Sum of RESULT	SITE_NAME
SAMPLE_DATE	ARAVAIPA CREEK - AT EAST TRAIL HEAD
11/25/1991	
1/29/1992	
4/10/1992	
4/22/1992	
5/9/1992	
8/5/1992	
11/13/1992	
3/15/1993	
4/2/1993	
4/13/1993	
5/26/1993	
8/17/1993	
11/23/1993	
4/12/1994	
4/13/1994	
4/28/1997	
5/6/1997	
5/12/1998	
5/13/1998	15.3
5/14/1998	
11/7/1999	
12/13/1999	
2/28/2000	
3/13/2000	
4/11/2000	
5/19/2000	
5/23/2000	26.94
5/24/2000	
8/21/2000	
9/26/2000	
12/4/2000	
4/18/2001	
12/13/2001	
5/15/2002	
11/15/2002	
1/14/2003	
4/1/2003	
5/20/2003	
8/16/2004	
11/9/2004	
3/7/2005	
4/6/2005	
7/16/2008	
7/24/2008	
8/20/2008	
12/15/2008	
12/17/2008	
2/11/2009	
3/26/2009	
5/14/2009	
6/24/2009	

8/18/2010	
7/26/2011	
8/9/2011	
12/5/2011	
2/6/2012	
4/2/2012	
8/31/2012	
12/17/2012	

ARAVAIPA CREEK - AT HELLS HALF ACRE CANYON	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
20.7	
18.8	
19.4	
20.1	
10.07	
14.7	
21.6	
29.97	
12.7	
17.1	
10.32	
18.3	
	47.18
	36.2
23.64	
10.85	
	18.36
9.36	
26.07	

39.2
32.2
25.23
7.81
10.59
13.31

ARAVAIPA CREEK - AT WOODS RANCH	ARAVAIPA CREEK - BELOW PARSONS CANYON
9.5	
12	
	16.2
18	
23.5	
9.5	
13	
	17.6
20.5	
21.5	
12	
	15.7
	21.5
	21.84
17.23	
	18.8
	19.3
19.24	
	18
	18.3
11.1	
9.27	
12.96	
20.2	
26.9	
13.2	
16.2	
14.3	

ARAVAIPA CREEK - FIVE MILES ABOVE SAN PEDRO RIVER	ARAVAIPA CREEK - NEAR SPRINGS
	19.2
22.81	

ARAVAIPA CREEK -AT NATURE CONSERVANCY NEAR KLONDYKE

17.65

15.97
17.11

22.5
17.5

LATITUDE	LONGITUI	DEQ_SITE	SITE_ID	SITE_NAME
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.87556	-110.389	100209	SPARA023.24	ARAVAIPA CREEK - NEAR SPRINGS
32.89778	-110.441	100210	SPARA019.41	ARAVAIPA CREEK - AT EAST TRAIL HEAD
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.84667	-110.637	100213	SPARA004.40	ARAVAIPA CREEK - FIVE MILES ABOVE SAN F
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89778	-110.441	100210	SPARA019.41	ARAVAIPA CREEK - AT EAST TRAIL HEAD
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.90619	-110.466	100211	SPARA017.25	ARAVAIPA CREEK - BELOW PARSONS CANYC
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.89556	-110.568	100212	SPARA010.19	ARAVAIPA CREEK - AT WOODS RANCH
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.87922	-110.394	106882	SPARA026.35	ARAVAIPA CREEK -AT NATURE CONSERVAN(
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE

32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.87922	-110.394	106882	SPARA026.35	ARAVAIPA CREEK -AT NATURE CONSERVAN(
32.87922	-110.394	106882	SPARA026.35	ARAVAIPA CREEK -AT NATURE CONSERVAN(
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
32.83944	-110.711	105601	SPARA000.28	ARAVAIPA CREEK - AT HIGHWAY 77 BRIDGE
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.91102	-110.55	100716	SPARA013.78	ARAVAIPA CREEK - AT HELLS HALF ACRE CA
32.87922	-110.394	106882	SPARA026.35	ARAVAIPA CREEK -AT NATURE CONSERVAN(
32.87922	-110.394	106882	SPARA026.35	ARAVAIPA CREEK -AT NATURE CONSERVAN(

SW_BASIC

SAMPLE_DATE	SAMPLE_T	REPORTIN	SAMPLER	COLLECTI	SAMPLE_I	ANALYSIS_TYPE
11/25/1991	1002	ADEQ	LLL	ADEQ	W	TOTAL
1/29/1992	1217	ADEQ	LLL	ADEQ	W	TOTAL
4/10/1992	1502	ADEQ	PHS	ADEQ	W	TOTAL
4/22/1992	1102	ADEQ	PHS	ADEQ	W	TOTAL
5/9/1992	0942	ADEQ	LLL	ADEQ	W	TOTAL
8/5/1992	0947	ADEQ	LLL	ADEQ	W	TOTAL
11/13/1992	0932	ADEQ	LLL	ADEQ	W	TOTAL
3/15/1993	1142	ADEQ	LLL	ADEQ	W	TOTAL
4/2/1993	1202	ADEQ	PHS	ADEQ	W	TOTAL
4/13/1993	1602	ADEQ	PHS	ADEQ	W	TOTAL
5/26/1993	1157	ADEQ	LLL	ADEQ	W	TOTAL
8/17/1993	1007	ADEQ	LLL	ADEQ	W	TOTAL
11/23/1993	1047	ADEQ	LLL	ADEQ	W	TOTAL
4/12/1994	1002	ADEQ	PHS	ADEQ	W	TOTAL
4/13/1994	1452	ADEQ	PHS	ADEQ	W	TOTAL
4/28/1997	1532	ADEQ	PHS	ADEQ	W	TOTAL
5/6/1997	1452	ADEQ	PHS	ADEQ	W	TOTAL
5/12/1998	1222	ADEQ	LLL	ADEQ	W	TOTAL
5/13/1998	1302	ADEQ	LLL	ADEQ	W	TOTAL
5/13/1998	0817	ADEQ	LLL	ADEQ	W	TOTAL
5/14/1998	1017	ADEQ	LLL	ADEQ	W	TOTAL
5/14/1998	1352	ADEQ	LLL	ADEQ	W	TOTAL
11/7/1999	1417	ADEQ	RSW	ADEQ	W	TOTAL
12/13/1999	1447	ADEQ	KWP	ADEQ	W	TOTAL
2/28/2000	1532	ADEQ	KWP	ADEQ	W	TOTAL
3/13/2000	1502	ADEQ	RSW	ADEQ	W	TOTAL
4/11/2000	1602	ADEQ	KWP	ADEQ	W	TOTAL
5/19/2000	1001	ADEQ	LLL	ADEQ	W	TOTAL
5/23/2000	1401	ADEQ	LLL	ADEQ	W	TOTAL
5/24/2000	0947	ADEQ	RSW	ADEQ	W	TOTAL
8/21/2000	1532	ADEQ	KWP	ADEQ	W	TOTAL
9/26/2000	1002	ADEQ	RSW	ADEQ	W	TOTAL
12/4/2000	1517	ADEQ	KWP	ADEQ	W	TOTAL
4/18/2001	1017	ADEQ	KWP	ADEQ	W	TOTAL
12/13/2001	1602	ADEQ	KWP	ADEQ	W	TOTAL
5/15/2002	1002	ADEQ	KWP	ADEQ	W	TOTAL
11/15/2002	1002	ADEQ	KWP	ADEQ	W	TOTAL
1/14/2003	0952	ADEQ	KWP	ADEQ	W	TOTAL
4/1/2003	0917	ADEQ	KWP	ADEQ	W	TOTAL
5/20/2003	1047	ADEQ	KWP	ADEQ	W	TOTAL
8/16/2004	1430	ADEQ	DM4	ADEQ	W	TOTAL
11/9/2004	1030	ADEQ	DM4	ADEQ	W	TOTAL
3/7/2005	1515	ADEQ	DM4	ADEQ	W	TOTAL
4/6/2005	1115	ADEQ	RSW	ADEQ	W	TOTAL
7/16/2008	0845	ADEQ	CB9	ADEQ	W	TOTAL
7/16/2008	0845	ADEQ	CB9	ADEQ	W	TOTAL
7/24/2008	1415	ADEQ	CB9	ADEQ	W	TOTAL
8/20/2008	0900	ADEQ	MKS	ADEQ	W	TOTAL
12/15/2008	1200	ADEQ	MKS	ADEQ	W	TOTAL
12/15/2008	1300	ADEQ	LWJ	ADEQ	W	TOTAL
12/17/2008	1330	ADEQ	CB9	ADEQ	W	TOTAL

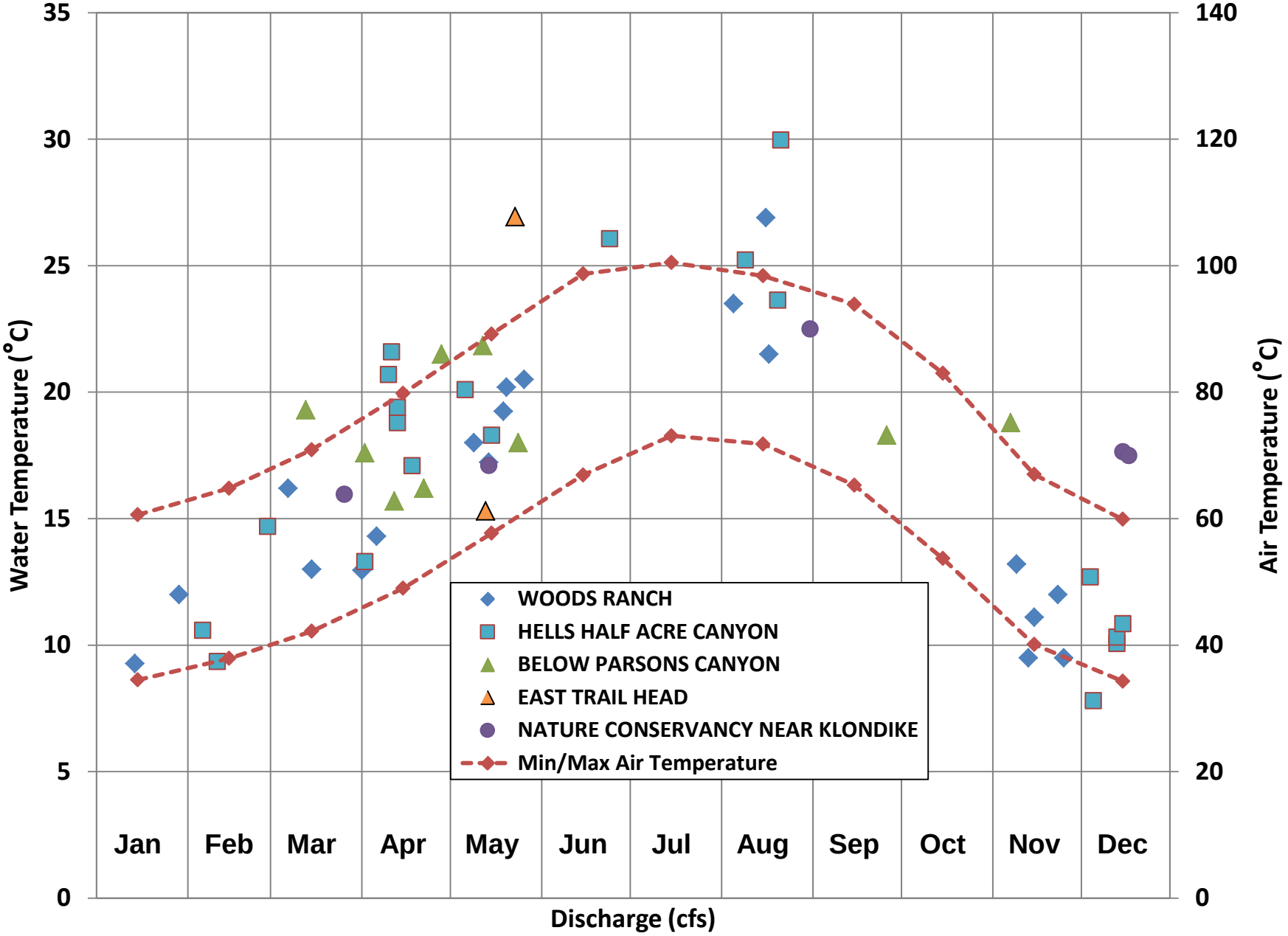
2/11/2009	1200	ADEQ	MKS	ADEQ	W	TOTAL
3/26/2009	0830	ADEQ	LWJ	ADEQ	W	TOTAL
5/14/2009	0700	ADEQ	LWJ	ADEQ	W	TOTAL
6/24/2009	0945	ADEQ	MKS	ADEQ	W	TOTAL
8/18/2010	1120	ADEQ	DM4	ADEQ	W	TOTAL
7/26/2011	1035	ADEQ	DM4	ADEQ	W	TOTAL
8/9/2011	0915	ADEQ	JDJ	ADEQ	W	TOTAL
12/5/2011	1230	ADEQ	JDJ	ADEQ	W	TOTAL
2/6/2012	1200	ADEQ	JDJ	ADEQ	W	TOTAL
4/2/2012	1000	ADEQ	JDJ	ADEQ	W	TOTAL
8/31/2012	1030	ADEQ	PHS	ADEQ	W	TOTAL
12/17/2012	1145	ADEQ	PHS	ADEQ	W	TOTAL

SW_BASIC

CHEMICAL_NAME	STORET_CODE	RESULT	UNIT
TEMPERATURE	00010	9.5	DEG C
TEMPERATURE	00010	12.0	DEG C
TEMPERATURE	00010	20.7	DEG C
TEMPERATURE	00010	16.2	DEG C
TEMPERATURE	00010	18.0	DEG C
TEMPERATURE	00010	23.5	DEG C
TEMPERATURE	00010	9.5	DEG C
TEMPERATURE	00010	13.0	DEG C
TEMPERATURE	00010	17.6	DEG C
TEMPERATURE	00010	18.8	DEG C
TEMPERATURE	00010	20.5	DEG C
TEMPERATURE	00010	21.5	DEG C
TEMPERATURE	00010	12.0	DEG C
TEMPERATURE	00010	15.7	DEG C
TEMPERATURE	00010	19.4	DEG C
TEMPERATURE	00010	21.5	DEG C
TEMPERATURE	00010	20.1	DEG C
TEMPERATURE	00010	21.8	DEG C
TEMPERATURE	00010	19.2	DEG C
TEMPERATURE	00010	15.3	DEG C
TEMPERATURE	00010	17.2	DEG C
TEMPERATURE	00010	22.8	DEG C
TEMPERATURE	00010	18.8	DEG C
TEMPERATURE	00010	10.1	DEG C
TEMPERATURE	00010	14.7	DEG C
TEMPERATURE	00010	19.3	DEG C
TEMPERATURE	00010	21.6	DEG C
TEMPERATURE	00010	19.2	DEG C
TEMPERATURE	00010	26.9	DEG C
TEMPERATURE	00010	18.0	DEG C
TEMPERATURE	00010	30.0	DEG C
TEMPERATURE	00010	18.3	DEG C
TEMPERATURE	00010	12.7	DEG C
TEMPERATURE	00010	17.1	DEG C
TEMPERATURE	00010	10.3	DEG C
TEMPERATURE	00010	18.3	DEG C
TEMPERATURE	00010	11.1	DEG C
TEMPERATURE	00010	9.3	DEG C
TEMPERATURE	00010	13.0	DEG C
TEMPERATURE	00010	20.2	DEG C
TEMPERATURE	00010	26.9	DEG C
TEMPERATURE	00010	13.2	DEG C
TEMPERATURE	00010	16.2	DEG C
TEMPERATURE	00010	14.3	DEG C
TEMPERATURE	00010	26.3	DEG C
TEMPERATURE	00010	20.9	DEG C
TEMPERATURE	00010	36.2	DEG C
TEMPERATURE	00010	23.6	DEG C
TEMPERATURE	00010	10.9	DEG C
TEMPERATURE	00010	17.7	DEG C
TEMPERATURE	00010	18.4	DEG C

TEMPERATURE	00010	9.4	DEG C
TEMPERATURE	00010	16.0	DEG C
TEMPERATURE	00010	17.1	DEG C
TEMPERATURE	00010	26.1	DEG C
TEMPERATURE	00010	39.2	DEG C
TEMPERATURE	00010	32.2	DEG C
TEMPERATURE	00010	25.2	DEG C
TEMPERATURE	00010	7.8	DEG C
TEMPERATURE	00010	10.6	DEG C
TEMPERATURE	00010	13.3	DEG C
TEMPERATURE	00010	22.5	DEG C
TEMPERATURE	00010	17.5	DEG C

SRP17206


35
30
25
20
15
10
5
0
Water Temperature (°C)
140
120
100
80
60
40
20
0
Air Temperature (°C)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Discharge (cfs)
WOODS RANCH
HELLS HALF ACRE CANYON
BELOW PARSONS CANYON
EAST TRAIL HEAD
NATURE CONSERVANCY NEAR KLONDIKE
Min/Max Air Temperature

SRP17207

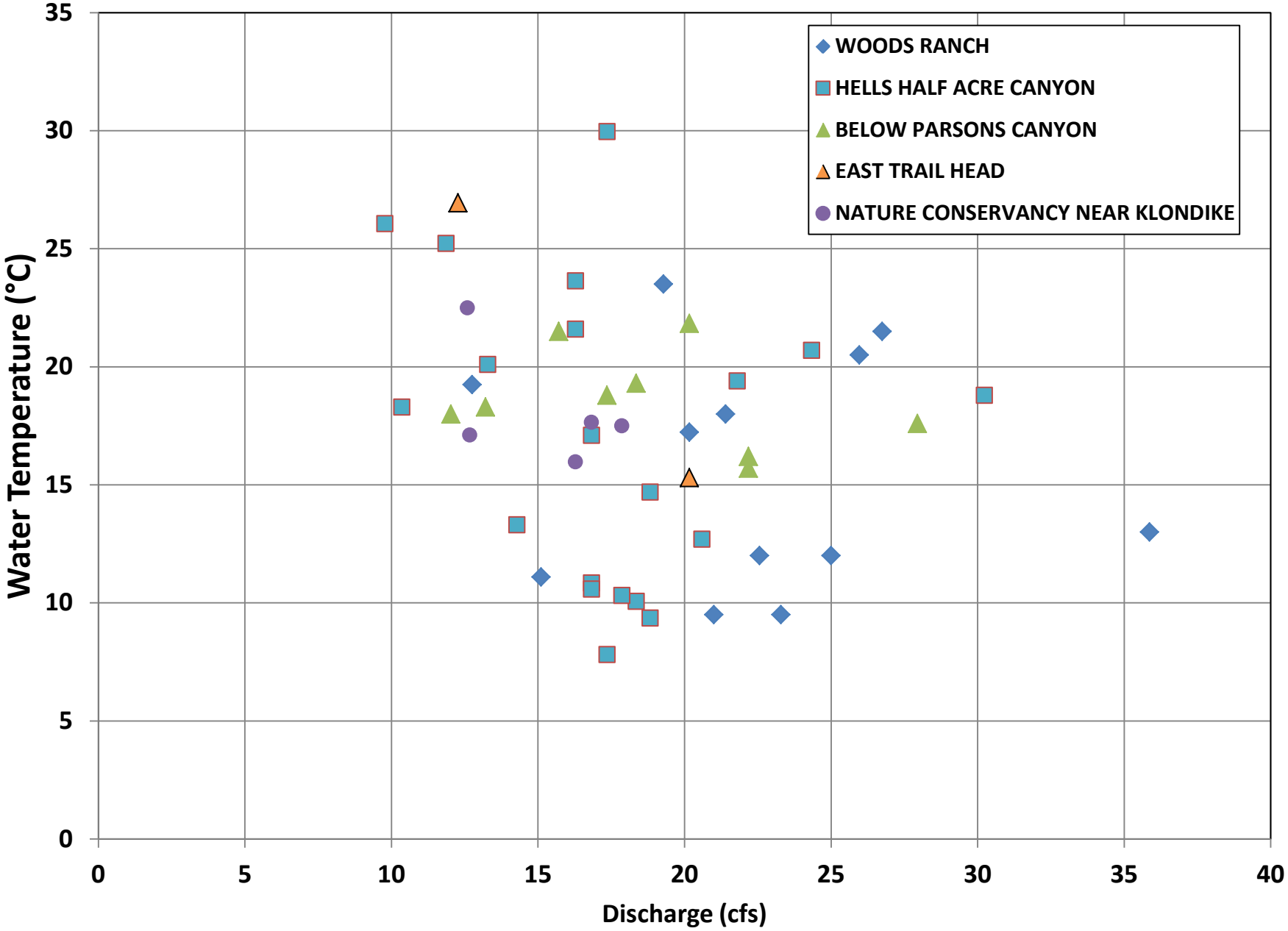

WOODS RANCH
HELLS HALF ACRE CANYON
BELOW PARSONS CANYON
EAST TRAIL HEAD
NATURE CONSERVANCY NEAR KLONDIKE
Water Temperature (°C)
Discharge (cfs)
0
5
10
15
20
25
30
35
40

Table 3. Available water temperature measurements (°C) in Aravaipa Creek from Arizona Department of Environm

Sample Date	HIGHWAY 77 BRIDGE	FIVE MILES ABOVE SAN PEDRO RIVER	WOODS RANCH	HELLS HALF ACRE CANYON	BELOW PARSONS CANYON	EAST TRAIL HEAD	NATURE CONSERVANCY NEAR KLONDIKE
Miles upstream from Mouth	0.4	5	12.17	14	20.9	22.8	23.9
25-Nov-91			9.5				
29-Jan-92			12				
10-Apr-92				20.7			
22-Apr-92					16.2		
9-May-92			18				
5-Aug-92			23.5				
13-Nov-92			9.5				
15-Mar-93			13				
2-Apr-93					17.6		
13-Apr-93				18.8			
26-May-93			20.5				
17-Aug-93			21.5				
23-Nov-93			12				
12-Apr-94					15.7		
13-Apr-94				19.4			
28-Apr-97					21.5		
6-May-97				20.1			
12-May-98					21.84		
13-May-98						15.3	
14-May-98		22.81	17.23				
7-Nov-99					18.8		
13-Dec-99				10.07			
28-Feb-00				14.7			
13-Mar-00					19.3		
11-Apr-00				21.6			
19-May-00			19.24				
23-May-00						26.94	
24-May-00					18		
21-Aug-00				29.97			
26-Sep-00					18.3		
4-Dec-00				12.7			
18-Apr-01				17.1			
13-Dec-01				10.32			
15-May-02				18.3			
15-Nov-02			11.1				
14-Jan-03			9.27				
1-Apr-03			12.96				
20-May-03			20.2				
16-Aug-04			26.9				
9-Nov-04			13.2				
7-Mar-05			16.2				
6-Apr-05			14.3				
16-Jul-08	47.18						

24-Jul-08	36.2						
20-Aug-08				23.64			
15-Dec-08				10.85			17.65
17-Dec-08	18.36						
11-Feb-09				9.36			
26-Mar-09							15.97
14-May-09							17.11
24-Jun-09				26.07			
18-Aug-10	39.2						
26-Jul-11	32.2						
9-Aug-11				25.23			
5-Dec-11				7.81			
6-Feb-12				10.59			
2-Apr-12				13.31			
31-Aug-12							22.5
17-Dec-12							17.5
	5	1	19	20	9	2	5

ıental Qualit Discharge (cfs) 12/31/2012

NEAR SPRINGS	USGS Mammoth Gage	East ACWA Boundary	Day of Year				
27.5							
	23	21	25-Nov		2	1-Feb	0
	27	23	29-Jan		2	1-Feb	35
	32	24	10-Apr				
	26	22	22-Apr		3	1-Mar	0
	24	21	9-May		3	1-Mar	35
	19	19	5-Aug				
	29	23	13-Nov		4	1-Apr	0
	70	36	15-Mar		4	1-Apr	35
	66	28	2-Apr				
	52	30	13-Apr		5	1-May	0
	37	26	26-May		5	1-May	35
	29	27	17-Aug				
	34	25	23-Nov		6	1-Jun	0
	26	22	12-Apr		6	1-Jun	35
	25	22	13-Apr				
	12	16	28-Apr		7	1-Jul	0
	8.3	13	6-May		7	1-Jul	35
	21	20	12-May				
19.2	21	20	13-May		8	1-Aug	0
	21	20	14-May		8	1-Aug	35
	15	17	7-Nov				
	17	18	13-Dec		9	1-Sep	0
	18	19	28-Feb		9	1-Sep	35
	17	18	13-Mar				
	13	16	11-Apr		10	1-Oct	0
	7.6	13	19-May		10	1-Oct	35
	7	12	23-May				
	6.7	12	24-May		11	1-Nov	0
	15	17	21-Aug		11	1-Nov	35
	8.2	13	26-Sep				
	22	21	4-Dec		12	1-Dec	0
	14	17	18-Apr		12	1-Dec	35
	16	18	13-Dec				
	4.4	10	15-May				
	11	15	15-Nov				
			14-Jan	Gage not operating			
			1-Apr	Gage not operating			
			20-May	Gage not operating			
			16-Aug	Gage not operating			
			9-Nov	Gage not operating			
			7-Mar	Gage not operating			
			6-Apr	Gage not operating			
	34	21.63	16-Jul				

	148	55	24-Jul
	13	16	20-Aug
	14	17	15-Dec
	12	16	17-Dec
	18	19	11-Feb
	13	16	26-Mar
	7.5	13	14-May
	2.6	10	24-Jun
	24	21	18-Aug
	25	22	26-Jul
	6.5	12	9-Aug
	15	17	5-Dec
	14	17	6-Feb
	9.7	14	2-Apr
	7.4	13	31-Aug
	16	18	17-Dec

Plot Labels

1	Jan	15-Jan	1
2	Feb	15-Feb	1
3	Mar	15-Mar	1
4	Apr	15-Apr	1
5	May	15-May	1
6	Jun	15-Jun	1
7	Jul	15-Jul	1
8	Aug	15-Aug	1
9	Sep	15-Sep	1
10	Oct	15-Oct	1
11	Nov	15-Nov	1
12	Dec	15-Dec	1

Label	Waypoint	Rivermile	Elevation
Hwy 77 Bri	HIGHWAY	0.4	500.0
USGS Gag	USGS 094	5.7	500.0
Woods Rar	Woods Rar	12.2	500.0
Hells Half /	Hells HalfA	14.0	500.0
Javalina Ca	JavalinaCa	15.4	500.0
Horse Cam	HorseCam	16.9	500.0
Booger Ca	Booger Ca	18.4	500.0
Paisano Ca	Paisano Ca	19.0	500.0
Deer Creek	Deer Creek	20.3	500.0
Parsons Ca	Parsons Ca	20.9	500.0
Turkey Cre	Turkey Cre	22.8	500.0
Martinez C	Martinez C	25.2	820.0
Maroga Ca	Maroga Ca	25.9	820.0
School Hou	School Hou	27.2	820.0
Stowe Gulc	Stowe Gulc	29.0	820.0
Black Cany	Black Cany	52.4	820.0

West ACW	13.0
East ACW/	22.8

Miles upstream from Mouth

Label	Waypoint	Rivermile	Elevation
Hwy 77 Bri	HIGHWAY	0.4	
USGS Gag	USGS 094	5.7	
Woods Rai	Woods Rai	12.2	
Hells Half /	Hells HalfA	14.0	
Javalina Ca	JavalinaCa	15.4	
Horse Cam	HorseCam	16.9	
Booger Ca	Booger Ca	18.4	
Paisano Ca	Paisano Ca	19.0	
Deer Creek	Deer Creek	20.3	
Parsons Ca	Parsons Ca	20.9	
Turkey Cre	Turkey Cre	22.8	
Martinez C	Martinez C	25.2	
Maroga Ca	Maroga Ca	25.9	
School Hou	School Hou	27.2	
Stowe Gulc	Stowe Gulc	29.0	
Laurel Canyon		30.7	
Klondyke Wash		32.0	
Buford Canyon		35.5	
Oak Creek		41.0	
Sheep Wash		45.2	
Black Cany	Black Cany	52.4	

Sample Date		
25-Nov-91	25-Nov	21
29-Jan-92	29-Jan	23
10-Apr-92	10-Apr	24
22-Apr-92	22-Apr	22
9-May-92	9-May	21
5-Aug-92	5-Aug	19
13-Nov-92	13-Nov	23
15-Mar-93	15-Mar	36
2-Apr-93	2-Apr	28
13-Apr-93	13-Apr	30
26-May-93	26-May	26
17-Aug-93	17-Aug	27
23-Nov-93	23-Nov	25
12-Apr-94	12-Apr	22
13-Apr-94	13-Apr	22
28-Apr-97	28-Apr	16
6-May-97	6-May	13
12-May-98	12-May	20
13-May-98	13-May	20
14-May-98	14-May	20
7-Nov-99	7-Nov	17
13-Dec-99	13-Dec	18
28-Feb-00	28-Feb	19
13-Mar-00	13-Mar	18
11-Apr-00	11-Apr	16
19-May-00	19-May	13
23-May-00	23-May	12
24-May-00	24-May	12
21-Aug-00	21-Aug	17
26-Sep-00	26-Sep	13
4-Dec-00	4-Dec	21
18-Apr-01	18-Apr	17
13-Dec-01	13-Dec	18
15-May-02	15-May	10
15-Nov-02	15-Nov	15
14-Jan-03	14-Jan	
1-Apr-03	1-Apr	
20-May-03	20-May	
16-Aug-04	16-Aug	
9-Nov-04	9-Nov	
7-Mar-05	7-Mar	
6-Apr-05	6-Apr	
16-Jul-08	16-Jul	21.63

24-Jul-08	24-Jul	55
20-Aug-08	20-Aug	16
15-Dec-08	15-Dec	17
17-Dec-08	17-Dec	16
11-Feb-09	11-Feb	19
26-Mar-09	26-Mar	16
14-May-09	14-May	13
24-Jun-09	24-Jun	10
18-Aug-10	18-Aug	21
26-Jul-11	26-Jul	22
9-Aug-11	9-Aug	12
5-Dec-11	5-Dec	17
6-Feb-12	6-Feb	17
2-Apr-12	2-Apr	14
31-Aug-12	31-Aug	13
17-Dec-12	17-Dec	18

12.17 14 20.9 22.8 23.9

WOODS RANCH	HELLS HALF ACRE CANYON	BELOW PARSONS CANYON	EAST TRAIL HEAD	NATURE CONSERVANCY NEAR KLONDIKE
9.5				
12				
	20.7			
		16.2		
18				
23.5				
9.5				
13				
		17.6		
	18.8			
20.5				
21.5				
12				
		15.7		
	19.4			
		21.5		
	20.1			
		21.84		
			15.3	
17.23				
		18.8		
	10.07			
	14.7			
		19.3		
	21.6			
19.24				
			26.94	
		18		
	29.97			
		18.3		
	12.7			
	17.1			
	10.32			
	18.3			
11.1				
9.27				
12.96				
20.2				
26.9				
13.2				
16.2				
14.3				

	23.64			
	10.85			17.65
	9.36			
				15.97
				17.11
	26.07			
	25.23			
	7.81			
	10.59			
	13.31			
				22.5
				17.5

Q E Boundary	WOODS RANCH	HELLS HALF ACRE CANYON	BELOW PARSONS CANYON	EAST TRAIL HEAD	NATURE CONSERVANCY NEAR KLONDIKE
21	9.5				
23	12				
24		20.7			
22			16.2		
21	18				
19	23.5				
23	9.5				
36	13				
28			17.6		
30		18.8			
26	20.5				
27	21.5				
25	12				
22			15.7		
22		19.4			
16			21.5		
13		20.1			
20			21.84		
20				15.3	
20	17.23				
17			18.8		
18		10.07			
19		14.7			
18			19.3		
16		21.6			
13	19.24				
12				26.94	
12			18		
17		29.97			
13			18.3		
21		12.7			
17		17.1			
18		10.32			
10		18.3			
15	11.1				
21.63					
55					
16		23.64			
17		10.85			17.65
16					
19		9.36			
16					15.97
13					17.11
10		26.07			
21					
22					
12		25.23			

Q E Boundary	Temp C
21	9.5
23	12
21	18
19	23.5
23	9.5
36	13
26	20.5
27	21.5
25	12
20	17.23
13	19.24
15	11.1
24	20.7
30	18.8
22	19.4
13	20.1
18	10.07
19	14.7
16	21.6
17	29.97
21	12.7
17	17.1
18	10.32
10	18.3
16	23.64
17	10.85
19	9.36
10	26.07
12	25.23
17	7.81
17	10.59
14	13.31
22	16.2
28	17.6
22	15.7
16	21.5
20	21.84
17	18.8
18	19.3
12	18
13	18.3
20	15.3
12	26.94
17	17.65
16	15.97
13	17.11
13	22.5

17		7.81			
17		10.59			
14		13.31			
13					22.5
18					17.5

18	17.5

XLSTAT 2013.3.01 - Correlation tests - on 10/10/2013 at 4:12:56 PM
Observations/variables table: Workbook = Aravaipa Cr - water temps.xlsb / Sheet = Sheet3 / Range = Sheet3!H
Type of correlation: Kendall

Summary statistics

Summary statistics:

Variable	Observation	with missing	without missi	Minimum	Maximum	Mean	Std. deviation
Q E Bound	48	0	48	9.773	35.870	18.646	5.311
Temp C	48	0	48	7.810	29.970	17.248	5.161

Correlation matrix (Kendall):

Variables	Q E Boundar	Temp C
Q E Bound	**1**	-0.198
Temp C	-0.198	**1**

Values in bold are different from 0 with a significance level alpha=0.05

p-values:

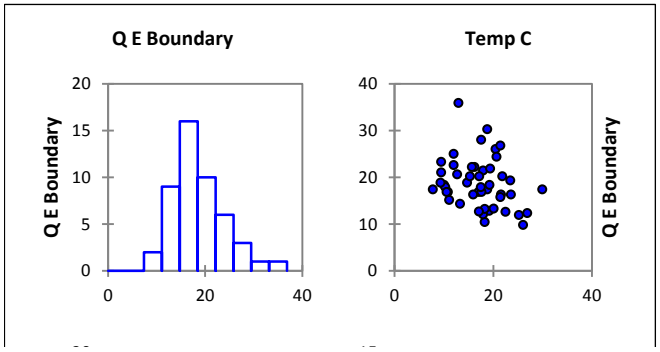
Variables	Q E Boundar	Temp C
Q E Bound	**0**	0.050
Temp C	0.050	**0**

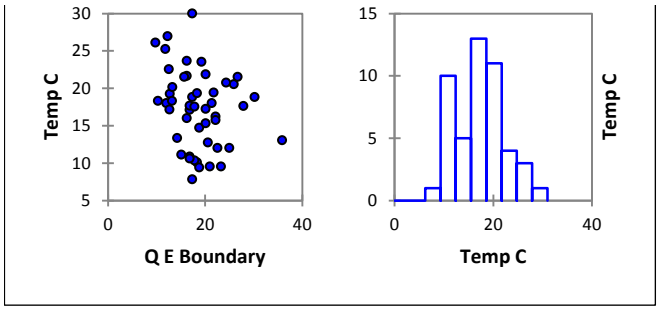
Values in bold are different from 0 with a significance level alpha=0.05

Coefficients of determination (Kendall):

Variables	Q E Boundar	Temp C
Q E Bound	**1**	0.039
Temp C	0.039	**1**

Scatter plots:




30
25
20
15
10
5
Temp C
0
20
40
Q E Boundary
15
10
5
0
Temp C
0
20
40
Temp C

XLSTAT 2013.3.01 - Linear regression - on 10/10/2013 at 4:14:26 PM
Y / Quantitative: Workbook = Aravaipa Cr - water temps.xlsb / Sheet = Sheet3 / Range = Sheet3!$I$1:$I$49 / 48 rov
X / Quantitative: Workbook = Aravaipa Cr - water temps.xlsb / Sheet = Sheet3 / Range = Sheet3!$H$1:$H$49 / 48 r
Confidence interval (%): 90
Tolerance: 0.0001

Summary statistics

Summary statistics:

Variable	Observation	with missing	ithout missi	Minimum	Maximum	Mean	Std. deviation
Temp C	48	0	48	7.810	29.970	17.248	5.161
Q E Bound	48	0	48	9.773	35.870	18.646	5.311

Correlation matrix:

Variables	Q E Bounda	Temp C
Q E Bound	**1.000**	-0.255
Temp C	-0.255	**1.000**

Regression of variable Temp C:

Goodness of fit statistics:

Observatio	48.000
Sum of wei	48.000
DF	46.000
R^2	0.065
Adjusted R	0.045
MSE	25.436
RMSE	5.043
MAPE	27.282
DW	1.862
Cp	2.000
AIC	157.292
SBC	161.035
PC	1.016

Analysis of variance:

Source	DF	um of squar	lean square	F	Pr > F
Model	1	81.668	81.668	3.211	0.080
Error	46	1170.035	25.436		
Corrected	47	1251.703			

Computed against model Y=Mean(Y)

Model parameters:

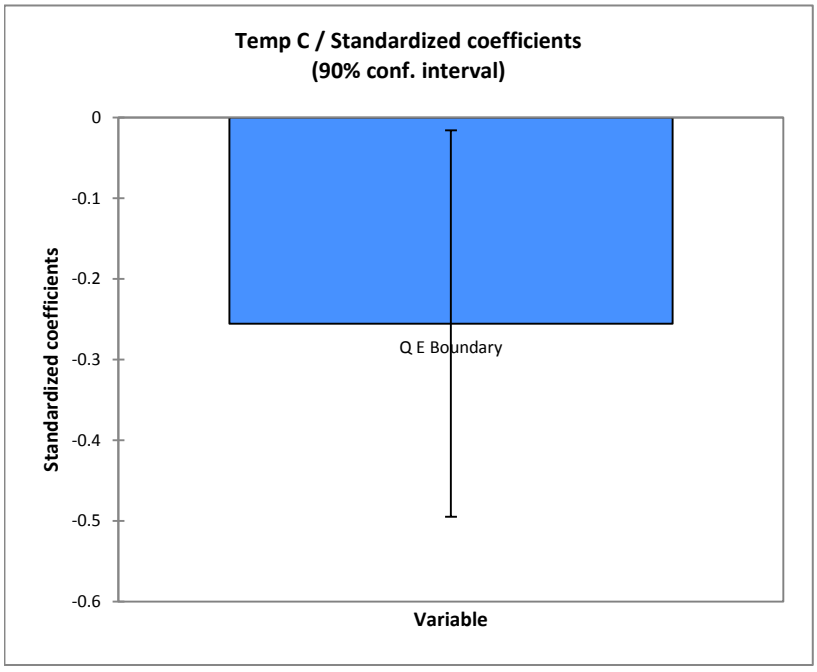
Source	Value	tandard err	t	Pr > |t|	er bound (9	er bound (90%)
Intercept	21.876	2.684	8.152	< 0.0001	17.371	26.381
Q E Bound	-0.248	0.139	-1.792	0.080	-0.481	-0.016

Equation of the model:

Temp C = 21.8761326907659-0.248217269198465*Q E Boundary

Standardized coefficients:

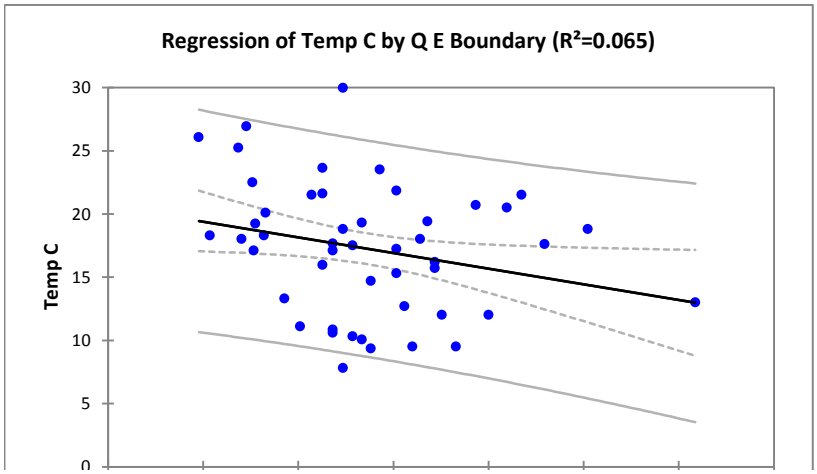
Source	Value	tandard err	t	Pr > |t|	er bound (9	er bound (90%)
Q E Bound	-0.255	0.143	-1.792	0.080	-0.495	-0.016

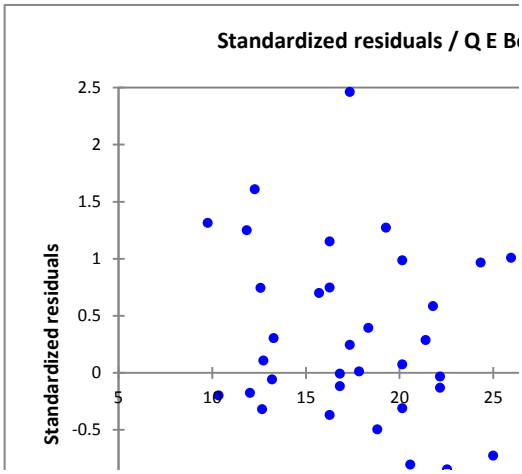


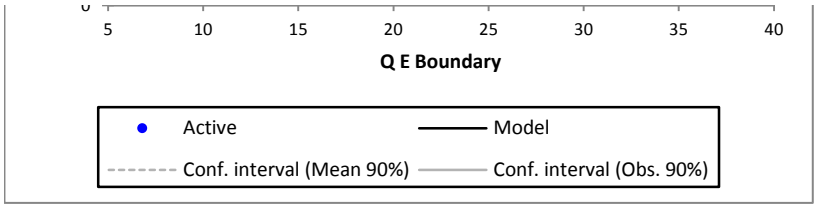
Predictions and residuals:

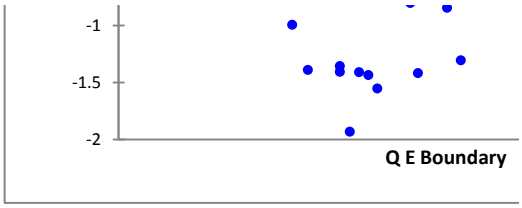
Observatior	Weight	Q E Boundar	Temp C	red(Temp C	Residual	Std. residua	v. on pred.	ound 90%	ound 90%
Obs1	1	21.000	9.500	16.664	-7.164	-1.420	0.798	15.325	18.003
Obs2	1	22.558	12.000	16.277	-4.277	-0.848	0.908	14.753	17.800
Obs3	1	21.403	18.000	16.564	1.436	0.285	0.822	15.184	17.944
Obs4	1	19.283	23.500	17.090	6.410	1.271	0.733	15.859	18.321
Obs5	1	23.290	9.500	16.095	-6.595	-1.308	0.971	14.465	17.726
Obs6	1	35.870	13.000	12.973	0.027	0.005	2.495	8.785	17.160
Obs7	1	25.965	20.500	15.431	5.069	1.005	1.248	13.336	17.526
Obs8	1	26.740	21.500	15.239	6.261	1.241	1.337	12.995	17.483
Obs9	1	25.003	12.000	15.670	-3.670	-0.728	1.143	13.752	17.588

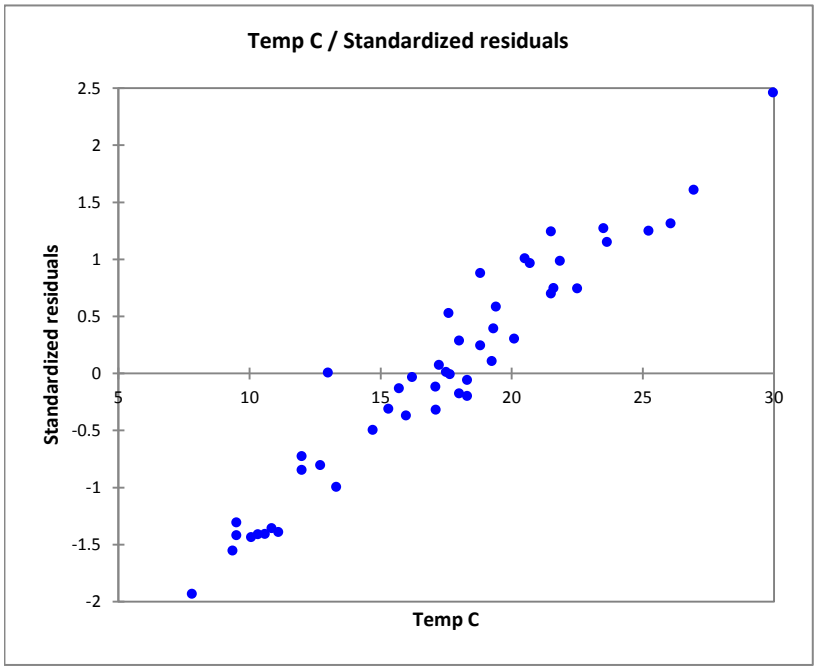
Obs10	1	20.164	17.230	16.871	0.359	0.071	0.758	15.599	18.143
Obs11	1	12.749	19.240	18.711	0.529	0.105	1.094	16.875	20.548
Obs12	1	15.109	11.100	18.126	-7.026	-1.393	0.877	16.653	19.599
Obs13	1	24.336	20.700	15.836	4.864	0.965	1.073	14.034	17.637
Obs14	1	30.225	18.800	14.374	4.426	0.878	1.761	11.417	17.331
Obs15	1	21.797	19.400	16.466	2.934	0.582	0.849	15.041	17.891
Obs16	1	13.281	20.100	18.580	1.520	0.301	1.040	16.833	20.326
Obs17	1	18.349	10.070	17.322	-7.252	-1.438	0.729	16.098	18.545
Obs18	1	18.823	14.700	17.204	-2.504	-0.496	0.728	15.981	18.426
Obs19	1	16.278	21.600	17.836	3.764	0.746	0.798	16.495	19.176
Obs20	1	17.352	29.970	17.569	12.401	2.459	0.750	16.311	18.827
Obs21	1	20.588	12.700	16.766	-4.066	-0.806	0.776	15.463	18.069
Obs22	1	16.826	17.100	17.700	-0.600	-0.119	0.770	16.406	18.993
Obs23	1	17.859	10.320	17.443	-7.123	-1.412	0.736	16.208	18.679
Obs24	1	10.354	18.300	19.306	-1.006	-0.200	1.360	17.023	21.589
Obs25	1	16.278	23.640	17.836	5.804	1.151	0.798	16.495	19.176
Obs26	1	16.826	10.850	17.700	-6.850	-1.358	0.770	16.406	18.993
Obs27	1	18.823	9.360	17.204	-7.844	-1.555	0.728	15.981	18.426
Obs28	1	9.773	26.070	19.450	6.620	1.313	1.429	17.052	21.848
Obs29	1	11.858	25.230	18.933	6.297	1.249	1.189	16.937	20.929
Obs30	1	17.352	7.810	17.569	-9.759	-1.935	0.750	16.311	18.827
Obs31	1	16.826	10.590	17.700	-7.110	-1.410	0.770	16.406	18.993
Obs32	1	14.276	13.310	18.333	-5.023	-0.996	0.947	16.743	19.922
Obs33	1	22.181	16.200	16.370	-0.170	-0.034	0.877	14.897	17.843
Obs34	1	27.950	17.600	14.938	2.662	0.528	1.480	12.454	17.423
Obs35	1	22.181	15.700	16.370	-0.670	-0.133	0.877	14.897	17.843
Obs36	1	15.707	21.500	17.977	3.523	0.698	0.834	16.577	19.377
Obs37	1	20.164	21.840	16.871	4.969	0.985	0.758	15.599	18.143
Obs38	1	17.352	18.800	17.569	1.231	0.244	0.750	16.311	18.827
Obs39	1	18.349	19.300	17.322	1.978	0.392	0.729	16.098	18.545
Obs40	1	12.026	18.000	18.891	-0.891	-0.177	1.171	16.926	20.857
Obs41	1	13.207	18.300	18.598	-0.298	-0.059	1.048	16.839	20.357
Obs42	1	20.164	15.300	16.871	-1.571	-0.311	0.758	15.599	18.143
Obs43	1	12.273	26.940	18.830	8.110	1.608	1.144	16.909	20.751
Obs44	1	16.826	17.650	17.700	-0.050	-0.010	0.770	16.406	18.993
Obs45	1	16.278	15.970	17.836	-1.866	-0.370	0.798	16.495	19.176
Obs46	1	12.671	17.110	18.731	-1.621	-0.321	1.102	16.881	20.581
Obs47	1	12.593	22.500	18.750	3.750	0.743	1.110	16.886	20.614
Obs48	1	17.859	17.500	17.443	0.057	0.011	0.736	16.208	18.679

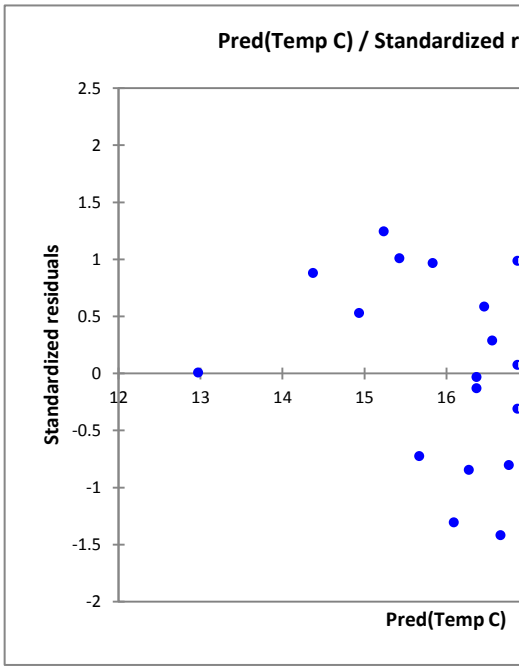





5
10
15
20
25
30
35
40
Q E Boundary
Active
Model
Conf. interval (Mean 90%)
Conf. interval (Obs. 90%)


-1
-1.5
-2
Q E Boundary


Temp C / Standardized residuals
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Standardized residuals
5
10
15
20
25
30
Temp C


Pred(Temp C) / Standardized r
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Standardized residuals
12
13
14
15
16
Pred(Temp C)

ws and 1 column
rows and 1 column

XLSTAT 2013.3.01 - Normality tests - on 10/10/2013 at 4:16:46 PM
Data: Workbook = Aravaipa Cr - water temps.xlsb / Sheet = Sheet3 / Range = S
Significance level (%): 5

Summary statistics

Summary statistics:

Variable	Observation	with missing	without missi	Minimum	Maximum	Mean
Residual	48	0	48	-9.759	12.401	0.000

Shapiro-Wilk test (Residual):

W	0.974
p-value	0.361
alpha	0.05

Test interpretation:
H0: The variable from which the sample was extracted follows a Normal distribu
Ha: The variable from which the sample was extracted does not follow a Normal
As the computed p-value is greater than the significance level alpha=0.05, one c
hypothesis H0.
The risk to reject the null hypothesis H0 while it is true is 36.12%.

Anderson-Darling test (Residual):

A^2	0.421
p-value	0.311
alpha	0.05

Test interpretation:
H0: The variable from which the sample was extracted follows a Normal distribu
Ha: The variable from which the sample was extracted does not follow a Normal
As the computed p-value is greater than the significance level alpha=0.05, one c
hypothesis H0.
The risk to reject the null hypothesis H0 while it is true is 31.11%.

Lilliefors test (Residual):

D	0.094
D (standar	0.654
p-value	0.353
alpha	0.05

Test interpretation:

H0: The variable from which the sample was extracted follows a Normal distribu
Ha: The variable from which the sample was extracted does not follow a Normal
As the computed p-value is greater than the significance level alpha=0.05, one c
hypothesis H0.
The risk to reject the null hypothesis H0 while it is true is 35.25%.

Jarque-Bera test (Residual):

JB (Obser	0.590
JB (Critica	5.991
DF	2
p-value	0.745
alpha	0.05

Test interpretation:
H0: The variable from which the sample was extracted follows a Normal distribu
Ha: The variable from which the sample was extracted does not follow a Normal
As the computed p-value is greater than the significance level alpha=0.05, one c
hypothesis H0.
The risk to reject the null hypothesis H0 while it is true is 74.46%.

on pred. (Ot	nd 90% (Ot	nd 90% (Observation)
5.106	8.092	25.235
5.124	7.675	24.879
5.110	7.986	25.141
5.096	8.535	25.645
5.136	7.474	24.717
5.627	3.527	22.418
5.196	6.710	24.153
5.218	6.480	23.997
5.171	6.989	24.351

5.100	8.310	25.432
5.161	10.048	27.375
5.119	9.533	26.719
5.156	7.180	24.491
5.342	5.406	23.341
5.114	7.881	25.051
5.150	9.935	27.224
5.096	8.767	25.876
5.096	8.650	25.758
5.106	9.264	26.407
5.099	9.010	26.128
5.103	8.200	25.332
5.102	9.135	26.264
5.097	8.887	25.999
5.223	10.538	28.075
5.106	9.264	26.407
5.102	9.135	26.264
5.096	8.650	25.758
5.242	10.651	28.249
5.182	10.235	27.631
5.099	9.010	26.128
5.102	9.135	26.264
5.131	9.719	26.946
5.119	7.777	24.964
5.256	6.115	23.762
5.119	7.777	24.964
5.112	9.396	26.558
5.100	8.310	25.432
5.099	9.010	26.128
5.096	8.767	25.876
5.177	10.200	27.582
5.151	9.951	27.245
5.100	8.310	25.432
5.172	10.149	27.511
5.102	9.135	26.264
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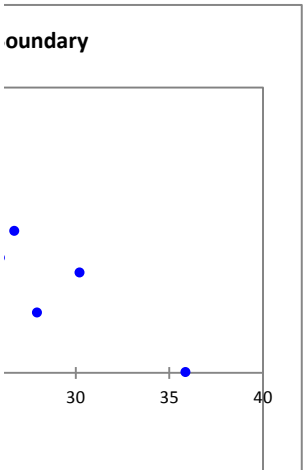

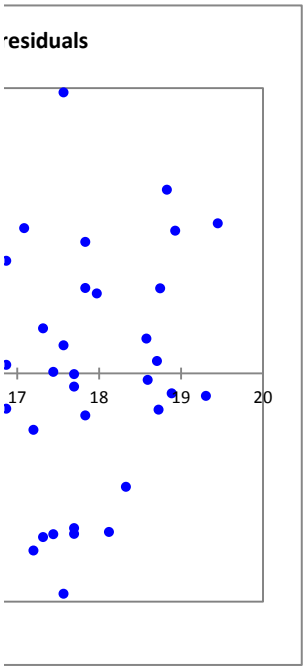
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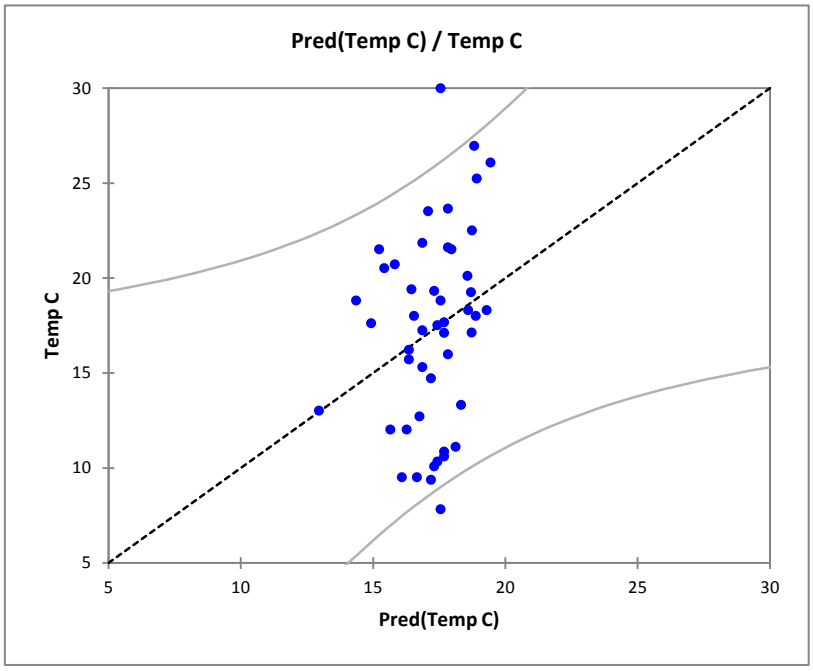
Pred(Temp C) / Temp C
Temp C
Pred(Temp C)
30
25
20
15
10
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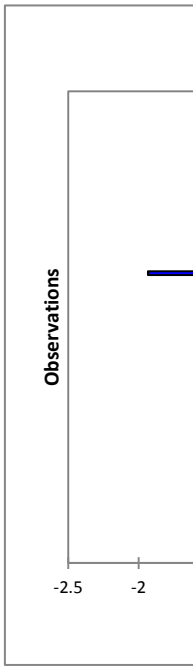
15
20
25
30


Observations
-2.5
-2

heet3!$Z$93:$Z$141 / 48 rows and 1 column

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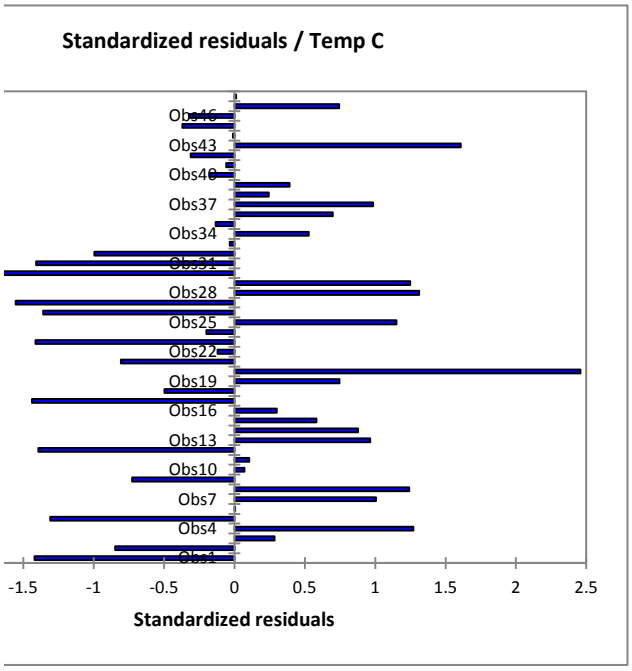
Standardized residuals / Temp C
Obs46
Obs43
Obs40
Obs37
Obs34
Obs31
Obs28
Obs25
Obs22
Obs19
Obs16
Obs13
Obs10
Obs7
Obs4
Obs1
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Standardized residuals

San Carlos Reservoir

1981-2010 Monthly Climate Summary

		Average Max. Temperature (F)	Average Min. Temperature (F)	Average Total Precipitation (in.)
15-Jan	Jan	60.6	34.5	1.81
15-Feb	Feb	64.8	37.9	1.85
15-Mar	Mar	70.9	42.2	1.53
15-Apr	Apr	79.8	49	0.48
15-May	May	89.2	57.7	0.35
15-Jun	Jun	98.7	66.9	0.24
15-Jul	Jul	100.5	73.1	1.38
15-Aug	Aug	98.4	71.8	2.18
15-Sep	Sep	93.9	65.3	1.53
15-Oct	Oct	83	53.7	1.11
15-Nov	Nov	67	40.1	1.09
15-Dec	Dec	59.9	34.3	1.62
	Annual	80.8	52.4	15.16