CITY OF MESA

ARIZONA

Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

N.P.D.E.S. STORMWATER PERMIT APPLICATION

PART II

PREPARED FOR

U.S. E.P.A.
REGION IX

Registered Professional Engineer (Civil)
CERTIFICATE NO.
24990
PETER W.
KNUDSON
Date Signed 5-17-97
ARIZONA, U.S.A.

Recommended By _____ Date 5/11/93
HARRY KENT Title: City Engineer

Legal Authority Approved By _____ Date 5/4/93
NEAL BEETS Title: City Attorney

CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possible of fine and imprisonment for knowing violations."

Signature _____ Date 5/11/93
Name: CHARLES K. LUSTER Title: City Manager

Primary Contact: Peter Knudson, P.E.
Senior Civil Engineer
(602)644-2514

Secondary Contact: Keith Nath, P.E.
Deputy City Engineer
(602) 644-2512

Mailing Address: City of Mesa
Engineering Department
P. O. Box 1466
Mesa, Arizona 85211-1466

e:npdescer.tpk

TABLE OF CONTENTS

SECTION PAGE

1. Adequate Legal Authority

2. Source Identification

2.1 Major Outfalls

2.2 Industrial Inventory

3. Characterization Data

3.1 Storm Water Sampling Results

3.1.1 Description of Sample Events

3.1.2 Quantitative Data

3.1.2.1 Volatile Constituents

3.1.2.2 Pesticide Constituents

3.1.2.3 Base/Neutral and Acid Constituents

3.1.2.4 Metal Constituents

3.1.2.5 Other Constituents

3.2 Annual Pollutant Load Estimate

3.2.1 Description of Procedure

3.2.2 Monitoring Locations

3.3 Monitoring Program

3.3.1 Proposed Monitoring Schedule

3.3.2 Pollutant Load Estimate and Event Mean Concentration

3.3.3 Monitoring Equipment

Registered Professional Engineer (Civil)
CERTIFICATE NO. 24990
PETER W. KNUDSON
Date Signed 5-17-93
ARIZONA, U.S.A.

TABLE OF CONTENTS (Con't.)

SECTION PAGE

4. Storm Water Management Program

4.1 Introduction

4.2 Objectives of Management Program

4.3 Water Quality Impacts and Management Program Priorities

4.3.1 Priorities

4.4 Implementation of Mesa's Storm Water Management Program

4.4.1 Prioritized Actions

4.4.2 Program Administration

4.5 Program Description

4.5.1 Commercial and Residential Areas

4.5.2 Illicit Discharges and Improper Disposal

5. Assessment of Controls

5.1 Introduction

5.2 Retention Basins

5.3 Other Control Methods

5.4 Assessment of Impact on Groundwater

6. Fiscal Analysis

APPENDICES

Appendix A - Industrial Facility Inventory
Appendix B - Tabulated Results of Stormwater Testing
Appendix C - Runoff Volume Tables by Drainage Area
Appendix D - Runoff Volume Calculations
Appendix E - Pollutant Load Calculations

Registered Professional Engineer (Civil)
CERTIFICATE NO. 24990
PETER W. KNUDSON
Date Signed 5-17-93
ARIZONA, U.S.A.

LIST OF TABLES

Table 3-1 Description of Sampled Storm Events
Table 3-2 Summary of Other Storm Water Constituents
Table 3-3 Event Mean Concentrations by Land Use
Table 3-4 Estimated Constituents Loading
Table 3-5 Estimated Event Mean Concentrations
Table 3-6 Wet Weather Monitoring Sites
Table 3-7 Parameters to be Sampled

Table 4-2 Storm Water Management Plan (Commercial and Residential Areas)
Table 4-3 Storm Water Management Plan (Illicit Discharge and Improper Disposal)
Table 4-4 Storm Water Management Plan (Construction Sites)

Table 5-1 Pollutant Load Reduction Factors
Table 5-2 Pollutant Reduction Totals Due to Basins
Table 5-3 Best Management Practices in Mesa

Table 6-1 Breakdown of Storm Water Program Funding

Registered Professional Engineer (Civil)
CERTIFICATE NO.
124990
PETER W.
KNUDSON
Date Signed 5-17-93
ARIZONA, U.S.A.

1

1.0 ADEQUATE LEGAL AUTHORITY

Attachment 1-1 contains a new ordinance adopted by the City of Mesa which grants the City all legal authority required by the N.P.D.E.S. Stormwater Program. The ordinance was adopted on April 5, 1993.

ATTACHMENT 1-1

ATTACHMENT 1 - 1

CITY OF MESA
STORM WATER ORDINANCE

ORDINANCE NO. 2774

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MESA, MARICOPA COUNTY, ARIZONA, AMENDING THE MESA CITY CODE BY ESTABLISHING A NEW CHAPTER 5 TO TITLE 8 THROUGH ADOPTING BY REFERENCE A STORM WATER POLLUTION CONTROL CODE RELATING TO AND REGULATING DISCHARGES TO THE CITY'S STORM SEWER SYSTEM; PROVIDING FOR SEVERABILITY AND PENALTIES.

WHEREAS, the 1987 Amendments to the Federal Clean Water Act, as implemented by Environmental Protection Agency regulations adopted November 16, 1990, make necessary the adoption of plans and programs for storm water pollution control;

WHEREAS, the City of Mesa seeks to comply with all applicable provisions of state and federal law; and

WHEREAS, the adoption of plans and programs, including this ordinance, for storm water pollution control is intended to ensure the future health, safety, and general welfare of the citizens and environment of the City of Mesa by:

(1) eliminating non-storm water discharges to the City's storm sewer system,

(2) controlling the discharge to the City's storm sewer system from spills, dumping, or disposal of materials other than storm water, and

(3) reducing pollutants in storm water discharges.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF MESA, MARICOPA COUNTY, ARIZONA, AS FOLLOWS:

Section 1: That certain document known as the "CITY OF MESA STORM WATER POLLUTION CONTROL CODE," three copies of which are on file in the office of the City Clerk, which document is dated April 5, 1993 and was made a public record by Resolution No. 6528 of the City of Mesa, Arizona, is hereby referred to, adopted, and made a part hereof as if fully set out in this ordinance.

Section 2: All ordinances and parts of ordinances in conflict with the provisions of this ordinance are hereby superseded to the extent of such conflict.

Section 3: If any section, subsection, sentence, clause, phrase, or portion of this ordinance, or of the City of Mesa Storm Water Pollution Control Code adopted herein, is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

Section 4: Any person who violates any provision of this ordinance shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine not to exceed $2,500.00 or by imprisonment for a term not to exceed six months, or by both fine and imprisonment.

Section 5: Persons subject to the requirements of this ordinance shall have 90 days from the adoption date of the ordinance to obtain compliance before enforcement action may be pursued hereunder.

PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY OF MESA, MARICOPA COUNTY, ARIZONA, this 5th day of April, 1993.

CITY OF MESA CORPORATE SEAL MARICOPA COUNTY, AZ.

APPROVED:

Willie Wong
Mayor

ATTEST:

Barbara Jague
City Clerk

RESOLUTION NO. 6528

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MESA, MARICOPA COUNTY, ARIZONA, DECLARING AS A PUBLIC RECORD THAT CERTAIN DOCUMENT FILED WITH THE CITY CLERK AND ENTITLED "CITY OF MESA STORM WATER POLLUTION CONTROL CODE."

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MESA, MARICOPA COUNTY, ARIZONA, AS FOLLOWS:

That certain document dated April 5, 1993 and entitled "CITY OF MESA STORM WATER POLLUTION CONTROL CODE," three copies of which are on file in the office of the City Clerk, is hereby declared to be a public record pursuant to A.R.S. § 9-802.

PASSED AND ADOPTED BY THE CITY COUNCIL OF THE CITY MESA, MARICOPA COUNTY, ARIZONA, this 5th day of April, 1993.

CITY OF MESA CORPORATE SEAL MARICOPA COUNTY, AZ.

APPROVED:

Willie Wong
Mayor

ATTEST:

Barbara Hogue
City Clerk

MESA CITY CODE

TITLE 8

HEALTH AND SANITATION

CHAPTER 5

STORM WATER POLLUTION CONTROL

SECTION:

8-5-1: Definitions
8-5-2: Illicit Discharges and Connections
8-5-3: Reduction of Pollutants in Storm Water
8-5-4: Inspections and Monitoring
8-5-5: Clean Up and Notification of Releases
8-5-6: Civil and Criminal Penalties
8-5-7: Abatement of Violations

8-5-1: DEFINITIONS:

(A) The following terms used in this Chapter shall mean:

CITY: City of Mesa, Arizona.

CITY ENGINEER: The City Engineer of the City, or authorized deputy, agent, or representative.

CITY MANAGER: The City Manager pursuant to Chapter 20 of Title 1 of the Mesa City Code, or such other person as the City Manager may designate.

CITY STORM SEWER SYSTEM: Those facilities not part of a publicly owned treatment works within the City by which storm water may be conveyed to waters of the United States, including all roads, municipal streets, catch basins, curbs, gutters, ditches, channels, storm drains, and retention or detention basins.

C.F.R. (CODE OF FEDERAL REGULATIONS): Compilation of federal regulations promulgated under the C.W.A. and incorporated herein by reference.

C.W.A. (CLEAN WATER ACT): Federal Water Pollution Control Act, as amended, 33 United States Code §§ 1251 et seq., incorporated herein by reference.

E.P.A. (ENVIRONMENTAL PROTECTION AGENCY): Federal agency charged with primary enforcement of the C.W.A.

NPDES STORM WATER PERMIT: A National Pollutant Discharge Elimination System Permit, issued by the E.P.A., which authorizes the discharge of storm water pursuant to C.W.A. § 402.

PERSON: Any individual, partnership, copartnership, firm, company, corporation, association, joint stock company, trust, State, municipality, Indian tribe, political subdivision of the State, federal government agency, or any other legal entity, including their legal representatives, agents, or assigns.

PREMISES: Any building, facility, lot, parcel, real estate, or land or portion of land, whether improved or unimproved and including adjacent sidewalks and parking strips.

RELEASE: Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, placing, leaching, dumping, or disposing of a pollutant into or on any land.

STORM WATER: Storm water runoff, snow melt runoff, and surface runoff and drainage.

(B) Other terms used in this Chapter are defined in the applicable sections of the C.W.A. and the C.F.R. Summaries of those definitions are provided as follows:

BEST MANAGEMENT PRACTICES: Schedules of activities, prohibitions of practices, good housekeeping practices, pollution prevention practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to waters of the United States.

DISCHARGE: Any addition of any pollutant or combination of pollutants to waters of the United States from any point source.

POINT SOURCE: Any discernible, confined, and discrete conveyance, except agricultural discharges and return flows from irrigated agriculture.

POLLUTANT: Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water.

PUBLICLY OWNED TREATMENT WORKS: Any device or system used in the treatment of municipal sewage or industrial waste of a liquid nature which is owned by a state or municipality.

WATERS OF THE UNITED STATES: All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce.

8-5-2: ILLICIT DISCHARGES AND CONNECTIONS:

(A) Unless expressly authorized or exempted by this Chapter, no person shall discharge, directly or indirectly, to the City storm sewer system.

(B) Discharges regulated pursuant to a NPDES Storm Water Permit or other NPDES Permit under the CWA, which is issued to the person who causes the discharge, are authorized under this Chapter, provided that the person is in full compliance with all requirements of such Permit.

(C) Unless identified by the City Engineer under Subsection (D) of this Section, the following discharges are exempt from the prohibition set forth in Subsection (A) of this Section:

1. Discharges composed entirely of storm water.

2. Discharges caused by a person from any of the following activities:

(a) Water line flushing and other discharges from drinking water sources;

(b) Lawn watering;

(c) Irrigation water;

(d) Diverted stream flow;

(e) Rising groundwater;

(f) Groundwater infiltration containing no pollutants;

(g) Pumped groundwater containing no pollutants;

(h) Foundation and footing drains;

(i) Water from crawl space pumps;

(j) Air conditioning condensation and evaporative cooler runoff;

(k) Natural springs;

(l) Individual residential car washing;

(m) Flows from riparian habitats and wetlands, as those areas are designated under applicable federal and state laws;

(n) Dechlorinated swimming pool discharges;

(o) Flows resulting from fire fighting activities; or

(p) Dust control watering.

(D) No person shall cause a discharge, directly or indirectly, to the City storm sewer system which is exempted under Subsection (C) of this Section if the City Engineer identifies and provides written notice to the person that the discharge from such person has the potential to be a source of pollutants to waters of the United States.

(E) No person shall discharge, directly or indirectly, to the City storm sewer system where such discharge would result in or contribute to a violation of the NPDES Storm Water Permit issued to the City, either separately considered or when combined with other discharges. Liability for any such discharge shall be the responsibility of the person causing or responsible for the discharge, and the

person shall defend, indemnify, and hold harmless the City in all administrative or judicial enforcement actions relating to such discharge.

(F) No person shall establish, use, maintain, or continue any direct or indirect connection to the City's storm sewer system which has the potential to result in a violation of this Section. This prohibition is retroactive and shall apply to connections made in the past, regardless of whether they were made under a permit or other authorization or whether they were permissible under the law or practices applicable or prevailing at the time of the connection.

8-5-3: REDUCTION OF POLLUTANTS IN STORM WATER:

(A) All persons owning or operating facilities or engaged in activities which will or may reasonably be expected to result in pollutants entering the City storm sewer system, either directly or indirectly, shall undertake all practicable best management practices identified by the City Engineer to minimize such pollutants. Such measures shall include the requirements imposed by all of the following:

1. This Section;

2. The applicable NPDES Storm Water Permits; and

3. Any written guidelines which may be developed or referenced for general use by the City Engineer.

(B) No person shall throw, deposit, leave, maintain, keep, or permit to be thrown, deposited, left, maintained, or kept, except in appropriate containers or in lawfully established dumping grounds, any refuse, rubbish, garbage, or other discarded or abandoned objects, articles, and accumulations, in or upon any street, alley, sidewalk, storm drain, inlet, catch basin, conduit, or other drainage structures, business place, or upon any public or private lot of land in the City, so that the same becomes or could reasonably be expected to become a pollutant.

(C) Persons owning or operating a parking lot, gas station parking, storage, and loading areas, or similar premises which are exposed to rainfall shall clean those premises in a frequent and thorough manner so that storm water from such premises does not cause or contribute to a violation of Section 8-5-2.

(D) Any person performing construction shall use all practicable best management practices identified by the City Engineer to minimize pollutants and sediment from leaving the construction site. At a minimum, the person shall do both of the following:

1. Not cause or contribute to a violation of Section 8-5-2; and

2. Comply with any written guidelines which may be developed or referenced for general use by the City Engineer.

(E) Persons causing discharges who are required to submit to E.P.A. a notice of intent to comply with a NPDES Storm Water Permit shall provide a copy of such notice to the City Engineer prior to beginning the construction or operation of an industrial activity which would cause the discharge.

8-5-4: INSPECTIONS AND MONITORING:

(A) Upon presentation of credentials and at all necessary hours, all authorized employees of the City shall have free access to all premises and to all records pertaining to those premises for purposes of ensuring compliance with this Chapter. Inspection, copying, sampling, photographing, and other activities conducted on the premises shall be limited to those which are reasonably needed by the City in determining compliance with the requirements of this Chapter and all applicable NPDES Storm Water Permit conditions. All persons shall allow such activities under safe and nonhazardous conditions with a minimum of delay.

(B) In addition to those activities described in Subsection (A) of this Section, authorized City employees shall engage in monitoring necessary to ensure compliance with this Chapter and all applicable NPDES Storm Water Permit conditions. At the City's expense, the City Engineer may establish on premises such devices as the City Engineer reasonably determines are necessary to conduct sampling or metering operations. Such devices shall be installed so as to minimize the impact on the owner and occupant of the premises. During all inspections as provided in Subsection (A) of this Section, a City employee may take any samples necessary to aid in the pursuit of the inquiry or in the recordation of the activities on the premises.

(C) The City Engineer may order any person engaged in any activity or owning or operating on any premises which may cause or contribute to discharges of storm water in violation of this Chapter or any applicable NPDES Storm Water Permit condition to undertake such monitoring activities and analyses and furnish such reports as the City Engineer reasonably may specify. The costs of such activities, analyses, and reports shall be borne by the recipient of the order.

8-5-5: CLEAN UP AND NOTIFICATION OF RELEASES:

(A) As soon as any owner or operator has actual or constructive knowledge of any release which may result in pollutants or discharges that are not in compliance with this Chapter entering the City storm sewer system, such person promptly shall take all necessary steps to ensure the discovery of the source and extent, and proceed with containment and clean up, of such release.

(B) In addition to the requirements contained in Subsection (A) of this Section, such person shall notify the City Engineer of the release in both of the following manners:

1. By telephone within 24 hours, or by 12:00 p.m. of the next work day if knowledge is received on a weekend or holiday; and

2. In writing within three days of receiving knowledge of the release.

8-5-6: CIVIL AND CRIMINAL PENALTIES:

(A) The City Manager may request that the City Attorney commence civil and/or criminal action pursuant to this Section against any person who violates any requirement of this Chapter or any applicable NPDES Storm Water Permit condition.

(B) A person who violates any requirement of this Chapter or any applicable NPDES Storm Water Permit condition shall be subject to a civil penalty of not less than $100 nor more than $10,000 for each violation. Each day in which a violation continues shall constitute a separate offense.

(C) A person shall be guilty of a misdemeanor and upon conviction thereof shall be punished by a fine not to exceed $2,500 or by imprisonment in the City jail for a period not to exceed six months, or by both such fine and imprisonment, for each of the following offenses:

1. Committing a violation of this Chapter or an applicable NPDES Storm Water Permit condition after previously having been found responsible for committing three or more civil violations under this Section within a 24-month period, calculated using the dates of the commission of the offenses, whether by admission, by payment of the fine, by default, or by judgment after hearing; or

2. Failing or refusing to provide evidence of the person's identity, including full name, residence address, and date of birth, to a duly authorized agent of the City upon request, when such agent has reasonable cause to believe the person is committing or has committed a

violation of this Chapter or an applicable NPDES Storm Water Permit condition.

(D) In addition to or in lieu of all other available penalties, the City may revoke any permit, approval, or license to construct improvements to real property or operate a business in the City if the holder of such permit, approval, or license is found to be in violation of any requirement of this Chapter or any applicable NPDES Storm Water Permit condition.

8-5-7: **ABATEMENT OF VIOLATIONS:**

(A) In addition to or in lieu of other penalties available under this Chapter, the City may serve a notice to abate upon any person engaged in any activity or owning or operating on any premises in violation of this Chapter or an applicable NPDES Storm Water Permit condition.

(B) The notice to abate shall set forth all of the following information:

1. The period of time the person has to abate or correct the violation;

2. Identification of the property in violation by street address, if known, and if unknown, then by book, map, and parcel number;

3. Statement of the violation in sufficient detail to allow a reasonable person to identify and correct the violation;

4. Reinspection date and time;

5. Name, business address, and business telephone number of the City Engineer;

6. A warning that if the violation is not corrected within the specified time, the City may abate the problem itself or by private contractor, assess the person for the cost of such abatement, and record a lien on the property for the assessment; and

7. Appeal procedures.

(C) If the person fails to comply with the abatement notice, the City may correct or abate the conditions subject to the notice if the City Engineer determines that those conditions constitute a significant hazard. If the City corrects or abates those conditions, the City Manager may prepare a verified statement as to the actual cost of correcting or abating the violation and serve the statement upon the person.

(D) The person receiving a notice to abate or a statement of costs may appeal by submitting a written request to the City Manager within 15 days of receipt of the notice or statement. The hearing shall be held before the City Manager as soon as practicable after the filing of the request. The decision of the City Manager shall be final and binding.

(E) The notice to abate and statement of costs shall run with the land. The City, at its sole option, may record a notice or statement with the Maricopa County Recorder and thereby cause compliance by an entity thereafter acquiring such property. When the property is brought into compliance, the City shall file a satisfaction of notice to abate with the Maricopa County Recorder.

(F) If a situation presents an imminent hazard to life or public safety, the City may do any of the following without abiding by the 30-day notice period applicable to Subsection (B) of this Section:

1. Issue a notice to abate;

2. Act immediately to correct or abate the imminent hazard itself; or

3. Commence an action in Superior Court to enjoin the person to abate the imminent hazard.

2.0 SOURCE IDENTIFICATION

2.1 Major Outfalls

Mapping completed for Part 1 of this permit application identified fourteen (14) major outfalls leaving the City of Mesa. Only four (4) of these outfalls discharge directly into waters of the United States while ten (10) other major outfalls discharge into facilities owned and operated by other agencies which ultimately drain to waters in the United States. Mesa's updated list of outfalls contains one (1) additional outfall that was recently constructed. This outfall is a 72-inch pipe which discharges directly into the Salt River. This outfall has been added to our maps prepared previously.

2.2 Industrial Inventory

An inventory was conducted of industries which may discharge stormwater into the City of Mesa's Municipal Storm Sewer System. The inventory includes name, address, S.I.C. code, contact person and telephone number. Two separate direct mailings were sent out to over 200 businesses in Mesa to supplement the inventory. This mailing was used to both inform local businesses and to help identify targeted industries. An unique identifier has been assigned to each industrial facility to aid in identification. This inventory is included in Appendix A.

3

3.0 CHARACTERIZATION DATA

3.1 Storm Water Sampling Results

Five (5) separate storm water sampling stations were established in Mesa with each station representing a different land use. These five (5) land uses are representative of overall land use throughout the City. These stations were located as indicated in the City's Part 1 application and were designed to collect samples from the distinct land use type. The five (5) land uses sampled were as follows:

1. Older Single Family Residential
2. New Single Family Residential
3. Industrial
4. Mobile Home Park
5. Commercial

3.1.1 Description of Samples Events

A total of twenty-five (25) samples were collected from the five stations from six (6) separate storms. Three (3) samples were also collected from a detention basin immediately downstream of Station No. 2, 24-hours following the storm events. Two of the sampled storms occurred during the summer "monsoon" season which typically has short duration, high intensity storms. The remaining four storms occurred during winter storms which are typically of longer duration and low intensity (although there may be short periods at higher intensity during the storm). Details of each of the storm events which were sampled are provided in Table 3-1.

The criteria used for a "representative" summer storm were .24 to .72 inches of rainfall with a corresponding duration of 2.4 to 7.2 hours; winter storm criteria were .22 to 66-inches of rainfall with a corresponding duration of 5.9 to 17.7 hours. All storms were monitored and sampled between the time the automated sample station, became operational and February 20th. Due to the extreme variability in local storm events, of the six (6) storms occurring in this time frame, only one of the storms met the criteria for a "representative" storm.

DATE	STATIONS SAMPLED	RAINFALL DEPTH	RAINFALL DURATION	PRECEDING DRY PERIOD	COMMENTS
08/22/92	#1, #3	1.06 in.	< 3 Hours	9 Days	Stations #2, #4, #5 Missed Due to Equipment Problems
10/28/92	#1, #2	.24 in.	< 3 Hours	59 Days	Stations #3, #4 #5 Missed Due to Equipment Problems
12/04/92	#1, #2, #3, #4, #5	1.14 in.	> 3 Hours	36 Days	
12/08/92	#1, #2, #3, #4, #5	1.07 in.	> 3 Hours	4 Days	
01/06/93	#1, #2, #3, #4, #5	.49 in.	> 3 Hours	3 Days	
02/08/93	#1, #2, #3, #4, #5	.89	> 3 Hours	20 Days	

TABLE 3 - 1
DESCRIPTION OF SAMPLED STORM EVENTS

3.1.2 QUANTITATIVE DATA

A review of the results of the analysis indicates that levels of most of the constituents analyzed for were below the detection levels of the analytical method. A summary of the results from the analysis required for this permit application are included in Appendix B. The following Sections summarize the results by groups of parameters.

3.1.2.1 "VOLATILE" STORM WATER CONSTITUENTS (METHOD 624)

Of the 28 samples taken, methylene chloride was detected a total of three (3) times at three (3) different locations and toluene was detected a total of two (2) times at one location. Both of these pollutants were measured in the one part per billion range.

3.1.2.2 PESTICIDE STORM WATER CONSTITUENTS (METHOD 608)

One (1) pesticide was detected during sampling. The pesticide 4,4-DDE was detected from a total of eight (8) storms at three (3) locations. This constituent was in the range of one-tenth to one-hundredth of a part per billion.

3.1.2.3 BASE/NEUTRAL AND ACID STORM WATER CONSTITUENTS (METHOD 625)

One (1) constituent from this class, Bis (2-ethylhexyl) phthalate was detected seven (7) times at four (4) different locations. Five other constituents, all in very low quantities, were found together at one site from one storm These five constituents were Benzo(a)pyrene, Chrysene, Fluroranthene, Indeno (1, 2, 3 -cd) pyrene, pyrene.

3.1.2.4 METAL STORM WATER CONSTITUENTS

Four (4) different metals were detected during the sampling program. Lead was detected in the two-hundredth of a part per million range a total of three (3) times at two different locations, Zinc was detected in the range of one-tenth of a part per million total of six (6) times at four (4) different locations and both of Chromium and Nickel were detected once in the range less than one-tenth of a part per million.

3.1.2.5 OTHER STORM WATER CONSTITUENTS

The results of the remaining constituents are summarized in Table 3 - 2.

PARAMETER	UNITS	AVERAGE	HIGH	LOW	COMMENTS
TSS	Mg/L	66	180	10	
TDS	Mg/L	76	200	45	
COD	Mg/L	88	210	26	
BOD	Mg/L	9	16	5	
FECAL COLIFORM	MPN/100ML	3,631	16,000	170	
FECAL STREP	MPN/100ML	21,180	90,000	2,300	
pH		6.6	7.1	6.1	
OIL AND GREASE	Mg/L	13	22	5	Detected Only Twice
TOTAL KJELDAHL N	Mg/L	1.4	2.5	.5	
NITRATE PLUS N	Mg/L	.35	.6	.21	
DISSOLVES PHOS.	Mg/L	.16	.29	.072	
AMMONIA + ORG. N	Mg/L	.7	1.5	.2	
TOTAL PHOS.	Mg/L	.21	.56	.16	

TABLE 3 - 2

SUMMARY OF "OTHER" STORM WATER CONSTITUENTS

3.2 ANNUAL POLLUTANT LOAD ESTIMATE

3.2.1 Description of Procedure

Pollutant load estimates were developed for the City of Mesa in accordance with the requirements of the permit application. The twelve (12) constituents required to be modelled are BOD, COD, total Suspended Solids, Total Dissolved Solids, Total Nitrogen, Total Ammonia plus Organic Nitrogen, Total Phosphorous, Dissolved Phosphorous, Cadmium, Copper, Lead, and Zinc. Eleven of the above constituents were analyzed directly while total nitrogen is the sum of total Kjeldahy nitrogen and nitrate plus nitrite.

The model used to estimate total pollutants discharged from the City of Mesa was the "simple method" as described in the guidance manual. This method uses a spread sheet and multiplies the event mean concentration (EMC) of the twelve (12) constituents listed above from each drainage basin by the expected runoff volume from that drainage basin. E.M.C.'s for each of the representative land uses were determined using results from the sampling data from Section 3.1 of this report. Section 3 - 3 is a summary of the E.M.C.'s used for each representative land use. Data from Mesa's sampling program has shown concentrations of most constituents well below the national averages as contained in the National Urban Runoff Program (NURP) Study. As additional data is accumulated in Mesa, our E.M.C.'s will be refined. The runoff volume for each basin was determined using Mesa's average total annual rainfall of 7.41 inches and a runoff coefficient based on the land use and a correction factor that adjusts for storms where no runoff occurs. The runoff coefficients were determined using the actual rainfall and runoff data from our sample stations. Total rainfall and total runoff were determined for numerous storms at each of the five stations. Since each sample station was located in a separate, homogenous land use, a runoff coefficient for the various land uses was determined. A summary of land use percentages, weighted runoff coefficients and runoff volumes for each drainage area are listed in Appendix "C". Appendix "D" contains a description of the method used to calculate runoff volumes and a summary of total runoff to various receiving waters and other agencies. Appendix "E" contains a description of the pollutant load calculations and a summary of total pollutants discharged to the previously mentioned receiving waters and other agencies.

CONSTITUENT	OLDER SINGLE FAMILY RESIDENTIAL	NEWER SINGLE FAMILY RESIDENTIAL	INDUSTRIAL	MOBILE HOME PARK	COMMERCIAL
BOD	9	9	9	9	9
COD	88	88	88	88	88
TSS	66	66	66	66	66
TDS	76	76	76	76	76
TOTAL N	1.75	1.75	1.75	1.75	1.75
TOTAL NH_3	.7	.7	.7	.7	.7
TOTAL P	.21	.21	.21	.21	.21
DISSOLVED P	.16	.16	.16	.16	.16
CADMIUM	.0	.0	.0	.0	.0
COPPER	.0	.0	.0	.0	.0
LEAD	.024	.024	.024	.024	.024
ZINC	.135	.135	.135	.135	.202

TABLE 3 - 3

EVENT MEAN CONCENTRATIONS BY LAND USE
(VALUES IN Mg/L)

3.2.2 POLLUTANT LOAD ESTIMATE AND EVENT MEAN CONCENTRATIONS (E.M.C.)

The total estimated constituent loading for each of the drainage basins were summed together to give the total estimated constituent loading for the study area. Table 3 - 4 shows the breakdown of pollutant load discharged to other agencies as well as the total discharged. The amount of pollutants shown reflect the reduction of six (6) pollutants due to Mesa's extensive use of detention/retention basins. Section 5.0 of this report explains the procedure for the pollutant reduction.

The total average annual runoff volume from Mesa is estimated at 13,386.3 Acre - Feet. This combined with the total area of 75,992 acres and 7.41 inches of annual rainfall results in an average runoff coefficient of .28. This coefficient is low due to Mesa's extensive use of retention basins which contribute to the overall City area, but do not contribute to runoff.

Table 3 - 5 lists the Event Mean Concentrations for the cumulative discharges from Mesa. In addition, the ranges of each parameter detected during the wet weather monitoring are also listed.

As additional information becomes available from local monitoring data, the estimates of annual loading and event mean concentrations will be refined.

CONSTITUENT	DISCHARGE RECIPIENT				
	SALT RIVER	AZ. DEPT. OF TRANSPORTATION	SALT RIVER PROJECT	MARICOPA CO. FLOOD CONTROL	TOTAL
BOD	41.3 TONS/YR.	58.3 TONS/YR.	7.08 TONS/YR.	46.9 TONS/YR.	153.6 TONS/YR.
COD	403.4	654.2	72.8	459.3	1590.2
TSS	302.9	239.2	45.2	344.5	931.8
TDS	348.9	587.3	69.9	31.3	1030.4
TOTAL N	8.03	11.34	1.38	9.1	29.85
TOTAL NH_3	3.21	5.2	.58	3.6	12.59
TOTAL P	.96	.86	.14	1.04	3.05
DISSOLVED P	.73	114	.13	.83	2.88
CADMIUM	*	*	*	*	*
COPPER	*	*	*	*	*
LEAD	.11	.1	.017	.12	.35
ZINC	.62	.75	.1	.70	2.17

* Concentrations Below Practical Quanitation Limit

ESTIMATED CONSTITUENT LOADING
TABLE 3 - 4

CONSTITUENT	CUMULATIVE EVENT MEAN CONCENTRATION (Mg/L)	RANGE DETECTED IN SAMPLING PROGRAM (Mg/L)
BOD	8.5	5 - 16
COD	88	26 - 210
TSS	51.6	10 - 180
TDS	76	45 - 200
TOTAL NITROGEN	1.65	.71 - 3.1
TOTAL AMMONIA + NITROGEN	.7	.2 - 1.5
TOTAL PHOSPHORUS	.17	.16 - .56
DISSOLVED PHOSPHORUS	.16	.01 - .29
CADMIUM	*	*
COPPER	*	*
LEAD	.019	.021 - .027
ZINC	.12	.1 - .18

* Concentrations Below Practical Quanitation Limit

Event Mean Concentration for Cumulative Discharge from Mesa

Table 3 - 5

3.3 MONITORING PROGRAM

3.3.1 Proposed Monitoring Schedule

An ongoing storm water monitoring program is proposed to refine estimates of Event Mean Concentrations of detected pollutants and to evaluate the effectiveness of specific "Best Management Practices." This sampling program will sample one representative storm from each of the two distinct seasons, winter and summer. These two annual samples from each of the five monitoring stations would then be analyzed for every pollutant that was detected in sampling for this permit application. See Table 3 - 7. These samples would then be used to annually determine event mean concentrations for each pollutant and to determine an annual pollutant loading from each outfall.

3.3.2 MONITORING LOCATIONS

Mesa's ongoing monitoring program will utilize five (5) monitoring stations representing five different land uses. These land uses were determined to be representative of the City. These five locations are listed in Table 3 - 6.

These monitoring locations were selected on three principal criteria:

1. Representative drainage area of 50 to 300 areas.

2. Homogeneous land use (at least 90% of a single category), and

3. Adequate hydraulic characteristics to allow accurate flow monitoring. The five monitoring sites most closely met these criteria from the dozens of sites evaluated.

3.3.3 MONITORING EQUIPMENT

Storm water sampling will be aided by five (5) automatic sampling stations. These stations will perform a variety of functions including flow measurement, storm water sampling, precipitation monitoring, data logging, and communication of the status of the station to sampling personnel. A description of this equipment follows:

- Rain Gauges: Each station is equipped with a rain gauge to measure intensity, volume and duration of a storm event as well as a "trigger" to activate the sampling station.

- Flow Measurement: Flow measurement is accomplished using a depth sensor to measure stage. Flow is then determined using the known characteristics of the pipe or channel.

TABLE 3 - 6

WET WEATHER MONITORING SITES

	SITE NAME	PREDOMINANT LAND USE	DRAINAGE AREA (ACRES)	MONITOR LOCATION
MR-1	HoHoKam Village Unit I	Newer Single Family Residential	66	Manhole - Horne South of Grandview
MR-2	Horne Near Edison Elementary	Older Single Family Residential	193	Manhole - Horne South of Grandview
MR-3	Mesa Mobile Estates	Mobile Home Park Broadway & Windsor	145	Manhole - South of
MC-1	Price Club/K-Mart	Commercial South of Broadway	63	Manhole - Dobson
MI-1	Falcon Field Airport	Industrial of Fighter Aces Dr.	171	Storm Drain South side

WET WEATHER MONITORING SITES
TABLE 3 - 6

3.3.3 MONITORING EQUIPMENT (Con't.)

- Storm Water Sampling: The sampling equipment is able to sample consistent volumes at variable head differentials. The sampler will obtain a flow proportioned sample of 15 liters. Sample containers are borosilicate glass, intake hoses are teflon. Velocity within the sample tube will be at least 1 - 2 fps to maintain partial suspension.

- Data Logging: Data will be recorded in two (2) files, continuous and storm event data. Continuous data will include hourly average flows and minimum and maximum flow rates for each day. Storm event data will include rainfall and flow inputs every two (2) minutes during a storm event.

- Storm Event Monitoring/Telecommunications: The station is capable of downloading all logged data via. a modem and telephone line.

TABLE 3 - 7

PARAMETERS TO BE SAMPLED

Pollutants Previously Detected	Other Selected Pollutants not Previously Detected
TSS	Chromium
TDS	Copper
COD	Mercury
BOD	Cadmium
Fecal Californ	
Fecal Strep	
Oil and Grease	
Total Kjeldon N	
Nitrate plus N	
Dissolved Phosphorus	
Ammonia and Organic N	
Total Phosphorous	

METALS

Lead
Zinc

VOLATILIZE

Methylene Chloride
Toluene

PESTICIDES

DDE
DDT

BASE/NEUTRAL AND ACID

Benzo(a)pyrene
Chrysene
Fluroranthese
Indeno (1,2, 3 - Cd) pyrene
Pyrene

4.0 STORM WATER MANAGEMENT PROGRAM

4.1 Introduction

A comprehensive storm water management program has been developed to address storm water pollution issues throughout the City of Mesa. To be effective, this program will be flexible so to address new problems and priorities as they arise. The basis of the program is to place the majority of the City's effort in areas which are shown to be a problem or have a negative impact on receiving water. Mesa's storm water sample results have shown very few detectable pollutants although only a small number of samples have yet been analyzed. The results so far show that there are no wide spread pollution problems. Mesa's management program will therefore concentrate on the few pollutants that were detected.

4.2 Objectives of Storm Water Management Program

The primary objective of the Storm Water Management Program is to reduce pollutants to the maximum extent practicable. This is accomplished by structural and nonstructural controls to reduce the amount of pollutants entering receiving waters. Structural controls will be those controls that are permanently constructed into the storm drain system which helps in removing pollutants already in the storm water (i.e. retention/detention basins). Non-structural controls are generally methods and procedures which prevent or minimize pollutants entering storm water. The emphasis in the management program will be in the non-structural controls with the rational that preventing pollutants from entering storm water is more cost effective than pollutant removal from storm water.

4.3 Water Quality Impacts and Management Program Priorities

Storm water collected in the storm drain system in Mesa is eventually discharged into either the Gila or Salt River. These rivers are located in the arid southwestern region of the United States which receives very little precipitation (approximately 7-inches per year). As a result, these receiving waters generally have ephemeral flow resulting only from storm events. The Salt River however has occasional flows resulting from upstream water storage dam releases.

Not all storm events in this area result in flow in these waterways as the area is characterized by localized, short duration, high intensity storms. When these rivers do flow, they typically carry a very high sediment load due to the areas high intensity storms and sparse vegetation. Also because of the ephemeral flows, the receiving waters do not support populations of fish or shell fish.

These factors of short term flow, very high sediment loads and little to no aquatic life makes these receiving waters very different than typical perennial rivers in other areas. This difference and the particular characteristics of Mesa's receiving waters are the basis for the management program priorities.

4.3 Water Quality Impacts and Management Program Priorities (Continued)

In developing Mesa Management Program, each of the five general categories of pollutants were examined as to how the detected pollutant could impact the receiving water. Below is a result of this analysis. In all categories, if additional pollutants are detected in the future, the management programs will be revised to add these pollutants.

Base/Neutral/Acid Constituents (E.P.A. Method 625)

One constituent of this class, Bis (2-eyhylhexyl) phthalate was detected seven (7) times and was evaluated as a contaminant not from the storm water. This was based in Mesa's experience in drinking water and wastewater sampling and the N.U.R.P. Study which stated significant blank contamination problems with this constituent.

Five (5) other constituents were detected in very low quantities, together from one storm. These five (5) constituents were all indicative of spilled oil. The concentrations of these constituents were from a single event and were more than 100 times below the local water quality standards so were not given a high priority in the Management Program.

Pesticides (E.P.A. Method 608)

Only one pesticide was detected in Mesa Sampling, 4.4 DDE. This particular pollutant is a long lived compound, which has not been produced for many years.

Volatiles (E.P.A. Method 624)

Two volatile constituents were detected in Mesa's Sampling, Methylene Chloride and Toluene. These pollutants were detected only a few times and at levels more than 1000 times below the Local Water Quality Standards so they were not given a high priority in the Management Program.

Metals

Four (4) metals were detected in the Sampling Program, zinc, lead, chromium and nickel. Because these constituents were detected in very few samples and their concentrations were well below the Local Water Quality Standards they were not given a high priority in the Management Program.

Other Constituents (Biologies, Nutrients, Solids)

Thirteen constituents make up this category of pollutants, which were all detected in the Sampling Program.

4.3 Water Quality Impacts and Management Program Priorities (Continued)

Other Constituents (Biologies, Nutrients, Solids) (Continued)

Fecal Californ and Fecal streptococcus were the only constituents found in higher than expected levels. Data from an undeveloped watershed in the Tucson area indicated Fecal Coliform and Fecal streptococcus ranging from 0 to 760,000 with mean values of 1.6×10^5 for coliform and 9.3×10^4 for streptococcus. Also, according to Standard Methods, (1989), fecal coliform; fecal streptococcus ratios greater than 4.0 generally indicate domestic wastewater and ratios less than 0.6 are "common to discharges from farm animals or stormwater". Therefore, the testing to date shows it is unlikely that the fecal californ and streptococcus microbes are from sanitary sewer connections and are most likely the normal background levels from this region.

4.3.1 Priorities

A total of 18 of the 134 priority pollutants were detected in Mesa's Sampling Program. Based on the existing data and the professional experience of the City staff, the City prioritized all detected pollutants indicating their relative concern as either high, medium or low level of concern. Table 4.1 summarizes these priorities.

TABLE 4.1

POLLUTANT	LEVEL OF CONCERN
Total Suspended Solids	Low
Total Dissolved Solids	Low
Chemical Oxygen Demand	Low
Biochemical Oxygen Demand	Low
Fecal Coliform	Low
Fecal Strepto	Low
pH	Low
Oil and Grease	Low
Total Kjeldul Nitrogen	Low
Dissolved Phosphorus	Low
Nitrate Plus Nitrogen	Low
Ammonia Plus Organic Nitrogen	Low
Total Phosphorus	Low
Lead	Low
Zinc	Low
Methylene Chloride	Low
Toluene	Low
4, 4-DDE	Low

4.4 Implementation of Mesa's Storm Water Management Program

4.4.1 Prioritized Actions

The City developed and prioritized the following action items needed to accomplish the objectives of the Management Program. The following items will be the basis for Best Management Practices used to reduce or eliminate detected pollutants.

- Educate the public to eliminate practices which may contribute pollutants to storm water.
- Implement and enforce new City Storm Water Ordinance to reduce potential storm water contamination at the source.
- Monitor stormwater to detect changes in typical runoff.
- Evaluate and implement if needed Household Hazardous Chemical Collection Program.
- Re-evaluate program periodically to incorporate new data.

4.4.2 Program Administrative

The City's Engineering Department will coordinate and monitor all actions implemented for this program. The Engineering Department will also serve as the central point of contact for all questions relating to the N.P.D.E.S. program. Two engineering personnel will be available for the overall program coordination.

4.5 Program Description

4.5.1 Commercial and Residential Areas

Table 4-2 describes each practice which the City will implement to address pollutants from commercial and residential areas.

4.5.2 Illicit Discharges and Improper Disposal

Table 4-3 describes each practice the City will implement to detect and remove illicit discharges and improper disposal into the City Storm Sewer System.

4.5 Program Description (Con't.)

4.5.3 Municipal Landfills, Hazardous Waste Treatment, Disposal and Recovery Facilities and Industrial Facilities

Appendix B lists an inventory of identical industrial facilities and four hazardous waste treatment storage and disposal facilities located within the City. Mesa has not identified any of these industrial sites as source or potential source of storm water pollution. However, Mesa will establish a program were visual inspections will be carried at annually on targeted industrial facilities to look for potential sources of storm water pollution.

These inspections will then be used to set priorities for further inspections and possible monitoring. As Mesa is predominantly a residential community with very little industry, very few pollutant problems have been experienced and few are anticipated in the future. However, an annual, visual inspection should identify any potential pollutant sources.

4.5.4 Construction Sites

Table 4-4 describes the practices the City will undertake to reduce pollutants in storm water runoff from construction sites.

TABLE 4-2

STORM WATER MANAGEMENT PLAN
(Commercial and Residential Areas)

REQUIREMENT	ACTIONS
Description of Maintenance activities and Maintenance Schedule for Structural Controls	City owned detention basin receive regular maintenance including turf mowing and litter removal. Sediment is removed periodically from basin bottom. Catch basins are cleaned periodically to remove debris and sediment. Privately owned retention/detention basins are required to provide regular maintenance.

TABLE 4-2 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of planning procedure including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from areas of new development and significant redevelopment. The plan shall address controls to reduce pollutants after construction is complete.	Mesa has adopted comprehensive development and drainage guidelines which require new and significant redevelopment to provide detention/retention basins to store rainfall from a 100-year, 2-hour storm. This collects over 99 percent of all runoff. Smaller detention/retention basins typically then depend on percolation/evaporation or dry wells to dispose of the collected runoff thus resulting in no runoff to the City Storm Drain System. Larger basins have bleed off lines or pump stations to send their accumulated runoff to the City System. These larger basins have typically holding time greater than 24-hours resulting in significant pollutant removal.

TABLE 4-2 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of practices for operation and maintaining public streets, roads and highways, and procedures for reducing the impact on receiving waters from discharge from pollutants discharged as a result of deicing activities.	A comprehensive street sweeping program sweeps arterial streets weekly and all other streets and municipal parking lots monthly. As Mesa receives no snowfall, no deicing activities are performed.

TABLE 4-2 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Describe procedures to assure that flood management projects assess the impact on water quality of receiving waters and that existing structural flood devices have been evaluated to determine if it is feasible to retrofit the device to improve its pollutant removal efficiency.	The Flood Control District of Maricopa County owns and operates all Flood Control structures in Mesa. The Flood Control District has an ongoing program to evaluate receiving water impacts due to their projects. All future projects will be examined to assess their impact on receiving waters. All existing flood management projects are reviewed periodically. If water quality problems are identified corrective action will be taken.

TABLE 4-2 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of a program to monitor pollutants in runoff from municipal landfills and treatment, storage or disposal facilities for municipal waste which shall identify priorities for inspections and implementing control measures.	The City of Mesa has no municipal landfills storage or disposal facilities for municipal waste within its jurisdiction.

TABLE 4-2 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of a program to reduce pollutants in discharges associated with the application of pesticides, herbicides and fertilizer. As appropriate, include education, permitting, certification and public right-of-way controls.	Periodically, the City collects and disposes of residential hazardous waste dropped off by City residents. This is advertising as the proper disposal for all unused pesticides and herbicides. Public education on property application methods of pesticides, herbicides and fertilizers emphasizing the effects on receiving waters of improper application.

TABLE 4-3

STORM WATER MANAGEMENT PLAN
(Illicit Discharges and Improper Disposal)

REQUIREMENT	ACTIONS
Description of a program, including inspections, to implement and enforce an ordinance, orders or similar means to prevent illicit discharges.	A new City ordinance which is contained in this report will be the authority for both Building and Engineering Inspectors to eliminate illicit discharges. These inspectors will be trained to look for and identify illicit discharges throughout the City.
Description of procedures to conduct ongoing field screening activities during the life of the permit.	Field screening of all major outfalls will be conducted periodically using identical procedures used for field screening in the Cities Part I application.
Description of procedures to be followed to investigate portions of the Storm drain System that have a reasonable potential of containing illicit discharges based on the results of field screening.	Any suspected illicit discharge will be traced up the storm drain to its source using field investigations and possibly additional testing. Any illicit discharge discovered will be removed suing the authority of the Cities Storm Water Ordinance.

TABLE 4-3 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of procedures to prevent, contain and respond to spills that may discharge into the municipal separate storm sewer.	The City of Mesa's Fire Department operates a hazardous material response team which respond to all unknown or potentially hazardous spills. They then coordinate cleanup to minimize spread of any pollutants. Smaller spills and spills of non-hazardous material within public right-of-way are contained and cleaned by the City Street Maintenance Department. Each spill will be evaluated as to its potential to contaminate storm water and the appropriate action will then be taken.
Description of a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges or water quality impacts associated with discharges from municipal separate storm sewers.	Periodic direct mailings and public service articals will be distributed and covering significant aspects of the Management Program.

TABLE 4-3 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of educational activities, public information activities and other activities to facilitate the proper management and disposal of used oil and toxic materials.	Periodically the City holds a household hazardous waste collection. This collection is advertized through the City using numerous means. Used oil is collected by local auto parts stores. This is no cost collection is periodically advertized and is encouraged by the City.
Description of controls to limit infiltration of seepage from municipal sanitary sewers to municipal separate storm sewer systems.	Permits are required for all connection to to the sanitary or storm sewer system. The permit process allows the City to review plan and inspect work in progress.

TABLE 4-4

STORM WATER MANAGEMENT PLAN
(Construction Sites)

REQUIREMENT	ACTIONS
Description of procedures for site planning which incorporate consideration of potential water quality impacts.	The City has developed an information packet which is issued to developers during their planning stages. This information packet describes compliance requirements for erosion control and storm water pollution reduction.
Description of requirements for structural and non-structural best management practices.	All development is required to retain storm water runoff from a 100-year 2-hour storm. This will retain 99 percent of all stormwater falling on the site. The City has worked with the Flood Control District of Maricopa County and developed a manual titled "Best Management Practices and Erosion Control Manual for Maricopa County Arizona". This manual is available to all Contractors and lists numerous BMP's used on construction sites.

TABLE 4-4 (Con't.)

STORM WATER MANAGEMENT PLAN

REQUIREMENT	ACTIONS
Description of procedures for identifying priorities for inspecting sites and enforcing control measures which consider the nature of the construction activity, topography and characteristics of soils and receiving water quality.	All construction must be permitted through the Public Works Services Department. Priority for inspection will be given to sites with steep topography and significant offsite flows. Periodic review of individual projects Storm Water Pollution Prevention Plans (SWPPP) will also be used to establish inspection priorities.
Description of appropriate education and training measures for construction site operators.	Mesa has encouraged and participated in educational seminars by local construction trade groups. Various informational packs have been produced by the City and are distributed to all interested parties.

5.0 ASSESSMENT OF CONTROLS

5.1 INTRODUCTION

To evaluate the effectiveness of storm water pollutant control measures, the measures where divided into two categories:

(1) Measures which allowed direct measurement of effectiveness, and

(2) Measure requiring indirect measurement.

Control measures allowing direct measurement are those which storm water sampling can be conducted before and after the control measure and the pollutant concentrations are compared. Because of small amount of local storm water data, the results of National studies were used to estimate effectiveness of these controls in Mesa. The control measure requiring indirect measurement are much more difficult to estimate their effectiveness. Professional judgement was primarily used to estimate this type of control effectiveness.

5.2 RETENTION BASINS

Basins and detention basins are the primary means of storm water pollutant control in Mesa. All new development and significant redevelopment must retain storm water runoff from a 100 year-2 hour storm. This volume of retention will retain 99 percent of all runoff based on historic records. Detention basins are commonly used on small commercial and industrial sites. These detention basins rely on evaporation and percolation for water disposal, therefore, they have no pollutant discharge. Larger commercial and industrial developments and most residential developments typically construct detention basins in which accumulated storm water is allowed to bleed-off into the City's storm sewer system following a storm event. This storm water is typically detained from 24 to 48 hours which allows time for reduction in numerous pollutants. Because of limited local data on pollutant reduction due to detention basins, reduction factors for six (6) constituents were used which were determined in the National Urban Runoff Program and from a literature search conducted by the American Society of Civil Engineers. Table 5-1 shows the ranges of pollutant reductions found. To estimate pollutant reductions in Mesa, the lower end of the ranges were used.

	CONSTITUENT	% REMOVAL	REDUCTION MULTIPLIER FACTOR USED
RETENTION BASINS (Complete Retention)	All	100%	1
DETENTION BASINS 12 - 48 HOUR DETAINED	TSS	80 - 90%	.8
	BOD	20 - 40%	.2
	TKN	20 - 30%	.2
	TP	70 - 80%	.7
	Pb	70 - 80%	.7
	Zn	40 - 50%	.4

TABLE 5-1
POLLUTANT LOAD REDUCTION FACTORS

Using the reduction factors from Table 5 - 1, the total reduction in loading was estimated for the six constituents. This reduction amount is listed in Table 5 - 2. The calculation of this reduction is included in Appendix E.

CONSTITUENT	AMOUNT OF POLLUTANT REMOVED (TONS)
TSS	260.8
BOD	8.88
TKN	1.73
TP	.73
Pb	.082
Zn	.26

TABLE 5 - 2
ESTIMATED POLLUTANT REDUCTION TOTALS DUE TO BASINS

5.3 OTHER CONTROL METHODS

The other pollutant control measures implemented by Mesa, weather structural on non-structural will provide some amount of pollutant reduction in storm water runoff. The measure of this pollutant reduction is difficult to determine as there has been little research done on these other control measures and they will most likely provide only minor reduction in pollutants. Their benefit, therefore, was not estimated with this application. Over the life of the permit, as local data is accumulated and more nationwide studies are published, Mesa will attempt to quantify the benefits of the many Best Management Practices that are implemented. Table 5 - 3 lists the programs both existing and planned that provide some degree of pollutant removal that will be quantified in the future.

BEST MANAGEMENT PRACTICES IN MESA	
Street Cleaning	Behavior Changes in Public
Spill Cleanup	Public Information and Education
Industrial Site Permitting	Household Hazardous Waste Collection
Construction Site Permitting	

TABLE 5 - 3

5.4 ASSESSMENT OF IMPACT OF STORM WATER CONTROLS ON GROUNDWATER

For over ten years, Mesa has required both commercial and residential developments to retain storm water runoff from their developments. In past years, if a City storm drain was not nearby to allow for a bleedoff line, the developer would install drywells to dispose of surface runoff. Although Mesa now discourages drywell use, several hundred drywells have been constructed.

Two different studies have been completed evaluating the effects of storm water runoff on groundwater, and one study is in progress. The two completed studies, one by the Arizona Department of Health Service and the other from Pima County concluded that there have been no adverse impacts on groundwater from storm water controls. This issue will be reevaluated when the study by the Arizona Department of Environmental Quality is completed.

6

6. FINAL ANALYSIS

The funding for the implementation of the storm water program in Mesa has been divided into six (6) categories.

Monitoring Program	Storm Drain Maintenance
Retention Basin Maintenance	Street Clean-up
Emergency Response (Spill Clean-up)	Administration, Inspections, and Enforcement

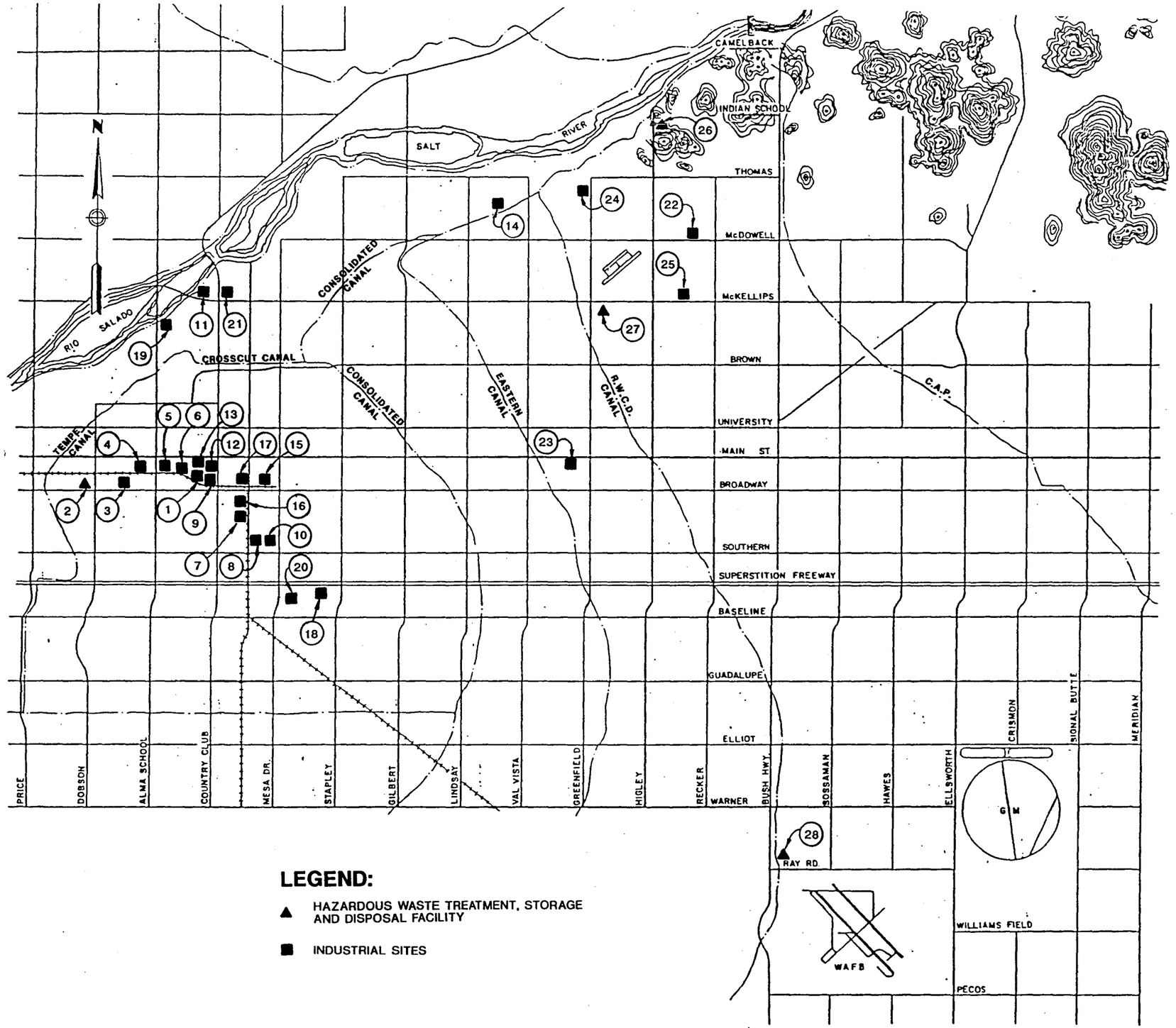
Each of these categories if funded in the current City budget and is anticipated to be funded in similar amounts in future years. The total amount budgeted for this year is $2,514,000 with $2,454.00 coming from the City's general fund and $60,000 coming from the Flood Control District of Maricopa County who will be performing the City's storm water monitoring. Table G - 1 gives a breakdown of each category and the amounts budgeted for each.

TABLE 6 - 1

BREAKDOWN OF STORM WATER PROGRAM FUNDING

1.	Monitoring Program	$ 60,000.00
2.	Storm Drain Maintenance	$ 450,000.00
	- Repair of Damaged Facilities - Sediment Removal from Catch Basin - Clearing of Debris from Inlet/Outlets - Regrade and Stabilizing Earthen Channels - Install Erosion Control Measures - Silt Removal from Retention Basins	
3.	Retention Basin Maintenance	$ 670,000.00
	- Regular Litter and Debris Removal - Turf Maintenance - Erosion Control and Bank Stabilization - Repair of Damaged Facilities	
4.	Street Cleaning	$ 1,019,000.00
	- Weekly Sweeping of Arterial Streets - Monthly Sweeping of Residential Streets	
5.	Emergency Response	
	- Spill Clean-Up	$ 65,000.00
6.	Administration, Inspection and Enforcement	$ 250,000.00
	- Annual Field Screening - Inspection of Industrial rites - Preparation of Annual Program Summaries - Legal Actions - Public Information and Educations	
	TOTAL ANNUAL FUND AVAILABLE	$ 2,514,000.00

APPENDIX A



MESA INDUSTRIAL SITES

APPENDIX A

SPILL PERMITS

LIST OF ALL RECORDS GROUPED BY MAP NUMBER

MAP NUMBER	TRANSFER AREA	BUSINESS NAME & ADDRESS	SIC NUMBER
1	3-5	ELIZABETH FOODS P.O. S. EXTENSION RD MESA, ARIZONA TIM BRIDGES (964-8761)	1062
2	3-5	MICROSOLA INC 1111 W. BROADWAY RD MESA, ARIZONA MICHAEL TRAET (962-3206)	3674
3	3-5	MASTERCRAFT CO. 315 S. BROOKS ST MESA, ARIZONA TELEPHONE TERRELL (964) 424-6900	1484
4	3-5	TITAN INSTALLATIONS 145 S. MULBERRY ST MESA, ARIZONA ROBERTO CASTILLO (898-1956)	3087
5	3-5	ACE-O-WELL INC. 113 S. ALMA SCHOOL RD MESA, ARIZONA JAMES HATMAKER (969-5501)	4226
6	3-5	ANODIZING OF MESA 1134 W. BIRCHWOOD ST MESA, ARIZONA MICHAEL TOMPKINS (833-6412)	3471
7	4-11	SWD CONTAINER 533 S. DREW ST MESA, ARIZONA STEVE SERKINS (969-8413)	3086
8	4-11	JAN'S IRON WORKS INC. 1125 S. CENTER ST MESA, ARIZONA MARK CHERY (833-7305)	3599
9	4-11	AMERICAN METALS CO. INC. 740 W. BROADWAY RD MESA, ARIZONA DEREK DAVIS (834-1923)	5093

NPDES PERMITS

LIST OF ALL RECORDS GROUPED BY MAP NUMBER

MAP NUMBER	DRAINAGE AREA	BUSINESS NAME & ADDRESS	SIC NUMBER
10	4-11	MESA FULLY FORMED CO. 1111 S. LEWIS ST MESA, ARIZONA EMILY GASSADDY (834-8331)	3281
11	4-1	DESERT TAN MANUFACTURING 840 W. McDOWELL RD MESA, ARIZONA JIM De GRAAF (827-0912)	2426
12	4-11	ATLAS ENERGY PRODUCTS 111 S. DATE ST MESA, ARIZONA SCOTT HANNINGSON (969-5966)	3086
13	4-11	F & L AUTO WORKS 110 S. EXTENSION RD MESA, ARIZONA ELLIS TAYLOR (832-9076)	5015
14	4-1	ALTEC MATERIALS 3250 E. LEHI RD MESA, ARIZONA BOB PERKINS (830-3464)	1442
15	4-11	TED LEWINE DRUM CO. 333 S. SIRRINE ST MESA, ARIZONA ARTHUR GARCIA (833-3531)	7699
16	4-11	ARIZONA FOAM & SPRAY 539 S. DREW ST MESA, ARIZONA STEVEN PERKINS	3086
17	4-11	AMERICAN RECYCLING 360 S. CENTER ST MESA, ARIZONA BOBIN FRIEDMAN (833-6100)	5093
18	4-13	THE DOOR MILL 908 E. IMPALA ST MESA, ARIZONA MIKE GARRISON (926-7112)	2431

WATER PERMITS

LIST OF ALL RECORDS GROUPED BY MAP NUMBER

MAP NUMBER	DRAINAGE AREA	BUSINESS NAME & ADDRESS		ID NUMBER
(19)	4-1	SLAWARI MATERIALS 1911 S. ALMA SCHOOL MESA, ARIZONA WILLIAM HUPPER (963-0805	RD	1442
(20)	4-13	BIBBAL POOL INC. 924 E. JUANITA UNIT 9 MESA, ARIZONA LARRY BURTON (832-9041)	AV	3444
(21)	4-4	A-1 AUTO WRECKERS 1111 S. COUNTRY CLUB MESA, ARIZONA R. & B.BEESING (964-1771)	DR	5112
(22)	4-1	BEAPLEX INC. 6601 E. McDOWELL MESA, ARIZONA ROBERT RIPPLE (985-9000)	RD	3679
(23)	4-1	BUELLOCK CABINET CO. INC. 3355 E. MAIN MESA, ARIZONA BART TOBERSPILLER (830-9818)	ST	2484
(24)	4-8	TALLEY DEFENSE SYSTEMS 3610 S. GREENFIELD MESA, ARIZONA SCOTT BARCZYNSKI (898-2433)	RD	3483
(25)	4-1	BOBBS CORPORATION 5751 E. McKELLIPS MESA, ARIZONA ANITA DAIS (786 8232)	RD	3679
(26)	4-8	DEW VEHICLE SAFETY 4151 J. HIGLEY MESA, ARIZONA	RD	
(27)	4-11	TALLEY INDUSTRIES OF AZ. 4551 E. McKELLIPS MESA, ARIZONA	RD	

NPDES PERMITS

LIST OF ALL RECORDS GROUPED BY MAP NUMBER

MAP NUMBER	DRAINAGE AREA	BUSINESS NAME & ADDRESS	SIC NUMBER
28	S-3	WILLIAMS AIR FORCE BASE S. POWER RD MESA, ARIZONA	

APPENDIX B

APPENDIX B

Tabulated Results of STorm Water Testing

PQL = Practical Quotation Limit.

WQS = State of Arizona Surface Water Quality Standard.

NURP = National Urban Runoff Program Results

Blank entry under a specific date indicates constituent level was less than practical quatitation limit.

ERR entry in "Average" column indicates constituent was not detected.

* Constituents with an asterisk are above the applicable level of the Arizona Water Quality Standards for navigable waters. Point source discharges of storm water have until January 2003 to meet these standards.

0

General Stormwater Constituents
City of Mesa
Sampling Station #1
Address: Horne & 6th St.

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10-28-92	12/4/92	12/8/92	1/7/93	Average
TSS	(mg/L)			180-548	82	89	60	30	56	63.4
TDS	(mg/L)				45	200	66	57	32	80
COD	(mg/L)			82-178	40	120	95	62	71	77.6
BOD	(mg/L)			12-19	6	16	12	10	8	10.4
Fecal Coliform	(MPN/100ml)	2.0	4000		2	16000*	800	2400	3000	4440.4
Fecal Strepto.	(MPN/100ml)				9	90000	22000	30000	13000	31001.8
pH			6.5-9.0		6.8	6.2	6.4	6.4	6.4	6.44
Oil and Grease	(mg/L)	5.0				22				22
Tot. Kjeldal N	(mg/L)			1.9-4.2	1.7	2	1.2	1	0.9	1.36
Nitrate plus N	(mg/L)			.86-2.2	0.33	0.59	0.3	0.26	0.25	0.346
Dissolved Phos	(mg/L)			.15-.28	0.18	0.23			0.081	0.163666
Ammonia+Org N	(mg/L)		VAR		0.5	1.1	0.8	0.5	0.3	0.64
Total Phos	(mg/L)			.42-.88		0.23	0.33	0.2	0.16	0.23

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #1
Address: Horne & 6th St.

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10/28/92	12/4/92	12/8/92	1/7/93	Average
Antimony	mg/L	0.020	0.056							ERR
Arsenic	"	0.020	0.02							ERR
Beryllium	"	0.010	0.065							ERR
Cadium	"	0.005	0.05V							ERR
Chromium	"	0.050	VAR							ERR
Copper	"	0.050	0.05	0.043-0.12						ERR
Cyanide	"	0.010	0.041							ERR
Lead	"	0.020	0.1V	0.18-0.44		0.021				0.021
Mercury	"	0.001	0.0024							ERR
Nickle	"	0.050	2.8V							ERR
Phenols	"	0.005	7.0						0.005	0.005
Selenium	"	0.005	20							ERR
Silver	"	0.020	VAR							ERR
Thallium	"	0.010	0.7							ERR
Zinc	"	0.100	25.0V	0.20-0.63		0.15	0.1			0.125

"Volatile" Stormwater Constituents (METHOD 624)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10-28-92	12/4/92	12/8/92	1/7/93	Average
Acrolein	micro g/L	50.0	34							ERR
Acrylonitrile	"	50.0	1400							ERR
Benzene	"	4.4	470							ERR
Bromoform	"	4.7	2800							ERR
Carbon Tetrachloride	"	2.8	8000							ERR
Chlorobenzene	"	6.0	2800							ERR
Chlorodibromomethane	"	3.1	2800							ERR
Chloroethane	"	4.2	NNS							ERR
2-Chloroethylvinyl Ether	"	8.5	180000							ERR
Chloroform	"	1.6	1400							ERR
Diclorobromomethane	"	2.2	2800							ERR
1,1-dichloroethane	"	4.7	14000							ERR
1,2-dichloroethane	"	2.8	10000							ERR
1,1-dichloroethylene	"	2.8	1300							ERR
1,2-dichloropropane	"	6.0	200							ERR
1,3-dichloropropylene	"	5.0	60							ERR
Ethylbenzene	"	7.2	23000							ERR
Methyl Bromide	"	5.2	200							ERR
Methyl Chloride	"	5.5	2800							ERR
Methylene Chloride	"	2.8	27000					1.4		1.4
1,1,2,2-Tetrachloroethan	"	6.9	450							ERR
Tetrachoroethylene	"	4.1	4000							ERR
Toluene	"	6.0	8700				‡5‡	0.7		0.35
1,2-Trans-Dicloroethylen	"	1.6	2800							ERR
1,1,1-Thicloroethane	"	3.8	2600							ERR
1,1,2-Thicloroethane	"	5.0	560							ERR
Trichloroethylene	"	1.9	20000							ERR
Vinyl Chloride	"	3.5	NNS							ERR

"Pesticide" Stormwater Constituents (METHOD 608)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10/28/92	12/4/92	12/8/92	1/7/93	Average
Aldrin	micro g/L	0.01	2.0V							ERR
BHC-ALPHA	"	0.01	1600							ERR
BHC-BETA	"	0.01	1600							ERR
BHC-GAMMA (Lindane)	"	0.01	3.4							ERR
BHC-DELTA	"	0.05	1600							ERR
Chlordane	"	0.10	2.4							ERR
4,4'-DDT	"	0.05	0.001							ERR
4,4'-DDE	"	0.01	0.001							ERR
4,4'-DDD	"	0.05	0.001							ERR
Dieldrin	"	0.01	2.5v							ERR
Endosulfan-Alpha	"	0.05	0.22							ERR
Endosulfan-Beta	"	0.02	0.22							ERR
Endosulfan Sulfate	"	0.20	0.22							ERR
Endrin	"	0.05	0.004							ERR
Endrin Aldehyde	"	0.10	0.2							ERR
Heptachlor	"	0.01	0.52							ERR
Heptachlor Epoxide	"	0.05	0.52							ERR
PCB-1242	"	0.20	0.001							ERR
PCB-1254	"	0.20	0.001							ERR
PCB-1221	"	0.20	0.001							ERR
PCB-1232	"	0.20	0.001							ERR
PCB-1248	"	0.20	0.001							ERR
PCB-1260	"	0.20	0.001							ERR
PCB-1016	"	0.20	0.001							ERR
Toxaphene	"	0.20	0.005							ERR

"Base/Neutral" Stormwater Constituents (method 625)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10\28\92	12/4/92	12/8/92	1/7/93	Average
Acenaphthene	micro g/L	1.9	850							ERR
Acenaphthylene	"	3.5	NNS							ERR
Anthracene	"	1.9	NNS							ERR
Benzidine	"	10.0	0.01							ERR
Benzo(a)anthracene	"	7.8	NNS							ERR
Benzo(a)pyrene	"	2.5	NNS							ERR
3,4-Benzofluoranthene	"	4.8	NNS							ERR
Benzo(ghi)perlyne	"	4.1	NNS							ERR
Benzo(k)fluoranthene	"	2.5	NNS							ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS							ERR
Bis(2-chloroethyl)ether	"	5.7	120000							ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600							ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400							ERR
4-Bromophenyl phenyl ether	"	1.9	180							ERR
Butylbenzyl phthalate	"	2.5	1700							ERR
2-chloronaphthalene	"	1.9	11000							ERR
4-Chlorophenyl phenyl ethe	"	4.2	NNS							ERR
Chrysene	"	2.5	NNS							ERR
Dibenzo(a,h)anthracene	"	2.5	NNS							ERR
1,2-Diclorobenzene	"	1.9	1200							ERR
1,3-Diclorobenzene	"	1.9	2500							ERR
1,4-Diclorobenzene	"	4.4	2000							ERR
3,3-dichlorobenzidine	"	17.0	NNS							ERR
Diethyl phthalate	"	22.0	26000							ERR
Dimethyl phthalate	"	1.6	17000							ERR
Di-n-butyl phthalate	"	2.5	470							ERR
2,4-dinitrotoluene	"	5.7	15000							ERR
2,6-dinitrotoluene	"	1.9	NNS							ERR
Di-n-octyl phthalate	"	2.5	NNS							ERR
1,2-Diphenylhydrazine(as a	"		130							ERR
Fluroranthene	"	2.2	2000							ERR
Fluorene	"	1.9	5600							ERR
Hexachlorobenzene	"	1.9	100							ERR
Hexachlorobutadiene	"	1.0	45							ERR
Hexachlorocyclopentadiene	"	10.0	3.5							ERR
Hexachloroethane	"	1.6	140							ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS							ERR
Isophorone	"	2.2	28000							ERR
Napthalene	"	1.6	560							ERR
Nitrobenzene	"	1.9	70							ERR
N-nitrosodimethylamine	"	10.0	NNS							ERR
N-nitrosodi-n-propylamine	"	10.0	NNS							ERR
N-nitrosodiphenylamine	"	10.0	2900							ERR
Phenanthrene	"	5.4	30							ERR
Pyrene	"	1.9	4200							ERR
1,2,4-Triclorobenzene	"	1.9	1700							ERR

"Acid" Stormwater Constituents (method 625)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	10\28\92	12/4/92	12/8/92	1/7/93	Average
2-Chlorophenol	micro g/L	3.3	700							ERR
2,4-Diclorophenol	"	2.7	420							ERR
2,4-Dimethylphenol	"	2.7	1000							ERR
4,6-Dinitro-o-Cresol	"	24.0	310							ERR
2-Nitrophenol	"	3.6	NNS							ERR
4-Nitrophenol	"	2.4	4100							ERR
P-Chloro-M-Cresol	"	3.0	15							ERR
Pentachlorophenol	"	3.6	2000V							ERR
Phenol	"	1.5	7000							ERR
2,4,6,-Trichlorophenol	"	2.7	160							ERR

General Stormwater Constituents
City of Mesa
Sampling Station #1
Address: Horne & 6th St.

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
TSS	(mg/L)			180-548	46	46
TDS	(mg/L)				35	35
COD	(mg/L)			82-178	71	71
BOD	(mg/L)			12-19	7	7
Fecal Coliform	(MPN/100ml)	2.0	4000		500	500
Fecal Strepto.	(MPN/100ml)				50000	50000
pH			6.5-9.0		6.4	6.4
Oil and Grease	(mg/L)	5.0				ERR
Tot. Kjeldal N	(mg/L)			1.9-4.2	0.9	0.9
Nitrate plus N	(mg/L)			.86-2.2		ERR
Dissolved Phos	(mg/L)			.15-.28	0.05	0.05
Ammonia+Org N	(mg/L)		VAR		0.4	0.4
Total Phos	(mg/L)			.42-.88	0.093	0.093

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #1
Address: Horne & 6th St.

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
Antimony	mg/L	0.020	0.056			ERR
Arsenic	"	0.020	0.02			ERR
Beryllium	"	0.010	0.065			ERR
Cadium	"	0.005	0.05V			ERR
Chromium	"	0.050	VAR			ERR
Copper	"	0.050	0.05	0.043-0.12		ERR
Cyanide	"	0.010	0.041			ERR
Lead	"	0.020	0.1V	0.18-0.44		ERR
Mercury	"	0.001	0.0024			ERR
Nickle	"	0.050	2.8V			ERR
Phenols	"	0.005	7.0			ERR
Selenium	"	0.005	20			ERR
Silver	"	0.020	VAR			ERR
Thallium	"	0.010	0.7			ERR
Zinc	"	0.100	25.0V	0.20-0.63		ERR

"Volatile" Stormwater Constituents (METHOD 624)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
Acrolein	micro g/L	50.0	34			ERR
Acrylonitrile	"	50.0	1400			ERR
Benzene	"	4.4	470			ERR
Bromoform	"	4.7	2800			ERR
Carbon Tetrachloride	"	2.8	8000			ERR
Chlorobenzene	"	6.0	2800			ERR
Chlorodibromomethane	"	3.1	2800			ERR
Chloroethane	"	4.2	NNS			ERR
2-Chloroethylvinyl Ether	"	8.5	180000			ERR
Chloroform	"	1.6	1400			ERR
Diclorobromomethane	"	2.2	2800			ERR
1,1-dichloroethane	"	4.7	14000			ERR
1,2-dichloroethane	"	2.8	10000			ERR
1,1-dichloroethylene	"	2.8	1300			ERR
1,2-dichloropropane	"	6.0	200			ERR
1,3-dichloropropylene	"	5.0	60			ERR
Ethylbenzene	"	7.2	23000			ERR
Methyl Bromide	"	5.2	200			ERR
Methyl Chloride	"	5.5	2800			ERR
Methylene Chloride	"	2.8	27000			ERR
1,1,2,2-Tetrachloroethan	"	6.9	450			ERR
Tetrachoroethylene	"	4.1	4000			ERR
Toluene	"	6.0	8700			ERR
1,2-Trans-Dicloroethylen	"	1.6	2800			ERR
1,1,1-Thicloroethane	"	3.8	2600			ERR
1,1,2-Thicloroethane	"	5.0	560			ERR
Trichloroethylene	"	1.9	20000			ERR
Vinyl Chloride	"	3.5	NNS			ERR

"Pesticide" Stormwater Constituents (METHOD 608)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
Aldrin	micro g/L	0.01	2.0V			ERR
BHC-ALPHA	"	0.01	1600			ERR
BHC-BETA	"	0.01	1600			ERR
BHC-GAMMA (Lindane)	"	0.01	3.4			ERR
BHC-DELTA	"	0.05	1600			ERR
Chlordane	"	0.10	2.4			ERR
4,4'-DDT	"	0.05	0.001			ERR
4,4'-DDE	"	0.01	0.001			ERR
4,4'-DDD	"	0.05	0.001			ERR
Dieldrin	"	0.01	2.5v			ERR
Endosulfan-Alpha	"	0.05	0.22			ERR
Endosulfan-Beta	"	0.02	0.22			ERR
Endosulfan Sulfate	"	0.20	0.22			ERR
Endrin	"	0.05	0.004			ERR
Endrin Aldehyde	"	0.10	0.2			ERR
Heptachlor	"	0.01	0.52			ERR
Heptachlor Epoxide	"	0.05	0.52			ERR
PCB-1242	"	0.20	0.001			ERR
PCB-1254	"	0.20	0.001			ERR
PCB-1221	"	0.20	0.001			ERR
PCB-1232	"	0.20	0.001			ERR
PCB-1248	"	0.20	0.001			ERR
PCB-1260	"	0.20	0.001			ERR
PCB-1016	"	0.20	0.001			ERR
Toxaphene	"	0.20	0.005			ERR

"Base/Neutral" Stormwater Constituents (method 625)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
Acenaphthene	micro g/L	1.9	850			ERR
Acenaphthylene	"	3.5	NNS			ERR
Anthracene	"	1.9	NNS			ERR
Benzidine	"	10.0	0.01			ERR
Benzo(a)anthracene	"	7.8	NNS			ERR
Benzo(a)pyrene	"	2.5	NNS			ERR
3,4-Benzofluoranthene	"	4.8	NNS			ERR
Benzo(ghi)perlyne	"	4.1	NNS			ERR
Benzo(k)fluoranthene	"	2.5	NNS			ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS			ERR
Bis(2-chloroethyl)ether	"	5.7	120000			ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600			ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400			ERR
4-Bromophenyl phenyl ether	"	1.9	180			ERR
Butylbenzyl phthalate	"	2.5	1700			ERR
2-chloronaphthalene	"	1.9	11000			ERR
4-Chlorophenyl phenyl ethe	"	4.2	NNS			ERR
Chrysene	"	2.5	NNS			ERR
Dibenzo(a,h)anthracene	"	2.5	NNS			ERR
1,2-Diclorobenzene	"	1.9	1200			ERR
1,3-Diclorobenzene	"	1.9	2500			ERR
1,4-Diclorobenzene	"	4.4	2000			ERR
3,3-dichlorobenzidine	"	17.0	NNS			ERR
Diethyl phthalate	"	22.0	26000			ERR
Dimethyl phthalate	"	1.6	17000			ERR
Di-n-butyl phthalate	"	2.5	470			ERR
2,4-dinitrotoluene	"	5.7	15000			ERR
2,6-dinitrotoluene	"	1.9	NNS			ERR
Di-n-octyl phthalate	"	2.5	NNS			ERR
1,2-Diphenylhydrazine(as a	"		130			ERR
Fluroranthene	"	2.2	2000			ERR
Fluorene	"	1.9	5600			ERR
Hexachlorobenzene	"	1.9	100			ERR
Hexachlorobutadiene	"	1.0	45			ERR
Hexachlorocyclopentadiene	"	10.0	3.5			ERR
Hexachloroethane	"	1.6	140			ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS			ERR
Isophorone	"	2.2	28000			ERR
Napthalene	"	1.6	560			ERR
Nitrobenzene	"	1.9	70			ERR
N-nitrosodimethylamine	"	10.0	NNS			ERR
N-nitrosodi-n-propylamine	"	10.0	NNS			ERR
N-nitrosodiphenylamine	"	10.0	2900			ERR
Phenanthrene	"	5.4	30			ERR
Pyrene	"	1.9	4200			ERR
1,2,4-Triclorobenzene	"	1.9	1700			ERR

"Acid" Stormwater Constituents (method 625)
City of Mesa
Sampling Station #1
Address: Horne & 6th St. Storm data

Parameter	Units	PQL	WQS	NURP	Dates 2/8/93	Average
2-Chlorophenol	micro g/L	3.3	700			ERR
2,4-Diclorophenol	"	2.7	420			ERR
2,4-Dimethylphenol	"	2.7	1000			ERR
4,6-Dinitro-o-Cresol	"	24.0	310			ERR
2-Nitrophenol	"	3.6	NNS			ERR
4-Nitrophenol	"	2.4	4100			ERR
P-Chloro-M-Cresol	"	3.0	15			ERR
Pentachlorophenol	"	3.6	2000V			ERR
Phenol	"	1.5	7000			ERR
2,4,6,-Trichlorophenol	"	2.7	160			ERR

General Stormwater Constituents
City of Mesa
Sampling Station #2
Address: Horne & Grandview

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/93	12/4/92	12/5/92	12/8/92	12/9/92	Average
TSS	(mg/L)			180-548	110	20	17	20	10	35.4
TDS	(mg/L)				81	56	77	160	88	92.4
COD	(mg/L)			82-178	100	51	47	40	26	52.8
BOD	(mg/L)			12-19	13	8	6	7	5	7.8
Fecal Coliform	(MPN/100ml)	2.0	4000		16000*	5000*	9000*	2400	1700	6820
Fecal Strepto.	(MPN/100ml)				30000	22000	17000	30000	5000	20800
pH			6.5-9.0		6.4	6.5	6.6	6.9	6.7	6.62
Oil and Grease	(mg/L)	5.0								ERR
Tot. Kjeldal N	(mg/L)			1.9-4.2	2	1.3	1.1	2.4	1	1.56
Nitrate plus N	(mg/L)			.86-2.2	0.5	0.32	0.21	0.45	0.21	0.338
Dissolved Phos	(mg/L)			.15-.28	0.29					0.29
Ammonia+Org N	(mg/L)		VAR		0.9	0.8	0.6	0.5	0.2	0.6
Total Phos	(mg/L)			.42-.88		0.21	0.22	0.16	0.094	0.171

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #2
Address: Horne & Grandview

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/93	12/4/92	12/5/92	12/8/92	12/9/92	Average
Antimony	mg/L	0.020	0.056							ERR
Arsenic	"	0.020	0.02							ERR
Beryllium	"	0.010	0.065							ERR
Cadium	"	0.005	0.05V							ERR
Chromium	"	0.050	VAR							ERR
Copper	"	0.050	0.05	0.043-0.12						ERR
Cyanide	"	0.010	0.041							ERR
Lead	"	0.020	0.1V	0.18-0.44						ERR
Mercury	"	0.001	0.0024							ERR
Nickle	"	0.050	2.8V							ERR
Phenols	"	0.005	7.0							ERR
Selenium	"	0.005	20							ERR
Silver	"	0.020	VAR							ERR
Thallium	"	0.010	0.7							ERR
Zinc	"	0.100	25.0V	0.20-0.63						ERR

"Volatile" Stormwater Constituents (Method 624)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/92	12/4/92	12/5/92	12/8/92	12/9/92	Average
Acrolein	micro g/L	50.0	34							ERR
Acrylonitrile	"	50.0	1400							ERR
Benzene	"	4.4	470							ERR
Bromoform	"	4.7	2800							ERR
Carbon Tetrachloride	"	2.8	8000							ERR
Chlorobenzene	"	6.0	2800							ERR
Chlorodibromomethane	"	3.1	2800							ERR
Chloroethane	"	4.2	NWS							ERR
2-Chloroethylvinyl Ether	"	8.5	180000							ERR
Chloroform	"	1.6	1400							ERR
Diclorobromomethane	"	2.2	2800							ERR
1,1-dichloroethane	"	4.7	14000							ERR
1,2-dichloroethane	"	2.8	10000							ERR
1,1-dichloroethylene	"	2.8	1300							ERR
1,2-dichloropropane	"	6.0	200							ERR
1,3-dichloropropylene	"	5.0	60							ERR
Ethylbenzene	"	7.2	23000							ERR
Methyl Bromide	"	5.2	200							ERR
Methyl Chloride	"	5.5	2800							ERR
Methylene Chloride	"	2.8	27000							ERR
1,1,2,2-Tetrachloroethan	"	6.9	450							ERR
Tetrachloroethylene	"	4.1	4000							ERR
Toluene	"	6.0	8700							ERR
1,2-Trans-Dicloroethylen	"	1.6	2800							ERR
1,1,1-Thicloroethane	"	3.8	2600							ERR
1,1,2-Thicloroethane	"	5.0	560							ERR
Trichloroethylene	"	1.9	20000							ERR
Vinyl Chloride	"	3.5	NWS							ERR

"Pesticide" Stormwater Constituents (Method 608)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/92	12/4/92	12/5/92	12/8/92	12/9/92	Average
Aldrin	micro g/L	0.01	2.0V							ERR
BHC-ALPHA	"	0.01	1600							ERR
BHC-BETA	"	0.01	1600							ERR
BHC-GAMMA (Lindane)	"	0.01	3.4							ERR
BHC-DELTA	"	0.05	1600							ERR
Chlordane	"	0.05	2.4							ERR
4,4'-DDT	"	0.05	0.001							ERR
4,4'-DDE	"	0.01	0.001							ERR
4,4'-DDD	"	0.05	0.001							ERR
Dieldrin	"	0.01	2.5v							ERR
Endosulfan-Alpha	"	0.05	0.22							ERR
Endosulfan-Beta	"	0.02	0.22							ERR
Endosulfan Sulfate	"	0.20	0.22							ERR
Endrin	"	0.05	0.004							ERR
Endrin Aldehyde	"	0.10	0.2							ERR
Heptachlor	"	0.01	0.52							ERR
Heptachlor Epoxide	"	0.05	0.52							ERR
PCB-1242	"	0.20	0.001							ERR
PCB-1254	"	0.20	0.001							ERR
PCB-1221	"	0.20	0.001							ERR
PCB-1232	"	0.20	0.001							ERR
PCB-1248	"	0.20	0.001							ERR
PCB-1260	"	0.20	0.001							ERR
PCB-1016	"	0.20	0.001							ERR
Toxaphene	"	0.20	0.005							ERR

"Base/Neutral" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/92	12/4/92	12/5/92	12/8/92	12/9/92	Average
Acenaphthene	micro g/L	1.9	850							ERR
Acenaphthylene	"	3.5	NNS							ERR
Anthracene	"	1.9	NNS							ERR
Benzidine	"	10.0	0.01							ERR
Benzo(a)anthracene	"	7.8	NNS							ERR
Benzo(a)pyrene	"	2.5	NNS							ERR
3,4-Benzofluoranthene	"	4.8	NNS							ERR
Benzo(ghi)perlyne	"	4.1	NNS							ERR
Benzo(k)fluoranthene	"	2.5	NNS							ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS							ERR
Bis(2-chloroethyl)ether	"	5.7	120000							ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600							ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400							ERR
4-Bromophenyl phenyl ether	"	1.9	180							ERR
Butylbenzyl phthalate	"	2.5	1700							ERR
2-chloronaphthalene	"	1.9	11000							ERR
4-Chlorophenyl phenyl ethe	"	4.2	NNS							ERR
Chrysene	"	2.5	NNS							ERR
Dibenzo(a,h)anthracene	"	2.5	NNS							ERR
1,2-Diclorobenzene	"	1.9	1200							ERR
1,3-Diclorobenzene	"	1.9	2500							ERR
1,4-Diclorobenzene	"	4.4	2000							ERR
3,3-dichlorobenzidine	"	17.0	NNS							ERR
Diethyl phthalate	"	22.0	26000							ERR
Dimethyl phthalate	"	1.6	17000							ERR
Di-n-butyl phthalate	"	2.5	470							ERR
2,4-dinitrotoluene	"	5.7	15000							ERR
2,6-dinitrotoluene	"	1.9	NNS							ERR
Di-n-octyl phthalate	"	2.5	NNS							ERR
1,2-Diphenylhydrazine(as a	"		130							ERR
Flurorantbene	"	2.2	2000							ERR
Fluorene	"	1.9	5600							ERR
Hexachlorobenzene	"	1.9	100							ERR
Hexachlorobutadiene	"	1.0	45							ERR
Hexachlorocyclopentadiene	"	10.0	3.5							ERR
Hexachloroethane	"	1.6	140							ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS							ERR
Isophorone	"	2.2	28000							ERR
Napthalene	"	1.6	560							ERR
Nitrobenzene	"	1.9	70							ERR
N-nitrosodimethylamine	"	10.0	NNS							ERR
N-nitrosodi-n-propylamine	"	10.0	NNS							ERR
N-nitrosodiphenylamine	"	10.0	2900							ERR
Phenanthrene	"	5.4	30							ERR
Pyrene	"	1.9	4200							ERR
1,2,4-Triclorobenzene	"	1.9	1700							ERR

"Acid" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 10/28/92	12/4/92	12/5//92	12/8/92	12/9/92	Average
2-Chlorophenol	micro g/L	3.3	700							ERR
2,4-Diclorophenol	"	2.7	420							ERR
2,4-Dimethylphenol	"	2.7	1000							ERR
4,6-Dinitro-o-Cresol	"	24.0	310							ERR
2-Nitrophenol	"	3.6	NNS							ERR
4-Nitrophenol	"	2.4	4100							ERR
P-Chloro-M-Cresol	"	3.0	15							ERR
Pentachlorophenol	"	3.6	2000V							ERR
Phenol	"	1.5	7000							ERR
2,4,6,-Trichlorophenol	"	2.7	160							ERR

General Stormwater Constituents
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	POL	WQS	NURP	Dates 1/6/93	2/8/93	2/10/93	Average
TSS	(mg/L)			180-348	49	28	6	27.67
TDS	(mg/L)				73	65	39	59.00
COD	(mg/L)			82-178	71	89	85	81.67
BOD	(mg/L)			12-19	7	8		7.50
Fecal Coliform	(MPN/100ml)	2.0	4000		250	2400	500	1050.00
Fecal Strepto.	(MPN/100ml)				9000	11000	1100	7033.33
pH			6.5-9.0		7.1	6.5	6.8	6.80
Oil and Grease	(mg/L)	5.0						NBR
Tot. Kieldal N	(mg/L)			1.9-4.2	1.1	1.4	0.6	1.03
Nitrate plus N	(mg/L)			.86-2.2	0.54	0.75		0.65
Dissolved Phos	(mg/L)			.15-.28		0.0112	0.064	0.04
Ammonia+Org N	(mg/L)		VAR		0.4	0.8	0.2	0.47
Total Phos	(mg/L)			.42-.88	0.13	0.16	0.088	0.13

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #2
Address: Horne & Grandview

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 1/6/93	2/5/93	2/10/93	Average
Antimony	mg/L	0.020	0.056					NRR
Arsenic	"	0.020	0.02					NRR
Beryllium	"	0.010	0.065					NRR
Cadium	"	0.005	0.05V					NRR
Chromium	"	0.050	VAR			0.052		0.052
Copper	"	0.050	0.05	0.043-0.12				NRR
Cyanide	"	0.010	0.041					NRR
Lead	"	0.020	0.1V	0.15-0.44				NRR
Mercury	"	0.001	0.0024					NRR
Nickle	"	0.050	2.8V			0.06		0.06
Phenols	"	0.005	7.0		0.005		.053	0.005
Selenium	"	0.005	20					NRR
Silver	"	0.020	VAR					NRR
Thallium	"	0.010	0.7					NRR
Zinc	"	0.100	25.0V	0.20-0.63				NRR

"Volatile" Stormwater Constituents (Method 624)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 1/6/93	2/8/93	2/10/93	Average
Acrolein	micro g/L	50.0	54					ERR
Acrylonitrile	"	50.0	1400					ERR
Benzene	"	4.4	470					ERR
Bromoform	"	4.7	2800					ERR
Carbon Tetrachloride	"	2.8	5000					ERR
Chlorobenzene	"	6.0	2800					ERR
Chlorodibromomethane	"	3.1	2800					ERR
Chloroethane	"	4.2	NWS					ERR
2-Chloroethylvinyl Ether	"	8.5	150000					ERR
Chloroform	"	1.6	1400					ERR
Diclorobromomethane	"	2.2	2800					ERR
1.1-dichloroethane	"	4.7	14000					ERR
1.2-dichloroethane	"	2.8	10000					ERR
1.1-dichloroethylene	"	2.8	1300					ERR
1.2-dichloropropane	"	6.0	200					ERR
1.3-dichloropropylene	"	5.0	60					ERR
Ethylbenzene	"	7.2	23000					ERR
Methyl Bromide	"	5.2	200					ERR
Methyl Chloride	"	5.5	2800					ERR
Methylene Chloride	"	2.8	27000					ERR
1.1.2.2-Tetrachloroethan	"	6.9	450					ERR
Tetrachoroethylene	"	4.1	4000					ERR
Toluene	"	6.0	8700					ERR
1.2-Trans-Dicloroethylen	"	1.6	2800					ERR
1.1.1-Thicloroethane	"	3.8	2600					ERR
1.1.2-Thicloroethane	"	5.0	560					ERR
Trichloroethylene	"	1.9	20000					ERR
Vinyl Chloride	"	3.5	NWS					ERR

"Pesticide" Stormwater Constituents (Method 608)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 1/6/93	2/8/93	2/10/93	Average
Aldrin	micro g/L	0.01	2.09					ERR
BHC-ALPHA	"	0.01	1600					ERR
BHC-BETA	"	0.01	1600					ERR
BHC-GAMMA (Lindane)	"	0.01	3.4					ERR
BHC-DELTA	"	0.05	1600					ERR
Chlordane		0.05	2.4					ERR
4,4'-DDT	"	0.05	0.001					ERR
4,4'-DDE	"	0.01	0.001					ERR
4,4'-DDD	"	0.05	0.001					ERR
Dieldrin	"	0.01	2.59					ERR
Endosulfan-Alpha	"	0.05	0.22					ERR
Endosulfan-Beta	"	0.02	0.22					ERR
Endosulfan Sulfate	"	0.20	0.22					ERR
Endrin	"	0.05	0.004					ERR
Endrin Aldehyde	"	0.10	0.2					ERR
Heptachlor	"	0.01	0.52					ERR
Heptachlor Epoxide	"	0.05	0.52					ERR
PCB-1242	"	0.20	0.001					ERR
PCB-1254	"	0.20	0.001					ERR
PCB-1221	"	0.20	0.001					ERR
PCB-1232	"	0.20	0.001					ERR
PCB-1248	"	0.20	0.001					ERR
PCB-1260	"	0.20	0.001					ERR
PCB-1016	"	0.20	0.001					ERR
Toxaphene	"	0.20	0.005					ERR

"Base/Neutral" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 1/6/93	2/8/93	2/10/93	average
Acenaphthene	micro g/L	1.9	850					ERR
Acenaphthylene	"	3.5	NNS					ERR
Anthracene	"	1.9	NNS					ERR
Benzidine	"	10.0	0.01					ERR
Benzo(a)anthracene	"	7.5	NNS					ERR
Benzo(a)pyrene	"	2.5	NNS					ERR
3,4-Benzofluoranthene	"	4.8	NNS					ERR
Benzo(ghi)perylene	"	4.1	NNS					ERR
Benzo(k)fluoranthene	"	2.5	NNS					ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS					ERR
Bis(2-chloroethyl)ether	"	5.7	120000					ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600					ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400		12	5.8		8.9
4-Bromophenyl phenyl ether	"	1.9	180					ERR
Butylbenzyl phthalate	"	2.5	1700					ERR
2-chloronaphthalene	"	1.9	11000					ERR
4-Chlorophenyl phenyl ethe	"	4.2	NNS					ERR
Chrysene	"	2.5	NNS					ERR
Dibenzo(a,h)anthracene	"	2.5	NNS					ERR
1,2-Diclorobenzene	"	1.9	1200					ERR
1,3-Diclorobenzene	"	1.9	2500					ERR
1,4-Diclorobenzene	"	4.4	2000					ERR
3,3-dichlorobenzidine	"	17.0	NNS					ERR
Diethyl phthalate	"	22.0	26000					ERR
Dimethyl phthalate	"	1.6	17000					ERR
Di-n-butyl phthalate	"	2.5	470					ERR
2,4-dinitrotoluene	"	5.7	15000					ERR
2,6-dinitrotoluene	"	1.9	NNS					ERR
Di-n-octyl phthalate	"	2.5	NNS					ERR
1,2-Diphenylhydrazine(as a	"		130					ERR
Fluroranthene	"	2.2	2000					ERR
Fluorene	"	1.9	5600					ERR
Hexachlorobenzene	"	1.9	100					ERR
Hexachlorobutadiene	"	1.0	45					ERR
Hexachlorocyclopentadiene	"	10.0	3.5					ERR
Hexachloroethane	"	1.6	140					ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS					ERR
Isophorone	"	2.2	28000					ERR
Napthalene	"	1.6	560					ERR
Nitrobenzene	"	1.9	70					ERR
N-nitrosodimethylamine	"	10.0	NNS					ERR
N-nitrosodi-n-propylamine	"	10.0	NNS					ERR
N-nitrosodiphenylamine	"	10.0	2900					ERR
Phenanthrene	"	5.4	30					ERR
Pyrene	"	1.9	4200					ERR
1,2,4-Triclorobenzene	"	1.9	1700					ERR

"Acid" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #2
Address: Horne & Grandview Storm data

Parameter	Units	PQL	WQS	NURP	Dates 1/6/93	2/8/93	2/10/93	Average
2-Chlorophenol	micro g/L	3.3	700					ERR
2,4-Dichlorophenol		2.7	420					ERR
2,4-Dimethylphenol	"	2.7	1000					ERR
4,6-Dinitro-o-Cresol	"	24.0	310					ERR
2-Nitrophenol	"	3.6	NNS					ERR
4-Nitrophenol	"	2.4	4100					ERR
P-Chloro-M-Cresol	"	3.0	15					ERR
Pentachlorophenol	"	3.6	2000V					ERR
Phenol	"	1.5	7000					ERR
2,4,6,-Trichlorophenol	"	2.7	160					ERR

General Stormwater Constituents
City of Mesa
Sampling Station #3
Address: Falcon Field

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
TSS	(mg/L)			180-548	82	23	56	25	100	57.2
TDS	(mg/L)				61	75	54	130	55	75
COD	(mg/L)			82-178	150	95	37	43	99	84.8
BOD	(mg/L)			12-19	12	7	5	5		7.25
Fecal Coliform	(MPN/100ml)	2.0	4000		2	240	170	220	130	152.4
Fecal Strepto.	(MPN/100ml)				2	2300	7000	7000	2400	3740.4
pH			6.5-9.0		6.1	6.5	6.7	6.8	6.7	6.56
Oil and Grease	(mg/L)	5.0			5					5
Tot. Kjeldal N	(mg/L)			1.9-4.2	2.5	0.5	0.9	0.4	0.9	1.04
Nitrate plus N	(mg/L)			.86-2.2	0.6	0.3	0.21	0.22	0.32	0.33
Dissolved Phos	(mg/L)			.15-.28	0.17			0.072	0.12	0.120666
Ammonia+Org N	(mg/L)		VAR		1.5	0.5	0.3	0.2	0.3	0.56
Total Phos	(mg/L)			.42-.88		0.2	0.17	0.085	0.15	0.15125

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #3
Address: Falcon Field

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
Antimony	mg/L	0.020	0.056							ERR
Arsenic	"	0.020	0.02							ERR
Beryllium	"	0.010	0.065							ERR
Cadium	"	0.005	0.05V							ERR
Chromium	"	0.050	VAR							ERR
Copper	"	0.050	0.05	0.043-0.12						ERR
Cyanide	"	0.010	0.041							ERR
Lead	"	0.020	0.1V	0.18-0.44						ERR
Mercury	"	0.001	0.0024							ERR
Nickle	"	0.050	2.8V							ERR
Phenols	"	0.005	7.0							ERR
Selenium	"	0.005	20							ERR
Silver	"	0.020	VAR							ERR
Thallium	"	0.010	0.7							ERR
Zinc	"	0.100	25.0V	0.20-0.63	0.13					0.13

"Volatile" Stormwater Constituents (Method 624)
City of Mesa
Sampling Station #3
Address: Falcon Field

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
Acrolein	micro g/L	50.0	34							ERR
Acrylonitrile	"	50.0	1400							ERR
Benzene	"	4.4	470							ERR
Bromoform	"	4.7	2800							ERR
Carbon Tetrachloride	"	2.8	8000							ERR
Chlorobenzene	"	6.0	2800							ERR
Chlorodibromomethane	"	3.1	2800							ERR
Chloroethane	"	4.2	NNS							ERR
2-Chloroethylvinyl Ether	"	8.5	180000							ERR
Chloroform	"	1.6	1400							ERR
Diclorobromomethane	"	2.2	2800							ERR
1,1-dichloroethane	"	4.7	14000							ERR
1,2-dichloroethane	"	2.8	10000							ERR
1,1-dichloroethylene	"	2.8	1300							ERR
1,2-dichloropropane	"	6.0	200							ERR
1,3-dichloropropylene	"	5.0	60							ERR
Ethylbenzene	"	7.2	23000							ERR
Methyl Bromide	"	5.2	200							ERR
Methyl Chloride	"	5.5	2800							ERR
Methylene Chloride	"	2.8	27000				1.9			1.9
1,1,2,2-Tetrachloroethan	"	6.9	450							ERR
Tetrachoroethylene	"	4.1	4000							ERR
Toluene	"	6.0	8700							ERR
1,2-Trans-Dicloroethylen	"	1.6	2800							ERR
1,1,1-Thicloroethane	"	3.8	2600							ERR
1,1,2-Thicloroethane	"	5.0	560							ERR
Trichloroethylene	"	1.9	20000							ERR
Vinyl Chloride	"	3.5	NNS							ERR

"Pesticide" Stormwater Constituents (Method 608)
City of Mesa
Sampling Station #3
Address: Falcon Field Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
Aldrin	micro g/L	0.01	2.04							ERR
BHC-ALPHA	"	0.01	1600							ERR
BHC-BETA	"	0.01	1600							ERR
BHC-GAMMA (Lindane)	"	0.01	3.4							ERR
BHC-DELTA	"	0.05	1600							ERR
Chlordane	"	0.05	2.4							ERR
4,4'-DDT	"	0.05	0.001							ERR
4,4'-DDE	"	0.01	0.001				0.13*	0.017*	0.033*	0.06
4,4'-DDD	"	0.05	0.001							ERR
Dieldrin	"	0.01	2.5v							ERR
Endosulfan-Alpha	"	0.05	0.22							ERR
Endosulfan-Beta	"	0.02	0.22							ERR
Endosulfan Sulfate	"	0.20	0.22							ERR
Endrin	"	0.05	0.004							ERR
Endrin Aldehyde	"	0.10	0.2							ERR
Heptachlor	"	0.01	0.52							ERR
Heptachlor Epoxide	"	0.05	0.52							ERR
PCB-1242	"	0.20	0.001							ERR
PCB-1254	"	0.20	0.001							ERR
PCB-1221	"	0.20	0.001							ERR
PCB-1232	"	0.20	0.001							ERR
PCB-1248	"	0.20	0.001							ERR
PCB-1260	"	0.20	0.001							ERR
PCB-1016	"	0.20	0.001							ERR
Toxaphene	"	0.20	0.005							ERR

"Base/Neutral" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #3
Address: Falcon Field

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
Acenaphthene	micro g/L	1.9	850							ERR
Acenaphthylene	"	3.5	NNS							ERR
Anthracene	"	1.9	NNS							ERR
Benzidine	"	10.0	0.01							ERR
Benzo(a)anthracene	"	7.8	NNS							ERR
Benzo(a)pyrene	"	2.5	NNS							ERR
3,4-Benzofluoranthene	"	4.8	NNS							ERR
Benzo(ghi)perlyne	"	4.1	NNS							ERR
Benzo(k)fluoranthene	"	2.5	NNS							ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS							ERR
Bis(2-chloroethyl)ether	"	5.7	120000							ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600							ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400						5.8	5.8
4-Bromophenyl phenyl ether	"	1.9	180							ERR
Butylbenzyl phthalate	"	2.5	1700							ERR
2-chloronaphthalene	"	1.9	11000							ERR
4-Chlorophenyl phenylether	"	4.2	NNS							ERR
Chrysene	"	2.5	NNS							ERR
Dibenzo(a,h)anthracene	"	2.5	NNS							ERR
1,2-Diclorobenzene	"	1.9	1200							ERR
1,3-Diclorobenzene	"	1.9	2500							ERR
1,4-Diclorobenzene	"	4.4	2000							ERR
3,3-dichlorobenzidine	"	17.0	NNS							ERR
Diethyl phthalate	"	22.0	26000							ERR
Dimethyl phthalate	"	1.6	17000							ERR
Di-n-butyl phthalate	"	2.5	470							ERR
2,4-dinitrotoluene	"	5.7	15000							ERR
2,6-dinitrotoluene	"	1.9	NNS							ERR
Di-n-octyl phthalate	"	2.5	NNS							ERR
1,2-Diphenylhydrazine(as a	"		130							ERR
Fluroranthene	"	2.2	2000							ERR
Fluorene	"	1.9	5600							ERR
Hexachlorobenzene	"	1.9	100							ERR
Hexachlorobutadiene	"	1.0	45							ERR
Hexachlorocyclopentadiene	"	10.0	3.5							ERR
Hexachloroethane	"	1.6	140							ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS							ERR
Isophorone	"	2.2	28000							ERR
Naphthalene	"	1.6	560							ERR
Nitrobenzene	"	1.9	70							ERR
N-nitrosodimethylamine	"	10.0	NNS							ERR
N-nitrosodi-n-propylamine	"	10.0	NNS							ERR
N-nitrosodiphenylamine	"	10.0	2900							ERR
Phenanthrene	"	5.4	30							ERR
Pyrene	"	1.9	4200							ERR
1,2,4-Trichlorobenzene	"	1.9	1700							ERR

"Acid" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #3
Address: Falcon filed

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 8-22-92	12/4/92	12/8/92	1/7/93	2/8/93	Average
2-Chlorophenol	micro g/L	3.3	700							ERR
2,4-Diclorophenol	"	2.7	420							ERR
2,4-Dimethylphenol	"	2.7	1000							ERR
4,6-Dinitro-o-Cresol	"	24.0	310							ERR
2-Nitrophenol	"	3.6	NNS							ERR
4-Nitrophenol	"	2.4	4100							ERR
P-Chloro-M-Cresol	"	3.0	15							ERR
Pentachlorophenol	"	3.6	2000V							ERR
Phenol	"	1.5	7000							ERR
2,4,6,-Trichlorophenol	"	2.7	160							ERR

General Stormwater Constituents
City of Mesa
Sampling Station #4
Address: Broadway & Windsor Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/7/93	2/8/93	Average
TSS	(mg/L)			180-548	180	34	85	81	95
TDS	(mg/L)				65	56	100	44	66.25
COD	(mg/L)			82-178	120	40	78	99	84.25
BOD	(mg/L)			12-19	5	5	5		5
Fecal Coliform	(MPN/100ml)	2.0	4000		3000	5000*	3000	3000	3500
Fecal Strepto.	(MPN/100ml)				22000	17000	50000	50000	34750
pH			6.5-9.0		7.1	6.6	7.4	6.6	6.925
Oil and Grease	(mg/L)	5.0							ERR
Tot. Kjeldal N	(mg/L)			1.9-4.2	1.9	0.9	1	0.9	1.175
Nitrate plus N	(mg/L)			.86-2.2	0.35	0.45	0.6	0.35	0.4375
Dissolved Phos	(mg/L)			.15-.28			0.13	0.12	0.125
Ammonia+Org N	(mg/L)		VAR		0.8	0.4	0.4		0.533333
Total Phos	(mg/L)			.42-.88	0.14	0.21	0.2	0.23	0.195

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #4
Address: Broadway & Windsor

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/7/93	2/8/93	Average
Antimony	mg/L	0.020	0.056						ERR
Arsenic	"	0.020	0.02						ERR
Beryllium	"	0.010	0.065						ERR
Cadium	"	0.005	0.05V						ERR
Chromium	"	0.050	VAR						ERR
Copper	"	0.050	0.05	0.043-0.12					ERR
Cyanide	"	0.010	0.041						ERR
Lead	"	0.020	0.1V	0.18-0.44					ERR
Mercury	"	0.001	0.0024						ERR
Nickle	"	0.050	2.8V						ERR
Phenols	"	0.005	7.0						ERR
Selenium	"	0.005	20						ERR
Silver	"	0.020	VAR						ERR
Thallium	"	0.010	0.7						ERR
Zinc	"	0.100	25.0V	0.20-0.63	0.13				0.13

"Volatile" Stormwater Constituents (Method 624)
City of Mesa
Sampling Station #4
Address: Broadway & Windsor Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/7/93	2/8/93	Average
Acrolein	micro g/L	50.0	34						ERR
Acrylonitrile	"	50.0	1400						ERR
Benzene	"	4.4	470						ERR
Bromoform	"	4.7	2800						ERR
Carbon Tetrachloride	"	2.8	8000						ERR
Chlorobenzene	"	6.0	2800						ERR
Chlorodibromomethane	"	3.1	2800						ERR
Chloroethane	"	4.2	NNS						ERR
2-Chloroethylvinyl Ether	"	8.5	180000						ERR
Chloroform	"	1.6	1400						ERR
Diclorobromomethane	"	2.2	2800						ERR
1,1-dichloroethane	"	4.7	14000						ERR
1,2-dichloroethane	"	2.8	10000						ERR
1,1-dichloroethylene	"	2.8	1300						ERR
1,2-dichloropropane	"	6.0	200						ERR
1,3-dichloropropylene	"	5.0	60						ERR
Ethylbenzene	"	7.2	23000						ERR
Methyl Bromide	"	5.2	200						ERR
Methyl Chloride	"	5.5	2800						ERR
Methylene Chloride	"	2.8	27000			1.6			1.6
1,1,2,2-Tetrachloroethan	"	6.9	450						ERR
Tetrachoroethylene	"	4.1	4000						ERR
Toluene	"	6.0	8700						ERR
1,2-Trans-Dicloroethylen	"	1.6	2800						ERR
1,1,1-Thicloroethane	"	3.8	2600						ERR
1,1,2-Thicloroethane	"	5.0	560						ERR
Trichloroethylene	"	1.9	20000						ERR
Vinyl Chloride	"	3.5	NNS						ERR

"Pesticide" Stormwater Constituents (Method 608)
City of Mesa
Sampling Station #4
Address: Broadway & Windsor Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/7/93	2/3/93	Average
Aldrin	micro g/L	0.01	2.0V						ERR
BHC-ALPHA	"	0.01	1600						ERR
BHC-BETA	"	0.01	1600						ERR
BHC-GAMMA	"	0.01	3.4						ERR
BHC-DELTA	"	0.05	1600						ERR
Chlordane	"	0.05	2.4						ERR
4,4'-DDT	"	0.05	0.001						ERR
4,4'-DDE	"	0.01	0.001		0.14*	0.027*	0.12*	0.016*	0.07575
4,4'-DDD	"	0.05	0.001						ERR
Dieldrin	"	0.01	2.5v						ERR
Endosulfan-Alpha	"	0.05	0.22						ERR
Endosulfan-Beta	"	0.02	0.22						ERR
Endosulfan Sulfate	"	0.20	0.22						ERR
Endrin	"	0.05	0.004						ERR
Endrin Aldehyde	"	0.10	0.2						ERR
Heptachlor	"	0.01	0.52						ERR
Heptachlor Epoxide	"	0.05	0.52						ERR
PCB-1242	"	0.20	0.001						ERR
PCB-1254	"	0.20	0.001						ERR
PCB-1221	"	0.20	0.001						ERR
PCB-1232	"	0.20	0.001						ERR
PCB-1248	"	0.20	0.001						ERR
PCB-1260	"	0.20	0.001						ERR
PCB-1016	"	0.20	0.001						ERR
Toxaphene	"	0.20	0.005						ERR

"Base/Neutral" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #4
Address: Broadway & Windsor Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/7/93	2/8/93	Average
Acenaphthene	micro g/L	1.9	850						ERR
Acenaphthylene	"	3.5	NNS						ERR
Anthracene	"	1.9	NNS						ERR
Benzidine	"	10.0	0.01						ERR
Benzo(a)anthracene	"	7.8	NNS						ERR
Benzo(a)pyrene	"	2.5	NNS						ERR
3,4-Benzofluoranthene	"	4.8	NNS						ERR
Benzo(ghi)perlyne	"	4.1	NNS						ERR
Benzo(k)fluoranthene	"	2.5	NNS						ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS						ERR
Bis(2-chloroethyl)ether	"	5.7	120000						ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600						ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400					4.9	4.9
4-Bromophenyl phenyl ether	"	1.9	180						ERR
Butylbenzyl phthalate	"	2.5	1700						ERR
2-chloronaphthalene	"	1.9	11000						ERR
4-Chlorophenyl phenylether	"	4.2	NNS						ERR
Chrysene	"	2.5	NNS						ERR
Dibenzo(a,h)anthracene	"	2.5	NNS						ERR
1,2-Diclorobenzene	"	1.9	1200						ERR
1,3-Diclorobenzene	"	1.9	2500						ERR
1,4-Diclorobenzene	"	4.4	2000						ERR
3,3-dichlorobenzidine	"	17.0	NNS						ERR
Diethyl phthalate	"	22.0	26000						ERR
Dimethyl phthalate	"	1.6	17000						ERR
Di-n-butyl phthalate	"	2.5	470						ERR
2,4-dinitrotoluene	"	5.7	15000						ERR
2,6-dinitrotoluene	"	1.9	NNS						ERR
Di-n-octyl phthalate	"	2.5	NNS						ERR
1,2-Diphenylhydrazine(as a	"		130						ERR
Flurorantene	"	2.2	2000						ERR
Fluorene	"	1.9	5600						ERR
Hexachlorobenzene	"	1.9	100						ERR
Hexachlorobutadiene	"	1.0	45						ERR
Hexachlorocyclopentadiene	"	10.0	3.5						ERR
Hexachloroethane	"	1.6	140						ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS						ERR
Isophorone	"	2.2	28000						ERR
Napthalene	"	1.6	560						ERR
Nitrobenzene	"	1.9	70						ERR
N-nitrosodimethylamine	"	10.0	NNS						ERR
N-nitrosodi-n-propylamine	"	10.0	NNS						ERR
N-nitrosodiphenylamine	"	10.0	2900						ERR
Phenanthrene	"	5.4	30						ERR
Pyrene	"	1.9	4200						ERR
1,2,4-Triclorobenzene	"	1.9	1700						ERR

"Acid" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #4
Address: Broadway & Windsor Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/9/92	1/7/93	2/8/93	Average
2-Chlorophenol	micro g/L	3.3	700						ERR
2,4-Diclorophenol	"	2.7	420						ERR
2,4-Dimethylphenol	"	2.7	1000						ERR
4,6-Dinitro-o-Cresol	"	24.0	310						ERR
2-Nitrophenol	"	3.6	NNS						ERR
4-Nitrophenol	"	2.4	4100						ERR
P-Chloro-M-Cresol	"	3.0	15						ERR
Pentachlorophenol	"	3.6	2000V						ERR
Phenol	"	1.5	7000						ERR
2,4,6,-Trichlorophenol	"	2.7	160						ERR

General Stormwater Constituents
City of Mesa
Sampling Station #5
Address: Broadway & Dobson

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
TSS	(mg/L)			180-548	120	21	77	130	87
TDS	(mg/L)				90	60	74	43	66.75
COD	(mg/L)			82-178	210	58	67	110	111.25
BOD	(mg/L)			12-19	16	9	9	6	10
Fecal Coliform	(MPN/100ml)	2.0	4000		2400	2400	500	1700	1750
Fecal Strepto.	(MPN/100ml)				24000	30000	11000	500	16375
pH			6.5-9.0		6.6	6.9	7.4	6.9	6.95
Oil and Grease	(mg/L)	5.0							ERR
Tot. Kjeldal N	(mg/L)			1.9-4.2	2.1	1	1.3	1	1.35
Nitrate plus N	(mg/L)			.86-2.2	0.32	0.21	0.5		0.343333
Dissolved Phos	(mg/L)			.15-.28				0.15	0.15
Ammonia+Org N	(mg/L)		VAR		1	0.7	0.6	0.6	0.725
Total Phos	(mg/L)			.42-.88	0.4	0.18	0.22	0.22	0.255

"Toxic Metal" Stormwater Constituents
City of Mesa
Sampling Station #5
Address: Broadway & Dobson

Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
Antimony	mg/L	0.020	0.056						ERR
Arsenic	"	0.020	0.02						ERR
Beryllium	"	0.010	0.065						ERR
Cadium	"	0.005	0.05V						ERR
Chromium	"	0.050	VAR						ERR
Copper	"	0.050	0.05	0.043-0.12					ERR
Cyanide	"	0.010	0.041						ERR
Lead	"	0.020	0.1V	0.18-0.44	0.027			0.032	0.0295
Mercury	"	0.001	0.0024						ERR
Nickle	"	0.050	2.8V						ERR
Phenols	"	0.005	7.0						ERR
Selenium	"	0.005	20						ERR
Silver	"	0.020	VAR						ERR
Thallium	"	0.010	0.7						ERR
Zinc	"	0.100	25.0V	0.20-0.63	0.18	0.12		0.14	0.146666

"Volatile" Stormwater Constituents (Method 624)
City of Mesa
Sampling Station #5
Address: Broadway & Dobson Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
Acrolein	micro g/L	50.0	34						ERR
Acrylonitrile	"	50.0	1400						ERR
Benzene	"	4.4	470						ERR
Bromoform	"	4.7	2800						ERR
Carbon Tetrachloride	"	2.8	8000						ERR
Chlorobenzene	"	6.0	2800						ERR
Chlorodibromomethane	"	3.1	2800						ERR
Chloroethane	"	4.2	NNS						ERR
2-Chloroethylvinyl Ether	"	8.5	180000						ERR
Chloroform	"	1.6	1400						ERR
Diclorobromomethane	"	2.2	2800						ERR
1,1-dichloroethane	"	4.7	14000						ERR
1,2-dichloroethane	"	2.8	10000						ERR
1,1-dichloroethylene	"	2.8	1300						ERR
1,2-dichloropropane	"	6.0	200						ERR
1,3-dichloropropylene	"	5.0	60						ERR
Ethylbenzene	"	7.2	23000						ERR
Methyl Bromide	"	5.2	200						ERR
Methyl Chloride	"	5.5	2800						ERR
Methylene Chloride	"	2.8	27000						ERR
1,1,2,2-Tetrachloroethan	"	6.9	450						ERR
Tetrachorcethylene	"	4.1	4000						ERR
Toluene	"	6.0	8700						ERR
1,2-Trans-Dicloroethylen	"	1.6	2800						ERR
1,1,1-Thicloroethane	"	3.8	2600						ERR
1,1,2-Thicloroethane	"	5.0	560						ERR
Trichloroethylene	"	1.9	20000						ERR
Vinyl Chloride	"	3.5	NNS						ERR

"Pesticide" Storawater Constituents (Method 608)
City of Mesa
Sampling Station #5
Address: Broadway & Dobson Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
Aldrin	micro g/L	0.01	2.0V						ERR
BHC-ALPHA	"	0.01	1600						ERR
BHC-BETA	"	0.01	1600						ERR
BHC-GAMMA	"	0.01	3.4						ERR
BHC-DELTA	"	0.05	1600						ERR
Chlordane	"	0.05	2.4						ERR
4,4'-DDT	"	0.05	0.001						ERR
4,4'-DDE	"	0.01	0.001				0.014	0.022	0.018
4,4'-DDD	"	0.05	0.001						ERR
Dieldrin	"	0.01	2.5v						ERR
Endosulfan-Alpha	"	0.05	0.22						ERR
Endosulfan-Beta	"	0.02	0.22						ERR
Endosulfan Sulfate	"	0.20	0.22						ERR
Endrin	"	0.05	0.004						ERR
Endrin Aldehyde	"	0.10	0.2						ERR
Heptachlor	"	0.01	0.52						ERR
Heptachlor Epoxide	"	0.01	0.52						ERR
PCB-1242	"	0.20	0.001						ERR
PCB-1254	"	0.20	0.001						ERR
PCB-1221	"	0.20	0.001						ERR
PCB-1232	"	0.20	0.001						ERR
PCB-1248	"	0.20	0.001						ERR
PCB-1260	"	0.20	0.001						ERR
PCB-1016	"	0.20	0.001						ERR
Toxaphene	"	0.20	0.005						ERR

"Base/Neutral" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #5
Address: Broadway & Dobson Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
Acenaphthene	micro g/L	1.9	850						ERR
Acenaphthylene	"	3.5	NNS						ERR
Anthracene	"	1.9	NNS						ERR
Benzidine	"	10.0	0.01						ERR
Benzo(a)anthracene	"	7.8	NNS						ERR
Benzo(a)pyrene	"	2.5	NNS					2.9	2.9
3,4-Benzofluoranthene	"	4.8	NNS						ERR
Benzo(ghi)perlyne	"	4.1	NNS						ERR
Benzo(k)fluoranthene	"	2.5	NNS						ERR
Bis(2-chloroethoxy)methane	"	5.3	NNS						ERR
Bis(2-chloroethyl)ether	"	5.7	120000						ERR
Bis(2-chloroisopropyl)ethe	"	5.7	5600						ERR
Bis(2-ethylhexyl)phthalate	"	2.5	400				<14	12	13
4-Bromophenyl phenyl ether	"	1.9	180						ERR
Butylbenzyl phthalate	"	2.5	1700						ERR
2-chloronaphthalene	"	1.9	11000						ERR
4-Chlorophenyl phenylether	"	4.2	NNS						ERR
Chrysene	"	2.5	NNS					6.2	6.2
Dibenzo(a,h)anthracene	"	2.5	NNS						ERR
1,2-Diclorobenzene	"	1.9	1200						ERR
1,3-Diclorobenzene	"	1.9	2500						ERR
1,4-Diclorobenzene	"	4.4	2000						ERR
3,3-dichlorobenzidine	"	17.0	NNS						ERR
Diethyl phthalate	"	22.0	26000						ERR
Dimethyl phthalate	"	1.6	17000						ERR
Di-n-butyl phthalate	"	2.5	470						ERR
2,4-dinitrotoluene	"	5.7	15000						ERR
2,6-dinitrotoluene	"	1.9	NNS						ERR
Di-n-octyl phthalate	"	2.5	NNS						ERR
1,2-Diphenylhydrazine(as a	"		130						ERR
Fluroranthene	"	2.2	2000					8	8
Fluorene	"	1.9	5600						ERR
Hexachlorobenzene	"	1.9	100						ERR
Hexachlorobutadiene	"	1.0	45						ERR
Hexachlorocyclopentadiene	"	10.0	3.5						ERR
Hexachloroethane	"	1.6	140						ERR
Indeno (1,2,3-cd) pyrene	"	3.7	NNS					3.7	3.7
Isophorone	"	2.2	28000						ERR
Napthalene	"	1.6	560						ERR
Nitrobenzene	"	1.9	70						ERR
N-nitrosodimethylamine	"	10.0	NNS						ERR
N-nitrosodi-n-propylamine	"	10.0	NNS						ERR
N-nitrosodiphenylamine	"	10.0	2900						ERR
Phenanthrene	"	5.4	30						ERR
Pyrene	"	1.9	4200					7.4	7.4
1,2,4-Triclorobenzene	"	1.9	1700						ERR

"Acid" Stormwater Constituents (Method 625)
City of Mesa
Sampling Station #5
Address: Broadway & Dobson Storm data

Parameter	Units	PQL	WQS	NURP	Dates 12/4/92	12/8/92	1/6/93	2/8/93	Average
2-Chlorophenol	micro g/L	3.3	700						ERR
2,4-Diclorophenol	"	2.7	420						ERR
2,4-Diaethylphenol	"	2.7	1000						ERR
4,6-Dinitro-o-Cresol	"	24.0	310						ERR
2-Nitrophenol	"	3.6	NNS						ERR
4-Nitrophenol	"	2.4	4100						ERR
P-Chloro-M-Cresol	"	3.0	15						ERR
Pentachlorophenol	"	3.6	2000V						ERR
Phenol	"	1.5	7000						ERR
2,4,6,-Trichlorophenol	"	2.7	160						ERR

APPENDIX C

APPENDIX D

MAP # AND DRAINAGE #	TOTAL AREA (ACRES)	.03 RESIDENTIAL (ACRES)	.05 AGRICULTURAL (ACRES)	.03 COMMERCIAL (ACRES)	.32 INDUSTRIAL (ACRES)	.20 UNDEVELOPED (ACRES)	WEIGHTED 'C'	AVG. RAINFALL	CORRECTION FACTOR	VOLUME (ACRE/FEET)	OUTFALL POINT	REMARKS
01-1	634	503 = 80%	—	—	131 = 20%	—	.41	7.41"	.90	144.46	SALT RIVER	
03-1	598	156 = 26%	—	—	442 = 74%	—	.35	7.41"	.90	116.32	SALT RIVER	
03-2	620	380 = 61%	108 = 17%	85 = 14%	47 = 08%	—	.35	7.41"	.90	120.60	A.D.O.T.	
03-3	135	—	—	—	135 = 100%	—	.32	7.41"	.90	24.00	A.D.O.T.	
03-4	240	240 = 100%	—	—	—	—	.43	7.41"	.90	57.35	S.R.P. CANAL	DRAINS TO ROOSEVELT SCHOOL RETENTION BASIN
03-5	1737	890 = 51%	—	509 = 30%	338 = 19%	—	.39	7.41"	.90	376.48	A.D.O.T.	
03-6	389	359 = 92%	—	30 = 08%	—	—	.42	7.41"	.90	90.80	A.D.O.T.	DRAINS TO CARRIAGE LANE BASIN
04-1	1585	1183 = 75%	170 = 11%	—	232 = 14%	—	.37	7.41"	.90	325.92	SALT RIVER	
04-2	841	749 = 89%	—	54 = 06%	38 = 05%	—	.42	7.41"	.90	196.30	SALT RIVER	
04-3	1086	765 = 70%	—	185 = 17%	136 = 13%	—	.41	7.41"	.90	247.45	A.D.O.T.	
04-4	1290	1202 = 93%	—	88 = 07%	—	—	.43	7.41"	.90	308.27	SALT RIVER	
04-5	187	187 = 100%	—	—	—	—	.43	7.41"	.90	44.69	SRP. CANAL	
04-6	120	120 = 100%	—	—	—	—	.43	7.41"	.90	28.68	SRP. CANAL	DRAINS TO HOHOKAM PARK RETENTION BASIN
04-7	22	22 = 100%	—	—	—	—	.43	7.41"	.90	5.26	ON-SITE RETENTION	
04-8	34	34 = 100%	—	—	—	—	.43	7.41"	.90	8.13	SRP. CANAL	
04-9	52	52 = 100%	—	—	—	—	.43	7.41"	.90	12.43	SRP. TILE	
04-10	4982	4353 = 87%	—	591 = 12%	38 = 01%	—	.42	7.41"	.90	1162.88	SALT RIVER	
04-11	1522	784 = 52%	—	561 = 37%	177 = 11%	—	.40	7.41"	.90	338.34	A.D.O.T.	DRAINS TO FIESTA LAKES RETENTION BASIN.
04-12	965	725 = 75%	—	130 = 13%	110 = 12%	—	.41	7.41"	.90	219.88	A.D.O.T.	DRAINS TO HERITAGE PARK RETENTION BASIN
04-13	635	—	200 = 31%	—	435 = 69%	—	.23	7.41"	.90	81.17	ON-SITE RETENTION	
04-14	1098	999 = 91%	33 = 03%	66 = 06%	—	—	.41	7.41"	.90	250.19	ON-SITE RETENTION	
04-15	192	192 = 100%	—	—	—	—	.43	7.41"	.90	45.88	SRP CANAL	DRAINS TO HORNE & GRANDVIEW RETENTION BASIN
04-16	205	205 = 100%	—	—	—	—	.43	7.41"	.90	48.99	SRP CANAL	

MAP # AND DRAINAGE #	TOTAL AREA (ACRES)	RESIDENTIAL (ACRES)	AGRICULTURAL (ACRES)	COMMERCIAL (ACRES)	INDUSTRIAL (ACRES)	UNDEVELOPED (ACRES)	WEIGHTED 'C'	AVG. RAINFALL	CORRECTION FACTOR	VOLUME (ACRE/FEET)	OUTFALL POINT	REMARKS
04-17	14	—	—	14=100%	—	—	.38	7.41"	.90	2.96	ON-SITE RETENTION	
04-18	1522	1144=75%	—	378=25%	—	—	.42	7.41"	.90	355.26	A.D.O.T.	DRAINS TO SHERWOOD PARK RETENTION BASIN.
04-19	229	187=82%	—	42=18%	—	—	.42	7.41"	.90	53.45	A.D.O.T	DRAINS TO EMERALD PARK RETENTION BASIN.
04-20	72	72=100%	—	—	—	—	.43	7.41"	.90	17.21	SRP TILE	
04-21	76	59=78%	—	17=22%	—	—	.42	7.41"	.90	17.74	ON-SITE RETENTION	
04-22	222	122=55%	—	—	100=45%	—	.41	7.41"	.90	50.58	SALT RIVER	
04-23	2611	1999=77%	535=20%	77=03%	—	—	.35	7.41"	.90	507.87	A.D.O.T.	DRAINS TO 32ND STREET RETENTION BASIN.
04-24	487	487=100%	—	—	—	—	.43	7.41"	.90	116.38	S.R.P. TILE	
04-25	24	19=79%	—	5=21%	—	—	.42	7.41"	.90	5.02	ON-SITE RETENTION	
04-26	59	59=100%	—	—	—	—	.43	7.41"	.90	14.10	ON-SITE RETENTION	
04-27	615	610=99%	—	5=01%	—	—	.43	7.41"	.90	146.97	SRP TILE	
04-28	944	859=91%	—	85=09%	—	—	.42	7.41"	.90	220.34	A.D.O.T.	DRAINS TO EMERALD PARK RETENTION BASIN.
04-29	824	628=76%	—	196=24%	—	—	.42	7.41"	.90	192.33	A.D.O.T.	DRAINS TO 24TH STREET RETENTION BASIN.
04-30	240	226=94%	—	14=06%	—	—	.42	7.41"	.90	56.02	SRP TILE	
04-31	71	53=75%	—	18=25%	—	—	.42	7.41"	.90	16.57	SRP TILE	
04-32	57	57=100%	—	—	—	—	.43	7.41"	.90	13.62	SRP TILE	
04-33	859	682=79%	31=04%	146=17%	—	—	.41	7.41"	.90	195.73	A.D.O.T.	DRAINS TO 32ND STREET RETENTION BASIN.
04-34	289	289=100%	—	—	—	—	.43	7.41"	.90	69.06	ON-SITE RETENTION	
05-1	1349	1014=75%	335=25%	—	—	—	.34	7.41"	.90	254.90	A.D.O.T	DRAINS TO 32ND STREET RETENTION BASIN.
05-2	2673	1967=74%	295=11%	411=15%	—	—	.38	7.41"	.90	564.50	A.D.O.T.	DRAINS TO GREENFIELD ROAD RETENTION BASIN.
05-3	509	465=91%	—	44=09%	—	—	.42	7.41"	.90	118.81	A.D.O.T.	
05-4	387	123=32%	32=08%	78=20%	154=40%	—	.34	7.41"	.90	73.13	ON-SITE RETENTION	
05-5	95	95=100%	—	—	—	—	.43	7.41"	.90	22.70	A.D.O.T.	

MAP # AND DRAINAGE #	TOTAL AREA (ACRES)	RESIDENTIAL (ACRES)	AGRICULTURAL (ACRES)	COMMERCIAL (ACRES)	INDUSTRIAL (ACRES)	UNDEVELOPED (ACRES)	WEIGHTED 'C'	AVG. RAINFALL	CORRECTION FACTOR	VOLUME (ACRE/FEET)	OUTFALL POINT	REMARKS
05-6	405	248=61%	116=29%	41=10%	—	—	.32	7.41"	.90	72.03	A.D.O.T.	
05-7	270	—	270=100%	—	—	—	.05	7.41"	.90	7.50	ON-SITE RETENTION	
05-8	4741	1988=42%	284=06%	—	2469=52%	—	.35	7.41"	.90	922.18	SALT RIVER	
05-9	726	726=100%	—	—	—	—	.43	7.41"	.90	173.49	SALT RIVER	
05-10	1533	685=45%	—	97=06%	751=49%	—	.37	7.41"	.90	315.22	MARICOPA FLOODWAY	
05-11	2282	1678=74%	62=03%	141=06%	401=17%	—	.39	7.41"	.90	494.60	MARICOPA FLOODWAY	
05-12	216	192=89%	—	24=11%	—	—	.42	7.41"	.90	50.41	MARICOPA FLOODWAY	
05-13	701	633=90%	—	68=10%	—	—	.42	7.41"	.90	163.62	MARICOPA FLOODWAY	
05-14	205	116=57%	—	89=43%	—	—	.40	7.41"	.90	45.57	MARICOPA FLOODWAY	
05-15	89	61=69%	—	28=31%	—	—	.41	7.41"	.90	20.27	MARICOPA FLOODWAY	
05-16	2109	1502=71%	—	607=29%	—	—	.41	7.41"	.90	524.23	MARICOPA FLOODWAY	
05-17	366	69=19%	—	297=81%	—	—	.39	7.41"	.90	79.32	MARICOPA FLOODWAY	
05-18	606	289=48%	109=18%	208=34%	—	—	.34	7.41"	.90	114.50	ON-SITE RETENTION	
05-19	459	334=73%	64=14%	61=13%	—	—	.37	7.41"	.90	94.38	A.D.O.T.	
05-20	896	720=80%	76=09%	58=06%	42=05%	—	.39	7.41"	.90	194.20	A.D.O.T	
05-21	941	791=84%	73=08%	42=05%	35=03%		.39	7.41"	.90	203.95	A.D.O.T.	
05-22	996	996=100%	—	—	—	—	.43	7.41"	.90	238.01	A.D.O.T.	
05-23	444	221=50%	223=50%	—	—	—	.23	7.41"	.90	56.75	A.D.O.T.	
05-24	610	538=88%	72=12%	—	—	—	.38	7.41"	.90	128.82	MARICOPA FLOODWAY	
05-25	781	570=73%	—	86=11%	131=16%	—	.41	7.41"	.90	177.95	MARICOPA FLOODWAY	
05-26	4076	4076=100%	—	—	—	—	.43	7.41"	.90	974.05	SPOOK HILL DAM	
06-1	384	384=100%	—	—	—	—	.43	7.41"	.90	91.76	CAP CANAL	
06-2	882	882=100%	—	—	—	—	.43	7.41"	.90	210.77	A.D.O.T.	

MAP # AND DRAINAGE #	TOTAL AREA (ACRES)	RESIDENTIAL (ACRES)	AGRICULTURAL (ACRES)	COMMERCIAL (ACRES)	INDUSTRIAL (ACRES)	UNDEVELOPED (ACRES)	WEIGHTED 'C'	AVG. RAINFALL	CORRECTION FACTOR	VOLUME (ACRE/FEET)	OUTFALL POINT	REMARKS
06-3	254	254=100%	—	—	—	—	.43	7.41"	.90	60.69	MARICOPA FLOODWAY	
06-4	896	622=69%	274=31%	—	—	—	.31	7.41"	.90	154.36	MARICOPA FLOODWAY	
07-1	832	792=95%	—	40=05%	—	—	.42	7.41"	.90	194.20	A.D.O.T.	DRAINS TO CARRIAGE LANE RETENTION BASIN.
08-1	1488	1245=84%	—	72=05%	171=11%	—	.41	7.41"	.90	339.05	A.D.O.T	DRAINS TO CARRIAGE LANE RETENTION BASIN.
09-1	3796	1319=35%	901=24%	—	86=02%	1490=39%	.24	7.41"	.90	506.31	MARICOPA FLOODWAY	
09-2	3970	—	—	—	3970=100%	—	.32	7.41"	.90	706.02	MARICOPA FLOODWAY	WILLIAMS AIR FORCE BASE
09-3	1912	—	1912=100%	—	—	—	.05	7.41"	.90	53.12	MARICOPA FLOODWAY	
10-1	2626	167=06%	472=18%	—	—	1987=76%	.19	7.41"	.90	277.28	MARICOPA FLOODWAY	
10-2	601	—	—	—	—	601=100%	.20	7.41"	.90	66.80	MARICOPA FLOODWAY	
10-3	1496	—	1496=100%	—	—	—	.05	7.41"	.90	41.57	MARICOPA FLOODWAY	
GRAND TOTALS	75,992	47,414	8,143	5,788	10,569	4,078				15092.20		

Runoff Volumes by Drainage Area

The following formula was used to determine runoff volumes from each drainage basin.

$$V = \frac{P(CF)(WC)(A)}{12}$$

V = Annual volume discharged from drainage basin (Acre-ft.)

P = Annual precipitation (in/yr.)

CF = Correction factor that adjusts for storms where no runoff occurs (0 - 9 used).

WC = Weighted average runoff coefficient from area served by outfall. Determined using percentages of individual land use from Part I mapping and their corresponding runoff coefficients determined during testing program.

A = Drainage basin area determined from Part I mapping (acres).

DISCHARGE SUMMARY

The following is a summary of the recipient of the volumes calculated in this appendix.

RECIPIENT	ANNUAL VOLUME (ACRE - FEET)
Salt River	3400.4
Arizona Department of Transportation	5506.78
Salt River Project	612.92
Maricopa County Flood Control District	3866.16

APPENDIX E

POLLUTANT LOADING BY DRAINAGE AREA

The following formula was used to determine the annual load of each pollutant for each drainage area.

$$L = (V)(C)(.00135)$$

L = Annual pollutant Load (tons/year).

C = Pollutant concentration determined from sampling program (Mg/liter).

(.00135) = Converts units to tons.

V = Annual volume discharged from drainage basin (Acre - ft).

Using the annual volumes determined in Appendix C and pollutant concentrations determined during testing program, the following annual pollutant loading was determined. This table does not include pollutant reductions due to existing structural controls. (i.e., detention basins).

APPENDIX E

CONSTITUENT	DISCHARGE RECIPIENT				
	SALT RIVER	AZ. DEPT. OF TRANSPORTATION	SALT RIVER PROJECT	MARICOPA CO. FLOOD CONTROL	TOTAL
BOD	41.3 TONS/YR.	58.3 TONS/YR.	7.08 TONS/YR.	46.9 TONS/YR.	153.6
COD	403.4	654.2	72.8	459.3	1590.2
TSS	302.9	239.2	45.2	344.5	931.8
TDS	348.9	587.3	69.9	31.3	1030.4
TOTAL N	8.03	11.34	1.38	9.1	29.85
TOTAL NH_3	3.21	5.2	.58	3.6	12.59
TOTAL P	.96	.86	.14	1.04	3.05
DISSOLVED P	.73	114	.13	.83	2.88
CADMIUM	*	*	*	*	*
COPPER	*	*	*	*	*
LEAD	.11	.1	.017	.12	.35
ZINC	.62	.75	.1	.70	2.17

* Concentrations Below Practical Quanitation Limit

ESTIMATED CONSTITUENT LOADING

POLLUTANT REDUCTION DUE TO DETENTION BASINS

Significant amounts of storm water is detained in basins from 24 to 48 hours.

The following tables are estimates of pollutant reductions due to these basins.

POLLUTANT REDUCTION IN STORM WATER ENTERING
ARIZONA DEPARTMENT OF TRANSPORTATION FACILITIES
VOLUME DETAINED 25 TO 48 HOURS - 3525.65 (ACRE-FEET)

POLLUTANT	INLET CONCENTRATION	POLLUTANT LAND IN BASIN	REDUCTION FACTOR DUE TO BASIN	AMOUNT OF POLLUTANT REMOVED
TSS	66 Mg/L	314.2 TONS	.8	251.4 TONS
BOD	9	42.8	.2	8.56
TKN	1.75	8.33	.2	1.67
TOTAL P	.21	1.0	.7	.7
Pb	.024	.11	.7	.08
Zn	.135	.64	.4	.25

APPENDIX D

Incorporating the pollutant reductions calculated previously. The following table shows the new pollutant discharged from Mesa.

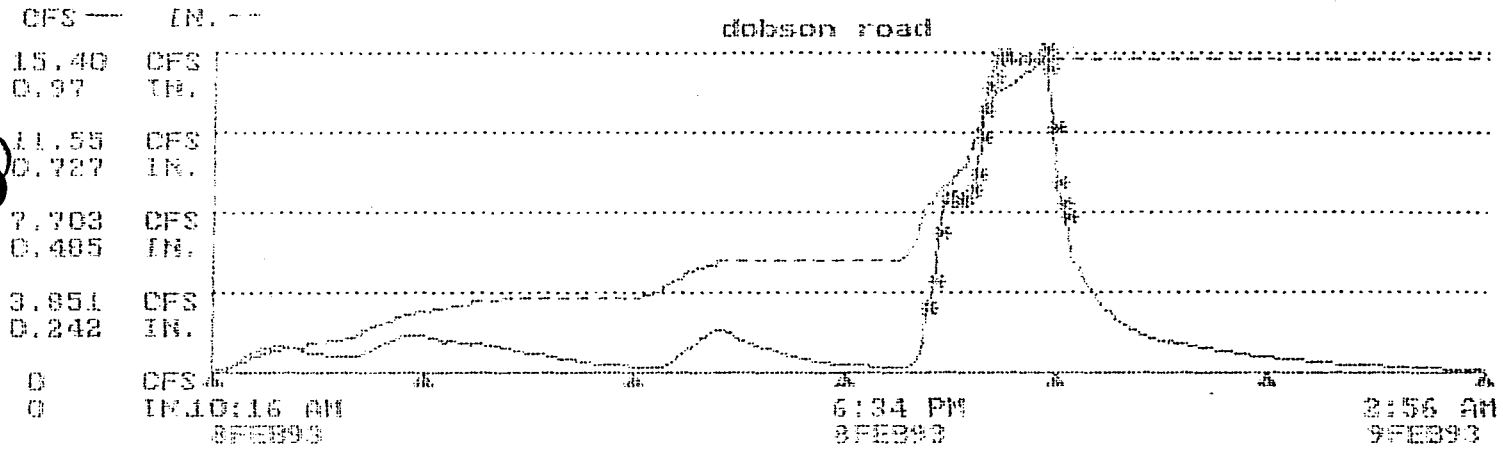
ESTIMATED ANNUAL POLLUTANT LOADING

CONSTITUENT	DISCHARGE RECIPIENT				
	SALT RIVER	AZ. DEPT. OF TRANSPORTATION	SALT RIVER PROJECT	MARICOPA CO. FLOOD CONTROL	TOTAL
BOD	41.3 TONS/YR.	58.3 TONS/YR.	7.08 TONS/YR.	46.9 TONS/YR.	153.6
COD	403.4	654.2	72.8	459.3	1590.2
TSS	302.9	239.2	45.2	344.5	931.8
TDS	348.9	587.3	69.9	31.3	1030.4
TOTAL N	8.03	11.34	1.38	9.1	29.85
TOTAL NH_3	3.21	5.2	.58	3.6	12.59
TOTAL P	.96	.86	.14	1.04	3.05
DISSOLVED P	.73	114	.13	.83	2.88
CADMIUM	*	*	*	*	*
COPPER	*	*	*	*	*
LEAD	.11	.1	.017	.12	.35
ZINC	.62	.75	.1	.70	2.17

* Concentrations Below Practical Quanitation Limit

ESTIMATED CONSTITUENT LOADING
TABLE 3 - 4
(After Reductions Due to Basins)

a:npdesII.rpt




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:   1004
PROGRAM STARTED  7:36 PM  8FEB93
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
 PROGRAM REVIEW-
EVEL CONTROL:      STORMWATER
TART ON  RAIN AND LEVEL
OTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN     CHANNEL LEVEL=  6.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     300CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
 INTAKE RINSE
 INTAKE FAULTS
ECIAL OUTPUT:  EVENT OUTPUT
MPLE TIME LIMIT: 1440 MIN
NTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92
```

SAMPLE TAKEN

001-01	7:36	PM	8FEB93	012-03	8:19	PM	8FEB93	023-06	8:56	PM	8FEB93
002-01	7:41	PM	8FEB93	013-04	8:23	PM	8FEB93	024-06	8:59	PM	8FEB93
3-01	7:45	PM	8FEB93	014-04	8:26	PM	8FEB93	025-07	9:02	PM	8FEB93
4-01	7:49	PM	8FEB93	015-04	8:29	PM	8FEB93	026-07	9:05	PM	8FEB93
005-02	7:53	PM	8FEB93	016-04	8:33	PM	8FEB93	027-07	9:08	PM	8FEB93
006-02	7:57	PM	8FEB93	017-05	8:37	PM	8FEB93	028-07	9:11	PM	8FEB93
007-02	8:01	PM	8FEB93	018-05	8:40	PM	8FEB93	029-08	9:15	PM	8FEB93
008-02	8:05	PM	8FEB93	019-05	8:43	PM	8FEB93	030-08	9:19	PM	8FEB93
009-03	8:09	PM	8FEB93	020-05	8:46	PM	8FEB93	031-08	9:22	PM	8FEB93
010-03	8:13	PM	8FEB93	021-06	8:50	PM	8FEB93	032-08	9:26	PM	8FEB93
011-03	8:16	PM	8FEB93	022-06	8:53	PM	8FEB93				

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8FEB93	0.105	16.235	2.609	132280	2.609	132280	0.96
9FEB93	0.011	0.897	0.184	7080	1.397	139360	0.01

2/8/93

Dobson Rd

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 5:14 AM 6JAN93
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 3000U FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

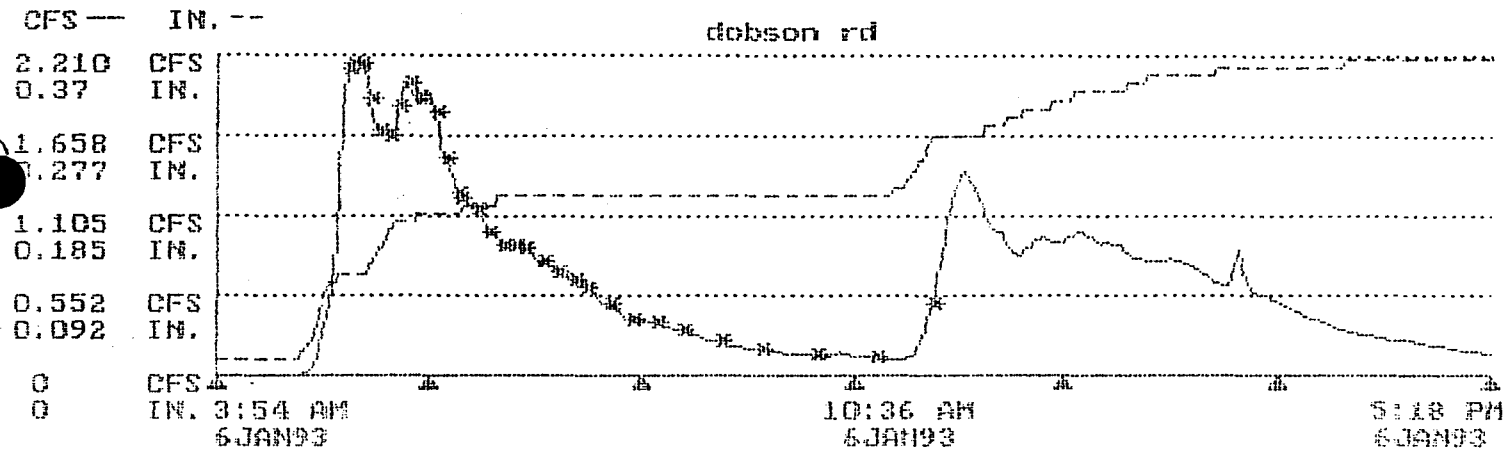
SAMPLE TAKEN

001-01	5:14 AM	6JAN93	012-03	6:17 AM	6JAN93	023-06	7:48 AM	6JAN93
002-01	5:20 AM	6JAN93	013-04	6:24 AM	6JAN93	024-06	8:01 AM	6JAN93
003-01	5:25 AM	6JAN93	014-04	6:31 AM	6JAN93	025-07	8:15 AM	6JAN93
004-01	5:29 AM	6JAN93	015-04	6:37 AM	6JAN93	026-07	8:31 AM	6JAN93
005-02	5:35 AM	6JAN93	016-04	6:44 AM	6JAN93	027-07	8:49 AM	6JAN93
006-02	5:41 AM	6JAN93	017-05	6:52 AM	6JAN93	028-07	9:11 AM	6JAN93
007-02	5:47 AM	6JAN93	018-05	7:01 AM	6JAN93	029-08	9:39 AM	6JAN93
008-02	5:53 AM	6JAN93	019-05	7:08 AM	6JAN93	030-08	10:12 AM	6JAN93
009-03	5:59 AM	6JAN93	020-05	7:20 AM	6JAN93	031-08	10:49 AM	6JAN93
010-03	6:05 AM	6JAN93	021-06	7:29 AM	6JAN93	032-08	11:25 AM	6JAN93
011-03	6:11 AM	6JAN93	022-06	7:38 AM	6JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.009	0.000	10	0.000	10	0.01
6JAN93	0.004	2.213	0.406	35780	0.203	35790	0.43
7JAN93	0.028	2.788	0.576	49750	0.327	85550	0.56
8JAN93	0.006	16.151	1.656	143040	0.659	228590	0.95
9JAN93	0.000	0.055	0.002	140	0.528	228730	0.00
10JAN93	0.000	4.699	0.945	81670	0.597	310400	0.77
11JAN93	0.003	16.212	1.798	156640	0.769	467040	0.80
12JAN93	0.001	3.401	0.138	11920	0.690	478960	0.23
13JAN93	0.001	3.301	0.205	17740	0.636	496700	0.05
14JAN93	0.001	3.089	0.084	7270	0.581	503960	0.14
15JAN93	0.011	16.234	1.269	109650	0.643	613600	0.44
16JAN93	0.002	4.447	0.320	27670	0.616	641240	0.26
17JAN93	0.025	6.292	0.408	35280	0.600	676480	0.26
18JAN93	0.014	7.917	0.408	35240	0.587	711720	0.30
19JAN93	0.005	0.076	0.018	1520	0.549	713240	0.00

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21JAN93	0.000	0.075	0.001	90	0.484	713440	0.00
22JAN93	0.000	0.082	0.001	90	0.457	713560	0.00
23JAN93	0.000	0.076	0.001	90	0.433	713600	0.00
24JAN93	0.000	0.078	0.001	80	0.412	713680	0.00
25JAN93	0.000	0.091	0.001	100	0.392	713760	0.00
26JAN93	0.000	0.084	0.002	160	0.374	713920	0.00
27JAN93	0.000	0.092	0.001	120	0.358	714040	0.00
28JAN93	0.000	0.100	0.001	110	0.343	714120	0.00
29JAN93	0.000	0.099	0.001	70	0.329	714240	0.00
30JAN93	0.000	0.101	0.001	90	0.317	714320	0.00
31JAN93	0.000	0.108	0.001	100	0.305	714400	0.00
1FEB93	0.000	0.104	0.002	90	0.294	714520	0.00



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 5:14 AM 6JAN93
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
EXTERNAL FLOWMETER: ENABLED
PIPING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01	5:14 AM	6JAN93	012-03	6:17 AM	6JAN93	023-06	7:48 AM	6JAN93
002-01	5:20 AM	6JAN93	013-04	6:24 AM	6JAN93	024-06	8:01 AM	6JAN93
003-01	5:25 AM	6JAN93	014-04	6:31 AM	6JAN93	025-07	8:15 AM	6JAN93
004-01	5:29 AM	6JAN93	015-04	6:37 AM	6JAN93	026-07	8:31 AM	6JAN93
005-02	5:35 AM	6JAN93	016-04	6:44 AM	6JAN93	027-07	8:49 AM	6JAN93
[illegible]-02	5:41 AM	6JAN93	017-05	6:52 AM	6JAN93	028-07	9:11 AM	6JAN93
[illegible]-02	5:47 AM	6JAN93	018-05	7:01 AM	6JAN93	029-08	9:39 AM	6JAN93
008-02	5:53 AM	6JAN93	019-05	7:08 AM	6JAN93	030-08	10:12 AM	6JAN93
009-03	5:59 AM	6JAN93	020-05	7:20 AM	6JAN93	031-08	10:49 AM	6JAN93
010-03	6:05 AM	6JAN93	021-06	7:29 AM	6JAN93	032-08	11:25 AM	6JAN93
011-03	6:11 AM	6JAN93	022-06	7:38 AM	6JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.009	0.000	10	0.000	10	0.01
6JAN93	0.004	2.213	0.406	35780	0.203	35790	0.43
7JAN93	0.028	2.788	0.576	49750	0.327	85550	0.56
8JAN93	0.006	16.151	1.656	143040	0.659	228590	0.95
9JAN93	0.000	0.055	0.002	140	0.528	228730	0.00
10JAN93	0.000	4.699	0.945	81670	0.597	310400	0.77
11JAN93	0.313	16.212	4.312	154200	1.128	464600	0.80

1/6/93

Dobson

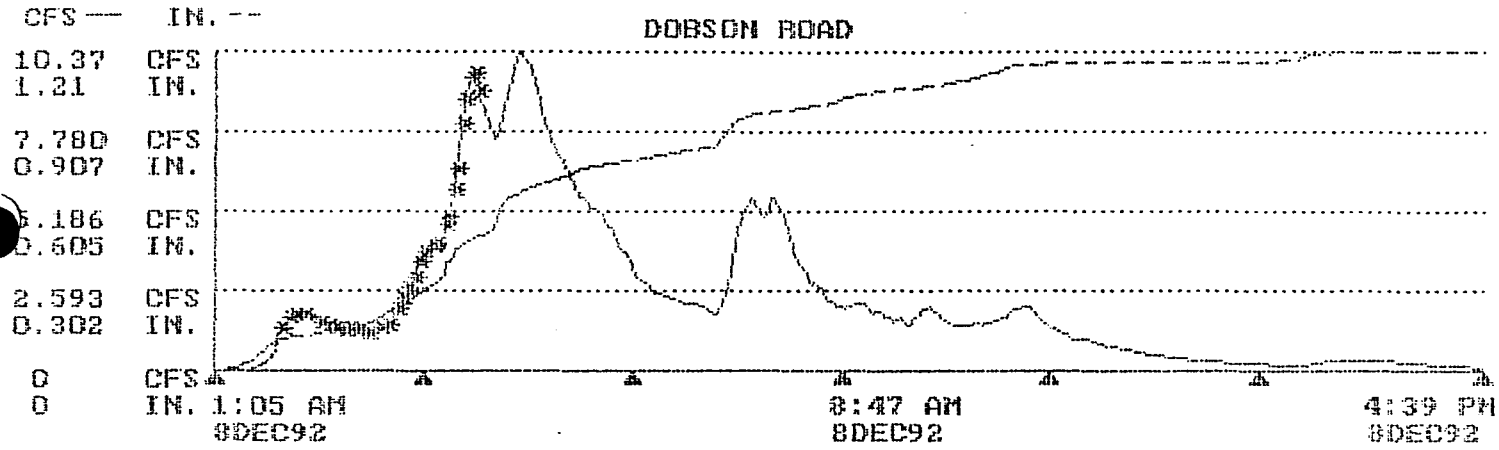
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 1:53 AM 8DEC92
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01	1:53 AM	8DEC92	012-03	2:56 AM	8DEC92	023-06	3:49 AM	8DEC92
002-01	1:58 AM	8DEC92	013-04	3:04 AM	8DEC92	024-06	3:52 AM	8DEC92
003-01	2:03 AM	8DEC92	014-04	3:10 AM	8DEC92	025-07	3:55 AM	8DEC92
004-01	2:09 AM	8DEC92	015-04	3:16 AM	8DEC92	026-07	3:58 AM	8DEC92
005-02	2:16 AM	8DEC92	016-04	3:20 AM	8DEC92	027-07	4:01 AM	8DEC92
006-02	2:21 AM	8DEC92	017-05	3:25 AM	8DEC92	028-07	4:04 AM	8DEC92
007-02	2:26 AM	8DEC92	018-05	3:29 AM	8DEC92	029-08	4:07 AM	8DEC92
008-02	2:32 AM	8DEC92	019-05	3:33 AM	8DEC92	030-08	4:10 AM	8DEC92
009-03	2:39 AM	8DEC92	020-05	3:37 AM	8DEC92	031-08	4:13 AM	8DEC92
010-03	2:45 AM	8DEC92	021-06	3:42 AM	8DEC92	032-08	4:16 AM	8DEC92
011-03	2:51 AM	8DEC92	022-06	3:45 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.001	0.000	00	0.000	00	0.00
8DEC92	0.000	10.442	1.525	133620	0.763	133620	1.21
9DEC92	0.000	0.012	0.000	40	0.509	133660	0.00
10DEC92	0.000	0.011	0.000	00	0.381	133660	0.00
11DEC92	0.000	0.010	0.000	00	0.305	133660	0.00
12DEC92	0.000	0.011	0.000	00	0.254	133660	0.00
13DEC92	0.000	0.034	0.000	10	0.218	133680	0.00
14DEC92	0.000	0.066	0.001	40	0.191	133720	0.00
15DEC92	0.000	0.073	0.000	40	0.170	133760	0.00
16DEC92	0.000	0.065	0.000	30	0.153	133790	0.00
17DEC92	0.000	0.062	0.000	30	0.139	133820	0.00
18DEC92	0.000	0.067	0.003	220	0.127	134040	0.05
19DEC92	0.000	0.066	0.000	30	0.118	134080	0.00
20DEC92	0.000	0.056	0.000	30	0.109	134100	0.00
21DEC92	0.000	0.072	0.000	40	0.102	134140	0.00
22DEC92	0.000	0.005	0.000	00	0.096	134140	0.00
23DEC92	0.000	0.004	0.000	00	0.090	134140	0.00
24DEC92	0.000	0.005	0.000	10	0.085	134150	0.00
25DEC92	0.000	0.007	0.000	00	0.081	134160	0.00
26DEC92	0.000	0.004	0.000	10	0.077	134170	0.00
27DEC92	0.000	1.194	0.038	3240	0.075	137410	0.18
28DEC92	0.002	4.514	0.989	85410	0.116	222830	0.77
29DEC92	0.000	0.026	0.002	190	0.111	223020	0.01
30DEC92	0.000	0.026	0.001	90	0.107	223110	0.00
31DEC92	0.000	0.024	0.000	20	0.102	223120	0.00
1JAN93	0.000	0.043	0.001	40	0.098	223160	0.00
2JAN93	0.000	0.043	0.001	40	0.095	223200	0.00
3JAN93	0.000	1.310	0.131	11300	0.096	234510	0.20
4JAN93	0.000	0.043	0.000	40	0.093	234550	0.00
5JAN93	0.000	0.000	0.000	00	0.090	234550	0.00



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 1:53 AM 8DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

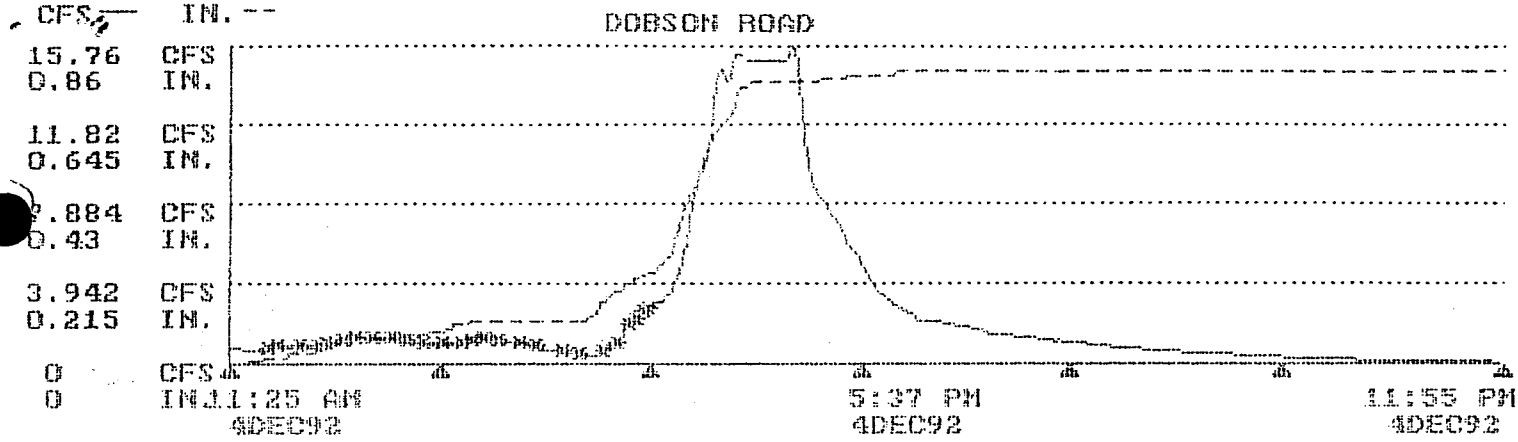
SAMPLE TAKEN

001-01	1:53	AM	8DEC92	012-03	2:56	AM	8DEC92	023-06	3:49	AM	8DEC92
002-01	1:58	AM	8DEC92	013-04	3:04	AM	8DEC92	024-06	3:52	AM	8DEC92
003-01	2:03	AM	8DEC92	014-04	3:10	AM	8DEC92	025-07	3:55	AM	8DEC92
004-01	2:09	AM	8DEC92	015-04	3:16	AM	8DEC92	026-07	3:58	AM	8DEC92
005-02	2:16	AM	8DEC92	016-04	3:20	AM	8DEC92	027-07	4:01	AM	8DEC92
006-02	2:21	AM	8DEC92	017-05	3:25	AM	8DEC92	028-07	4:04	AM	8DEC92
007-02	2:26	AM	8DEC92	018-05	3:29	AM	8DEC92	029-08	4:07	AM	8DEC92
008-02	2:32	AM	8DEC92	019-05	3:33	AM	8DEC92	030-08	4:10	AM	8DEC92
009-03	2:39	AM	8DEC92	020-05	3:37	AM	8DEC92	031-08	4:13	AM	8DEC92
010-03	2:45	AM	8DEC92	021-06	3:42	AM	8DEC92	032-08	4:16	AM	8DEC92
011-03	2:51	AM	8DEC92	022-06	3:45	AM	8DEC92				

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.001	0.000	00	0.000	00	0.00
8DEC92	0.000	10.442	1.525	133620	0.763	133620	1.21
9DEC92	0.000	0.012	0.000	40	0.509	133660	0.00
10DEC92	0.000	0.011	0.000	00	0.381	133660	0.00

12/8/92



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 11:44 AM 4DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

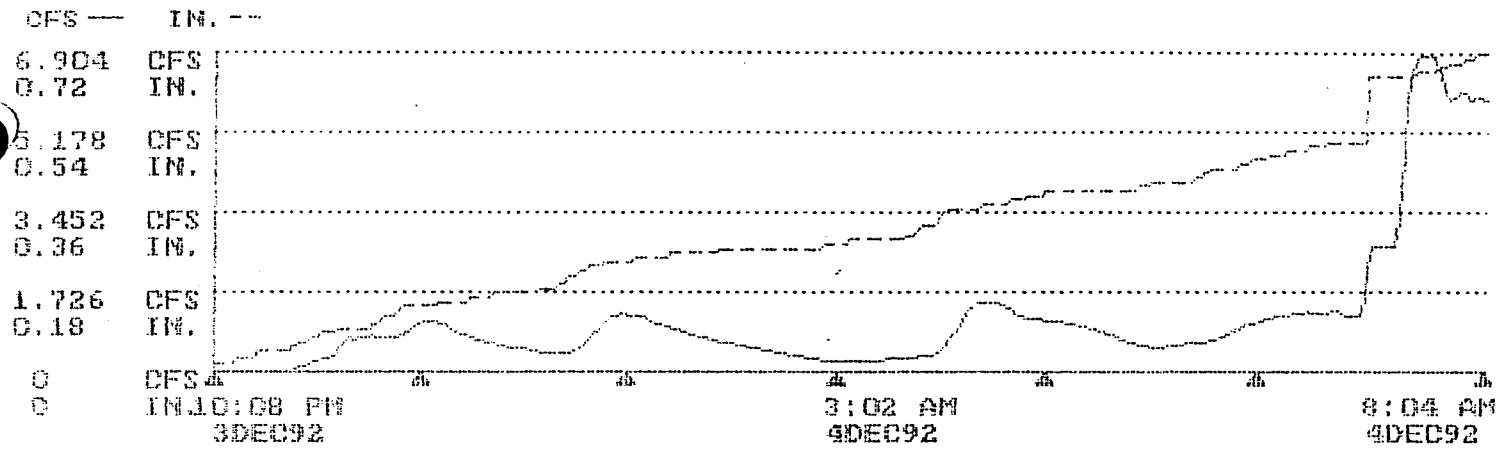
001-01	11:44 AM	4DEC92	012-03	1:02 PM	4DEC92	023-06	2:20 PM	4DEC92
002-01	11:53 AM	4DEC92	013-04	1:09 PM	4DEC92	024-06	2:27 PM	4DEC92
003-01	12:01 PM	4DEC92	014-04	1:16 PM	4DEC92	025-07	2:36 PM	4DEC92
004-01	12:08 PM	4DEC92	015-04	1:23 PM	4DEC92	026-07	2:47 PM	4DEC92
005-02	12:17 PM	4DEC92	016-04	1:30 PM	4DEC92	027-07	3:00 PM	4DEC92
006-02	12:25 PM	4DEC92	017-05	1:38 PM	4DEC92	028-07	3:09 PM	4DEC92
007-02	12:31 PM	4DEC92	018-05	1:45 PM	4DEC92	029-08	3:16 PM	4DEC92
008-02	12:37 PM	4DEC92	019-05	1:51 PM	4DEC92	030-08	3:20 PM	4DEC92
009-03	12:44 PM	4DEC92	020-05	1:57 PM	4DEC92	031-08	3:25 PM	4DEC92
010-03	12:50 PM	4DEC92	021-06	2:05 PM	4DEC92	032-08	3:29 PM	4DEC92
011-03	12:56 PM	4DEC92	022-06	2:12 PM	4DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
4DEC92	0.128	16.139	2.522	116660	2.522	116660	0.79
5DEC92	0.003	0.403	0.058	5020	1.290	121680	0.07
6DEC92	0.001	0.345	0.005	420	0.862	122100	0.00
7DEC92	0.001	0.004	0.001	40	0.646	122150	0.00

12/4/92

Dobson




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1004
PROGRAM AWAITING  RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=    300CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;   AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92
```

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
20NOV92	0.001	0.017	0.001	20	0.001	20	0.00
21NOV92	0.001	0.045	0.002	160	0.001	180	0.00
22NOV92	0.001	0.040	0.002	150	0.001	330	0.00
23NOV92	0.001	0.043	0.002	200	0.002	540	0.00
24NOV92	0.001	0.041	0.002	130	0.002	670	0.00
25NOV92	0.001	0.042	0.002	130	0.002	810	0.00
26NOV92	0.001	0.046	0.002	140	0.002	960	0.00
27NOV92	0.001	0.041	0.001	110	0.002	1070	0.00
28NOV92	0.001	0.025	0.002	130	0.002	1210	0.00
29NOV92	0.001	0.029	0.001	120	0.002	1330	0.00
30NOV92	0.001	0.039	0.002	160	0.002	1500	0.00
1DEC92	0.001	0.041	0.002	130	0.002	1630	0.00
2DEC92	0.001	0.043	0.002	130	0.002	1760	0.00
3DEC92	0.001	1.162	0.037	3190	0.004	4960	0.16
4DEC92	0.250	6.998	1.316	38930	0.092	43900	0.56

Dobson

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
27OCT92	0.003	0.033	0.003	180	0.003	180	0.00
28OCT92	0.002	2.598	0.153	13250	0.078	13430	0.23
29OCT92	0.003	0.046	0.004	340	0.054	13780	0.00
30OCT92	0.002	0.046	0.003	260	0.041	14040	0.00
31OCT92	0.002	0.048	0.003	220	0.033	14270	0.00
1NOV92	0.001	0.047	0.002	190	0.028	14470	0.00
2NOV92	0.001	0.047	0.003	210	0.024	14680	0.00
3NOV92	0.001	0.049	0.003	250	0.022	14940	0.00
4NOV92	0.001	0.046	0.002	170	0.020	15120	0.00
5NOV92	0.001	0.041	0.002	180	0.018	15300	0.00
6NOV92	0.002	0.042	0.003	240	0.016	15540	0.00
7NOV92	0.001	0.041	0.002	160	0.015	15710	0.00
8NOV92	0.002	0.042	0.003	230	0.014	15940	0.00
9NOV92	0.002	0.053	0.004	340	0.014	16280	0.00
10NOV92	0.002	0.050	0.003	210	0.013	16500	0.00
11NOV92	0.001	0.045	0.002	180	0.012	16680	0.00
12NOV92	0.002	0.046	0.003	240	0.012	16930	0.00
13NOV92	0.001	0.042	0.002	180	0.011	17110	0.00
14NOV92	0.001	0.045	0.002	190	0.011	17300	0.00
15NOV92	0.001	0.042	0.001	110	0.010	17420	0.00
16NOV92	0.001	0.036	0.002	180	0.010	17600	0.00
17NOV92	0.001	0.043	0.002	160	0.009	17770	0.00
18NOV92	0.001	0.040	0.002	130	0.009	17900	0.00
19NOV92	0.001	0.044	0.002	160	0.009	18070	0.00
20NOV92	0.001	0.043	0.003	60	0.009	18140	0.00

Dobson Rd

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST_FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML: AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
22SEP92	0.002	0.011	0.002	60	0.002	60	0.00
23SEP92	0.002	0.114	0.003	270	0.003	340	0.00
24SEP92	0.001	0.105	0.003	250	0.003	600	0.00
25SEP92	0.002	0.111	0.003	240	0.003	840	0.00
26SEP92	0.002	0.113	0.003	250	0.003	1100	0.00
27SEP92	0.002	0.115	0.003	250	0.003	1350	0.00
28SEP92	0.002	0.114	0.004	330	0.003	1690	0.00
29SEP92	0.002	0.042	0.003	220	0.003	1910	0.00
30SEP92	0.001	0.041	0.003	240	0.003	2160	0.00
1OCT92	0.001	0.038	0.002	180	0.003	2340	0.00
2OCT92	0.002	0.039	0.003	300	0.003	2640	0.00
3OCT92	0.002	0.038	0.003	240	0.003	2880	0.00
4OCT92	0.002	0.042	0.003	220	0.003	3110	0.00
5OCT92	0.002	0.045	0.003	220	0.003	3330	0.00
6OCT92	0.002	0.076	0.003	290	0.003	3630	0.00
7OCT92	0.001	0.068	0.003	260	0.003	3890	0.00
8OCT92	0.002	0.067	0.003	250	0.003	4140	0.00
9OCT92	0.001	0.057	0.003	220	0.003	4370	0.00
10OCT92	0.001	0.060	0.002	170	0.003	4540	0.00
11OCT92	0.001	0.069	0.002	200	0.003	4750	0.00
12OCT92	0.002	0.075	0.003	280	0.003	5040	0.00
13OCT92	0.001	0.043	0.003	230	0.003	5270	0.00
14OCT92	0.002	0.040	0.003	220	0.003	5500	0.00
15OCT92	0.001	0.102	0.003	220	0.003	5720	0.00
16OCT92	0.001	0.108	0.003	250	0.003	5970	0.00
17OCT92	0.001	0.108	0.002	190	0.003	6170	0.00
18OCT92	0.001	0.105	0.003	220	0.003	6390	0.00
19OCT92	0.002	0.107	0.003	250	0.003	6650	0.00
20OCT92	0.001	0.016	0.002	180	0.003	6830	0.00
21OCT92	0.002	0.022	0.003	150	0.003	6990	0.00

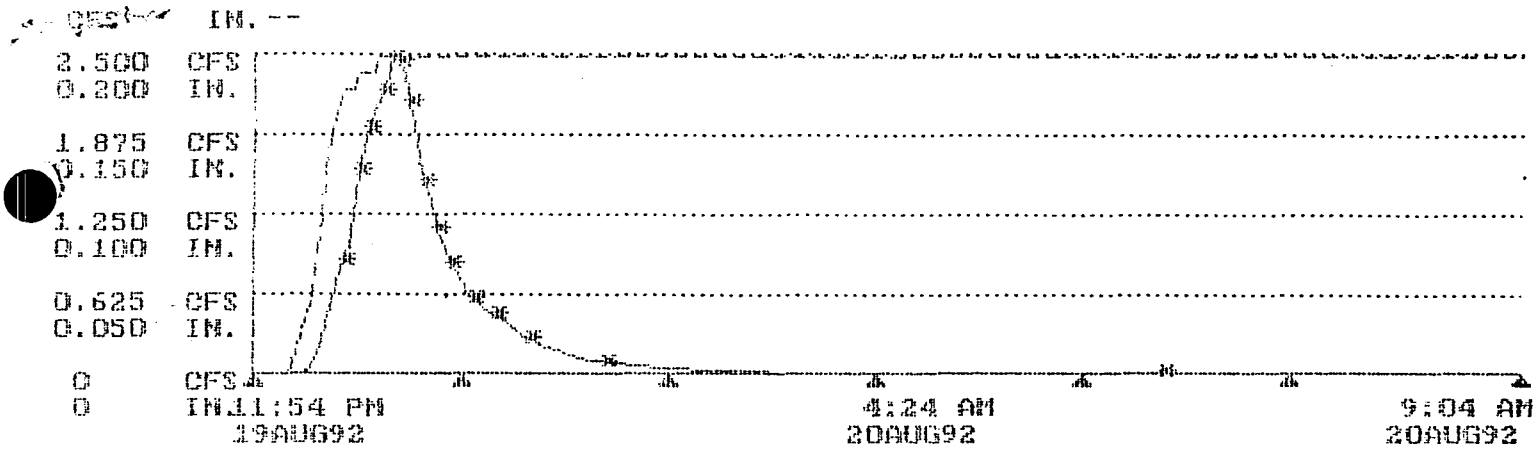
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 11:50 PM 19SEP92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01 11:50 PM 19SEP92 003-01 12:22 AM 20SEP92 005-02 4:04 AM 20SEP92
002-01 12:00 AM 20SEP92 004-01 1:03 AM 20SEP92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
26AUG92	0.000	0.004	0.000	00	0.000	00	0.00
27AUG92	0.000	0.019	0.000	00	0.000	00	0.00
28AUG92	0.000	0.019	0.000	00	0.000	10	0.00
29AUG92	0.000	0.018	0.000	00	0.000	20	0.00
30AUG92	0.000	0.009	0.000	00	0.000	20	0.00
31AUG92	0.000	0.017	0.000	10	0.000	40	0.00
1SEP92	0.000	0.023	0.000	10	0.000	60	0.00
2SEP92	0.000	0.020	0.000	00	0.000	70	0.00
3SEP92	0.000	0.020	0.000	00	0.000	80	0.00
4SEP92	0.000	0.051	0.000	40	0.000	120	0.00
5SEP92	0.000	0.049	0.000	40	0.000	160	0.00
6SEP92	0.000	0.048	0.000	40	0.000	200	0.00
7SEP92	0.000	0.030	0.000	20	0.000	230	0.00
8SEP92	0.000	0.079	0.001	40	0.000	270	0.00
9SEP92	0.000	0.060	0.000	30	0.000	310	0.00
10SEP92	0.000	0.068	0.000	30	0.000	350	0.00
11SEP92	0.000	0.063	0.000	30	0.000	380	0.00
12SEP92	0.000	0.063	0.001	50	0.000	440	0.00
13SEP92	0.000	0.080	0.002	180	0.000	630	0.02
14SEP92	0.000	0.083	0.001	60	0.000	690	0.00
15SEP92	0.000	0.091	0.001	60	0.000	760	0.00
16SEP92	0.000	0.093	0.001	60	0.000	820	0.00
17SEP92	0.000	0.094	0.001	60	0.000	890	0.00
18SEP92	0.000	0.089	0.001	60	0.000	950	0.00
19SEP92	0.000	0.689	0.008	680	0.001	1640	0.13
20SEP92	0.002	0.721	0.021	1860	0.002	3500	0.00
21SEP92	0.002	0.099	0.004	120	0.002	3620	0.00



DOBSON SOUTH OF BROA

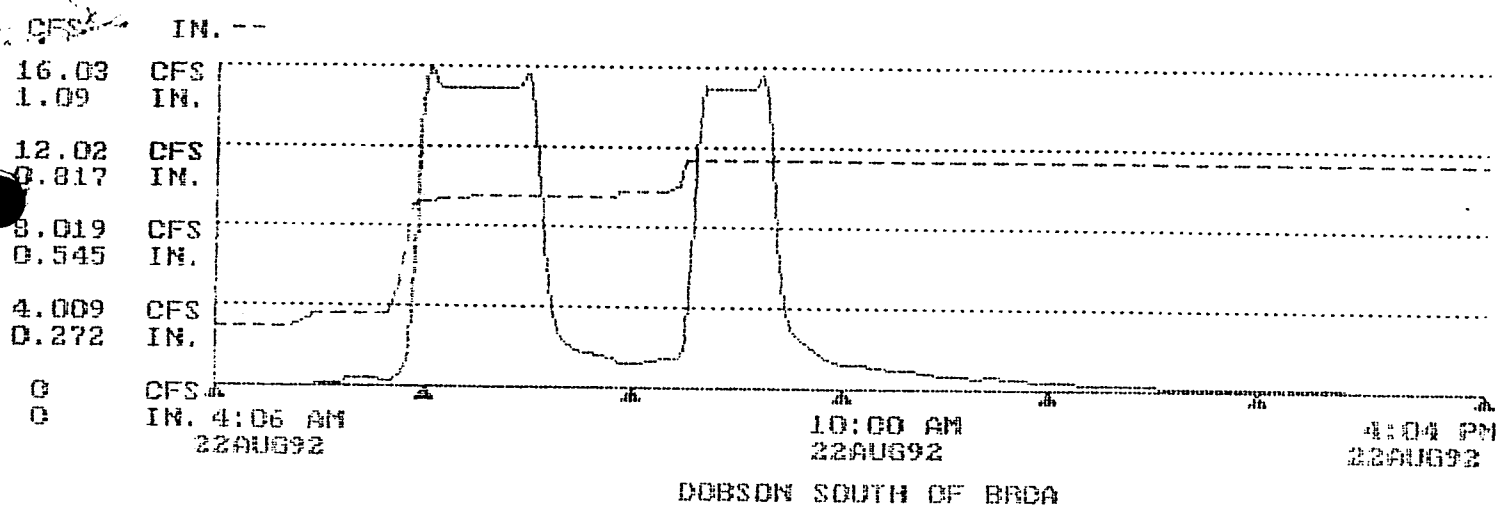
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 12:32 AM 20AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL= 300CU FT
DISCRETE MODE. 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
PLANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01	12:32 AM 20AUG92	006-02	12:57 AM 20AUG92	011-03	1:28 AM 20AUG92
002-01	12:39 AM 20AUG92	007-02	1:01 AM 20AUG92	012-03	1:39 AM 20AUG92
003-01	12:43 AM 20AUG92	008-02	1:06 AM 20AUG92	013-04	1:55 AM 20AUG92
004-01	12:48 AM 20AUG92	009-03	1:12 AM 20AUG92	014-04	2:26 AM 20AUG92
005-02	12:53 AM 20AUG92	010-03	1:19 AM 20AUG92	015-04	6:34 AM 20AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
18AUG92	0.000	0.191	0.001	40	0.001	40	0.00
19AUG92	0.000	0.007	0.000	00	0.000	50	0.00
20AUG92	0.000	2.522	0.081	7020	0.027	7080	0.20
21AUG92	0.000	0.007	0.000	00	0.020	7080	0.00
22AUG92	0.000	16.192	1.535	133640	0.323	140720	0.60
23AUG92	0.002	0.861	0.205	17680	0.303	158400	0.29
24AUG92	0.001	0.141	0.021	640	0.263	159040	0.00



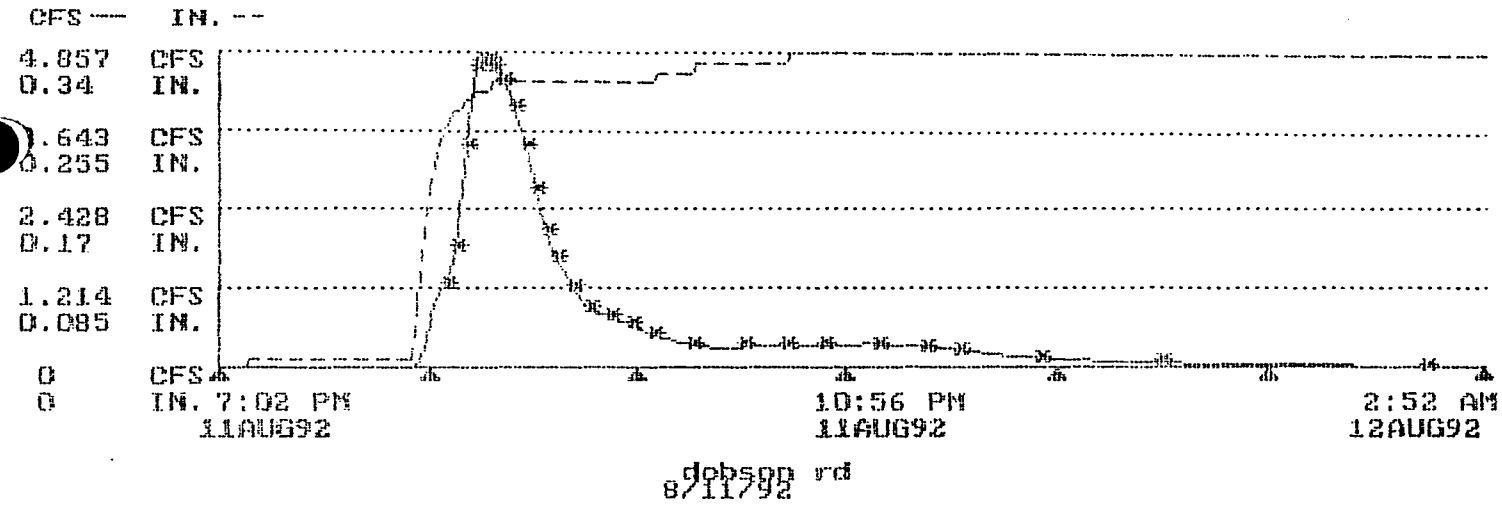
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 12:32 AM 20AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
PIPE FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01	12:32 AM 20AUG92	006-02	12:57 AM 20AUG92	011-03	1:28 AM 20AUG92
002-01	12:39 AM 20AUG92	007-02	1:01 AM 20AUG92	012-03	1:39 AM 20AUG92
003-01	12:43 AM 20AUG92	008-02	1:06 AM 20AUG92	013-04	1:55 AM 20AUG92
004-01	12:48 AM 20AUG92	009-03	1:12 AM 20AUG92	014-04	2:26 AM 20AUG92
005-02	12:53 AM 20AUG92	010-03	1:19 AM 20AUG92	015-04	6:34 AM 20AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
18AUG92	0.000	0.191	0.001	40	0.001	40	0.00
19AUG92	0.000	0.007	0.000	00	0.000	50	0.00
20AUG92	0.000	2.522	0.081	7020	0.027	7080	0.20
21AUG92	0.000	0.007	0.000	00	0.020	7080	0.00
22AUG92	0.000	16.192	1.535	133640	0.323	140720	0.60
23AUG92	0.002	0.861	0.205	17680	0.303	158400	0.29
24AUG92	0.001	0.141	0.021	640	0.263	159040	0.00



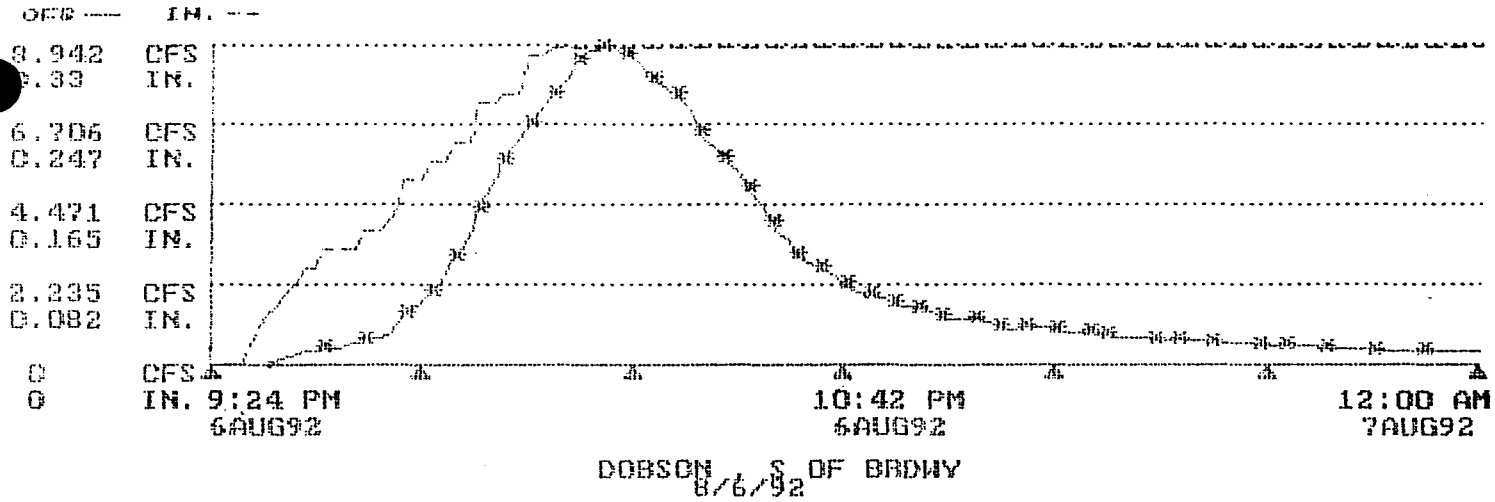

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1004
PROGRAM STARTED  8:24 PM 11AUG92
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:
NEXT SAMPLE IN      100CU FT
COLLECTED  3 SAMPLES IN BOTTLE  7
 1   REMAINING
 1 BOTTLE TO GO
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN     CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=   0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=    300CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92
```

SAMPLE TAKEN

001-01	8:24 PM	11AUG92	010-03	8:58 PM	11AUG92	019-05	10:17 PM	11AUG92
002-01	8:29 PM	11AUG92	011-03	9:02 PM	11AUG92	020-05	10:34 PM	11AUG92
003-01	8:33 PM	11AUG92	012-03	9:06 PM	11AUG92	021-06	10:51 PM	11AUG92
004-01	8:37 PM	11AUG92	013-04	9:12 PM	11AUG92	022-06	11:07 PM	11AUG92
005-02	8:40 PM	11AUG92	014-04	9:18 PM	11AUG92	023-06	11:24 PM	11AUG92
006-02	8:43 PM	11AUG92	015-04	9:26 PM	11AUG92	024-06	11:43 PM	11AUG92
007-02	8:47 PM	11AUG92	016-04	9:34 PM	11AUG92	025-07	12:10 AM	12AUG92
008-02	8:50 PM	11AUG92	017-05	9:45 PM	11AUG92	026-07	12:56 AM	12AUG92
009-03	8:54 PM	11AUG92	018-05	9:59 PM	11AUG92	027-07	2:35 AM	12AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
11AUG92	0.000	4.873	0.381	13740	0.381	13740	0.34
12AUG92	0.006	0.199	0.039	1010	0.210	14750	0.00



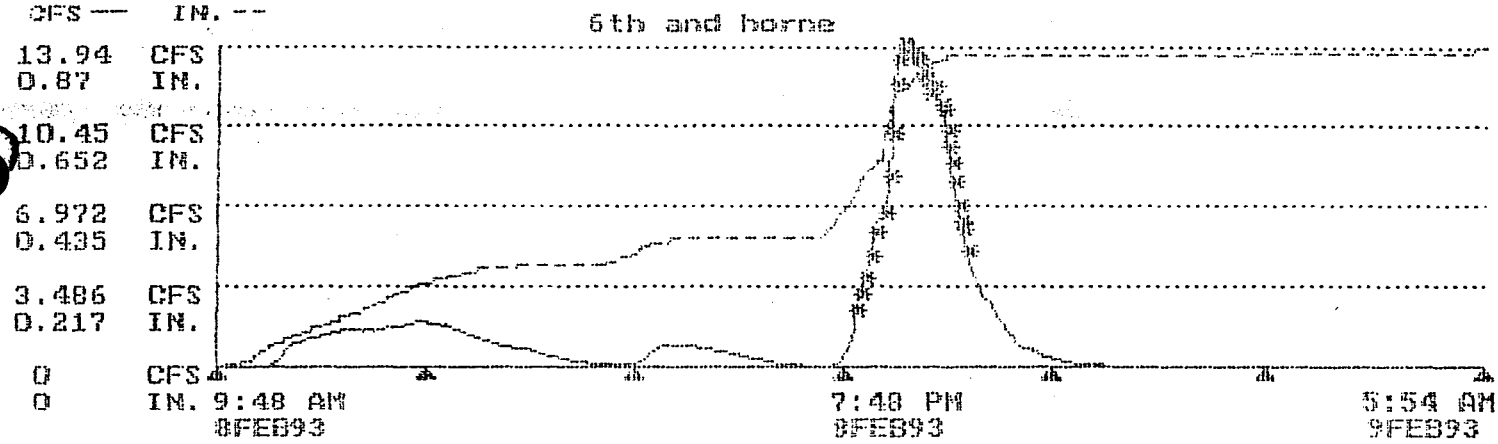
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1004
PROGRAM STARTED 9:37 PM 6AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
FLOW MODE, SAMPLE INTERVAL= 100CU FT
DISCRETE MODE, 5 SAMP/BOTTLE
SAMPLE VOLUME= 300 ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=030.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 1 MIN
SENSOR LAST CALIBRATED: 2:10 PM 30JUL92

SAMPLE TAKEN

001-01	9:37	PM	6AUG92	015-03	10:23	PM	6AUG92	028-06	11:03	PM	6AUG92
002-01	9:42	PM	6AUG92	016-04	10:26	PM	6AUG92	029-06	11:07	PM	6AUG92
003-01	9:47	PM	6AUG92	017-04	10:29	PM	6AUG92	030-06	11:11	PM	6AUG92
004-01	9:50	PM	6AUG92	018-04	10:32	PM	6AUG92	031-07	11:14	PM	6AUG92
005-01	9:53	PM	6AUG92	019-04	10:35	PM	6AUG92	032-07	11:19	PM	6AUG92
006-02	9:56	PM	6AUG92	020-04	10:38	PM	6AUG92	033-07	11:23	PM	6AUG92
007-02	9:59	PM	6AUG92	021-05	10:41	PM	6AUG92	034-07	11:27	PM	6AUG92
008-02	10:02	PM	6AUG92	022-05	10:44	PM	6AUG92	035-07	11:32	PM	6AUG92
009-02	10:05	PM	6AUG92	023-05	10:47	PM	6AUG92	036-08	11:37	PM	6AUG92
010-02	10:08	PM	6AUG92	024-05	10:50	PM	6AUG92	037-08	11:42	PM	6AUG92
011-03	10:11	PM	6AUG92	025-05	10:53	PM	6AUG92	038-08	11:48	PM	6AUG92
012-03	10:14	PM	6AUG92	026-06	10:57	PM	6AUG92	039-08	11:53	PM	6AUG92
013-03	10:17	PM	6AUG92	027-06	11:00	PM	6AUG92	040-08	12:00	AM	7AUG92
014-03	10:20	PM	6AUG92								

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6AUG92	0.000	8.942	0.786	26420	0.786	26420	0.33
7AUG92	0.391	0.391	0.391	20	0.589	26450	0.00



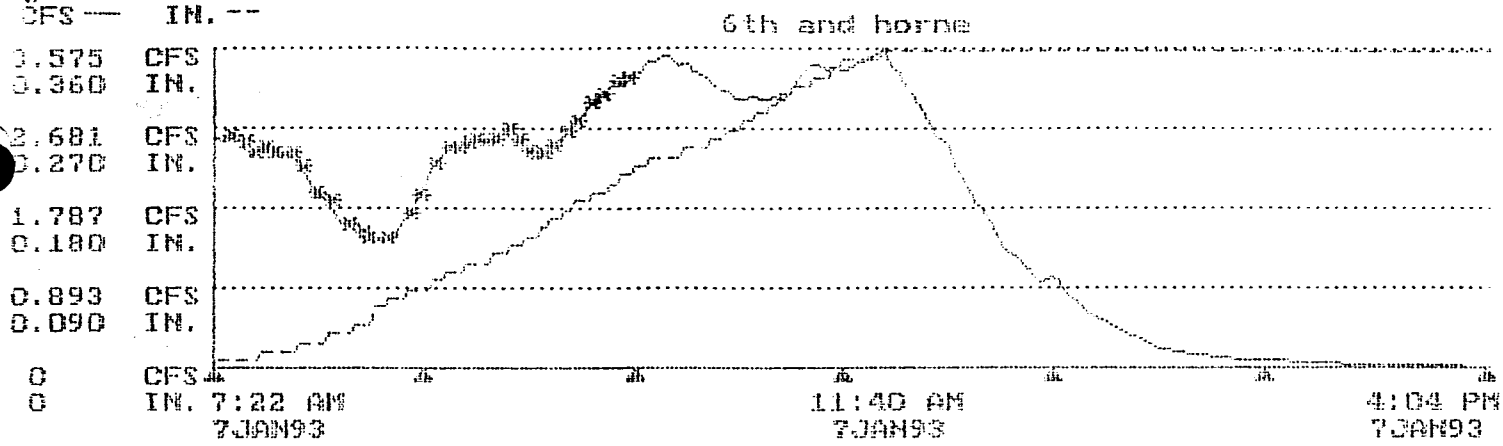

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1000
PROGRAM STARTED  7:58 PM  8FEB93
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
-- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN     CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
 INTAKE RINSE
 INTAKE FAULTS
MPLE TIME LIMIT: 1440 MIN
TERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92
```

SAMPLE TAKEN

001-01	7:58 PM	8FEB93	012-03	8:43 PM	8FEB93	023-06	9:16 PM	8FEB93
002-01	8:03 PM	8FEB93	013-04	8:46 PM	8FEB93	024-06	9:19 PM	8FEB93
003-01	8:07 PM	8FEB93	014-04	8:49 PM	8FEB93	025-07	9:22 PM	8FEB93
004-01	8:11 PM	8FEB93	015-04	8:52 PM	8FEB93	026-07	9:25 PM	8FEB93
005-02	8:15 PM	8FEB93	016-04	8:55 PM	8FEB93	027-07	9:28 PM	8FEB93
006-02	8:25 PM	8FEB93	017-05	8:58 PM	8FEB93	028-07	9:31 PM	8FEB93
007-02	8:28 PM	8FEB93	018-05	9:01 PM	8FEB93	029-08	9:34 PM	8FEB93
008-02	8:31 PM	8FEB93	019-05	9:04 PM	8FEB93	030-08	9:37 PM	8FEB93
009-03	8:34 PM	8FEB93	020-05	9:07 PM	8FEB93	031-08	9:41 PM	8FEB93
010-03	8:37 PM	8FEB93	021-06	9:10 PM	8FEB93	032-08	9:45 PM	8FEB93
011-03	8:40 PM	8FEB93	022-06	9:13 PM	8FEB93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8FEB93	0.001	14.149	1.880	101290	1.880	101290	0.85
9FEB93	0.002	0.280	0.017	630	0.949	101920	0.02



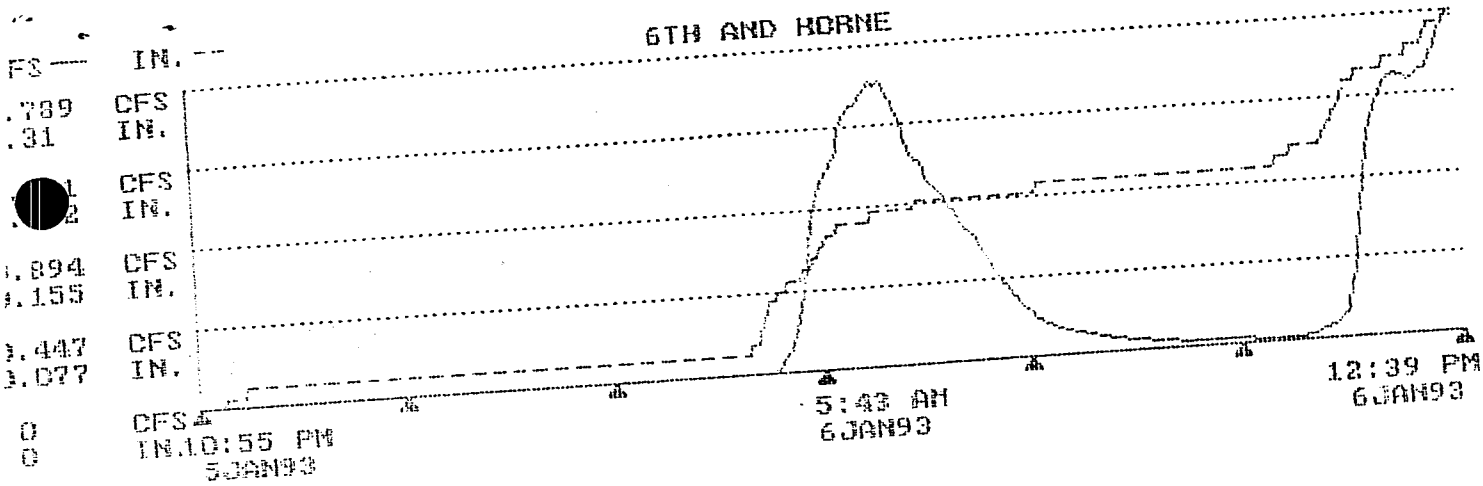
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 7:27 AM 7JAN93
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
EXTERNAL FLOWMETER: ENABLED
PIPING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	7:27	AM	7JAN93	012-03	8:27	AM	7JAN93	023-06	9:24	AM	7JAN93
002-01	7:32	AM	7JAN93	013-04	8:33	AM	7JAN93	024-06	9:29	AM	7JAN93
003-01	7:37	AM	7JAN93	014-04	8:40	AM	7JAN93	025-07	9:34	AM	7JAN93
004-01	7:42	AM	7JAN93	015-04	8:45	AM	7JAN93	026-07	9:39	AM	7JAN93
005-02	7:47	AM	7JAN93	016-04	8:51	AM	7JAN93	027-07	9:44	AM	7JAN93
006-02	7:52	AM	7JAN93	017-05	8:56	AM	7JAN93	028-07	9:49	AM	7JAN93
007-02	7:57	AM	7JAN93	018-05	9:01	AM	7JAN93	029-08	9:54	AM	7JAN93
008-02	8:03	AM	7JAN93	019-05	9:05	AM	7JAN93	030-08	9:58	AM	7JAN93
009-03	8:08	AM	7JAN93	020-05	9:10	AM	7JAN93	031-08	10:04	AM	7JAN93
010-03	8:14	AM	7JAN93	021-06	9:15	AM	7JAN93	032-08	10:08	AM	7JAN93
011-03	8:20	AM	7JAN93	022-06	9:20	AM	7JAN93				

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7JAN93	0.003	3.666	1.028	62570	1.028	62570	0.49
8JAN93	0.000	36.314	2.647	228710	1.838	291280	1.13
9JAN93	0.000	0.001	0.000	10	1.225	291280	0.00
10JAN93	0.000	5.685	2.933	76280	1.140	367540	0.60
11JAN93	0.262	10.793	3.704	97790	1.652	465340	0.78



OMA STREAMLINE REV: SW-2.05A
TE I.D.#: 1000
ROGRAM AWAITING RAIN AND LEVEL
) SAMPLES YET
PROGRAM REVIEW-
EVEL CONTROL: STORMWATER
TART ON RAIN AND LEVEL CHANNEL LEVEL= 0.2 IN.
OTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN FIRST FLUSH BOTTLES= 0
IRST FLUSH: PERIOD= 0 MIN;
1 BOTTLE/SAMPLE
AMPLE VOLUME=1000 ML
AIN PROGRAM: 400CU FT
LOW MODE: SAMPLE INTERVAL= 4 SAMP/BOTTLE
ISCRETE MODE: AUTO CALIBRATE
AMPLE VOLUME= 450 ML;
INTAKE RINSE
INTAKE FAULTS
PECIAL OUTPUT: EVENT OUTPUT
AMPLE TIME LIMIT: 1440 MIN
ERNAL FLOWMETER: ENABLED
ING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
LOW RECORDING INTERVAL= 2 MIN
ENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.000	0.000	00	0.000	00	0.02
5JAN93	0.000	1.832	0.343	15730	0.172	15730	0.29

6th & Horne

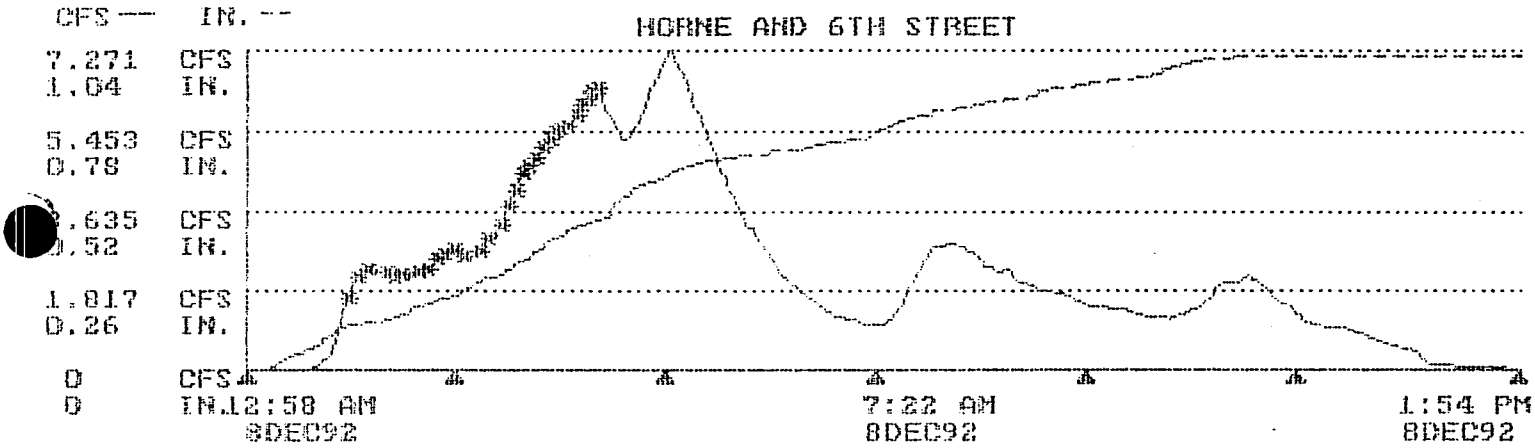
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 1:58 AM 8DEC92
PROGRAM COMPLETE
PROGRAM REVIEW-
EL CONTROL: STORMWATER
RT ON RAIN AND LEVEL
TAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	1:58 AM	8DEC92	012-03	3:03 AM	8DEC92	023-06	3:57 AM	8DEC92
002-01	2:05 AM	8DEC92	013-04	3:08 AM	8DEC92	024-06	4:01 AM	8DEC92
003-01	2:11 AM	8DEC92	014-04	3:13 AM	8DEC92	025-07	4:05 AM	8DEC92
004-01	2:18 AM	8DEC92	015-04	3:18 AM	8DEC92	026-07	4:09 AM	8DEC92
005-02	2:23 AM	8DEC92	016-04	3:23 AM	8DEC92	027-07	4:13 AM	8DEC92
006-02	2:28 AM	8DEC92	017-05	3:33 AM	8DEC92	028-07	4:16 AM	8DEC92
007-02	2:33 AM	8DEC92	018-05	3:37 AM	8DEC92	029-08	4:20 AM	8DEC92
008-02	2:40 AM	8DEC92	019-05	3:41 AM	8DEC92	030-08	4:24 AM	8DEC92
009-03	2:46 AM	8DEC92	020-05	3:45 AM	8DEC92	031-08	4:27 AM	8DEC92
010-03	2:53 AM	8DEC92	021-06	3:49 AM	8DEC92	032-08	4:31 AM	8DEC92
011-03	2:58 AM	8DEC92	022-06	3:53 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.000	0.000	00	0.000	00	0.00
8DEC92	0.000	7.328	1.216	106620	0.608	106620	1.34
9DEC92	0.002	0.023	0.000	10	0.405	106620	0.00
10DEC92	0.000	0.027	0.000	20	0.304	106640	0.00
11DEC92	0.000	0.050	0.000	30	0.243	106670	0.00
12DEC92	0.000	0.000	0.000	00	0.203	106670	0.00
13DEC92	0.000	0.000	0.000	00	0.174	106670	0.00
14DEC92	0.000	0.000	0.000	00	0.152	106670	0.00
15DEC92	0.000	0.001	0.000	00	0.135	106670	0.00
16DEC92	0.000	0.054	0.031	2660	0.125	109340	0.00
17DEC92	0.043	0.074	0.060	5220	0.119	114560	0.00
18DEC92	0.002	0.073	0.048	4150	0.113	118710	0.35
19DEC92	0.000	0.001	0.000	00	0.104	118710	0.01
20DEC92	0.000	0.000	0.000	00	0.097	118710	0.00
21DEC92	0.000	0.000	0.000	00	0.090	118710	0.00
22DEC92	0.000	0.000	0.000	00	0.085	118710	0.00
23DEC92	0.000	0.000	0.000	00	0.080	118710	0.00
24DEC92	0.002	0.043	0.018	1510	0.076	120220	0.00
25DEC92	0.038	0.063	0.050	4310	0.075	124540	0.00
26DEC92	0.038	0.063	0.053	4550	0.074	129090	0.00
27DEC92	0.000	0.991	0.063	5460	0.073	134550	0.14
28DEC92	0.001	4.710	0.945	81680	0.113	216230	0.79
29DEC92	0.000	0.001	0.000	00	0.108	216230	0.01
30DEC92	0.000	0.002	0.000	10	0.104	216240	0.00
31DEC92	0.000	0.034	0.003	280	0.099	216520	0.00
1JAN93	0.000	0.001	0.000	00	0.096	216520	0.00
2JAN93	0.000	0.000	0.000	00	0.092	216520	0.00
3JAN93	0.000	0.797	0.094	8080	0.092	224600	0.16
4JAN93	0.000	0.000	0.000	00	0.089	224600	0.00
5JAN93	0.000	0.000	0.000	00	0.086	224600	0.00



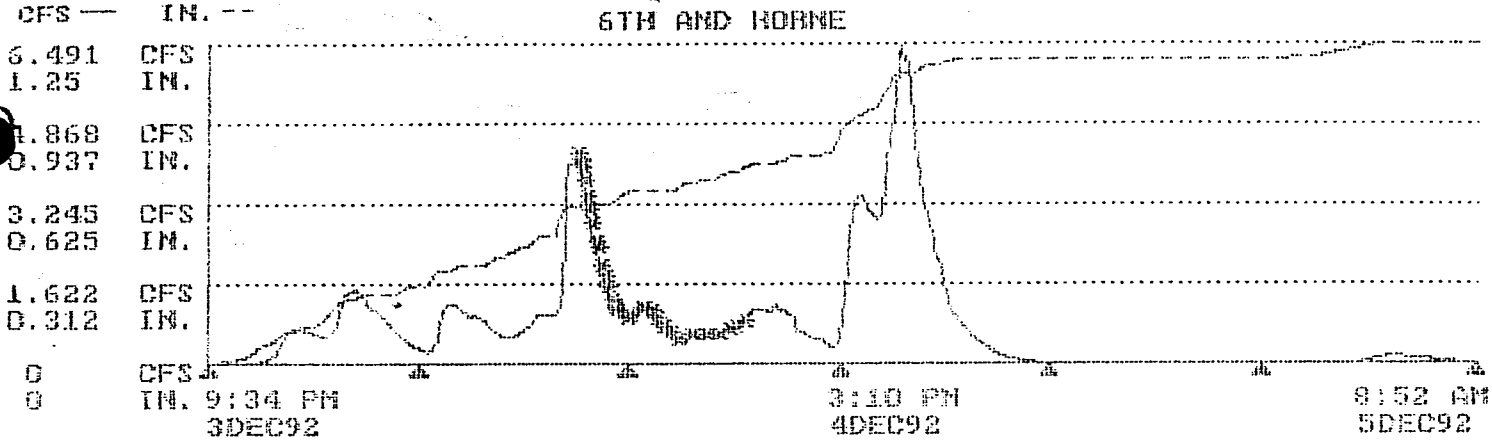

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1000
PROGRAM STARTED  1:58 AM  8DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92
```

SAMPLE TAKEN

001-01	1:58	AM	8DEC92	012-03	3:03	AM	8DEC92	023-06	3:57	AM	8DEC92
002-01	2:05	AM	8DEC92	013-04	3:08	AM	8DEC92	024-06	4:01	AM	8DEC92
003-01	2:11	AM	8DEC92	014-04	3:13	AM	8DEC92	025-07	4:05	AM	8DEC92
004-01	2:18	AM	8DEC92	015-04	3:18	AM	8DEC92	026-07	4:09	AM	8DEC92
005-02	2:23	AM	8DEC92	016-04	3:23	AM	8DEC92	027-07	4:13	AM	8DEC92
006-02	2:28	AM	8DEC92	017-05	3:33	AM	8DEC92	028-07	4:16	AM	8DEC92
007-02	2:33	AM	8DEC92	018-05	3:37	AM	8DEC92	029-08	4:20	AM	8DEC92
008-02	2:40	AM	8DEC92	019-05	3:41	AM	8DEC92	030-08	4:24	AM	8DEC92
009-03	2:46	AM	8DEC92	020-05	3:45	AM	8DEC92	031-08	4:27	AM	8DEC92
010-03	2:53	AM	8DEC92	021-06	3:49	AM	8DEC92	032-08	4:31	AM	8DEC92
011-03	2:58	AM	8DEC92	022-06	3:53	AM	8DEC92				

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.000	0.000	00	0.000	00	0.00
8DEC92	0.000	7.328	1.216	106620	0.608	106620	1.04
9DEC92	0.000	0.023	0.000	10	0.405	106620	0.00
10DEC92	0.000	0.027	0.000	20	0.304	106640	0.00



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 7:48 AM 4DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
EXTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	7:48 AM	4DEC92	012-03	8:40 AM	4DEC92	023-06	10:23 AM	4DEC92
002-01	7:52 AM	4DEC92	013-04	8:46 AM	4DEC92	024-06	10:37 AM	4DEC92
003-01	7:56 AM	4DEC92	014-04	8:53 AM	4DEC92	025-07	10:53 AM	4DEC92
004-01	8:00 AM	4DEC92	015-04	9:02 AM	4DEC92	026-07	11:09 AM	4DEC92
005-02	8:04 AM	4DEC92	016-04	9:11 AM	4DEC92	027-07	11:23 AM	4DEC92
006-02	8:08 AM	4DEC92	017-05	9:20 AM	4DEC92	028-07	11:36 AM	4DEC92
007-02	8:13 AM	4DEC92	018-05	9:36 AM	4DEC92	029-08	11:51 AM	4DEC92
008-02	8:18 AM	4DEC92	019-05	9:44 AM	4DEC92	030-08	12:04 PM	4DEC92
009-03	8:23 AM	4DEC92	020-05	9:52 AM	4DEC92	031-08	12:15 PM	4DEC92
010-03	8:28 AM	4DEC92	021-06	10:01 AM	4DEC92	032-08	12:26 PM	4DEC92
011-03	8:34 AM	4DEC92	022-06	10:11 AM	4DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
20NOV92	0.068	0.092	0.080	2920	0.080	2920	0.00
21NOV92	0.071	0.089	0.079	6830	0.079	9750	0.00
22NOV92	0.068	0.087	0.078	6740	0.079	16500	0.00
23NOV92	0.066	0.087	0.074	6400	0.078	22900	0.00
24NOV92	0.062	0.087	0.075	6500	0.077	29410	0.00
25NOV92	0.068	0.087	0.075	6440	0.077	35850	0.00
26NOV92	0.063	0.090	0.074	6400	0.076	42250	0.00
27NOV92	0.060	0.091	0.074	6430	0.076	48680	0.00
28NOV92	0.063	0.083	0.072	6190	0.076	54880	0.00
[illegible]NOV92	0.063	0.087	0.071	6170	0.075	61050	0.00
[illegible]OV92	0.002	0.105	0.063	5500	0.074	66550	0.00
[illegible]EC92	0.000	0.014	0.000	40	0.068	66590	0.00
2DEC92	0.000	0.141	0.006	480	0.063	67080	0.00
3DEC92	0.000	0.735	0.014	1190	0.060	68270	0.13
4DEC92	0.000	6.713	1.123	98600	0.131	166870	1.06
5DEC92	0.000	0.193	0.015	1300	0.123	168170	0.06
6DEC92	0.000	0.000	0.000	00	0.116	168170	0.00
7DEC92	0.000	0.000	0.000	00	0.110	168170	0.00

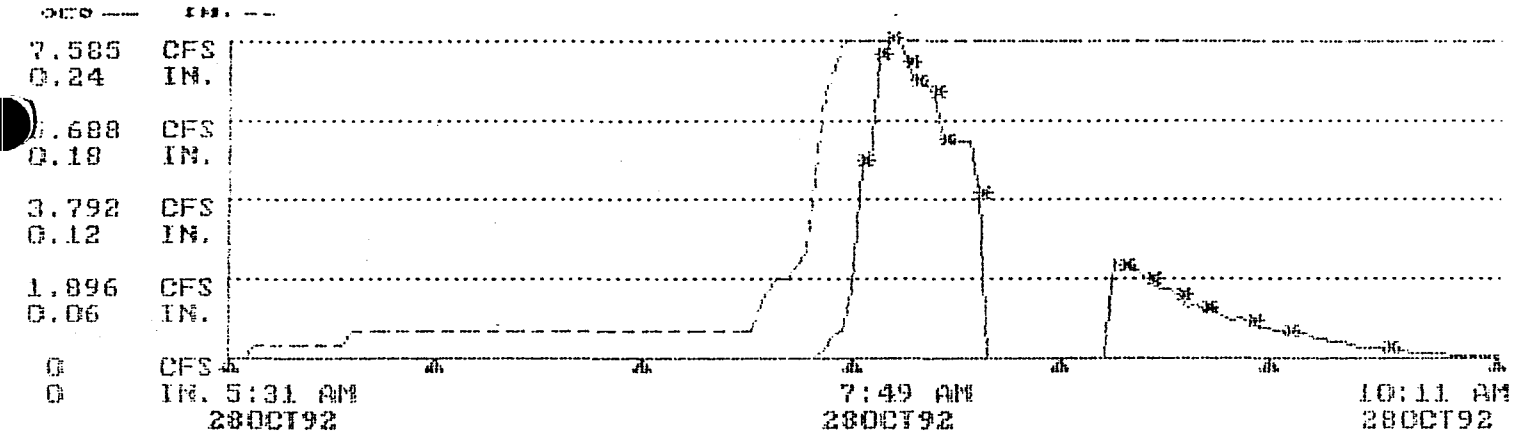
6th + Horne

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.: TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
30OCT92	0.000	0.000	0.000	00	0.000	00	0.00
31OCT92	0.000	0.000	0.000	00	0.000	00	0.00
1NOV92	0.000	0.002	0.000	00	0.000	00	0.00
2NOV92	0.002	0.039	0.025	2160	0.006	2160	0.00
3NOV92	0.038	0.078	0.056	4830	0.016	7000	0.00
4NOV92	0.060	0.083	0.071	6140	0.025	13140	0.00
5NOV92	0.063	0.078	0.070	6090	0.032	19240	0.00
6NOV92	0.066	0.085	0.073	6330	0.037	25570	0.00
7NOV92	0.064	0.083	0.073	6320	0.041	31890	0.00
8NOV92	0.062	0.073	0.068	5870	0.044	37760	0.00
9NOV92	0.063	0.074	0.069	5920	0.046	43690	0.00
10NOV92	0.053	0.069	0.061	5230	0.047	48920	0.00
11NOV92	0.060	0.077	0.069	5910	0.049	54840	0.00
12NOV92	0.066	0.083	0.074	6350	0.051	61190	0.00
13NOV92	0.070	0.085	0.077	6630	0.052	67820	0.00
14NOV92	0.063	0.081	0.071	6150	0.053	73970	0.00
15NOV92	0.066	0.079	0.072	6250	0.055	80220	0.00
16NOV92	0.066	0.078	0.071	6090	0.055	86310	0.00
17NOV92	0.064	0.079	0.071	6140	0.056	92460	0.00
18NOV92	0.066	0.081	0.072	6250	0.057	98710	0.00
19NOV92	0.066	0.079	0.072	6230	0.058	104940	0.00
20NOV92	0.066	0.076	0.071	2300	0.058	107240	0.00



6th & horne
10/28/92

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 7:49 AM 280CT92
FIRST FLUSH:
NEXT SAMPLE IN 0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:
NEXT SAMPLE IN 200CU FT
COLLECTED 3 SAMPLES IN BOTTLE 4
1 REMAINING
4 BOTTLES TO GO
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	7:49 AM 280CT92	006-02	8:04 AM 280CT92	011-03	8:58 AM 280CT92
002-01	7:52 AM 280CT92	007-02	8:07 AM 280CT92	012-03	9:05 AM 280CT92
003-01	7:55 AM 280CT92	008-02	8:15 AM 280CT92	013-04	9:14 AM 280CT92
004-01	7:58 AM 280CT92	009-03	8:46 AM 280CT92	014-04	9:25 AM 280CT92
005-02	8:01 AM 280CT92	010-03	8:52 AM 280CT92	015-04	9:45 AM 280CT92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
27OCT92	0.000	0.000	0.000	00	0.000	00	0.00
28OCT92	0.000	7.585	0.167	14310	0.083	14310	0.24
29OCT92	0.000	0.000	0.000	00	0.056	14310	0.00

Herne & 6Th ST.

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.: TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

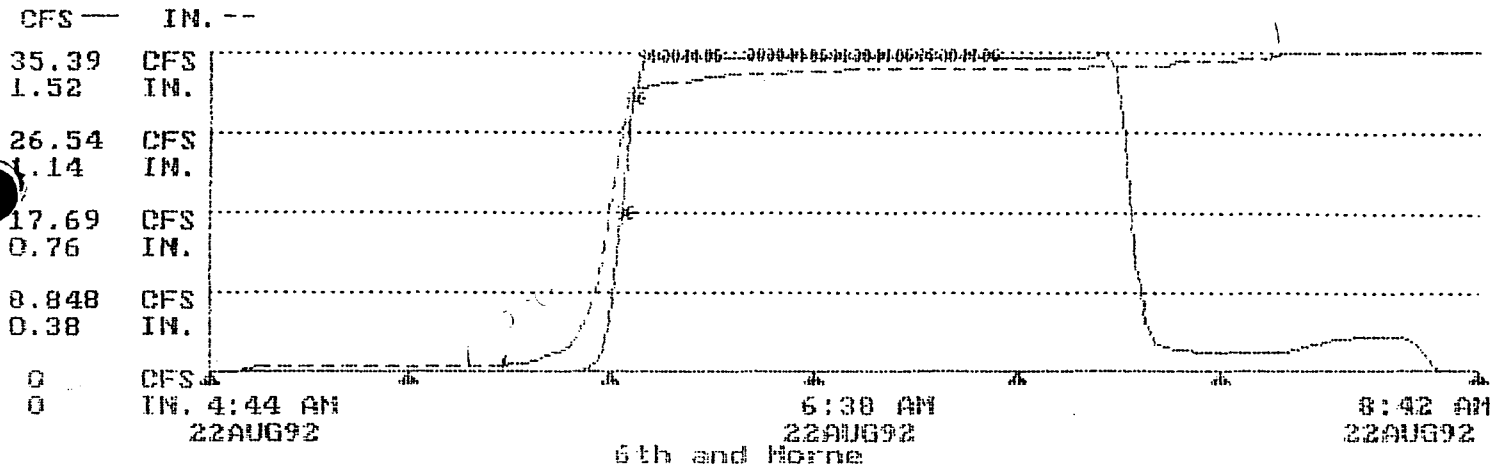
DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
22SEP92	0.000	0.026	0.001	40	0.001	40	0.00
23SEP92	0.000	0.229	0.010	860	0.006	910	0.00
24SEP92	0.000	0.030	0.000	40	0.004	950	0.00
25SEP92	0.000	0.001	0.000	00	0.003	950	0.00
26SEP92	0.000	0.279	0.002	200	0.003	1160	0.00
27SEP92	0.000	0.001	0.000	00	0.002	1160	0.00
28SEP92	0.000	0.001	0.000	00	0.002	1160	0.00
29SEP92	0.000	0.001	0.000	00	0.002	1160	0.00
30SEP92	0.000	0.001	0.000	00	0.002	1160	0.00
1OCT92	0.000	0.653	0.011	920	0.002	2080	0.00
2OCT92	0.000	0.146	0.002	180	0.002	2270	0.00
3OCT92	0.000	0.256	0.007	640	0.003	2910	0.00
4OCT92	0.000	0.062	0.004	340	0.003	3250	0.00
5OCT92	0.000	0.034	0.000	30	0.003	3290	0.00
6OCT92	0.000	0.000	0.000	00	0.003	3290	0.00
7OCT92	0.000	0.001	0.000	00	0.002	3290	0.00
8OCT92	0.001	0.012	0.008	720	0.003	4020	0.00
9OCT92	0.000	0.013	0.009	750	0.003	4770	0.00
10OCT92	0.000	0.606	0.046	4000	0.005	8770	0.00
11OCT92	0.000	0.000	0.000	00	0.005	8770	0.00
12OCT92	0.000	0.005	0.001	80	0.005	8860	0.00
13OCT92	0.000	0.035	0.005	410	0.005	9270	0.00
14OCT92	0.000	0.020	0.000	10	0.005	9290	0.00
15OCT92	0.000	0.141	0.002	140	0.005	9440	0.00
16OCT92	0.000	0.340	0.003	240	0.005	9680	0.00
17OCT92	0.000	0.006	0.000	00	0.004	9680	0.00
18OCT92	0.000	0.171	0.010	830	0.005	10520	0.00
19OCT92	0.000	0.020	0.000	30	0.004	10550	0.00
20OCT92	0.000	0.000	0.000	00	0.004	10550	0.00
21OCT92	0.000	0.000	0.000	00	0.004	10550	0.00

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
-PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON: RAIN AND LEVEL
[illegible]AL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE: SAMPLE INTERVAL= 400CU FT
DISCRETE MODE: 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
26AUG92	0.000	0.004	0.000	10	0.000	10	0.00
27AUG92	0.000	0.071	0.009	730	0.004	750	0.00
28AUG92	0.000	0.061	0.008	670	0.006	1420	0.00
29AUG92	0.000	0.002	0.001	40	0.004	1470	0.00
30AUG92	0.000	0.002	0.000	40	0.004	1510	0.00
31AUG92	0.000	0.002	0.000	30	0.003	1550	0.00
1SEP92	0.000	0.002	0.000	30	0.003	1590	0.00
2SEP92	0.000	0.026	0.001	50	0.002	1640	0.00
3SEP92	0.000	0.173	0.005	460	0.003	2110	0.00
4SEP92	0.000	0.073	0.005	420	0.003	2540	0.00
5SEP92	0.000	0.094	0.004	370	0.003	2910	0.00
6SEP92	0.000	0.002	0.001	40	0.003	2950	0.00
7SEP92	0.000	0.001	0.001	40	0.003	3000	0.00
8SEP92	0.000	0.002	0.001	50	0.003	3050	0.00
9SEP92	0.000	0.002	0.000	30	0.002	3090	0.00
10SEP92	0.000	0.035	0.004	310	0.002	3400	0.00
11SEP92	0.000	0.040	0.002	150	0.002	3560	0.00
12SEP92	0.000	0.001	0.001	40	0.002	3600	0.00
13SEP92	0.000	0.109	0.006	480	0.002	4090	0.03
14SEP92	0.000	0.072	0.002	130	0.002	4220	0.00
15SEP92	0.000	0.008	0.001	40	0.002	4270	0.00
[illegible]92	0.000	0.066	0.001	120	0.002	4390	0.00
17SEP92	0.000	0.004	0.000	30	0.002	4430	0.00
18SEP92	0.000	0.044	0.002	150	0.002	4590	0.00
19SEP92	0.000	0.627	0.039	3370	0.004	7960	0.00
20SEP92	0.000	0.292	0.011	950	0.004	8910	0.00
21SEP92	0.000	0.001	0.000	00	0.004	8910	0.00



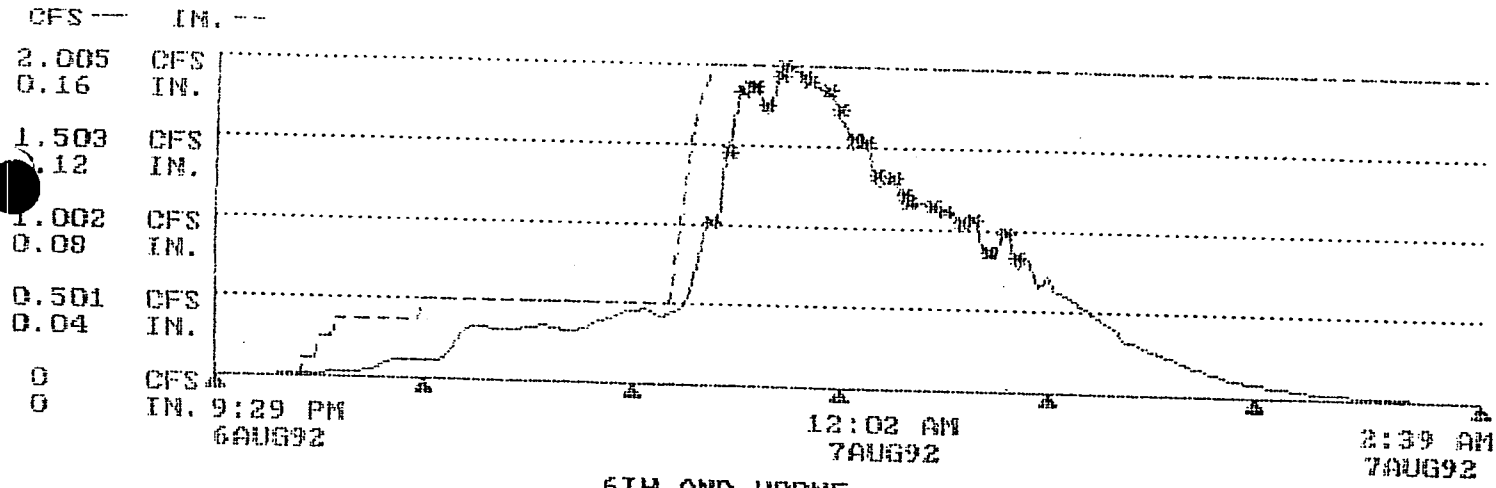
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 6:04 AM 22AUG92
FIRST FLUSH:
NEXT SAMPLE IN 0 MINUTES
NO SAMPLES YET
MAIN PROGRAM: COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	6:04 AM 22AUG92		012-03	6:32 AM 22AUG92		023-06	6:54 AM 22AUG92	
002-01	6:07 AM 22AUG92		013-04	6:34 AM 22AUG92		024-06	6:56 AM 22AUG92	
003-01	6:10 AM 22AUG92		014-04	6:36 AM 22AUG92		025-07	6:58 AM 22AUG92	
004-01	6:12 AM 22AUG92		015-04	6:38 AM 22AUG92		026-07	7:00 AM 22AUG92	
005-02	6:14 AM 22AUG92		016-04	6:40 AM 22AUG92		027-07	7:02 AM 22AUG92	
006-02	6:16 AM 22AUG92		017-05	6:42 AM 22AUG92		028-07	7:04 AM 22AUG92	
007-02	6:18 AM 22AUG92		018-05	6:44 AM 22AUG92		029-08	7:06 AM 22AUG92	
008-02	6:20 AM 22AUG92		019-05	6:46 AM 22AUG92		030-08	7:08 AM 22AUG92	
009-03	6:22 AM 22AUG92		020-05	6:48 AM 22AUG92		031-08	7:10 AM 22AUG92	
010-03	6:28 AM 22AUG92		021-06	6:50 AM 22AUG92		032-08	7:12 AM 22AUG92	
011-03	6:30 AM 22AUG92		022-06	6:52 AM 22AUG92				

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
18AUG92	0.000	0.037	0.000	00	0.000	00	0.00
19AUG92	0.000	0.067	0.001	70	0.000	80	0.00
20AUG92	0.000	0.016	0.002	130	0.001	210	0.00
21AUG92	0.000	0.282	0.007	640	0.003	860	0.01
22AUG92	0.000	36.369	2.439	143710	0.490	144570	1.51
23AUG92	0.000	0.000	0.000	00	0.408	144570	0.00
24AUG92	0.000	0.189	0.008	240	0.351	144810	0.00



6TH AND HORNE
8/6/92

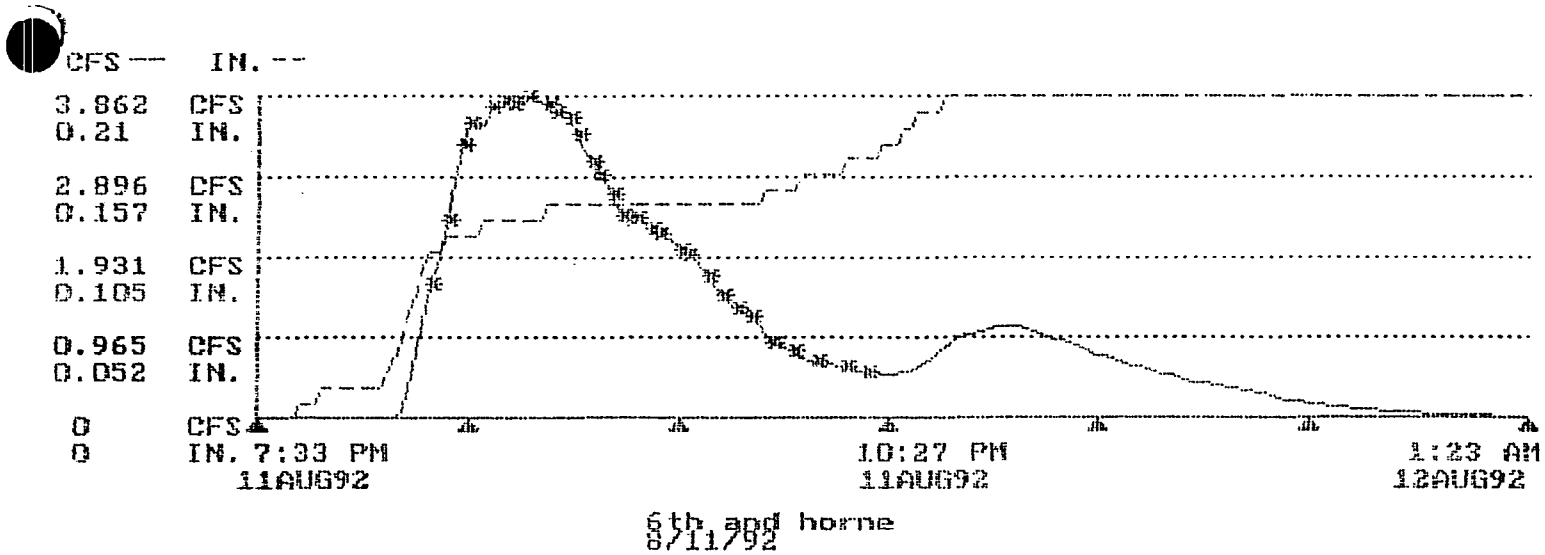
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1000
PROGRAM STARTED 11:29 PM 6AUG92
FIRST FLUSH:
NEXT SAMPLE IN 0 MINUTES
NO SAMPLES YET
MAIN PROGRAM: COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 100CU FT
DISCRETE MODE, 3 SAMP/BOTTLE
SAMPLE VOLUME= 550 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 1 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92

SAMPLE TAKEN

001-01	11:29 PM	6AUG92	009-03	11:54 PM	6AUG92	017-06	12:19 AM	7AUG92
002-01	11:33 PM	6AUG92	010-04	11:57 PM	6AUG92	018-06	12:23 AM	7AUG92
003-01	11:36 PM	6AUG92	011-04	12:00 AM	7AUG92	019-07	12:26 AM	7AUG92
004-02	11:39 PM	6AUG92	012-04	12:03 AM	7AUG92	020-07	12:30 AM	7AUG92
005-02	11:42 PM	6AUG92	013-05	12:06 AM	7AUG92	021-07	12:33 AM	7AUG92
006-02	11:45 PM	6AUG92	014-05	12:09 AM	7AUG92	022-08	12:37 AM	7AUG92
007-03	11:48 PM	6AUG92	015-05	12:13 AM	7AUG92	023-08	12:41 AM	7AUG92
008-03	11:51 PM	6AUG92	016-06	12:16 AM	7AUG92	024-08	12:44 AM	7AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6AUG92	0.000	2.005	0.143	5030	0.143	5030	0.16
7AUG92	0.000	1.835	0.091	5000	0.117	10030	0.00



6th and horne
8/11/92

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1000
PROGRAM STARTED  8:18 PM 11AUG92
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:     STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1000 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     200CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=036.00 IN., ROUGHNESS=.013, SLOPE=0.29/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 9:45 AM 30JUL92
```

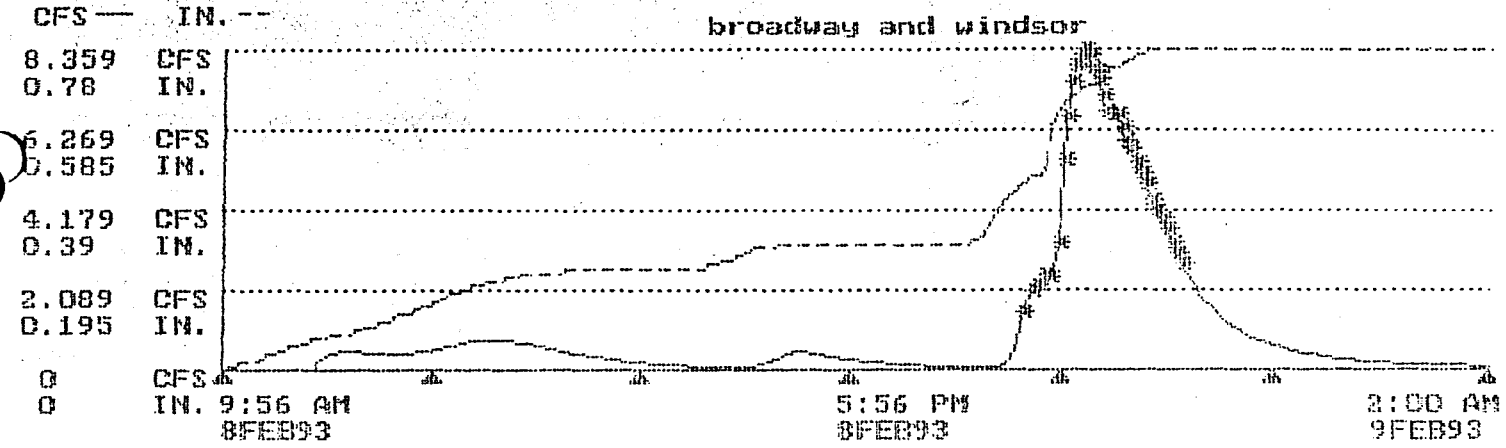
SAMPLE TAKEN

001-01	8:18 PM 11AUG92	012-03	8:53 PM 11AUG92	023-06	9:30 PM 11AUG92
002-01	8:22 PM 11AUG92	013-04	8:56 PM 11AUG92	024-06	9:34 PM 11AUG92
003-01	8:26 PM 11AUG92	014-04	8:59 PM 11AUG92	025-07	9:38 PM 11AUG92
004-01	8:29 PM 11AUG92	015-04	9:02 PM 11AUG92	026-07	9:42 PM 11AUG92
005-02	8:32 PM 11AUG92	016-04	9:05 PM 11AUG92	027-07	9:47 PM 11AUG92
006-02	8:35 PM 11AUG92	017-05	9:08 PM 11AUG92	028-07	9:52 PM 11AUG92
007-02	8:38 PM 11AUG92	018-05	9:11 PM 11AUG92	029-08	9:58 PM 11AUG92
008-02	8:41 PM 11AUG92	019-05	9:15 PM 11AUG92	030-08	10:04 PM 11AUG92
009-03	8:44 PM 11AUG92	020-05	9:19 PM 11AUG92	031-08	10:12 PM 11AUG92
010-03	8:47 PM 11AUG92	021-06	9:22 PM 11AUG92	032-08	10:19 PM 11AUG92
011-03	8:50 PM 11AUG92	022-06	9:26 PM 11AUG92		

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
11AUG92	0.000	3.875	0.602	21140	0.602	21140	0.21
12AUG92	0.000	0.382	0.028	700	0.315	21840	0.00

BROADWAY RD




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1001
PROGRAM STARTED  8:06 PM  8FEB93
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
-PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=  0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,  4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;   AUTO CALIBRATE
 1 INTAKE RINSE
 INTAKE FAULTS
ECIAL OUTPUT:  EVENT OUTPUT
MPLE TIME LIMIT: 1440 MIN
NTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92
```

SAMPLE TAKEN

001-01	8:06 PM	8FEB93	012-03	8:51 PM	8FEB93	023-06	9:31 PM	8FEB93
002-01	8:12 PM	8FEB93	013-04	8:54 PM	8FEB93	024-06	9:35 PM	8FEB93
003-01	8:17 PM	8FEB93	014-04	8:57 PM	8FEB93	025-07	9:39 PM	8FEB93
004-01	8:22 PM	8FEB93	015-04	9:00 PM	8FEB93	026-07	9:43 PM	8FEB93
005-02	8:27 PM	8FEB93	016-04	9:03 PM	8FEB93	027-07	9:47 PM	8FEB93
006-02	8:32 PM	8FEB93	017-05	9:06 PM	8FEB93	028-07	9:51 PM	8FEB93
007-02	8:36 PM	8FEB93	018-05	9:09 PM	8FEB93	029-08	9:55 PM	8FEB93
008-02	8:39 PM	8FEB93	019-05	9:17 PM	8FEB93	030-08	9:59 PM	8FEB93
009-03	8:42 PM	8FEB93	020-05	9:20 PM	8FEB93	031-08	10:03 PM	8FEB93
010-03	8:45 PM	8FEB93	021-06	9:23 PM	8FEB93	032-08	10:07 PM	8FEB93
011-03	8:48 PM	8FEB93	022-06	9:27 PM	8FEB93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8FEB93	0.000	8.369	1.092	56480	1.092	56480	0.78
9FEB93	0.022	0.365	0.082	3050	0.587	59530	0.00

2/8/93

Brandway

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM STARTED 3:30 PM 6JAN93
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

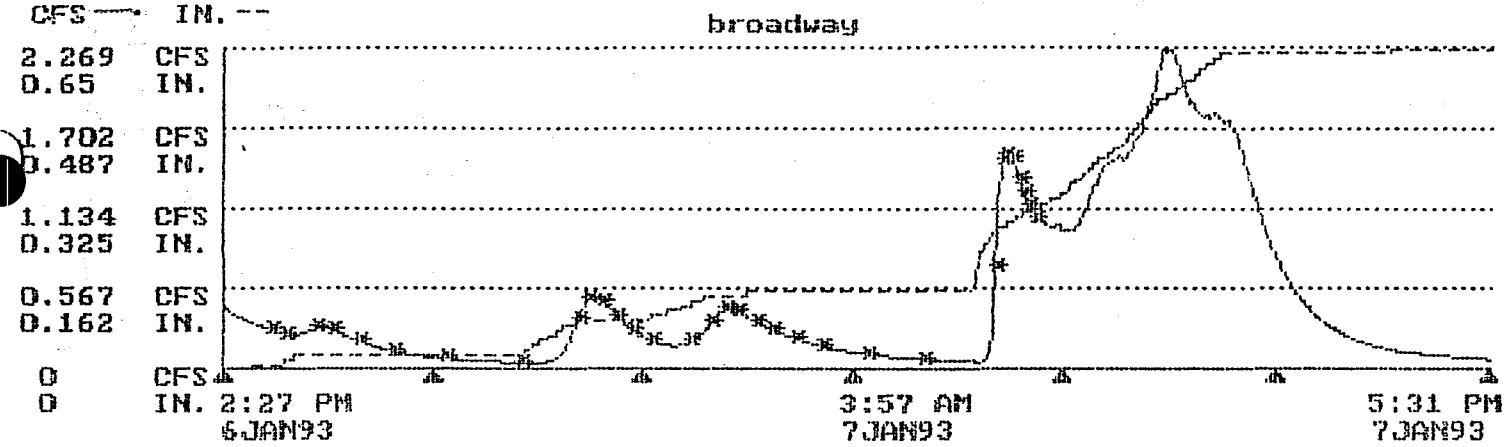
001-01	3:30 PM	6JAN93	012-03	10:51 PM	6JAN93	023-06	4:15 AM	7JAN93
002-01	3:59 PM	6JAN93	013-04	11:13 PM	6JAN93	024-06	5:31 AM	7JAN93
003-01	4:26 PM	6JAN93	014-04	11:45 PM	6JAN93	025-07	6:58 AM	7JAN93
004-01	4:51 PM	6JAN93	015-04	12:25 AM	7JAN93	026-07	7:08 AM	7JAN93
005-02	5:21 PM	6JAN93	016-04	12:53 AM	7JAN93	027-07	7:15 AM	7JAN93
006-02	6:05 PM	6JAN93	017-05	1:13 AM	7JAN93	028-07	7:21 AM	7JAN93
007-02	7:14 PM	6JAN93	018-05	1:31 AM	7JAN93	029-08	7:28 AM	7JAN93
008-02	9:02 PM	6JAN93	019-05	1:51 AM	7JAN93	030-08	7:35 AM	7JAN93
009-03	10:01 PM	6JAN93	020-05	2:15 AM	7JAN93	031-08	7:42 AM	7JAN93
010-03	10:18 PM	6JAN93	021-06	2:45 AM	7JAN93	032-08	7:50 AM	7JAN93
011-03	10:33 PM	6JAN93	022-06	3:23 AM	7JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6JAN93	0.049	0.510	0.208	7250	0.208	7250	0.12
7JAN93	0.029	2.299	0.501	43690	0.354	50940	0.62
8JAN93	0.020	15.545	1.466	126670	0.725	177610	0.86
9JAN93	0.011	0.021	0.016	1340	0.547	178960	0.00
10JAN93	0.014	4.216	0.642	55510	0.566	234470	0.79
11JAN93	0.017	29.698	2.843	246460	0.946	480920	0.98
12JAN93	0.008	1.122	0.034	2970	0.815	483880	0.16
13JAN93	0.012	1.570	0.159	13700	0.733	497580	0.09
14JAN93	0.000	2.246	0.077	6610	0.660	504180	0.22
15JAN93	0.013	13.714	0.927	80080	0.687	584240	0.44
16JAN93	0.000	1.621	0.133	11500	0.637	595740	0.23
17JAN93	0.026	1.496	0.147	12670	0.596	608400	0.14
18JAN93	0.015	4.905	0.298	25740	0.573	634140	0.31
19JAN93	0.006	0.057	0.019	1670	0.533	635800	0.00
20JAN93	0.000	0.006	0.001	60	0.498	635840	0.00

4-96

21JAN93	0.000	0.000	0.000	00	0.439	635840	0.00
22JAN93	0.000	0.000	0.000	00	0.415	635840	0.00
23JAN93	0.000	0.000	0.000	00	0.393	635840	0.00
24JAN93	0.000	0.000	0.000	00	0.373	635840	0.00
25JAN93	0.000	0.000	0.000	00	0.355	635840	0.00
26JAN93	0.000	0.000	0.000	00	0.339	635840	0.00
27JAN93	0.000	0.000	0.000	00	0.324	635840	0.00
28JAN93	0.000	0.000	0.000	00	0.311	635840	0.00
29JAN93	0.000	0.000	0.000	00	0.299	635840	0.00
30JAN93	0.000	0.000	0.000	00	0.287	635840	0.00
31JAN93	0.000	0.000	0.000	00	0.276	635840	0.00
1FEB93	0.000	0.000	0.000	00			




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1001
PROGRAM STARTED  3:30 PM  6JAN93
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;   AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
PIPING FORMULA:  I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92
```

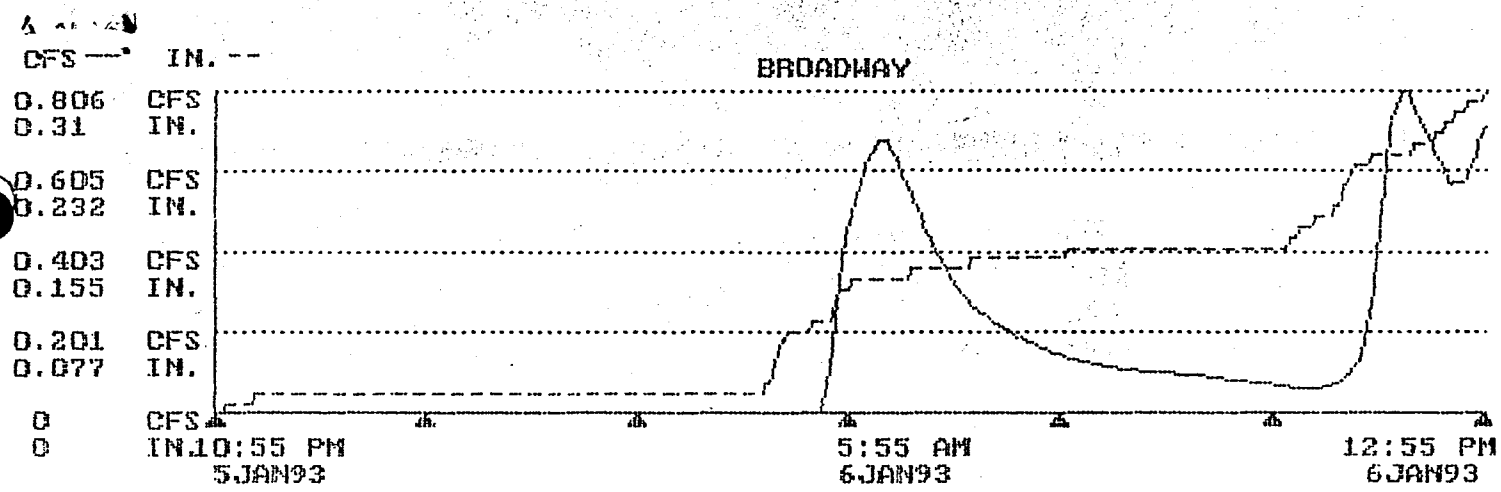
SAMPLE TAKEN

001-01	3:30 PM	6JAN93	012-03	10:51 PM	6JAN93	023-06	4:15 AM	7JAN93
002-01	3:59 PM	6JAN93	013-04	11:13 PM	6JAN93	024-06	5:31 AM	7JAN93
003-01	4:26 PM	6JAN93	014-04	11:45 PM	6JAN93	025-07	6:58 AM	7JAN93
004-01	4:51 PM	6JAN93	015-04	12:25 AM	7JAN93	026-07	7:08 AM	7JAN93
005-02	5:21 PM	6JAN93	016-04	12:53 AM	7JAN93	027-07	7:15 AM	7JAN93
006-02	6:05 PM	6JAN93	017-05	1:13 AM	7JAN93	028-07	7:21 AM	7JAN93
007-02	7:14 PM	6JAN93	018-05	1:31 AM	7JAN93	029-08	7:28 AM	7JAN93
008-02	9:02 PM	6JAN93	019-05	1:51 AM	7JAN93	030-08	7:35 AM	7JAN93
009-03	10:01 PM	6JAN93	020-05	2:15 AM	7JAN93	031-08	7:42 AM	7JAN93
010-03	10:18 PM	6JAN93	021-06	2:45 AM	7JAN93	032-08	7:50 AM	7JAN93
011-03	10:33 PM	6JAN93	022-06	3:23 AM	7JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6JAN93	0.049	0.510	0.208	7250	0.208	7250	0.12
7JAN93	0.029	2.299	0.501	43690	0.354	50940	0.62
8JAN93	0.020	15.545	1.466	126670	0.725	177610	0.86
9JAN93	0.011	0.021	0.016	1340	0.547	178960	0.00
10JAN93	0.014	4.216	0.642	55510	0.566	234470	0.79
11JAN93	0.267	29.698	8.857	240200	1.948	474660	0.98

1/7/93




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1001
PROGRAM AWAITING  RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=   0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT;  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
RUNNING FORMULA:  I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92
```

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.000	0.000	00	0.000	00	0.02
6JAN93	0.000	0.813	0.163	7590	0.081	7590	0.29

Broadway

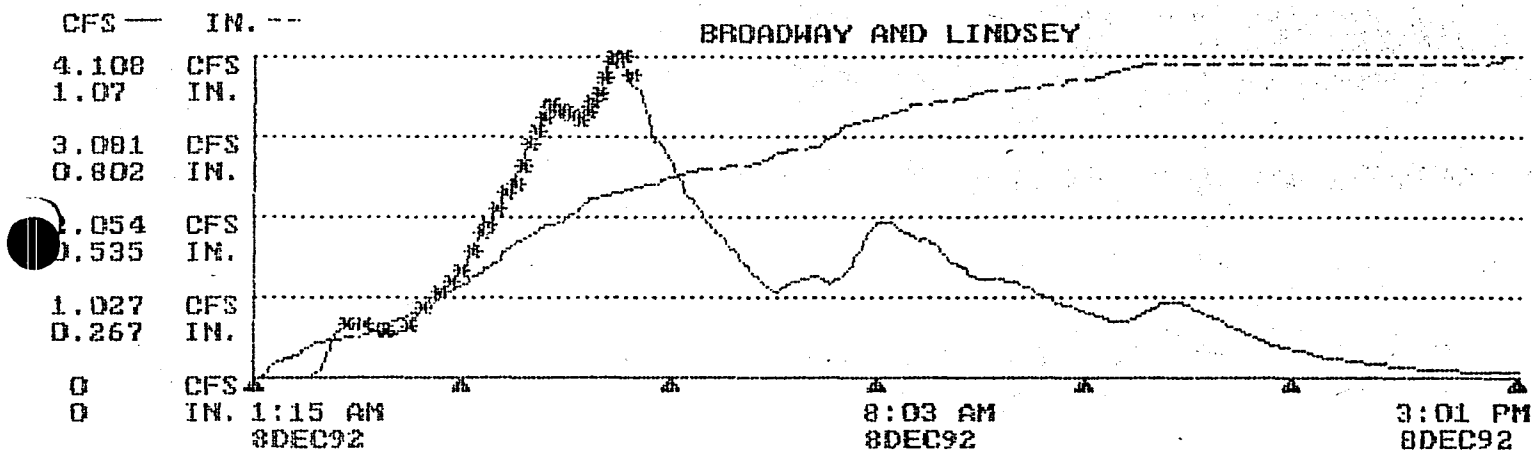
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM STARTED 2:13 AM 8DEC92
PROGRAM COMPLETE
PROGRAM REVIEW-
VEL CONTROL: STORMWATER
ART ON RAIN AND LEVEL
TAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

001-01	2:13 AM	8DEC92	012-03	3:51 AM	8DEC92	023-06	4:41 AM	8DEC92
002-01	2:25 AM	8DEC92	013-04	3:57 AM	8DEC92	024-06	4:45 AM	8DEC92
003-01	2:38 AM	8DEC92	014-04	4:02 AM	8DEC92	025-07	4:49 AM	8DEC92
004-01	2:52 AM	8DEC92	015-04	4:07 AM	8DEC92	026-07	4:53 AM	8DEC92
005-02	3:03 AM	8DEC92	016-04	4:12 AM	8DEC92	027-07	4:57 AM	8DEC92
006-02	3:12 AM	8DEC92	017-05	4:17 AM	8DEC92	028-07	5:01 AM	8DEC92
007-02	3:20 AM	8DEC92	018-05	4:21 AM	8DEC92	029-08	5:05 AM	8DEC92
008-02	3:27 AM	8DEC92	019-05	4:25 AM	8DEC92	030-08	5:09 AM	8DEC92
009-03	3:34 AM	8DEC92	020-05	4:29 AM	8DEC92	031-08	5:13 AM	8DEC92
010-03	3:40 AM	8DEC92	021-06	4:33 AM	8DEC92	032-08	5:17 AM	8DEC92
011-03	3:45 AM	8DEC92	022-06	4:37 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.000	0.000	00	0.000	00	0.00
8DEC92	0.000	4.117	0.719	62990	0.359	62990	1.07
9DEC92	0.000	0.004	0.001	90	0.240	63080	0.00
10DEC92	0.000	0.002	0.000	30	0.180	63120	0.00
11DEC92	0.000	0.000	0.000	00	0.144	63120	0.00
12DEC92	0.000	0.000	0.000	00	0.120	63120	0.00
13DEC92	0.000	0.000	0.000	00	0.103	63120	0.00
14DEC92	0.000	0.000	0.000	00	0.090	63120	0.00
15DEC92	0.000	0.000	0.000	00	0.080	63120	0.00
16DEC92	0.000	0.000	0.000	00	0.072	63120	0.00
17DEC92	0.000	0.000	0.000	00	0.065	63120	0.00
18DEC92	0.000	0.000	0.000	00	0.060	63120	0.03
19DEC92	0.000	0.000	0.000	00	0.055	63120	0.01
20DEC92	0.000	0.000	0.000	00	0.051	63120	0.00
21DEC92	0.000	0.000	0.000	00	0.048	63120	0.00
22DEC92	0.000	0.000	0.000	00	0.045	63120	0.00
23DEC92	0.000	0.000	0.000	00	0.042	63120	0.00
24DEC92	0.000	0.000	0.000	00	0.040	63120	0.00
25DEC92	0.000	0.000	0.000	00	0.038	63120	0.00
26DEC92	0.000	0.000	0.000	00	0.036	63120	0.00
27DEC92	0.000	0.125	0.001	120	0.034	63240	0.15
28DEC92	0.002	3.420	0.540	46640	0.057	109880	0.88
29DEC92	0.000	0.002	0.000	30	0.055	109910	0.01
30DEC92	0.000	0.000	0.000	00	0.053	109910	0.00
31DEC92	0.000	0.000	0.000	00	0.050	109910	0.00
1JAN93	0.000	0.000	0.000	00	0.048	109910	0.00
2JAN93	0.000	0.000	0.000	00	0.047	109910	0.00
3JAN93	0.000	0.224	0.019	1640	0.046	111550	0.13
4JAN93	0.000	0.001	0.000	00	0.044	111550	0.00
5JAN93	0.000	0.000	0.000	00	0.043	111550	0.00




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1001
PROGRAM STARTED  2:13 AM  8DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=   0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;   AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92
```

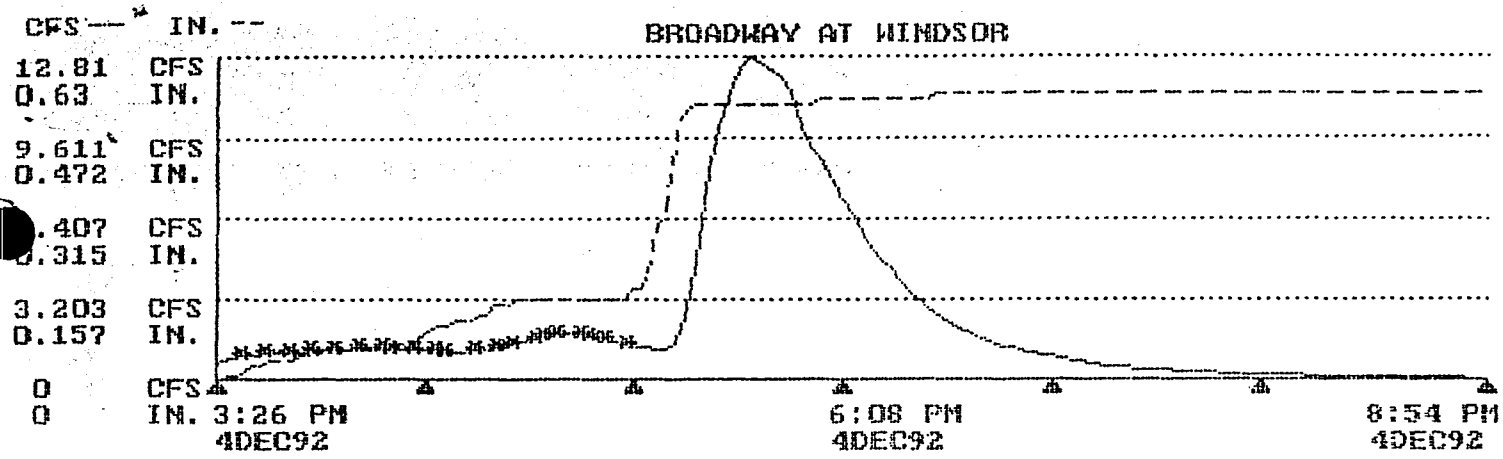
SAMPLE TAKEN

001-01	2:13 AM	8DEC92	012-03	3:51 AM	8DEC92	023-06	4:41 AM	8DEC92
002-01	2:25 AM	8DEC92	013-04	3:57 AM	8DEC92	024-06	4:45 AM	8DEC92
003-01	2:38 AM	8DEC92	014-04	4:02 AM	8DEC92	025-07	4:49 AM	8DEC92
004-01	2:52 AM	8DEC92	015-04	4:07 AM	8DEC92	026-07	4:53 AM	8DEC92
005-02	3:03 AM	8DEC92	016-04	4:12 AM	8DEC92	027-07	4:57 AM	8DEC92
006-02	3:12 AM	8DEC92	017-05	4:17 AM	8DEC92	028-07	5:01 AM	8DEC92
007-02	3:20 AM	8DEC92	018-05	4:21 AM	8DEC92	029-08	5:05 AM	8DEC92
008-02	3:27 AM	8DEC92	019-05	4:25 AM	8DEC92	030-08	5:09 AM	8DEC92
009-03	3:34 AM	8DEC92	020-05	4:29 AM	8DEC92	031-08	5:13 AM	8DEC92
010-03	3:40 AM	8DEC92	021-06	4:33 AM	8DEC92	032-08	5:17 AM	8DEC92
011-03	3:45 AM	8DEC92	022-06	4:37 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.000	0.000	00	0.000	00	0.00
8DEC92	0.000	4.117	0.719	62990	0.359	62990	1.07
9DEC92	0.000	0.004	0.001	90	0.240	63080	0.00
10DEC92	0.000	0.002	0.001	30	0.180	63120	0.00

12/8/92



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM STARTED 3:32 PM 4DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 100CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

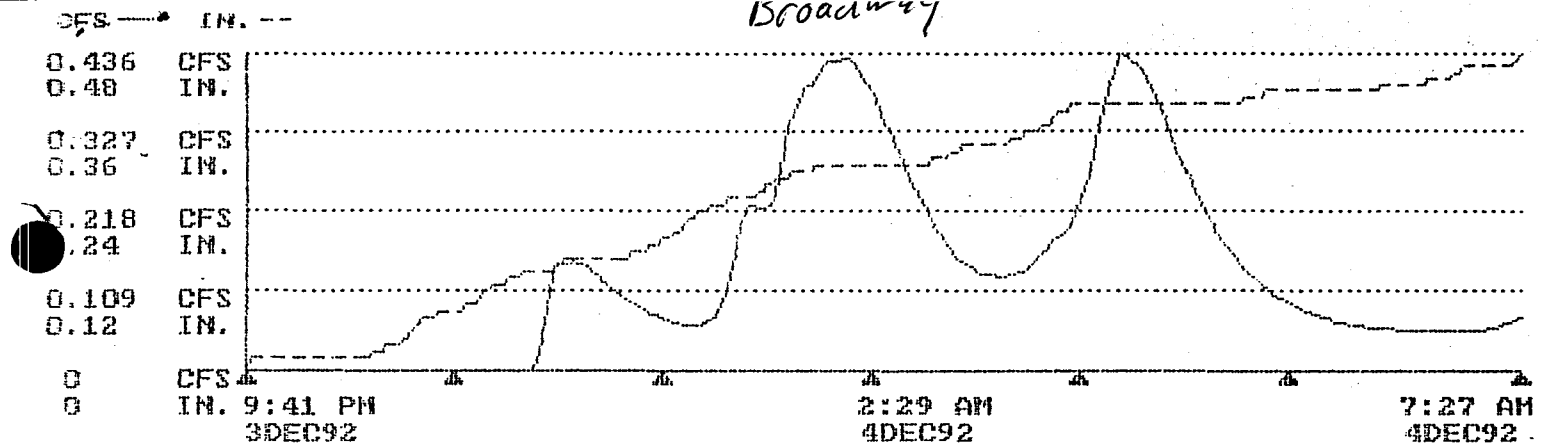
SAMPLE TAKEN

001-01	3:32 PM	4DEC92	012-03	4:10 PM	4DEC92	023-06	4:46 PM	4DEC92
002-01	3:36 PM	4DEC92	013-04	4:13 PM	4DEC92	024-06	4:49 PM	4DEC92
003-01	3:39 PM	4DEC92	014-04	4:16 PM	4DEC92	025-07	4:52 PM	4DEC92
004-01	3:43 PM	4DEC92	015-04	4:20 PM	4DEC92	026-07	4:55 PM	4DEC92
005-02	3:46 PM	4DEC92	016-04	4:23 PM	4DEC92	027-07	4:58 PM	4DEC92
006-02	3:50 PM	4DEC92	017-05	4:27 PM	4DEC92	028-07	5:01 PM	4DEC92
007-02	3:53 PM	4DEC92	018-05	4:30 PM	4DEC92	029-08	5:04 PM	4DEC92
008-02	3:57 PM	4DEC92	019-05	4:33 PM	4DEC92	030-08	5:07 PM	4DEC92
009-03	4:00 PM	4DEC92	020-05	4:37 PM	4DEC92	031-08	5:10 PM	4DEC92
010-03	4:03 PM	4DEC92	021-06	4:40 PM	4DEC92	032-08	5:13 PM	4DEC92
011-03	4:06 PM	4DEC92	022-06	4:43 PM	4DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
4DEC92	0.015	13.155	1.496	47570	1.496	47570	0.56
5DEC92	0.002	0.112	0.014	1210	0.755	48780	0.07
6DEC92	0.000	0.003	0.001	80	0.504	48870	0.00
7DEC92	0.001	0.002	0.001	30	0.378	48900	0.00

12/4/92




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1001
PROGRAM AWAITING  RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=   0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     500CU FT
OVERRIDE TIME:  180 MIN
DISCRETE MODE.    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92
```

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
2DEC92	0.000	0.000	0.000	00	0.000	00	0.00
3DEC92	0.000	0.071	0.000	10	0.000	10	0.15
4DEC92	0.055	0.443	0.180	4870	0.060	4880	0.33

Broadway

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 500CU FT
OVERRIDE TIME: 180 MIN
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
27OCT92	0.000	0.000	0.000	00	0.000	00	0.00
28OCT92	0.000	0.000	0.000	00	0.000	00	0.08
29OCT92	0.000	0.000	0.000	00	0.000	00	0.00
30OCT92	0.000	0.000	0.000	00	0.000	00	0.00
31OCT92	0.000	0.000	0.000	00	0.000	00	0.00
1NOV92	0.000	0.000	0.000	00	0.000	00	0.00
2NOV92	0.000	0.000	0.000	00	0.000	00	0.00
3NOV92	0.000	0.000	0.000	00	0.000	00	0.00
4NOV92	0.000	0.000	0.000	00	0.000	00	0.00
5NOV92	0.000	0.000	0.000	00	0.000	00	0.00
6NOV92	0.000	0.000	0.000	00	0.000	00	0.00
7NOV92	0.000	0.000	0.000	00	0.000	00	0.00
8NOV92	0.000	0.000	0.000	00	0.000	00	0.00
9NOV92	0.000	0.000	0.000	00	0.000	00	0.00
10NOV92	0.000	0.000	0.000	00	0.000	00	0.02
11NOV92	0.000	0.000	0.000	00	0.000	00	0.00
12NOV92	0.000	0.000	0.000	00	0.000	00	0.00
13NOV92	0.000	0.000	0.000	00	0.000	00	0.00
14NOV92	0.000	0.000	0.000	00	0.000	00	0.00
15NOV92	0.000	0.000	0.000	00	0.000	00	0.00
16NOV92	0.000	0.000	0.000	00	0.000	00	0.00
17NOV92	0.000	0.000	0.000	00	0.000	00	0.00
18NOV92	0.000	0.000	0.000	00	0.000	00	0.00
20NOV92	0.001	0.043	0.003	60	0.009	18140	0.00

Broadway & Lindsey

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.: TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML: AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 500CU FT
OVERRIDE TIME: 180 MIN
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

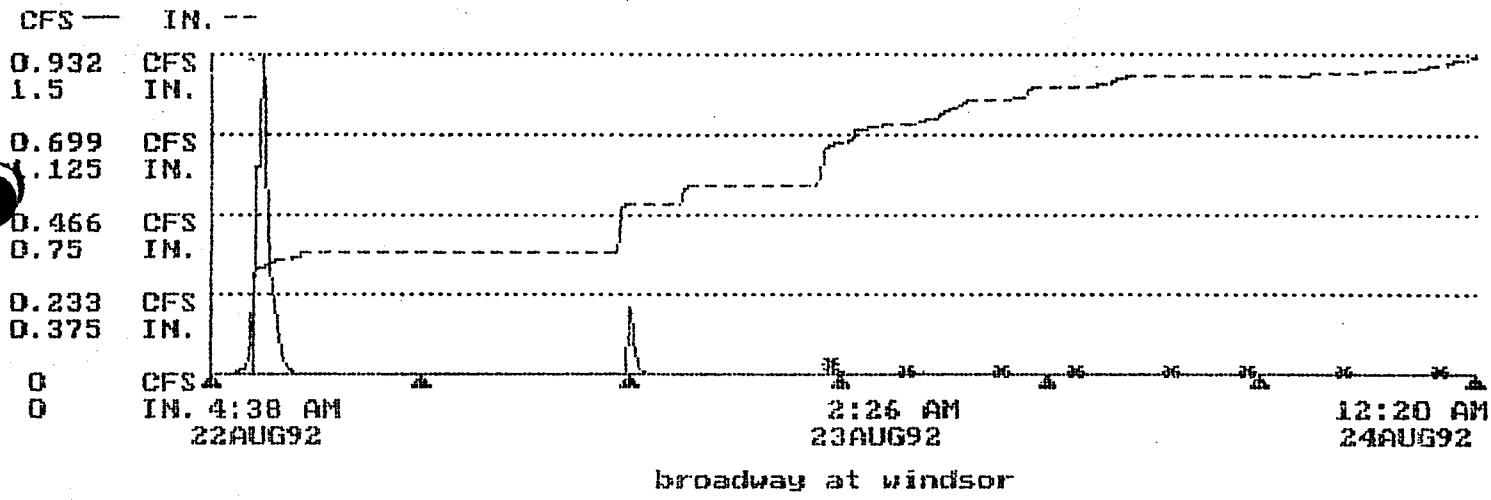
DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
22SEP92	0.000	0.000	0.000	00	0.000	00	0.00
23SEP92	0.000	0.000	0.000	00	0.000	00	0.00
24SEP92	0.000	0.000	0.000	00	0.000	00	0.00
25SEP92	0.000	0.000	0.000	00	0.000	00	0.00
26SEP92	0.000	0.000	0.000	00	0.000	00	0.00
27SEP92	0.000	0.000	0.000	00	0.000	00	0.00
28SEP92	0.000	0.000	0.000	00	0.000	00	0.00
29SEP92	0.000	0.000	0.000	00	0.000	00	0.00
30SEP92	0.000	0.000	0.000	00	0.000	00	0.00
1OCT92	0.000	0.000	0.000	00	0.000	00	0.00
2OCT92	0.000	0.000	0.000	00	0.000	00	0.00
3OCT92	0.000	0.000	0.000	00	0.000	00	0.00
4OCT92	0.000	0.000	0.000	00	0.000	00	0.00
5OCT92	0.000	0.000	0.000	00	0.000	00	0.00
6OCT92	0.000	0.000	0.000	00	0.000	00	0.00
7OCT92	0.000	0.000	0.000	00	0.000	00	0.00
8OCT92	0.000	0.000	0.000	00	0.000	00	0.00
9OCT92	0.000	0.000	0.000	00	0.000	00	0.00
10OCT92	0.000	0.000	0.000	00	0.000	00	0.00
11OCT92	0.000	0.000	0.000	00	0.000	00	0.00
12OCT92	0.000	0.000	0.000	00	0.000	00	0.00
13OCT92	0.000	0.000	0.000	00	0.000	00	0.00
14OCT92	0.000	0.000	0.000	00	0.000	00	0.00
15OCT92	0.000	0.000	0.000	00	0.000	00	0.00
16OCT92	0.000	0.000	0.000	00	0.000	00	0.00
17OCT92	0.000	0.000	0.000	00	0.000	00	0.00
18OCT92	0.000	0.000	0.000	00	0.000	00	0.00
19OCT92	0.000	0.000	0.000	00	0.000	00	0.00
20OCT92	0.000	0.000	0.000	00	0.000	00	0.00
21OCT92	0.000	0.000	0.000	00	0.000	00	0.00

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 500CU FT
OVERRIDE TIME: 180 MIN
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
26AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
27AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
28AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
29AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
30AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
31AUG92	0.000	0.000	0.000	00	0.000	00	0.0C
1SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
2SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
3SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
4SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
5SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
6SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
7SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
8SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
9SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
10SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
11SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
12SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
13SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
14SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
15SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
16SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
17SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
18SEP92	0.000	0.000	0.000	00	0.000	00	0.0C
19SEP92	0.000	0.000	0.000	00	0.000	00	0.02
20SEP92	0.000	0.000	0.000	00	0.000	00	0.03
21SEP92	0.000	0.000	0.000	00	0.000	00	0.0C



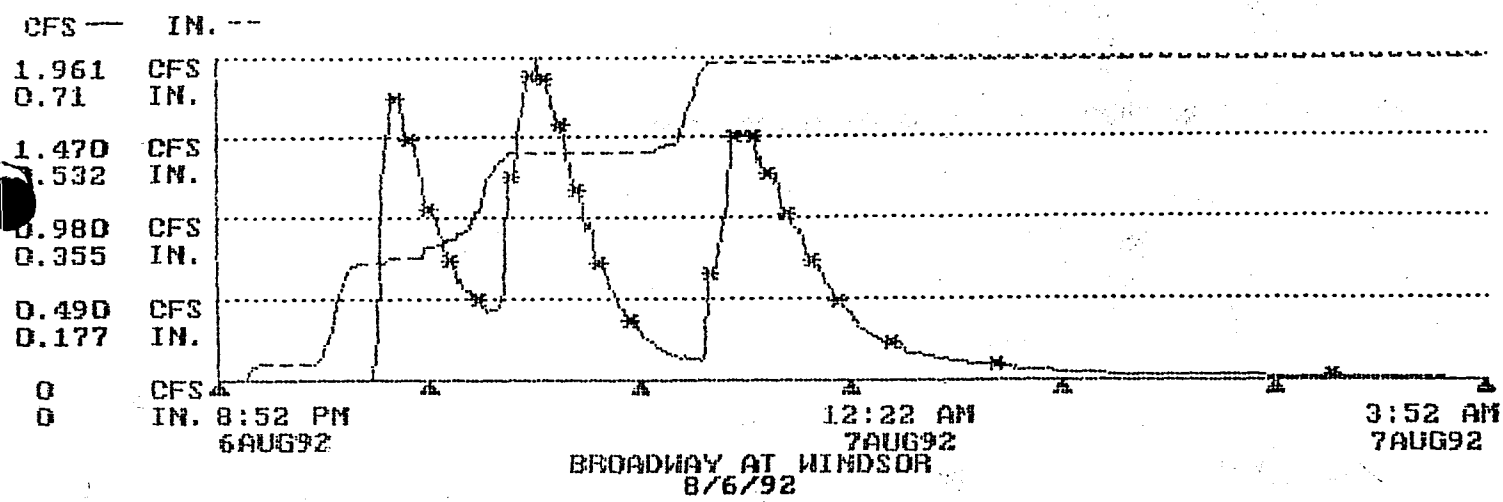
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM STARTED 2:01 AM 23AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 500CU FT
OVERRIDE TIME: 180 MIN
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
PIPE FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED:11:48 AM 12AUG92

SAMPLE TAKEN

001-01	2:01 AM 23AUG92	004-01	11:01 AM 23AUG92	007-02	8:01 PM 23AUG92
002-01	5:01 AM 23AUG92	005-02	2:01 PM 23AUG92	008-02	11:01 PM 23AUG92
003-01	8:01 AM 23AUG92	006-02	5:01 PM 23AUG92		

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
13AUG92	0.000	0.000	0.000	00	0.000	00	0.00
14AUG92	0.000	0.000	0.000	00	0.000	00	0.00
15AUG92	0.000	0.000	0.000	00	0.000	00	0.00
16AUG92	0.000	0.000	0.000	00	0.000	00	0.00
17AUG92	0.000	0.000	0.000	00	0.000	00	0.00
18AUG92	0.000	0.000	0.000	00	0.000	00	0.00
19AUG92	0.000	0.000	0.000	00	0.000	00	0.00
20AUG92	0.000	0.000	0.000	00	0.000	00	0.00
21AUG92	0.000	0.000	0.000	00	0.000	00	0.00
22AUG92	0.000	1.023	0.020	1750	0.002	1750	0.89
23AUG92	0.000	0.055	0.001	50	0.002	1810	0.59
24AUG92	0.000	0.000	0.000	00	0.002	1810	0.02



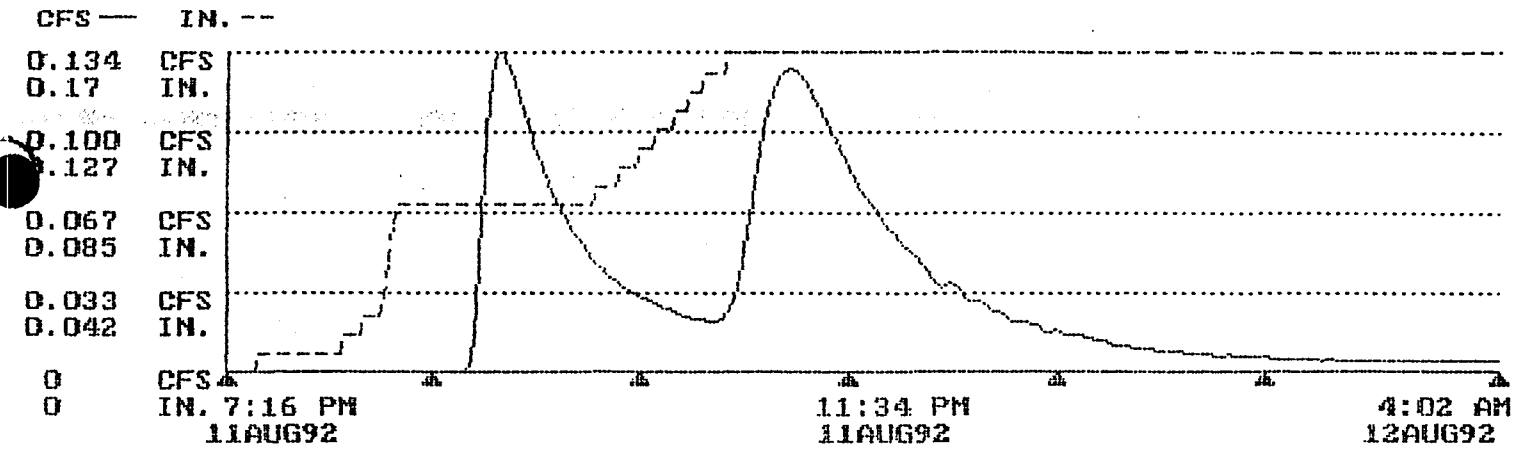
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM STARTED 9:49 PM 6AUG92
NEXT SAMPLE IN 200CU FT
COLLECTED 2 SAMPLES IN BOTTLE 5
3 REMAINING
3 BOTTLES TO GO
- PROGRAM REVIEW-
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 5 SAMP/BOTTLE
SAMPLE VOLUME= 300 ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 1 MIN
SENSOR LAST CALIBRATED: 3:34 PM 30JUL92

SAMPLE TAKEN

[illegible]-01	9:49 PM	6AUG92	009-02	10:44 PM	6AUG92	016-04	11:53 PM	6AUG92
0[illegible]-01	9:54 PM	6AUG92	010-02	10:50 PM	6AUG92	017-04	11:59 PM	6AUG92
003-01	10:00 PM	6AUG92	011-03	10:57 PM	6AUG92	018-04	12:07 AM	7AUG92
004-01	10:07 PM	6AUG92	012-03	11:07 PM	6AUG92	019-04	12:16 AM	7AUG92
005-01	10:17 PM	6AUG92	013-03	11:34 PM	6AUG92	020-04	12:33 AM	7AUG92
006-02	10:28 PM	6AUG92	014-03	11:42 PM	6AUG92	021-05	1:10 AM	7AUG92
007-02	10:34 PM	6AUG92	015-03	11:48 PM	6AUG92	022-05	2:59 AM	7AUG92
008-02	10:39 PM	6AUG92						

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6AUG92	0.000	1.961	0.248	7870	0.248	7870	0.70
7AUG92	0.000	0.991	0.036	1960	0.142	9830	0.01



broadway
8/11/92

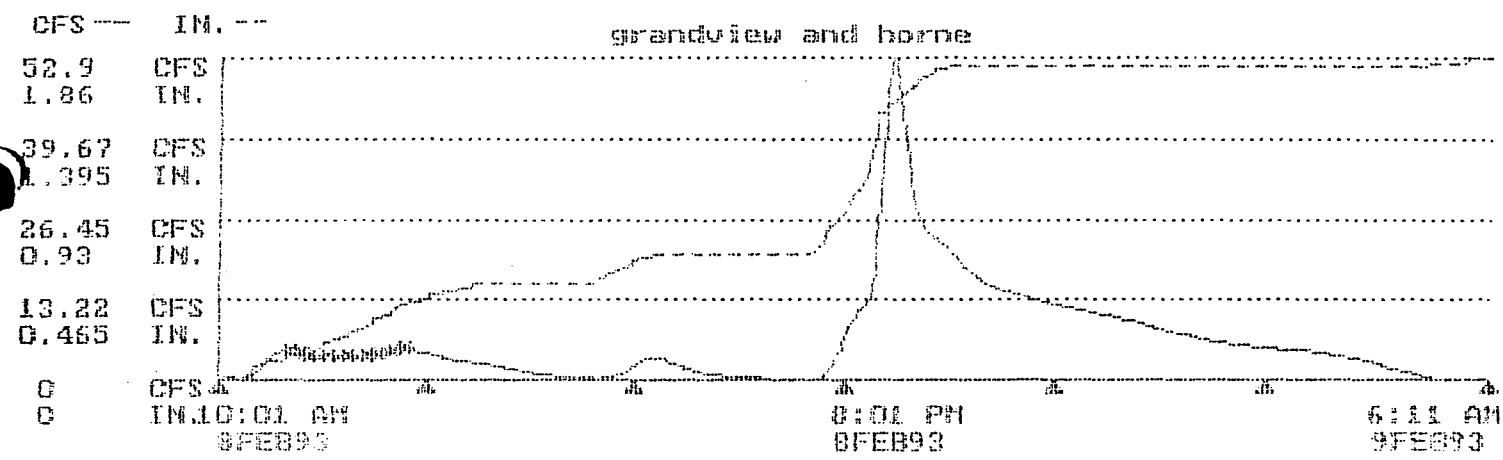
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1001
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 500CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
PLANNING FORMULA: I.D.=072.00 IN., ROUGHNESS=.013, SLOPE=0.11/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 3:34 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
11AUG92	0.000	0.137	0.021	750	0.021	750	0.17
12AUG92	0.003	0.051	0.009	220	0.015	970	0.00

GRANDVIEW




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:   1003
PROGRAM STARTED 11:05 AM  8FEB93
FIRST FLUSH:
NEXT SAMPLE IN     0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:     STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN     CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
 INTAKE RINSE
 INTAKE FAULTS
MPLE TIME LIMIT: 1440 MIN
TERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92
```

SAMPLE TAKEN

001-01	11:05 AM	8FEB93	012-03	11:49 AM	8FEB93	023-06	12:33 PM	8FEB93
002-01	11:09 AM	8FEB93	013-04	11:53 AM	8FEB93	024-06	12:37 PM	8FEB93
003-01	11:13 AM	8FEB93	014-04	11:57 AM	8FEB93	025-07	12:41 PM	8FEB93
004-01	11:17 AM	8FEB93	015-04	12:01 PM	8FEB93	026-07	12:45 PM	8FEB93
005-02	11:21 AM	8FEB93	016-04	12:05 PM	8FEB93	027-07	12:49 PM	8FEB93
006-02	11:25 AM	8FEB93	017-05	12:09 PM	8FEB93	028-07	12:53 PM	8FEB93
007-02	11:29 AM	8FEB93	018-05	12:13 PM	8FEB93	029-08	12:57 PM	8FEB93
008-02	11:33 AM	8FEB93	019-05	12:17 PM	8FEB93	030-08	1:01 PM	8FEB93
009-03	11:37 AM	8FEB93	020-05	12:21 PM	8FEB93	031-08	1:05 PM	8FEB93
010-03	11:41 AM	8FEB93	021-06	12:25 PM	8FEB93	032-08	1:09 PM	8FEB93
011-03	11:45 AM	8FEB93	022-06	12:29 PM	8FEB93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8FEB93	0.032	53.431	6.975	377920	6.975	377920	1.82
9FEB93	0.225	11.118	3.055	116190	5.015	494100	0.04

2/8/93

Grandview
&
Horne

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1223
PROGRAM STARTED 5:17 AM 6JAN93
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

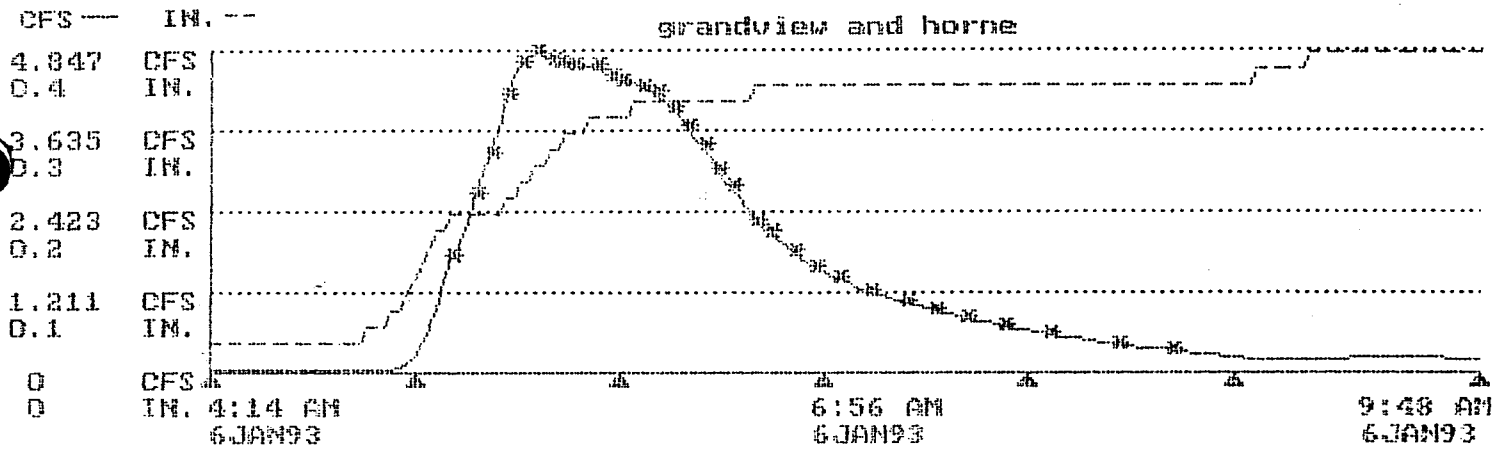
001-01	5:17 AM	6JAN93	012-03	6:02 AM	6JAN93	023-06	6:53 AM	6JAN93
002-01	5:22 AM	6JAN93	013-04	6:06 AM	6JAN93	024-06	6:59 AM	6JAN93
003-01	5:26 AM	6JAN93	014-04	6:10 AM	6JAN93	025-07	7:06 AM	6JAN93
004-01	5:30 AM	6JAN93	015-04	6:14 AM	6JAN93	026-07	7:16 AM	6JAN93
005-02	5:34 AM	6JAN93	016-04	6:18 AM	6JAN93	027-07	7:24 AM	6JAN93
006-02	5:38 AM	6JAN93	017-05	6:22 AM	6JAN93	028-07	7:34 AM	6JAN93
007-02	5:42 AM	6JAN93	018-05	6:26 AM	6JAN93	029-08	7:44 AM	6JAN93
008-02	5:46 AM	6JAN93	019-05	6:31 AM	6JAN93	030-08	7:57 AM	6JAN93
009-03	5:50 AM	6JAN93	020-05	6:36 AM	6JAN93	031-08	8:12 AM	6JAN93
010-03	5:54 AM	6JAN93	021-06	6:41 AM	6JAN93	032-08	8:31 AM	6JAN93
011-03	5:58 AM	6JAN93	022-06	6:47 AM	6JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.018	0.001	40	0.001	40	0.04
6JAN93	0.019	5.386	0.973	84500	0.487	84550	1.04
7JAN93	0.019	7.098	1.456	125780	0.810	210320	1.28
8JAN93	0.338	68.574	10.614	917000	3.261	1127200	2.25
9JAN93	0.001	5.123	0.982	84860	2.805	1212100	0.00
10JAN93	0.000	8.864	1.499	129470	2.587	1341600	1.68
11JAN93	0.316	22.120	3.289	285550	2.687	1627100	1.47
12JAN93	0.001	5.642	0.313	27020	2.390	1654100	0.42
13JAN93	0.000	4.296	0.254	21980	2.153	1676000	0.13
14JAN93	0.000	2.763	0.187	16130	1.956	1692200	0.31
15JAN93	0.003	20.991	1.066	92100	1.875	1784300	0.84
16JAN93	0.001	7.665	0.515	44470	1.762	1828700	0.57
17JAN93	0.003	31.765	1.133	97910	1.713	1926500	1.04
18JAN93	0.022	8.929	0.371	32050	1.617	1958500	0.29
19JAN93	0.000	0.163	0.004	310	1.510	1958800	0.00

11.36

20JAN93	0.000	0.005	0.001	70	1.332	1958900	0.00
21JAN93	0.000	0.005	0.001	70	1.258	1958900	0.00
22JAN93	0.000	0.005	0.001	80	1.192	1959000	0.00
23JAN93	0.000	0.006	0.001	110	1.132	1959100	0.00
24JAN93	0.000	0.012	0.001	80	1.078	1959100	0.00
25JAN93	0.000	0.005	0.001	70	1.029	1959200	0.00
26JAN93	0.000	0.004	0.001	120	0.984	1959200	0.00
27JAN93	0.000	0.006	0.001	60	0.943	1959300	0.00
28JAN93	0.000	0.004	0.001	20	0.906	1959300	0.00
29JAN93	0.000	0.002	0.000	00	0.871	1959300	0.00
30JAN93	0.000	0.003	0.000	390	0.839	1959700	0.00
31JAN93	0.000	0.023	0.005	20	0.809	1959700	0.00
1FEB93	0.000	0.005	0.001				




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1003
PROGRAM STARTED  5:17 AM  6JAN93
PROGRAM COMPLETE
-- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 1 BOTTLE/SAMPLE
SAMPLE  VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
RUNNING FORMULA:  I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92
```

SAMPLE TAKEN

001-01	5:17 AM	6JAN93	012-03	6:02 AM	6JAN93	023-06	6:53 AM	6JAN93
002-01	5:22 AM	6JAN93	013-04	6:06 AM	6JAN93	024-06	6:59 AM	6JAN93
003-01	5:26 AM	6JAN93	014-04	6:10 AM	6JAN93	025-07	7:06 AM	6JAN93
004-01	5:30 AM	6JAN93	015-04	6:14 AM	6JAN93	026-07	7:16 AM	6JAN93
005-02	5:34 AM	6JAN93	016-04	6:18 AM	6JAN93	027-07	7:24 AM	6JAN93
006-02	5:38 AM	6JAN93	017-05	6:22 AM	6JAN93	028-07	7:34 AM	6JAN93
007-02	5:42 AM	6JAN93	018-05	6:26 AM	6JAN93	029-08	7:44 AM	6JAN93
008-02	5:46 AM	6JAN93	019-05	6:31 AM	6JAN93	030-08	7:57 AM	6JAN93
009-03	5:50 AM	6JAN93	020-05	6:36 AM	6JAN93	031-08	8:12 AM	6JAN93
010-03	5:54 AM	6JAN93	021-06	6:41 AM	6JAN93	032-08	8:31 AM	6JAN93
011-03	5:58 AM	6JAN93	022-06	6:47 AM	6JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.018	0.001	40	0.001	40	0.04
6JAN93	0.019	5.386	0.973	84500	0.487	84550	1.04
7JAN93	0.019	7.098	1.456	125780	0.810	210320	1.28
8JAN93	0.338	68.574	10.614	917000	3.261	1127200	2.25
9JAN93	0.001	5.123	0.982	84860	2.805	1212100	0.00
10JAN93	0.000	8.864	1.499	129470	2.587	1341600	1.68
11JAN93	0.374	22.120	6.587	238710	3.158	1580200	1.47

1/6/93

Grandview & Herne

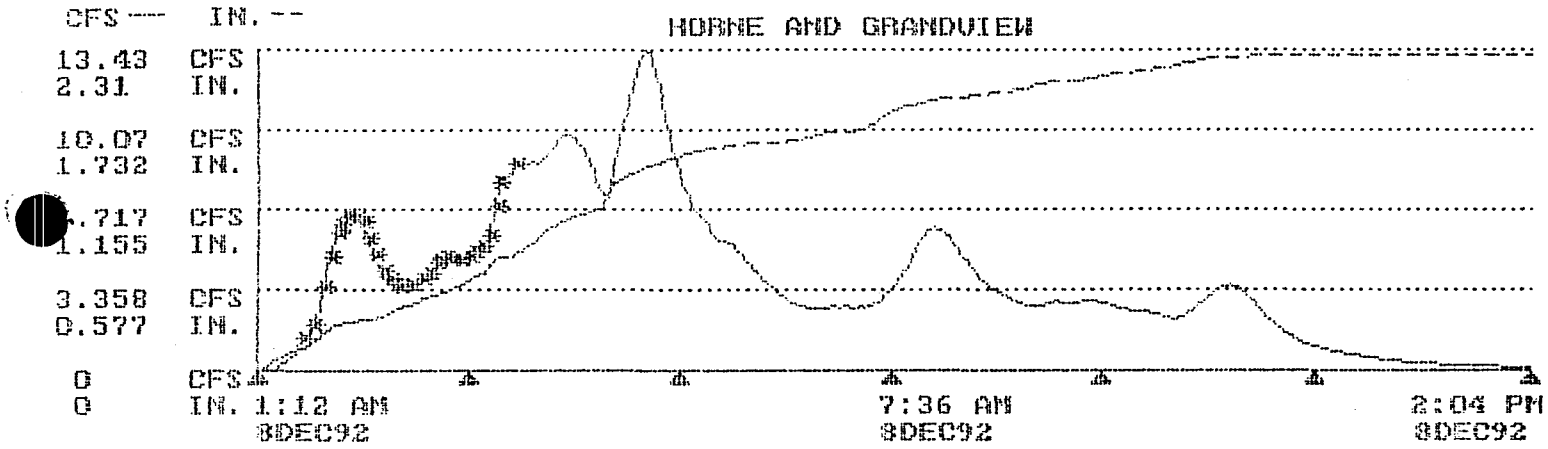
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 1:38 AM 8DEC92
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

001-01	1:38 AM	8DEC92	012-03	2:22 AM	8DEC92	023-06	3:06 AM	8DEC92
002-01	1:44 AM	8DEC92	013-04	2:26 AM	8DEC92	024-06	3:10 AM	8DEC92
003-01	1:50 AM	8DEC92	014-04	2:30 AM	8DEC92	025-07	3:14 AM	8DEC92
004-01	1:54 AM	8DEC92	015-04	2:34 AM	8DEC92	026-07	3:18 AM	8DEC92
005-02	1:58 AM	8DEC92	016-04	2:38 AM	8DEC92	027-07	3:22 AM	8DEC92
006-02	2:01 AM	8DEC92	017-05	2:42 AM	8DEC92	028-07	3:26 AM	8DEC92
007-02	2:05 AM	8DEC92	018-05	2:46 AM	8DEC92	029-08	3:30 AM	8DEC92
008-02	2:08 AM	8DEC92	019-05	2:50 AM	8DEC92	030-08	3:34 AM	8DEC92
009-03	2:11 AM	8DEC92	020-05	2:54 AM	8DEC92	031-08	3:37 AM	8DEC92
010-03	2:14 AM	8DEC92	021-06	2:58 AM	8DEC92	032-08	3:46 AM	8DEC92
011-03	2:18 AM	8DEC92	022-06	3:02 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.024	0.069	0.044	1650	0.044	1650	0.00
8DEC92	0.000	13.531	2.098	181230	1.071	182880	2.29
9DEC92	0.000	0.072	0.000	30	0.714	182910	0.02
10DEC92	0.000	0.000	0.000	00	0.535	182910	0.00
11DEC92	0.000	0.000	0.000	00	0.428	182910	0.00
12DEC92	0.000	0.001	0.000	00	0.357	182910	0.00
13DEC92	0.000	0.000	0.000	00	0.306	182910	0.00
14DEC92	0.000	0.000	0.000	00	0.268	182910	0.00
15DEC92	0.000	0.000	0.000	00	0.238	182910	0.00
16DEC92	0.000	0.000	0.000	00	0.214	182910	0.00
17DEC92	0.000	0.000	0.000	00	0.195	182910	0.00
18DEC92	0.000	0.393	0.024	2070	0.180	184980	0.11
19DEC92	0.000	0.000	0.000	00	0.167	184980	0.00
20DEC92	0.000	0.000	0.000	00	0.155	184980	0.00
21DEC92	0.000	0.000	0.000	00	0.144	184980	0.00
22DEC92	0.000	0.014	0.000	20	0.135	185000	0.00
23DEC92	0.000	0.000	0.000	00	0.127	185000	0.00
24DEC92	0.000	0.000	0.000	00	0.120	185000	0.00
25DEC92	0.000	0.000	0.000	00	0.114	185000	0.00
26DEC92	0.000	0.000	0.000	00	0.108	185000	0.00
27DEC92	0.000	2.198	0.088	7590	0.107	192600	0.31
28DEC92	0.000	7.243	1.378	119030	0.165	311630	1.55
29DEC92	0.000	0.021	0.002	140	0.158	311770	0.02
30DEC92	0.000	0.000	0.000	00	0.151	311770	0.02
31DEC92	0.000	0.000	0.000	00	0.145	311770	0.00
1JAN93	0.000	0.000	0.000	00	0.140	311770	0.00
2JAN93	0.000	0.000	0.000	00	0.134	311770	0.00
3JAN93	0.000	3.390	0.213	18440	0.137	330200	0.40
4JAN93	0.000	0.000	0.000	00	0.133	330200	0.00
5JAN93	0.000	0.000	0.000	00	0.128	330200	0.00



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 1:38 AM 8DEC92
PROGRAM COMPLETE
-- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

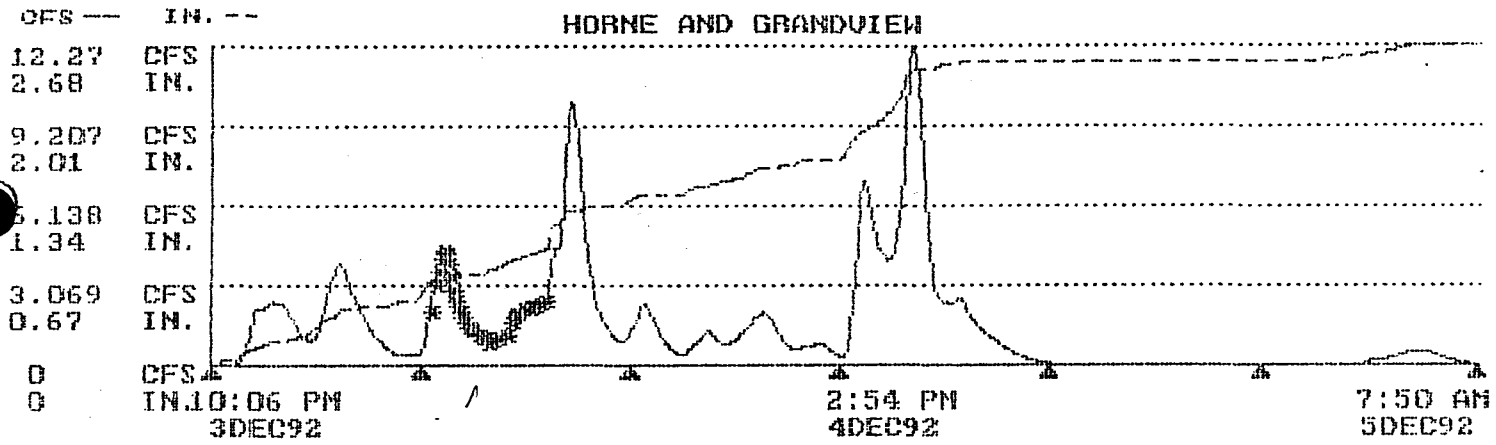
SAMPLE TAKEN

001-01	1:38 AM	8DEC92	012-03	2:22 AM	8DEC92	023-06	3:06 AM	8DEC92
002-01	1:44 AM	8DEC92	013-04	2:26 AM	8DEC92	024-06	3:10 AM	8DEC92
003-01	1:50 AM	8DEC92	014-04	2:30 AM	8DEC92	025-07	3:14 AM	8DEC92
004-01	1:54 AM	8DEC92	015-04	2:34 AM	8DEC92	026-07	3:18 AM	8DEC92
005-02	1:58 AM	8DEC92	016-04	2:38 AM	8DEC92	027-07	3:22 AM	8DEC92
006-02	2:01 AM	8DEC92	017-05	2:42 AM	8DEC92	028-07	3:26 AM	8DEC92
007-02	2:05 AM	8DEC92	018-05	2:46 AM	8DEC92	029-08	3:30 AM	8DEC92
008-02	2:08 AM	8DEC92	019-05	2:50 AM	8DEC92	030-08	3:34 AM	8DEC92
009-03	2:11 AM	8DEC92	020-05	2:54 AM	8DEC92	031-08	3:37 AM	8DEC92
010-03	2:14 AM	8DEC92	021-06	2:58 AM	8DEC92	032-08	3:46 AM	8DEC92
011-03	2:18 AM	8DEC92	022-06	3:02 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.024	0.069	0.044	1650	0.044	1650	0.00
8DEC92	0.000	13.531	2.098	181230	1.071	182880	2.29
9DEC92	0.000	0.072	0.000	30	0.714	182910	0.02
10DEC92	0.000	0.000	0.000	00	0.535	182910	0.00

12/8/92



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 3:57 AM 4DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

001-01	3:57 AM	4DEC92	012-03	4:46 AM	4DEC92	023-06	6:12 AM	4DEC92
002-01	4:02 AM	4DEC92	013-04	4:51 AM	4DEC92	024-06	6:18 AM	4DEC92
003-01	4:06 AM	4DEC92	014-04	4:58 AM	4DEC92	025-07	6:24 AM	4DEC92
004-01	4:10 AM	4DEC92	015-04	5:05 AM	4DEC92	026-07	6:29 AM	4DEC92
005-02	4:14 AM	4DEC92	016-04	5:13 AM	4DEC92	027-07	6:34 AM	4DEC92
006-02	4:18 AM	4DEC92	017-05	5:21 AM	4DEC92	028-07	6:39 AM	4DEC92
007-02	4:22 AM	4DEC92	018-05	5:31 AM	4DEC92	029-08	6:45 AM	4DEC92
008-02	4:26 AM	4DEC92	019-05	5:41 AM	4DEC92	030-08	6:50 AM	4DEC92
009-03	4:30 AM	4DEC92	020-05	5:50 AM	4DEC92	031-08	6:55 AM	4DEC92
010-03	4:35 AM	4DEC92	021-06	5:59 AM	4DEC92	032-08	7:00 AM	4DEC92
011-03	4:40 AM	4DEC92	022-06	6:06 AM	4DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
20NOV92	0.000	0.000	0.000	00	0.000	00	0.00
21NOV92	0.000	0.000	0.000	00	0.000	00	0.00
22NOV92	0.000	0.001	0.000	00	0.000	00	0.00
23NOV92	0.000	0.000	0.000	00	0.000	00	0.00
24NOV92	0.000	0.000	0.000	00	0.000	00	0.00
25NOV92	0.000	0.000	0.000	00	0.000	00	0.00
26NOV92	0.000	0.000	0.000	00	0.000	00	0.00
27NOV92	0.000	0.000	0.000	00	0.000	00	0.00
28NOV92	0.000	0.000	0.000	00	0.000	00	0.00
29NOV92	0.000	0.000	0.000	00	0.000	00	0.00
30NOV92	0.000	0.000	0.000	00	0.000	00	0.00
1DEC92	0.000	0.000	0.000	00	0.000	00	0.00
2DEC92	0.000	0.000	0.000	00	0.000	00	0.00
3DEC92	0.000	2.477	0.083	7230	0.006	7230	0.21
4DEC92	0.000	12.420	1.931	168720	0.134	175960	2.35
5DEC92	0.000	0.603	0.046	3930	0.129	179880	0.12
6DEC92	0.000	0.000	0.000	00	0.121	179880	0.00
7DEC92	0.000	0.000	0.000	00	0.114	179880	0.00

12/4/92

Grandview + Home

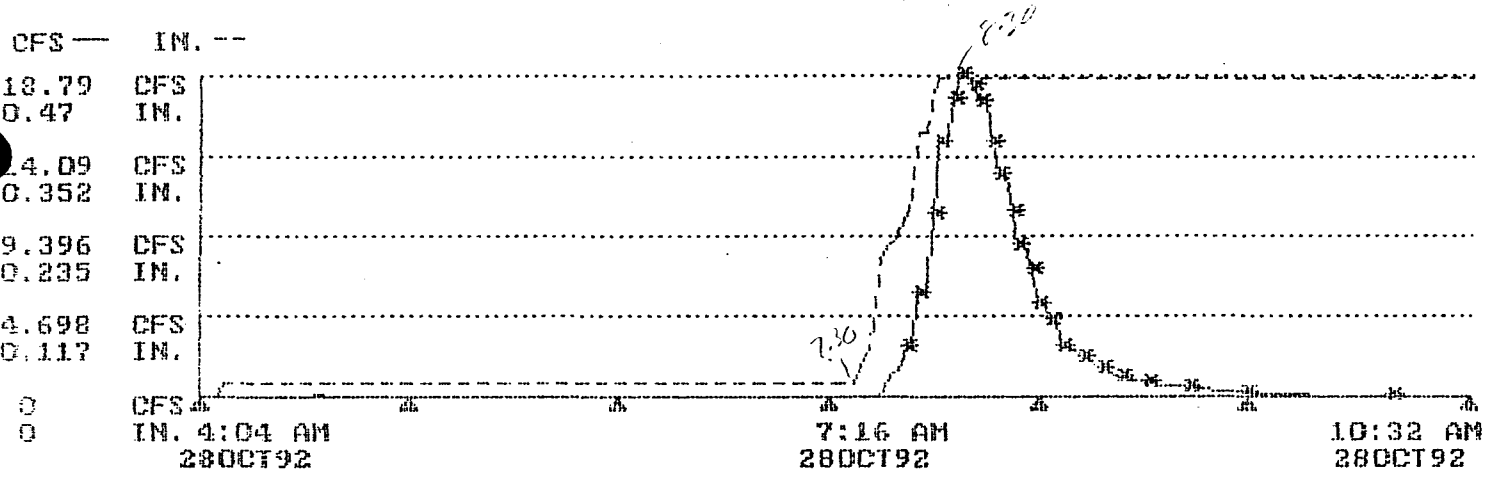
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
30OCT92	0.000	0.004	0.000	00	0.000	00	0.00
31OCT92	0.000	0.003	0.000	00	0.000	00	0.00
1NOV92	0.000	0.007	0.000	10	0.000	20	0.00
2NOV92	0.000	0.000	0.000	00	0.000	20	0.00
3NOV92	0.000	0.000	0.000	00	0.000	20	0.00
4NOV92	0.000	0.000	0.000	00	0.000	20	0.00
5NOV92	0.000	0.035	0.002	170	0.000	190	0.00
6NOV92	0.000	0.007	0.000	20	0.000	210	0.00
7NOV92	0.000	0.000	0.000	00	0.000	210	0.00
8NOV92	0.000	0.000	0.000	00	0.000	210	0.00
9NOV92	0.000	0.000	0.000	00	0.000	210	0.00
10NOV92	0.000	0.000	0.000	00	0.000	210	0.00
11NOV92	0.000	0.000	0.000	00	0.000	210	0.00
12NOV92	0.000	0.000	0.000	00	0.000	210	0.00
13NOV92	0.000	0.000	0.000	00	0.000	210	0.00
14NOV92	0.000	0.003	0.000	00	0.000	220	0.00
15NOV92	0.000	0.002	0.000	00	0.000	220	0.00
16NOV92	0.000	0.000	0.000	00	0.000	220	0.00
17NOV92	0.000	0.000	0.000	00	0.000	220	0.00
18NOV92	0.000	0.000	0.000	00	0.000	220	0.00
19NOV92	0.000	0.000	0.000	00	0.000	220	0.00
20NOV92	0.000	0.000	0.000	00	0.000	220	0.00

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM AWAITING RAIN AND LEVEL



HORNE & GRANDVIEW
10/28/92

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 7:38 AM 28OCT92
FIRST FLUSH:
NEXT SAMPLE IN 0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:
NEXT SAMPLE IN 300CU FT
COLLECTED 3 SAMPLES IN BOTTLE 6
1 REMAINING
2 BOTTLES TO GO
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

001-01	7:38 AM 280CT92	009-03	8:04 AM 280CT92	017-05	8:33 AM 280CT92
002-01	7:42 AM 280CT92	010-03	8:07 AM 280CT92	018-05	8:39 AM 280CT92
003-01	7:46 AM 280CT92	011-03	8:10 AM 280CT92	019-05	8:45 AM 280CT92
004-01	7:49 AM 280CT92	012-03	8:13 AM 280CT92	020-05	8:54 AM 280CT92
005-02	7:52 AM 280CT92	013-04	8:16 AM 280CT92	021-06	9:05 AM 280CT92
006-02	7:55 AM 280CT92	014-04	8:19 AM 280CT92	022-06	9:22 AM 280CT92
007-02	7:58 AM 280CT92	015-04	8:22 AM 280CT92	023-06	10:06 AM 280CT92
008-02	8:01 AM 280CT92	016-04	8:26 AM 280CT92		

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
270CT92	0.000	0.013	0.000	20	0.000	20	0.00
280CT92	0.000	18.792	0.427	36980	0.214	37010	0.47
290CT92	0.000	0.002	0.000	00	0.142	37010	0.00

10/28/92

Horne & Grandview

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.: TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

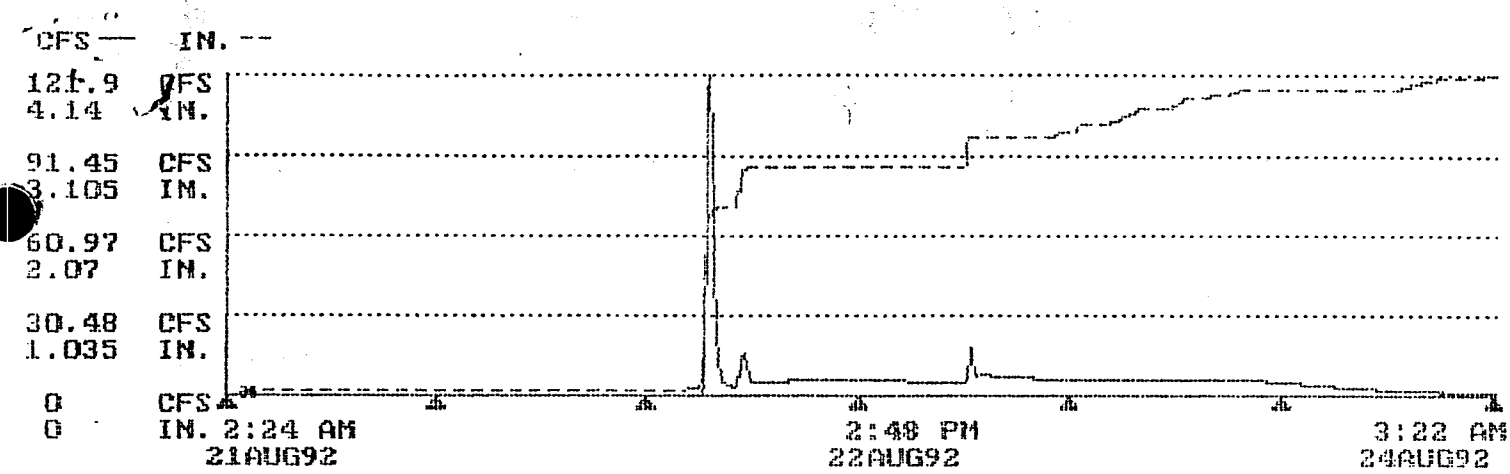
DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
22SEP92	0.000	0.002	0.000	00	0.000	00	0.00
23SEP92	0.000	0.009	0.000	20	0.000	30	0.00
24SEP92	0.000	0.011	0.002	200	0.001	240	0.00
25SEP92	0.000	0.004	0.000	00	0.001	240	0.00
26SEP92	0.000	0.008	0.000	10	0.001	250	0.00
27SEP92	0.000	0.013	0.000	20	0.001	270	0.00
28SEP92	0.000	0.000	0.000	00	0.000	270	0.00
29SEP92	0.000	0.017	0.002	180	0.001	450	0.00
30SEP92	0.000	0.000	0.000	00	0.001	450	0.00
1OCT92	0.000	0.007	0.000	10	0.001	470	0.00
2OCT92	0.000	0.002	0.000	00	0.001	470	0.00
3OCT92	0.000	0.013	0.000	10	0.000	490	0.00
4OCT92	0.000	0.058	0.007	610	0.001	1100	0.00
5OCT92	0.000	0.015	0.000	20	0.001	1130	0.00
6OCT92	0.000	0.025	0.000	40	0.001	1180	0.00
7OCT92	0.000	0.019	0.001	70	0.001	1250	0.00
8OCT92	0.000	0.011	0.000	30	0.001	1290	0.00
9OCT92	0.000	0.003	0.000	00	0.001	1290	0.00
10OCT92	0.000	0.014	0.000	30	0.001	1320	0.00
11OCT92	0.000	0.046	0.001	120	0.001	1450	0.00
12OCT92	0.000	0.027	0.002	160	0.001	1610	0.00
13OCT92	0.000	0.027	0.001	80	0.001	1700	0.00
14OCT92	0.000	0.000	0.000	00	0.001	1700	0.00
15OCT92	0.000	0.006	0.000	00	0.001	1700	0.00
16OCT92	0.000	0.008	0.000	10	0.001	1710	0.00
17OCT92	0.000	0.000	0.000	00	0.001	1710	0.00
18OCT92	0.000	0.012	0.000	00	0.001	1720	0.00
19OCT92	0.000	0.003	0.000	00	0.001	1720	0.00
20OCT92	0.000	0.018	0.001	50	0.001	1780	0.00
21OCT92	0.000	0.012	0.000	00	0.001	1790	0.00

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 BOTTLE/SAMPLE
SAMPLE VOLUME=1500 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
1SEP92	0.000	0.009	0.001	40	0.001	40	0.00
2SEP92	0.000	0.012	0.001	50	0.001	100	0.00
3SEP92	0.000	0.001	0.000	00	0.001	100	0.00
4SEP92	0.000	0.020	0.001	100	0.001	200	0.00
5SEP92	0.000	0.009	0.001	50	0.001	250	0.00
6SEP92	0.000	0.043	0.002	200	0.001	460	0.00
7SEP92	0.000	0.026	0.001	90	0.001	560	0.00
8SEP92	0.000	0.005	0.000	00	0.001	560	0.00
9SEP92	0.000	0.004	0.000	10	0.001	570	0.04
10SEP92	0.000	0.002	0.000	00	0.001	570	0.00
11SEP92	0.000	0.016	0.000	20	0.001	590	0.00
12SEP92	0.000	0.007	0.000	00	0.001	600	0.00
13SEP92	0.000	0.612	0.018	1550	0.002	2160	0.04
14SEP92	0.000	0.028	0.002	180	0.002	2340	0.00
15SEP92	0.000	0.012	0.000	20	0.002	2360	0.00
16SEP92	0.000	0.000	0.000	00	0.002	2360	0.00
17SEP92	0.000	0.002	0.000	00	0.002	2370	0.00
18SEP92	0.000	0.024	0.003	280	0.002	2650	0.00
19SEP92	0.000	0.032	0.008	650	0.002	3300	0.00
20SEP92	0.000	0.011	0.000	30	0.002	3340	0.00
21SEP92	0.000	0.000	0.000	00	0.002	3340	0.00



HORNE AND GRANDVIEW

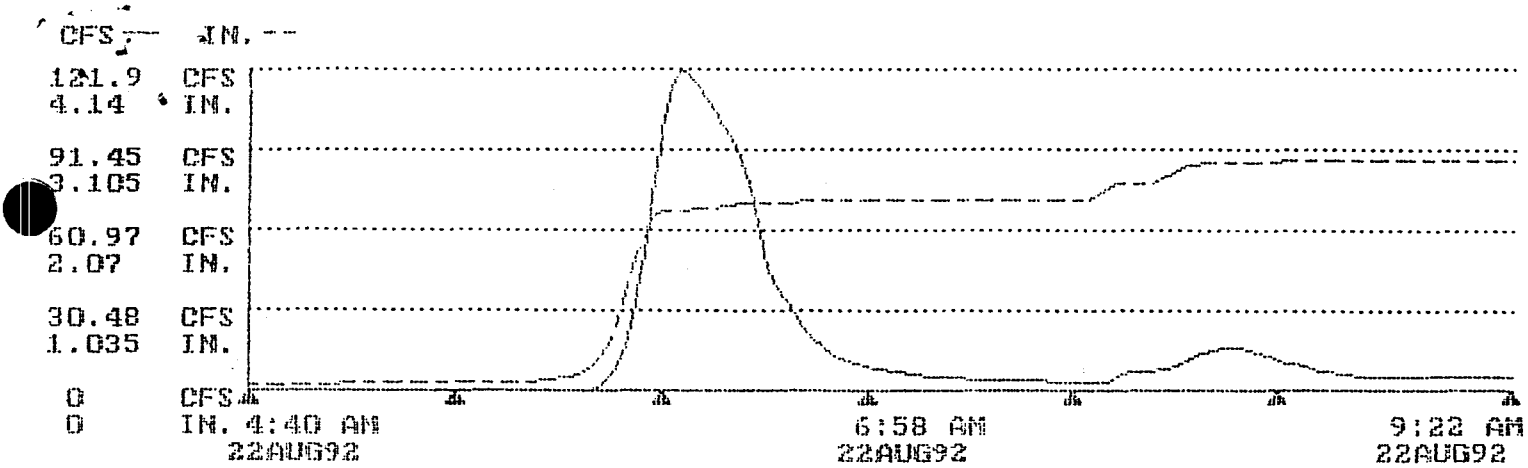
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 4:09 AM 21AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
2 BOTTLE/SAMPLE
SAMPLE VOLUME= 140 ML
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN
001-01 4:09 AM 21AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
18AUG92	0.000	0.000	0.000	00	0.000	00	0.00
19AUG92	0.000	0.010	0.000	20	0.000	20	0.00
20AUG92	0.000	0.016	0.001	70	0.000	100	0.00
21AUG92	0.000	0.215	0.008	710	0.002	810	0.08
22AUG92	0.000	123.19	7.141	615640	1.430	616440	3.29
23AUG92	2.062	7.649	5.544	478960	2.115	1095300	0.73
24AUG92	0.000	2.095	0.649	34430	1.906	1129700	0.04

8/22/92



HORNE AND GRANDVIEW

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:   1003
PROGRAM STARTED  4:09 AM 21AUG92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:       STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
 2 BOTTLE/SAMPLE
SAMPLE  VOLUME= 140 ML
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL=     400CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92
```

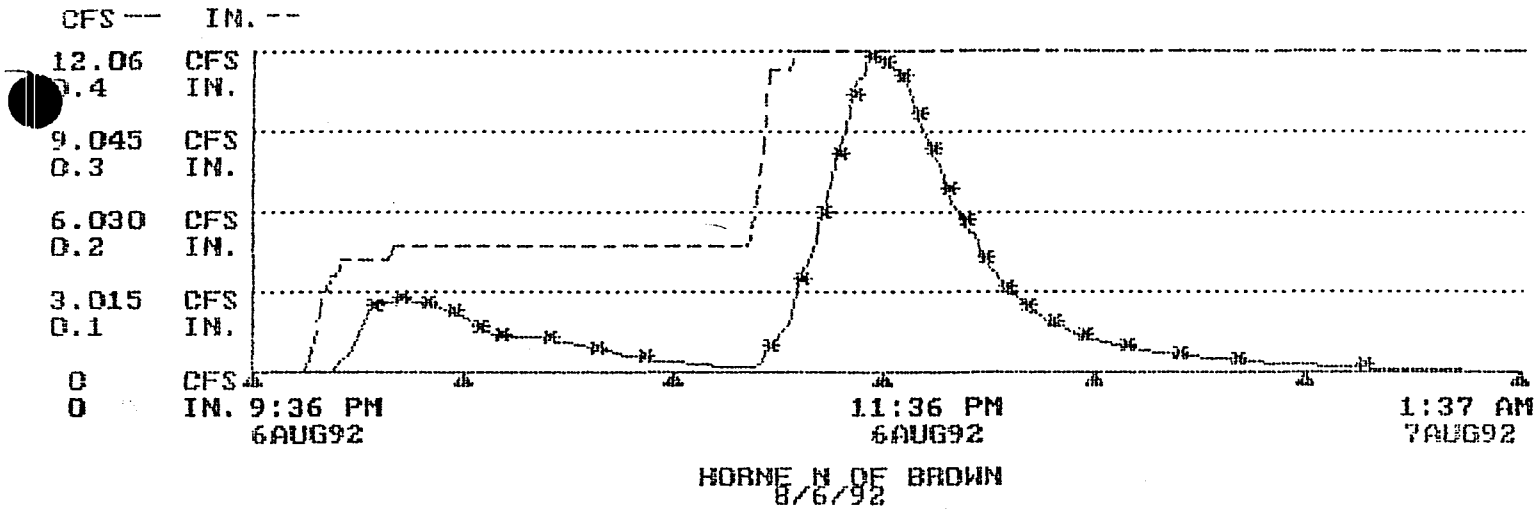
SAMPLE TAKEN

001-01 4:09 AM 21AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
18AUG92	0.000	0.000	0.000	00	0.000	00	0.00
19AUG92	0.000	0.010	0.000	20	0.000	20	0.00
20AUG92	0.000	0.016	0.001	70	0.000	100	0.00
21AUG92	0.000	0.215	0.008	710	0.002	810	0.08
22AUG92	0.000	123.19	7.141	615640	1.430	616440	3.29
23AUG92	2.062	7.649	5.544	478960	2.115	1095300	0.73
24AUG92	0.000	2.095	0.649	34430	1.906	1129700	0.04

8/22/92



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1003
PROGRAM STARTED 9:58 PM 6AUG92
NEXT SAMPLE IN 300CU FT
COLLECTED 3 SAMPLES IN BOTTLE 7
2 REMAINING
1 BOTTLE TO GO
- PROGRAM REVIEW-
FLOW MODE, SAMPLE INTERVAL= 400CU FT
DISCRETE MODE, 5 SAMP/BOTTLE
SAMPLE VOLUME=300ML
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=054.00 IN., ROUGHNESS=.013, SLOPE=0.40/100FT
FLOW RECORDING INTERVAL= 1 MIN
SENSOR LAST CALIBRATED: 7:41 AM 30JUL92

SAMPLE TAKEN

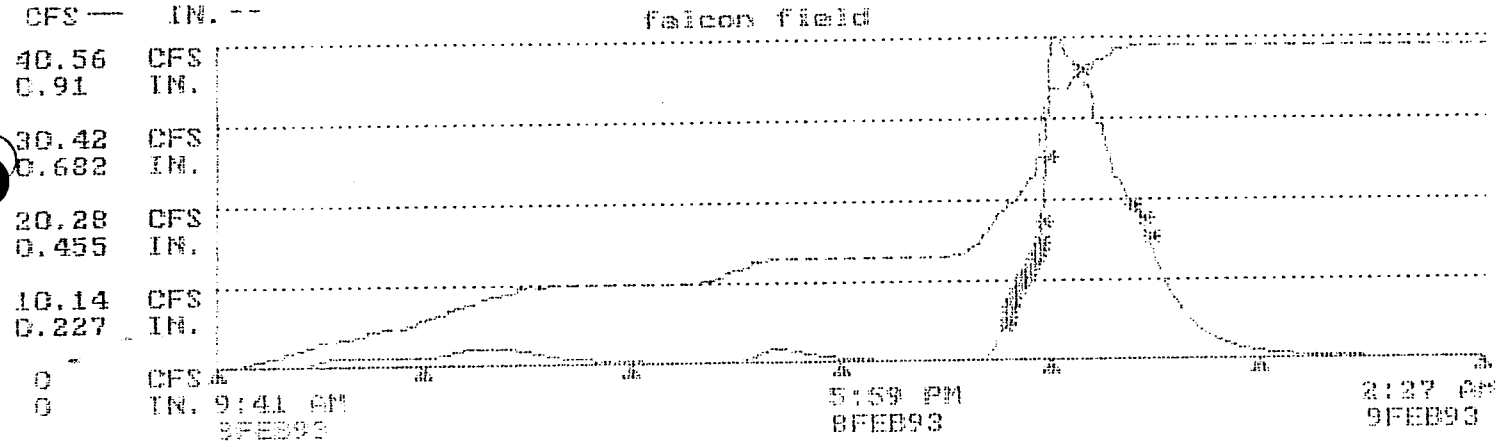
001-01	9:58 PM	6AUG92	012-03	11:23 PM	6AUG92	023-05	11:58 PM	6AUG92
002-01	10:03 PM	6AUG92	013-03	11:26 PM	6AUG92	024-05	12:02 AM	7AUG92
003-01	10:08 PM	6AUG92	014-03	11:29 PM	6AUG92	025-05	12:07 AM	7AUG92
004-01	10:13 PM	6AUG92	015-03	11:32 PM	6AUG92	026-06	12:13 AM	7AUG92
005-01	10:18 PM	6AUG92	016-04	11:35 PM	6AUG92	027-06	12:21 AM	7AUG92
006-02	10:25 PM	6AUG92	017-04	11:38 PM	6AUG92	028-06	12:31 AM	7AUG92
007-02	10:32 PM	6AUG92	018-04	11:41 PM	6AUG92	029-06	12:44 AM	7AUG92
008-02	10:40 PM	6AUG92	019-04	11:44 PM	6AUG92	030-06	1:07 AM	7AUG92
009-02	10:51 PM	6AUG92	020-04	11:47 PM	6AUG92	031-07	1:59 AM	8AUG92
010-02	11:13 PM	6AUG92	021-05	11:50 PM	6AUG92	032-07	4:21 AM	8AUG92
011-03	11:19 PM	6AUG92	022-05	11:54 PM	6AUG92	033-07	7:12 AM	8AUG92

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
6AUG92	0.000	12.061	0.762	27330	0.762	27330	0.40
7AUG92	0.000	2.994	0.047	4100	0.404	31430	0.00
8AUG92	0.000	0.054	0.019	1090	0.276	32530	0.00

8/6/92

FALCON FIELD




```
SIGMA STREAMLINE  REV: SW-2.05
SITE I.D.#:   1002
PROGRAM STARTED   9:44 PM   8FEB93
FIRST FLUSH:
NEXT SAMPLE IN      0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:       COMPLETE
MISSED       10 SAMPLES
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON:  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL=     300CU FT
DISCRETE MODE.   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
INTAKE RINSE
INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:   I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL=  2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

001-01	8:04 PM	8FEB93	009-03	8:20 PM	8FEB93	016-04	8:34 PM	8FEB93
002-01	8:06 PM	8FEB93	010-03	8:22 PM	8FEB93	017-05	8:36 PM	8FEB93
003-01	8:08 PM	8FEB93	011-03	8:24 PM	8FEB93	018-05	8:38 PM	8FEB93
004-01	8:10 PM	8FEB93	012-03	8:26 PM	8FEB93	019-06	9:07 PM	8FEB93
005-02	8:12 PM	8FEB93	013-04	8:28 PM	8FEB93	020-08	9:47 PM	8FEB93
006-02	8:14 PM	8FEB93	014-04	8:30 PM	8FEB93	021-09	9:54 PM	8FEB93
007-02	8:16 PM	8FEB93	015-04	8:32 PM	8FEB93	022-08	10:00 PM	8FEB93
008-02	8:18 PM	8FEB93						

SAMPLE MISSED

001-05	8:59 PM	8FEB93	005-06	9:16 PM	8FEB93	008-07	9:39 PM	8FEB93
002-05	9:00 PM	8FEB93	006-07	9:25 PM	8FEB93	009-07	9:47 PM	8FEB93
003-06	9:06 PM	8FEB93	007-07	9:32 PM	8FEB93	010-08	9:59 PM	8FEB93
004-06	9:14 PM	8FEB93						

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8FEB93	0.000	40.562	4.397	230820	4.397	230820	0.89
9FEB93	0.024	0.638	0.128	4810	2.262	235640	0.02

2/8/93

Falcon Fd

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM STARTED 7:45 AM 7JAN93
PROGRAM COMPLETE
PROGRAM REVIEW
LEVEL CONTROL: STORMWATER
START ON CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:03 PM 30JUL92

SAMPLE TAKEN

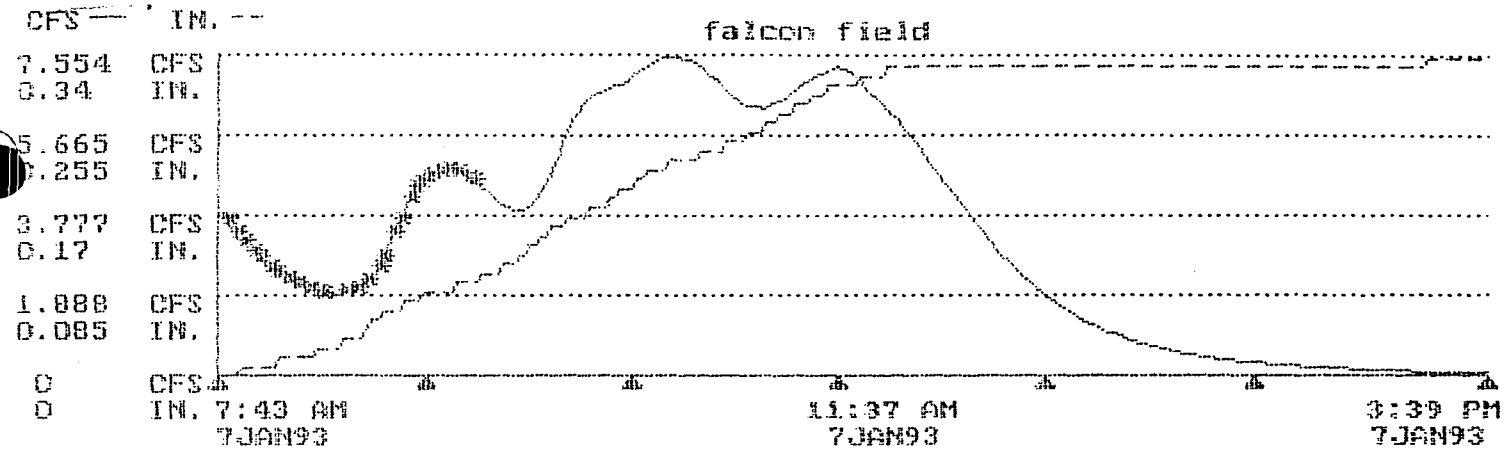
001-01	7:45 AM	7JAN93	012-03	8:21 AM	7JAN93	023-06	8:57 AM	7JAN93
002-01	7:48 AM	7JAN93	013-04	8:25 AM	7JAN93	024-06	8:59 AM	7JAN93
003-01	7:51 AM	7JAN93	014-04	8:29 AM	7JAN93	025-07	9:01 AM	7JAN93
004-01	7:54 AM	7JAN93	015-04	8:33 AM	7JAN93	026-07	9:04 AM	7JAN93
005-02	7:57 AM	7JAN93	016-04	8:36 AM	7JAN93	027-07	9:06 AM	7JAN93
006-02	8:00 AM	7JAN93	017-05	8:40 AM	7JAN93	028-07	9:08 AM	7JAN93
007-02	8:03 AM	7JAN93	018-05	8:43 AM	7JAN93	029-08	9:10 AM	7JAN93
008-02	8:06 AM	7JAN93	019-05	8:46 AM	7JAN93	030-08	9:12 AM	7JAN93
009-03	8:10 AM	7JAN93	020-05	8:49 AM	7JAN93	031-08	9:14 AM	7JAN93
010-03	8:14 AM	7JAN93	021-06	8:52 AM	7JAN93	032-08	9:16 AM	7JAN93
011-03	8:18 AM	7JAN93	022-06	8:54 AM	7JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7JAN93	0.019	7.590	1.949	114250	1.949	114250	0.46
8JAN93	0.022	56.710	5.195	448820	3.572	563060	1.25
9JAN93	0.000	0.022	0.004	370	2.383	563420	0.00
10JAN93	0.000	15.191	2.342	202300	2.372	765720	0.8[illegible]
11JAN93	0.000	48.410	5.054	437880	2.909	1203500	0.93
12JAN93	0.000	3.729	0.097	8380	2.440	1211900	0.17
13JAN93	0.000	4.954	0.383	33110	2.146	1244900	0.0[illegible]
14JAN93	0.000	3.467	0.204	17600	1.903	1262500	0.1[illegible]
15JAN93	0.002	8.000	0.759	65590	1.776	1328100	0.2[illegible]
16JAN93	0.000	6.920	0.471	40710	1.645	1368800	0.24
17JAN93	0.001	3.399	0.288	24920	1.522	1393700	0.16
18JAN93	0.058	33.755	1.900	164160	1.553	1557800	0.51
19JAN93	0.000	0.101	0.013	1080	1.435	1558900	0.00
20JAN93	0.000	0.000	0.000	00	1.332	1558900	0.00
21JAN93	0.000	0.000	0.000	00	1.243	1558900	0.00
22JAN93	0.000	0.000	0.000	00	1.166	1558900	0.00

5.12

23JAN93	0.000	0.000	0.000	00	1.036	1558900	0.00
24JAN93	0.000	0.000	0.000	00	0.981	1558900	0.00
25JAN93	0.000	0.000	0.000	00	0.932	1558500	0.00
26JAN93	0.000	0.000	0.000	00	0.888	1558900	0.00
27JAN93	0.000	0.000	0.000	00	0.848	1558900	0.00
28JAN93	0.000	0.000	0.000	00	0.811	1558900	0.00
29JAN93	0.000	0.000	0.000	00	0.777	1558900	0.00
30JAN93	0.000	0.000	0.000	00	0.746	1558900	0.00
31JAN93	0.000	0.000	0.000	00	0.717	1558900	0.00
1FEB93	0.000	0.000	0.000	00			



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM STARTED 7:45 AM 7JAN93
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
PIPING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

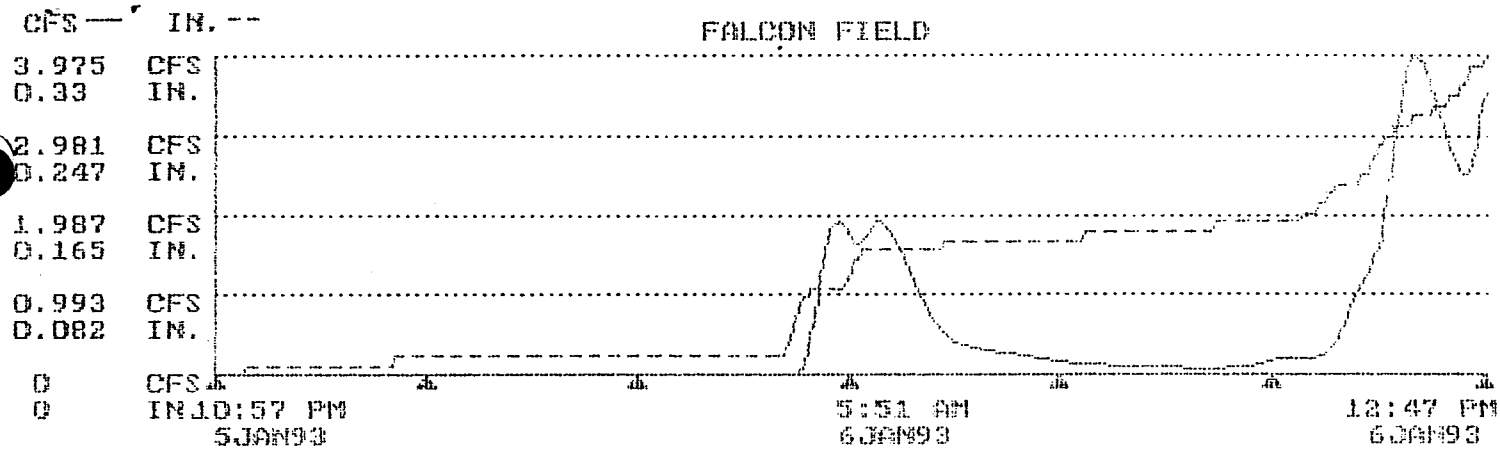
SAMPLE TAKEN

001-01	7:45 AM	7JAN93	012-03	8:21 AM	7JAN93	023-06	8:57 AM	7JAN93
002-01	7:48 AM	7JAN93	013-04	8:25 AM	7JAN93	024-06	8:59 AM	7JAN93
003-01	7:51 AM	7JAN93	014-04	8:29 AM	7JAN93	025-07	9:01 AM	7JAN93
004-01	7:54 AM	7JAN93	015-04	8:33 AM	7JAN93	026-07	9:04 AM	7JAN93
005-02	7:57 AM	7JAN93	016-04	8:36 AM	7JAN93	027-07	9:06 AM	7JAN93
006-02	8:00 AM	7JAN93	017-05	8:40 AM	7JAN93	028-07	9:08 AM	7JAN93
007-02	8:03 AM	7JAN93	018-05	8:43 AM	7JAN93	029-08	9:10 AM	7JAN93
008-02	8:06 AM	7JAN93	019-05	8:46 AM	7JAN93	030-08	9:12 AM	7JAN93
009-03	8:10 AM	7JAN93	020-05	8:49 AM	7JAN93	031-08	9:14 AM	7JAN93
010-03	8:14 AM	7JAN93	021-06	8:52 AM	7JAN93	032-08	9:16 AM	7JAN93
011-03	8:18 AM	7JAN93	022-06	8:54 AM	7JAN93			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7JAN93	0.019	7.590	1.949	114250	1.949	114250	0.46
8JAN93	0.022	56.710	5.195	448820	3.572	563060	1.25
9JAN93	0.000	0.022	0.004	370	2.383	563420	0.00
10JAN93	0.000	15.191	2.342	202300	2.372	765720	0.84
11JAN93	0.356	48.410	15.555	433040	5.009	1198700	0.97

1/7/93




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1002
PROGRAM AWAITING  RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     300CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
5JAN93	0.000	0.000	0.000	00	0.000	00	0.01
6JAN93	0.000	3.981	0.555	25610	0.277	25610	0.32

Falcon Field

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM STARTED 4:07 AM 8DEC92
PROGRAM COMPLETE
PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 35 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 300CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

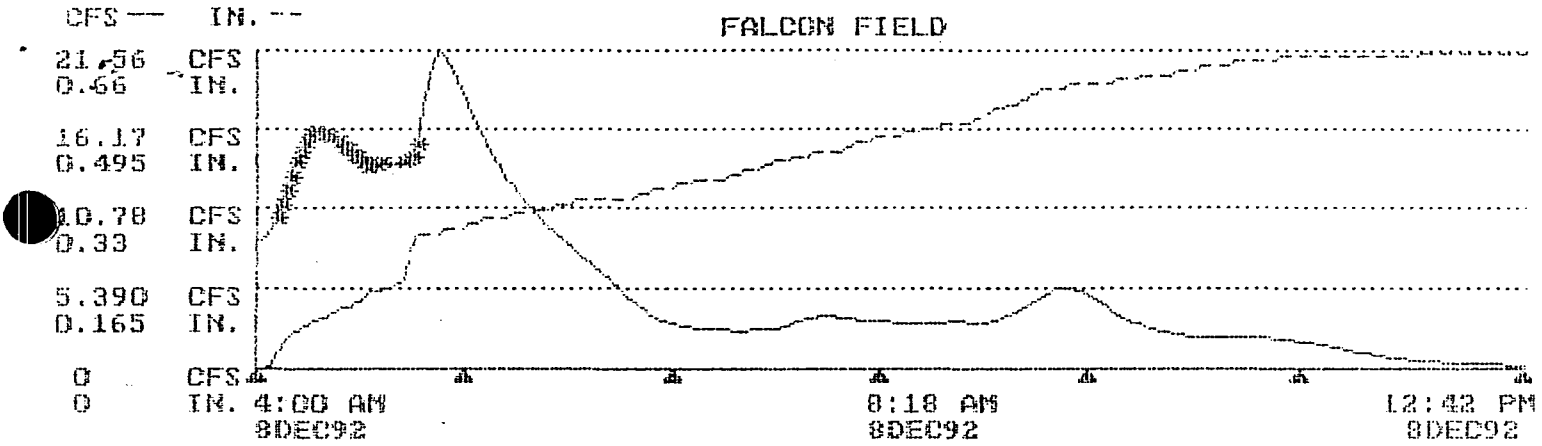
SAMPLE TAKEN

001-01	4:07 AM	8DEC92	012-03	4:29 AM	8DEC92	023-06	4:51 AM	8DEC92
002-01	4:09 AM	8DEC92	013-04	4:31 AM	8DEC92	024-06	4:53 AM	8DEC92
003-01	4:11 AM	8DEC92	014-04	4:33 AM	8DEC92	025-07	4:55 AM	8DEC92
004-01	4:13 AM	8DEC92	015-04	4:35 AM	8DEC92	026-07	4:57 AM	8DEC92
005-02	4:15 AM	8DEC92	016-04	4:37 AM	8DEC92	027-07	4:59 AM	8DEC92
006-02	4:17 AM	8DEC92	017-05	4:39 AM	8DEC92	028-07	5:00 AM	8DEC92
007-02	4:19 AM	8DEC92	018-05	4:41 AM	8DEC92	029-08	5:01 AM	8DEC92
008-02	4:21 AM	8DEC92	019-05	4:43 AM	8DEC92	030-08	5:02 AM	8DEC92
009-03	4:23 AM	8DEC92	020-05	4:45 AM	8DEC92	031-08	5:03 AM	8DEC92
010-03	4:25 AM	8DEC92	021-06	4:47 AM	8DEC92	032-08	5:04 AM	8DEC92
011-03	4:27 AM	8DEC92	022-06	4:49 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8DEC92	0.002	21.707	2.505	179750	2.505	179750	0.66
9DEC92	0.000	0.004	0.000	30	1.253	179780	0.00
10DEC92	0.000	0.001	0.000	00	0.835	179780	0.00
11DEC92	0.000	0.000	0.000	00	0.626	179780	0.00
12DEC92	0.000	0.000	0.000	00	0.501	179780	0.01
13DEC92	0.000	0.000	0.000	00	0.417	179780	0.00
14DEC92	0.000	0.000	0.000	00	0.358	179780	0.00
15DEC92	0.000	0.000	0.000	00	0.313	179780	0.00
16DEC92	0.000	0.000	0.000	00	0.278	179780	0.00
17DEC92	0.000	0.000	0.000	00	0.250	179780	0.00
18DEC92	0.000	0.001	0.000	00	0.228	179780	0.04
19DEC92	0.000	0.001	0.000	00	0.209	179780	0.01
20DEC92	0.000	0.000	0.000	00	0.193	179780	0.00
21DEC92	0.000	0.000	0.000	00	0.179	179780	0.00
22DEC92	0.000	0.000	0.000	00	0.167	179780	0.00
23DEC92	0.000	0.000	0.000	00	0.157	179780	0.00
24DEC92	0.000	0.000	0.000	00	0.147	179780	0.00
25DEC92	0.000	0.000	0.000	00	0.139	179780	0.00
26DEC92	0.000	0.000	0.000	00	0.132	179780	0.00
27DEC92	0.000	0.767	0.026	2220	0.126	182000	0.14
28DEC92	0.002	13.266	1.999	172680	0.216	354680	0.88
29DEC92	0.000	0.006	0.001	80	0.206	354760	0.00
30DEC92	0.000	0.000	0.000	00	0.197	354760	0.00
31DEC92	0.000	0.000	0.000	00	0.189	354760	0.00
1JAN93	0.000	0.000	0.000	00	0.181	354760	0.01
2JAN93	0.000	0.000	0.000	00	0.174	354760	0.00
3JAN93	0.000	1.174	0.072	6180	0.170	360940	0.15
4JAN93	0.000	0.000	0.000	00	0.164	360940	0.00
5JAN93	0.000	0.000	0.000	00	0.159	360940	0.00

12/28/93



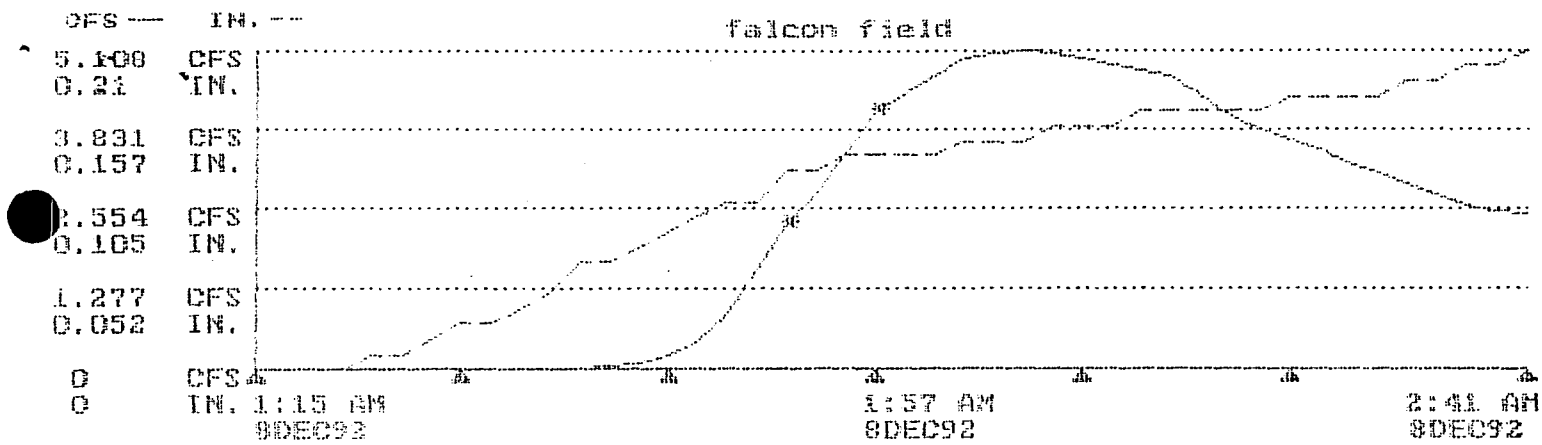

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1002
PROGRAM STARTED  4:07 AM  8DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:       STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.: TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE. SAMPLE INTERVAL=     300CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

001-01	4:07 AM	8DEC92	012-03	4:29 AM	8DEC92	023-06	4:51 AM	8DEC92
002-01	4:09 AM	8DEC92	013-04	4:31 AM	8DEC92	024-06	4:53 AM	8DEC92
003-01	4:11 AM	8DEC92	014-04	4:33 AM	8DEC92	025-07	4:55 AM	8DEC92
004-01	4:13 AM	8DEC92	015-04	4:35 AM	8DEC92	026-07	4:57 AM	8DEC92
005-02	4:15 AM	8DEC92	016-04	4:37 AM	8DEC92	027-07	4:59 AM	8DEC92
006-02	4:17 AM	8DEC92	017-05	4:39 AM	8DEC92	028-07	5:00 AM	8DEC92
007-02	4:19 AM	8DEC92	018-05	4:41 AM	8DEC92	029-08	5:01 AM	8DEC92
008-02	4:21 AM	8DEC92	019-05	4:43 AM	8DEC92	030-08	5:02 AM	8DEC92
009-03	4:23 AM	8DEC92	020-05	4:45 AM	8DEC92	031-08	5:03 AM	8DEC92
010-03	4:25 AM	8DEC92	021-06	4:47 AM	8DEC92	032-08	5:04 AM	8DEC92
011-03	4:27 AM	8DEC92	022-06	4:49 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
8DEC92	0.002	21.707	2.505	179750	2.505	179750	0.66
9DEC92	0.000	0.004	0.000	30	1.253	179780	0.00
10DEC92	0.000	0.001	0.000	00	0.835	179780	0.00



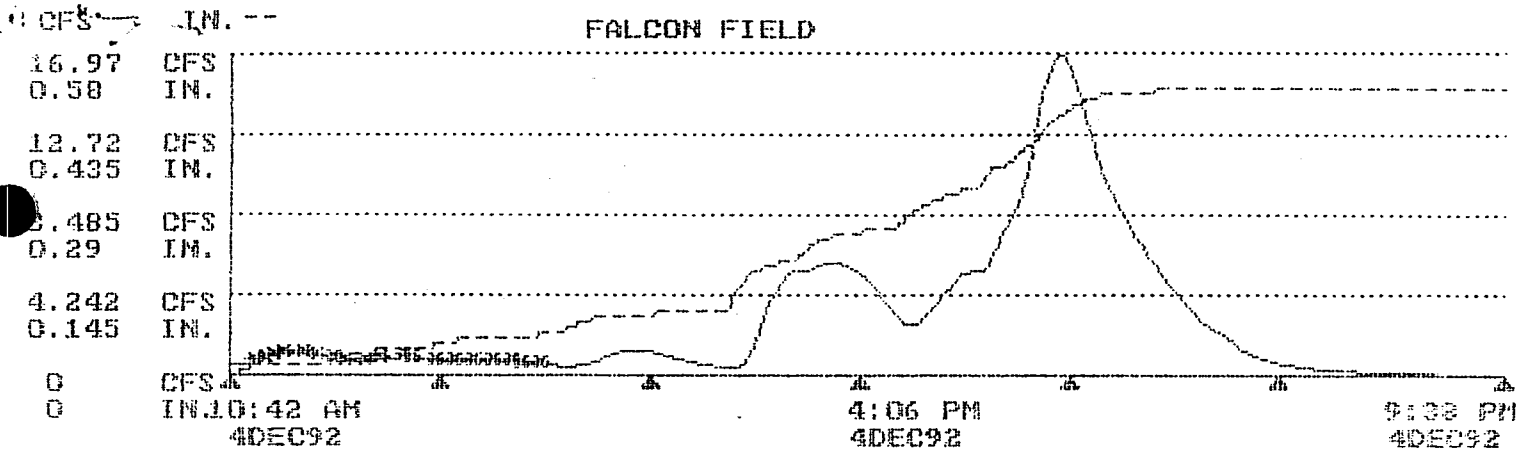

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:   1002
PROGRAM STARTED   1:49 AM  8DEC92
FIRST FLUSH:
NEXT SAMPLE IN      0 MINUTES
NO SAMPLES YET
MAIN PROGRAM:       COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:       STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 35 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN:  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML:    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     300CU FT
DISCRETE MODE,   4 BOTTLE/SAMPLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
RUNNING FORMULA:  I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

001-01	1:49 AM	8DEC92	004-04	1:49 AM	8DEC92	007-07	1:54 AM	8DEC92
002-02	1:49 AM	8DEC92	005-05	1:54 AM	8DEC92	008-08	1:54 AM	8DEC92
003-03	1:49 AM	8DEC92	006-06	1:54 AM	8DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
7DEC92	0.000	0.000	0.000	00	0.000	00	0.00
8DEC92	0.000	5.135	1.287	12660	0.644	12660	0.21




```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1002
PROGRAM STARTED 10:52 AM  4DEC92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:      STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.01 IN.; TIME LIMIT= 15 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=    0 MIN;  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML;    AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=     200CU FT
DISCRETE MODE,    4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;    AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

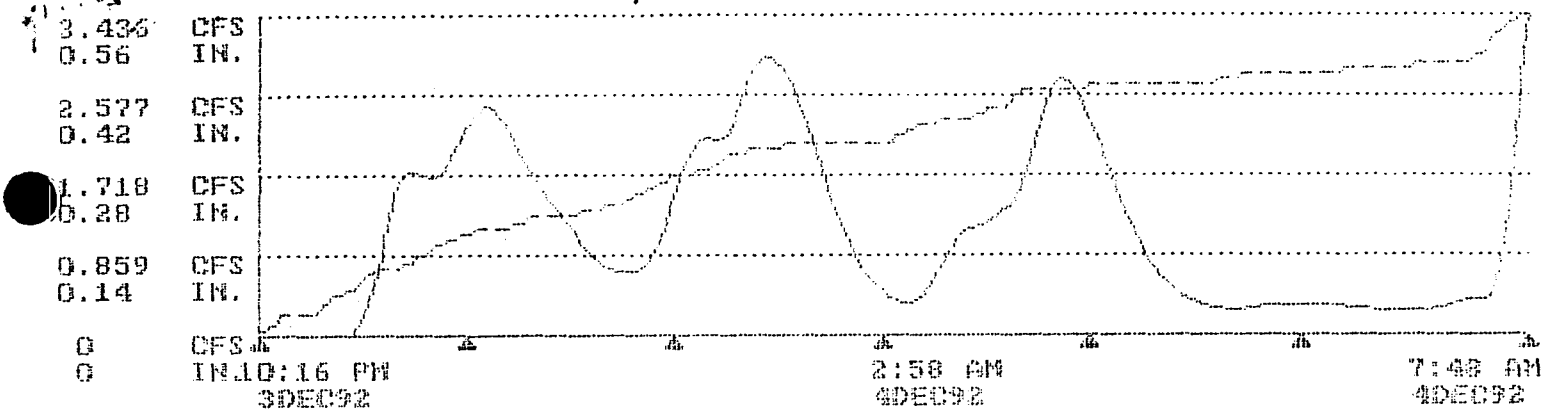
001-01	10:52 AM	4DEC92	012-03	11:38 AM	4DEC92	023-06	12:32 PM	4DEC92
002-01	10:58 AM	4DEC92	013-04	11:43 AM	4DEC92	024-06	12:37 PM	4DEC92
003-01	11:02 AM	4DEC92	014-04	11:49 AM	4DEC92	025-07	12:43 PM	4DEC92
004-01	11:06 AM	4DEC92	015-04	11:54 AM	4DEC92	026-07	12:48 PM	4DEC92
005-02	11:10 AM	4DEC92	016-04	11:59 AM	4DEC92	027-07	12:53 PM	4DEC92
006-02	11:14 AM	4DEC92	017-05	12:04 PM	4DEC92	028-07	12:59 PM	4DEC92
007-02	11:18 AM	4DEC92	018-05	12:08 PM	4DEC92	029-08	1:04 PM	4DEC92
008-02	11:21 AM	4DEC92	019-05	12:12 PM	4DEC92	030-08	1:10 PM	4DEC92
009-03	11:25 AM	4DEC92	020-05	12:17 PM	4DEC92	031-08	1:16 PM	4DEC92
010-03	11:29 AM	4DEC92	021-06	12:21 PM	4DEC92	032-08	1:22 PM	4DEC92
011-03	11:34 AM	4DEC92	022-06	12:26 PM	4DEC92			

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
4DEC92	0.042	17.080	2.438	116440	2.438	116440	0.52
5DEC92	0.013	0.313	0.060	5180	1.249	121620	0.06
6DEC92	0.007	0.023	0.014	1220	0.837	122850	0.00
7DEC92	0.003	0.011	0.005	160	0.629	123010	0.00

12/4/93

Falcon Fd



SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 200CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
20NOV92	0.000	0.000	0.000	00	0.000	00	0.00
21NOV92	0.000	0.000	0.000	00	0.000	00	0.00
22NOV92	0.000	0.000	0.000	00	0.000	00	0.00
23NOV92	0.000	0.000	0.000	00	0.000	00	0.00
24NOV92	0.000	0.000	0.000	00	0.000	00	0.00
25NOV92	0.000	0.000	0.000	00	0.000	00	0.00
26NOV92	0.000	0.000	0.000	00	0.000	00	0.00
27NOV92	0.000	0.000	0.000	00	0.000	00	0.00
28NOV92	0.000	0.000	0.000	00	0.000	00	0.00
29NOV92	0.000	0.000	0.000	00	0.000	00	0.00
30NOV92	0.000	0.000	0.000	00	0.000	00	0.00
1DEC92	0.000	0.000	0.000	00	0.000	00	0.00
2DEC92	0.000	0.000	0.000	00	0.000	00	0.00
3DEC92	0.000	2.476	0.064	5530	0.005	5530	0.19
4DEC92	0.259	3.561	1.170	32990	0.082	38530	0.37

Falcon Fd

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.; TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN; FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML; AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 200CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML; AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
27OCT92	0.000	0.003	0.001	60	0.001	60	0.00
28OCT92	0.001	3.910	0.129	11120	0.065	11180	0.13
29OCT92	0.009	0.051	0.018	1590	0.049	12780	0.00
30OCT92	0.006	0.020	0.011	970	0.040	13750	0.00
31OCT92	0.002	0.015	0.007	630	0.033	14390	0.00
1NOV92	0.000	0.002	0.000	30	0.028	14430	0.00
2NOV92	0.000	0.002	0.000	00	0.024	14430	0.00
3NOV92	0.000	0.000	0.000	00	0.021	14430	0.00
4NOV92	0.000	0.000	0.000	00	0.019	14430	0.00
5NOV92	0.000	0.000	0.000	00	0.017	14430	0.00
6NOV92	0.000	0.000	0.000	00	0.015	14430	0.00
7NOV92	0.000	0.000	0.000	00	0.014	14430	0.00
8NOV92	0.000	0.000	0.000	00	0.013	14430	0.00
9NOV92	0.000	0.000	0.000	00	0.012	14430	0.00
10NOV92	0.000	0.000	0.000	00	0.011	14430	0.00
11NOV92	0.000	0.000	0.000	00	0.010	14430	0.00
12NOV92	0.000	0.000	0.000	00	0.010	14430	0.00
13NOV92	0.000	0.000	0.000	00	0.009	14430	0.00
14NOV92	0.000	0.000	0.000	00	0.009	14430	0.00
15NOV92	0.000	0.000	0.000	00	0.008	14430	0.00
16NOV92	0.000	0.000	0.000	00	0.008	14430	0.00
17NOV92	0.000	0.000	0.000	00	0.008	14430	0.00
18NOV92	0.000	0.000	0.000	00	0.007	14430	0.00
19NOV92	0.000	0.000	0.000	00	0.007	14430	0.00
20NOV92	0.001	0.043	0.003	60	0.009	18140	0.00

Falcon Field

SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM AWAITING RAIN AND LEVEL
NO SAMPLES YET
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.10 IN.: TIME LIMIT= 15 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML: AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 200CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

SAMPLE TAKEN

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
22SEP92	0.002	0.009	0.005	170	0.005	170	0.00
23SEP92	0.000	0.007	0.002	130	0.003	310	0.00
24SEP92	0.000	0.001	0.000	00	0.002	310	0.00
25SEP92	0.000	0.000	0.000	00	0.002	310	0.00
26SEP92	0.000	0.000	0.000	00	0.001	310	0.00
27SEP92	0.000	0.000	0.000	00	0.001	310	0.00
28SEP92	0.000	0.000	0.000	00	0.001	310	0.00
29SEP92	0.000	0.000	0.000	00	0.001	310	0.00
30SEP92	0.000	0.000	0.000	00	0.001	310	0.00
1OCT92	0.000	0.000	0.000	00	0.001	310	0.00
2OCT92	0.000	0.000	0.000	00	0.001	310	0.00
3OCT92	0.000	0.000	0.000	00	0.001	310	0.00
4OCT92	0.000	0.000	0.000	00	0.001	310	0.00
5OCT92	0.000	0.000	0.000	00	0.000	310	0.00
6OCT92	0.000	0.028	0.007	620	0.001	930	0.00
7OCT92	0.000	0.000	0.000	00	0.001	930	0.00
8OCT92	0.000	0.000	0.000	00	0.001	930	0.00
9OCT92	0.000	0.000	0.000	00	0.001	930	0.00
10OCT92	0.000	0.000	0.000	00	0.001	930	0.00
11OCT92	0.000	0.000	0.000	00	0.001	930	0.00
12OCT92	0.000	0.000	0.000	00	0.001	930	0.00
13OCT92	0.000	0.000	0.000	00	0.001	930	0.00
14OCT92	0.000	0.000	0.000	00	0.001	930	0.00
15OCT92	0.000	0.000	0.000	00	0.001	930	0.00
16OCT92	0.000	0.000	0.000	00	0.001	930	0.00
17OCT92	0.000	0.000	0.000	00	0.001	930	0.00
18OCT92	0.000	0.000	0.000	00	0.001	930	0.00
19OCT92	0.000	0.000	0.000	00	0.000	930	0.00
20OCT92	0.000	0.000	0.000	00	0.000	930	0.00
21OCT92	0.000	0.000	0.000	00	0.000	930	0.00

Falcon

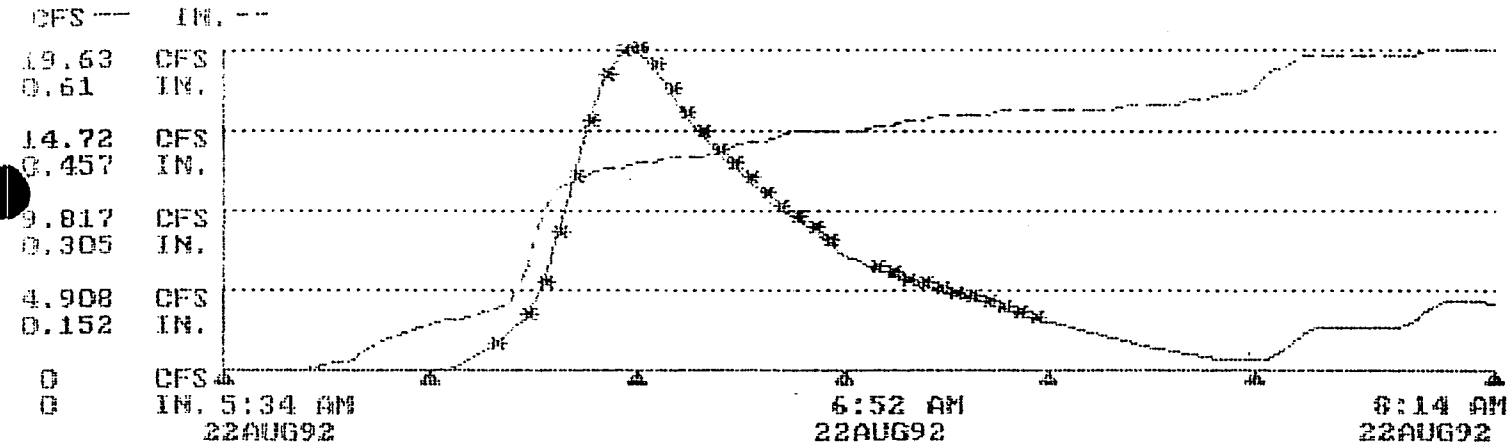
SIGMA STREAMLINE REV: SW-2.05A
SITE I.D.#: 1002
PROGRAM STARTED 4:19 AM 19SEP92
PROGRAM COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL: STORMWATER
START ON RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.: TIME LIMIT= 10 MIN CHANNEL LEVEL= 0.2 IN.
FIRST FLUSH: PERIOD= 0 MIN: FIRST FLUSH BOTTLES= 0
1 SAMP/BOTTLE
SAMPLE VOLUME=1500 ML: AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL= 200CU FT
DISCRETE MODE, 4 SAMP/BOTTLE
SAMPLE VOLUME= 450 ML: AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT: EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER: ENABLED
MANNING FORMULA: I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92

SAMPLE TAKEN

001-01	4:19 AM 19SEP92	012-03	5:20 AM 19SEP92	023-06	7:21 PM 19SEP92
002-01	4:21 AM 19SEP92	013-04	5:32 AM 19SEP92	024-06	9:47 PM 19SEP92
003-01	4:23 AM 19SEP92	014-04	5:47 AM 19SEP92	025-07	11:53 PM 19SEP92
004-01	4:25 AM 19SEP92	015-04	6:07 AM 19SEP92	026-07	12:01 AM 20SEP92
005-02	4:27 AM 19SEP92	016-04	6:37 AM 19SEP92	027-07	12:05 AM 20SEP92
006-02	4:43 AM 19SEP92	017-05	7:22 AM 19SEP92	028-07	12:10 AM 20SEP92
007-02	4:45 AM 19SEP92	018-05	8:27 AM 19SEP92	029-08	12:16 AM 20SEP92
008-02	4:47 AM 19SEP92	019-05	9:58 AM 19SEP92	030-08	12:22 AM 20SEP92
009-03	4:50 AM 19SEP92	020-05	11:51 AM 19SEP92	031-08	12:45 AM 20SEP92
010-03	4:53 AM 19SEP92	021-06	2:12 PM 19SEP92	032-08	12:59 AM 20SEP92
011-03	5:12 AM 19SEP92	022-06	5:12 PM 19SEP92		

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
26AUG92	0.000	0.000	0.000	00	0.000	00	0.00
27AUG92	0.000	0.000	0.000	00	0.000	00	0.00
28AUG92	0.000	0.000	0.000	00	0.000	00	0.00
29AUG92	0.000	0.000	0.000	00	0.000	00	0.00
30AUG92	0.000	0.000	0.000	00	0.000	00	0.00
31AUG92	0.000	0.000	0.000	00	0.000	00	0.00
1SEP92	0.000	0.000	0.000	00	0.000	00	0.00
2SEP92	0.000	0.000	0.000	00	0.000	00	0.00
3SEP92	0.000	0.000	0.000	00	0.000	00	0.00
4SEP92	0.000	0.000	0.000	00	0.000	00	0.00
5SEP92	0.000	0.000	0.000	00	0.000	00	0.00
6SEP92	0.000	0.000	0.000	00	0.000	00	0.00
7SEP92	0.000	0.000	0.000	00	0.000	00	0.00
8SEP92	0.000	0.000	0.000	00	0.000	00	0.00
9SEP92	0.000	0.000	0.000	00	0.000	00	0.00
10SEP92	0.000	0.000	0.000	00	0.000	00	0.00
11SEP92	0.000	0.000	0.000	00	0.000	00	0.00
[illegible]	0.000	0.000	0.000	00	0.000	00	0.00



FALCON FIELD

```
SIGMA STREAMLINE  REV: SW-2.05A
SITE I.D.#:  1002
PROGRAM STARTED  6:07 AM 22AUG92
FIRST FLUSH:
NO SAMPLES YET
MAIN PROGRAM:      COMPLETE
- PROGRAM REVIEW-
LEVEL CONTROL:     STORMWATER
START ON  RAIN AND LEVEL
TOTAL RAINFALL=0.05 IN.; TIME LIMIT= 10 MIN      CHANNEL LEVEL=  0.2 IN.
FIRST FLUSH: PERIOD=   0 MIN;  FIRST FLUSH BOTTLES= 0
  1 SAMP/BOTTLE
SAMPLE  VOLUME=1500 ML;   AUTO CALIBRATE
MAIN PROGRAM:
FLOW MODE, SAMPLE INTERVAL=    200CU FT
DISCRETE MODE,   4 SAMP/BOTTLE
SAMPLE  VOLUME= 450 ML;   AUTO CALIBRATE
1 INTAKE RINSE
2 INTAKE FAULTS
SPECIAL OUTPUT:  EVENT OUTPUT
SAMPLE TIME LIMIT: 1440 MIN
INTERNAL FLOWMETER:  ENABLED
MANNING FORMULA:  I.D.=048.00 IN., ROUGHNESS=.013, SLOPE=0.14/100FT
FLOW RECORDING INTERVAL= 2 MIN
SENSOR LAST CALIBRATED: 4:53 PM 30JUL92
```

SAMPLE TAKEN

001-01	6:07 AM 22AUG92	012-03	6:30 AM 22AUG92	023-06	6:57 AM 22AUG92
002-01	6:10 AM 22AUG92	013-04	6:32 AM 22AUG92	024-06	6:59 AM 22AUG92
003-01	6:12 AM 22AUG92	014-04	6:34 AM 22AUG92	025-07	7:01 AM 22AUG92
004-01	6:14 AM 22AUG92	015-04	6:36 AM 22AUG92	026-07	7:03 AM 22AUG92
005-02	6:16 AM 22AUG92	016-04	6:38 AM 22AUG92	027-07	7:05 AM 22AUG92
006-02	6:18 AM 22AUG92	017-05	6:40 AM 22AUG92	028-07	7:07 AM 22AUG92
007-02	6:20 AM 22AUG92	018-05	6:42 AM 22AUG92	029-08	7:09 AM 22AUG92
008-02	6:22 AM 22AUG92	019-05	6:44 AM 22AUG92	030-08	7:11 AM 22AUG92
009-03	6:24 AM 22AUG92	020-05	6:46 AM 22AUG92	031-08	7:13 AM 22AUG92
010-03	6:26 AM 22AUG92	021-06	6:48 AM 22AUG92	032-08	7:15 AM 22AUG92
011-03	6:28 AM 22AUG92	022-06	6:55 AM 22AUG92		

FLOW RATE UNITS: CFS VOLUME UNITS: CU FT

DAY	MIN DAILY FLOW RATE	MAX DAILY FLOW RATE	AVG DAILY FLOW RATE	TOT DAILY VOLUME	CUM AVG FLOW RATE	CUMULATIVE TOT VOLUME	RAIN
13AUG92	0.295	0.472	0.374	13120	0.374	13120	0.00
14AUG92	0.049	0.295	0.154	13340	0.264	26470	0.00
15AUG92	0.000	0.049	0.012	1020	0.180	27490	0.00
16AUG92	0.000	0.000	0.000	00	0.135	27490	0.00
17AUG92	0.000	0.000	0.000	00	0.108	27490	0.00
18AUG92	0.000	0.000	0.000	00	0.090	27490	0.00
19AUG92	0.000	0.000	0.000	00	0.077	27490	0.00
20AUG92	0.000	0.000	0.000	00	0.068	27490	0.00
21AUG92	0.000	0.000	0.000	00	0.060	27490	0.00
22AUG92	0.000	20.106	1.580	47410	0.212	74910	0.61

8/22/92