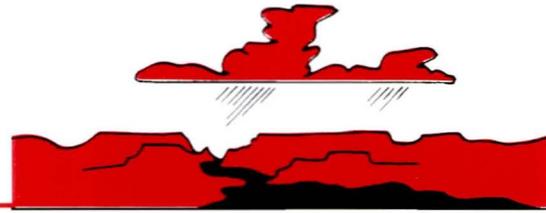


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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report
City of Glendale, Arizona

Third Quarter 2002

April 5, 2002

FLOOD CONTROL
DISTRICT

OF
MARICOPA

1102.064

Stormwater Quality Report

Third Quarter, Sampling Year 2002

January 1, 2002 through March 31, 2002

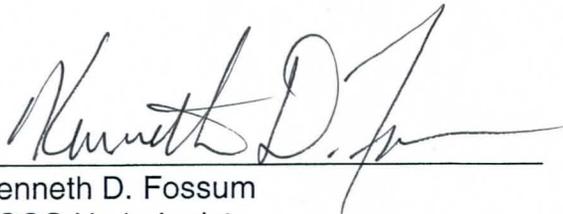
For

City of Glendale, Arizona

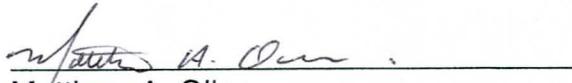
April 5, 2002

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Prepared by:


Kenneth D. Fossum
USGS Hydrologist

Reviewed by:


Matthew A. Oller
Water Quality Hydrologist

Stormwater Quality Report
City of Glendale, Arizona

Third Quarter 2002

April 5, 2002

Introduction

The U.S. Geological Survey operates and maintains five land based stormwater monitoring stations for the City of Glendale for compliance with their National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit.

This report details stormwater sampling and equipment upkeep for the five Glendale stations for the period from January 1, 2002 through March 31, 2002.

During storm events, only representative storm events are sampled. A representative storm event has occurred when the following criteria have been met **and there has been no rainfall greater than 0.10 inches within the previous 72 hours.**

GLENDALE	RAINFALL	DURATION
WINTER (October – March)	0.2 – 0.7 INCHES	5.2 – 15.6 HOURS
SUMMER (April – September)	0.2 – 0.8 INCHES	2.2 – 6.5 HOURS

Storm duration is defined as the time period from start to end of a sustained rainfall. Sustained rainfall is defined as rainfall that continues without a gap of greater than 150 consecutive minutes. If a gap greater than 150 consecutive minutes occurs, then the rainfall is considered to be from a separate storm event. Summer months are April through September and winter months are October through March.

Representative Storm Event Summaries

This is a summary of representative storm events that occurred during the third quarter of the 2002 sample year, from January 1 through March 31, 2002. No representative storm events occurred during this period.

Table 1 of this report, lists storm events with rainfall greater than 0.20 inches of rain (Glendale minimum winter rainfall criteria). Table 1 also specifies reasons why samples were not collected and/or analyzed. Table 2 of this report, summarizes data retrievals from the sites.

TABLE 1
SUMMARY OF GLENDALE STORM EVENTS
WITH RAINFALL > 0.20 INCHES BUT NOT SAMPLED
JANUARY 1, 2002 – MARCH 31, 2002

SITE	DATE	RAIN (inches)	REASONS NOT SAMPLED
None	NA	NA	NA

TABLE 2
SUMMARY OF DATA RETRIEVALS
JANUARY 1, 2002 – MARCH 31, 2002

SITE	DATE	RETRIEVAL TYPE
ARROW	01/04/02	Phone - Weekly
ARROW	01/11/02	Phone - Weekly
ARROW	01/18/02	Phone - Weekly
ARROW	01/25/02	Phone - Weekly
ARROW	01/28/02	Onsite
ARROW	01/31/02	Onsite - Storm
ARROW	02/08/02	Phone - Weekly
ARROW	02/15/02	Phone - Weekly
ARROW	02/22/02	Phone - Weekly
ARROW	03/01/02	Phone - Weekly
ARROW	03/04/02	Onsite
ARROW	03/08/02	Phone - Weekly
ARROW	03/15/02	Phone - Weekly
ARROW	03/22/02	Phone - Weekly
ARROW	03/29/02	Phone - Weekly
BUTLER	01/04/02	Phone - Weekly
BUTLER	01/11/02	Phone - Weekly
BUTLER	01/18/02	Phone - Weekly
BUTLER	01/25/02	Phone - Weekly
BUTLER	01/31/02	Onsite - Storm
BUTLER	02/08/02	Phone - Weekly
BUTLER	02/15/02	Phone - Weekly
BUTLER	02/22/02	Phone - Weekly
BUTLER	03/01/02	Phone - Weekly
BUTLER	03/04/02	Onsite
BUTLER	03/08/02	Phone - Weekly
BUTLER	03/15/02	Phone - Weekly
BUTLER	03/22/02	Phone - Weekly
BUTLER	03/29/02	Phone - Weekly
CITRUS	01/04/02	Phone - Weekly
CITRUS	01/11/02	Phone - Weekly
CITRUS	01/18/02	Phone - Weekly
CITRUS	01/25/02	Phone - Weekly
CITRUS	01/31/02	Onsite - Storm
CITRUS	02/08/02	Phone - Weekly
CITRUS	02/15/02	Phone - Weekly
CITRUS	02/22/02	Phone - Weekly
CITRUS	03/01/02	Phone - Weekly
CITRUS	03/04/02	Onsite
CITRUS	03/08/02	Phone - Weekly
CITRUS	03/15/02	Phone - Weekly
CITRUS	03/22/02	Phone - Weekly
CITRUS	03/29/02	Phone - Weekly
IND PARK	01/04/02	Phone - Weekly
IND PARK	01/10/02	Onsite
IND PARK	01/18/02	Phone - Weekly
IND PARK	01/25/02	Phone - Weekly
IND PARK	01/28/02	Onsite

IND PARK	01/31/02	Onsite - Storm
IND PARK	02/08/02	Phone - Weekly
IND PARK	02/15/02	Phone - Weekly
IND PARK	02/22/02	Phone - Weekly
IND PARK	03/01/02	Phone - Weekly
IND PARK	03/04/02	Onsite
IND PARK	03/08/02	Phone - Weekly
IND PARK	03/15/02	Phone - Weekly
IND PARK	03/22/02	Phone - Weekly
IND PARK	03/29/02	Phone - Weekly

OLIVE	01/04/02	Phone - Weekly
OLIVE	01/11/02	Phone - Weekly
OLIVE	01/18/02	Phone - Weekly
OLIVE	01/25/02	Phone - Weekly
OLIVE	01/31/02	Phone - Storm
OLIVE	02/08/02	Phone - Weekly
OLIVE	02/15/02	Phone - Weekly
OLIVE	02/22/02	Phone - Weekly
OLIVE	03/01/02	Phone - Weekly
OLIVE	03/08/02	Phone - Weekly
OLIVE	03/15/02	Phone - Weekly
OLIVE	03/22/02	Phone - Weekly
OLIVE	03/29/02	Phone - Weekly

Maintenance Summary

This section details maintenance activities and problems that occurred from January 1 through March 31, 2002. All water quality samplers are SIGMA 900 MAX models with the exception of the Olive stormwater station, which uses an ISCO model 3700 sampler.

ARROW

The sampler was reset on January 2, 28, 31, March 4, & 21. The phone battery was replaced on January 15, 28, 31, March 4, & 21. Data was downloaded to the DTU onsite on January 28, 31 and March 4. All sampler tubing and collection bottles were cleaned on January 31.

BUTLER

The sampler was reset on January 17, 28, 31, March 4, & 21. Data was downloaded to the DTU onsite on January 31 and March 4. Dead phone line was reported to FCDMC on March 4 and was repaired and operating by March 6.

CITRUS

The sampler was reset on January 28 and March 4. Data was downloaded to the DTU onsite on January 31 and March 4. All sampler tubing and collection bottles were cleaned on January 31.

INDUSTRIAL PARK

The sampler was reset on January 28, 31 and March 4. Data was downloaded to the DTU onsite on January 10, 28, 31 and March 4. All sampler tubing and collection bottles were cleaned on January 31. The strainer on the intake was changed on March 4.

OLIVE

The sampler tubing and collection bottle was cleaned on January 31. The data logger battery was replaced on January 31. The nitrogen tank was changed on February 1. The old gage house was replaced with a new traffic box gage house on March 28. The sampler battery and power cable was replaced on March 29. A new strainer was installed on the intake on March 29.

Data compiled for January 1 through March 31, 2002

The remainder of this report contains data. The following data are included:

- Rainfall tables for five Glendale NPDES raingages.
- Rainfall data for four Glendale ALERT raingages.
- Operation and maintenance log sheets.

STORM WATER QUALITY RAINFALL GAGES

Gage Rainfall (inches)													
Gage Number		ARROW											
Location		Skunk Creek near 79th Avenue											
		July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1			gage				"						
2			not				gage						
3		0.12	working				not						
4			"				working						
5			"			gage							
6		0.07	"			not							
7			"			working							
8			"			"							
9			"			"							
10			"			"							
11			"			"	0.08						
12			"	gage		"	0.06						
13			"	not		"							
14			"	working		"							
15			"	"		"							
16			"	"		"							
17			"	"		"							
18			"	"		"							
19			"	"		"							
20			"	"		"							
21			"	"		"							
22			gage	"		"							
23			not	"		"							
24			working	"		"							
25		gage		"		"							
26		not		"		"							
27		working		"		"							
28		"		gage		"							
29		gage		not		"							
30		not		working		"		0.16					
31		working											
Month Total		0.19	0.00	0.00	0.00	0.00	0.14	0.16	0.00	0.00	0.00	0.00	0.00

Gage Rainfall (inches)													
Gage Number		BUTLER											
Location		56th Drive and Orchid Lane											
		July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1													
2													
3													
4							0.64						
5						0.06							
6		0.10											
7													
8													
9			0.32										
10			0.05										
11			0.31				0.13						
12							0.02						
13													
14													
15													
16													
17			0.04										
18													
19													
20													
21													
22													
23													
24													
25		0.22											
26													
27													
28													
29		0.61											
30		0.11						0.03					
31													
Month Total		1.04	0.72	0.00	0.00	0.06	0.79	0.03	0.00	0.00	0.00	0.00	0.00

FLOOD CONTROL DISTRICT
A.L.E.R.T GAGES

Gage Rainfall (inches)													
Gage Number		4785											
Location		Butler Park											
		July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1													
2													
3													
4							0.59						
5						0.04	0.04						
6													
7		0.08											
8													
9			0.28										
10			0.04	—									
11							0.08						
12			0.28				0.04						
13													
14													
15													
16													
17			0.04										
18													
19													
20													
21													
22													
23													
24													
25													
26		0.16											
27													
28													
29													
30		0.71						0.04					
31													
Month Total		0.95	0.64	0.00	0.00	0.04	0.75	0.04	0.00	0.00	0.00	0.00	0.00

Gage Rainfall (inches)													
Gage Number		5505											
Location		New River at Glendale Avenue											
		July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1													
2													
3		0.12											
4		--					0.39						
5		--				0.12							
6		0.12											
7		--											
8		--											
9			0.16										
10			0.04										
11			0.20				0.12						
12													
13													
14		0.04					0.04						
15			0.04										
16													
17			0.16										
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29		0.43											
30		0.12						0.04					
31													
Month Total		0.83	0.60	0.00	0.00	0.12	0.55	0.04	0.00	0.00	0.00	0.00	0.00

Gage Rainfall (inches)													
Gage Number		5520											
Location		ACDC at 67th Avenue											
		July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1													
2													
3													
4		0.04					0.47						
5						0.20	0.04						
6													
7		0.08											
8													
9			0.63										
10													
11							0.08						
12							0.04						
13													
14													
15													
16													
17			0.31										
18													
19													
20													
21													
22													
23													
24													
25													
26		0.47											
27													
28													
29													
30		0.39						0.08					
31													
Month Total		0.98	0.94	0.00	0.00	0.20	0.63	0.08	0.00	0.00	0.00	0.00	0.00

Gage Rainfall (inches)													
Gage Number		5595											
Location		New River and Bell Road											
		July	August	September	October	November	December	January	February	March	April	May	June
		2001	2001	2001	2001	2001	2001	2002	2002	2002	2002	2002	2002
	1												
	2												
	3	0.16											
	4						0.43						
	5					0.12							
	6	0.08											
	7												
	8												
	9		0.39										
	10		0.04										
	11		0.04				0.12						
	12						0.04						
	13		0.04										
	14		0.08										
	15						0.04						
	16												
	17		0.39										
	18												
	19												
	20												
	21												
	22												
	23												
	24												
	25	0.16											
	26												
	27												
	28												
	29	0.39											
	30	0.08						0.16					
	31												
	Month Total	0.87	0.98	0.00	0.00	0.12	0.63	0.16	0.00	0.00	0.00	0.00	0.00

Operation and maintenance and storm event log sheets

STORMWATER O&M LOG SHEET

SITE	Arrow		DATE	12 January - 02	
ARRIVAL TIME	9:50	DEPARTURE TIME	9:53	SERVICED BY	NOS JLM
SAMPLER	<input checked="" type="checkbox"/> SIGMA <input type="checkbox"/> OR ISCO		MODEL NUMBER	800	<input checked="" type="checkbox"/> 900 <input type="checkbox"/> other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	← OK
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	— OK
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	Reset sampler
2	
3	

STORMWATER O&M LOG SHEET

SITE	ARROWHEAD		DATE	1/15/02	
ARRIVAL TIME	1455	DEPARTURE TIME	1500	SERVICED BY	Fossum
SAMPLER	<input checked="" type="radio"/> SIGMA OR <input type="radio"/> ISCO		MODEL NUMBER	800	<input checked="" type="radio"/> 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.3 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	CHANGED PHONE BATTERY
2	
3	

STORMWATER O&M LOG SHEET

SITE	ARROW		DATE	1/28/02	
ARRIVAL TIME	1105	DEPARTURE TIME	1145	SERVICED BY	FOSSUM
SAMPLER	SIGMA OR ISCO		MODEL NUMBER	800	900
					other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.0 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	RESET SAMPLER, PULLED DATA TO DTU, CHANGED
2	PHONE BATTERY.
3	

STORMWATER O&M LOG SHEET

SITE	ARROW		DATE	1/31/02	
ARRIVAL TIME	1300	DEPARTURE TIME	1315	SERVICED BY	Fossum
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.0 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input checked="" type="radio"/> YES <input type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input checked="" type="radio"/> YES <input type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA TO DTU, CLEANED + RESET SIGMA,
2	CHANGED PHONE BATTERY
3	

STORMWATER O&M LOG SHEET

SITE	ARROW		DATE	3/4/02	
ARRIVAL TIME	1115	DEPARTURE TIME	1145	SERVICED BY	FOSSUM + SANDERS
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.2 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	CHANGED PHONE BATTERY, PULLED DATA w/DTU.
2	RESET
3	

STORMWATER O&M LOG SHEET

SITE	Arrow		DATE	21-March-02	
ARRIVAL TIME	14:00	DEPARTURE TIME	14:15	SERVICED BY	BSW JLM
SAMPLER	SIGMA DR ISCO		MODEL NUMBER	800	900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	changed battery (PHONE) ^{500ms}
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1. sampler read 0l in rainfall reset w/o downloading
2. changed out battery
3.

STORMWATER O&M LOG SHEET

SITE	Butler		DATE	1/17/02	
ARRIVAL TIME	9:05	DEPARTURE TIME	9:07	SERVICED BY	KDF NOS
SAMPLER	<input checked="" type="radio"/> SIGMA <input type="radio"/> OR ISCO		MODEL NUMBER	800	<input checked="" type="radio"/> 900 <input type="radio"/> other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.1 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	RESET SAMPLER
2	
3	

STORMWATER O&M LOG SHEET

SITE	BUTLER		DATE	1/28/02	
ARRIVAL TIME	1025	DEPARTURE TIME	1030	SERVICED BY	FOSSUM
SAMPLER	SIGMA OR ISCO		MODEL NUMBER	800	900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.5 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	RESET SAMPLER
2	
3	

STORMWATER O&M LOG SHEET

SITE	BUTLER		DATE	1/31/02	
ARRIVAL TIME	1335	DEPARTURE TIME	1340	SERVICED BY	FOSSUM
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.7 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA TO DTU, RESET SIGMA
2	
3	

STORMWATER O&M LOG SHEET

SITE	Butler		DATE	3/4/02	
ARRIVAL TIME	13:00	DEPARTURE TIME	13:35	SERVICED BY	Fossum + SANDERS
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.6 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	No PHONE TONE
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input checked="" type="radio"/> YES <input type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input checked="" type="radio"/> YES <input type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA w/DTU. RESET. PHONE LINE DEAD.
2	
3	

STORMWATER O&M LOG SHEET

SITE	Butler		DATE	03-21-02	
ARRIVAL TIME	13:40	DEPARTURE TIME	13:45	SERVICED BY	JCM - BSW
SAMPLER	<input checked="" type="radio"/> SIGMA OR ISCO		MODEL NUMBER	800	<input checked="" type="radio"/> 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	YES <input checked="" type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	YES <input checked="" type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	Reset
2	
3	

STORMWATER O&M LOG SHEET

SITE	CITRUS		DATE	1/28/02	
ARRIVAL TIME	1150	DEPARTURE TIME	1155	SERVICED BY	FOSSUM
SAMPLER	<input checked="" type="radio"/> SIGMA OR ISCO		MODEL NUMBER	800	<input checked="" type="radio"/> 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.6 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input checked="" type="radio"/> YES <input type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input checked="" type="radio"/> YES <input type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	RESET SAMPLER
2	
3	

STORMWATER O&M LOG SHEET

SITE	CITRUS		DATE	1/31/02	
ARRIVAL TIME	1240	DEPARTURE TIME	1250	SERVICED BY	FOSSUM
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.0 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input checked="" type="radio"/> YES <input type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input checked="" type="radio"/> YES <input type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA TO DTU, CLEANED & RESET
2	SIGMA
3	

STORMWATER O&M LOG SHEET

SITE	CITRUS		DATE	3/4/02	
ARRIVAL TIME	1220	DEPARTURE TIME	1245	SERVICED BY	FOSSUM + SANDERS
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	13.3 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA w/DTU. RESET.
2	
3	

STORMWATER O&M LOG SHEET

SITE	IND PARK		DATE	1/10/02	
ARRIVAL TIME	D940	DEPARTURE TIME	1100	SERVICED BY	Fossun
SAMPLER	SIGMA OR ISCO		MODEL NUMBER	800	900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	CHANGED BATTERY volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	CLEANED AROUND INTAKE, DOWNLOADED DATA w/ DTU.
2	
3	

STORMWATER O&M LOG SHEET

SITE	IND PARK		DATE	1/28/02	
ARRIVAL TIME	0930	DEPARTURE TIME	1000	SERVICED BY	FOSSUM
SAMPLER	SIGMA DR ISCO		MODEL NUMBER	800	900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.7 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input checked="" type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA TO DTU, RESET SAMPLER
2	
3	

STORMWATER O&M LOG SHEET

SITE	IND PARK		DATE	1/31/02	
ARRIVAL TIME	1400	DEPARTURE TIME	1415	SERVICED BY	Fossun
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.0 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	PULLED DATA TO DTU, CLEANED & RESET
2	SIGMA.
3	

STORMWATER O&M LOG SHEET

SITE	IND PARK		DATE	3/4/02	
ARRIVAL TIME	1025	DEPARTURE TIME	1100	SERVICED BY	FOSSUM & SANDERS
SAMPLER	SIGMA ISCO		MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.5 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	CHANGED STRAINER ON INTAKE, PULLED
2	DATA W/ DTU. RESET
3	

STORMWATER O&M LOG SHEET

SITE	OLIVE		DATE	1/31/02	
ARRIVAL TIME	0930	DEPARTURE TIME	0950	SERVICED BY	Fossum
SAMPLER	SIGMA OR <u>ISCO</u>		MODEL NUMBER	800 900	<u>other</u>

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<u>YES</u> NO	12.8 volts
SOLAR PANEL CLEAN	<u>YES</u> NO	
CABLES AND CONNECTIONS GOOD	<u>YES</u> NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	<u>YES</u> NO	
RAINGAGE (screen, funnel, tipping bucket)	<u>YES</u> NO	
SAMPLE TUBING (intake, pump, distributor)	<u>YES</u> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<u>YES</u> NO	
CALIBRATED DEPTH SENSOR	<u>YES</u> NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES <u>NO</u>	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 CLEANED, RESET, CHANGED CR-10 BATTERY
2
3

STORMWATER O&M LOG SHEET

SITE	OLIVE			DATE	2/1/02	
ARRIVAL TIME	1250	DEPARTURE TIME	1305	SERVICED BY	FOSSUM	
SAMPLER	SIGMA		ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.7 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	<input type="radio"/> YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input type="radio"/> YES <input checked="" type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input type="radio"/> YES <input checked="" type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input type="radio"/> YES <input checked="" type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	CHANGED N ₂ TANK.
2	
3	

STORMWATER O&M LOG SHEET

SITE	67TH AVE + OLIVE		DATE	3/28/02	
ARRIVAL TIME	0700	DEPARTURE TIME	1430	SERVICED BY	FOSSUM, REES, SANDERS
SAMPLER	SIGMA	<input checked="" type="radio"/> ISCO	MODEL NUMBER	900	<input checked="" type="radio"/> 3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	<input checked="" type="radio"/> YES <input type="radio"/> NO	12.5 volts
SOLAR PANEL CLEAN	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CABLES AND CONNECTIONS GOOD	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CELLULAR ANTENNA	YES <input type="radio"/> NO	
PHONE TONE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
RAINGAGE (screen, funnel, tipping bucket)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
SAMPLE TUBING (intake, pump, distributor)	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	<input checked="" type="radio"/> YES <input type="radio"/> NO	
CALIBRATED DEPTH SENSOR	<input checked="" type="radio"/> YES <input type="radio"/> NO	depth (in)
CALIBRATED SAMPLE VOLUME	<input checked="" type="radio"/> YES <input type="radio"/> NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.	
1	REMOVED OLD GAGE HOUSE AND REPLACED WITH LIGHT
2	WEIGHT TRAFFIC BOX GAGE HOUSE.
3	

STORMWATER O&M LOG SHEET

SITE	67TH AVE & OLIVE		DATE	3/29/02	
ARRIVAL TIME	1230	DEPARTURE TIME	1345	SERVICED BY	FOSSUM
SAMPLER	SIGMA	ISCO	MODEL NUMBER	900	3700

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 REPLACED ISCO BATTERY AND POWER CABLE.
2 INSTALLED NEW STRAINER ON INTAKE.
3