the provided rating table, I converted the hourly head readings to the equivalent discharge in cfs. I then calculated the daily mean discharge in cfs and converted that to ac-ft/day. Based on that data, the largest volume diverted through the side channel in a 365 consecutive day period was 17,319.7 AF between May 13, 2015 - May 11, 2016. Considering the Department's rounding standards, this would likely be rounded to 17,300 AF.

G. NARRATIVE / REMARKS / COMMENTS

Application for Permit was filed on 9/27/2012 by JR Simplot Company for 295 cfs year-round from the Yankee Fork. The purpose was to divert water into an artificial side channel for fish habitat and recreation. The permit was approved on 11/15/2012 with proof of beneficial use due on 12/1/2015. The permit lapsed because proof was not filed by that date; however, proof was filed on 12/17/2015 so the permit was reinstated with a new priority date of 10/13/2012.

The point of diversion is an engineered inlet channel designed to passively allow a portion of the flow as well as juvenile salmonids in the Yankee Fork to pass into the side channel. Approximately 50-100 feet below the diversion is a structure which helps control the amount of flow and contains a staff gage which corresponds to a discharge rating table. The place of use consists of the artificially constructed side channel & its adjacent floodplain, which is approximately 2500-3500 feet long. At low water periods, water is contained primarily in the channel and at high water, it covers the floodplain. Information provided by the permit holder indicates that the side channel was designed and constructed to include meanders, variable depths, and a connection with the floodplain to enhance fish rearing and spawning. This was observed during the field exam. At the lower end of the place of use, the side channel flows freely back in to the Yankee Fork.

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>Rate of Diversion</u>	<u>Annual Volume</u>
FISH HABITAT	01/01 to 12/31	295.00 CFS	17,300 AF
RECREATION	01/01 to 12/31	295.00 CFS	17,300 AF

Totals: 295.0 CFS 17,300 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	☒ None

I. AUTHENTICATION

Field Examiner's Name Allison Inouye Date 4/27/2019
Allison Inouye, Water Resource Agent, Senior

Reviewer _____ Date _____

Attachment to 72-16896 Beneficial Use Field Report: System Diagram & Map



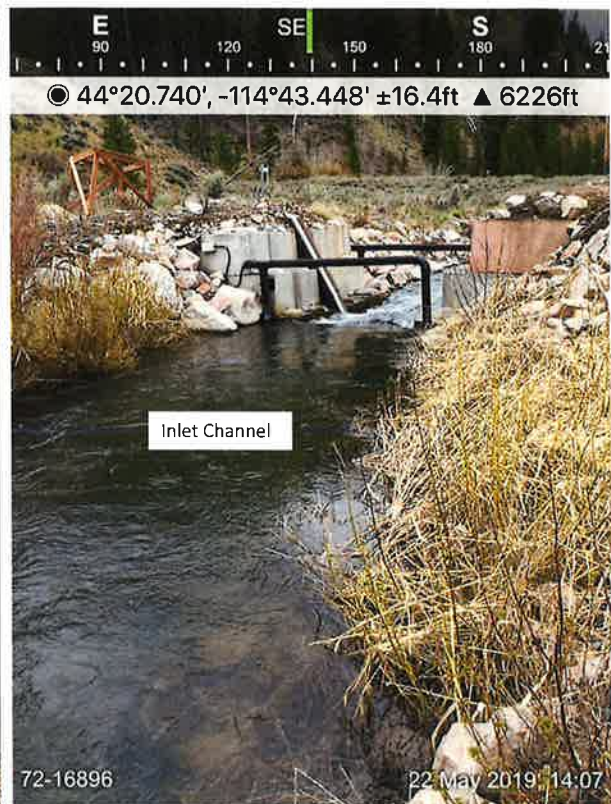
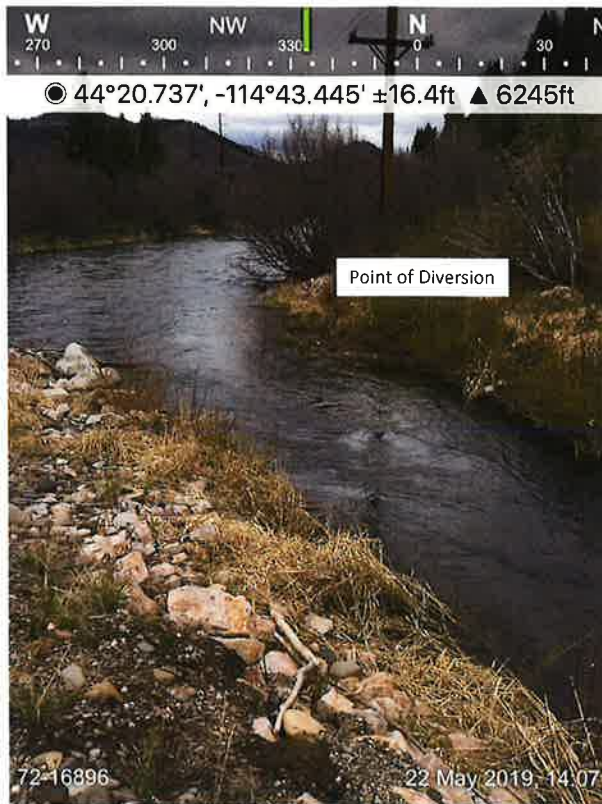
Legend

- Township/Range
- Sections
- QQ

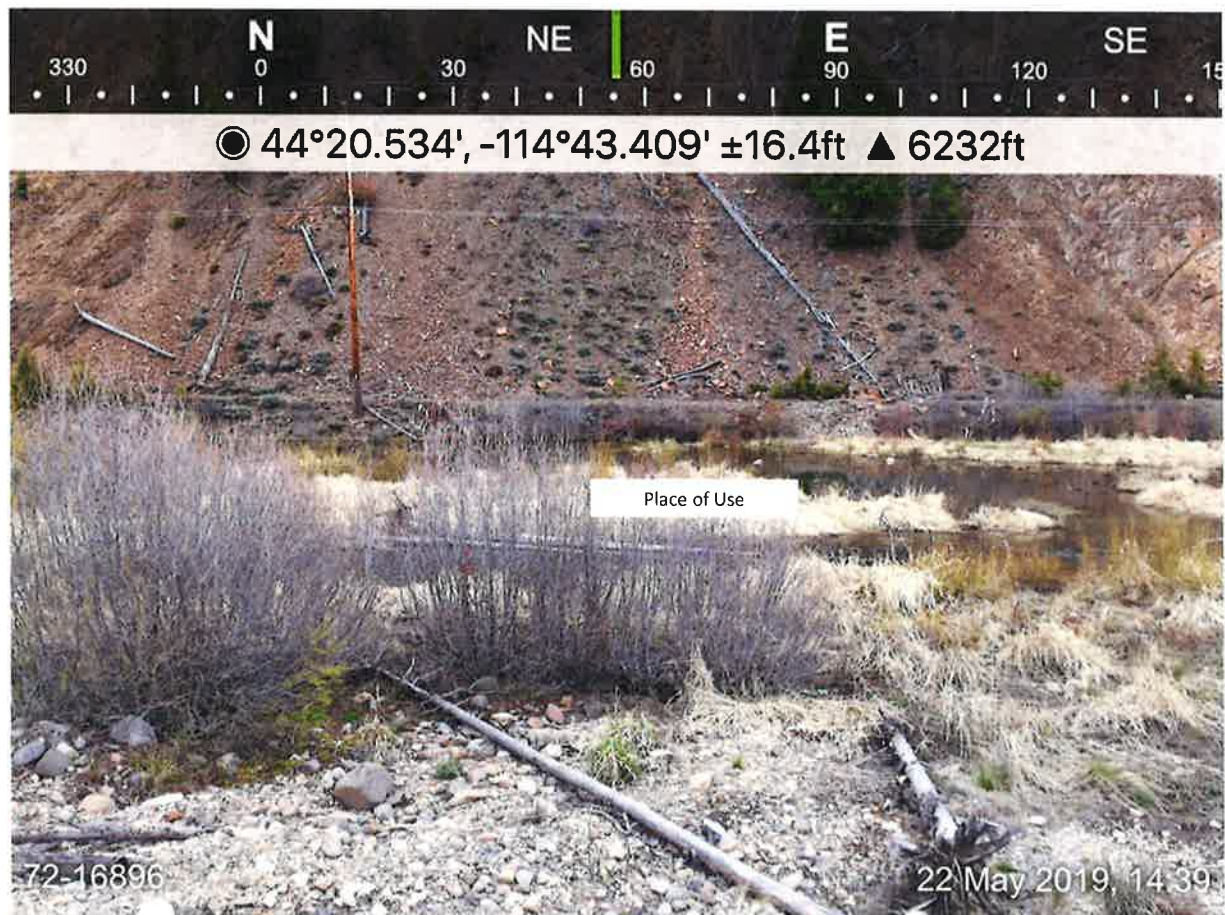
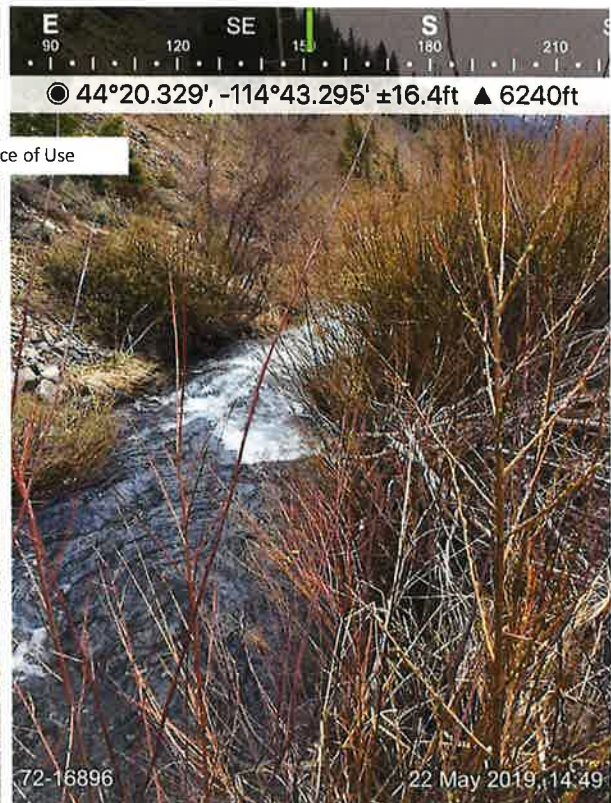
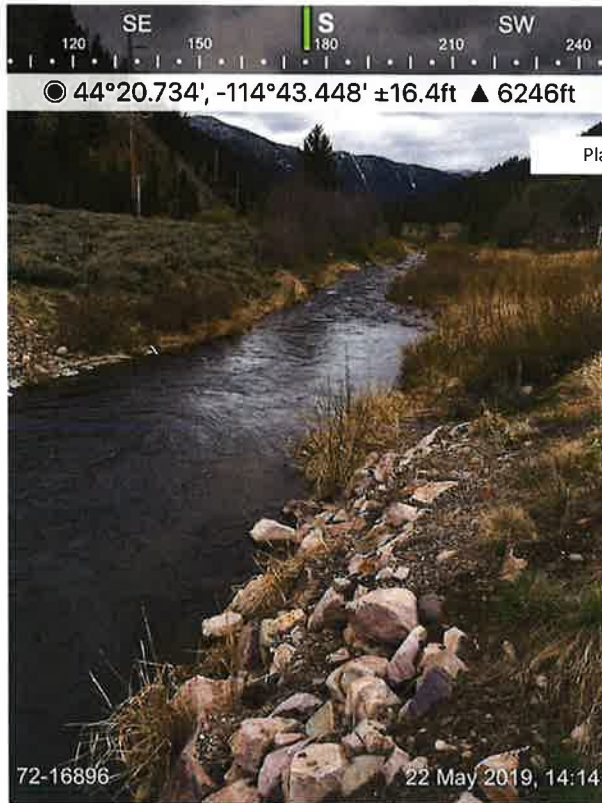
0 0.05 0.1 0.2 Miles



Attachment to 72-16896 Beneficial Use Field Report - Photographs



Attachment to 72-16896 Beneficial Use Field Report - Photographs



Attachment to 72-16896 Beneficial Use Field Report - Photographs



Attachment to 72-16896 Beneficial Use Field Report – Photographs from Trout Unlimited showing inlet structure under high flow conditions



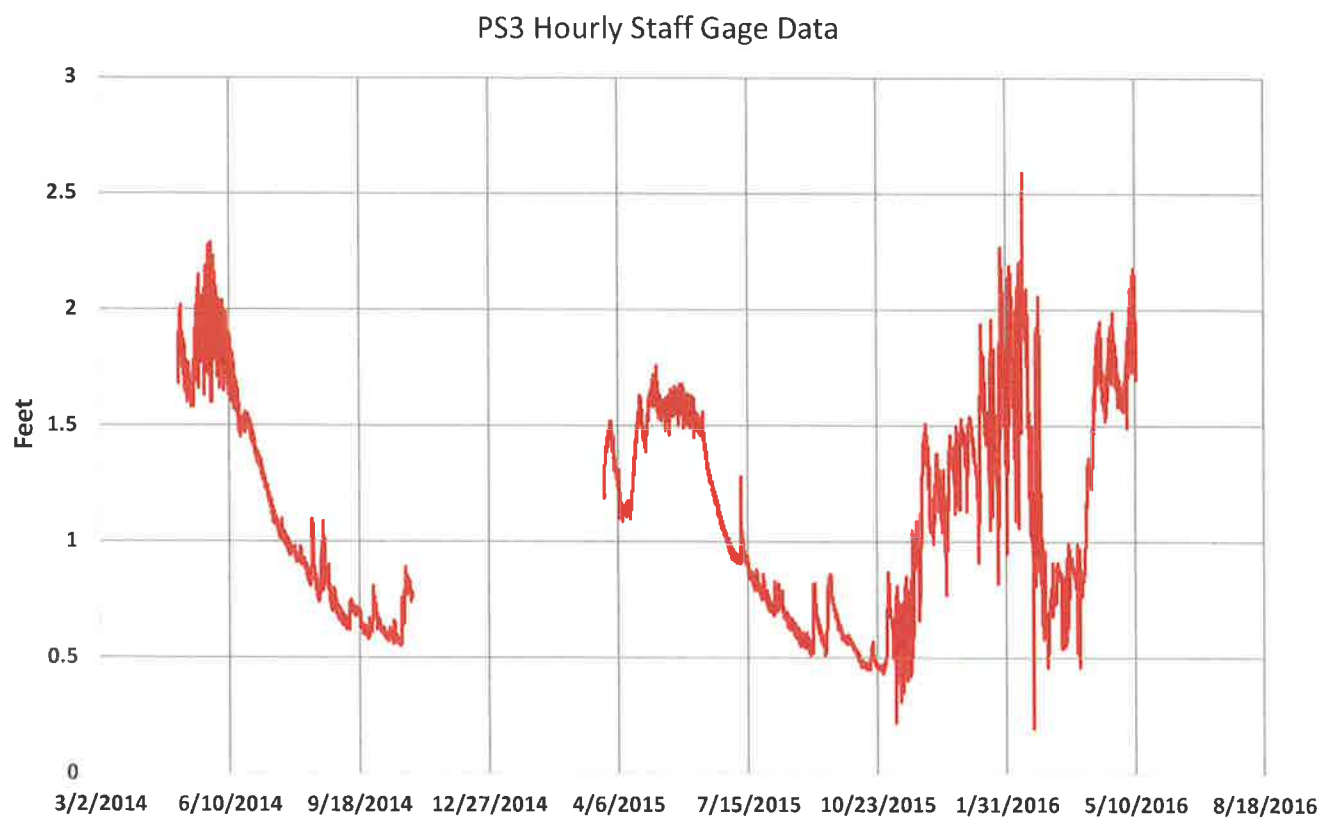
Rating table provided in 6/7/2019 e-mail from Jim Gregory

PS3 Compound Weir Rating Table										
Discharge (cfs)										
Head (ft)	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
0	--	0.0	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.5
0.1	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
0.2	1.5	1.6	1.7	1.9	2.0	2.1	2.2	2.4	2.5	2.6
0.3	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.9	4.0	4.2
0.4	4.4	4.5	4.7	4.9	5.0	5.2	5.4	5.6	5.8	6.0
0.5	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0
0.6	8.2	8.4	8.7	8.9	9.1	9.3	9.6	9.8	10.0	10.3
0.7	10.5	10.8	11.0	11.2	11.5	11.7	12.0	12.3	12.5	12.8
0.8	13.0	13.3	13.6	13.8	14.1	14.4	14.7	14.9	15.2	15.5
0.9	15.8	16.1	16.4	16.7	16.9	17.2	17.5	17.8	18.1	18.5
1	18.8	19.1	19.4	19.7	20.0	20.3	20.6	21.0	21.3	21.6
1.1	22.0	22.3	22.6	23.0	23.3	23.6	24.0	24.3	24.7	25.0
1.2	25.4	25.7	26.1	26.4	26.8	27.2	27.5	27.9	28.3	28.6
1.3	29.0	29.4	29.8	30.1	30.5	30.9	31.3	31.7	32.1	32.5
1.4	32.9	33.3	33.7	34.1	34.5	34.9	35.3	35.7	36.1	36.5
1.5	37.0	37.4	37.8	38.2	38.7	39.1	39.5	40.0	40.4	40.8
1.6	41.3	41.7	42.2	42.6	43.1	43.5	44.0	44.4	44.9	45.3
1.7	45.8	46.3	46.7	47.2	47.7	48.2	48.6	49.1	49.6	50.1
1.8	50.6	51.1	51.6	52.0	52.5	53.0	53.5	54.0	54.6	55.1
1.9	55.6	56.1	56.6	57.1	57.6	58.1	58.7	59.2	59.7	60.3
2	60.8	61.3	61.9	62.4	62.9	63.5	64.0	64.6	65.1	65.7
2.1	66.2	66.8	67.4	67.9	68.5	69.1	69.6	70.2	70.8	71.4
2.2	71.9	72.5	73.1	73.7	74.3	74.9	75.5	76.0	76.6	77.2
2.3	77.9	78.5	79.1	79.7	80.3	80.9	81.5	82.1	82.8	83.4
2.4	84.0	84.6	85.3	85.9	86.5	87.2	87.8	88.5	89.1	89.8
2.5	90.4	91.1	91.7	92.4	93.0	93.7	94.4	95.0	95.7	96.4
2.6	97.0	97.7	98.4	99.1	99.8	100.4	101.1	101.8	102.5	103.2
2.7	103.9	104.6	105.3	106.0	106.7	107.4	108.2	108.9	109.6	110.3
2.8	111.0	111.8	112.5	113.2	113.9	114.7	115.4	116.2	116.9	117.6
2.9	118.4	119.1	119.9	120.7	121.4	122.2	122.9	123.7	124.5	125.2

Discharge (cfs)										
Head (ft)	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
3	126.0	126.8	127.6	128.3	129.1	129.9	130.7	131.5	132.3	133.1
3.1	133.9	134.7	135.5	136.3	137.1	137.9	138.7	139.5	140.3	141.2
3.2	142.0	142.8	143.6	144.5	145.3	146.1	147.0	147.8	148.7	149.5
3.3	150.3	151.2	152.0	152.9	153.8	154.6	155.5	156.3	157.2	158.1
3.4	159.0	159.8	160.7	161.6	162.5	163.4	164.3	165.1	166.0	166.9
3.5	167.8	168.7	169.6	170.5	171.5	172.4	173.3	174.2	175.1	176.0
3.6	177.0	177.9	178.8	179.8	180.7	181.6	182.6	183.5	184.5	185.4
3.7	186.4	187.3	188.3	189.2	190.2	191.2	192.1	193.1	194.1	195.0
3.8	196.0	197.0	198.0	199.0	199.9	200.9	201.9	202.9	203.9	204.9
3.9	205.9	206.9	207.9	209.0	210.0	211.0	212.0	213.0	214.1	215.1
4	216.1	217.1	218.2	219.2	220.3	221.3	222.4	223.4	224.5	225.5
4.1	226.6	227.6	228.7	229.8	230.8	231.9	233.0	234.0	235.1	236.2
4.2	237.3	238.4	239.5	240.6	241.6	242.7	243.8	245.0	246.1	247.2
4.3	248.3	249.4	250.5	251.6	252.8	253.9	255.0	256.1	257.3	258.4
4.4	259.5	260.7	261.8	263.0	264.1	265.3	266.4	267.6	268.8	269.9
4.5	271.1	272.2	273.4	274.6	275.8	277.0	278.1	279.3	280.5	281.7
4.6	282.9	284.1	285.3	286.5	287.7	288.9	290.1	291.3	292.5	293.8
4.7	295.0	296.2	297.4	298.7	299.9	301.1	302.4	303.6	304.9	306.1
4.8	307.4	308.6	309.9	311.1	312.4	313.7	314.9	316.2	317.5	318.7
4.9	320.0	321.3	322.6	323.9	325.2	326.5	327.7	329.0	330.3	331.7
5	333.0	334.3	335.6	336.9	338.2	339.5	340.9	342.2	343.5	344.8
5.1	346.2	347.5	348.9	350.2	351.6	352.9	354.3	355.6	357.0	358.3
5.2	359.7	361.1	362.4	363.8	365.2	366.6	367.9	369.3	370.7	372.1
5.3	373.5	374.9	376.3	377.7	379.1	380.5	381.9	383.3	384.8	386.2
5.4	387.6	389.0	390.4	391.9	393.3	394.8	396.2	397.6	399.1	400.5
5.5	402.0	403.4	404.9	406.4	407.8	409.3	410.8	412.2	413.7	415.2
5.6	416.7	418.1	419.6	421.1	422.6	424.1	425.6	427.1	428.6	430.1
5.7	431.6	433.2	434.7	436.2	437.7	439.2	440.8	442.3	443.8	445.4
5.8	446.9	448.5	450.0	451.6	453.1	454.7	456.2	457.8	459.3	460.9
5.9	462.5	464.1	465.6	467.2	468.8	470.4	472.0	473.6	475.2	476.8
6	478.4	480.0	481.6	483.2	484.8	486.4	488.0	489.7	491.3	492.9
6.1	494.5	496.2	497.8	499.5	501.1	502.7	504.4	506.0	507.7	509.4
6.2	511.0	512.7	514.4	516.0	517.7	519.4	521.1	522.7	524.4	526.1
6.3	527.8	529.5	531.2	532.9	534.6	536.3	538.0	539.8	541.5	543.2
6.4	544.9	546.6	548.4	550.1	551.8	553.6	555.3	557.1	558.8	

Discharge (cfs)										
Head (ft)	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09
3	126.0	126.8	127.6	128.3	129.1	129.9	130.7	131.5	132.3	133.1
3.1	133.9	134.7	135.5	136.3	137.1	137.9	138.7	139.5	140.3	141.2
3.2	142.0	142.8	143.6	144.5	145.3	146.1	147.0	147.8	148.7	149.5
3.3	150.3	151.2	152.0	152.9	153.8	154.6	155.5	156.3	157.2	158.1
3.4	159.0	159.8	160.7	161.6	162.5	163.4	164.3	165.1	166.0	166.9
3.5	167.8	168.7	169.6	170.5	171.5	172.4	173.3	174.2	175.1	176.0
3.6	177.0	177.9	178.8	179.8	180.7	181.6	182.6	183.5	184.5	185.4
3.7	186.4	187.3	188.3	189.2	190.2	191.2	192.1	193.1	194.1	195.0
3.8	196.0	197.0	198.0	199.0	199.9	200.9	201.9	202.9	203.9	204.9
3.9	205.9	206.9	207.9	209.0	210.0	211.0	212.0	213.0	214.1	215.1
4	216.1	217.1	218.2	219.2	220.3	221.3	222.4	223.4	224.5	225.5
4.1	226.6	227.6	228.7	229.8	230.8	231.9	233.0	234.0	235.1	236.2
4.2	237.3	238.4	239.5	240.6	241.6	242.7	243.8	245.0	246.1	247.2
4.3	248.3	249.4	250.5	251.6	252.8	253.9	255.0	256.1	257.3	258.4
4.4	259.5	260.7	261.8	263.0	264.1	265.3	266.4	267.6	268.8	269.9
4.5	271.1	272.2	273.4	274.6	275.8	277.0	278.1	279.3	280.5	281.7
4.6	282.9	284.1	285.3	286.5	287.7	288.9	290.1	291.3	292.5	293.8
4.7	295.0	296.2	297.4	298.7	299.9	301.1	302.4	303.6	304.9	306.1
4.8	307.4	308.6	309.9	311.1	312.4	313.7	314.9	316.2	317.5	318.7
4.9	320.0	321.3	322.6	323.9	325.2	326.5	327.7	329.0	330.3	331.7
5	333.0	334.3	335.6	336.9	338.2	339.5	340.9	342.2	343.5	344.8
5.1	346.2	347.5	348.9	350.2	351.6	352.9	354.3	355.6	357.0	358.3
5.2	359.7	361.1	362.4	363.8	365.2	366.6	367.9	369.3	370.7	372.1
5.3	373.5	374.9	376.3	377.7	379.1	380.5	381.9	383.3	384.8	386.2
5.4	387.6	389.0	390.4	391.9	393.3	394.8	396.2	397.6	399.1	400.5
5.5	402.0	403.4	404.9	406.4	407.8	409.3	410.8	412.2	413.7	415.2
5.6	416.7	418.1	419.6	421.1	422.6	424.1	425.6	427.1	428.6	430.1
5.7	431.6	433.2	434.7	436.2	437.7	439.2	440.8	442.3	443.8	445.4
5.8	446.9	448.5	450.0	451.6	453.1	454.7	456.2	457.8	459.3	460.9
5.9	462.5	464.1	465.6	467.2	468.8	470.4	472.0	473.6	475.2	476.8
6	478.4	480.0	481.6	483.2	484.8	486.4	488.0	489.7	491.3	492.9
6.1	494.5	496.2	497.8	499.5	501.1	502.7	504.4	506.0	507.7	509.4
6.2	511.0	512.7	514.4	516.0	517.7	519.4	521.1	522.7	524.4	526.1
6.3	527.8	529.5	531.2	532.9	534.6	536.3	538.0	539.8	541.5	543.2
6.4	544.9	546.6	548.4	550.1	551.8	553.6	555.3	557.1	558.8	560.6

Chart created using data provided in 6/7/2019 email from Jim Gregory



72-16896 Volume Calculations

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
5/2/2014	50.8	100.8	
5/3/2014	55.6	110.2	
5/4/2014	55.7	110.5	
5/5/2014	52.4	103.9	
5/6/2014	50.4	100.0	
5/7/2014	48.6	96.4	
5/8/2014	46.6	92.4	
5/9/2014	46.6	92.4	
5/10/2014	46.3	91.9	
5/11/2014	44.2	87.6	
5/12/2014	41.9	83.1	
5/13/2014	42.0	83.3	
5/14/2014	43.6	86.4	
5/15/2014	49.6	98.3	
5/16/2014	55.4	109.9	
5/17/2014	55.6	110.2	
5/18/2014	59.1	117.1	
5/19/2014	56.6	112.2	
5/20/2014	56.6	112.3	
5/21/2014	57.8	114.7	
5/22/2014	59.8	118.6	
5/23/2014	60.5	120.0	
5/24/2014	60.0	119.1	
5/25/2014	62.8	124.6	
5/26/2014	64.3	127.5	
5/27/2014	63.6	126.2	
5/28/2014	59.2	117.4	
5/29/2014	63.2	125.3	
5/30/2014	62.2	123.4	
5/31/2014	57.7	114.4	
6/1/2014	55.0	109.2	
6/2/2014	51.8	102.7	
6/3/2014	53.8	106.6	
6/4/2014	56.9	112.9	
6/5/2014	56.1	111.3	
6/6/2014	53.1	105.3	
6/7/2014	52.5	104.1	
6/8/2014	52.0	103.2	
6/9/2014	50.1	99.3	
6/10/2014	50.6	100.4	
6/11/2014	48.9	96.9	

Note: used daily mean flows to identify equivalent ac-ft/d, then summed 365 consecutive days to identify annual volume

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
6/12/2014	47.9	95.1	
6/13/2014	47.5	94.3	
6/14/2014	44.8	88.8	
6/15/2014	43.9	87.2	
6/16/2014	42.8	84.8	
6/17/2014	41.2	81.7	
6/18/2014	39.0	77.4	
6/19/2014	37.2	73.8	
6/20/2014	36.7	72.8	
6/21/2014	37.6	74.6	
6/22/2014	38.0	75.4	
6/23/2014	38.0	75.3	
6/24/2014	37.9	75.1	
6/25/2014	38.0	75.3	
6/26/2014	37.3	74.0	
6/27/2014	36.3	72.1	
6/28/2014	35.6	70.6	
6/29/2014	34.4	68.2	
6/30/2014	33.2	65.9	
7/1/2014	32.3	64.0	
7/2/2014	31.5	62.5	
7/3/2014	31.3	62.1	
7/4/2014	30.7	60.8	
7/5/2014	29.8	59.1	
7/6/2014	29.0	57.6	
7/7/2014	28.2	55.9	
7/8/2014	27.4	54.3	
7/9/2014	26.7	53.0	
7/10/2014	26.1	51.7	
7/11/2014	25.2	50.1	
7/12/2014	24.6	48.8	
7/13/2014	23.8	47.2	
7/14/2014	23.0	45.5	
7/15/2014	22.2	44.1	
7/16/2014	21.7	43.1	
7/17/2014	21.4	42.5	
7/18/2014	20.9	41.5	
7/19/2014	20.3	40.4	
7/20/2014	19.9	39.5	
7/21/2014	20.6	40.9	
7/22/2014	19.7	39.1	
7/23/2014	19.4	38.5	
7/24/2014	18.9	37.5	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
7/25/2014	18.7	37.1	
7/26/2014	18.3	36.3	
7/27/2014	17.8	35.4	
7/28/2014	17.5	34.8	
7/29/2014	17.7	35.0	
7/30/2014	17.6	34.8	
7/31/2014	17.6	34.9	
8/1/2014	16.9	33.4	
8/2/2014	16.8	33.4	
8/3/2014	16.6	32.9	
8/4/2014	16.7	33.1	
8/5/2014	16.7	33.1	
8/6/2014	16.0	31.7	
8/7/2014	16.1	32.0	
8/8/2014	15.8	31.3	
8/9/2014	15.3	30.3	
8/10/2014	14.7	29.2	
8/11/2014	14.2	28.1	
8/12/2014	14.5	28.7	
8/13/2014	16.6	32.9	
8/14/2014	17.6	34.9	
8/15/2014	15.1	29.9	
8/16/2014	14.0	27.8	
8/17/2014	13.2	26.2	
8/18/2014	12.6	24.9	
8/19/2014	12.3	24.5	
8/20/2014	13.7	27.2	
8/21/2014	14.9	29.6	
8/22/2014	15.2	30.2	
8/23/2014	16.5	32.7	
8/24/2014	14.6	29.0	
8/25/2014	13.8	27.3	
8/26/2014	14.3	28.3	
8/27/2014	12.7	25.2	
8/28/2014	11.8	23.4	
8/29/2014	11.3	22.4	
8/30/2014	11.9	23.6	
8/31/2014	11.9	23.6	
9/1/2014	11.1	22.1	
9/2/2014	10.7	21.2	
9/3/2014	10.3	20.5	
9/4/2014	10.2	20.1	
9/5/2014	10.0	19.8	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
9/6/2014	9.8	19.3	
9/7/2014	9.6	19.0	
9/8/2014	9.5	18.8	
9/9/2014	9.3	18.5	
9/10/2014	9.2	18.2	
9/11/2014	10.1	20.0	
9/12/2014	11.2	22.2	
9/13/2014	11.0	21.8	
9/14/2014	10.7	21.2	
9/15/2014	10.5	20.9	
9/16/2014	10.5	20.8	
9/17/2014	10.3	20.4	
9/18/2014	10.3	20.5	
9/19/2014	9.9	19.7	
9/20/2014	9.0	17.9	
9/21/2014	8.8	17.4	
9/22/2014	8.8	17.4	
9/23/2014	8.9	17.6	
9/24/2014	8.4	16.6	
9/25/2014	8.1	16.0	
9/26/2014	9.0	17.9	
9/27/2014	9.0	17.8	
9/28/2014	8.7	17.2	
9/29/2014	11.6	23.0	
9/30/2014	11.3	22.5	
10/1/2014	10.7	21.3	
10/2/2014	9.8	19.3	
10/3/2014	9.5	18.8	
10/4/2014	9.2	18.3	
10/5/2014	8.9	17.7	
10/6/2014	8.7	17.3	
10/7/2014	8.5	16.9	
10/8/2014	8.4	16.6	
10/9/2014	8.1	16.2	
10/10/2014	8.0	15.9	
10/11/2014	8.0	15.9	
10/12/2014	8.4	16.7	
10/13/2014	8.1	16.0	
10/14/2014	7.8	15.5	
10/15/2014	8.1	16.1	
10/16/2014	8.5	16.8	
10/17/2014	8.0	15.8	
10/18/2014	7.7	15.3	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
10/19/2014	7.6	15.0	
10/20/2014	7.4	14.7	
10/21/2014	9.9	19.7	
10/22/2014	10.2	20.1	
10/23/2014	10.9	21.6	
10/24/2014	14.4	28.5	
10/25/2014	13.2	26.1	
10/26/2014	13.9	27.5	
10/27/2014	13.0	25.8	
10/28/2014	12.1	24.1	
10/29/2014	12.3	24.3	
<i>*sensor removed</i>			
3/27/2015	26.8	53.1	
3/28/2015	31.4	62.3	
3/29/2015	34.0	67.4	
3/30/2015	34.6	68.6	
3/31/2015	36.5	72.4	
4/1/2015	36.6	72.6	
4/2/2015	34.3	67.9	
4/3/2015	32.0	63.5	
4/4/2015	30.2	59.8	
4/5/2015	28.9	57.3	
4/6/2015	27.2	53.9	
4/7/2015	25.6	50.9	
4/8/2015	24.8	49.1	
4/9/2015	23.6	46.9	
4/10/2015	22.9	45.5	
4/11/2015	23.6	46.7	
4/12/2015	23.2	46.0	
4/13/2015	22.9	45.5	
4/14/2015	24.3	48.2	
4/15/2015	23.3	46.1	
4/16/2015	22.8	45.3	
4/17/2015	24.1	47.8	
4/18/2015	26.9	53.3	
4/19/2015	29.9	59.2	
4/20/2015	32.2	63.8	
4/21/2015	35.1	69.6	
4/22/2015	37.7	74.7	
4/23/2015	39.7	78.8	
4/24/2015	40.4	80.1	
4/25/2015	38.3	76.0	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
4/26/2015	35.9	71.1	
4/27/2015	33.9	67.2	
4/28/2015	33.5	66.4	
4/29/2015	36.4	72.1	
4/30/2015	39.8	79.0	
5/1/2015	41.7	82.7	
5/2/2015	42.4	84.0	
5/3/2015	43.4	86.1	
5/4/2015	43.6	86.6	
5/5/2015	44.6	88.5	
5/6/2015	44.0	87.3	
5/7/2015	42.5	84.2	
5/8/2015	41.1	81.6	
5/9/2015	40.6	80.5	
5/10/2015	39.6	78.6	
5/11/2015	40.2	79.7	
5/12/2015	40.3	79.9	
5/13/2015	39.9	79.2	
5/14/2015	39.3	78.0	
5/15/2015	39.8	79.0	
5/16/2015	40.8	80.9	
5/17/2015	40.7	80.8	
5/18/2015	41.0	81.3	
5/19/2015	41.0	81.3	
5/20/2015	41.6	82.6	
5/21/2015	41.4	82.1	
5/22/2015	42.2	83.8	
5/23/2015	41.6	82.6	
5/24/2015	42.3	83.8	
5/25/2015	42.2	83.6	
5/26/2015	41.7	82.6	
5/27/2015	41.0	81.3	
5/28/2015	40.0	79.3	
5/29/2015	39.6	78.6	
5/30/2015	39.9	79.1	
5/31/2015	39.5	78.3	
6/1/2015	40.2	79.8	
6/2/2015	40.1	79.5	
6/3/2015	39.8	78.9	
6/4/2015	39.3	78.0	
6/5/2015	38.4	76.1	
6/6/2015	37.7	74.8	
6/7/2015	37.6	74.5	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
6/8/2015	37.1	73.6	
6/9/2015	36.8	72.9	
6/10/2015	37.0	73.4	
6/11/2015	36.5	72.3	
6/12/2015	34.3	68.1	
6/13/2015	32.6	64.7	
6/14/2015	31.3	62.0	
6/15/2015	29.8	59.1	
6/16/2015	28.7	56.9	
6/17/2015	27.9	55.3	
6/18/2015	26.9	53.4	
6/19/2015	26.2	52.0	
6/20/2015	25.3	50.2	
6/21/2015	24.7	48.9	
6/22/2015	23.9	47.4	
6/23/2015	23.2	45.9	
6/24/2015	22.3	44.3	
6/25/2015	21.8	43.2	
6/26/2015	21.1	41.8	
6/27/2015	20.5	40.7	
6/28/2015	20.1	39.8	
6/29/2015	19.6	38.9	
6/30/2015	19.0	37.6	
7/1/2015	18.5	36.6	
7/2/2015	18.0	35.7	
7/3/2015	17.5	34.8	
7/4/2015	17.2	34.1	
7/5/2015	16.9	33.5	
7/6/2015	16.9	33.6	
7/7/2015	16.9	33.5	
7/8/2015	16.5	32.8	
7/9/2015	16.5	32.8	
7/10/2015	19.0	37.7	
7/11/2015	18.3	36.3	
7/12/2015	17.6	34.8	
7/13/2015	16.8	33.3	
7/14/2015	16.3	32.3	
7/15/2015	16.4	32.5	
7/16/2015	15.7	31.1	
7/17/2015	14.8	29.4	
7/18/2015	14.6	29.0	
7/19/2015	14.5	28.8	
7/20/2015	13.8	27.3	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
7/21/2015	13.4	26.6	
7/22/2015	13.5	26.8	
7/23/2015	13.9	27.5	
7/24/2015	13.1	26.1	
7/25/2015	13.0	25.7	
7/26/2015	12.4	24.6	
7/27/2015	13.5	26.7	
7/28/2015	13.3	26.4	
7/29/2015	12.5	24.7	
7/30/2015	12.0	23.8	
7/31/2015	11.6	23.0	
8/1/2015	11.3	22.4	
8/2/2015	11.1	22.1	
8/3/2015	11.0	21.7	
8/4/2015	10.8	21.5	
8/5/2015	11.5	22.7	
8/6/2015	12.3	24.5	
8/7/2015	11.2	22.2	
8/8/2015	12.1	24.1	
8/9/2015	12.1	24.0	
8/10/2015	11.6	23.1	
8/11/2015	11.9	23.6	
8/12/2015	10.6	21.1	
8/13/2015	10.3	20.3	
8/14/2015	10.2	20.2	
8/15/2015	9.8	19.4	
8/16/2015	9.5	18.9	
8/17/2015	9.4	18.6	
8/18/2015	9.3	18.3	
8/19/2015	9.1	18.1	
8/20/2015	8.9	17.7	
8/21/2015	8.7	17.2	
8/22/2015	8.5	16.8	
8/23/2015	8.4	16.7	
8/24/2015	8.2	16.2	
8/25/2015	7.9	15.7	
8/26/2015	7.8	15.5	
8/27/2015	7.9	15.6	
8/28/2015	7.8	15.4	
8/29/2015	7.7	15.3	
8/30/2015	7.8	15.5	
8/31/2015	7.6	15.1	
9/1/2015	7.3	14.4	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
9/2/2015	6.9	13.8	
9/3/2015	6.8	13.5	
9/4/2015	11.6	23.0	
9/5/2015	12.5	24.8	
9/6/2015	10.5	20.9	
9/7/2015	9.7	19.2	
9/8/2015	9.1	18.1	
9/9/2015	8.7	17.2	
9/10/2015	8.3	16.4	
9/11/2015	7.9	15.6	
9/12/2015	7.5	14.9	
9/13/2015	7.1	14.2	
9/14/2015	7.0	13.9	
9/15/2015	11.6	23.0	
9/16/2015	13.1	25.9	
9/17/2015	12.9	25.6	
9/18/2015	13.2	26.1	
9/19/2015	11.8	23.3	
9/20/2015	11.0	21.8	
9/21/2015	10.4	20.7	
9/22/2015	10.0	19.8	
9/23/2015	9.3	18.5	
9/24/2015	9.1	18.0	
9/25/2015	8.9	17.6	
9/26/2015	8.4	16.7	
9/27/2015	8.0	15.9	
9/28/2015	7.8	15.6	
9/29/2015	7.8	15.4	
9/30/2015	7.6	15.1	
10/1/2015	7.9	15.6	
10/2/2015	7.9	15.8	
10/3/2015	7.7	15.3	
10/4/2015	7.4	14.7	
10/5/2015	7.2	14.2	
10/6/2015	7.0	13.8	
10/7/2015	6.8	13.4	
10/8/2015	6.6	13.1	
10/9/2015	6.4	12.6	
10/10/2015	6.1	12.1	
10/11/2015	5.7	11.3	
10/12/2015	5.7	11.3	
10/13/2015	5.6	11.0	
10/14/2015	5.5	11.0	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
10/15/2015	5.5	10.8	
10/16/2015	5.3	10.6	
10/17/2015	5.3	10.5	
10/18/2015	5.8	11.5	
10/19/2015	6.7	13.3	
10/20/2015	6.9	13.8	
10/21/2015	6.1	12.1	
10/22/2015	5.8	11.5	
10/23/2015	5.6	11.1	
10/24/2015	5.5	10.8	
10/25/2015	5.4	10.6	
10/26/2015	5.3	10.6	
10/27/2015	5.4	10.7	
10/28/2015	5.1	10.2	
10/29/2015	5.6	11.0	
10/30/2015	5.8	11.4	
10/31/2015	8.7	17.2	
11/1/2015	12.7	25.2	
11/2/2015	11.9	23.6	
11/3/2015	10.4	20.6	
11/4/2015	9.3	18.4	
11/5/2015	8.3	16.5	
11/6/2015	8.4	16.7	
11/7/2015	6.3	12.5	
11/8/2015	8.2	16.3	
11/9/2015	10.1	19.9	
11/10/2015	8.4	16.8	
11/11/2015	6.5	12.9	
11/12/2015	8.1	16.1	
11/13/2015	8.3	16.5	
11/14/2015	8.7	17.3	
11/15/2015	8.8	17.4	
11/16/2015	7.2	14.4	
11/17/2015	8.2	16.3	
11/18/2015	8.0	15.9	
11/19/2015	9.5	18.8	
11/20/2015	12.7	25.2	
11/21/2015	13.0	25.8	
11/22/2015	17.5	34.7	
11/23/2015	18.8	37.3	
11/24/2015	17.1	34.0	
11/25/2015	11.5	22.9	
11/26/2015	16.9	33.6	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
11/27/2015	25.7	50.9	
11/28/2015	30.2	59.9	
11/29/2015	32.8	65.1	
11/30/2015	35.6	70.5	
12/1/2015	32.7	64.9	
12/2/2015	30.7	60.9	
12/3/2015	24.7	48.9	
12/4/2015	20.8	41.2	
12/5/2015	20.9	41.5	
12/6/2015	21.0	41.7	
12/7/2015	23.2	46.0	
12/8/2015	30.2	59.8	
12/9/2015	29.5	58.6	
12/10/2015	25.2	50.0	
12/11/2015	26.8	53.1	
12/12/2015	24.4	48.4	
12/13/2015	21.5	42.7	
12/14/2015	23.8	47.3	
12/15/2015	22.7	45.0	
12/16/2015	17.8	35.3	
12/17/2015	20.6	40.9	
12/18/2015	28.4	56.4	
12/19/2015	34.2	67.9	
12/20/2015	31.7	62.9	
12/21/2015	30.2	59.9	
12/22/2015	29.8	59.1	
12/23/2015	27.5	54.5	
12/24/2015	33.7	66.9	
12/25/2015	29.3	58.2	
12/26/2015	28.1	55.7	
12/27/2015	29.5	58.5	
12/28/2015	35.9	71.2	
12/29/2015	35.4	70.2	
12/30/2015	34.7	68.8	
12/31/2015	33.3	66.0	
1/1/2016	29.3	58.1	
1/2/2016	34.1	67.7	
1/3/2016	37.7	74.9	
1/4/2016	37.4	74.2	
1/5/2016	35.4	70.2	
1/6/2016	33.3	66.0	
1/7/2016	31.6	62.7	
1/8/2016	29.8	59.1	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
1/9/2016	27.9	55.4	
1/10/2016	20.2	40.1	
1/11/2016	30.9	61.2	
1/12/2016	50.2	99.5	
1/13/2016	47.4	94.1	
1/14/2016	45.9	91.0	
1/15/2016	39.0	77.4	
1/16/2016	36.9	73.3	
1/17/2016	36.7	72.8	
1/18/2016	35.6	70.7	
1/19/2016	29.8	59.1	
1/20/2016	49.0	97.2	
1/21/2016	30.2	60.0	
1/22/2016	39.4	78.2	
1/23/2016	32.8	65.1	
1/24/2016	30.4	60.3	
1/25/2016	19.7	39.0	
1/26/2016	28.3	56.2	
1/27/2016	62.5	123.9	
1/28/2016	61.8	122.6	
1/29/2016	54.0	107.1	
1/30/2016	43.8	86.8	
1/31/2016	36.9	73.1	
2/1/2016	30.2	60.0	
2/2/2016	42.9	85.1	
2/3/2016	52.0	103.2	
2/4/2016	64.7	128.4	
2/5/2016	57.6	114.2	
2/6/2016	44.6	88.5	
2/7/2016	36.7	72.8	
2/8/2016	34.2	67.8	
2/9/2016	40.1	79.5	
2/10/2016	44.9	89.1	
2/11/2016	66.7	132.3	
2/12/2016	60.7	120.4	
2/13/2016	66.6	132.1	
2/14/2016	60.7	120.4	
2/15/2016	60.2	119.5	
2/16/2016	61.6	122.2	
2/17/2016	49.4	97.9	
2/18/2016	31.8	63.1	
2/19/2016	24.6	48.9	
2/20/2016	22.9	45.4	

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
2/21/2016	14.3	28.4	
2/22/2016	19.7	39.2	
2/23/2016	23.2	45.9	
2/24/2016	35.8	71.1	
2/25/2016	40.5	80.3	
2/26/2016	33.7	66.8	
2/27/2016	17.9	35.6	
2/28/2016	13.6	27.0	
2/29/2016	11.4	22.6	
3/1/2016	12.4	24.5	
3/2/2016	8.4	16.7	
3/3/2016	8.5	16.9	
3/4/2016	8.8	17.5	
3/5/2016	10.5	20.9	
3/6/2016	12.3	24.5	
3/7/2016	12.2	24.2	
3/8/2016	12.3	24.3	
3/9/2016	11.6	23.0	
3/10/2016	12.3	24.3	
3/11/2016	15.3	30.4	
3/12/2016	14.7	29.2	
3/13/2016	14.3	28.4	
3/14/2016	12.2	24.2	
3/15/2016	11.7	23.2	
3/16/2016	11.4	22.6	
3/17/2016	11.8	23.4	
3/18/2016	12.5	24.8	
3/19/2016	14.0	27.8	
3/20/2016	15.6	31.0	
3/21/2016	15.5	30.7	
3/22/2016	16.0	31.7	
3/23/2016	15.0	29.8	
3/24/2016	14.6	28.9	
3/25/2016	14.1	28.0	16663.2
3/26/2016	13.4	26.5	16636.6
3/27/2016	14.4	28.6	16602.9
3/28/2016	13.3	26.3	16561.8
3/29/2016	13.4	26.6	16519.7
3/30/2016	12.9	25.5	16472.9
3/31/2016	14.3	28.4	16428.7
4/1/2016	15.4	30.5	16391.3
4/2/2016	19.7	39.0	16366.8
4/3/2016	26.0	51.5	16358.4

	Daily Mean Flow cfs	Daily Vol ac-ft/d	Annual Vol ac-ft/yr
4/4/2016	30.3	60.1	16361.2
4/5/2016	28.0	55.5	16362.8
4/6/2016	27.4	54.3	16366.3
4/7/2016	31.3	62.0	16379.2
4/8/2016	37.9	75.3	16407.6
4/9/2016	43.3	85.9	16448.0
4/10/2016	47.7	94.6	16495.9
4/11/2016	49.6	98.3	16548.3
4/12/2016	51.5	102.2	16604.9
4/13/2016	53.4	105.9	16662.6
4/14/2016	49.2	97.6	16714.1
4/15/2016	44.6	88.4	16757.1
4/16/2016	41.0	81.3	16790.7
4/17/2016	39.9	79.1	16816.5
4/18/2016	41.8	82.9	16840.2
4/19/2016	45.0	89.3	16865.7
4/20/2016	49.5	98.2	16894.2
4/21/2016	52.2	103.5	16923.0
4/22/2016	53.9	107.0	16951.2
4/23/2016	54.6	108.4	16979.5
4/24/2016	51.3	101.8	17005.3
4/25/2016	48.5	96.2	17030.5
4/26/2016	46.2	91.7	17055.0
4/27/2016	44.3	87.9	17076.6
4/28/2016	43.7	86.6	17091.1
4/29/2016	42.5	84.3	17096.4
4/30/2016	41.3	81.9	17095.6
5/1/2016	40.7	80.7	17092.2
5/2/2016	42.5	84.3	17090.4
5/3/2016	45.5	90.2	17094.1
5/4/2016	49.5	98.2	17103.8
5/5/2016	52.4	104.0	17120.6
5/6/2016	55.6	110.4	17146.8
5/7/2016	58.0	115.1	17180.3
5/8/2016	58.4	115.9	17215.7
5/9/2016	61.5	121.9	17259.0
5/10/2016	58.0	115.1	17294.4
5/11/2016	53.0	105.1	17319.7

*maximum 365 day volume

Additional information (raw data) related to
Field Exam:

Yankee Fork Stage Data from Bureau
of Reclamation (Excel spreadsheet)

See scanned documents in 72-16896