UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morg
Date 11/10/95

Stream West Arawaipa

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.25	

Gage

Type of meter Marsh McBirney
Date rated 11/10/95 for rod, other.
Meter ft. above bottom of weight.
Spin before meas. after
Meas. plots % diff. from rating
Wading, cable, ice, boat, upstr., downstr., side bridge 50 feet, mile, above, below gage, and

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth, cobble, gravel, few small rocks
Flow Smooth, steady Weather Sunny, clear, excellent
Other

Specific	pH	Time	TEMPERATURE °C	
340	8.5	1400	A 22.5	W 17.5

DO

BACTERIA. Concentration/100ml FC FS Ratio FC/FS

Fecal Coliform	Volumes	Count	Comments
Time in	blank		
Time out			

Fecal Strep	Volumes	Count	Comments
Time in	blank		
Time out			

Comments

USAV2-00003566

River at - -

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge	
	7.0	0	0				0			0	0	
	8.0	1.0	.40				.50			.40	.200	.15
	9.0	1.0	.45				1.25			.45	.563	
	10.0	1.0	.50				1.25			.50	.625	
	11.0		.40				1.60			.40	.640	.19
	12.0		.50				1.90			.50	.950	.22
	13.0		.50				1.80			.50	.900	.24
	14.0		.50				1.90			.50	.950	
	15.0		.45				1.90			.45	.855	.26
	16.0		.45				1.95			.45	.878	.27
	17.0		.40				1.90			.40	.760	.24
	18.0		.45				1.90			.45	.855	.29
	19.0		.45				2.00			.45	.900	
	20.0		.50				2.10			.50	1.05	
⊙	21.0		.60				2.40			.60	1.44	1.00
	22.0		.60				2.30			.60	1.38	
	23.0		.70				2.50			.70	1.75	
	24.0		.70				2.60			.70	1.82	.29
	25.0		.75				2.85			.75	2.14	.30
	26.0		.75				2.85			.75	2.14	.27
	27.0		.70				2.50			.70	1.75	.26
	28.0		.65				2.20			.65	1.43	
	29.0		.65				2.15			.65	1.40	.24
	30.0		.50				1.75			.50	.88	.22
	31.0		.40				1.80			.40	.72	.19
	32.0		.45				1.50			.45	.68	
	33.0		.30				1.35			.30	.405	
	34.0		.65				1.40			.65	.91	.21
	35.0		.60				1.10			.60	.66	
	35.7	.70	0				0			0	0	
												.0
											29.63	

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morga
Date 9/19/95

Stream West Arawapa

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.25	

Gage

Type of meter Marsh McBirney
Date rated 9/19/95 for rod, other.
Meter ft. above bottom of weight.
Spin before meas. after
Meas. plots % diff. from rating
Wading, cable, ice, boat, upstr., downstr., side bridge 80 feet, mile, above, below gage, and

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section gravel, cobble
Flow Smooth, steady Weather Clear, sunny, clouds, hum building
Other

Specific	pH	Time	TEMPERATURE °C	
390	7.9	1400	A 27.6	W 30.7C

DO

BACTERIA. Concentration/100ml FC____ FS____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in	blank		
Time out			

Fecal Strep	Volumes	Count	Comments
Time in	blank		
Time out			

Comments

USAV2-00003568

River at · ·

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5.0	0	0				0				
	7.0	2.0	.35				.90			.700	.630
	8.0	1.0	.40				1.15			.400	.460
	9.0	1.0	.50				1.10			.500	.550
	10.0	1.0	.40				1.35			.400	.540
	11.0		.40				1.75			.400	.700
	12.0		.40				1.50			.400	.600
	13.0		.45				1.55			.450	.698
	14.0		.40				1.60			.400	.640
	15.0		.40				1.55			.400	.620
	16.0		.40				1.65			.400	.660
	17.0		.45				1.35			.450	.608
	18.0		.45				1.65			.450	.743
	19.0		.50				1.80			.500	.900
⊙	20.0		.45				2.00			.450	.900
	21.0		.60				1.90			.600	1.14
	22.0		.65				2.25			.650	1.463
	23.0		.70				2.20			.700	1.54
	24.0		.70				2.00			.700	1.40
	25.0		.75				2.30			.750	1.725
	26.0		.80				2.10			.800	1.68
	27.0		.70				2.00			.700	1.400
	28.0		.70				1.50			.700	1.05
	29.0		.60				1.50			.600	.900
	30.0		.45				1.35			.450	.608
	31.0		.30				1.35			.300	.405
	32.0		.50				1.50			.500	.750
	33.0		.70				1.50			.700	1.05
	34.0		.50				.80			.500	.400
	35.3	1.3	0				0			0	0
											24.76

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morgan
Date 10/9/95
10/9/95

Stream West Arawaipa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.25	

Gage

Type of meter Marsh McBirney
Date rated 10/9/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge .....100 feet mile above below gage and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel, cobble
Flow Smooth steady Weather Clear, sunny
Other

Specific	pH	Time	TEMPERATURE °C	
380	8.17	1030	A 24.2	W 18.4

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS_____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

USAV2-00003570

River at

Angle and Incr.	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for inst. angle or	Area	Discharge
	8.0	0	0				0				
	9.5	1.5	.40				.90			.600	.540
	11.0	1.5	.40				1.25			.600	.750
	12.5	1.5	.40				1.55			.600	.930
	14.0		.45				1.85			.675	1.248
	15.5		.45				1.75			.675	1.181
	17.0		.45				1.70			.675	1.147
	18.5		.45				2.00			.675	1.350
	20.0		.50				2.10			.750	1.575
	21.5		.50				2.25			.750	1.688
	23.0		.60				2.50			.900	2.250
	24.5		.65				2.55			.975	2.486
	26.0		.75				2.80			1.125	3.150
	27.5		.65				2.50			.975	2.44
⊙	29.0		.70				2.40			1.050	2.52
	30.5		.60				2.00			.900	1.800
	32.0		.30				1.75			.450	.788
	33.5		.30				1.30			.450	.585
	35.0		.55				1.40			.825	1.155
	36.5		.65				.80			.975	.780
	37.5	1.0	0				0			0	0
											28.36

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Marga
Date 10/29/95

Stream West Aravaipa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.25	

Gage

Type of meter Marsh McBirney
Date rated 10/29/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... feet, mile, above, below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section gravel, rocky, a few boulder swirls
Flow Smooth, steady, swirly Weather Cloudy, cool
Other .....

Specific	pH	Time	TEMPERATURE °C	
330	8.6	(1430) 2:30 pm	A 22.7	W 17.6

DO

BACTERIA. Concentration/100ml FC_____ FS_____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

USAV2-00003572

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge	.80
	7.5	0	0				0					
	8.5	1.0	.50				.50			.500	.250	.85
	9.5	1.0	.55				1.10			.550	.605	
	10.5		.45				1.20			.450	.540	.90
	11.5		.40				1.60			.400	.640	
	12.5		.55				1.75			.550	.963	.92
	13.5		.50				1.80			.500	.900	.94
	14.5		.45				1.95			.450	.878	
	15.5		.40				1.50			.400	.606	.96
	16.5		.40				1.75			.400	.700	.97
	17.5		.40				1.80			.400	.720	.98
	18.5		.45				1.85			.450	.833	.99
	19.5		.50				2.30			.500	1.15	
	20.5		.60				2.00			.600	1.20	
⊙	21.5		.65				2.35			.650	1.58	1.00
	22.5		.65				2.50			.650	1.63	
	23.5		.75				2.20			.750	1.65	
	24.5		.75				2.10			.750	1.58	.99
	25.5		.80				2.20			.800	1.76	.98
	26.5		.70				2.25			.700	1.58	.97
	27.5		.70				2.10			.700	1.47	.96
	28.5		.65				1.90			.650	1.24	
	29.5		.60				1.25			.600	.750	.94
	30.5		.45				1.50			.450	.675	.92
	31.5		.40				1.15			.400	.460	.90
	32.5		.40				1.00			.400	.400	
	33.5		.55				1.15			.550	.715	
	34.5		.65				1.10			.650	.715	.84
	35.5		.60				.70			.600	.420	
	36.0	.50	0				0				26.61	
		(.50)										.81

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003573

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

I. Surveyor Morg.
Date 9/1/95

Stream West Aravaipa

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.24	

Gage

Type of meter Marsh McBirney
Date rated 9/1/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... 50 feet, mile, above, below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth cobble, gravel
Flow Smooth, steady Weather Sunny, clear
Other .....

Specific	pH 3.0	Time	TEMPERATURE °C	
390	Meter Out	11:00	A 31.6	B 27.3

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

USAV2-00003574

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	6.0	0	0				0			0	0
	7.5	1.5	.20				.03			.300	.009
	9.0	1.5	.50				1.00			.750	.750
	10.5	1.5	.50				1.65			.750	1.2375
	12.0		.55				1.50			.825	1.2375
	13.5		.50				2.00			.750	1.500
	15.0		.65				1.95			.975	1.901
	16.5		.65				2.10			.975	2.048
	18.0		.55				2.00			.825	1.650
	19.5		.50				1.80			.750	1.350
	21.0		.55				2.00			.825	1.650
	22.5		.55				2.25			.825	1.856
	24.0		.60				2.60			.900	2.340
	25.5		.40				2.35			.600	1.410
	27.0		.35				2.00			.525	1.050
	28.5		.30				1.45			.450	.653
	30.0		.35				1.65			.525	.866
	31.5		.30				1.25			.450	.563
	33.0		.55				1.50			.825	1.238
	34.5		.90				1.65			1.350	2.228
	36.0		.80				1.00			1.200	1.200
	37.5	1.5	0				0			0	0
											26.74
											CFS

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morg
Date 8/19/

Stream West Arawaya Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1:00	

Gage

Type of meter Marsh McBirney
Date rated 8/19/95 for rod, other.
Meter ft. above bottom of weight.
Spin before meas. after
Meas. plots % diff. from rating
Wading, cable, ice, boat, upstr., downstr., side bridge 20 feet mile, above, below gage, and

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section smooth gravel
Flow Smooth, steady Weather Cloudy, warm
Other

Specific	pH	Time	TEMPERATURE °C	
	8.4	1100	A 29.8 C	W 25.2

DO

BACTERIA Concentration/100ml FC FS Ratio FC/FS

Fecal Coliform	Volumes	Count	Comments
Time in	blank		
Time out			

Fecal Strep	Volumes	Count	Comments
Time in	blank		
Time out			

Comments

USAV2-00003576

River at · ·

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	10.0	0	0				0			0	0
	11.0	1.0	.20				.20			.200	.040
	12.0	1.0	.30				1.10			.300	.330
	13.0	1.0	.50				1.35			.500	.675
	14.0		.60				1.65			.600	.990
	15.0		.65				1.65			.650	1.073
	16.0		.85				2.10			.850	1.785
	17.0		.90				2.30			.900	2.070
	18.0		.95				2.60			.950	2.470
	19.0		1.00				3.00			1.000	3.000
	20.0		1.00				3.30			1.00	3.300
	21.0		1.00				2.90			1.00	2.900
	22.0		.90				2.50			.900	2.250
	23.0		.80				2.30			.800	1.840
⊙	24.0		.80				2.20			.800	1.760
	25.0		.65				1.95			.650	1.268
	26.0		.60				1.80			.600	1.080
	27.0		.50				1.90			.500	.950
	28.0		.40				1.30			.400	.520
	29.0		.20				.20			.200	.040
	30.0		0				0			0	0

28.30 CFS

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003577

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Meas. No. .....
Comp. by .....
Checked by .....

DISCHARGE MEASUREMENT NOTES

Sta. No. .....
West Arawajin Creek
Date January 21, 1995 Party Sue Morgan
Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....
Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....
Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.30	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter .....
Date rated 1/21/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge 15 feet, mile, above, below gage, and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth cobble, some large cobble
Flow Smooth, swift Weather Cloudy, cold
Other ..... Air 18.3°F @ 10:90
Gage ..... Water .....°F @ .....
..... Record removed ..... Intake flushed .....
Observer .....

Control Recent flooding rearranged silt levels around gage - bottom at ladder is about 3' above water.
Remarks Cond 340 pH 9.1
Gage filled with sand and gravel from recent flooding - piled up against marker. Removed
G. H. of zero flow ..... ft.

USAV2-00003578

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	10.0	0	0				0			0	0
	11.5	1.5	.32				.30			.555	.1665
	13.0	1.5	.30				.60			.450	.270
	14.5		.35				1.60			.525	.840
	16.0		.40				1.50			.600	.900
	17.5		.60				1.50			.900	1.350
	19.0		.75				1.75			1.125	1.968
	20.5		.80				1.85			1.200	2.220
	22.0		.90				2.25			1.350	3.037
	23.5		.85				2.55			1.275	3.251
	25.0		.85				2.60			1.275	3.315
	26.5		.80				2.50			1.200	3.000
	28.0		.75				2.50			1.050	2.625
	29.5		.75				2.65			1.125	2.981
⊙	30.0		.80				2.80			1.200	3.360
	32.5		.70				2.80			1.050	2.940
	34.0		.50				2.30			.750	1.725
	35.5		.55				2.35			.925	1.938
	37.0		.70				2.25			1.050	2.362
	38.5		.70				2.00			1.050	2.100
	40.0		.95				1.80			1.425	2.565
	41.5		.60				1.20			.900	1.080
	43.0		0				0			0	0
											44.02

.0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Arapaho Creek

Date 2/4, 19 95 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.45	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 2/4/95 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 50 feet, mile, above, below gage and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Rough, boulders, turbulent

Flow Somewhat turbulent Weather Hot, sunny

Other ..... Air .....°F@ .....

Gage ..... Water .....°F@ .....

..... Record removed ..... Intake flushed .....

Observer .....

Control .....

Remarks .....

G. H. of zero flow ..... ft.

USAV2-00003580

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge	.80
	11.5	0	0				0			0	0	
	13.0	1.0	.30				.50			.45	.225	.85
	14.0	1.0	.60				.50			.60	.300	
	15.0	1.0	.55				.70			.55	.385	.90
	16.0	↓	.52				.70			.52	.364	
	17.0		.55				1.0			.55	.550	.92
	18.0		.49				.80			.49	.392	.94
	19.0		.45				.90			.45	.405	
	20.0		.40				1.05			.40	.420	.96
	21.0		.52				1.50			.52	.780	.97
	22.0		.60				1.65			.60	.990	.99
	23.0		.65				1.60			.65	1.040	.99
	24.0		.50				1.50			.50	.750	
	25.0		.50				1.50			.50	.750	
⊙	26.0		.70				1.65			.70	1.155	1.00
	27.0		.50				1.60			.50	.800	
	28.0		.55				1.50			.55	.825	
	29.0		.75				2.0			.75	1.500	.99
	30.0		.70				1.75			.70	1.225	.98
	31.0		.65				1.60			.65	1.040	.97
	32.0		.55				1.00			.55	.550	.96
	33.0		.30				1.40			.30	.420	
	34.0		.60				2.50			.60	1.500	.94
	35.0		.80				2.40			.80	1.920	.92
	36.0		1.00				2.50			1.00	2.500	.9
	37.0		1.00				2.20			1.00	2.200	
	38.0		1.10				1.60			1.10	1.760	
	39.0		.90				1.60			.90	1.440	
	40.0		.60				1.20			.60	.720	
	42.0	2.0	0				0			0	0	
											26.93	

.0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....
Comp. by .....
Checked by .....

Sta. No. .....
West Arauaza Creek
Date February 28, 1995 Party Sue Morgan
Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....
Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....
Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.29	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney
Date rated 2/25/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots ..... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... 20 feet, mile, above, below gage, and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth cobble
Flow Smooth, swift Weather Sunny
Other ..... Air ..... °F@ .....
Gage ..... Water ..... °F@ .....
..... Record removed ..... Intake flushed U L .....
Observer .....
Control .....
Remarks Recent Flooding. Had to scrape sand out of bottom of gageing station to read measurement on the scale
G. H. of zero flow ..... ft.

USAV2-00003582

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	7.0	0	0				0			0	0
	9.0	2.0	.35				.80			.7	.56
	10.0	1.0	.55				1.00			.55	.55
	11.0		.80				1.70			.80	1.12
	12.0		.95				1.55			.95	1.47
	13.0		.95				1.85			.95	1.76
	14.0		1.05				2.00			1.05	2.10
	15.0		1.15				2.20			1.15	2.53
	16.0		1.15				2.50			1.15	2.88
	17.0		1.20				2.70			1.20	3.24
	18.0		1.20				2.70			1.20	3.24
	19.0		1.15				3.00			1.15	3.45
	20.0		1.15				3.50			1.15	4.03
	21.0		1.05				3.50			1.05	3.68
⊙	22.0		1.00				3.00			1.00	3.00
	23.0		.90				2.90			.90	2.61
	24.0		.85				2.75			.85	2.34
	25.0		.85				2.50			.85	2.13
	26.0		.80				2.50			.80	2.00
	27.0		.85				2.60			.85	2.21
	28.0		.85				2.50			.85	2.13
	29.0		.80				2.60			.80	2.08
	30.0		.60				2.20			.60	1.32
	31.0		.85				2.20			.85	1.87
	32.0		.85				2.00			.85	1.70
	33.0		1.05				2.30			1.05	2.42
	34.0		1.15				2.20			1.15	2.53
	35.0		1.10				1.20			1.10	1.32
	36.0	1.0	.75				.90			.75	.68
	37.0	1.0	0				0			0	0
											60.95

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003583

9-275-b
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Aravaipa Creek

Date March 10, 1995 Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....

Method ..... No. secs. ..... C. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.25	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 3/10/95 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 30 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Mostly smooth cobble, sand

Flow ..... Weather Sunny, fair, beautiful

Other ..... Air .....°F@ .....

Gage ..... Water .....°F@ .....

..... Record removed ..... Intake flushed .....

Observer .....

Control .....

Remarks .....

The Black Hawks are back!

G. H. of zero flow ..... ft.

USAV2-00003584

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5.0	0	0				0			0	0
	8.0	3.0	.25				.50			.75	.375
	9.5	1.5	.55				.70			.83	.581
	11.0	1.5	.80				1.00			1.20	1.200
	12.5		.80				1.40			1.20	1.680
	14.0		.85				1.85			1.28	2.368
	15.5		.90				2.00			1.35	2.700
	17.0		.85				2.05			1.28	2.624
	18.5		.80				2.40			1.20	2.880
	20.0		.80				2.50			1.20	3.000
	21.5		.80				2.75			1.20	3.300
	23.0		.70				2.25			1.05	2.363
	24.5		.75				2.25			1.13	2.543
	26.0		.90				2.05			1.35	2.768
⊙	27.5		.85				2.50			1.28	3.200
	29.0		.80				2.45			1.20	2.94
	30.5		.80				2.00			1.20	2.40
	32.0		.95				2.10			1.43	3.003
	33.5		.95				1.50			1.43	2.145
	35.0		1.15				1.20			1.73	2.076
	36.5		1.10				.20			1.65	.330
	37.0	.5	0				0			0	0

44.48

.0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

Meas. No. .....
Comp. by .....
Checked by .....

DISCHARGE MEASUREMENT NOTES

Sta. No. .....
West Arapahoe Creek
Date March 25, 1995 Party Sue Morgan
Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....
Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....
Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.30	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter .....
Date rated 3/25/95 for rod, other.
Meter 15 (ft) above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
(Wading), cable, ice, boat, (upstr.), downstr., side
bridge 15 feet, mile, (above) below
(gage) and .....
Check-bar, found .....
changed to ..... at .....
Correct .....
Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth sand and cobble
Flow Smooth, steady Weather Clear, sunny, breezy, 60°
Other ..... Air .....°F@ .....
Gage ..... Water .....°F@ .....
..... Record removed ..... Intake flushed U .....
Observer .....
.....
Control .....
.....
Remarks .....
.....
.....
G. H. of zero flow ..... ft.

USAV2-00003586

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	7.0	0					0			0	0
	10.0	3.0	.30				.50			.90	.45
	11.5	1.5	.55				1.05			.83	.872
	13.0	1.5	.70				2.40			1.05	2.52
	14.5	1.5	.70				2.55			1.05	2.67
	16.0		.65				2.80			.98	2.74
	17.5		.65				2.75			.98	2.69
	19.0		.70				2.80			1.05	2.94
	20.5		.70				2.55			1.05	2.68
	22.0		.65				2.70			.98	2.65
	23.5		.65				2.65			.98	2.60
	25.0		.55				2.30			.83	1.91
	26.5		.50				2.20			.75	1.65
	28.0		.45				2.30			.68	1.564
⊙	29.5		.50				2.35			.75	1.762
	31.0		.60				2.50			.90	2.25
	32.5		.55				2.50			.83	2.075
	34.0		.65				2.60			.98	2.55
	35.5		.70				2.40			1.05	2.52
	37.0		.80				2.20			1.20	2.64
	38.5		.65				.70			.98	.686
	39.0	.5	0				0			0	0
											42.42

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003587

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

Date 4/7/95, 19..... Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS

Time		Recorder	Inside	Outside
			1.35	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter .....

Date rated 4/7/95 ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots ..... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 50 feet mile, above, below gage and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth, sand and gravel

Flow Smooth, steady Weather Sunny, clear, hot

Other ..... Air ..... °F@ 27.2

Gage ..... Water ..... °F@ 20.1 C

..... Record removed ..... Intake flushed U

Observer .....

Control .....

Remarks Pt. 9.0 Electro 320

G. H. of zero flow ..... ft.

USAV2-00003588

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	18.5	0	0				0			0	0
	20.0	1.5	.40				1.25			.60	.750
	21.0	1.0	.40				1.40			.40	.560
	22.0	1.0	.45				1.70			.45	.765
	23.0		.55				2.10			.55	1.155
	24.0		.60				2.50			.60	1.500
	25.0		.55				2.50			.55	1.375
	26.0		.65				2.50			.65	1.625
	27.0		.55				2.51			.55	1.380
	28.0		.55				2.40			.55	1.320
	29.0		.55				2.50			.55	1.375
	30.0		.50				2.40			.50	1.200
	31.0		.45				2.50			.45	1.125
	32.0		.45				2.50			.45	1.125
⊙	33.0		.35				2.40			.35	.840
	34.0		.50				2.25			.50	1.125
	35.0		.50				2.15			.50	1.075
	36.0		.50				2.15			.50	1.075
	37.0		.60				2.45			.60	1.470
	38.0		.60				2.70			.60	1.620
	39.0		.60				2.70			.60	1.620
	40.0		.60				2.40			.60	1.440
	41.0		.60				2.50			.60	1.500
	42.0		.55				2.30			.55	1.265
	43.0		.60				2.00			.60	1.200
	44.0		.55				1.90			.55	1.045
	45.0		.70				2.00			.70	1.400
	46.0		.60				2.10			.60	1.260
	47.0		.65				1.75			.65	1.137
	48.0		.65				1.35			.65	.877
	50.0	2.0	0				0			0	0
											35.27

.0 .10 .20 .30 .40 .50 .60 .70 .75

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....

West Arawapa Creek

Date April 24, 1995 Party Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.60	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter Marsh McBirney

Date rated 4/24/95 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge 20 feet, mile, above, below gage and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth sand and gravel

Flow Slow, smooth, steady Weather Clear, Sunny, Warm

Other ..... Air .....°F@ 29.8C

Gage ..... Water .....°F@ 23.6C

..... Record removed ..... Intake flushed U L [redacted]

Observer .....

Control .....

Remarks PH [redacted] 9.0 Electro 330

G. H. of zero flow ..... ft.

USAV2-00003590

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	7.0	0	0				0				
	8.5	1.5	.35				.80			.525	.42
	10.0	1.5	.45				1.25			.675	.8438
	11.5	1.5	.45				1.70			.675	1.1475
	13.0		.50				1.80			.75	1.35
	14.5		.55				2.10			.825	1.7325
	16.0		.50				2.40			.75	1.8
	17.5		.50				2.25			.75	1.6875
	19.0		.55				2.05			.825	1.6913
	20.5		.55				2.00			.825	1.65
	22.0		.50				2.30			.75	1.725
	23.5		.55				2.25			.825	1.8563
	25.0		.55				2.30			.825	1.8975
	26.5		.60				2.50			.9	2.25
⊙	28.0		.65				2.30			.975	2.2425
	29.5		.60				2.45			.9	2.205
	31.0		.60				2.40			.9	2.16
	32.5		.55				2.30			.825	1.8975
	34.0		.55				2.01			.825	1.6583
	35.5		.45				1.30			.675	.8775
	37.0		.55				1.25			.825	1.0313
	38.5		.65				1.20			.975	1.17
	40.0	1.5	.70				.60			1.05	.63
	41.0	1.0	0				0				
										17.85	
											33.9235

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003591

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor

Date

Stream: West Arawaya Creek

Flow cfs: EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.59	

Gage

Type of meter: Marsh McBirney

Date rated: 5/8/95 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... feet, mile, above, below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section: Smooth gravel / cobble

Flow: Smooth steady Weather: Scattered clouds, windy

Other: Light flooding yesterday

Specific	pH	Time	TEMPERATURE °C	
390	9.1		A 24.6 C	B 22.3

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments: Heavy rains and light flooding yesterday
Not much runoff

USAV2-00003592

Angle of flow	Dist. from initial point	Width	Depth	Depth of flow	Revolutions	Time in sec.	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	6.0	0	0				0				
	7.5	1.5	.40				.70			.6	.42
	9.0	1.5	.50				1.30			.75	.975
	10.5	1.5	.50				1.65			.75	1.2375
	12.0		.55				2.15			.825	1.7738
	13.5		.60				2.20			.9	1.98
	15.0		.60				2.30			.9	2.07
	16.5		.65				2.20			.975	2.145
	18.0		.70				2.15			1.05	2.2575
	19.5		.70				2.15			1.05	2.2575
	21.0		.65				2.15			.975	2.0963
	22.5		.65				2.35			.975	2.2913
	24.0		.70				2.90			1.05	3.045
	25.5		.60				2.90			.9	2.61
	27.0		.60				2.80			.9	2.52
	28.5		.60				2.50			.9	2.25
	30.0		.55				2.60			.825	2.145
	31.5		.45				2.00			.675	1.35
	33.0		.35				1.20			.525	.63
	34.5		.45				1.10			.675	.7425
	36.0		.45				1.80			.675	1.215
	37.5		.55				1.20			.825	.99
	39.0		.55				.50			.825	.4125
	40.0	1.0	0				0				
										18.525	39.413

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morgan
Date 5/20/95

Stream West Aravaipa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside

Gage

Type of meter Marsh McBirney
Date rated 5/20/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side
bridge ..... 2.0 feet, mile, above, below
gage and .....

Measurement rated excellent (1%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth, gravel, sand, mois
Flow Smooth, steady Weather Sunny, clear, warm
Other .....

Specific	pH	Time	TEMPERATURE °C	
340	8.8		A 28.6	W 21.7

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS_____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

USAV2-00003594

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	5.0	0	0				0				
	6.5	1.5	.20				.30			.3	.09
	8.0	1.5	.25				.80			.375	.3
	9.5	1.5	.25				1.00			.375	.375
	11.0		.25				1.00			.375	.375
	12.5		.60				1.65			.9	1.485
	14.0		.85				2.60			1.275	3.315
	15.5		.80				2.70			1.2	3.24
	17.0		.80				3.00			1.2	3.6
	18.5		.75				3.00			1.125	3.375
	20.0		.70				2.90			1.05	3.045
	21.5		.75				3.00			1.125	3.375
	23.0		.85				3.00			1.275	3.825
	24.5		.90				2.80			1.35	3.78
⊙	26.0		.65				2.40			.975	2.34
	27.5		.45				2.10			.675	1.4175
	29.0		.35				1.90			.525	.9975
	30.5		.20				.90			.3	.27
	32.0		.10				0			.15	0
	33.5		.20				.20			.3	.06
	35.0		.30				.80			.45	.36
	36.5		.30				.70			.45	.315
	38.0	1.5	0				0				
										15.75	3.594

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor

Date

Stream: West Anaconda Creek

Flow cfs

EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.25	

Gage

Type of meter .....

Date rated June 15, 195 for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... % diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge ..... 2 feet mile, above below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel

Flow Smooth steady Weather Sunny, clear, breezy

Other .....

Specific	pH	Time	TEMPERATURE °C	
			A	W

DO

BACTERIA Concentration/100ml FC____ FS____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in	blank		
Time out			

Fecal Strep	Volumes	Count	Comments
Time in	blank		
Time out			

Comments

USAV2-00003596

River at - -

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for bar. angle or	Area	Discharge
	12.0	0	0								
	13.0	1.0	.20				.90			.2	.18
	14.0	1.0	.60				2.00			.6	1.2
	15.0	1.0	.70				2.10			.7	1.47
	16.0		.80				2.50			.8	2.0
	17.0		.85				2.60			.85	2.21
	18.0		.90				3.10			.9	2.79
	19.0		.90				3.10			.9	2.79
	20.0		.75				3.20			.75	2.4
	21.0		.85				2.65			.85	2.2525
	22.0		.90				2.60			.9	2.34
	23.0		.85				3.00			.85	2.55
	24.0		.90				3.10			.9	2.79
	25.0		.90				2.50			.9	2.25
⊙	26.0		.85				2.25			.85	1.9125
	27.0		.85				2.30			.85	1.955
	28.0		.30				1.10			.3	.33
	29.0		.20				.30			.2	.06
	30.0	1.0	0				0				
										12.3	
											31.48

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003597

9-275-F
(May 1971)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

DISCHARGE MEASUREMENT NOTES

Meas. No. .....

Comp. by .....

Checked by .....

Sta. No. .....
West Fork Cache Creek

Date 7/10/95, 19..... Party Sue Morgan

Width ..... Area ..... Vel. ..... G. H. ..... Disch. .....

Method ..... No. secs. ..... G. H. change ..... in ..... hrs. Susp. .....

Method coef. ..... Hor. angle coef. ..... Susp. coef. ..... Meter No. .....

GAGE READINGS				
Time		Recorder	Inside	Outside
			1.00	
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter .....

Date rated ..... for rod, other.

Meter ..... ft. above bottom of weight.

Spin before meas. ..... after .....

Meas. plots .... %, diff. from rating .....

Wading, cable, ice, boat, upstr., downstr., side bridge .....20 feet, mile, above, below gage, and .....

Check-bar, found .....

changed to ..... at .....

Correct .....

Levels obtained .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section ...smooth gravel

Flow ...Steady, smooth..... Weather ...Hot, sunny, clear...

Other ..... Air .....°F@ 30.6

Gage ..... Water .....°F@ 26.4

..... Record removed ..... Intake flushed U .....

Observer .....

Control .....

Remarks PH 8.4 Electro 390

G. H. of zero flow ..... ft.

USAV2-00003598

River at--

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for bar, angle or	Area	Discharge
	10.8	0	0				0			0	0
	11.0	1.0	.20				.50			.20	.100
	12.0	1.0	.50				1.25			.50	.875
	13.0	1.0	.65				2.00			.65	1.300
	14.0		.70				2.40			.70	1.68
	15.0		.80				2.50			.80	2.00
	16.0		.80				2.70			.80	2.16
	17.0		.80				2.55			.80	2.04
	18.0		.80				3.20			.80	2.56
	19.0		.80				2.50			.80	2.00
	20.0		.80				2.80			.80	2.24
	21.0		.85				2.70			.85	2.30
	22.0		.90				2.80			.90	2.52
	23.0		.80				2.60			.80	2.08
⊙	24.0		.70				2.20			.70	1.54
	25.0		.60				2.45			.60	1.47
	26.0		.50				1.65			.50	.830
	27.0		.30				1.20			.30	.360
	28.0		.25				1.00			.25	.250
	29.0	1.0	0				0			0	0
											28.31

.80 .85 .90 .92 .94 .96 .97 .98 .99 1.00 .99 .98 .97 .96 .94 .92 .90 .86 .54

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003599

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

I. Surveyor Morga
Date 7/23/95

Stream West Arawipa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.0	

Gage

Type of meter .....
Date rated ..... for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... %, diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side
bridge .....20. feet, mile, above, below
gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel
Flow Smooth Weather Sunny, clear
Other .....

Specific	pH	Time	TEMPERATURE °C	
370	8.4		A 31.8	W 25.8

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS_____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

Angle and Lines	Dist. from initial point	Width	Depth	Depth at 0.6	Revolutions	Time in sec-onds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	11.0	0	0				0			0	0
	12.0	1.0	.30				1.50			.30	.45
	13.0	1.0	.50				2.10			.50	1.05
	14.0		.65				2.25			.65	1.46
	15.0		.70				2.20			.70	1.54
	16.0		.80				2.65			.80	2.12
	17.0		.85				3.00			.85	2.55
	18.0		.90				3.00			.90	2.70
	19.0		.95				3.50			.95	3.33
	20.0		.80				2.90			.80	2.32
	21.0		.80				2.50			.80	2.00
	22.0		.80				2.85			.80	2.28
	23.0		.80				2.90			.80	2.32
	24.0		.75				2.60			.75	1.95
⊙	25.0		.70				2.15			.70	1.51
	26.0		.65				2.25			.65	1.46
	27.0		.50				2.00			.50	1.00
	28.0		.35				1.00			.35	.35
	29.0		0				0			0	0
											30.39

.0 .10 .20 .30 .40 .50 .60 .70 .75

USAV2-00003601

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morgan
Date 8/6/95

Stream West Arawapa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.00	

Gage

Type of meter .....
Date rated 8/6/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge 15 feet, mile, above, below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Smooth gravel

Flow Smooth, steady Weather Clear Sunny

Other .....

Specific	pH	Time	TEMPERATURE °C	
380	8.6	A.M.	A 34.6	W

DO

BACTERIA Concentration/100ml FC_____ FS_____ Ratio FC/FS_____

Fecal Coliform	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Fecal Strep	Volumes	Count	Comments
Time in_____	blank		
Time out_____			

Comments

USAV2-00003602

River at

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in sec. conds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	10.0	0	0				0			0	0
	11.0	1.0	.20				.50			.20	.100
	12.0	1.0	.40				1.30			.40	.520
	13.0	1.0	.55				1.70			.55	.935
	14.0		.55				1.65			.55	.908
	15.0		.65				1.80			.65	1.17
	16.0		.80				1.85			.80	1.48
	17.0		.85				2.40			.85	2.04
	18.0		.85				2.45			.85	2.08
	19.0		.85				2.60			.85	2.21
	20.0		.90				2.70			.90	2.43
	21.0		.80				2.40			.80	1.92
	22.0		.80				2.40			.80	1.92
	23.0		.75				2.45			.75	1.84
⊙	24.0		.70				2.20			.70	1.54
	25.0		.65				1.80			.65	1.17
	26.0		.60				2.00			.60	1.20
	27.0		.50				1.60			.50	.80
	28.0		.25				.85			.25	.213
	29.0	1.0	0				0			0	0
											24.48

.0 .10 .20 .30 .40 .50 .60 .70 .75

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

STREAM WATER ANALYSIS RECORD

1. Surveyor Morgan
Date 11/26/95

Stream West Arawaipa Creek

Flow cfs
EST MEAS

GAGE READINGS

Time		Recorder	Inside	Outside
			1.27	

Gage

Type of meter Marsh McBirney
Date rated 11/26/95 for rod, other.
Meter ..... ft. above bottom of weight.
Spin before meas. ..... after .....
Meas. plots .... % diff. from rating .....
Wading, cable, ice, boat, upstr., downstr., side bridge ..... 1.5 feet, mile, above, below gage, and .....

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Mostly smooth cobble
Flow Smooth, steady Weather Sunny, windy
Other

Specific	pH	Time	TEMPERATURE °C	
360	8.7	1515	A 21.6	W 15.1

DO

BACTERIA Concentration/100ml FC____ FS____ Ratio FC/FS____

Fecal Coliform	Volumes	Count	Comments
Time in	blank		
Time out			

Fecal Strep	Volumes	Count	Comments
Time in	blank		
Time out			

Comments

Great fall colors, several coati at gage area

USAV2-00003604

River at · ·

Angle coefficient	Dist. from initial point	Width	Depth	Observed depth	Revolutions	Time in seconds	VELOCITY At point	VELOCITY Mean in vertical	Adjusted for hor. angle or	Area	Discharge
	6.0	0	0				0				
	7.5	1.5	.35				.70			.53	.371
	9.0	1.5	.35				1.00			.53	.530
	10.5	1.5	.55				1.75			.83	1.45
	12.0	↓	.65				2.00			.98	1.96
	13.5		.65				1.90			.98	1.86
	15.0		.65				2.20			.98	2.16
	16.5		.70				2.20			1.05	2.31
	18.0		.60				2.10			.90	1.89
	19.5		.50				2.00			.75	1.50
	21.0		.55				2.10			.83	1.74
	22.5		.50				2.40			.75	1.80
	24.0		.50				2.40			.75	1.80
	25.5		.50				2.50			.75	1.88
⊙	27.0		.40				2.00			.60	1.20
	28.5		.35				1.80			.53	.954
	30.0		.30				1.80			.45	.810
	31.5		.40				1.80			.60	1.08
	33.0		.40				1.85			.60	1.11
	34.5		.70				1.55			1.05	1.63
	36.0		1.00				1.65			1.50	2.48
	37.0		0				0			0	0
											30.52

.0 .10 .20 .30 .40 .50 .60 .70 .78

USAV2-00003605