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Date	pH	H2O T (C)	Air T (C)	Sulfates mg/L	Conduct. uS/cm	Alkalinity mg/L CaCO3	T. Iron mg/l	Ferrous mg/L	Free Acid	T.Acid	Hot Acidity	Al mg/L	Manganese mg/L	Water Flow	Water Condition	Weather notes	Taken By	Notes
BR4	BIG RUN #4 (old#2)				40 32' 59.7" N, 79 24' 53.5"W									Speranza #2 at footbridge				(KKIBR2)
5/25/99	5.2	12		523		14	0.44				0	3.32	1.72				DEP Sholtis	DEP Lab
6/18/99	5.4	13	23		752	34.2	0		0	103					clear	clear	Lezark Sokolick	
6/28/99	5.3	13	25		766	7	0.4		0	89					clear	clear hot	Lezark Sokolick	
7/15/99	5.2				1020	12				57				897			USGS Survey	USGS
7/28/99	4.5	12	27	>200	757	14	0.06		0	89				1889	clear	hot humid	Lezark Sokolick	
7/29/99	5.2					11.2	0.33				3	2.89	1.5				DEP Sholtis	DEP Lab
9/21/99	5.5	13	12		973	21	0.4		0	89				830	clear	cool overcast	Lezark Sokolick	.5" rain yesterday
10/28/99	5.3	12	8		1010									1360	clear	cool dry sunny	Lezark Sokolick	
11/11/99	5.4	12	12		1059	13.7	0.4		0	109					clear	dry sunny	Lezark Sokolick	1.8 " rain last week
3/22/00	5.2			449		10.2	1.01				1	3.67	1.14		higher than normal		DEP Sholtis	DEP Lab Rain Yesterday
4/11/00	5.4	11	10											4741	high clear	lt. rain	Lezark Sokolick	
4/19/00	5.2	13	7			17.1	1.2		0	103					high clear	sunny	Lezark Sokolick	
7/6/00	5.4			552		12.2	0.42				0	3.33	1.54				DEP Sholtis	DEP Lab
8/8/00														3410	high	after rain	Lezark Sokolick	FLOWS ONLY
10/13/00	6.1	11	10		976	34.2	1.1		0	109				normal	clear	sunny	Lezark Sokolick	
7/12/01	5.6	12	20	603	840	14.4	0.36	0.09			22	2.67	1.45	normal	clear	clear	Lezark Sokolick	DEP Lab
10/30/01	5.5	10	12	540	1020	34.2	1.2		0	90		2.64	1.7	normal	clear	clear	Lezark	EASI kits
2/9/02	4.8	10	10	460	996	2.6	0.5	0.1			49	2.83	0.9	normal	clear	cloudy	Lezark Sokolick	DEP Lab
4/21/02	5.5	11	15	490	1102	10	0.45	0.11			0	2.9	1.1	normal	clear	rain	Lezarks	DEP Lab
7/14/02	5.1	12	22	521	1020	9.2	1.49	0.36			39	3.69	1.79	normal	clear	sunny	Lezarks	DEP Lab
10/27/02	4.8	13	11	500	1088	4	0.27	0.13			68	3	1.29	normal	clear	cloudy	Lezarks	DEP Lab
11/24/03														4688	murky	rain	Lezark-	After big rain

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Date	pH	H2O T (C)	Air T (C)	Sulfates mg/L	Conduct. uS/cm	Alkalinity mg/L CaCO3	T. Iron mg/l	Ferrous mg/L	Free Acid	T.Acid	Hot Acidity	Al mg/L	Manganese mg/L	Water Flow	Water Condition	Weather notes	Taken By	Notes
BR7	BIG RUN #7	40 32' 50.7"N, 79 25' 3.5"W							Seepage .1 mi N of Big Run Near Speranza#2 Treatment									(KKIBR7)
6/28/99	3.6	12	24			0	1.2		68	137					clear	hot drought	Lezark Sokolick	
7/28/99	3.6	13	25	>200	876	0	1.8		41	120				473	clear	hot drought	Lezark Sokolick	.5" rain yesterday
7/29/99	3.4					0	1.79				132	14.6	2.4				DEP Sholtis	DEP Lab
9/21/99	2.7	13	13		1148	0	2.8		102	188				50	clear v.low	cool drought	Lezark Sokolick	
10/28/99	3.5	9	9		1080									7	v. slow	cool sunny	Lezark Sokolick	1.8" rain last week
11/11/99	3.3	11	8		1317	0	1.8		102	222				2	clear, v. low	dry sunny	Lezark Sokolick	
3/22/00	3.3			396		0	1.01				108	12.6	2.26		high		DEP Sholtis	Rain yesterday
4/11/00	3.3	12	10											1240	v. high, clear	lt. rain	Lezark Sokolick	Recent Rain
4/19/00	3.5	11	12		1045	0	0.8		51	171				1392	clear high	sunny	Lezark Sokolick	
7/6/00	3.4			441		0	1.63				124	16.5	2.34				DEP Sholtis	DEP Lab
8/8/00														1026	high	overcast	Lezark Sokolick	Rain two days ago
10/13/00	3.4	11	10		1118	0	4		120	188				v. high	clear	sunny	Lezark Sokolick	flow 2X last mo.
7/12/01	3.4	13	19	426	918	0	2.39	0.17			132	14.5	2.53	low	clear	Clear	Lezark Sokolick	DEP LAB
10/30/01	3.3	10	10	>200	1260	0	3		100	220		13	2.1	v low	clear	clear	Lezarks	EASI kits
2/9/02	4.2	9	11	531	1190	0	2.12	1.93			99	8.22	3.68	low	clear	cloudy	Lezark Sokolick	DEP Lab
4/21/02	3.6	13	15	439	1019	0	0.59	0.53		31	147	16.3	2.48	1826	clear	rain	Lezarks	DEP Lab
7/14/02	3.4	12	21	484	890	0	1.01	0.6			165	16.2	2.43		clear	sunny	Lezarks	DEP Lab
7/15/02	FLOW ONLY			-	-	-	-	-	-	-	-	-	-	1103	clear	sunny	Lezark Sokolick	Flows only
10/27/02	3.2	12	11	539	1374	0	2.81	0.24			225	25.9	3.45	low	clear	cloudy	Lezarks	DEP Lab
1/31/03	3.3	10	3	488	1150	0	1.45	0.13			179	17.8	2.81	703	clear	cloudy	Lezarks	DEP Lab
4/27/03	3.3	12	18		1047	0	1.15	0.24			109	12	1.96	1595	clear	sunny	Lezarks	DEP Lab
5/27/03	3.3			533	1060	0	1.42			138		15.1	2.23		clear	sunny	WPC	Mahaffey LAB
6/25/03	3.4			531	1020	0	1.77			120		15.1	2.04		clear	sunny	WPC	Mahaffey Lab

Date	pH	H2O T (C)	Air T (C)	Sulfates mg/L	Conduct. uS/cm	Alkalinity mg/L CaCO3	T. Iron mg/l	Ferrous mg/L	Free Acid	T.Acid	Hot Acidity	Al mg/L	Manganese mg/L	Water Flow	Water Condition	Weather notes	Taken By	Notes
8/3/03	3.3	15	27	481	1088	0	2.84	0.31			134	15.5	2.53	1603	clear	cloudy	Lezarks	DEP Lab
8/28/03	3.3			507	1170	0	3.83			135		17.6	2.86		clear	sunny	WPC	Mahaffey Lab
10/1/03	3.3			521	1220	0	4.71			152		20.2	3.02	940	clear	sunny	WPC	Mahaffey Lab
10/25/03	3.5	14	15	539	1130	0	4.61	0.46		169		17.4	2.71	1283	clear	cloudy	Lezarks	DEP Lab
1/7/04						flows only: after period of heavy rain								5827			Lezarks	depth 12"
1/13/04	3.6			474	965	0	0.67			98		9.91	1.94	3907	clear	snow	Lezarks	Mahaffey Lab
1/25/04	3.8	9	10	629	1190	0	0.54	0.11			162	19.00	3.15	3482	clear	snow	Lezarks	DEP Lab
2/18/04	3.6			545	1430	0	2.28			178		25.30	3.38	2309.6	clear	sunny	Lezarks	Mahaffey
4/24/04	3.5	14	15	523	1215	0	3.93	0.55			188	23.30	3.09	3121	clear	sunny	Lezarks	DEP
5/6/04		FLOW ONLY												2525			Lezarks	
8/1/04	3.2	13	19	554	1238	0	7.85	2.18			224	25.20	3.69	1354	clear	sunny	Lezarks	DEP
10/24/05	3.2	13	14	548	1247	0	6.4	1.69			203	22.90	3.4		clear	overcast	Lezarks	DEP
1/19/05					flow only									3278	clear	snow	Lezarks	
1/22/05	3.4	8	-9	810	1210	0	1.34	0.36		160			4.02	3327	clear	snow	Lezarks	EASI kits
1/22/05	3.3	8	-9	517	1210	0	1.2	0.12			158	19.10	3.38	3327	clear	snow	Lezarks	DEP
4/24/05	3.2	13	16	781	1285	0	3.97	0.69			229	23.80	3.34		clear	cloudy	Lezarks	DEP
5/27/05	FLOW ONLY													1179			Lezarks	
7/24/05	3.2	13	22	692	1318	0	10.4	4.27			239	28.00	4.21	922 gpm	clear	sun	Lezarks	DEP
8/13/05	FLOW ONLY													1179gpm				
9/28/05	3.2	14	18		1379	0	3.15	0.51		400			4.7	110gpm	clear	sun	Lezarks	EASI kits
10/11/05	FLOW ONLY													54gpm	clear	sun	Lezarks	
10/22/05	3	12	11	514	1240	0	3.17	0.95			199	22.00	3.56	64gpm	clear	rainy	Lezark	DEP
1/21/06	3.6	12	13	553	1190	0	2.27	0.52			198	21.50	2.69	120gpm	clear	clear	Lezark	DEP
3/1/06				Flows Only										1672 gpm	clear	sunny	Lezark	
4/23/06	3.3	14	16	587	1220	0	3.58	0.19			196	18.00	2.61	1152gpm	clear	sunny	Lezark	DEP
7/22/06	3.3			448	754	0	5.81	0.31			144	17.20	2.78				Kirsch	DEP
10/21/06	3.1	12		599	892	0	4.55	0.3			213	23.73	3.38		clear	clear	Kirsch	DEP
1/20/07	3.56			283.2	565	0	<.3	0.1			68.2	6.29	1.06		clear		Kirsch	DEP
4/22/07	3.3			485.5		0	0.905	0.14			139	12.00	2.14		clear	sun	Kirsch	DEP
7/28/07	3.1			567.9		0	5.2	0.33			218	22	3.36		clear	sun	Kirsch	DEP
10/21/07	3.00			619.7	1324	0	7.08	0.29			130	20.1	3.56		clear	sun	Kirsch	DEP
2/4/08	3.79	4		363.5		0	0.532	0.08			68.4	8.8	1.97			lt rain	Kirsch	DEP
4/28/08	3.7	14	21	514.6	1180	0	1.982	0.16			139	16.7	3.2		clear	sun	Lezarks	DEP Lab
7/27/08	3.1	15	30	558.4	1585	0	4.082	0.48			169	17.5	3.32		clear	sun	Lezarks	DEP Lab

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BR10	BIG RUN 10	RMI 1.6				40 32' 34"N, 79 24' 39.8"W					Big Run 50 yds above first bridge							KKBR10
7/28/99	3.7	15	27	>200	1038	0.0	3.7		34	116					clear, normal	hot drought	Lezark Sokolick	.5" rain yesterday
7/29/99	4.5					0.0	11.4				48	8.0	3.9				DEP Sholtis	DEP Lab
9/21/99	3.2	13	13		1348	0.0	4.2		62	123					clear med. flo	cool drought	Lezark Sokolick	
10/28/99	3.9	10	10		1260									2783	clear, usual fl	cool sunny	Lezark Sokolick	1.8" rain last week
11/11/99	4.1	12	10		1222	0.0	5.8		34	103					clear normal	dry sunny	Lezark Sokolick	
3/22/00	6.1			227		16.0	1.9				0	2.7	0.6		high		DEP Sholtis	Rain yesterday
4/11/00	5.0	10	9											20568	clear fast	lt. rain	Lezark Sokolick	Recent Rain
4/19/00	4.9	12	12		906	0.0	2.4		0	68					clear high	sunny	Lezark Sokolick	
7/6/00	4.0			627		0.0	3.3				76	10.8	2.3		orange precip		DEP Sholtis	DEP Lab
8/8/00														13875	high	overcast	Lezark Sokolick	Rain two days ago
10/13/00	4.9	11	14		967	17.1	4.0		0	137					milky	sunny	Lezark Sokolick	
11/7/01	4.6	12	12	>200	1300	0.0	5.2		5	115		9.2	3.2	v low	milky	overcast	Lezarks	EASI kits
4/21/02	5.8	15	15	490	992	2.2	3.6	2.3			49	7.4	1.9	medium	clear	rain	Lezarks	DEP Lab
10/27/02	4.8	12	11	618	1290	2.6	6.6	5.6			77	7.8	2.3	normal	clear	cloudy	Lezarks	DEP Lab
1/31/03	5.2	10	3	696	1140	2.2	4.6	2.2			69	8.7	2.3	normal	clear	cloudy	Lezarks	DEP Lab
4/27/03	4.6	14	17	564	1084	8.6	2.8	1.4			61	8.5	2.0	normal	clear	cloudy	Lezarks	DEP Lab
5/27/03	4.4			589	1060	6.0	3.1			66		9.6	2.1	normal	clear	cloudy	WPC	Mahaffey Lab
6/25/03	4.0			603	1060	1.0	3.5			70		10.2	2.0	normal	clear	cloudy	WPC	Mahaffey Lab
8/3/03	4.5	18	24	502	938	9.6	3.6	1.3			41	6.5	1.7	normal	clear	cloudy	Lezarks	DEP Lab
8/28/03	5.0			508	1090	7.0	4.6			21		7.7	1.9	normal	clear	cloudy	WPC	Mahaffey Lab
10/1/03	4.8				1080	8.0	5.6			34		9.6	2.2	normal	clear	cloudy	WPC	Mahaffey Lab
10/25/03	5.7	12	15	561	962	10.2	4.0	3.0			55	5.9	1.8	normal	clear	cloudy	Lezarks	DEP LAB
1/13/04	4.7			474	1130	9.0	3.5				70	11.5	2.1	high	Murky	Snow	WPC	Mahaffey Lab

Date	pH	H2O T (C)	Air T (C)	Sulfates mg/L	Conduct. uS/cm	Alkalinity mg/L CaCO3	T. Iron mg/l	Ferrous mg/L	Free Acid	T.Acid	Hot Acidity	Al mg/L	Manganese mg/L	Water Flow	Water Condition	Weather notes	Taken By	Notes
1/25/04	4.5	10		700	1173	9.4	3.4	1.3			98	14.7	2.9	high	murky	snow	Lezarks	DEP Lab
2/18/04	4.3			567	1250	8.0	5.1			178		14.8	2.7	high	murky	overcast	Lezarks	Mahaffey
4/24/04	4.2	14	16	612	1014	9.2	3.1	0.9			80	10.9	2.4	high	murky	overcast	Lezarks	DEP Lab
8/1/04	4.5	16	27	594	1096	9.6	4.3	1.9			71	10.6	2.4		murky	clear	Lezarks	DEP Lab
9/15/04	5.6	16	20	570	954	5.0	4.4	2.3		80			2.4	3733	murky	overcast	Lezarks	EASI kits
10/20/04	5.2	13	15	700	1046	15.0	3.0	1.0		60			2.1	5592	murky	overcast	Lezarks	EASI kits
10/24/04	6.9	14	15	585	1034	34.6	3.1	1.0			9	8.1	1.8		murky	clear	Lezarks	DEP Lab
1/22/05	4.4	8	-9	>200	950	0.0	1.7	0.9		60			2.8		murky	snow	Lezarks	EASI kits
1/22/05	4.6	8	-9	568	950	10.8	2.2	0.4			74	11.4	2.3		murky	snow	Lezarks	DEP
3/19/05	4.3	10	10	>200	980	0.0	2.6	0.3		80		8.9	2.7	17920	murky	sunny	Lezarks	DEP
4/15/05	4.0	12	12	700	942	0.0	2.2	0.7		140		7.9	2.5	12177	murky	sunny	Lezarks	EASI Kit
4/24/05	4.9	14	16	635	925	11.2	2.3	0.6			39	8.1	1.8		Murky	Cloudy	Lezarks	DEP
5/21/05	4.0	13	13	>800	1117	0.0	3.3	1.3		140		9.2	2.3	8177	murky	sunny	Lezarks	EASI Kits
7/9/05	3.8	15	21	1000	1203	0.0	4.3	2.0		140		10.3	2.8	4460	murky	sun	Lezarks	EASI Kits
7/24/05	3.8	15	22	742	1210	0.0	5.7	2.5			104	13.8	2.8		murky	sun	Lezarks	DEP
8/13/05	3.3	17	27	1137	1088	0.0	5.5	2.1		160		11.4	3.0	4277	murky	sun	Lezarks	EASI kits
9/17/05	4.4	16	19	1400	1104	0.0	7.2	3.5		220		12.4	3.6	3387	murky	cloudy	Lezarks	EASI kits
10/15/05	3.9	14	14	1125	1188	0.0	8.0	3.8		180		6.3	4.3	3234	murky	cloudy	Lezarks	EASI, filtered Al
1/14/06	6.0	10	2	150	545	20.0	1.3	0.2		40		1.3	0.3	16322	high,mud	rain	Lezarks	EASI, no filter
1/21/06	6.0	10	13	364	682	20.0	1.9	1.0		38.2		3.6	1.0	high	murky	rain	Lezarks	DEP, no filter
2/15/06	5.1	10	9	1225	1053	0.0	2.5	1.2		80		3.8	2.7	5205	murky	sun	Lezarks	EASI, no filter
3/31/06	4.9	16	20	1050	1190	0.0	1.3	1.3		100		8.0	2.5	6190	murky	sun	Lezarks	EASI, no filter
4/23/06	6.2	13	12	236	573	40.0	1.7	0.2				8.0	2.4	v.high	murky	sun	Lezarks	DEP
5/20/06	6.3	13	12	508	713	15.0	2.0	0.6		80		1.7		10943	high	sun	Lezarks	DEP
6/21/06	5.4		23	700	820	5.0	2.1	0.9		120		4.7	2.3	7119	murky	sun	Lezarks	DEP
7/22/06	4.5			476	628	9.2	2.8	1.1			53	8.2	2.0		murky	sun	Kirsch	DEP
8/28/06	5.7	16	23	700	830	10.0	1.2	1.0		80		1.3	1.7	3320	murky	sun	Lezarks	EASI kits
9/28/06	4.5	13	13	1180	949	0.0	1.9	0.7		160		8.0	2.3		murky	rain	Lezarks	EASI kits
10/21/06	5.7	13		238	626	28.6	1.4	0.7			-10	2.1	0.7			clear	Kirsch	DEP
10/29/06	6.9	9	10	480	487	20.0	0.6	0.5		60		1.7	0.9	9681	murky	clear	Lezarks	EASI kits
11/28/06	6.3	10	9	600	953	15.0	1.2	0.7		60		1.4	1.9	10649	murky	clear	Lezarks	EASI kits
1/17/07	6.0	6	-3	525	580	15.0	0.3	0.3		60		0.3	0.7	12000	murky	clear	Lezarks	EASI kits
1/20/07	5.4			364.7	553	12.0	1.6	0.6			9.6	3.2	1.0			snow	Kirsch	DEP

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STO	Output of Speranza Treatment					N 40 32' 55.4", W 79 24' 54.0"					Output of 2ND pond, Speranza Treatment						KKSTO	
1/13/04	5.4			531	1270	13	1.1			24		6.56	2.48	1313.47		snow	wpc	Mahaffey Lab
2/18/04	6.4			493	1300	51	0.5			0		3.24	2.17	1792		sunny	lezarks	Mahaffey Lab
5/6/04	6.5				1052		0.1							747		sunny	lezarks	EASI kits
8/1/04	6.3	15	27	523	1046	64	0.1	<.3			0	1.31	1.56	1340		sunny	lezarks	DEP Lab
10/24/04	6.2	13	14	550	989	53	0.4	0.07			0	3.61	1.78			cloudy	lezarks	DEP Lab
1/19/05				flow only										2438		snow	Lezarks	
1/22/05	4.3	8	-9	600	1024	0	2.0	0.12		100			3.01	1377		snow	Lezarks	EASI kits
1/22/05	4.6	9	-9	577	1024	11.6	2.3	0.17			69	11.3	2.51	1377		snow	Lezarks	DEP
4/24/05	5.6	13	16	549	834	62.2	<.3	0.08			-27	1.32	1.44			cloudy	Lezarks	DEP
7/24/05	6.4	15	22	588	951	45.8	<.3	0.08			0	1.14	1.34	1288	cloudy	sunny	Lezarks	DEP
10/22/05	6.4	11	11	492	960	60.8	<.3	0.004			-23	0.95	1.11	942	cloudy	rain	Lezarks	DEP
1/21/06	6.3	11	13	489	818	30.4	0.7	0.19			24	2.42	0.98	3600 est	cloudy	rain	Lezarks	DEP
4/23/06	5.6	12	16		857									1979	cloudy	sun	Lezarks	DEP
7/22/06	6			361		30.2	0.5	0.18			-11	2.21	1.16				Kirsch	DEP
10/21/06	6.3	14		522		38.6	0.8	0.36			-23	2.48	1.12			clear	Kirsch	DEP
1/20/07	6.25			458.9		26.4	0.8	0.31			-71	1.6	0.91	2844		snow	Kirsch	DEP
4/22/07	6.1			472		46.8	1.1	0.61			-27	2.61	1.2			clear	Kirsch	DEP
10/21/07	6.1			714		40.4	3.7	2.52			11.6	2.48	1.87		cloudy	clear	Kirsch	DEP
2/4/08	6.39	4		603.5		47.4	2.2	1.98			-31	2.16	1.7			lt rain	Kirsch	DEP
4/28/08	6.4	15	21	537	1010	48.6	2.8	2.39			-31	2.84	1.94		cloudy	sun	Lezarks	DEP Lab
7/27/08	6.1	15	27	731.7	1283	62	4.0	3.88			-32	1.87	2.2		cloudy	sun	Lezarks	DEP Lab
BRM	BIG RUN MOUTH				40 31' 19.8"N 79 24' 03.8"W elev 880													NSR project
4/29/05	4.6			537		9.2	0.2				50.2	7.9	1.8	normal	clear	cludy	Lezarks, DEP	DEP LAB
10/6/05	4.1			634		4.8	0.8				119	10.3	2.1	normal	clear	clear	Lezarks, DEP	DEP LAB
6/27/06	5.7			275		10.2	2.0				9	4.5	1.2	high	murky	cloudy	Lezarks, DEP	DEP LAB
5/18/08	6.9			405.2		20.6	2.1	0.9			-1.8	3.9	1.3	Normal	murky	sunny	Lezark, DEP	DEP