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CITY OF ROCKY MOUNT

LAND CLEARING & INERT DEBRIS LANDFILL

A Notification Report

Prepared for:

City of Rocky Mount
Post Office Box 1180
Rocky Mount, North Carolina 27802

ACE JN: 01-065

September 19, 2002

APPIAN
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES

APPROVED
DIVISION OF WASTE MANAGEMENT
SOLID WASTE SECTION
DATE 4/15/03 BY

33-G
CITY OF ROCKY MOUNT LCID LANDFILL
PERMIT TO CONSTRUCT - PHASE VII
RALEIGH REGIONAL OFFICE COPY

NOTIFICATION REPORT FOR

APR 2003

CITY OF ROCKY MOUNT
LCID LANDFILL

Rocky Mount, NC
18 September 2002

Appian Consulting Engineers, PA
PO Box 7966
Rocky Mount, NC 27804
(252) 972-7703
(252) 972-7638 (Fax)

NORTH CAROLINA PROFESSIONAL SEAL 8421 ENGINEER BOBBY L. JOYNER

9.26.02

RECEIVED
APR 21 2003
DENR RALEIGH REGIONAL OFFICE

City of Rocky Mount LCID Landfill
Notification Report

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I. SITING CRITERIA

A. Introduction

The City of Rocky Mount is proposing to permit a Land Clearing & Inert Debris (LCID) landfill on City owned property located in Edgecombe County, North Carolina. The site is located near the Rocky Mount, North Carolina, north of NC 97 and east of Old Battleboro Road. A legal description of the property is included in Appendix I. The LCID landfill will be operated and maintained by the City of Rocky Mount.

The proposed LCID landfill encompasses approximately 79.84 +/- acres and is currently zoned as Agricultural. The information contained within the application has been prepared to conform to the siting and design criteria of the Solid Waste Management Rules .0564 and .0565.

B. Floodplain Boundary

As required by the Division of Solid Waste Management Rules .0564 (1), the proposed LCID landfill area is not located within the 100-year floodplain. The floodplain boundary was digitized into the plans by Joyner, Keeny & Associates, a licensed surveying company, from the current available FEMA flood maps. The most current FEMA flood map of the area is enclosed in Appendix II.

C. Endangered Species

As required by the Division of Solid Waste Management Rules .0564 (2) and (3), the proposed LCID landfill is not located in an area that will threaten an endangered species or result in destruction or adversely modify critical habitat of an endangered species. The United States Fish & Wildlife Service in a letter dated June 19, 2002 verified the absence of endangered or threatened species and habitats. We also obtained verification from the North Carolina Natural Heritage Program in a letter dated March 4, 2002. Both letters are located in Appendix III.

D. Archeological, State Nature and Historic Preserve

As required by the Division of Solid Waste Management Rules .0564 (4) and (5), the proposed landfill site will not damage or destroy an archeological or historical site. Based on the letter received from the North Carolina State Historic Preservation Office, one site is listed under the National Register of Historic Places; however, the proposed landfill is approximately 1 mile away from the historic property. Between the proposed landfill and the historic site is a nature buffer of trees that will not be disturbed and a residential subdivision. There will be minimal noise addition to the site as the City of Rocky Mount's estimate for transportation in the area to be 10 tandum trucks per day. Odor and vermin should not be

increased, as the waste for disposal in the landfill is to be inert and the Rocky Mount Waste Water Treatment Plant is located just to the north of the historic property. Therefore, the site will not have an adverse impact to a State park, recreation or scenic area, or any other lands included in the state nature and historic preserve. The letter of notification from and the letter of response to the North Carolina State Historic Preservation Office is enclosed in Appendix III.

E. Wetlands

As required by the Division of Solid Waste Management Rule .0564 (6), the facility shall not be located in any wetlands. The proposed landfill site does contain wetlands within the site with a total area of 0.76 acres. The wetlands are all non-jurisdictional (isolated) and do not involve the United States Army Corps of Engineers, however, the Division of Water Quality (DWQ), Wetlands Unit, has reviewed the site and are currently reviewing the feasibility of filling the wetlands. Based on the DWQ Isolated Wetlands/Waters rules, they must advertise for 30 days to obtain public response and depending on the comments received, give the allowance to proceed with the filling of the wetlands. The approval from the Division of Water Quality is forthcoming and will be enclosed in Appendix IV.

F. Borrow Soil

As required by the Division of Solid Waste Management Rule .0564 (7), adequate suitable soils for cover must be shown on the plans. Suitable borrow soils for cover material are readily available off-site within the City of Rocky Mount property as shown on the plans, which is within 1/2 mile from the proposed landsite location.

G. Stormwater and Erosion & Sedimentation Control

As required by Division of Solid Waste Management Rules .0564 (8)(a)-(c), there shall be no violations of the National Pollutant Discharge Elimination System (NPDES) under Section 402 of the Clean Water Act, no violations due to discharge of dredged materials or fill materials into waters of the state under Section 404 of the Clean Water Act, and no violations caused by non-point source pollution of waters of the state assigned water quality standards. A Pre-Construction Notification (PCN) to the Division of Water Quality (DWQ) has been sent and is enclosed in Appendix IV.

An Erosion & Sedimentation Control Plan has been produced and submitted to Land Quality Section for approval. The locations of the erosion control devices are shown on the Erosion & Sedimentation Control Plan (sheet CE-7) and are attached in Appendix V. The supporting calculations are also included in Appendix V.

H. Groundwater Separation

As required by the Division of Solid Waste Management Rules .0564 (8)(d), waste must be placed a minimum of four feet above the seasonal high groundwater table. As verified through hand auger tests throughout the landfill site (included in Appendix VI), the seasonal high ground water elevation for most of the site is at the current ground level. At locations of higher ground levels, the groundwater table is slightly lower with approximately two (2) feet of separation.

I. Buffer Requirements

As required by the Division of Solid Waste Management Rules .0564 (9), the waste limits of the proposed LCID landfill area are 100 feet from the property boundaries. There are currently three manmade drainage ditches on the site that are determined by the U.S. Army Corps of Engineers as non-jurisdictional. Upon reviewing the Soils Map and the USGS Quadrangle Map (Hartsease) for the area (enclosed in Appendix VII), the three ditches are not shown on the maps, therefore, are not regulated by the Tar-Pamlico Buffer Regulations. The closes surface water location is the pond located to the west and is approximately 200 feet from the proposed landfill area. The Tar River is approximately 1.5 miles to the south of the site. Residential dwellings, commercial or public buildings and wells are not located within 100 feet of the property boundary.

J. Local Zoning Requirements

As required by the Division of Solid Waste Management Rules .0564 (10), the local government zoning ordinances must be met. A letter from the City of Rocky Mount Planning & Development Department in regards to the proposed LCID landfill is presented in Appendix VIII.

K. 1/4-Mile Vicinity Map

A 1/4-mile radius vicinity map has been produced and is shown in the plans on sheet CE-1. A subdivision (Deer Run) is located just east of the proposed landfill with five (5) lots located within the 1/4-mile radius. The current subdivision uses well water, however, a new water line is being installed for the residence of Deer Run. Four (4) main parcels of land are encompassed within the 1/4-mile radius to the west and north of the proposed landfill. All four parcels contain single-family residences and are currently using well water. A new water line is scheduled for installation along State Road 1400 (Old Battleboro Road) in the near future. The property to the south of the proposed landfill is owned by Barnhill Contracting Company and is a location of an existing LCID landfill site.

L. Development and Design Drawings

Drawings meeting the requirements of the Division of Solid Waste Management Rule .0565 (3) are submitted with this report. The drawings include an overall site plan that shows the location of the proposed landfill and the surrounding areas, a Grading and Solid Waste Plan that shows the final contours of the proposed landfill and the different phases of construction, Cross Section Plans that shows the cross sections of each phase of the landfill, and an Erosion Control Plan. The existing topography were developed using surveying methods by Joyner, Keeny & Associates.

II. Operations Plan

The proposed LCID landfill will be owned and operated by the City of Rocky Mount. Operation of the landfill will be the responsibility of the following:

Mr. Doug Roberson, Director of Public Works
Public Works Department
City of Rocky Mount
Post Office Box 1180
Rocky Mount, North Carolina, 27802.

A. Waste Description

As defined in the Division of Solid Waste Management Rules 15A NCAC 13B .0100, LCID waste is generated solely from land clearing activities such as stumps, trees, limbs, brush, grass and other naturally occurring vegetative material, and inert debris such as concrete, asphalt, brick, concrete block, uncontaminated soil, gravel and rock, and unpainted/untreated wood.

B. Site Operations

The City of Rocky Mount will obtain and dispose of the LCID waste. Placement of waste within the landfill will be from east to west and from the north to the south. Loads will be dumped and compacted as densely as possible by a wheel loader. Waste will not be disposed of in areas of ponding water and placement will be restricted to as small an area as practical.

LCID waste will be covered with 6-inches of soil monthly or when the active area reaches one acre in size, whichever comes first. Upon completion of disposal operations, the disposal area will be covered with a minimum of one foot of compacted soil cover.

The City of Rocky Mount personnel will inspect waste at the landfill entrance. A sign at the landfill entrance will be posted and will provide an emergency contact name and number and the facility permit number.

Access to the site is limited by dense vegetation and topography around most of the site. The only entrance to the site is from State Road 1400 (Old Battleboro Road) and it will be maintained and repaired when necessary. There are two gates located along the access road, one at the entrance from State Road 1400 and the other approximately 500 feet from the entrance to limit the access to the proposed landfill.

C. Fire Control

Open burning of waste within the landfill limits is prohibited. Fires shall be controlled through smothering with bare earth and soil should be stockpiled adjacent to the active area for fire control. The area is located within the City of Rocky Mount ETJ and will be covered by the City of Rocky Mount Fire Department.

D. Explosive Gas Monitoring

Concentration of explosive gases generated by the proposed landfill shall not exceed twenty five percent of the lower explosive limit for the gases in the landfill structure nor the lower explosive limit for the gases at the property boundary. Gas buildup is not anticipated at this time, as the waste will consist solely of land clearing and inert debris. The City of Rocky Mount shall perform a yearly inspection for gas buildup due to disturbances from the landfill activities.

E. Erosion & Sedimentation Control

Prior to LCID waste placement on site, erosion control devices and structures will be constructed and in place as shown on the Erosion Control Plan. Waste placement shall be planned as such to provide positive drainage to the two main extended detention wetlands. Temporary ditches may be necessary, as the site is developed to provide drainage to the designed wetlands.

Areas greater than one acre that reach final elevations and have received final cover shall be stabilized with an permanent grass cover as noted in the Erosion Control Narrative in the plan detail sheet. Filling operations for the site will continue year round, thus the seeding requirements shall be adjusted on a seasonal basis. Seeding will be conducted in accordance with the seeding specifications shown in the Erosion Control Narrative. Embankment slopes shall be periodically inspected for erosion. All seeded areas will be fertilized, seeded, and mulched according to the seeding specifications to maintain a suitable vegetative cover.

The erosion control structures shall be inspected following every producing rainfall and at least once per week. Repairs to the structures should be made immediately. Sediments accumulated within the extended detention wetland basins shall be removed when the level

of sediment reaches approximately a quarter of the structure's height. Trash and debris collected within the structure's spillways shall be removed immediately.

F. Site Closure

Upon completion of disposal activities, a final soil cover shall be placed over the entire landfill. The final cover shall be placed to a minimum thickness of one foot. The completed LCID landfill area shall be graded in accordance with the proposed final contours as shown on the Grading Plan.

Final cover shall be placed within 30 days of final receipt of waste unless otherwise approved by the Division of Solid Waste Management. The final use for the LCID site is a pasture/grass land and will be maintained as such by the City of Rocky Mount.

APPENDIX I

3861-98-6231-00
130.7 Ac

THIS INSTRUMENT PREPARED BY THOMAS D. EATMAN, JR., ATTORNEY AT LAW, POYNER & SPRUILL, P. O. DRAWER 353, ROCKY MOUNT, NORTH CAROLINA 27802-0353

NORTH CAROLINA

EDGECOMBE COUNTY

THIS DEED, made this 31 day of October, 1991, by and between **EVANS TREE FARM, INC.**, Grantor, and **THE CITY OF ROCKY MOUNT**, a municipal corporation lying in Nash and Edgecombe Counties, whose mailing address is P. O. Box 1180, Rocky Mount, North Carolina 27802-1180, Grantee. The designations Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine, or neuter as required by context.

W I T N E S S E T H:

That Grantor, for a valuable consideration paid by Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto Grantee in fee simple, all that certain lot or parcel of land situated in Number Township, Edgecombe County, North Carolina, and more particularly described as follows:

BEGINNING at a new iron pipe set in the eastern right of way line of SR 1400 (Springfield Road), northwesternmost corner for William T. Phillips (Book 736, Page 254, Edgecombe County Registry) at N.C. Grid NAD 83' Coordinates N=819,743.608 and E=2,368,031.835, which new iron pipe is located N. 82° 00' 23" E. 115.13 feet (Horizontal Ground Distance, Combined Factor = 0.999949897) from a new iron pipe in the right of way of SR 1402 located at N.C. Grid NAD 83' Coordinates N=819,727.599 and E=2,367,917.830; thence along the eastern right of way line of SR 1400, N. 04° 00' 22" E. 54.85 feet to a point of curvature, and continuing along the eastern right of way line of SR 1400 which is a curve having a radius of 710 feet, a chord bearing and distance of N. 04° 15' 48" E. 6.37 feet to a new iron pipe, a new

Real Estate Excise Tax
20.00
P.B. 10744
STATE OF NORTH CAROLINA
OCT 31 '91
EDGECOMBE COUNTY

corner for Evans Tree Farm, Inc.; thence along a new southern line for Evans Tree Farm, Inc., N. 82° 32' 44" E. 1242.23 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount", a new corner with Evans Tree Farm, Inc.; thence along a new eastern line for Evans Tree Farm, Inc., N. 04° 31' 27" W. 733.15 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount" in a southern line for Lucy Ann Williams (Book 896, Page 839); thence along a southern line for Lucy Ann Williams, S. 88° 31' 02" E. 1475.86 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount" in a western line for property owned by the City of Rocky Mount (Book 1065, Page 103) and formerly owned by Sarah M. Cade (Map Book 4, Page 45); thence along a western line for property owned by the City of Rocky Mount, S. 01° 25' 10" W. 3587.19 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount" at a corner with Barnhill Contracting Company (Book 889, Page 272) (Tract 1 of Hugh H. Battle Estate, Map Book 18, Page 41), located 4384.66 feet northerly of an existing iron pipe in a northern right of way line of N.C. Highway 97; thence along a northern line for Barnhill Contracting Company, N. 84° 35' 41" W. 808.45 feet to an existing iron pipe, corner for Barnhill Contracting Company and Avalon Missionary Baptist Church (Book 660, Page 61); thence along a northern line for Avalon Missionary Baptist Church, N. 84° 50' 36" W. 944.56 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount", a new corner with Evans Tree Farm, Inc.; thence along a new eastern line for Evans Tree Farm, Inc., N. 05° 09' 24" E. 431.74 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount", cornering; thence along a new northern line for Evans Tree Farm, Inc., N. 84° 50' 36" W. 388.48 feet to a new iron pipe with aluminum cap stamped "City of Rocky Mount", corner for Evans Tree Farm, Inc. and Margaret Cooley (Book 660, Page 604); thence along the eastern lines of Margaret Cooley, property now or formerly owned by Margaret Cooley, property of Margaret C. Watson and Victor C. Moser (Book 979, Page 513) and property of James T. Nelms and wife, Eunice A. Nelms (Book 1059, Page 278), N. 05° 05' 32" E. 1049.21 feet to an existing iron pipe, corner with Nelms in a southern line of William T. Phillips (Book 736, Page 254); thence along a southern line of William T. Phillips, S. 62° 30' 13" E. 903.72 feet to an existing iron pipe, cornering; thence along an eastern line of William T. Phillips, N. 04° 31' 27" W. 1584.67 feet to an existing iron pipe, cornering; thence along a northern line of William T. Phillips, S. 82° 32' 44" W. 1251.35 feet to the point of beginning, all as shown on map entitled "Property of City of Rocky Mount" dated October 24, 1991, prepared by Joyner, Keeny & Associates, a copy of which is recorded in Plat Cabinet 3, Page

40B, Edgecombe County Registry, to which map reference is made for a more particular description.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to Grantee in fee simple.

And Grantor covenants with Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions herein stated.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its corporate name by its (Vice) President, sealed with its corporate seal, and attested by its (Asst.) Secretary, all by order of its Board of Directors, as of the day and year first above written.

EVANS TREE FARM, INC.

By _____
~~(Vice)~~ President

ATTEST:

_____
~~(Asst.)~~ Secretary

[CORPORATE SEAL]

EVANS TREE FARM, INC. CORPORATE SEAL NORTH CAROLINA 1982

NORTH CAROLINA

COUNTY OF Nash

I, Bonnie R. Carson, Notary Public, do hereby certify that Pamela D. Evans personally came before me this day and acknowledged that he/she is (~~Asst.~~) Secretary of Evans Tree Farm, Inc., a corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its _____ (~~Vice~~) President, sealed with its corporate seal, and attested by him/herself as its (~~Asst.~~) Secretary.

Witness my hand and notarial seal, this the 31st day of October, 1991.

Bonnie R. Carson
Notary Public

My Commission Expires: 11/29/92

BONNIE R. CARSON
NOTARY PUBLIC
NASH COUNTY, NC

~~NORTH~~ CAROLINA, EDGECOMBE COUNTY

The foregoing certificate (s) of

Bonnie R. Carson

A Notary Public, is (are) certified to be correct. This instrument was presented for registration and recorded in this office in Book 1071 Page 249

This 31st day of October 19 91

at 3:30 o'clock P M.

Gladys Shelton Pitt
Register of Deeds

By Bettie L. Godfrey Assistant

030163\00308
JGW00101.W-D

PREPARED BY:
W. KELLY ELDER, JR., P. A.
BURLINGTON, NC 27215

3871-18-4172-00
3872-11-6749-00

EXCISE TAX: $163.00

NORTH CAROLINA
EDGECOMBE COUNTY

WARRANTY DEED

THIS WARRANTY DEED made this 6th day of June, 1991, by and between BRUCE R. CADE and wife, LESLIE C. CADE, and ROBERT E. CADE, single, an incompetent adult acting through his general guardian, BRUCE R. CADE, pursuant to authority granted in that certain Order For Private Sale Of Real Property filed in the action entitled IN THE MATTER OF THE ESTATE OF ROBERT EARL CADE, NCM, of record in the Office of the Clerk of Superior Court of Edgecombe County, 91 SP 49, all of Alamance County, North Carolina, herein collectively called "Grantor", and the CITY OF ROCKY MOUNT, a municipal corporation with a mailing address of P. O. Box 1180, Rocky Mount, North Carolina 27802-1180, herein called "Grantee". The designations Grantor and Grantee as used herein shall include such parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by the context.

WITNESSETH:

WHEREAS, Robert E. Cade, one of the Grantors, is the owner of a one-half (1/2) undivided interest in the real property described below; and,

WHEREAS, Bruce R. Cade, one of the Grantors, is the owner of the other one-half (1/2) undivided interest in such real property; and

WHEREAS, Robert E. Cade is an incompetent adult and Bruce R. Cade is his duly appointed general guardian, having been so appointed on August 18, 1981, in Alamance County, North Carolina; and,

WHEREAS, Bruce R. Cade, as general guardian for Robert E. Cade, was authorized to sell at private sale Robert E. Cade's one-half (1/2) undivided interest in such real property pursuant to an Order For Private Sale Of Real Property entered on the 22d day of May, 1991, by the Honorable Carol F. White, Clerk of Superior Court of Edgecombe County, and approved by the Honorable Frank R. Brown, Superior Court Judge, in the action entitled In The Matter Of The Estate Of Robert Earl Cade, NCM, 91 SP 49; and

WHEREAS, a Report of Sale was filed on May 23, 1991, in the Office of the Clerk of Superior Court of Edgecombe County, North Carolina, reporting the sale of Robert E. Cade's one-half (1/2) undivided interest in such real property to the City of Rocky

Real Estate Excise Tax 163.00
STATE OF NORTH CAROLINA
JUN-6'91
EDGECOMBE COUNTY
047926
P.B. 10744

Mount for the sum of Eighty-One Thousand Five Hundred Dollars ($81,500.00); and,

WHEREAS, more than ten (10) days have elapsed since the filing of such Report Of Sale, and no advance or upset bids have been received; and,

WHEREAS, the Honorable Carol F. White, Clerk of Superior Court of Edgecombe County, entered an Order Of Confirmation In Private Sale Of Real Property on June 6, 1991, and such Order was approved by the Honorable Frank R. Brown, Superior Court Judge, on the same day.

NOW THEREFORE, in consideration of the sum of Eighty-One Thousand Five Hundred Dollars ($81,500.00) paid by the Grantee to the Grantor, the receipt of which is hereby acknowledged, Grantor has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in No. 7 Township, Edgecombe County, North Carolina, and more particularly described as follows:

SEE "EXHIBIT A" WHICH IS INCORPORATED HEREIN BY REFERENCE FOR DESCRIPTION OF SUBJECT PROPERTY.

The property described above was acquired by Grantor by Will recorded in Estate 84-E-141, Edgecombe County, North Carolina.

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions stated below. Title to the above described property is subject to the following exceptions:

This conveyance is subject to recorded easements, rights of way and restrictions, if any, appearing in the Edgecombe County Registry, and 1991 ad valorem taxes which are to be prorated between Grantor and Grantee on a calendar year basis as of the date of this conveyance.

IN WITNESS WHEREOF, the Grantor has hereunto set his or her hand and adopted as his or her seal the word "SEAL" appearing beside his or her signature, the day and year first above written.

Bruce R. Cade (SEAL)
BRUCE R. CADE

Leslie C. Cade (SEAL)
LESLIE C. CADE

ROBERT E. CADE

BY: Bruce R. Cade, Gdn (SEAL)
BRUCE R. CADE, General Guardian for Robert E. Cade, NCM

NORTH CAROLINA, NASH COUNTY

I, a Notary Public of the County and State aforesaid, certify that BRUCE R. CADE and wife, LESLIE C. CADE, personally appeared before me this day and acknowledged the execution of the foregoing instrument.

Witness my hand and official stamp or seal, this 6th day of June, 1991.

My commission expires:
4-27-95

Joyce G. Williams
NOTARY PUBLIC

JOYCE G. WILLIAMS
Notary Public
Nash County, N.C.

NORTH CAROLINA, NASH COUNTY

I, a Notary Public of the County and State aforesaid, certify that BRUCE R. CADE, general guardian for Robert E. Cade, NCM, personally came before me this day and being by me duly sworn says that he executed the foregoing Warranty Deed for and in behalf of the said Robert E. Cade and that his authority to execute the foregoing Warranty Deed is contained in that certain Order For Private Sale Of Real Property of record in File No. 91 SP 49 in the office of the Clerk of Superior Court of Edgecombe County, and that this instrument was executed under and by virtue of the authority given by said Order; that the said BRUCE R. CADE acknowledged the due execution of the foregoing Warranty Deed for and on behalf of the said Robert E. Cade.

Witness my hand and official stamp or seal, this 6th day of June, 1991.

My commission expires:
4-27-95

Joyce G. Williams
NOTARY PUBLIC

JOYCE G. WILLIAMS
Notary Public
Nash County, N.C.

m/cade

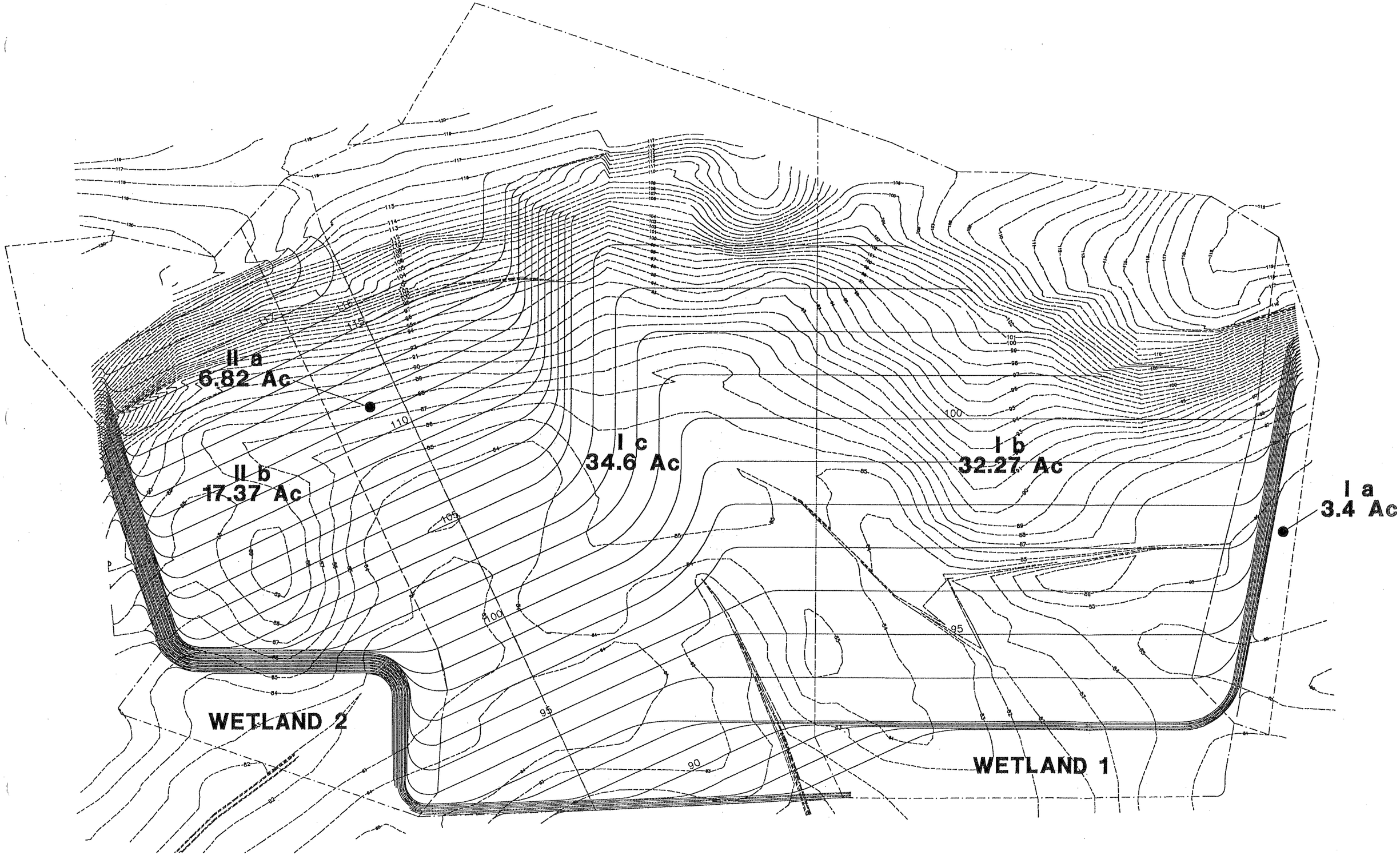
Over

EXHIBIT A
ATTACHED TO THAT CERTAIN WARRANTY DEED FROM BRUCE R. CADE, ET AL, TO THE CITY OF ROCKY MOUNT, DATED JUNE 6, 1991.

That certain tract or parcel of land located in No. 7 Township, Edgecombe County, North Carolina, and described as BEGINNING at a stake in the Battle heirs' line J. D. Smith's corner; thence along the Battle heirs' line N 6-44 E 5712 feet, more or less, to an iron stake in old road, corner of Battle heirs' land and corner of Tract No. 2 of the James B. Battle Farm; thence N 37-10 E 1836.5 feet along the line of Tracts Nos. 2 and 3 of the James B. Battle Farm to an iron stake in the Odom line; thence along the Odom line S 83-17 E 766 feet to an iron stake, the Odom corner; thence along J. M. Daughtry's line S 6-31 W 7166 feet, more or less, to a stake, J. D. Smith's corner in J. M. Daughtry's line; thence along J. D. Smith's line N. 87-06 W 1750 feet, more or less, to the beginning, containing 270.8 acres, more or less, and being the identical property described in deeds to R. B. McAfee recorded in Book 371, page 91, and Book 409, page 33, Edgecombe County Public Registry, and the said R. B. McAfee died about 1954 leaving surviving him his widow, Ethel B. McAfee, who died in 1967, and a daughter, Sarah Bruce McAfee Cade, who died testate in Alamance County, North Carolina, on April 10, 1967, and by her Last Will and Testament devised said property to her sons, Bruce Reed Cade and Robert Earl Cade, and a copy of said Will and its probate is recorded in Estate 84-E-141, in the Office of the Clerk of Superior Court of Edgecombe County.

NORTH CAROLINA, EDGECOMBE COUNTY
The foregoing certificate(s) of
L. Williams
A Notary Public, is (are) certified to be correct.
This instrument was presented for registration
and recorded in this office in Book 1065 Page 103
This 12 day of June 1991
at 2:30 o'clock M.
Gladys Shelton Pitt
Register of Deeds
By Deputy

APPENDIX II


II a
6.82 Ac
II b
17.37 Ac
I c
34.6 Ac
I b
32.27 Ac
I a
3.4 Ac
WETLAND 2
WETLAND 1

CITY OF ROCKY MOUNT

DEPARTMENT OF
WATER RESOURCES

February 28, 2003

Mr. Douglas Roberson
Director, Public Works
City of Rocky Mount
P.O. Box 1180
Rocky Mount, NC 27802-1180

Dear Mr. Roberson:

Re: Proposed land clearing and demolition landfill

The City (Department of Water Resources) owns approximately one thousand acres of land east if Rocky Mount bounded generally by old Battleboro Road, NC 97E, Cool Springs Road, and Seven Bridges Road. About three hundred acres are dedicated to the Regional Wastewater Treatment Plant, about two hundred acres are woodlands, and about five hundred acres were purchased to be used for land application of Bio Solids from the wastewater process. Of that five hundred, four hundred acres are appropriate for land application.

The property proposed to be permitted as a LCID landfill is inappropriate for land application due to its slope. This land would not have been permitted in the City's non-discharge NPDES permit WQ0005568. The City has no plans in the future to use the 100 acres of the property for land application. If I can supply additional information, please call.

Sincerely,

Paul Blount

Paul Blount
Director, Water Resources

Cc: Stanley Curtis, Regional WWTP Superintendent

One Government Plaza • Post Office Box 1180 • Rocky Mount, North Carolina 27802-1180
Telephone (252) 972-1291 • Fax (252) 972-1173

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

June 19, 2002

Peter Sokalski
Appian Consulting Engineers, PA
Post Office Box 7966
Rocky Mount, North Carolina 27804

Dear Mr. Sokalski:

Thank you for your June 7, 2002, letter, regarding the proposed construction of the City of Rocky Mount LCID Landfill. The site will be east of SR 1400 and north of NC 97 in Edgecombe County. This letter provides the U.S. Fish and Wildlife Service's (Service) response pursuant to section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*) (ESA).

Based on the information provided, the Service concurs with your determination of no effect for the red-cockaded woodpecker (*Picoides borealis*) and the Tar spinymussel (*Elliptio steinstansana*). We believe that the requirements of section 7(a)(2) of the ESA have been satisfied. We remind you that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

Thank you for the opportunity to review this project. If you have any questions or comments regarding our response, please contact Mr. Dale W. Suiter of this office at (919) 856-4520, Ext. 18.

Sincerely,

Garland B. Pardue

Garland Pardue, Ph.D.
Ecological Services Supervisor

APPIAN
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES

June 7, 2002

Mr. Dale Suiter
United States Fish & Wildlife Services
Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27601-3726

Re: City of Rocky Mount LCID Landfill
Response Letter

Enclosure(s):

1. NCDENR – Division of Parks and Recreation Letter for "Proposed Rocky Mount LCID (Land Clearing and Inert Debris) Landfill, Edgecombe County", dated March 4, 2002
2. Natural Heritage Program Publication "Natural Heritage Program List of Rare Animals of North Carolina", page 18
3. U.S. Fish & Wildlife Service website for "Red-Cockaded Woodpeckers in North Carolina"
4. Natural Heritage Program Website, Search Criteria = Hartsease Quad Map
5. Natural Heritage Program Publication "Natural Heritage Program List of Rare Animals of North Carolina", page 31

Dear **Mr. Suiter**:

Thank you for your letter concerning the City of Rocky Mount LCID Landfill project dated March 26, 2002. I apologize for the mistake that I made in my previous letter to you concerning the location of the project. The project is located entirely within Edgecombe County, partly on the Rocky Mount USGS Quad map but mostly on the Hartsease USGS Quad map. Based on the information that you have provided for Nash County, I was able to look up the same information for Edgecombe County, which lists two species as endangered, the Red-cockaded Woodpecker and the Tar River Spinymussel.

Within the March 26, 2002 letter, you requested that a survey of the surrounding area up to ½ miles from the project site be completed to ensure that none of the listed endangered species abides within the area. The following were determined via research into the habitat of the endangered species listed for the Edgecombe County area and information obtained from the North Carolina Natural Heritage Program (NHP):

- I spoke with Mr. Harry LeGrand from the NHP, who reviewed the site based on North Carolina lists for rare species, significant natural communities and priority natural areas. Mr. LeGrand is a zoologist, who works for the North Carolina Department of Environment & Natural Resources (NC DENR), and co-authored the publication "Natural

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e-mail: admin@appianengineers.com

Heritage Program List of the Rare Animals of North Carolina", which gives a brief description of the habitat, counties of occurrence, the status and rank of animals for both North Carolina and the federal government. Based on his letter (Enclosure 1) and telephone conversation, Mr. LeGrand stated that the NHP does not have any record of rare species, significant natural communities or priority natural areas within the vicinity of the project site.

- Based on the publication "Natural Heritage Program List of the Rare Animals of North Carolina", sighting of the Red-cockaded Woodpeckers have not occurred within the last 20 years within Edgecombe County (see Enclosure 2 and 3).
- Review of the NHP website for endangered species by Quad map does not list either the Red-cockaded Woodpecker or the Tar River Spinymussel as inhabiting the areas within that quad map (see Enclosure 4).
- The proposed LCID landfill site is located adjacent to spray application fields for the City of Rocky Mount Waste Water Treatment Plant and is in close proximity to the 100-year flood plain. The project site consists equally of cutover timber and woodlands. The woodlands are made up of pine with a dense understory of hardwood, which, based on the description provided on the U.S. Fish & Wildlife Service website, are avoided by the Red-cockaded Woodpeckers.
- The site ultimately drains into the Tar River, but is located approximately ¾ mile away. The site does not cross any stream or creek of the Tar River, but does fill some isolated wetlands that exist on the property (the fill of the wetlands is less than 1 acre). Two permanent basins were designed to contain runoff up to 100-year storm frequency without overflow from the basin, which means that sediment is contained to the site and will not enter into the receiving, existing ditches. Based on the above, the landfill site will not disturb the habitat of the Tar River Spinymussel, which is located within the Tar River basin (see Enclosure 5).

Due to the existing use near the project site, the current condition of the woodlands and information gleaned from NHP concerning the lack of citing of the Red-cockaded Woodpecker within the last 20 years, we feel confident that a survey will not be necessary for this project. The site disturbance will also be contained to the site and will not go beyond the project limits of disturbance, therefore, will not disturb or effect the Tar River Spinymussel.

Please review the information provided above and enclosed. Should you require additional information concerning this project, please do not hesitate to call me at (252) 972-7703. Again, thank you for your time and help on this project!

Sincerely,
Appian Consulting Engineers, P.A.

Peter W. Sokalski, E.I.

Enclosure
cc: Mr. Doug Roberson, City of Rocky Mount
File

ENCLOSURE (1)

NCDENR

North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Michael F. Easley, Governor William G. Ross, Jr., Secretary Dr. Philip K. McKnelly, Director

March 4, 2002

Mr. Peter W. Sokalski
Appian Consulting Engineers
841 South Wesleyan Blvd.
Rocky Mount, NC 27803

Subject: Proposed Rocky Mount LCID (Land Clearing and Inert Debris) Landfill, Edgecombe County

Dear Mr. Sokalski:

The Natural Heritage Program has no record of rare species, significant natural communities, or priority natural areas at the site nor within a mile of the site.

You may wish to check the Natural Heritage Program database website at <www.ncsparks.net/nhp/search.html> for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8687 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr.

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

HEL/hel

1615 Mail Service Center, Raleigh, North Carolina 27699-1615
Phone: 919-733-4181 \ Fax: 919-715-3085 \ Internet: www.ncsparks.net
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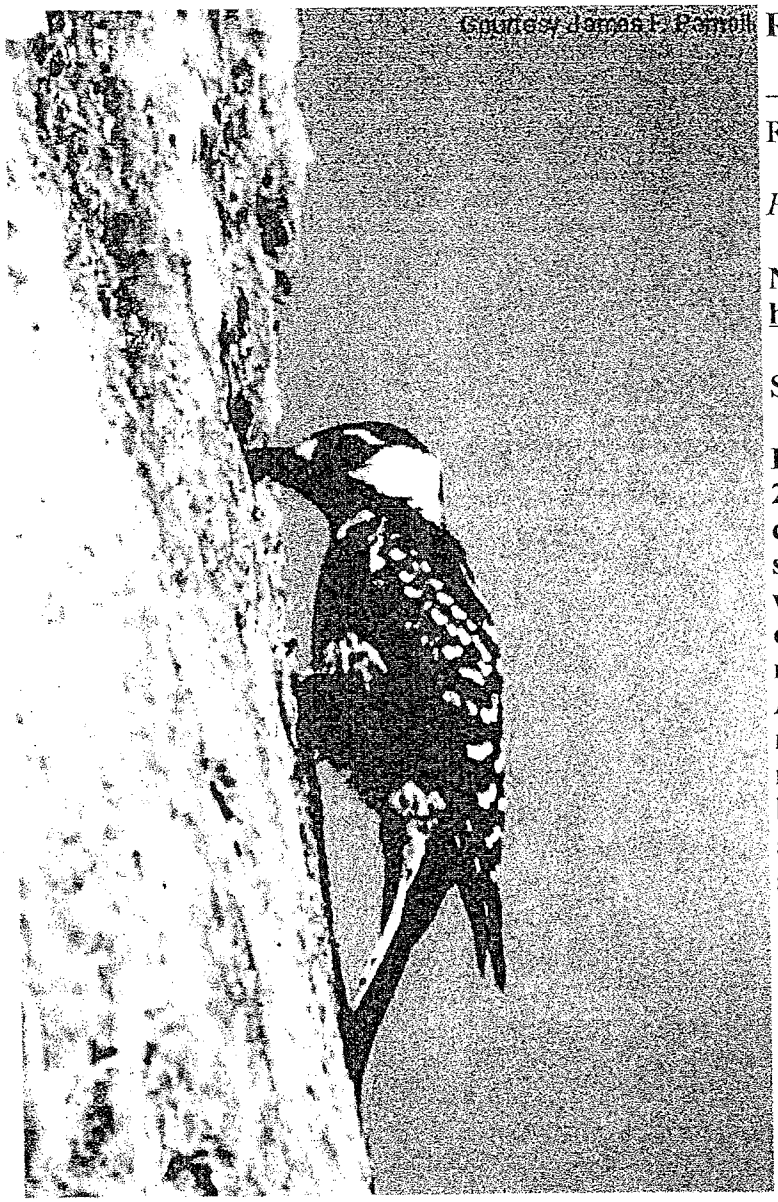
ENCLOSURE (2)

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status N.C.	 U.S.	Rank N.C.	 Global
Laterallus jamaicensis TCP: brackish marshes, rarely fresh marshes [breeding season only] (Carteret, Craven, Currituck, Dare, Hyde, Onslow, Pamlico)	Black Rail	SR	FSC	S3B,S2N	G4
Loxia curvirostra pop 1 M: coniferous forests, preferably spruce-fir [breeding season only] (Ashe*, Avery, Buncombe, Burke, Haywood, Jackson, McDowell, Mitchell, Swain, Transylvania, Yancey)	Red Crossbill - Southern Appalachian population	SR (PSC)	FSC	S3B,S3N	G5T?
Mycteria americana T: fresh or brackish ponds (for foraging) [regular non-breeding sites] (Brunswick)	Wood Stork	E	E	S1N	G4
Passerculus sandwichensis M: grassy fields and pastures [breeding season only] (Alleghany, Ashe, Watauga)	Savannah Sparrow	SR	-	S1B,S5N	G5
Passerina ciris ciris T: maritime shrub thickets and forest edges [breeding season only] (Brunswick, Carteret, New Hanover, Onslow)	Eastern Painted Bunting	SR	FSC	S3B,SZN	G5T3T4
Pelecanus occidentalis T: maritime islands [breeding sites only] (Brunswick, Carteret, Dare, New Hanover)	Brown Pelican	SC (PD)	-	S3B,S4N	G4
Phalacrocorax auritus CP: lakes with scattered trees for nesting [breeding sites only] (Chatham, Craven)	Double-crested Cormorant	SR	-	S1B,S5N	G5
Picoides borealis SCP: mature open pine forests, mainly in longleaf pine [breeding evidence only] (Anson, Beaufort, Bertie, Bladen, Brunswick, Camden*, Carteret, Chatham*, Columbus, Craven, Cumberland, Currituck*, Dare, Duplin, Edgecombe*, Forsyth*, Gates, Halifax*, Harnett, Hertford*, Hoke, Hyde, Johnston, Jones, Lee*, Lenoir*, Montgomery, Moore, Nash*, New Hanover, Northampton*, Onslow, Orange*, Pamlico, Pender, Pitt*, Richmond, Robeson, Sampson, Scotland, Tyrrell, Wake*, Wayne, Wilson*)	Red-cockaded Woodpecker	E	E	S2	G3
Plegadis falcinellus T: forests or thickets on maritime islands [breeding sites only] (Brunswick, Carteret, Dare, Hyde, New Hanover)	Glossy Ibis	SC	-	S2B,SZN	G5
Poecile atricapilla practica M: high elevation forests, mainly spruce-fir [breeding season only] (Avery, Buncombe*, Haywood, Jackson, Swain, Transylvania, Yancey*)	Southern Appalachian Black-capped Chickadee	SC	FSC	S3	G5T?
Pooecetes gramineus M: high elevation pastures and grassy fields [breeding season only] (Ashe, Avery, Mitchell, Watauga)	Vesper Sparrow	SR	-	S2B,S2N	G5

ENCLOSURE (3)

U.S. Fish & Wildlife Service



Red - Cockaded Woodpeckers in North Carolina

RED-COCKADED WOODPECKER

Picoides borealis

NEW! - Red Cockaded Woodpecker Recovery Page at http://rcwrecovery.fws.gov

STATUS: Endangered

DESCRIPTION: The red-cockaded woodpecker is 18 to 20 centimeters long with a wing span of 35 to 38 centimeters. There are black and white horizontal stripes on its back, and its cheeks and underparts are white. Its flanks are black streaked. The cap and stripe on the side of the neck and the throat are black. The male has a small red spot on each side of the black cap. After the first post fledgling molt, fledgling males have a red crown patch. This woodpecker's diet is composed mainly of insects which include ants, beetles, wood-boring insects, caterpillars, and corn ear worms if available. About 16 to 18 percent of the diet includes seasonal wild fruit.

REPRODUCTION AND DEVELOPMENT: Egg laying occurs during April, May, and June with the female utilizing her mate's roosting cavity for a nest. Maximum clutch size is seven eggs with the average being three to five eggs. From egg laying to fledging requires about 38 days, and then another several weeks are needed before the young become completely independent. Most often, the parent birds and some of their male offspring from previous years form a family unit called a group. A group may include one breeding pair and as many as seven other birds. Commonly, these groups are comprised of three to five birds. Rearing the young birds becomes a shared responsibility of the group. However, a single pair can breed successfully without the benefit of the helpers.

RANGE AND POPULATION LEVEL: This bird's range is closely tied to the distribution of southern pines. Historically, the red-cockaded woodpecker occurred from East Texas and Oklahoma, to Florida, and North to New Jersey. The present distribution is similar, except the species has been extirpated from Missouri, Maryland and New Jersey.

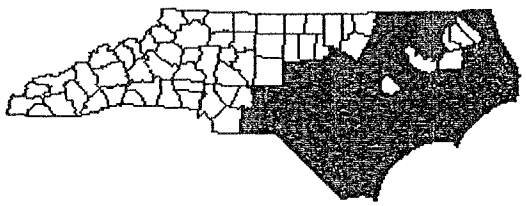
HABITAT: Open stands of pines with a minimum age of 80 to 120 years. Yellow counties indicate an obscure data reference to the species in the county. depending on the site, provide suitable nesting habitat. Longleaf

ENCLOSURE (3)

pines (Pinus palustris) are most commonly used, but other species of southern pine are also acceptable. Dense stands (stands that are primarily hardwoods, or that have a dense hardwood understory) are avoided. Foraging habitat is provided in pine and pine hardwood stands 30 years old or older with foraging preference for pine trees 10 inches or larger in diameter. In good, well-stocked, pine habitat, sufficient foraging substrate can be provided on 80 to 125 acres.

Roosting cavities are excavated in living pines, and usually in those which are infected with a fungus producing what is known as red-heart disease. The cavity tree ages range from 63 to 300 plus years for longleaf, and 62 to 200 plus years for loblolly and other pines. The aggregate of cavity trees is called a cluster and may include 1 to 20 or more cavity trees on 3 to 60 acres. The average cluster is about 10 acres. Completed cavities in active use have numerous, small resin wells which exude sap. The birds keep the sap flowing apparently as a cavity defense mechanism against rat snakes and possibly other predators. The territory for a group averages about 200 acres, but observers have reported territories running from a low of around 60 acres, to an upper extreme of more than 600 acres. The expanse of territories is related to both habitat suitability and population density.

Species Distribution from known occurrences. Species may occur in similar habitats in other counties. **Green counties indicate observed within 20 years. Yellow counties indicate an obscure data reference to the species in the county. Red counties indicate observed more than 20 years ago.**



Map Generated May. 22 2002

Species Location Map based on information provided by the North Carolina Natural Heritage Program.

For additional information regarding this Web page, contact John Hammond, in Raleigh, NC, at john_hammond@fws.gov

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Visit the North Carolina ES Homepage
Visit the U.S. Fish and Wildlife Service Home Page

Keywords={same keywords listed above - used for search tools}

ENCLOSURE (4)

Search Criteria: =hartsease
Quads: 4

Major Group	Scientific Name (Habitat Link)	Common Name	State Status	Federal Status	State Rank	Global Rank	Quad Status
Fish	Noturus furiosus pop 2	Carolina Madtom - Tar River Population	SR	-	S2	G3T2Q	Current - HARTSEASE
Mollusk	Elliptio roanokensis	Roanoke Slabshell	T	-	S1	G2G3	Current - HARTSEASE
Insect	Baetisca obesa	a mayfly	SR	-	S1	G5	Current - HARTSEASE
Natural Community	Cypress--Gum Swamp (Brownwater Subtype)	-	-	-	S5	G5T5	Current - HARTSEASE

NC NHP database updated: January, 2002. Search performed on Friday, May 31, 2002 at 8:35:14 Eastern Standard Time.
Total number of searches since 01/01/02: 927
Explanation of Codes
Do NOT bookmark this search results page, instead bookmark: www.ncsparks.net/nhp/quad.html

ENCLOSURE (5)

Scientific Name Province: Habitat (Counties of occurrence)	Common Name	Status N.C.	 U.S.	Rank N.C.	 Global
Elliptio lanceolata PC: Tar and Neuse systems, mainly near the Fall Line (Edgecombe, Franklin, Granville, Halifax, Johnston, Nash, Vance, Wake, Warren)	Yellow Lance	T (PE)	FSC	S1	G2G3
Elliptio marsupiobesa C: Cape Fear and Neuse basins (endemic to North Carolina) (Bladen, Cumberland, Johnston, Pender, Robeson)	Cape Fear Spike	T (PSC)	-	SU	G3Q
Elliptio roanokensis PC: Cape Fear north to Roanoke river systems (Bladen, Cumberland, Edgecombe, Halifax, Harnett, Johnston, Lenoir+, Montgomery, Nash, Northampton, Randolph+, Wake, Wayne)	Roanoke Slabshell	T	-	S1	G2G3
Elliptio steinstansana PC: essentially Tar River drainage, but one site in Neuse drainage (endemic to North Carolina) (Edgecombe, Franklin, Halifax, Johnston, Nash, Pitt*, Warren)	Tar River Spinymussel	E	E	S1	G1
Elliptio waccamawensis C: Lake Waccamaw and vicinity (endemic to North Carolina; possibly in adjacent South Carolina) (Brunswick, Columbus)	Waccamaw Spike	T	FSC	S1	G2Q
Epioblasma capsaeformis M: French Broad River (Buncombe*, Madison*)	Oyster Mussel	EX	E	SX	G1
Fusconaia barnesiana M: Little Tennessee River (Macon, Swain)	Tennessee Pigtoe	E	-	S1	G2G3
Fusconaia masoni CP: most Atlantic drainages, in lower Piedmont and upper Coastal Plain; also in Black River in lower Coastal Plain (Bladen, Caswell, Chatham*, Cumberland, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Johnston, Montgomery, Moore, Nash, Northampton*, Orange, Pender, Person, Pitt*, Randolph, Union, Vance+, Wake, Warren, Wayne, Wilson)	Atlantic Pigtoe	T (PE)	FSC	S1	G2
Fusconaia subrotunda M: French Broad system (Buncombe*, Transylvania)	Long-solid	EX	-	SR	G3
Lampsilis cariosa PC: a number of river systems; mainly near the Fall Line (Alamance*, Bladen, Chatham, Columbus, Cumberland, Durham, Edgecombe, Franklin, Granville, Halifax, Harnett, Johnston, Montgomery, Moore, Nash, Orange, Pender, Person, Pitt*, Randolph, Vance)	Yellow Lampmussel	T (PE)	FSC	S1	G3G4
Lampsilis fasciola M: French Broad, Pigeon, and Little Tennessee rivers (Cherokee, Haywood, Jackson, Macon, Mitchell, Swain, Yancey)	Wavy-rayed Lampmussel	SC	-	S1	G4

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

March 26, 2002

Peter Sokalski
Appian Consulting Engineers, PA
PO Box 7966
Rocky Mount, NC 27804

Dear Mr. Sokalski:

Thank you for your February 18, 2002 letter requesting information from the U.S. Fish and Wildlife Service (Service). Enclosed is a current list of Federally-protected species and their habitat requirements which may occur within the general project area (Nash County). If your project area contains habitat suitable for the federally-listed species known to be present within the county, we recommend that surveys be conducted to determine the species' presence or absence on the site. Surveys for the red-cockaded woodpecker should be conducted in all suitable habitat within one-half mile of the project. Surveys for federally listed aquatic species should be conducted by a permitted surveyor and should be conducted 100 meters upstream and 300 meters downstream from all stream crossings. Upon completion of the surveys, please report your findings to this office including the survey date, survey methods, qualifications of staff conducting the survey, and a determination of the affects of the proposed project on federally-listed species.

If you have any questions or comments, please contact me at (919) 856-4520, extension 18, or via email at Dale_Suiter@fws.gov.

Sincerely,

Dale W. Suiter
Fish and Wildlife Biologist

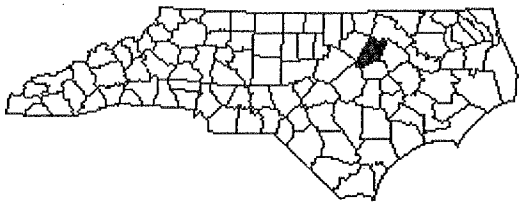
Enclosure

FWS/R4:DSuiter:919.856.4520x18/Nash Rocky Mount Landfill.wpd

Updated: 03/22/2001

U.S. Fish & Wildlife Service

NASH COUNTY



Common Name	Scientific Name	Status
Vertebrates		
Pinewoods shiner	*Lythrurus matutinus*	FSC
Red-cockaded woodpecker	*Picoides borealis*	Endangered
Invertebrates		
Atlantic pigtoe	*Fusconaia masoni*	FSC
Diana fritillary butterfly	*Speyeria diana*	FSC*
Dwarf wedge mussel	*Alasmidonta heterodon*	Endangered
Green floater	*Lasmigona subviridis*	FSC
Tar spinymussel	*Elliptio steinstansana*	Endangered
Yellow lance	*Elliptio lanceolata*	FSC
Yellow lampmussel	*Lampsilis cariosa*	FSC
Vascular Plants		
Carolina least trillium	*Trillium pusillum var. pusillum*	FSC
Sandhills bog lily	*Lilium iridollae*	FSC

KEY:

Status	Definition
Endangered -	A taxon "in danger of extinction throughout all or a significant portion of its range."
Threatened -	A taxon "likely to become endangered within the foreseeable future throughout all or a significant portion of its range."
Proposed -	A taxon proposed for official listing as endangered or threatened.
C1 -	A taxon under consideration for official listing for which there is sufficient information to support listing.
FSC -	A Federal species of concern--a species that may or may not be listed in the future (formerly C2 candidate species or species under consideration for listing for which there is insufficient information to support listing).

T(S/A) - Threatened due to similarity of appearance (e.g., American alligator)--a species that is threatened due to similarity of appearance with other rare species and is listed for its protection. These species are not biologically endangered or threatened and are not subject to Section 7 consultation.

EXP - A taxon that is listed as experimental (either essential or nonessential). Experimental, nonessential endangered species (e.g., red wolf) are treated as threatened on public land, for consultation purposes, and as species proposed for listing on private land.

Species with 1, 2, 3, or 4 asterisks behind them indicate historic, obscure, or incidental records.

*Historic record - the species was last observed in the county more than 50 years ago.

**Obscure record - the date and/or location of observation is uncertain.

***Incidental/migrant record - the species was observed outside of its normal range or habitat.

****Historic record - obscure and incidental record.

For additional information regarding this Web page, contact Mark Cantrell, in Asheville, NC, at mark_a_cantrell@fws.gov
Visit the North Carolina ES Homepage
Visit the U.S. Fish and Wildlife Service Home Page

Keywords={same keywords listed above - used for search tools}

NCDENR

North Carolina Department of Environment and Natural Resources
Division of Parks and Recreation

Michael F. Easley, Governor William G. Ross, Jr., Secretary Dr. Philip K. McKnelly, Director

March 4, 2002

Mr. Peter W. Sokalski
Appian Consulting Engineers
841 South Wesleyan Blvd.
Rocky Mount, NC 27803

Subject: Proposed Rocky Mount LCID (Land Clearing and Inert Debris) Landfill, Edgecombe County

Dear Mr. Sokalski:

The Natural Heritage Program has no record of rare species, significant natural communities, or priority natural areas at the site nor within a mile of the site.

You may wish to check the Natural Heritage Program database website at <www.ncsparks.net/nhp/search.html> for a listing of rare plants and animals and significant natural communities in the county and on the topographic quad map. Please do not hesitate to contact me at 919-715-8687 if you have questions or need further information.

Sincerely,

Harry E. LeGrand, Jr.

Harry E. LeGrand, Jr., Zoologist
Natural Heritage Program

HEL/hel

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North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Division of Historical Resources
David J. Olson, Director

September 20, 2002

Peter Sokalski
Appian Consulting Engineers
PO Box 7966
Rocky Mount NC 27804

Re: City of Rocky Mount LCID Landfill, Edgecombe, ER 02-9137

Dear Mr. Sokalski:

Thank you for your letter of August 29, 2002, concerning the above project.

We have conducted a review of the proposed undertaking and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the undertaking as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for David Brook

DB:kgc

APPIAN
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES

August 29, 2002

Mr. David Brook
North Carolina Department of Cultural Resources
State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Re: City of Rocky Mount LCID Landfill
Tracking Number ER 02-9137

Enclosure(s):
(1) Sheets Cover and CE-1 of plans
(2) Aerial Map Showing Vicinity to Historic Property

Dear **Mr. Brook:**

Thank you for your initial review of this project with respects to the historic sites in the Edgecombe/Nash counties. Per your letter dated April 9, 2002, the following are the conditions and future usage for the future landfill site:

1. As requested, Enclosure (1) is attached to this letter to show the exact location of the landfill site relative to the existing subdivision (Deer Run) and the nearby roads. As shown on the plans, there is only one entrance/exit to the site, which is located along Old Battleboro Road (SR 1400).
2. ***Description of Project:*** The proposed project is for a Land Clearing & Inert Debris (LCID) landfill to be located within the property owned by the City of Rocky Mount in Edgecombe County. The type of the landfill material that is allowed within an LCID landfill consists of the following: land clearing waste, inert debris, untreated wood and yard trash.
3. ***Buffering:*** The existing conditions for the site will remain mainly undisturbed. The City of Rocky Mount has cleared the main portion of the future landfill site within the past several years. The proposed landfill does encroach slightly into the existing stand of woods to the east of the property (towards the historic site), but a minimum of 500 ft. buffer will remain undisturbed between the landfill and the existing subdivision. As shown on Enclosure (2), the approximate distance between the closest corner of the landfill and the historic property is one mile as the crow flies.
4. ***Odor:*** Based on the allowable material for a LCID landfill, which is inert, odor will not be a concern for the site. Majority of the landfill material will consist of land clearing debris and construction debris based on discussions with the City of Rocky Mount. In addition, the proposed landfill is located in the same vicinity as the existing City of Rocky Mount Waste Water Treatment Plant, within 1.5 miles from the landfill (see Enclosure (2)). The Old Town Plantation is closer being only 0.75 miles from the treatment plant. Any odor that is currently in the air around the site will not be increased with the proposed placement of the LCID landfill.

841 South Wesleyan Blvd. • Rocky Mount, NC 27803
P.O. Box 7966 • Rocky Mount, NC 27804
Phone: (252) 972-7703
Fax: (252) 972-7638
e-mail: admin@appianengineers.com

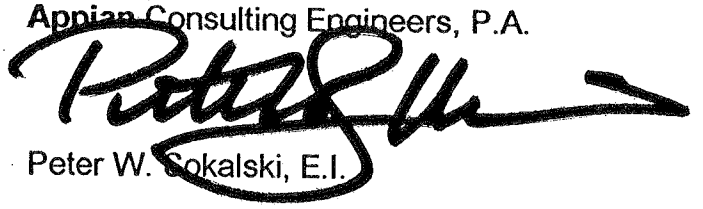
5. ***Noise:*** The noise should not be a concern as well for the historic site. The historic property is approximately 1 mile away with buffering of trees and an established subdivision (as stated in item 3 above) between the landfill area and the property in question. Based on estimates from the City of Rocky Mount, only 10 trucks per day will enter the site to place material into the landfill. Only one entrance and exit exists for the landfill site, which is located along Old Battleboro Road, SR 1400. The trucks will mainly come from the City of Rocky Mount proper and not from Edgecombe County; therefore, the amount of truck travel along NC 97 in front of the Old Town Plantation will not be increased.

6. ***Vermin:*** Potential for increase in vermin should be minimized based on the requirements and guidelines for material placement by the Solid Waste Division. The material is to be compacted as much as possible during placement as fill and the material cannot stay uncovered (meaning adequate soil must be placed on the fill) longer than 1 month or when the area of activity equals one acre. With these requirements, the vermin numbers shall not be increased with constant activity on the landfill and by limiting the additional area of habitat.

Please let us know if the information provided to you and the explanation given above is adequate to quell any of your concerns on this project. If you have any additional questions or need more information, please do not hesitate to call.

Again, thank you for your time and effort on this project.

Sincerely,
Appian Consulting Engineers, P.A.



Peter W. Sokalski, E.I.

Enclosures

cc: File

Pws: C:\My Documents\01065 Landfill\Letters\8-29-02 Response Letter to SHPO.doc

APPIAN
GENESIS 1:1
CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS
COMPREHENSIVE ENVIRONMENTAL SERVICES
P.O. Box 7966 / Rocky Mount, N.C. 27804
Phone: (252) 972-7703
Fax: (252) 972-7638
www.appianengineers.com
E-Mail: admin@appianengineers.com

CITY OF ROCKY MOUNT
LCID LANDFILL
AERIAL MAP SHOWING VICINITY TO HISTORIC PROPERTY

DATE:	REV. 8-29-02
SHEET #:	1 OF 1
SCALE:	-
J.N.	01-065

North Carolina Department of Cultural Resources
State Historic Preservation Office
David L. S. Brook, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary
Office of Archives and History

Division of Historical Resources
David J. Olson, Director

April 9, 2002

Peter W. Sokalski, E.I.
Appian Consulting Engineers
841 South Wesleyan Blvd.
Rocky Mount, NC 27804

Re: City of Rocky Mount LCID Landfill, Nash County, ER 02-9137

Dear Mr. Sokalski:

Thank you for your letter of February 18, 2002, concerning the above project.

We have conducted a search of our maps and files and have located the following structures of historical or architectural importance within the general area of the project:

Old Town Plantation (ED 10), a property listed in the National Register of Historic Places

Please see the enclosed map for the location of this historic property. For us to determine the potential effect of your project on the above resource, please send us detailed plans regarding landscape buffering as they become available. Also please include information addressing the future use of the site and potential for noise, odor and vermin, all which may have an effect upon the historic property.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919/733-4763. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

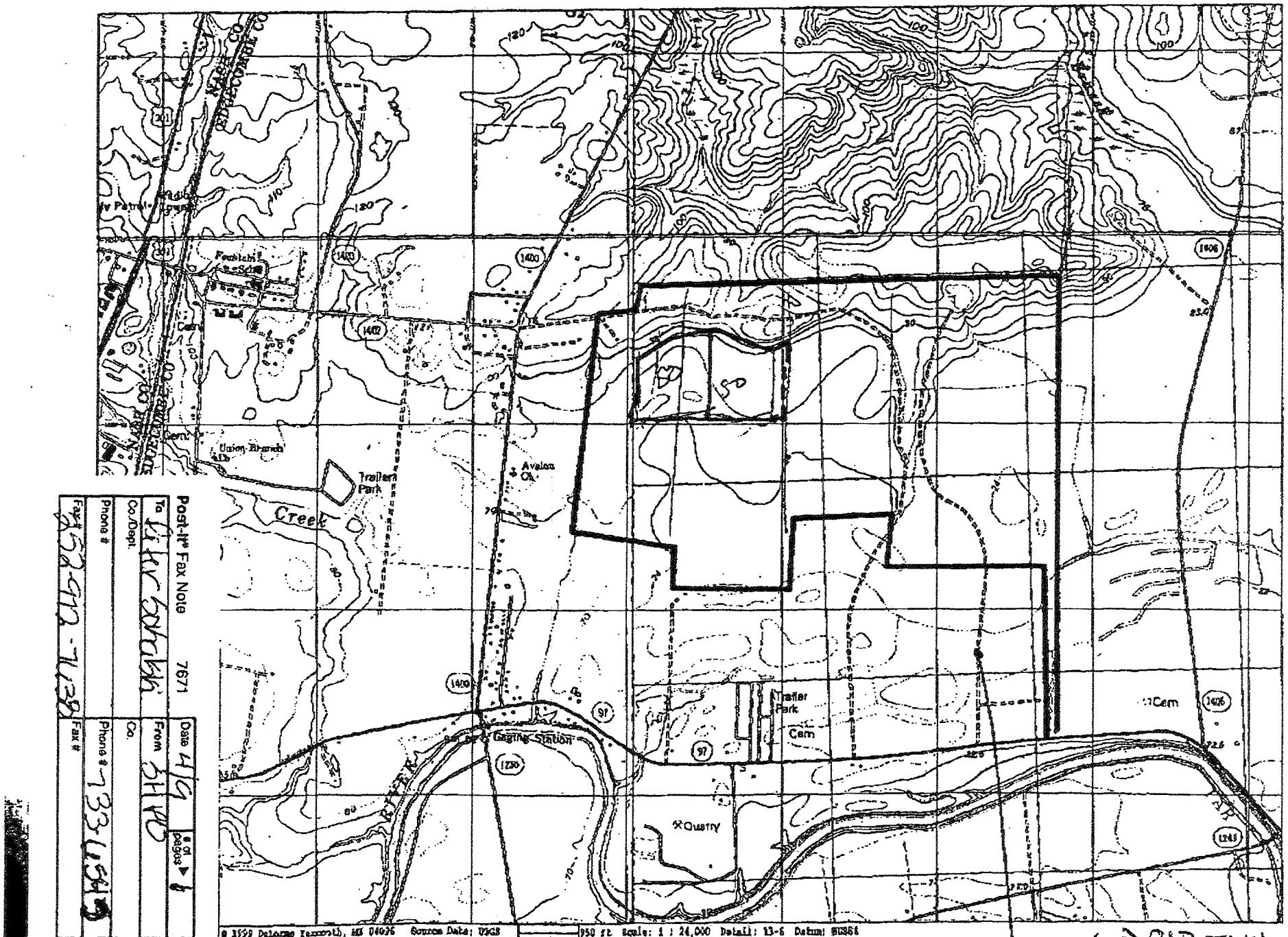
David Brook by JA

David Brook

enclosure

cc: Rudolph Knight, HPC
Division of Solid Waste Management

ENCLOSURE (2)



© 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 950 ft Scale: 1 : 24,000 Detail: 13-6 Datum: NGS84

ED 10 (NR) OLD TOWN PLANTATION

Post-it® Fax Note 7671

To Peter Schaub	Date 4/9
Co./Dept.	From SHPO
Phone #	Co.
Fax # 252-972-7638	Phone # 733-4584
	Fax #

# of pages ▶ 6

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E., Director
Division of Water Quality

February 18, 2003

Mr. Doug Roberson
City of Rocky Mount
P.O. Box 1180
Rocky Mount, NC 27802

Dear Mr. Roberson:

Re: Isolated Wetland Permit
City of Rocky Mount LCID Landfill
WQC Project # 02-0471
Nash County

Attached hereto is a copy of Isolated Wetland Permit Number 7 issued to City of Rocky Mount for the City of Rocky Mount LCID Landfill project dated February 18, 2003.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Alan W. Klimek, P.E., Director

Attachments

cc: Corps of Engineers Raleigh Field Office
Debbie Edwards, DWQ Raleigh Regional Office
Kathy Matthews, US Environmental Protection Agency
Peter W. Sokalski, Appian Consulting Engineers
File Copy
Central Files

N. C. Division of Water Quality, 401 Wetlands Certification Unit,
1650 Mail Service Center, Raleigh, NC 27699-1650 (Mailing Address)
2321 Crabtree Blvd., Raleigh, NC 27604-2260 (Location)
(919) 733-1786 (phone), 919-733-6893 (fax), (http://h2o.enr.state.nc.us/ncwetlands

NORTH CAROLINA ISOLATED WETLAND PERMIT

THIS PERMIT is issued in conformity with the requirements North Carolina Division of Water Quality (DWQ) Regulations in 15 NCAC 2H, Section .1300. It is issued to City of Rocky Mount resulting in 0.76 acres of wetland impact in Nash County pursuant to an application filed on the 14th day of June 2002 with a modification dated October 1, 2002 and a Public Notice dated November 8, 2002 to construct the City of Rocky Mount LCID landfill near the CRM Waste Plant on NC 97.

The application provides adequate assurance that the discharge of fill material into wetlands and streams in the watershed of the Tar River in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated June14, 2002 as modified on October 1, 2002 and as described in the Public Notice. If you change your project, you must notify us and send us a new application for a new Permit and Certification. If the property is sold, the new owner must be given a copy of the Permit and Certification and their approval letter and is thereby responsible for complying with all conditions. If total wetland fills for this project (now or in the future) exceed one acre or total perennial stream impact exceeds 150 feet, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7) and 15A NCAC 2H .1305 © (6) and .1305 (d)(6). For this approval to be valid, you must follow the conditions listed below. In addition, you should get any other federal, state or local permits before you go ahead with your project including (but not limited to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations.

Conditions of Permit and Certification:

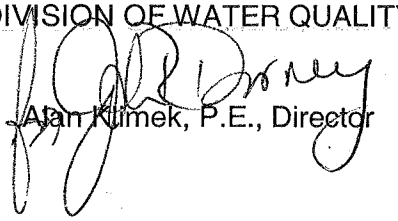
1. Appropriate sediment and erosion control practices which equal or exceed those outlined in the most recent version of two manuals, either the "North Carolina Sediment and Erosion Control Planning and Design Manual" or the "North Carolina Surface Mining Manual" (available from the Division of Land Resources in the DEHNR Regional or Central Offices). The control practices shall be utilized to prevent exceedances of the appropriate turbidity water quality standard (50 NTUs in all fresh water streams and rivers not designated as trout waters; 25 NTUs in all lakes and reservoirs, and all saltwater classes; and 10 NTUs in trout waters);
2. All sediment and erosion control measures placed in wetlands or waters shall be removed and the natural grade restored after the Division of Land Resources has released the project;
3. Measures shall be taken to prevent live or fresh concrete from coming into contact with waters of the state until the concrete has hardened;
4. If waste or borrow sites are located in wetlands or other waters, compensatory mitigation will be required since it is a direct impact from road construction activities;
5. An additional condition is that a final written stormwater management plan shall be approved in writing by this Office based on the October 1, 2002 stormwater plan for Extended Detention Wetlands prepared by Appian Engineering before the impacts specified in this Permit occur. The stormwater management plan must include plans and specifications for stormwater management facilities designed to remove 85% TSS according to the most recent version of the NC DENR Stormwater Best Management Practices Manual. Also, before any permanent building is occupied at the subject site, the facilities, as approved by this Office, shall be constructed and operational, and the stormwater management plan, as approved by this Office, shall be implemented.
6. Deed notifications or similar mechanisms shall be placed on all remaining jurisdictional wetlands and waters or areas within 50 feet of all streams and ponds to notify the state in order to assure compliance for future wetland and/or water impact. These mechanisms shall be put in place within 30 days of the date of this letter or the issuance of the 404 Permit (whichever is later);
7. Fill must be stabilized with the use of slopes and vegetation, bulkheads or similar mechanisms such that additional wetlands outside the approved fill area are not impacted by off-site sedimentation; and

8. Upon completion of the project, the applicant shall complete and return the enclosed "Certification of Completion Form" to notify DWQ that all the work included in the Isolated Wetland Permit has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality.

Violations of any condition herein set forth may result in revocation of this Permit and may result in criminal and/or civil penalties. This Permit shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Permit shall expire five (5) years after the issuance date. If the work is not completed, then application for a new Isolated Wetland Permit will be required.

If this Permit unacceptable to you have the right to an adjudicatory hearing upon written request within sixty (60) days following receipt of this Permit. This request must be in the form of a written petition conforming to Chapter 150B of the North Carolina General Statutes and filed with the Office of Administrative Hearings, P.O. Box 27447, Raleigh, N.C. 27611-7447. If modifications are made to an original Permit, you have the right to an adjudicatory hearing on the modifications upon written request within sixty (60) days following receipt of the Permit. Unless such demands are made, this Permit shall be final and binding.

This the 18th day of February 2003
DIVISION OF WATER QUALITY



Alan Klimek, P.E., Director

DWQ Project No.: _____ County: _____

Applicant: _____

Project Name: _____

Date of Issuance of Isolated Wetland Permit: _____

Certificate of Completion

Upon completion of all work approved within the Isolated Wetland Permit, and any subsequent modifications, the applicant is required to return this certificate to the 401/Wetlands Unit, North Carolina Division of Water Quality, 1621 Mail Service Center, Raleigh, NC, 27699-1621.This form may be returned to DWQ by the applicant, the applicant's authorized agent, or the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the Isolated Wetland Permit, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the Isolated Wetland Permit, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

If this project was designed by a Certified Professional

I, _____, as a duly registered Professional _____ (i.e., Engineer, Landscape Architect, Surveyor, etc) in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project, for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the Isolated Wetland Permit, the approved plans and specifications, and other supporting materials.

Signature: _____ Registration No. _____ Date _____

SITE CALCULATIONS FOR

CITY OF ROCKY MOUNT
LCID LANDFILL

Rocky Mount, NC
16 September 2002

Appian Consulting Engineers, PA
PO Box 7966
Rocky Mount, NC 27804
(252) 972-7703
(252) 972-7638 (Fax)

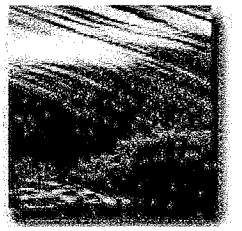
NORTH CAROLINA PROFESSIONAL SEAL 8421 ENGINEER BOBBY L. JOYNER

9.17.02

City of Rocky Mount
LCID Landfill
Site Calculations
Table of Contents

Description

- Runoff Computations
    - Runoff Coefficient Calculations
- Hydrology Calculations
    - Stormwater Pond 1 Calculations
    - Stormwater Pond 2 Calculations
- Storm Sewer Pipe Calculations
- Ditch Liner Calculations
- Outlet Protection Calculations
- Runoff Map



RUNOFF CALCULATIONS

APPIAN
CONSULTING ENGINEERS, PA
CIVIL, MUNICIPAL & STRUCTURAL ENGINEERS

RUNOFF COMPUTATIONS

PROJECT: City of Rocky Mount LCID Landfill **ACE JN:** 01-065

DATE: September 19, 2002

SHEET: 1 of 1

TC	PIPE UPPER TO LOWER	A	ΣA	BASINS	C	I	Qn	ΣQn
EXTENDED DETENTION WETLAND 1								
	Using Q10 Storm							
<5	Inflow into Pro D-1	3.4	---	I a	7.5	0.15	3.83	---
~~14~~	~~Inflow into Pro D-2~~	~~34.6~~	---	I c	~~5.9~~	~~0.15~~	~~30.62~~	---
14	Inflow into Wetland	~~32.3~~ 36.31	---	I b	5.9	0.15	~~28.59~~	32.13 35.96
---	Total Inflow	39.71	~~70.3~~	I a, b, c	---	---	---	~~63.04~~
---	Outflow	39.71	~~70.3~~	Routed thru Wetland	---	---	---	~~1.07~~
	Using Q100 Storm							
<5	Inflow into Pro D-1	3.4	---	I a	10	0.15	5.10	---
~~14~~	~~Inflow into Pro D-2~~	~~34.6~~	---	I c	~~8~~	~~0.15~~	~~41.52~~	---
14	Inflow into Wetland	36.31 ~~32.3~~	---	I b	8	0.15	~~38.76~~ 43.57	--- 48.67
---	Total Inflow	39.71	~~70.3~~	I a, b, c	---	---	---	~~85.38~~
---	Outflow	39.71	~~70.3~~	Routed thru Wetland	---	---	---	~~3.86~~
EXTENDED DETENTION WETLAND 2								
	Using Q10 Storm	37.33						
~~14 12~~	Inflow into Pro D-~~3~~2	~~6.82~~	---	II a	5.9 ~~6.1~~	0.15	~~6.24~~	33.04
12 ~~14 12~~ (10)	Inflow into Wetland	17.37	---	II b	6.1	0.15	15.89	49.53
---	Total Inflow	54.70	~~24.19~~	II a, b	---	---	---	~~22.13~~
---	Outflow	54.70	~~24.19~~	Routed thru Wetland	---	---	---	~~0.14~~
	Using Q100 Storm	37.33						
14	~~12~~ Inflow into Pro D-~~3~~2	~~6.82~~	---	II a	8.0 ~~8.5~~	0.15	~~8.70~~	44.80
12	Inflow into Wetland	17.37	---	II b	8.5	0.15	22.15	66.35
---	Total Inflow	54.70	~~24.19~~	II a, b	---	---	---	~~30.85~~
---	Outflow	54.70	~~24.19~~	Routed thru Wetland	---	---	---	~~0.24~~

EXTENDED DETENTION WETLAND CALCULATIONS

Stormwater Management Summary

Extended Detention Wetland 1

Area Draining into SWM Basin:	~~69~~ 39.71 Ac ±
Minimum Pond Area:	0.897 Ac
Designed Pond Area (at Permanent Pool):	1.412 Ac

Outlet Structure Summary

Invert of Wet Detention Pond:	80.0 ft.
Draw Down Orifice:	2 in. Dia.
Invert of Draw Down Orifice (Permanent Pool Elevation):	83.0 ft.
Permanent Pool Depth:	3.0 ft.
Principal Spillway:	3 ft. X 3 ft. Box
Principal Spillway Elevation:	84.0 ft.
Emergency Spillway Elevation:	84.25 ft.
Top of Dam:	85.0 ft.
Draw Down Time:	2 Days ±

Hydrologic Summary

Existing Condition:

Storm	Q (cfs)
10 Yr.	**57.53**

Post Development:

Storm	Inflow Q_P (cfs)	Volume of Runoff (cf)	Outflow Q_P (cfs)	Max. Storm Elevation (ft)
1 Inch Event	1.78	15,791	0.17	83.17
10 Yr. – 24 Hr.	108.52	617,331	93.38	84.84
10 Yr. – 30 Min.	10.34	71,739	**1.07**	83.47
100 Yr. – 30 Min.	27.13	178,968	3.86	84.10

Design Parameters / Calculations

- Detain first 1 inch of rainfall above permanent pool elevation.
- Remove 85% TSS (minimum).
- Allow 2 to 5 day draw down to permanent pool elevation.
- Design side slopes no steeper than 3:1.
- Design 6 feet wide vegetated perimeter shelf (at a minimum) at no steeper than 6:1 slope.
- Maintain the following percentages for permanent storage area:
  - Forebay – 15%
  - Low Marsh (9" – 18" deep) – 35%
  - High Marsh (0 – 9" deep) – 35%
  - Micro Pool – 15%

Minimum Pond Area:

STORMWATER POND CALCULATIONS SUMMARY

Project Name	City of Rocky Mount LCID Landfill - Basin 1		
Designer	PWS	***Date***	9/11/02

Area Draining to Pond (ADP)

1729767.6

Current Project	3005640	SF	69.000 AC
Contingency for Future Growth	0	SF	0.000 AC
Total	**3005640**	SF	**69.000** AC

1729767.6 39.71

Built-Upon Area (BUA)

Current Project: ~~864883.8~~ 432441.9

Landfill Material	43560	SF	1.000 AC
Drives/Parking	0	SF	0.000 AC
Contingency for Future Growth	0	SF	0.03 0.000 AC
Total	**43560**	SF	~~1.00~~ **1.000** AC

~~864883.8~~ 432441.9

BUA/ADP	**0.014**	0.25 ~~0.50~~
Runoff from 1" Rainfall	15791	CF

City of Rocky Mount LCID Landfill
Stormwater Management

Extended Detention Wetland 1

85% or 90% TSS Removal	90	
Pond Depth	3	FT
SA/ADP Ratio	~~0.013~~ ~~0.056~~ 0.02975	
Water Surface Areas		
Minimum Required at Normal Pool	39073	SF
Amount Proposed at Normal Pool	77327	SF
Amount at Storage Pool	106326	SF

Elevations

Bottom	80	FT MSL
Normal Pool	83	FT MSL
Storage Pool	83.2	FT MSL
Flood Pool	84.2	FT MSL

With 90% TSS removal the percentage impervious area in each SWM Basin watershed, and the pond depth at each pond, the surface area (SA) of the pond for the drainage area (DA) of the watershed is determined to be:

SA/DA - 90% TSS REMOVAL WITHOUT VEGETATIVE FILTER

IMPERVIOUS %	3 FT	3.5 FT	4 FT	4.5 FT	5 FT	5.5 FT	6 FT	6.5 FT	7 FT	7.5 FT
10%	1.3	1	0.8	0.7	0.6	0.5	0.4	0.3	0.2	0.1
20%	2.4	2	1.8	1.7	1.5	1.4	1.2	1	0.9	0.6
30%	3.5	3	5.7	2.5	2.2	1.9	1.6	1.3	1.1	0.8
40%	4.5	4	3.5	3.1	2.8	2.5	2.1	1.8	1.4	1.1
50%	5.6	5	4.3	3.9	3.5	3.1	2.7	2.3	1.9	1.5
60%	7	6	5.3	4.8	4.3	3.9	3.4	2.9	2.4	1.9
70%	8.1	7	6	5.5	5	4.5	3.9	3.4	2.9	2.3
80%	9.4	8	7	6.4	5.7	5.2	4.6	4	3.4	2.8
90%	10.7	9	7.9	7.2	6.5	5.9	5.2	4.6	3.9	3.3
100%	12	10	8.8	8.1	7.3	6.6	5.8	5.1	4.3	3.6

BUA/ADP	~~0.014~~ ~~0.5~~ 0.25	
Pond Depth	3	FT
SA/DA	~~1.3~~ 5 to 2.95	%

0.0295 5.6 2.975 39.71

Pond Surface Area = ~~1.30%~~ x DA
= ~~0.0130~~ x ~~69~~ Acres
= **~~0.897~~ Acres** (minimum)
1.171

Storage Volumes

Contour	Z	Area	ΔS	ACC S
83	0	77,327	---	---
84	1	82,317	79,822	79,822
85	2	87,363	84,840	164,662

86 102363

85.25 2.25 91113

Permanent Pool Storage

Main Pool (Includes Micro Pool)

Contour	Z	Area	ΔS	ACC S
81	0	5,949	---	---
81.5	0.5	13,005	4,738.5	4,738.5
82	1	21,999	8,751	13,489.5
83	2	42,302	32,150.5	45,640

Forebay

Contour	Z	Area	ΔS	ACC S
80	0	4,725	---	---
81	1	10,016	7,370.5	7,370.5
82	2	14,565	12,290.5	19,661
83	3	19,213	16,899	36,560

Basin SA (Designed Pond) = **1.412 Acres** (area obtained by planimeter)
Thus, the Designed Pond is *greater* than the minimum calculated pond surface area.

Sediment Storage Zone:

39.71

Acres Disturbed = ~~69~~ Ac. ±
Volume of Sediment = 69 Ac x 1800 cf/yr x 1 yr
= ~~124,200~~ CF of Sediment
71,478

Permanent Pool Storage = 82,200 cf
Min. Forebay/Micro Pool Storage = 82,200cf x 15%
= <u>12,330 cf</u>

Designed Forebay Storage= **36,560** cf *(44.48% of total Permanent Pool Storage)*

Outlet Structure:

- Contour of outlet pipe at outflow is at existing elevation of 82 ft.
  Using 50 LF 18" RCP w/6' FES @ 2% obtains an upstream invert elevation 83 ft.
- Permanent Pool Elevation is **83.0 ft**.
- Match invert of draw down orifice to Permanent Pool Elevation of 83.0 ft.
- Assume that the primary weir structure is a 3 ft x 3 ft box with Principal Spillway Elevation of 84.0 ft.

1. Calculate Volume from first 1 Inch Rainfall using the "Simple Method":

$$Rv = 0.05 + 0.009(I)$$

Where,
Rv = runoff coefficient = storm runoff (in.)/storm rainfall (in.)
I = Percent Impervious = ~~1.4%~~ ~~25~~ 25%

$$Rv = 0.05 + 0.009(\cancel{1.4\%}) = \cancel{0.0626}\ in./in.$$

25% → 0.275 in/in.

Therefore, the volume is

$$V = (Design\ Rainfall)(Rv)(Drainage\ Area)$$

0.275 39.71

$$V = (1\ inch\ rainfall)(\cancel{0.0626}\ in./in.)(\cancel{69.0}Ac.)(1/12\ ft./in.)$$

0.91 → 39,641

$$V = \underline{\cancel{0.360}\ Ac\text{-}ft.\ or\ \cancel{15,791}\ cf}$$

2. Calculate Draw Down Orifice:

- Assume 2-day draw down.

First, the maximum head of water is calculated:

$$\Delta H = 84.0\ ft - 83.0\ ft - (2\ in)\left(\frac{1\ ft}{12\ in}\right) = \underline{0.833\ ft}$$

Then, the minimum Q needs to be found:

$$Q_{min} = \frac{Volume}{Days} = \frac{cf}{sec}$$

$$Q_{min} = \frac{(15{,}791\ cf)}{(2\ days)(24\ hr)(60\ min)(60\ sec)}$$ 39,641

$$Q_{min} = 0.0914\ cfs$$ 0.229 cfs.

Finally, using the orifice equation, the orifice size can be determined:

$$Q = C\,A\sqrt{2\,G\,\Delta H}$$

$$A = \frac{Q}{C\sqrt{2\,G\,\Delta H}}$$

Where,

Q	$= 0.0914$ cfs
C	$= 0.63$
g	$= 32.2$ ft/sec^2
ΔH	$= 0.833$ ft

$$A = \frac{0.0914}{0.63\sqrt{2\,(32.2)(0.833)}}$$ 0.229

$A =$ **0.0198** *sf required* → 0.0496

Orifice	Area
1" ϕ	0.0055 sf
2" ϕ	0.0218 sf
3" ϕ	0.0491 sf

3"

Use 2" draw down orifice. This will allow for draw down to occur within 2 days.

Extended Detention Wetland 1

Stormwater Pond Stage/Storage
And
Hydrologic Reports

STAGE / STORAGE TABLE

1. RESERVOIR No = 1. 2. RESERVOIR NAME = WETLAND 1...
3. S = Ks * Z^b
   Ks = 0..... b = 0.....
   START ELEV = 0..... INCREMENT = 0...

	STAGE ft	ELEVATION ft	CO AREA sq ft	INC STORAGE cu ft	TOT STORAGE cu ft
4	0.00	83.00.	77327...	0	0
5	1.00	84.00.	82317...	79822	79822
6	2.00	85.00.	87363...	84840	164662
7	0.00	0.00.	0.....	0	0

OUTLET STRUCTURES

Reservoir: 1

CULVERT STRUC A. Q=CoA[2gh/k]^.5

1. WIDTH (in) = 12.
2. HEIGHT (in) = 12.
3. No. BARRELS = 1..
4. INVERT ELEV. = 83.....
5. Co = 0.60
6. CULVERT LENGTH (ft) = 50..
7. CULVERT SLOPE (%) = 2...
8. MANNING'S N-VALUE = .013

CULVERT STRUC B. Q=CoA[2gh/k]^.5

9. WIDTH (in) = ~~2..~~ 3
10. HEIGHT (in) = ~~2..~~ 3
11. No. BARRELS = 1..
12. INVERT ELEV. = 83.....
13. Co = 0.60
14. CULVERT LENGTH (ft) = .25.
15. CULVERT SLOPE (%) = .25.
16. MANNING'S N-VALUE = .013
17. MULTI-STAGE OPTION ? (Y/N) N

WEIR STRUCTURE A. Q=CwLH^EXP

18. CREST LENGTH (ft) = 9.....
19. CREST ELEVATION = 84.....
20. Cw = 3.00
21. EXP = 1.50
22. MULTI-STAGE OPTION ? (Y/N) N

WEIR STRUCTURE B. Q=CwLH^EXP

23. CREST LENGTH (ft) = 50.....
24. CREST ELEVATION = 84.25..
25. Cw = 3.00
26. EXP = 1.50
27. MULTI-STAGE OPTION ? (Y/N) N

1 HYDROLOGIC REPORT

STAGE / STORAGE / DISCHARGE

0

RESERVOIR NUMBER = 1

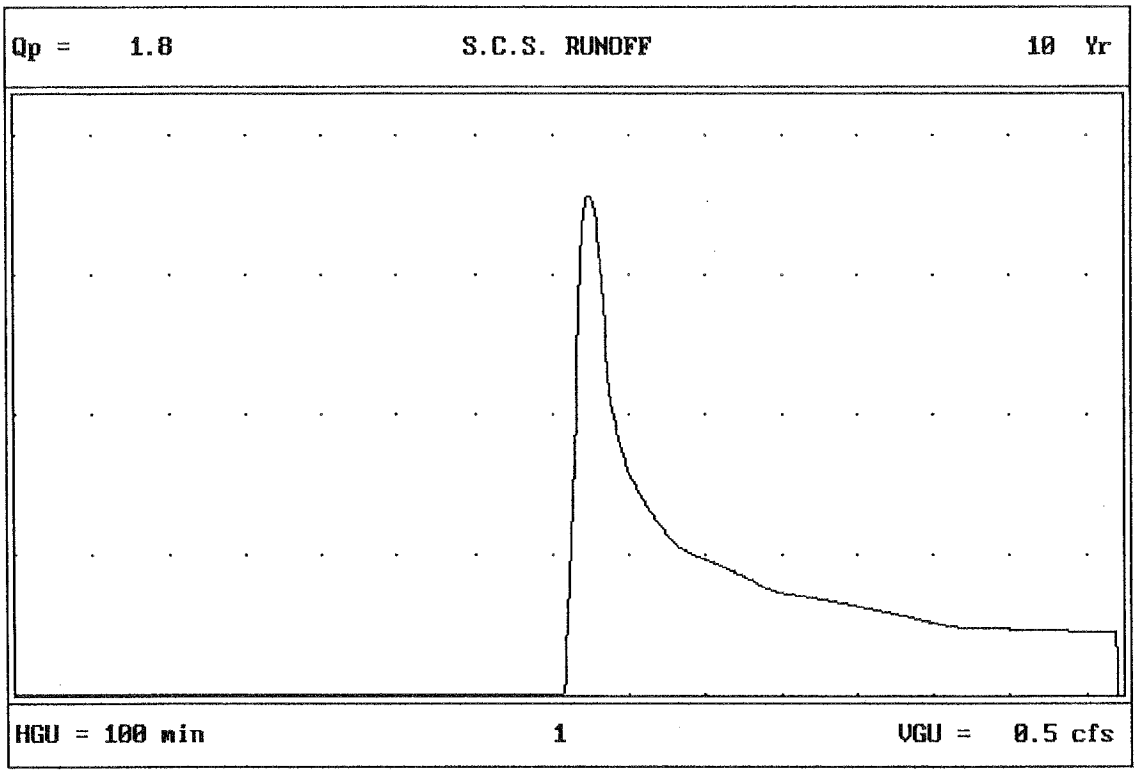
RESERVOIR NAME = WETLAND 1...
STORAGE VALUES WERE INPUT MANUALLY

DISCHARGE VALUES: CULVERT STRUCT A. Q = .6 *A*[2gh/k]^.5 * 1
CULVERT STRUCT B. Q = .6 *A*[2gh/k]^.5 * 1
WEIR STRUCT A. Q = 3 * 9 * H ^ 1.5
WEIR STRUCT B. Q = 3 * 50 * H ^ 1.5

ELEVATION	DISCHARGE (cfs)			
	CULVERT A	CULVERT B	WEIR A	WEIR B
83.00	0.00	0.00	0.00	0.00
84.00	2.67	0.10	0.00	0.00
85.00	4.63	0.15	27.00	97.43
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00

STAGE	ELEVATION	INC STOR cu ft	TOT STOR cu ft	OUTFLOW cfs
0.00	83.00	0	0	0.00
1.00	84.00	79822	79822	2.77
2.00	85.00	84840	164662	129.20
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00

1-INCH RUNOFF: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 19088 / 0.438

1
0

HYDROLOGIC REPORT

1 INCH RUNOFF INFLOW..
WET POND 1.....
.....

Hyd. No. 1

Hydrograph type	= S.C.S. RUNOFF	Peak discharge	= 1.78 cfs
Storm frequency	= 10 yr	Time interval	= 2 min
Basin area	= 65 ac	Basin curve No.	= 80
Ave basin slope	= 1 %	Hydraulic len	= 1200 ft
Basin lag	= 22.1 min	Time of concen	= 36.84 min
Total precip.	= 1.00 in	Distribution	= S.C.S. II

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
12.17	1.06	12.20	1.24	12.23	1.42	12.27	1.58
12.30	1.69	12.33	1.74	12.37	1.76	12.40	1.78
12.43	1.78	12.47	1.78	12.50	1.77	12.53	1.75
12.57	1.72	12.60	1.68	12.63	1.63	12.67	1.58
12.70	1.52	12.73	1.45	12.77	1.38	12.80	1.29
12.83	1.21	12.87	1.13	12.90	1.08	12.93	1.04
12.97	1.01	13.00	0.98	13.03	0.95	13.07	0.93

1
0

HYDROLOGIC REPORT

1 INCH RUNOFF ROUTED..
WETLAND 1.....
.....

Hyd. No. 2

Hydrograph type = RESERVOIR ROUTE Peak discharge = 0.17 cfs
Storm frequency = 10 yr Time interval = 2 min
Inflow hyd. no. = 1 Reservoir no. = 1

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00
0.37	0.00	0.00	0.00	0.00	0.00
0.40	0.00	0.00	0.00	0.00	0.00
0.43	0.00	0.00	0.00	0.00	0.00
0.47	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00
0.53	0.00	0.00	0.00	0.00	0.00
0.57	0.00	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00
0.63	0.00	0.00	0.00	0.00	0.00
0.67	0.00	0.00	0.00	0.00	0.00
0.70	0.00	0.00	0.00	0.00	0.00
0.73	0.00	0.00	0.00	0.00	0.00
0.77	0.00	0.00	0.00	0.00	0.00
0.80	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.83	0.00	0.00	0.00	0.00	0.00
0.87	0.00	0.00	0.00	0.00	0.00
0.90	0.00	0.00	0.00	0.00	0.00
0.93	0.00	0.00	0.00	0.00	0.00
0.97	0.00	0.00	0.00	0.00	0.00
1.00	0.00	0.00	0.00	0.00	0.00
1.03	0.00	0.00	0.00	0.00	0.00
1.07	0.00	0.00	0.00	0.00	0.00
1.10	0.00	0.00	0.00	0.00	0.00
1.13	0.00	0.00	0.00	0.00	0.00
1.17	0.00	0.00	0.00	0.00	0.00
1.20	0.00	0.00	0.00	0.00	0.00
1.23	0.00	0.00	0.00	0.00	0.00
1.27	0.00	0.00	0.00	0.00	0.00
1.30	0.00	0.00	0.00	0.00	0.00
1.33	0.00	0.00	0.00	0.00	0.00
1.37	0.00	0.00	0.00	0.00	0.00
1.40	0.00	0.00	0.00	0.00	0.00
1.43	0.00	0.00	0.00	0.00	0.00
1.47	0.00	0.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	0.00	0.00
1.53	0.00	0.00	0.00	0.00	0.00
1.57	0.00	0.00	0.00	0.00	0.00
1.60	0.00	0.00	0.00	0.00	0.00
1.63	0.00	0.00	0.00	0.00	0.00
1.67	0.00	0.00	0.00	0.00	0.00
1.70	0.00	0.00	0.00	0.00	0.00
1.73	0.00	0.00	0.00	0.00	0.00
1.77	0.00	0.00	0.00	0.00	0.00
1.80	0.00	0.00	0.00	0.00	0.00
1.83	0.00	0.00	0.00	0.00	0.00
1.87	0.00	0.00	0.00	0.00	0.00
1.90	0.00	0.00	0.00	0.00	0.00
1.93	0.00	0.00	0.00	0.00	0.00
1.97	0.00	0.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	0.00	0.00
2.03	0.00	0.00	0.00	0.00	0.00
2.07	0.00	0.00	0.00	0.00	0.00
2.10	0.00	0.00	0.00	0.00	0.00
2.13	0.00	0.00	0.00	0.00	0.00
2.17	0.00	0.00	0.00	0.00	0.00
2.20	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
2.23	0.00	0.00	0.00	0.00	0.00
2.27	0.00	0.00	0.00	0.00	0.00
2.30	0.00	0.00	0.00	0.00	0.00
2.33	0.00	0.00	0.00	0.00	0.00
2.37	0.00	0.00	0.00	0.00	0.00
2.40	0.00	0.00	0.00	0.00	0.00
2.43	0.00	0.00	0.00	0.00	0.00
2.47	0.00	0.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	0.00	0.00
2.53	0.00	0.00	0.00	0.00	0.00
2.57	0.00	0.00	0.00	0.00	0.00
2.60	0.00	0.00	0.00	0.00	0.00
2.63	0.00	0.00	0.00	0.00	0.00
2.67	0.00	0.00	0.00	0.00	0.00
2.70	0.00	0.00	0.00	0.00	0.00
2.73	0.00	0.00	0.00	0.00	0.00
2.77	0.00	0.00	0.00	0.00	0.00
2.80	0.00	0.00	0.00	0.00	0.00
2.83	0.00	0.00	0.00	0.00	0.00
2.87	0.00	0.00	0.00	0.00	0.00
2.90	0.00	0.00	0.00	0.00	0.00
2.93	0.00	0.00	0.00	0.00	0.00
2.97	0.00	0.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	0.00	0.00
3.03	0.00	0.00	0.00	0.00	0.00
3.07	0.00	0.00	0.00	0.00	0.00
3.10	0.00	0.00	0.00	0.00	0.00
3.13	0.00	0.00	0.00	0.00	0.00
3.17	0.00	0.00	0.00	0.00	0.00
3.20	0.00	0.00	0.00	0.00	0.00
3.23	0.00	0.00	0.00	0.00	0.00
3.27	0.00	0.00	0.00	0.00	0.00
3.30	0.00	0.00	0.00	0.00	0.00
3.33	0.00	0.00	0.00	0.00	0.00
3.37	0.00	0.00	0.00	0.00	0.00
3.40	0.00	0.00	0.00	0.00	0.00
3.43	0.00	0.00	0.00	0.00	0.00
3.47	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00	0.00
3.53	0.00	0.00	0.00	0.00	0.00
3.57	0.00	0.00	0.00	0.00	0.00
3.60	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.63	0.00	0.00	0.00	0.00	0.00
3.67	0.00	0.00	0.00	0.00	0.00
3.70	0.00	0.00	0.00	0.00	0.00
3.73	0.00	0.00	0.00	0.00	0.00
3.77	0.00	0.00	0.00	0.00	0.00
3.80	0.00	0.00	0.00	0.00	0.00
3.83	0.00	0.00	0.00	0.00	0.00
3.87	0.00	0.00	0.00	0.00	0.00
3.90	0.00	0.00	0.00	0.00	0.00
3.93	0.00	0.00	0.00	0.00	0.00
3.97	0.00	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	0.00	0.00
4.03	0.00	0.00	0.00	0.00	0.00
4.07	0.00	0.00	0.00	0.00	0.00
4.10	0.00	0.00	0.00	0.00	0.00
4.13	0.00	0.00	0.00	0.00	0.00
4.17	0.00	0.00	0.00	0.00	0.00
4.20	0.00	0.00	0.00	0.00	0.00
4.23	0.00	0.00	0.00	0.00	0.00
4.27	0.00	0.00	0.00	0.00	0.00
4.30	0.00	0.00	0.00	0.00	0.00
4.33	0.00	0.00	0.00	0.00	0.00
4.37	0.00	0.00	0.00	0.00	0.00
4.40	0.00	0.00	0.00	0.00	0.00
4.43	0.00	0.00	0.00	0.00	0.00
4.47	0.00	0.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	0.00	0.00
4.53	0.00	0.00	0.00	0.00	0.00
4.57	0.00	0.00	0.00	0.00	0.00
4.60	0.00	0.00	0.00	0.00	0.00
4.63	0.00	0.00	0.00	0.00	0.00
4.67	0.00	0.00	0.00	0.00	0.00
4.70	0.00	0.00	0.00	0.00	0.00
4.73	0.00	0.00	0.00	0.00	0.00
4.77	0.00	0.00	0.00	0.00	0.00
4.80	0.00	0.00	0.00	0.00	0.00
4.83	0.00	0.00	0.00	0.00	0.00
4.87	0.00	0.00	0.00	0.00	0.00
4.90	0.00	0.00	0.00	0.00	0.00
4.93	0.00	0.00	0.00	0.00	0.00
4.97	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
5.03	0.00	0.00	0.00	0.00	0.00
5.07	0.00	0.00	0.00	0.00	0.00
5.10	0.00	0.00	0.00	0.00	0.00
5.13	0.00	0.00	0.00	0.00	0.00
5.17	0.00	0.00	0.00	0.00	0.00
5.20	0.00	0.00	0.00	0.00	0.00
5.23	0.00	0.00	0.00	0.00	0.00
5.27	0.00	0.00	0.00	0.00	0.00
5.30	0.00	0.00	0.00	0.00	0.00
5.33	0.00	0.00	0.00	0.00	0.00
5.37	0.00	0.00	0.00	0.00	0.00
5.40	0.00	0.00	0.00	0.00	0.00
5.43	0.00	0.00	0.00	0.00	0.00
5.47	0.00	0.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	0.00	0.00
5.53	0.00	0.00	0.00	0.00	0.00
5.57	0.00	0.00	0.00	0.00	0.00
5.60	0.00	0.00	0.00	0.00	0.00
5.63	0.00	0.00	0.00	0.00	0.00
5.67	0.00	0.00	0.00	0.00	0.00
5.70	0.00	0.00	0.00	0.00	0.00
5.73	0.00	0.00	0.00	0.00	0.00
5.77	0.00	0.00	0.00	0.00	0.00
5.80	0.00	0.00	0.00	0.00	0.00
5.83	0.00	0.00	0.00	0.00	0.00
5.87	0.00	0.00	0.00	0.00	0.00
5.90	0.00	0.00	0.00	0.00	0.00
5.93	0.00	0.00	0.00	0.00	0.00
5.97	0.00	0.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	0.00	0.00
6.03	0.00	0.00	0.00	0.00	0.00
6.07	0.00	0.00	0.00	0.00	0.00
6.10	0.00	0.00	0.00	0.00	0.00
6.13	0.00	0.00	0.00	0.00	0.00
6.17	0.00	0.00	0.00	0.00	0.00
6.20	0.00	0.00	0.00	0.00	0.00
6.23	0.00	0.00	0.00	0.00	0.00
6.27	0.00	0.00	0.00	0.00	0.00
6.30	0.00	0.00	0.00	0.00	0.00
6.33	0.00	0.00	0.00	0.00	0.00
6.37	0.00	0.00	0.00	0.00	0.00
6.40	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.43	0.00	0.00	0.00	0.00	0.00
6.47	0.00	0.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	0.00	0.00
6.53	0.00	0.00	0.00	0.00	0.00
6.57	0.00	0.00	0.00	0.00	0.00
6.60	0.00	0.00	0.00	0.00	0.00
6.63	0.00	0.00	0.00	0.00	0.00
6.67	0.00	0.00	0.00	0.00	0.00
6.70	0.00	0.00	0.00	0.00	0.00
6.73	0.00	0.00	0.00	0.00	0.00
6.77	0.00	0.00	0.00	0.00	0.00
6.80	0.00	0.00	0.00	0.00	0.00
6.83	0.00	0.00	0.00	0.00	0.00
6.87	0.00	0.00	0.00	0.00	0.00
6.90	0.00	0.00	0.00	0.00	0.00
6.93	0.00	0.00	0.00	0.00	0.00
6.97	0.00	0.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00	0.00	0.00
7.03	0.00	0.00	0.00	0.00	0.00
7.07	0.00	0.00	0.00	0.00	0.00
7.10	0.00	0.00	0.00	0.00	0.00
7.13	0.00	0.00	0.00	0.00	0.00
7.17	0.00	0.00	0.00	0.00	0.00
7.20	0.00	0.00	0.00	0.00	0.00
7.23	0.00	0.00	0.00	0.00	0.00
7.27	0.00	0.00	0.00	0.00	0.00
7.30	0.00	0.00	0.00	0.00	0.00
7.33	0.00	0.00	0.00	0.00	0.00
7.37	0.00	0.00	0.00	0.00	0.00
7.40	0.00	0.00	0.00	0.00	0.00
7.43	0.00	0.00	0.00	0.00	0.00
7.47	0.00	0.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	0.00	0.00
7.53	0.00	0.00	0.00	0.00	0.00
7.57	0.00	0.00	0.00	0.00	0.00
7.60	0.00	0.00	0.00	0.00	0.00
7.63	0.00	0.00	0.00	0.00	0.00
7.67	0.00	0.00	0.00	0.00	0.00
7.70	0.00	0.00	0.00	0.00	0.00
7.73	0.00	0.00	0.00	0.00	0.00
7.77	0.00	0.00	0.00	0.00	0.00
7.80	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
7.83	0.00	0.00	0.00	0.00	0.00
7.87	0.00	0.00	0.00	0.00	0.00
7.90	0.00	0.00	0.00	0.00	0.00
7.93	0.00	0.00	0.00	0.00	0.00
7.97	0.00	0.00	0.00	0.00	0.00
8.00	0.00	0.00	0.00	0.00	0.00
8.03	0.00	0.00	0.00	0.00	0.00
8.07	0.00	0.00	0.00	0.00	0.00
8.10	0.00	0.00	0.00	0.00	0.00
8.13	0.00	0.00	0.00	0.00	0.00
8.17	0.00	0.00	0.00	0.00	0.00
8.20	0.00	0.00	0.00	0.00	0.00
8.23	0.00	0.00	0.00	0.00	0.00
8.27	0.00	0.00	0.00	0.00	0.00
8.30	0.00	0.00	0.00	0.00	0.00
8.33	0.00	0.00	0.00	0.00	0.00
8.37	0.00	0.00	0.00	0.00	0.00
8.40	0.00	0.00	0.00	0.00	0.00
8.43	0.00	0.00	0.00	0.00	0.00
8.47	0.00	0.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	0.00	0.00
8.53	0.00	0.00	0.00	0.00	0.00
8.57	0.00	0.00	0.00	0.00	0.00
8.60	0.00	0.00	0.00	0.00	0.00
8.63	0.00	0.00	0.00	0.00	0.00
8.67	0.00	0.00	0.00	0.00	0.00
8.70	0.00	0.00	0.00	0.00	0.00
8.73	0.00	0.00	0.00	0.00	0.00
8.77	0.00	0.00	0.00	0.00	0.00
8.80	0.00	0.00	0.00	0.00	0.00
8.83	0.00	0.00	0.00	0.00	0.00
8.87	0.00	0.00	0.00	0.00	0.00
8.90	0.00	0.00	0.00	0.00	0.00
8.93	0.00	0.00	0.00	0.00	0.00
8.97	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	0.00	0.00	0.00
9.03	0.00	0.00	0.00	0.00	0.00
9.07	0.00	0.00	0.00	0.00	0.00
9.10	0.00	0.00	0.00	0.00	0.00
9.13	0.00	0.00	0.00	0.00	0.00
9.17	0.00	0.00	0.00	0.00	0.00
9.20	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
9.23	0.00	0.00	0.00	0.00	0.00
9.27	0.00	0.00	0.00	0.00	0.00
9.30	0.00	0.00	0.00	0.00	0.00
9.33	0.00	0.00	0.00	0.00	0.00
9.37	0.00	0.00	0.00	0.00	0.00
9.40	0.00	0.00	0.00	0.00	0.00
9.43	0.00	0.00	0.00	0.00	0.00
9.47	0.00	0.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	0.00	0.00
9.53	0.00	0.00	0.00	0.00	0.00
9.57	0.00	0.00	0.00	0.00	0.00
9.60	0.00	0.00	0.00	0.00	0.00
9.63	0.00	0.00	0.00	0.00	0.00
9.67	0.00	0.00	0.00	0.00	0.00
9.70	0.00	0.00	0.00	0.00	0.00
9.73	0.00	0.00	0.00	0.00	0.00
9.77	0.00	0.00	0.00	0.00	0.00
9.80	0.00	0.00	0.00	0.00	0.00
9.83	0.00	0.00	0.00	0.00	0.00
9.87	0.00	0.00	0.00	0.00	0.00
9.90	0.00	0.00	0.00	0.00	0.00
9.93	0.00	0.00	0.00	0.00	0.00
9.97	0.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	0.00	0.00
10.03	0.00	0.00	0.00	0.00	0.00
10.07	0.00	0.00	0.00	0.00	0.00
10.10	0.00	0.00	0.00	0.00	0.00
10.13	0.00	0.00	0.00	0.00	0.00
10.17	0.00	0.00	0.00	0.00	0.00
10.20	0.00	0.00	0.00	0.00	0.00
10.23	0.00	0.00	0.00	0.00	0.00
10.27	0.00	0.00	0.00	0.00	0.00
10.30	0.00	0.00	0.00	0.00	0.00
10.33	0.00	0.00	0.00	0.00	0.00
10.37	0.00	0.00	0.00	0.00	0.00
10.40	0.00	0.00	0.00	0.00	0.00
10.43	0.00	0.00	0.00	0.00	0.00
10.47	0.00	0.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	0.00	0.00
10.53	0.00	0.00	0.00	0.00	0.00
10.57	0.00	0.00	0.00	0.00	0.00
10.60	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.63	0.00	0.00	0.00	0.00	0.00
10.67	0.00	0.00	0.00	0.00	0.00
10.70	0.00	0.00	0.00	0.00	0.00
10.73	0.00	0.00	0.00	0.00	0.00
10.77	0.00	0.00	0.00	0.00	0.00
10.80	0.00	0.00	0.00	0.00	0.00
10.83	0.00	0.00	0.00	0.00	0.00
10.87	0.00	0.00	0.00	0.00	0.00
10.90	0.00	0.00	0.00	0.00	0.00
10.93	0.00	0.00	0.00	0.00	0.00
10.97	0.00	0.00	0.00	0.00	0.00
11.00	0.00	0.00	0.00	0.00	0.00
11.03	0.00	0.00	0.00	0.00	0.00
11.07	0.00	0.00	0.00	0.00	0.00
11.10	0.00	0.00	0.00	0.00	0.00
11.13	0.00	0.00	0.00	0.00	0.00
11.17	0.00	0.00	0.00	0.00	0.00
11.20	0.00	0.00	0.00	0.00	0.00
11.23	0.00	0.00	0.00	0.00	0.00
11.27	0.00	0.00	0.00	0.00	0.00
11.30	0.00	0.00	0.00	0.00	0.00
11.33	0.00	0.00	0.00	0.00	0.00
11.37	0.00	0.00	0.00	0.00	0.00
11.40	0.00	0.00	0.00	0.00	0.00
11.43	0.00	0.00	0.00	0.00	0.00
11.47	0.00	0.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	0.00	0.00
11.53	0.00	0.00	0.00	0.00	0.00
11.57	0.00	0.00	0.00	0.00	0.00
11.60	0.00	0.00	0.00	0.00	0.00
11.63	0.00	0.00	0.00	0.00	0.00
11.67	0.00	0.00	0.00	0.00	0.00
11.70	0.00	0.00	0.00	0.00	0.00
11.73	0.00	0.00	0.00	0.00	0.00
11.77	0.00	0.00	0.00	0.00	0.00
11.80	0.00	0.00	0.00	0.00	0.00
11.83	0.00	0.00	0.00	0.00	0.00
11.87	0.00	0.02	0.00	0.00	0.00
11.90	0.02	0.08	0.02	0.02	0.00
11.93	0.08	0.19	0.13	0.13	0.00
11.97	0.19	0.31	0.40	0.40	0.00
12.00	0.31	0.44	0.89	0.89	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
12.03	0.44	0.58	1.63	1.63	0.00
12.07	0.58	0.73	2.65	2.65	0.00
12.10	0.73	0.89	3.95	3.95	0.00
12.13	0.89	1.06	5.56	5.57	0.00
12.17	1.06	1.24	7.50	7.51	0.00
12.20	1.24	1.42	9.78	9.79	0.01
12.23	1.42	1.58	12.43	12.44	0.01
12.27	1.58	1.69	15.42	15.44	0.01
12.30	1.69	1.74	18.67	18.69	0.01
12.33	1.74	1.76	22.06	22.09	0.01
12.37	1.76	1.78	25.53	25.56	0.02
12.40	1.78	1.78	29.03	29.07	0.02
12.43	1.78	1.78	32.55	32.59	0.02
12.47	1.78	1.77	36.07	36.11	0.02
12.50	1.77	1.75	39.57	39.62	0.02
12.53	1.75	1.72	43.03	43.08	0.03
12.57	1.72	1.68	46.44	46.50	0.03
12.60	1.68	1.63	49.78	49.84	0.03
12.63	1.63	1.58	53.03	53.10	0.03
12.67	1.58	1.52	56.18	56.25	0.03
12.70	1.52	1.45	59.21	59.28	0.04
12.73	1.45	1.38	62.10	62.18	0.04
12.77	1.38	1.29	64.85	64.93	0.04
12.80	1.29	1.21	67.44	67.52	0.04
12.83	1.21	1.13	69.86	69.94	0.04
12.87	1.13	1.08	72.11	72.20	0.04
12.90	1.08	1.04	74.23	74.32	0.04
12.93	1.04	1.01	76.25	76.35	0.05
12.97	1.01	0.98	78.21	78.30	0.05
13.00	0.98	0.95	80.10	80.20	0.05
13.03	0.95	0.93	81.94	82.04	0.05
13.07	0.93	0.91	83.72	83.82	0.05
13.10	0.91	0.89	85.46	85.56	0.05
13.13	0.89	0.87	87.15	87.25	0.05
13.17	0.87	0.85	88.79	88.90	0.05
13.20	0.85	0.83	90.40	90.51	0.05
13.23	0.83	0.82	91.97	92.08	0.05
13.27	0.82	0.80	93.50	93.61	0.06
13.30	0.80	0.79	95.00	95.12	0.06
13.33	0.79	0.78	96.48	96.59	0.06
13.37	0.78	0.76	97.93	98.04	0.06
13.40	0.76	0.75	99.35	99.46	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
13.43	0.75	0.74	100.74	100.86	0.06
13.47	0.74	0.73	102.12	102.24	0.06
13.50	0.73	0.72	103.47	103.60	0.06
13.53	0.72	0.71	104.80	104.93	0.06
13.57	0.71	0.70	106.11	106.24	0.06
13.60	0.70	0.69	107.40	107.53	0.06
13.63	0.69	0.69	108.67	108.80	0.06
13.67	0.69	0.68	109.92	110.05	0.07
13.70	0.68	0.67	111.15	111.28	0.07
13.73	0.67	0.66	112.36	112.50	0.07
13.77	0.66	0.65	113.56	113.69	0.07
13.80	0.65	0.64	114.73	114.87	0.07
13.83	0.64	0.64	115.89	116.03	0.07
13.87	0.64	0.63	117.03	117.17	0.07
13.90	0.63	0.62	118.15	118.29	0.07
13.93	0.62	0.61	119.26	119.40	0.07
13.97	0.61	0.61	120.35	120.49	0.07
14.00	0.61	0.60	121.42	121.57	0.07
14.03	0.60	0.59	122.48	122.63	0.07
14.07	0.59	0.58	123.52	123.67	0.07
14.10	0.58	0.58	124.55	124.70	0.07
14.13	0.58	0.57	125.56	125.71	0.07
14.17	0.57	0.56	126.56	126.71	0.08
14.20	0.56	0.56	127.54	127.69	0.08
14.23	0.56	0.55	128.51	128.66	0.08
14.27	0.55	0.55	129.46	129.62	0.08
14.30	0.55	0.54	130.41	130.56	0.08
14.33	0.54	0.54	131.34	131.49	0.08
14.37	0.54	0.53	132.25	132.41	0.08
14.40	0.53	0.53	133.16	133.32	0.08
14.43	0.53	0.52	134.06	134.22	0.08
14.47	0.52	0.52	134.94	135.10	0.08
14.50	0.52	0.51	135.82	135.98	0.08
14.53	0.51	0.51	136.69	136.85	0.08
14.57	0.51	0.51	137.55	137.71	0.08
14.60	0.51	0.51	138.40	138.57	0.08
14.63	0.51	0.50	139.24	139.41	0.08
14.67	0.50	0.50	140.08	140.25	0.09
14.70	0.50	0.50	140.91	141.08	0.09
14.73	0.50	0.50	141.73	141.91	0.09
14.77	0.50	0.49	142.55	142.72	0.09
14.80	0.49	0.49	143.36	143.54	0.09

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
14.83	0.49	0.49	144.16	144.34	0.09
14.87	0.49	0.49	144.96	145.14	0.09
14.90	0.49	0.48	145.76	145.94	0.09
14.93	0.48	0.48	146.55	146.73	0.09
14.97	0.48	0.48	147.33	147.51	0.09
15.00	0.48	0.48	148.11	148.29	0.09
15.03	0.48	0.48	148.88	149.07	0.09
15.07	0.48	0.47	149.64	149.83	0.09
15.10	0.47	0.47	150.40	150.59	0.10
15.13	0.47	0.47	151.16	151.35	0.10
15.17	0.47	0.47	151.91	152.10	0.10
15.20	0.47	0.47	152.65	152.84	0.10
15.23	0.47	0.46	153.38	153.58	0.10
15.27	0.46	0.46	154.12	154.31	0.10
15.30	0.46	0.46	154.84	155.04	0.10
15.33	0.46	0.46	155.56	155.76	0.10
15.37	0.46	0.45	156.27	156.47	0.10
15.40	0.45	0.45	156.98	157.18	0.10
15.43	0.45	0.45	157.68	157.88	0.10
15.47	0.45	0.45	158.37	158.58	0.10
15.50	0.45	0.44	159.06	159.26	0.10
15.53	0.44	0.44	159.74	159.95	0.10
15.57	0.44	0.44	160.41	160.62	0.10
15.60	0.44	0.44	161.08	161.29	0.11
15.63	0.44	0.43	161.74	161.96	0.11
15.67	0.43	0.43	162.40	162.61	0.11
15.70	0.43	0.43	163.05	163.26	0.11
15.73	0.43	0.43	163.69	163.91	0.11
15.77	0.43	0.42	164.33	164.54	0.11
15.80	0.42	0.42	164.96	165.17	0.11
15.83	0.42	0.42	165.58	165.80	0.11
15.87	0.42	0.41	166.19	166.42	0.11
15.90	0.41	0.41	166.80	167.03	0.11
15.93	0.41	0.41	167.41	167.63	0.11
15.97	0.41	0.41	168.00	168.23	0.11
16.00	0.41	0.40	168.59	168.82	0.11
16.03	0.40	0.40	169.17	169.40	0.11
16.07	0.40	0.40	169.75	169.98	0.11
16.10	0.40	0.39	170.32	170.55	0.11
16.13	0.39	0.39	170.88	171.11	0.11
16.17	0.39	0.39	171.44	171.67	0.12
16.20	0.39	0.39	171.98	172.22	0.12

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
16.23	0.39	0.38	172.53	172.76	0.12
16.27	0.38	0.38	173.06	173.30	0.12
16.30	0.38	0.38	173.59	173.83	0.12
16.33	0.38	0.38	174.12	174.35	0.12
16.37	0.38	0.37	174.64	174.87	0.12
16.40	0.37	0.37	175.15	175.39	0.12
16.43	0.37	0.37	175.66	175.90	0.12
16.47	0.37	0.37	176.17	176.40	0.12
16.50	0.37	0.37	176.67	176.91	0.12
16.53	0.37	0.37	177.16	177.40	0.12
16.57	0.37	0.37	177.65	177.90	0.12
16.60	0.37	0.36	178.14	178.39	0.12
16.63	0.36	0.36	178.63	178.87	0.12
16.67	0.36	0.36	179.11	179.36	0.12
16.70	0.36	0.36	179.59	179.84	0.12
16.73	0.36	0.36	180.07	180.31	0.12
16.77	0.36	0.36	180.54	180.79	0.12
16.80	0.36	0.36	181.01	181.26	0.12
16.83	0.36	0.36	181.48	181.73	0.12
16.87	0.36	0.36	181.94	182.19	0.12
16.90	0.36	0.36	182.41	182.66	0.13
16.93	0.36	0.35	182.87	183.12	0.13
16.97	0.35	0.35	183.32	183.58	0.13
17.00	0.35	0.35	183.78	184.03	0.13
17.03	0.35	0.35	184.23	184.48	0.13
17.07	0.35	0.35	184.68	184.94	0.13
17.10	0.35	0.35	185.13	185.38	0.13
17.13	0.35	0.35	185.57	185.83	0.13
17.17	0.35	0.35	186.01	186.27	0.13
17.20	0.35	0.35	186.45	186.71	0.13
17.23	0.35	0.35	186.89	187.15	0.13
17.27	0.35	0.35	187.33	187.59	0.13
17.30	0.35	0.34	187.76	188.02	0.13
17.33	0.34	0.34	188.19	188.45	0.13
17.37	0.34	0.34	188.61	188.88	0.13
17.40	0.34	0.34	189.04	189.30	0.13
17.43	0.34	0.34	189.46	189.72	0.13
17.47	0.34	0.34	189.88	190.14	0.13
17.50	0.34	0.34	190.29	190.56	0.13
17.53	0.34	0.34	190.71	190.97	0.13
17.57	0.34	0.34	191.12	191.39	0.13
17.60	0.34	0.34	191.53	191.79	0.13

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
17.63	0.34	0.34	191.93	192.20	0.13
17.67	0.34	0.33	192.34	192.60	0.13
17.70	0.33	0.33	192.74	193.01	0.13
17.73	0.33	0.33	193.13	193.40	0.14
17.77	0.33	0.33	193.53	193.80	0.14
17.80	0.33	0.33	193.92	194.19	0.14
17.83	0.33	0.33	194.31	194.58	0.14
17.87	0.33	0.33	194.70	194.97	0.14
17.90	0.33	0.33	195.08	195.35	0.14
17.93	0.33	0.33	195.46	195.74	0.14
17.97	0.33	0.33	195.84	196.11	0.14
18.00	0.33	0.32	196.21	196.49	0.14
18.03	0.32	0.32	196.59	196.86	0.14
18.07	0.32	0.32	196.96	197.24	0.14
18.10	0.32	0.32	197.33	197.60	0.14
18.13	0.32	0.32	197.69	197.97	0.14
18.17	0.32	0.32	198.05	198.33	0.14
18.20	0.32	0.32	198.41	198.69	0.14
18.23	0.32	0.32	198.77	199.05	0.14
18.27	0.32	0.32	199.12	199.40	0.14
18.30	0.32	0.31	199.47	199.75	0.14
18.33	0.31	0.31	199.82	200.10	0.14
18.37	0.31	0.31	200.16	200.45	0.14
18.40	0.31	0.31	200.51	200.79	0.14
18.43	0.31	0.31	200.85	201.13	0.14
18.47	0.31	0.31	201.18	201.47	0.14
18.50	0.31	0.31	201.52	201.80	0.14
18.53	0.31	0.31	201.85	202.14	0.14
18.57	0.31	0.31	202.18	202.46	0.14
18.60	0.31	0.31	202.50	202.79	0.14
18.63	0.31	0.30	202.82	203.11	0.14
18.67	0.30	0.30	203.14	203.43	0.14
18.70	0.30	0.30	203.46	203.75	0.14
18.73	0.30	0.30	203.78	204.07	0.15
18.77	0.30	0.30	204.09	204.38	0.15
18.80	0.30	0.30	204.39	204.69	0.15
18.83	0.30	0.30	204.70	204.99	0.15
18.87	0.30	0.30	205.00	205.30	0.15
18.90	0.30	0.29	205.30	205.60	0.15
18.93	0.29	0.29	205.60	205.89	0.15
18.97	0.29	0.29	205.89	206.19	0.15
19.00	0.29	0.29	206.18	206.48	0.15

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
19.03	0.29	0.29	206.47	206.77	0.15
19.07	0.29	0.29	206.76	207.05	0.15
19.10	0.29	0.29	207.04	207.34	0.15
19.13	0.29	0.29	207.32	207.62	0.15
19.17	0.29	0.29	207.60	207.89	0.15
19.20	0.29	0.28	207.87	208.17	0.15
19.23	0.28	0.28	208.14	208.44	0.15
19.27	0.28	0.28	208.41	208.71	0.15
19.30	0.28	0.28	208.67	208.97	0.15
19.33	0.28	0.28	208.94	209.24	0.15
19.37	0.28	0.28	209.19	209.50	0.15
19.40	0.28	0.28	209.45	209.75	0.15
19.43	0.28	0.28	209.70	210.01	0.15
19.47	0.28	0.27	209.95	210.26	0.15
19.50	0.27	0.27	210.20	210.50	0.15
19.53	0.27	0.27	210.45	210.75	0.15
19.57	0.27	0.27	210.69	210.99	0.15
19.60	0.27	0.27	210.93	211.23	0.15
19.63	0.27	0.27	211.16	211.47	0.15
19.67	0.27	0.27	211.39	211.70	0.15
19.70	0.27	0.27	211.62	211.93	0.15
19.73	0.27	0.26	211.85	212.16	0.15
19.77	0.26	0.26	212.07	212.38	0.15
19.80	0.26	0.26	212.30	212.60	0.15
19.83	0.26	0.26	212.51	212.82	0.15
19.87	0.26	0.26	212.73	213.03	0.15
19.90	0.26	0.26	212.94	213.25	0.15
19.93	0.26	0.26	213.15	213.46	0.15
19.97	0.26	0.26	213.35	213.66	0.15
20.00	0.26	0.25	213.56	213.87	0.15
20.03	0.25	0.25	213.76	214.07	0.15
20.07	0.25	0.25	213.95	214.26	0.15
20.10	0.25	0.25	214.15	214.46	0.15
20.13	0.25	0.25	214.34	214.65	0.16
20.17	0.25	0.25	214.53	214.84	0.16
20.20	0.25	0.25	214.71	215.02	0.16
20.23	0.25	0.25	214.90	215.21	0.16
20.27	0.25	0.24	215.08	215.39	0.16
20.30	0.24	0.24	215.26	215.57	0.16
20.33	0.24	0.24	215.43	215.74	0.16
20.37	0.24	0.24	215.60	215.92	0.16
20.40	0.24	0.24	215.78	216.09	0.16

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
20.43	0.24	0.24	215.95	216.26	0.16
20.47	0.24	0.24	216.11	216.43	0.16
20.50	0.24	0.24	216.28	216.59	0.16
20.53	0.24	0.24	216.45	216.76	0.16
20.57	0.24	0.24	216.61	216.92	0.16
20.60	0.24	0.24	216.77	217.09	0.16
20.63	0.24	0.24	216.93	217.25	0.16
20.67	0.24	0.24	217.09	217.41	0.16
20.70	0.24	0.24	217.25	217.57	0.16
20.73	0.24	0.24	217.41	217.73	0.16
20.77	0.24	0.24	217.57	217.89	0.16
20.80	0.24	0.24	217.73	218.04	0.16
20.83	0.24	0.24	217.88	218.20	0.16
20.87	0.24	0.24	218.04	218.36	0.16
20.90	0.24	0.24	218.20	218.51	0.16
20.93	0.24	0.24	218.35	218.67	0.16
20.97	0.24	0.24	218.50	218.82	0.16
21.00	0.24	0.24	218.66	218.98	0.16
21.03	0.24	0.24	218.81	219.13	0.16
21.07	0.24	0.24	218.96	219.28	0.16
21.10	0.24	0.24	219.12	219.44	0.16
21.13	0.24	0.24	219.27	219.59	0.16
21.17	0.24	0.24	219.42	219.74	0.16
21.20	0.24	0.23	219.57	219.89	0.16
21.23	0.23	0.23	219.72	220.04	0.16
21.27	0.23	0.23	219.87	220.19	0.16
21.30	0.23	0.23	220.02	220.34	0.16
21.33	0.23	0.23	220.16	220.49	0.16
21.37	0.23	0.23	220.31	220.63	0.16
21.40	0.23	0.23	220.46	220.78	0.16
21.43	0.23	0.23	220.61	220.93	0.16
21.47	0.23	0.23	220.75	221.07	0.16
21.50	0.23	0.23	220.90	221.22	0.16
21.53	0.23	0.23	221.04	221.36	0.16
21.57	0.23	0.23	221.18	221.51	0.16
21.60	0.23	0.23	221.33	221.65	0.16
21.63	0.23	0.23	221.47	221.79	0.16
21.67	0.23	0.23	221.61	221.94	0.16
21.70	0.23	0.23	221.76	222.08	0.16
21.73	0.23	0.23	221.90	222.22	0.16
21.77	0.23	0.23	222.04	222.36	0.16
21.80	0.23	0.23	222.18	222.50	0.16

HYDROGRAPH DISCHARGE TABLE Cont'd

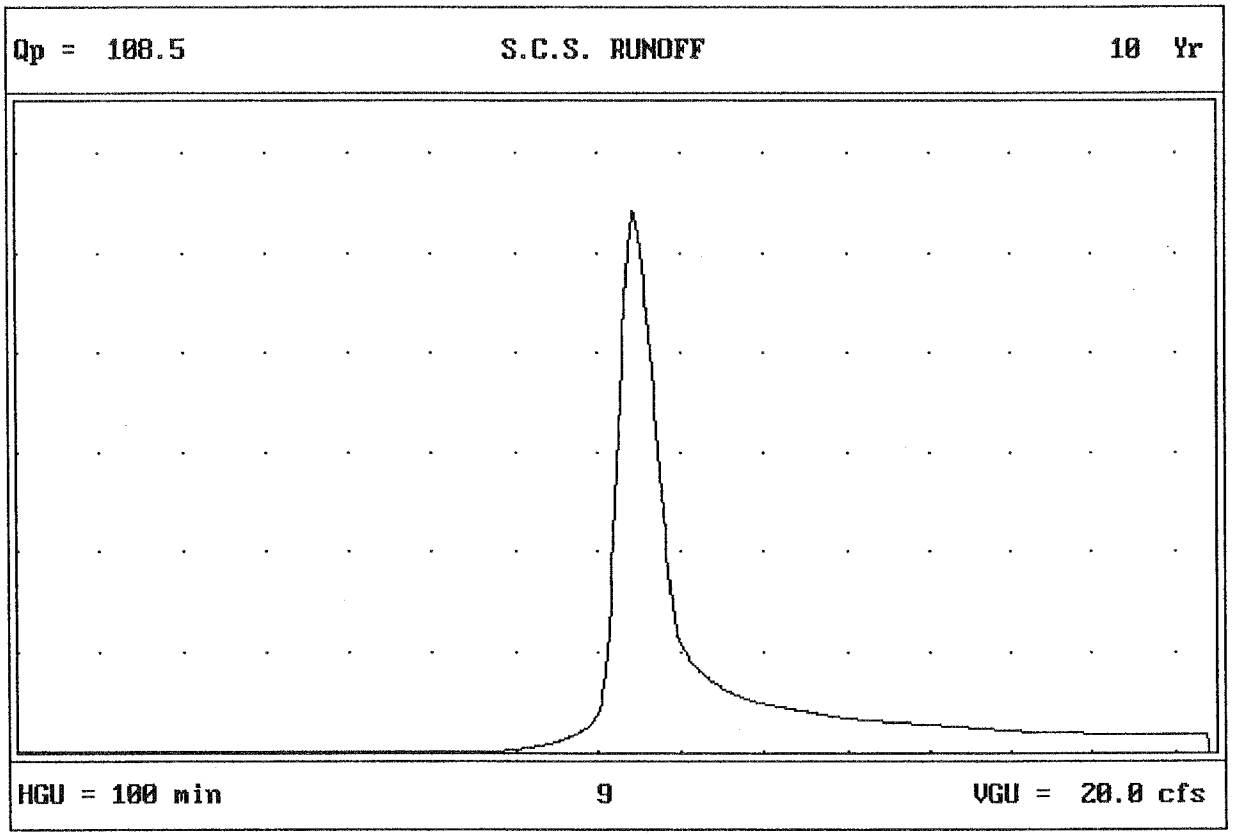
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
21.83	0.23	0.23	222.32	222.64	0.16
21.87	0.23	0.23	222.46	222.78	0.16
21.90	0.23	0.23	222.59	222.92	0.16
21.93	0.23	0.23	222.73	223.06	0.16
21.97	0.23	0.23	222.87	223.19	0.16
22.00	0.23	0.23	223.00	223.33	0.16
22.03	0.23	0.23	223.14	223.47	0.16
22.07	0.23	0.23	223.28	223.60	0.16
22.10	0.23	0.23	223.41	223.74	0.16
22.13	0.23	0.23	223.55	223.87	0.16
22.17	0.23	0.23	223.68	224.01	0.16
22.20	0.23	0.23	223.81	224.14	0.16
22.23	0.23	0.23	223.94	224.27	0.16
22.27	0.23	0.23	224.08	224.40	0.16
22.30	0.23	0.23	224.21	224.54	0.16
22.33	0.23	0.23	224.34	224.67	0.16
22.37	0.23	0.23	224.47	224.80	0.16
22.40	0.23	0.23	224.60	224.93	0.16
22.43	0.23	0.23	224.73	225.06	0.16
22.47	0.23	0.23	224.86	225.19	0.16
22.50	0.23	0.23	224.98	225.31	0.16
22.53	0.23	0.23	225.11	225.44	0.17
22.57	0.23	0.23	225.24	225.57	0.17
22.60	0.23	0.23	225.36	225.69	0.17
22.63	0.23	0.23	225.49	225.82	0.17
22.67	0.23	0.23	225.61	225.95	0.17
22.70	0.23	0.23	225.74	226.07	0.17
22.73	0.23	0.23	225.86	226.19	0.17
22.77	0.23	0.23	225.99	226.32	0.17
22.80	0.23	0.23	226.11	226.44	0.17
22.83	0.23	0.23	226.23	226.56	0.17
22.87	0.23	0.23	226.35	226.68	0.17
22.90	0.23	0.23	226.47	226.80	0.17
22.93	0.23	0.23	226.59	226.93	0.17
22.97	0.23	0.23	226.71	227.05	0.17
23.00	0.23	0.23	226.83	227.16	0.17
23.03	0.23	0.23	226.95	227.28	0.17
23.07	0.23	0.23	227.07	227.40	0.17
23.10	0.23	0.23	227.18	227.52	0.17
23.13	0.23	0.23	227.30	227.64	0.17
23.17	0.23	0.23	227.42	227.75	0.17
23.20	0.23	0.22	227.53	227.87	0.17

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
23.23	0.22	0.22	227.65	227.98	0.17
23.27	0.22	0.22	227.76	228.10	0.17
23.30	0.22	0.22	227.88	228.21	0.17
23.33	0.22	0.22	227.99	228.33	0.17
23.37	0.22	0.22	228.10	228.44	0.17
23.40	0.22	0.22	228.21	228.55	0.17
23.43	0.22	0.22	228.33	228.66	0.17
23.47	0.22	0.22	228.44	228.77	0.17
23.50	0.22	0.22	228.55	228.88	0.17
23.53	0.22	0.22	228.66	228.99	0.17
23.57	0.22	0.22	228.77	229.10	0.17
23.60	0.22	0.22	228.87	229.21	0.17
23.63	0.22	0.22	228.98	229.32	0.17
23.67	0.22	0.22	229.09	229.43	0.17
23.70	0.22	0.22	229.20	229.53	0.17
23.73	0.22	0.22	229.30	229.64	0.17
23.77	0.22	0.22	229.41	229.75	0.17
23.80	0.22	0.22	229.51	229.85	0.17
23.83	0.22	0.22	229.62	229.96	0.17
23.87	0.22	0.22	229.72	230.06	0.17
23.90	0.22	0.22	229.82	230.16	0.17
23.93	0.22	0.22	229.93	230.27	0.17
23.97	0.22	0.00	230.03	230.37	0.17
24.00	0.00	0.00	229.91	230.25	0.17

Maximum outflow (cfs) = 0.17
Maximum storage (cu ft) = 13812
Maximum elevation (ft) = 83.17

10 YEAR – 24 HOUR STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 617331 / 14.172

HYDROLOGIC REPORT

10 YR 24 HR STORM.....
INFLOW.....
WETLAND 1.....

Hyd. No. 9

Hydrograph type	= S.C.S. RUNOFF	Peak discharge	= 108.52 cfs
Storm frequency	= 10 yr	Time interval	= 2 min
Basin area	= 65 ac	Basin curve No.	= 70
Ave basin slope	= 1 %	Hydraulic len	= 1200 ft
Basin lag	= 29.4 min	Time of concen	= 49.16 min
Total precip.	= 5.80 in	Distribution	= S.C.S. II

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
10.43	1.06	10.47	1.12	10.50	1.18	10.53	1.25
10.57	1.32	10.60	1.40	10.63	1.47	10.67	1.55
10.70	1.63	10.73	1.72	10.77	1.81	10.80	1.90
10.83	2.00	10.87	2.10	10.90	2.21	10.93	2.32
10.97	2.44	11.00	2.56	11.03	2.68	11.07	2.80
11.10	2.93	11.13	3.07	11.17	3.22	11.20	3.37
11.23	3.54	11.27	3.71	11.30	3.90	11.33	4.10
11.37	4.31	11.40	4.53	11.43	4.77	11.47	5.03
11.50	5.30	11.53	5.62	11.57	6.01	11.60	6.50
11.63	7.12	11.67	7.92	11.70	8.94	11.73	10.26
11.77	11.92	11.80	14.09	11.83	16.93	11.87	20.65
11.90	25.48	11.93	31.37	11.97	37.97	12.00	44.88
12.03	51.85	12.07	58.84	12.10	65.79	12.13	72.63
12.17	79.28	12.20	85.65	12.23	91.64	12.27	97.13
12.30	101.87	12.33	105.58	12.37	107.92	12.40	108.52
12.43	107.43	12.47	105.21	12.50	102.50	12.53	99.61
12.57	96.55	12.60	93.35	12.63	89.99	12.67	86.50
12.70	82.89	12.73	79.15	12.77	75.31	12.80	71.36
12.83	67.33	12.87	63.23	12.90	59.09	12.93	54.94
12.97	50.80	13.00	46.72	13.03	42.74	13.07	38.88
13.10	35.20	13.13	31.78	13.17	28.73	13.20	26.19
13.23	24.27	13.27	22.98	13.30	22.09	13.33	21.37
13.37	20.70	13.40	20.07	13.43	19.48	13.47	18.94
13.50	18.44	13.53	17.97	13.57	17.54	13.60	17.13
13.63	16.76	13.67	16.41	13.70	16.08	13.73	15.78
13.77	15.48	13.80	15.20	13.83	14.93	13.87	14.67
13.90	14.41	13.93	14.16	13.97	13.92	14.00	13.69
14.03	13.46	14.07	13.24	14.10	13.03	14.13	12.82
14.17	12.63	14.20	12.43	14.23	12.24	14.27	12.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
14.30	11.89	14.33	11.72	14.37	11.56	14.40	11.40
14.43	11.25	14.47	11.10	14.50	10.96	14.53	10.83
14.57	10.71	14.60	10.59	14.63	10.48	14.67	10.37
14.70	10.27	14.73	10.17	14.77	10.08	14.80	9.99
14.83	9.91	14.87	9.83	14.90	9.75	14.93	9.67
14.97	9.60	15.00	9.53	15.03	9.46	15.07	9.39
15.10	9.33	15.13	9.26	15.17	9.20	15.20	9.14
15.23	9.08	15.27	9.01	15.30	8.95	15.33	8.89
15.37	8.83	15.40	8.77	15.43	8.71	15.47	8.65
15.50	8.59	15.53	8.53	15.57	8.47	15.60	8.41
15.63	8.35	15.67	8.28	15.70	8.22	15.73	8.16
15.77	8.10	15.80	8.04	15.83	7.97	15.87	7.91
15.90	7.85	15.93	7.79	15.97	7.73	16.00	7.66
16.03	7.60	16.07	7.54	16.10	7.48	16.13	7.41
16.17	7.35	16.20	7.29	16.23	7.23	16.27	7.18
16.30	7.12	16.33	7.06	16.37	7.01	16.40	6.95
16.43	6.90	16.47	6.85	16.50	6.80	16.53	6.76
16.57	6.72	16.60	6.67	16.63	6.63	16.67	6.59
16.70	6.56	16.73	6.52	16.77	6.49	16.80	6.46
16.83	6.43	16.87	6.40	16.90	6.37	16.93	6.34
16.97	6.31	17.00	6.29	17.03	6.26	17.07	6.24
17.10	6.21	17.13	6.19	17.17	6.17	17.20	6.14
17.23	6.12	17.27	6.10	17.30	6.08	17.33	6.06
17.37	6.03	17.40	6.01	17.43	5.99	17.47	5.97
17.50	5.95	17.53	5.92	17.57	5.90	17.60	5.88
17.63	5.86	17.67	5.83	17.70	5.81	17.73	5.79
17.77	5.77	17.80	5.75	17.83	5.72	17.87	5.70
17.90	5.68	17.93	5.66	17.97	5.63	18.00	5.61
18.03	5.59	18.07	5.57	18.10	5.54	18.13	5.52
18.17	5.50	18.20	5.48	18.23	5.45	18.27	5.43
18.30	5.41	18.33	5.39	18.37	5.36	18.40	5.34
18.43	5.32	18.47	5.30	18.50	5.27	18.53	5.25
18.57	5.23	18.60	5.20	18.63	5.18	18.67	5.16
18.70	5.14	18.73	5.11	18.77	5.09	18.80	5.07
18.83	5.04	18.87	5.02	18.90	5.00	18.93	4.98
18.97	4.95	19.00	4.93	19.03	4.91	19.07	4.88
19.10	4.86	19.13	4.84	19.17	4.81	19.20	4.79
19.23	4.77	19.27	4.74	19.30	4.72	19.33	4.70
19.37	4.67	19.40	4.65	19.43	4.63	19.47	4.60
19.50	4.58	19.53	4.56	19.57	4.53	19.60	4.51
19.63	4.49	19.67	4.46	19.70	4.44	19.73	4.42
19.77	4.39	19.80	4.37	19.83	4.35	19.87	4.32
19.90	4.30	19.93	4.28	19.97	4.25	20.00	4.23
20.03	4.21	20.07	4.18	20.10	4.16	20.13	4.14
20.17	4.11	20.20	4.09	20.23	4.07	20.27	4.05
20.30	4.03	20.33	4.01	20.37	3.99	20.40	3.97

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
20.43	3.95	20.47	3.93	20.50	3.92	20.53	3.90
20.57	3.89	20.60	3.87	20.63	3.86	20.67	3.85
20.70	3.84	20.73	3.83	20.77	3.82	20.80	3.81
20.83	3.80	20.87	3.79	20.90	3.78	20.93	3.78
20.97	3.77	21.00	3.76	21.03	3.76	21.07	3.75
21.10	3.75	21.13	3.74	21.17	3.74	21.20	3.73
21.23	3.73	21.27	3.72	21.30	3.72	21.33	3.71
21.37	3.71	21.40	3.71	21.43	3.70	21.47	3.70
21.50	3.69	21.53	3.69	21.57	3.68	21.60	3.68
21.63	3.67	21.67	3.67	21.70	3.67	21.73	3.66
21.77	3.66	21.80	3.65	21.83	3.65	21.87	3.64
21.90	3.64	21.93	3.64	21.97	3.63	22.00	3.63
22.03	3.62	22.07	3.62	22.10	3.61	22.13	3.61
22.17	3.61	22.20	3.60	22.23	3.60	22.27	3.59
22.30	3.59	22.33	3.58	22.37	3.58	22.40	3.57
22.43	3.57	22.47	3.57	22.50	3.56	22.53	3.56
22.57	3.55	22.60	3.55	22.63	3.54	22.67	3.54
22.70	3.53	22.73	3.53	22.77	3.53	22.80	3.52
22.83	3.52	22.87	3.51	22.90	3.51	22.93	3.50
22.97	3.50	23.00	3.49	23.03	3.49	23.07	3.49
23.10	3.48	23.13	3.48	23.17	3.47	23.20	3.47
23.23	3.46	23.27	3.46	23.30	3.45	23.33	3.45
23.37	3.45	23.40	3.44	23.43	3.44	23.47	3.43
23.50	3.43	23.53	3.42	23.57	3.42	23.60	3.41
23.63	3.41	23.67	3.41	23.70	3.40	23.73	3.40
23.77	3.39	23.80	3.39	23.83	3.38	23.87	3.38
23.90	3.37	23.93	3.37	23.97	3.37	24.00	0.00

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HYDROLOGIC REPORT

10 YR 24 HR STORM.....
ROUTED.....
WETLAND 1.....

Hyd. No. 10

Hydrograph type = RESERVOIR ROUTE
Storm frequency = 10 yr
Inflow hyd. no. = 9

Peak discharge = 93.38 cfs
Time interval = 2 min
Reservoir no. = 1

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.43	1.06	1.12	25.31	25.34	0.02
10.47	1.12	1.18	27.45	27.48	0.02
10.50	1.18	1.25	29.72	29.76	0.02
10.53	1.25	1.32	32.12	32.16	0.02
10.57	1.32	1.40	34.65	34.70	0.02
10.60	1.40	1.47	37.33	37.37	0.02
10.63	1.47	1.55	40.15	40.19	0.02
10.67	1.55	1.63	43.12	43.17	0.03
10.70	1.63	1.72	46.24	46.30	0.03
10.73	1.72	1.81	49.54	49.60	0.03
10.77	1.81	1.90	53.00	53.06	0.03
10.80	1.90	2.00	56.64	56.71	0.03
10.83	2.00	2.10	60.47	60.55	0.04
10.87	2.10	2.21	64.50	64.57	0.04
10.90	2.21	2.32	68.73	68.81	0.04
10.93	2.32	2.44	73.17	73.25	0.04
10.97	2.44	2.56	77.83	77.92	0.05
11.00	2.56	2.68	82.72	82.82	0.05
11.03	2.68	2.80	87.85	87.95	0.05
11.07	2.80	2.93	93.21	93.32	0.06
11.10	2.93	3.07	98.83	98.95	0.06
11.13	3.07	3.22	104.71	104.83	0.06
11.17	3.22	3.37	110.86	111.00	0.07
11.20	3.37	3.54	117.31	117.45	0.07
11.23	3.54	3.71	124.08	124.23	0.07

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
11.27	3.71	3.90	131.17	131.33	0.08
11.30	3.90	4.10	138.62	138.79	0.08
11.33	4.10	4.31	146.43	146.62	0.09
11.37	4.31	4.53	154.64	154.84	0.10
11.40	4.53	4.77	163.27	163.48	0.11
11.43	4.77	5.03	172.34	172.57	0.12
11.47	5.03	5.30	181.89	182.14	0.12
11.50	5.30	5.62	191.94	192.21	0.13
11.53	5.62	6.01	202.58	202.87	0.14
11.57	6.01	6.50	213.91	214.22	0.15
11.60	6.50	7.12	226.09	226.42	0.17
11.63	7.12	7.92	239.35	239.71	0.18
11.67	7.92	8.94	254.00	254.39	0.19
11.70	8.94	10.26	270.44	270.87	0.21
11.73	10.26	11.92	289.13	289.64	0.25
11.77	11.92	14.09	310.70	311.31	0.30
11.80	14.09	16.93	335.99	336.71	0.36
11.83	16.93	20.65	366.16	367.01	0.43
11.87	20.65	25.48	402.73	403.74	0.50
11.90	25.48	31.37	447.68	448.85	0.59
11.93	31.37	37.97	503.15	504.52	0.69
11.97	37.97	44.88	570.74	572.49	0.87
12.00	44.88	51.85	651.28	653.59	1.16
12.03	51.85	58.84	745.22	748.00	1.39
12.07	58.84	65.79	852.63	855.92	1.64
12.10	65.79	72.63	973.33	977.27	1.97
12.13	72.63	79.28	1107.06	1111.75	2.35
12.17	79.28	85.65	1253.72	1258.97	2.63
12.20	85.65	91.64	1411.76	1418.65	3.44
12.23	91.64	97.13	1578.41	1589.04	5.31
12.27	97.13	101.87	1747.57	1767.18	9.80
12.30	101.87	105.58	1902.81	1946.57	21.88
12.33	105.58	107.92	2037.82	2110.26	36.22
12.37	107.92	108.52	2150.40	2251.33	50.46
12.40	108.52	107.43	2240.26	2366.84	63.29
12.43	107.43	105.21	2308.28	2456.21	73.96
12.47	105.21	102.50	2357.25	2520.92	81.84
12.50	102.50	99.61	2390.22	2564.96	87.37
12.53	99.61	96.55	2410.42	2592.33	90.95
12.57	96.55	93.35	2420.94	2606.58	92.82
12.60	93.35	89.99	2424.08	2610.84	93.38
12.63	89.99	86.50	2421.56	2607.42	92.93

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
12.67	86.50	82.89	2414.65	2598.05	91.70
12.70	82.89	79.15	2404.30	2584.04	89.87
12.73	79.15	75.31	2391.24	2566.34	87.55
12.77	75.31	71.36	2376.00	2545.70	84.85
12.80	71.36	67.33	2358.57	2522.67	82.05
12.83	67.33	63.23	2339.35	2497.26	78.96
12.87	63.23	59.09	2318.65	2469.91	75.63
12.90	59.09	54.94	2296.75	2440.97	72.11
12.93	54.94	50.80	2273.90	2410.77	68.44
12.97	50.80	46.72	2250.21	2379.63	64.71
13.00	46.72	42.74	2225.39	2347.73	61.17
13.03	42.74	38.88	2199.82	2314.85	57.52
13.07	38.88	35.20	2173.82	2281.43	53.81
13.10	35.20	31.78	2147.73	2247.90	50.08
13.13	31.78	28.73	2121.63	2214.71	46.54
13.17	28.73	26.19	2095.50	2182.14	43.32
13.20	26.19	24.27	2070.04	2150.41	40.19
13.23	24.27	22.98	2046.03	2120.50	37.23
13.27	22.98	22.09	2024.20	2093.29	34.54
13.30	22.09	21.37	2004.92	2069.27	32.18
13.33	21.37	20.70	1987.53	2048.38	30.42
13.37	20.70	20.07	1971.90	2029.60	28.85
13.40	20.07	19.48	1957.81	2012.67	27.43
13.43	19.48	18.94	1945.08	1997.37	26.14
13.47	18.94	18.44	1933.54	1983.51	24.98
13.50	18.44	17.97	1923.07	1970.92	23.93
13.53	17.97	17.54	1913.55	1959.48	22.97
13.57	17.54	17.13	1904.88	1949.06	22.09
13.60	17.13	16.76	1896.96	1939.55	21.29
13.63	16.76	16.41	1889.73	1930.86	20.56
13.67	16.41	16.08	1883.11	1922.90	19.90
13.70	16.08	15.78	1877.04	1915.60	19.28
13.73	15.78	15.48	1871.20	1908.89	18.85
13.77	15.48	15.20	1865.58	1902.46	18.44
13.80	15.20	14.93	1860.18	1896.27	18.04
13.83	14.93	14.67	1854.99	1890.32	17.66
13.87	14.67	14.41	1850.00	1884.59	17.30
13.90	14.41	14.16	1845.19	1879.08	16.95
13.93	14.16	13.92	1840.56	1873.77	16.61
13.97	13.92	13.69	1836.09	1868.64	16.28
14.00	13.69	13.46	1831.77	1863.70	15.96
14.03	13.46	13.24	1827.61	1858.93	15.66

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
14.07	13.24	13.03	1823.59	1854.32	15.36
14.10	13.03	12.82	1819.70	1849.86	15.08
14.13	12.82	12.63	1815.95	1845.56	14.81
14.17	12.63	12.43	1812.32	1841.40	14.54
14.20	12.43	12.24	1808.81	1837.38	14.28
14.23	12.24	12.06	1805.42	1833.49	14.03
14.27	12.06	11.89	1802.13	1829.72	13.79
14.30	11.89	11.72	1798.96	1826.09	13.56
14.33	11.72	11.56	1795.89	1822.57	13.34
14.37	11.56	11.40	1792.92	1819.17	13.12
14.40	11.40	11.25	1790.05	1815.88	12.91
14.43	11.25	11.10	1787.28	1812.70	12.71
14.47	11.10	10.96	1784.61	1809.63	12.51
14.50	10.96	10.83	1782.03	1806.67	12.32
14.53	10.83	10.71	1779.54	1803.82	12.14
14.57	10.71	10.59	1777.15	1801.08	11.97
14.60	10.59	10.48	1774.85	1798.45	11.80
14.63	10.48	10.37	1772.65	1795.93	11.64
14.67	10.37	10.27	1770.54	1793.50	11.48
14.70	10.27	10.17	1768.51	1791.18	11.33
14.73	10.17	10.08	1766.57	1788.96	11.19
14.77	10.08	9.99	1764.71	1786.83	11.06
14.80	9.99	9.91	1762.94	1784.79	10.93
14.83	9.91	9.83	1761.23	1782.84	10.80
14.87	9.83	9.75	1759.60	1780.97	10.68
14.90	9.75	9.67	1758.04	1779.17	10.57
14.93	9.67	9.60	1756.54	1777.46	10.46
14.97	9.60	9.53	1755.10	1775.81	10.35
15.00	9.53	9.46	1753.72	1774.22	10.25
15.03	9.46	9.39	1752.39	1772.70	10.16
15.07	9.39	9.33	1751.12	1771.24	10.06
15.10	9.33	9.26	1749.89	1769.83	9.97
15.13	9.26	9.20	1748.70	1768.48	9.89
15.17	9.20	9.14	1747.56	1767.16	9.80
15.20	9.14	9.08	1746.45	1765.90	9.72
15.23	9.08	9.01	1745.38	1764.67	9.64
15.27	9.01	8.95	1744.29	1763.47	9.59
15.30	8.95	8.89	1743.14	1762.26	9.56
15.33	8.89	8.83	1741.94	1760.99	9.53
15.37	8.83	8.77	1740.69	1759.67	9.49
15.40	8.77	8.71	1739.39	1758.29	9.45
15.43	8.71	8.65	1738.05	1756.87	9.41

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
15.47	8.65	8.59	1736.66	1755.41	9.37
15.50	8.59	8.53	1735.23	1753.90	9.33
15.53	8.53	8.47	1733.77	1752.35	9.29
15.57	8.47	8.41	1732.27	1750.77	9.25
15.60	8.41	8.35	1730.73	1749.14	9.21
15.63	8.35	8.28	1729.16	1747.48	9.16
15.67	8.28	8.22	1727.56	1745.79	9.11
15.70	8.22	8.16	1725.93	1744.07	9.07
15.73	8.16	8.10	1724.27	1742.32	9.02
15.77	8.10	8.04	1722.59	1740.53	8.97
15.80	8.04	7.97	1720.87	1738.72	8.92
15.83	7.97	7.91	1719.14	1736.89	8.87
15.87	7.91	7.85	1717.38	1735.02	8.82
15.90	7.85	7.79	1715.59	1733.14	8.77
15.93	7.79	7.73	1713.79	1731.23	8.72
15.97	7.73	7.66	1711.96	1729.30	8.67
16.00	7.66	7.60	1710.12	1727.35	8.62
16.03	7.60	7.54	1708.25	1725.38	8.56
16.07	7.54	7.48	1706.37	1723.39	8.51
16.10	7.48	7.41	1704.47	1721.39	8.46
16.13	7.41	7.35	1702.56	1719.36	8.40
16.17	7.35	7.29	1700.64	1717.33	8.35
16.20	7.29	7.23	1698.70	1715.28	8.29
16.23	7.23	7.18	1696.75	1713.23	8.24
16.27	7.18	7.12	1694.80	1711.16	8.18
16.30	7.12	7.06	1692.85	1709.09	8.12
16.33	7.06	7.01	1690.89	1707.02	8.07
16.37	7.01	6.95	1688.93	1704.95	8.01
16.40	6.95	6.90	1686.97	1702.89	7.96
16.43	6.90	6.85	1685.03	1700.83	7.90
16.47	6.85	6.80	1683.09	1698.78	7.85
16.50	6.80	6.76	1681.16	1696.74	7.79
16.53	6.76	6.72	1679.25	1694.72	7.74
16.57	6.72	6.67	1677.36	1692.72	7.68
16.60	6.67	6.63	1675.49	1690.75	7.63
16.63	6.63	6.59	1673.64	1688.79	7.58
16.67	6.59	6.56	1671.82	1686.87	7.52
16.70	6.56	6.52	1670.02	1684.97	7.47
16.73	6.52	6.49	1668.26	1683.11	7.42
16.77	6.49	6.46	1666.52	1681.27	7.37
16.80	6.46	6.43	1664.82	1679.47	7.33
16.83	6.43	6.40	1663.15	1677.70	7.28

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
16.87	6.40	6.37	1661.51	1675.97	7.23
16.90	6.37	6.34	1659.90	1674.27	7.18
16.93	6.34	6.31	1658.33	1672.61	7.14
16.97	6.31	6.29	1656.79	1670.98	7.10
17.00	6.29	6.26	1655.28	1669.38	7.05
17.03	6.26	6.24	1653.80	1667.83	7.01
17.07	6.24	6.21	1652.36	1666.30	6.97
17.10	6.21	6.19	1650.95	1664.81	6.93
17.13	6.19	6.17	1649.57	1663.35	6.89
17.17	6.17	6.14	1648.23	1661.93	6.85
17.20	6.14	6.12	1646.91	1660.54	6.81
17.23	6.12	6.10	1645.62	1659.17	6.78
17.27	6.10	6.08	1644.36	1657.84	6.74
17.30	6.08	6.06	1643.12	1656.54	6.71
17.33	6.06	6.03	1641.91	1655.26	6.67
17.37	6.03	6.01	1640.73	1654.00	6.64
17.40	6.01	5.99	1639.56	1652.77	6.60
17.43	5.99	5.97	1638.42	1651.57	6.57
17.47	5.97	5.95	1637.30	1650.38	6.54
17.50	5.95	5.92	1636.19	1649.21	6.51
17.53	5.92	5.90	1635.11	1648.06	6.48
17.57	5.90	5.88	1634.04	1646.93	6.45
17.60	5.88	5.86	1632.99	1645.82	6.42
17.63	5.86	5.83	1631.95	1644.72	6.39
17.67	5.83	5.81	1630.92	1643.64	6.36
17.70	5.81	5.79	1629.91	1642.57	6.33
17.73	5.79	5.77	1628.91	1641.51	6.30
17.77	5.77	5.75	1627.92	1640.47	6.27
17.80	5.75	5.72	1626.95	1639.44	6.24
17.83	5.72	5.70	1625.98	1638.42	6.22
17.87	5.70	5.68	1625.03	1637.41	6.19
17.90	5.68	5.66	1624.08	1636.41	6.16
17.93	5.66	5.63	1623.14	1635.42	6.14
17.97	5.63	5.61	1622.21	1634.43	6.11
18.00	5.61	5.59	1621.29	1633.46	6.08
18.03	5.59	5.57	1620.38	1632.49	6.06
18.07	5.57	5.54	1619.47	1631.53	6.03
18.10	5.54	5.52	1618.57	1630.58	6.01
18.13	5.52	5.50	1617.68	1629.64	5.98
18.17	5.50	5.48	1616.79	1628.70	5.96
18.20	5.48	5.45	1615.90	1627.76	5.93
18.23	5.45	5.43	1615.02	1626.83	5.90

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
18.27	5.43	5.41	1614.15	1625.91	5.88
18.30	5.41	5.39	1613.28	1624.99	5.85
18.33	5.39	5.36	1612.41	1624.07	5.83
18.37	5.36	5.34	1611.55	1623.16	5.81
18.40	5.34	5.32	1610.69	1622.26	5.78
18.43	5.32	5.30	1609.84	1621.35	5.76
18.47	5.30	5.27	1608.99	1620.45	5.73
18.50	5.27	5.25	1608.14	1619.55	5.71
18.53	5.25	5.23	1607.29	1618.66	5.69
18.57	5.23	5.20	1606.41	1617.76	5.68
18.60	5.20	5.18	1605.51	1616.84	5.66
18.63	5.18	5.16	1604.59	1615.90	5.65
18.67	5.16	5.14	1603.65	1614.93	5.64
18.70	5.14	5.11	1602.69	1613.95	5.63
18.73	5.11	5.09	1601.71	1612.94	5.62
18.77	5.09	5.07	1600.71	1611.91	5.60
18.80	5.07	5.04	1599.69	1610.87	5.59
18.83	5.04	5.02	1598.65	1609.80	5.58
18.87	5.02	5.00	1597.59	1608.71	5.56
18.90	5.00	4.98	1596.51	1607.61	5.55
18.93	4.98	4.95	1595.42	1606.49	5.53
18.97	4.95	4.93	1594.31	1605.35	5.52
19.00	4.93	4.91	1593.18	1604.19	5.50
19.03	4.91	4.88	1592.03	1603.01	5.49
19.07	4.88	4.86	1590.87	1601.82	5.48
19.10	4.86	4.84	1589.69	1600.61	5.46
19.13	4.84	4.81	1588.50	1599.39	5.44
19.17	4.81	4.79	1587.29	1598.15	5.43
19.20	4.79	4.77	1586.07	1596.90	5.41
19.23	4.77	4.74	1584.83	1595.63	5.40
19.27	4.74	4.72	1583.58	1594.34	5.38
19.30	4.72	4.70	1582.32	1593.05	5.36
19.33	4.70	4.67	1581.04	1591.74	5.35
19.37	4.67	4.65	1579.75	1590.41	5.33
19.40	4.65	4.63	1578.44	1589.07	5.31
19.43	4.63	4.60	1577.13	1587.72	5.30
19.47	4.60	4.58	1575.80	1586.36	5.28
19.50	4.58	4.56	1574.46	1584.98	5.26
19.53	4.56	4.53	1573.10	1583.60	5.25
19.57	4.53	4.51	1571.74	1582.20	5.23
19.60	4.51	4.49	1570.36	1580.79	5.21
19.63	4.49	4.46	1568.98	1579.36	5.19

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
19.67	4.46	4.44	1567.58	1577.93	5.17
19.70	4.44	4.42	1566.17	1576.49	5.16
19.73	4.42	4.39	1564.76	1575.03	5.14
19.77	4.39	4.37	1563.33	1573.57	5.12
19.80	4.37	4.35	1561.89	1572.10	5.10
19.83	4.35	4.32	1560.45	1570.61	5.08
19.87	4.32	4.30	1558.99	1569.12	5.06
19.90	4.30	4.28	1557.52	1567.61	5.05
19.93	4.28	4.25	1556.05	1566.10	5.03
19.97	4.25	4.23	1554.57	1564.58	5.01
20.00	4.23	4.21	1553.08	1563.05	4.99
20.03	4.21	4.18	1551.58	1561.51	4.97
20.07	4.18	4.16	1550.07	1559.97	4.95
20.10	4.16	4.14	1548.55	1558.41	4.93
20.13	4.14	4.11	1547.03	1556.85	4.91
20.17	4.11	4.09	1545.50	1555.28	4.89
20.20	4.09	4.07	1543.97	1553.71	4.87
20.23	4.07	4.05	1542.43	1552.13	4.85
20.27	4.05	4.03	1540.88	1550.54	4.83
20.30	4.03	4.01	1539.34	1548.96	4.81
20.33	4.01	3.99	1537.79	1547.37	4.79
20.37	3.99	3.97	1536.24	1545.78	4.77
20.40	3.97	3.95	1534.70	1544.20	4.75
20.43	3.95	3.93	1533.15	1542.61	4.73
20.47	3.93	3.92	1531.61	1541.04	4.71
20.50	3.92	3.90	1530.08	1539.46	4.69
20.53	3.90	3.89	1528.55	1537.90	4.67
20.57	3.89	3.87	1527.04	1536.34	4.65
20.60	3.87	3.86	1525.53	1534.80	4.63
20.63	3.86	3.85	1524.04	1533.26	4.61
20.67	3.85	3.84	1522.56	1531.74	4.59
20.70	3.84	3.83	1521.09	1530.24	4.58
20.73	3.83	3.82	1519.64	1528.75	4.56
20.77	3.82	3.81	1518.20	1527.28	4.54
20.80	3.81	3.80	1516.79	1525.83	4.52
20.83	3.80	3.79	1515.39	1524.39	4.50
20.87	3.79	3.78	1514.01	1522.98	4.48
20.90	3.78	3.78	1512.65	1521.58	4.47
20.93	3.78	3.77	1511.31	1520.21	4.45
20.97	3.77	3.76	1509.99	1518.85	4.43
21.00	3.76	3.76	1508.69	1517.52	4.42
21.03	3.76	3.75	1507.41	1516.21	4.40

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
21.07	3.75	3.75	1506.15	1514.92	4.38
21.10	3.75	3.74	1504.92	1513.65	4.37
21.13	3.74	3.74	1503.70	1512.40	4.35
21.17	3.74	3.73	1502.51	1511.18	4.34
21.20	3.73	3.73	1501.34	1509.98	4.32
21.23	3.73	3.72	1500.18	1508.79	4.31
21.27	3.72	3.72	1499.05	1507.63	4.29
21.30	3.72	3.71	1497.94	1506.49	4.28
21.33	3.71	3.71	1496.85	1505.37	4.26
21.37	3.71	3.71	1495.77	1504.27	4.25
21.40	3.71	3.70	1494.72	1503.19	4.23
21.43	3.70	3.70	1493.68	1502.12	4.22
21.47	3.70	3.69	1492.66	1501.08	4.21
21.50	3.69	3.69	1491.66	1500.05	4.20
21.53	3.69	3.68	1490.67	1499.04	4.18
21.57	3.68	3.68	1489.70	1498.05	4.17
21.60	3.68	3.67	1488.75	1497.07	4.16
21.63	3.67	3.67	1487.81	1496.11	4.15
21.67	3.67	3.67	1486.89	1495.16	4.13
21.70	3.67	3.66	1485.98	1494.23	4.12
21.73	3.66	3.66	1485.09	1493.31	4.11
21.77	3.66	3.65	1484.21	1492.41	4.10
21.80	3.65	3.65	1483.35	1491.52	4.09
21.83	3.65	3.64	1482.49	1490.65	4.08
21.87	3.64	3.64	1481.65	1489.79	4.07
21.90	3.64	3.64	1480.83	1488.94	4.06
21.93	3.64	3.63	1480.01	1488.10	4.05
21.97	3.63	3.63	1479.21	1487.28	4.03
22.00	3.63	3.62	1478.42	1486.47	4.02
22.03	3.62	3.62	1477.64	1485.67	4.01
22.07	3.62	3.61	1476.87	1484.88	4.00
22.10	3.61	3.61	1476.11	1484.10	3.99
22.13	3.61	3.61	1475.37	1483.34	3.99
22.17	3.61	3.60	1474.63	1482.58	3.98
22.20	3.60	3.60	1473.90	1481.84	3.97
22.23	3.60	3.59	1473.19	1481.10	3.96
22.27	3.59	3.59	1472.48	1480.38	3.95
22.30	3.59	3.58	1471.78	1479.66	3.94
22.33	3.58	3.58	1471.09	1478.95	3.93
22.37	3.58	3.57	1470.41	1478.25	3.92
22.40	3.57	3.57	1469.74	1477.56	3.91
22.43	3.57	3.57	1469.08	1476.88	3.90

HYDROGRAPH DISCHARGE TABLE Cont'd

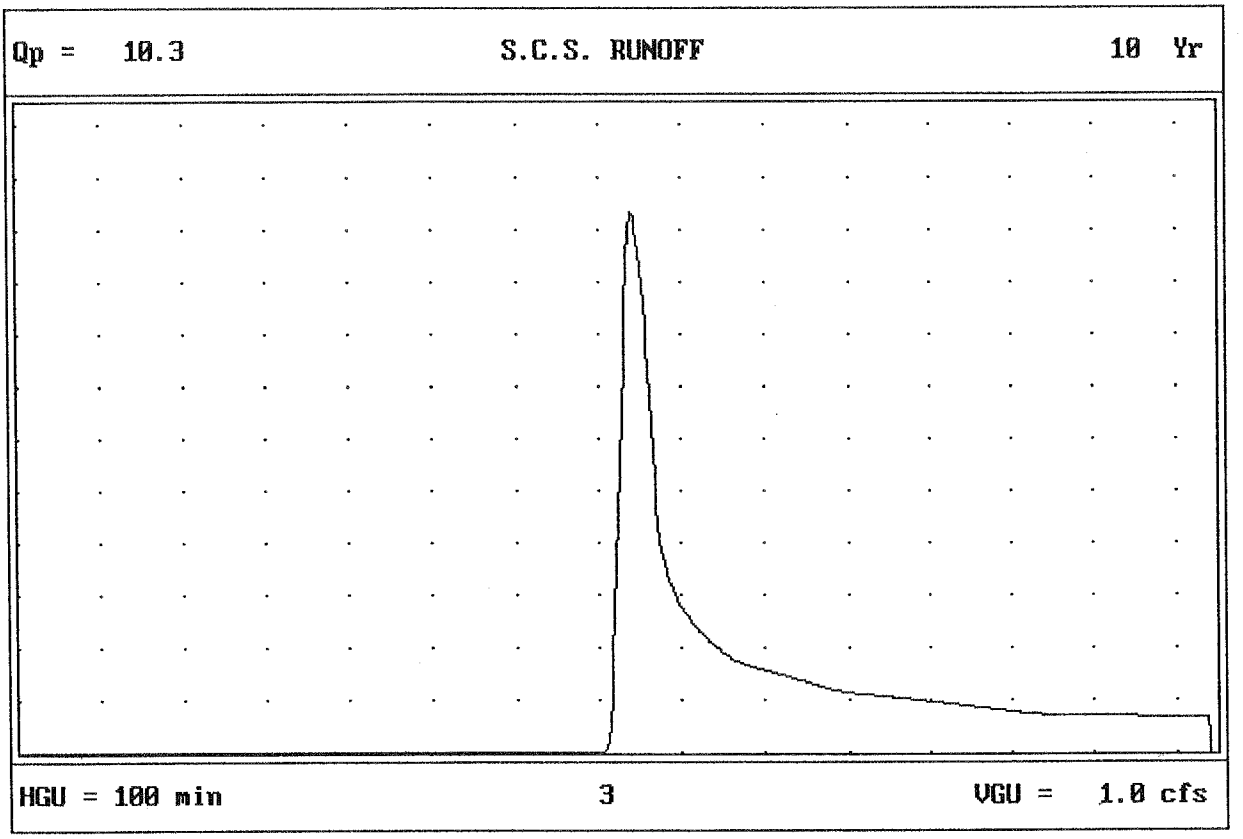
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
22.47	3.57	3.56	1468.42	1476.21	3.90
22.50	3.56	3.56	1467.77	1475.55	3.89
22.53	3.56	3.55	1467.12	1474.89	3.88
22.57	3.55	3.55	1466.48	1474.23	3.88
22.60	3.55	3.54	1465.83	1473.58	3.87
22.63	3.54	3.54	1465.19	1472.93	3.87
22.67	3.54	3.53	1464.55	1472.27	3.86
22.70	3.53	3.53	1463.91	1471.62	3.86
22.73	3.53	3.53	1463.27	1470.97	3.85
22.77	3.53	3.52	1462.63	1470.33	3.85
22.80	3.52	3.52	1462.00	1469.68	3.84
22.83	3.52	3.51	1461.36	1469.04	3.84
22.87	3.51	3.51	1460.73	1468.39	3.83
22.90	3.51	3.50	1460.10	1467.75	3.83
22.93	3.50	3.50	1459.46	1467.11	3.82
22.97	3.50	3.49	1458.83	1466.47	3.82
23.00	3.49	3.49	1458.20	1465.83	3.81
23.03	3.49	3.49	1457.58	1465.19	3.81
23.07	3.49	3.48	1456.95	1464.55	3.80
23.10	3.48	3.48	1456.32	1463.92	3.80
23.13	3.48	3.47	1455.70	1463.28	3.79
23.17	3.47	3.47	1455.07	1462.65	3.79
23.20	3.47	3.46	1454.45	1462.01	3.78
23.23	3.46	3.46	1453.83	1461.38	3.78
23.27	3.46	3.45	1453.21	1460.75	3.77
23.30	3.45	3.45	1452.59	1460.12	3.77
23.33	3.45	3.45	1451.97	1459.49	3.76
23.37	3.45	3.44	1451.35	1458.86	3.76
23.40	3.44	3.44	1450.73	1458.24	3.75
23.43	3.44	3.43	1450.11	1457.61	3.75
23.47	3.43	3.43	1449.50	1456.98	3.74
23.50	3.43	3.42	1448.88	1456.36	3.74
23.53	3.42	3.42	1448.27	1455.74	3.73
23.57	3.42	3.41	1447.66	1455.11	3.73
23.60	3.41	3.41	1447.04	1454.49	3.72
23.63	3.41	3.41	1446.43	1453.87	3.72
23.67	3.41	3.40	1445.82	1453.25	3.71
23.70	3.40	3.40	1445.21	1452.63	3.71
23.73	3.40	3.39	1444.60	1452.01	3.70
23.77	3.39	3.39	1443.99	1451.39	3.70
23.80	3.39	3.38	1443.38	1450.77	3.69
23.83	3.38	3.38	1442.77	1450.15	3.69

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
23.87	3.38	3.37	1442.17	1449.54	3.68
23.90	3.37	3.37	1441.56	1448.92	3.68
23.93	3.37	3.37	1440.96	1448.30	3.67
23.97	3.37	0.00	1440.35	1447.69	3.67
24.00	0.00	0.00	1436.44	1443.72	3.64

Maximum outflow (cfs) = 93.38
Maximum storage (cu ft) = 151048
Maximum elevation (ft) = 84.84

10 YEAR – 30 MINUTE STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 71739 / 1.647

HYDROLOGIC REPORT

10 YR STORM INFLOW....
WETLAND 1.....
.....

Hyd. No. 3

Hydrograph type	= S.C.S. RUNOFF	Peak discharge	= 10.34 cfs
Storm frequency	= 10 yr	Time interval	= 2 min
Basin area	= 65 ac	Basin curve No.	= 70
Ave basin slope	= 2 %	Hydraulic len	= 1200 ft
Basin lag	= 20.8 min	Time of concen	= 34.76 min
Total precip.	= 2.18 in	Distribution	= S.C.S. II

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
11.90	0.66	11.93	1.26	11.97	2.04	12.00	2.91
12.03	3.81	12.07	4.75	12.10	5.74	12.13	6.76
12.17	7.78	12.20	8.75	12.23	9.57	12.27	10.12
12.30	10.34	12.33	10.31	12.37	10.16	12.40	9.98
12.43	9.76	12.47	9.50	12.50	9.20	12.53	8.86
12.57	8.49	12.60	8.09	12.63	7.65	12.67	7.18
12.70	6.68	12.73	6.16	12.77	5.62	12.80	5.10
12.83	4.62	12.87	4.24	12.90	3.99	12.93	3.82
12.97	3.69	13.00	3.57	13.03	3.46	13.07	3.35
13.10	3.26	13.13	3.17	13.17	3.08	13.20	3.01
13.23	2.94	13.27	2.87	13.30	2.82	13.33	2.76
13.37	2.71	13.40	2.66	13.43	2.62	13.47	2.58
13.50	2.54	13.53	2.50	13.57	2.46	13.60	2.42
13.63	2.38	13.67	2.35	13.70	2.31	13.73	2.28
13.77	2.25	13.80	2.22	13.83	2.18	13.87	2.15
13.90	2.12	13.93	2.10	13.97	2.07	14.00	2.04
14.03	2.01	14.07	1.98	14.10	1.96	14.13	1.93
14.17	1.91	14.20	1.88	14.23	1.86	14.27	1.84
14.30	1.81	14.33	1.79	14.37	1.78	14.40	1.76
14.43	1.74	14.47	1.73	14.50	1.71	14.53	1.70
14.57	1.69	14.60	1.67	14.63	1.66	14.67	1.65
14.70	1.64	14.73	1.63	14.77	1.62	14.80	1.61
14.83	1.61	14.87	1.60	14.90	1.59	14.93	1.58
14.97	1.57	15.00	1.57	15.03	1.56	15.07	1.55
15.10	1.54	15.13	1.53	15.17	1.52	15.20	1.51
15.23	1.51	15.27	1.50	15.30	1.49	15.33	1.48
15.37	1.47	15.40	1.46	15.43	1.45	15.47	1.44
15.50	1.43	15.53	1.43	15.57	1.42	15.60	1.41
15.63	1.40	15.67	1.39	15.70	1.38	15.73	1.37

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
15.77	1.36	15.80	1.35	15.83	1.34	15.87	1.33
15.90	1.32	15.93	1.31	15.97	1.30	16.00	1.29
16.03	1.28	16.07	1.27	16.10	1.26	16.13	1.25
16.17	1.24	16.20	1.23	16.23	1.22	16.27	1.22
16.30	1.21	16.33	1.20	16.37	1.19	16.40	1.19
16.43	1.18	16.47	1.17	16.50	1.17	16.53	1.16
16.57	1.16	16.60	1.15	16.63	1.15	16.67	1.14
16.70	1.14	16.73	1.14	16.77	1.13	16.80	1.13
16.83	1.13	16.87	1.12	16.90	1.12	16.93	1.12
16.97	1.11	17.00	1.11	17.03	1.11	17.07	1.10
17.10	1.10	17.13	1.10	17.17	1.09	17.20	1.09
17.23	1.09	17.27	1.08	17.30	1.08	17.33	1.08
17.37	1.07	17.40	1.07	17.43	1.07	17.47	1.06
17.50	1.06	17.53	1.06	17.57	1.05	17.60	1.05
17.63	1.05	17.67	1.04	17.70	1.04	17.73	1.04
17.77	1.03	17.80	1.03	17.83	1.03	17.87	1.02
17.90	1.02	17.93	1.02	17.97	1.01	18.00	1.01
18.03	1.01	18.07	1.00	18.10	1.00	18.13	0.99

1
0

HYDROLOGIC REPORT

10 YR STORM ROUTED....
WETLAND 1.....
.....

Hyd. No. 4

Hydrograph type = RESERVOIR ROUTE Peak discharge = 1.07 cfs
Storm frequency = 10 yr Time interval = 2 min
Inflow hyd. no. = 3 Reservoir no. = 1

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00
0.37	0.00	0.00	0.00	0.00	0.00
0.40	0.00	0.00	0.00	0.00	0.00
0.43	0.00	0.00	0.00	0.00	0.00
0.47	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00
0.53	0.00	0.00	0.00	0.00	0.00
0.57	0.00	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00
0.63	0.00	0.00	0.00	0.00	0.00
0.67	0.00	0.00	0.00	0.00	0.00
0.70	0.00	0.00	0.00	0.00	0.00
0.73	0.00	0.00	0.00	0.00	0.00
0.77	0.00	0.00	0.00	0.00	0.00
0.80	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.83	0.00	0.00	0.00	0.00	0.00
0.87	0.00	0.00	0.00	0.00	0.00
0.90	0.00	0.00	0.00	0.00	0.00
0.93	0.00	0.00	0.00	0.00	0.00
0.97	0.00	0.00	0.00	0.00	0.00
1.00	0.00	0.00	0.00	0.00	0.00
1.03	0.00	0.00	0.00	0.00	0.00
1.07	0.00	0.00	0.00	0.00	0.00
1.10	0.00	0.00	0.00	0.00	0.00
1.13	0.00	0.00	0.00	0.00	0.00
1.17	0.00	0.00	0.00	0.00	0.00
1.20	0.00	0.00	0.00	0.00	0.00
1.23	0.00	0.00	0.00	0.00	0.00
1.27	0.00	0.00	0.00	0.00	0.00
1.30	0.00	0.00	0.00	0.00	0.00
1.33	0.00	0.00	0.00	0.00	0.00
1.37	0.00	0.00	0.00	0.00	0.00
1.40	0.00	0.00	0.00	0.00	0.00
1.43	0.00	0.00	0.00	0.00	0.00
1.47	0.00	0.00	0.00	0.00	0.00
1.50	0.00	0.00	0.00	0.00	0.00
1.53	0.00	0.00	0.00	0.00	0.00
1.57	0.00	0.00	0.00	0.00	0.00
1.60	0.00	0.00	0.00	0.00	0.00
1.63	0.00	0.00	0.00	0.00	0.00
1.67	0.00	0.00	0.00	0.00	0.00
1.70	0.00	0.00	0.00	0.00	0.00
1.73	0.00	0.00	0.00	0.00	0.00
1.77	0.00	0.00	0.00	0.00	0.00
1.80	0.00	0.00	0.00	0.00	0.00
1.83	0.00	0.00	0.00	0.00	0.00
1.87	0.00	0.00	0.00	0.00	0.00
1.90	0.00	0.00	0.00	0.00	0.00
1.93	0.00	0.00	0.00	0.00	0.00
1.97	0.00	0.00	0.00	0.00	0.00
2.00	0.00	0.00	0.00	0.00	0.00
2.03	0.00	0.00	0.00	0.00	0.00
2.07	0.00	0.00	0.00	0.00	0.00
2.10	0.00	0.00	0.00	0.00	0.00
2.13	0.00	0.00	0.00	0.00	0.00
2.17	0.00	0.00	0.00	0.00	0.00
2.20	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
2.23	0.00	0.00	0.00	0.00	0.00
2.27	0.00	0.00	0.00	0.00	0.00
2.30	0.00	0.00	0.00	0.00	0.00
2.33	0.00	0.00	0.00	0.00	0.00
2.37	0.00	0.00	0.00	0.00	0.00
2.40	0.00	0.00	0.00	0.00	0.00
2.43	0.00	0.00	0.00	0.00	0.00
2.47	0.00	0.00	0.00	0.00	0.00
2.50	0.00	0.00	0.00	0.00	0.00
2.53	0.00	0.00	0.00	0.00	0.00
2.57	0.00	0.00	0.00	0.00	0.00
2.60	0.00	0.00	0.00	0.00	0.00
2.63	0.00	0.00	0.00	0.00	0.00
2.67	0.00	0.00	0.00	0.00	0.00
2.70	0.00	0.00	0.00	0.00	0.00
2.73	0.00	0.00	0.00	0.00	0.00
2.77	0.00	0.00	0.00	0.00	0.00
2.80	0.00	0.00	0.00	0.00	0.00
2.83	0.00	0.00	0.00	0.00	0.00
2.87	0.00	0.00	0.00	0.00	0.00
2.90	0.00	0.00	0.00	0.00	0.00
2.93	0.00	0.00	0.00	0.00	0.00
2.97	0.00	0.00	0.00	0.00	0.00
3.00	0.00	0.00	0.00	0.00	0.00
3.03	0.00	0.00	0.00	0.00	0.00
3.07	0.00	0.00	0.00	0.00	0.00
3.10	0.00	0.00	0.00	0.00	0.00
3.13	0.00	0.00	0.00	0.00	0.00
3.17	0.00	0.00	0.00	0.00	0.00
3.20	0.00	0.00	0.00	0.00	0.00
3.23	0.00	0.00	0.00	0.00	0.00
3.27	0.00	0.00	0.00	0.00	0.00
3.30	0.00	0.00	0.00	0.00	0.00
3.33	0.00	0.00	0.00	0.00	0.00
3.37	0.00	0.00	0.00	0.00	0.00
3.40	0.00	0.00	0.00	0.00	0.00
3.43	0.00	0.00	0.00	0.00	0.00
3.47	0.00	0.00	0.00	0.00	0.00
3.50	0.00	0.00	0.00	0.00	0.00
3.53	0.00	0.00	0.00	0.00	0.00
3.57	0.00	0.00	0.00	0.00	0.00
3.60	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.63	0.00	0.00	0.00	0.00	0.00
3.67	0.00	0.00	0.00	0.00	0.00
3.70	0.00	0.00	0.00	0.00	0.00
3.73	0.00	0.00	0.00	0.00	0.00
3.77	0.00	0.00	0.00	0.00	0.00
3.80	0.00	0.00	0.00	0.00	0.00
3.83	0.00	0.00	0.00	0.00	0.00
3.87	0.00	0.00	0.00	0.00	0.00
3.90	0.00	0.00	0.00	0.00	0.00
3.93	0.00	0.00	0.00	0.00	0.00
3.97	0.00	0.00	0.00	0.00	0.00
4.00	0.00	0.00	0.00	0.00	0.00
4.03	0.00	0.00	0.00	0.00	0.00
4.07	0.00	0.00	0.00	0.00	0.00
4.10	0.00	0.00	0.00	0.00	0.00
4.13	0.00	0.00	0.00	0.00	0.00
4.17	0.00	0.00	0.00	0.00	0.00
4.20	0.00	0.00	0.00	0.00	0.00
4.23	0.00	0.00	0.00	0.00	0.00
4.27	0.00	0.00	0.00	0.00	0.00
4.30	0.00	0.00	0.00	0.00	0.00
4.33	0.00	0.00	0.00	0.00	0.00
4.37	0.00	0.00	0.00	0.00	0.00
4.40	0.00	0.00	0.00	0.00	0.00
4.43	0.00	0.00	0.00	0.00	0.00
4.47	0.00	0.00	0.00	0.00	0.00
4.50	0.00	0.00	0.00	0.00	0.00
4.53	0.00	0.00	0.00	0.00	0.00
4.57	0.00	0.00	0.00	0.00	0.00
4.60	0.00	0.00	0.00	0.00	0.00
4.63	0.00	0.00	0.00	0.00	0.00
4.67	0.00	0.00	0.00	0.00	0.00
4.70	0.00	0.00	0.00	0.00	0.00
4.73	0.00	0.00	0.00	0.00	0.00
4.77	0.00	0.00	0.00	0.00	0.00
4.80	0.00	0.00	0.00	0.00	0.00
4.83	0.00	0.00	0.00	0.00	0.00
4.87	0.00	0.00	0.00	0.00	0.00
4.90	0.00	0.00	0.00	0.00	0.00
4.93	0.00	0.00	0.00	0.00	0.00
4.97	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
5.03	0.00	0.00	0.00	0.00	0.00
5.07	0.00	0.00	0.00	0.00	0.00
5.10	0.00	0.00	0.00	0.00	0.00
5.13	0.00	0.00	0.00	0.00	0.00
5.17	0.00	0.00	0.00	0.00	0.00
5.20	0.00	0.00	0.00	0.00	0.00
5.23	0.00	0.00	0.00	0.00	0.00
5.27	0.00	0.00	0.00	0.00	0.00
5.30	0.00	0.00	0.00	0.00	0.00
5.33	0.00	0.00	0.00	0.00	0.00
5.37	0.00	0.00	0.00	0.00	0.00
5.40	0.00	0.00	0.00	0.00	0.00
5.43	0.00	0.00	0.00	0.00	0.00
5.47	0.00	0.00	0.00	0.00	0.00
5.50	0.00	0.00	0.00	0.00	0.00
5.53	0.00	0.00	0.00	0.00	0.00
5.57	0.00	0.00	0.00	0.00	0.00
5.60	0.00	0.00	0.00	0.00	0.00
5.63	0.00	0.00	0.00	0.00	0.00
5.67	0.00	0.00	0.00	0.00	0.00
5.70	0.00	0.00	0.00	0.00	0.00
5.73	0.00	0.00	0.00	0.00	0.00
5.77	0.00	0.00	0.00	0.00	0.00
5.80	0.00	0.00	0.00	0.00	0.00
5.83	0.00	0.00	0.00	0.00	0.00
5.87	0.00	0.00	0.00	0.00	0.00
5.90	0.00	0.00	0.00	0.00	0.00
5.93	0.00	0.00	0.00	0.00	0.00
5.97	0.00	0.00	0.00	0.00	0.00
6.00	0.00	0.00	0.00	0.00	0.00
6.03	0.00	0.00	0.00	0.00	0.00
6.07	0.00	0.00	0.00	0.00	0.00
6.10	0.00	0.00	0.00	0.00	0.00
6.13	0.00	0.00	0.00	0.00	0.00
6.17	0.00	0.00	0.00	0.00	0.00
6.20	0.00	0.00	0.00	0.00	0.00
6.23	0.00	0.00	0.00	0.00	0.00
6.27	0.00	0.00	0.00	0.00	0.00
6.30	0.00	0.00	0.00	0.00	0.00
6.33	0.00	0.00	0.00	0.00	0.00
6.37	0.00	0.00	0.00	0.00	0.00
6.40	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.43	0.00	0.00	0.00	0.00	0.00
6.47	0.00	0.00	0.00	0.00	0.00
6.50	0.00	0.00	0.00	0.00	0.00
6.53	0.00	0.00	0.00	0.00	0.00
6.57	0.00	0.00	0.00	0.00	0.00
6.60	0.00	0.00	0.00	0.00	0.00
6.63	0.00	0.00	0.00	0.00	0.00
6.67	0.00	0.00	0.00	0.00	0.00
6.70	0.00	0.00	0.00	0.00	0.00
6.73	0.00	0.00	0.00	0.00	0.00
6.77	0.00	0.00	0.00	0.00	0.00
6.80	0.00	0.00	0.00	0.00	0.00
6.83	0.00	0.00	0.00	0.00	0.00
6.87	0.00	0.00	0.00	0.00	0.00
6.90	0.00	0.00	0.00	0.00	0.00
6.93	0.00	0.00	0.00	0.00	0.00
6.97	0.00	0.00	0.00	0.00	0.00
7.00	0.00	0.00	0.00	0.00	0.00
7.03	0.00	0.00	0.00	0.00	0.00
7.07	0.00	0.00	0.00	0.00	0.00
7.10	0.00	0.00	0.00	0.00	0.00
7.13	0.00	0.00	0.00	0.00	0.00
7.17	0.00	0.00	0.00	0.00	0.00
7.20	0.00	0.00	0.00	0.00	0.00
7.23	0.00	0.00	0.00	0.00	0.00
7.27	0.00	0.00	0.00	0.00	0.00
7.30	0.00	0.00	0.00	0.00	0.00
7.33	0.00	0.00	0.00	0.00	0.00
7.37	0.00	0.00	0.00	0.00	0.00
7.40	0.00	0.00	0.00	0.00	0.00
7.43	0.00	0.00	0.00	0.00	0.00
7.47	0.00	0.00	0.00	0.00	0.00
7.50	0.00	0.00	0.00	0.00	0.00
7.53	0.00	0.00	0.00	0.00	0.00
7.57	0.00	0.00	0.00	0.00	0.00
7.60	0.00	0.00	0.00	0.00	0.00
7.63	0.00	0.00	0.00	0.00	0.00
7.67	0.00	0.00	0.00	0.00	0.00
7.70	0.00	0.00	0.00	0.00	0.00
7.73	0.00	0.00	0.00	0.00	0.00
7.77	0.00	0.00	0.00	0.00	0.00
7.80	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
7.83	0.00	0.00	0.00	0.00	0.00
7.87	0.00	0.00	0.00	0.00	0.00
7.90	0.00	0.00	0.00	0.00	0.00
7.93	0.00	0.00	0.00	0.00	0.00
7.97	0.00	0.00	0.00	0.00	0.00
8.00	0.00	0.00	0.00	0.00	0.00
8.03	0.00	0.00	0.00	0.00	0.00
8.07	0.00	0.00	0.00	0.00	0.00
8.10	0.00	0.00	0.00	0.00	0.00
8.13	0.00	0.00	0.00	0.00	0.00
8.17	0.00	0.00	0.00	0.00	0.00
8.20	0.00	0.00	0.00	0.00	0.00
8.23	0.00	0.00	0.00	0.00	0.00
8.27	0.00	0.00	0.00	0.00	0.00
8.30	0.00	0.00	0.00	0.00	0.00
8.33	0.00	0.00	0.00	0.00	0.00
8.37	0.00	0.00	0.00	0.00	0.00
8.40	0.00	0.00	0.00	0.00	0.00
8.43	0.00	0.00	0.00	0.00	0.00
8.47	0.00	0.00	0.00	0.00	0.00
8.50	0.00	0.00	0.00	0.00	0.00
8.53	0.00	0.00	0.00	0.00	0.00
8.57	0.00	0.00	0.00	0.00	0.00
8.60	0.00	0.00	0.00	0.00	0.00
8.63	0.00	0.00	0.00	0.00	0.00
8.67	0.00	0.00	0.00	0.00	0.00
8.70	0.00	0.00	0.00	0.00	0.00
8.73	0.00	0.00	0.00	0.00	0.00
8.77	0.00	0.00	0.00	0.00	0.00
8.80	0.00	0.00	0.00	0.00	0.00
8.83	0.00	0.00	0.00	0.00	0.00
8.87	0.00	0.00	0.00	0.00	0.00
8.90	0.00	0.00	0.00	0.00	0.00
8.93	0.00	0.00	0.00	0.00	0.00
8.97	0.00	0.00	0.00	0.00	0.00
9.00	0.00	0.00	0.00	0.00	0.00
9.03	0.00	0.00	0.00	0.00	0.00
9.07	0.00	0.00	0.00	0.00	0.00
9.10	0.00	0.00	0.00	0.00	0.00
9.13	0.00	0.00	0.00	0.00	0.00
9.17	0.00	0.00	0.00	0.00	0.00
9.20	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
9.23	0.00	0.00	0.00	0.00	0.00
9.27	0.00	0.00	0.00	0.00	0.00
9.30	0.00	0.00	0.00	0.00	0.00
9.33	0.00	0.00	0.00	0.00	0.00
9.37	0.00	0.00	0.00	0.00	0.00
9.40	0.00	0.00	0.00	0.00	0.00
9.43	0.00	0.00	0.00	0.00	0.00
9.47	0.00	0.00	0.00	0.00	0.00
9.50	0.00	0.00	0.00	0.00	0.00
9.53	0.00	0.00	0.00	0.00	0.00
9.57	0.00	0.00	0.00	0.00	0.00
9.60	0.00	0.00	0.00	0.00	0.00
9.63	0.00	0.00	0.00	0.00	0.00
9.67	0.00	0.00	0.00	0.00	0.00
9.70	0.00	0.00	0.00	0.00	0.00
9.73	0.00	0.00	0.00	0.00	0.00
9.77	0.00	0.00	0.00	0.00	0.00
9.80	0.00	0.00	0.00	0.00	0.00
9.83	0.00	0.00	0.00	0.00	0.00
9.87	0.00	0.00	0.00	0.00	0.00
9.90	0.00	0.00	0.00	0.00	0.00
9.93	0.00	0.00	0.00	0.00	0.00
9.97	0.00	0.00	0.00	0.00	0.00
10.00	0.00	0.00	0.00	0.00	0.00
10.03	0.00	0.00	0.00	0.00	0.00
10.07	0.00	0.00	0.00	0.00	0.00
10.10	0.00	0.00	0.00	0.00	0.00
10.13	0.00	0.00	0.00	0.00	0.00
10.17	0.00	0.00	0.00	0.00	0.00
10.20	0.00	0.00	0.00	0.00	0.00
10.23	0.00	0.00	0.00	0.00	0.00
10.27	0.00	0.00	0.00	0.00	0.00
10.30	0.00	0.00	0.00	0.00	0.00
10.33	0.00	0.00	0.00	0.00	0.00
10.37	0.00	0.00	0.00	0.00	0.00
10.40	0.00	0.00	0.00	0.00	0.00
10.43	0.00	0.00	0.00	0.00	0.00
10.47	0.00	0.00	0.00	0.00	0.00
10.50	0.00	0.00	0.00	0.00	0.00
10.53	0.00	0.00	0.00	0.00	0.00
10.57	0.00	0.00	0.00	0.00	0.00
10.60	0.00	0.00	0.00	0.00	0.00

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.63	0.00	0.00	0.00	0.00	0.00
10.67	0.00	0.00	0.00	0.00	0.00
10.70	0.00	0.00	0.00	0.00	0.00
10.73	0.00	0.00	0.00	0.00	0.00
10.77	0.00	0.00	0.00	0.00	0.00
10.80	0.00	0.00	0.00	0.00	0.00
10.83	0.00	0.00	0.00	0.00	0.00
10.87	0.00	0.00	0.00	0.00	0.00
10.90	0.00	0.00	0.00	0.00	0.00
10.93	0.00	0.00	0.00	0.00	0.00
10.97	0.00	0.00	0.00	0.00	0.00
11.00	0.00	0.00	0.00	0.00	0.00
11.03	0.00	0.00	0.00	0.00	0.00
11.07	0.00	0.00	0.00	0.00	0.00
11.10	0.00	0.00	0.00	0.00	0.00
11.13	0.00	0.00	0.00	0.00	0.00
11.17	0.00	0.00	0.00	0.00	0.00
11.20	0.00	0.00	0.00	0.00	0.00
11.23	0.00	0.00	0.00	0.00	0.00
11.27	0.00	0.00	0.00	0.00	0.00
11.30	0.00	0.00	0.00	0.00	0.00
11.33	0.00	0.00	0.00	0.00	0.00
11.37	0.00	0.00	0.00	0.00	0.00
11.40	0.00	0.00	0.00	0.00	0.00
11.43	0.00	0.00	0.00	0.00	0.00
11.47	0.00	0.00	0.00	0.00	0.00
11.50	0.00	0.00	0.00	0.00	0.00
11.53	0.00	0.00	0.00	0.00	0.00
11.57	0.00	0.00	0.00	0.00	0.00
11.60	0.00	0.00	0.00	0.00	0.00
11.63	0.00	0.00	0.00	0.00	0.00
11.67	0.00	0.00	0.00	0.00	0.00
11.70	0.00	0.00	0.00	0.00	0.00
11.73	0.00	0.00	0.00	0.00	0.00
11.77	0.00	0.02	0.00	0.00	0.00
11.80	0.02	0.09	0.02	0.02	0.00
11.83	0.09	0.28	0.13	0.13	0.00
11.87	0.28	0.66	0.51	0.51	0.00
11.90	0.66	1.26	1.45	1.45	0.00
11.93	1.26	2.04	3.37	3.38	0.00
11.97	2.04	2.91	6.67	6.68	0.00
12.00	2.91	3.81	11.60	11.62	0.01

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
12.03	3.81	4.75	18.30	18.32	0.01
12.07	4.75	5.74	26.83	26.86	0.02
12.10	5.74	6.76	37.28	37.32	0.02
12.13	6.76	7.78	49.71	49.77	0.03
12.17	7.78	8.75	64.17	64.25	0.04
12.20	8.75	9.57	80.61	80.71	0.05
12.23	9.57	10.12	98.82	98.94	0.06
12.27	10.12	10.34	118.38	118.52	0.07
12.30	10.34	10.31	138.67	138.84	0.08
12.33	10.31	10.16	159.11	159.32	0.10
12.37	10.16	9.98	179.34	179.59	0.12
12.40	9.98	9.76	199.20	199.48	0.14
12.43	9.76	9.50	218.62	218.94	0.16
12.47	9.50	9.20	237.52	237.87	0.18
12.50	9.20	8.86	255.83	256.22	0.19
12.53	8.86	8.49	273.45	273.89	0.22
12.57	8.49	8.09	290.29	290.81	0.26
12.60	8.09	7.65	306.29	306.87	0.29
12.63	7.65	7.18	321.37	322.02	0.33
12.67	7.18	6.68	335.48	336.20	0.36
12.70	6.68	6.16	348.57	349.34	0.39
12.73	6.16	5.62	360.58	361.41	0.41
12.77	5.62	5.10	371.49	372.36	0.44
12.80	5.10	4.62	381.29	382.21	0.46
12.83	4.62	4.24	390.05	391.01	0.48
12.87	4.24	3.99	397.92	398.91	0.50
12.90	3.99	3.82	405.14	406.15	0.51
12.93	3.82	3.69	411.90	412.95	0.52
12.97	3.69	3.57	418.35	419.42	0.53
13.00	3.57	3.46	424.53	425.61	0.54
13.03	3.46	3.35	430.45	431.56	0.55
13.07	3.35	3.26	436.13	437.26	0.56
13.10	3.26	3.17	441.59	442.74	0.57
13.13	3.17	3.08	446.85	448.02	0.58
13.17	3.08	3.01	451.92	453.10	0.59
13.20	3.01	2.94	456.81	458.01	0.60
13.23	2.94	2.87	461.53	462.75	0.61
13.27	2.87	2.82	466.11	467.35	0.62
13.30	2.82	2.76	470.54	471.80	0.63
13.33	2.76	2.71	474.85	476.12	0.63
13.37	2.71	2.66	479.04	480.32	0.64
13.40	2.66	2.62	483.12	484.42	0.65

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
13.43	2.62	2.58	487.09	488.40	0.66
13.47	2.58	2.54	490.96	492.29	0.66
13.50	2.54	2.50	494.74	496.08	0.67
13.53	2.50	2.46	498.42	499.77	0.68
13.57	2.46	2.42	502.01	503.38	0.68
13.60	2.42	2.38	505.51	506.89	0.69
13.63	2.38	2.35	508.92	510.31	0.70
13.67	2.35	2.31	512.25	513.66	0.70
13.70	2.31	2.28	515.50	516.91	0.71
13.73	2.28	2.25	518.67	520.09	0.71
13.77	2.25	2.22	521.75	523.19	0.72
13.80	2.22	2.18	524.77	526.22	0.72
13.83	2.18	2.15	527.71	529.17	0.73
13.87	2.15	2.12	530.58	532.05	0.73
13.90	2.12	2.10	533.37	534.86	0.74
13.93	2.10	2.07	536.09	537.59	0.75
13.97	2.07	2.04	538.73	540.25	0.76
14.00	2.04	2.01	541.29	542.83	0.77
14.03	2.01	1.98	543.78	545.34	0.78
14.07	1.98	1.96	546.20	547.78	0.79
14.10	1.96	1.93	548.55	550.15	0.80
14.13	1.93	1.91	550.84	552.44	0.80
14.17	1.91	1.88	553.05	554.67	0.81
14.20	1.88	1.86	555.20	556.84	0.82
14.23	1.86	1.84	557.29	558.94	0.83
14.27	1.84	1.81	559.32	560.98	0.83
14.30	1.81	1.79	561.29	562.97	0.84
14.33	1.79	1.78	563.20	564.89	0.85
14.37	1.78	1.76	565.06	566.77	0.85
14.40	1.76	1.74	566.88	568.60	0.86
14.43	1.74	1.73	568.64	570.38	0.87
14.47	1.73	1.71	570.37	572.11	0.87
14.50	1.71	1.70	572.05	573.81	0.88
14.53	1.70	1.69	573.69	575.46	0.88
14.57	1.69	1.67	575.30	577.08	0.89
14.60	1.67	1.66	576.87	578.66	0.90
14.63	1.66	1.65	578.40	580.20	0.90
14.67	1.65	1.64	579.90	581.72	0.91
14.70	1.64	1.63	581.38	583.20	0.91
14.73	1.63	1.62	582.82	584.65	0.92
14.77	1.62	1.61	584.23	586.08	0.92
14.80	1.61	1.61	585.62	587.47	0.93

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
14.83	1.61	1.60	586.98	588.84	0.93
14.87	1.60	1.59	588.32	590.19	0.94
14.90	1.59	1.58	589.62	591.50	0.94
14.93	1.58	1.57	590.91	592.79	0.94
14.97	1.57	1.57	592.16	594.06	0.95
15.00	1.57	1.56	593.40	595.30	0.95
15.03	1.56	1.55	594.61	596.52	0.96
15.07	1.55	1.54	595.79	597.71	0.96
15.10	1.54	1.53	596.95	598.88	0.97
15.13	1.53	1.52	598.08	600.02	0.97
15.17	1.52	1.51	599.19	601.14	0.97
15.20	1.51	1.51	600.27	602.23	0.98
15.23	1.51	1.50	601.33	603.29	0.98
15.27	1.50	1.49	602.37	604.34	0.98
15.30	1.49	1.48	603.38	605.35	0.99
15.33	1.48	1.47	604.36	606.35	0.99
15.37	1.47	1.46	605.33	607.31	0.99
15.40	1.46	1.45	606.26	608.26	1.00
15.43	1.45	1.44	607.17	609.18	1.00
15.47	1.44	1.43	608.06	610.07	1.00
15.50	1.43	1.43	608.93	610.94	1.01
15.53	1.43	1.42	609.77	611.79	1.01
15.57	1.42	1.41	610.58	612.61	1.01
15.60	1.41	1.40	611.38	613.41	1.02
15.63	1.40	1.39	612.14	614.18	1.02
15.67	1.39	1.38	612.89	614.93	1.02
15.70	1.38	1.37	613.61	615.65	1.02
15.73	1.37	1.36	614.30	616.36	1.03
15.77	1.36	1.35	614.98	617.03	1.03
15.80	1.35	1.34	615.63	617.69	1.03
15.83	1.34	1.33	616.25	618.32	1.03
15.87	1.33	1.32	616.85	618.92	1.03
15.90	1.32	1.31	617.43	619.51	1.04
15.93	1.31	1.30	617.99	620.06	1.04
15.97	1.30	1.29	618.52	620.60	1.04
16.00	1.29	1.28	619.03	621.11	1.04
16.03	1.28	1.27	619.51	621.60	1.04
16.07	1.27	1.26	619.97	622.07	1.05
16.10	1.26	1.25	620.41	622.51	1.05
16.13	1.25	1.24	620.83	622.93	1.05
16.17	1.24	1.23	621.23	623.33	1.05
16.20	1.23	1.22	621.60	623.70	1.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
16.23	1.22	1.22	621.95	624.06	1.05
16.27	1.22	1.21	622.28	624.39	1.05
16.30	1.21	1.20	622.60	624.71	1.06
16.33	1.20	1.19	622.89	625.01	1.06
16.37	1.19	1.19	623.17	625.29	1.06
16.40	1.19	1.18	623.43	625.55	1.06
16.43	1.18	1.17	623.68	625.80	1.06
16.47	1.17	1.17	623.91	626.03	1.06
16.50	1.17	1.16	624.13	626.25	1.06
16.53	1.16	1.16	624.34	626.46	1.06
16.57	1.16	1.15	624.53	626.65	1.06
16.60	1.15	1.15	624.71	626.84	1.06
16.63	1.15	1.14	624.89	627.01	1.06
16.67	1.14	1.14	625.05	627.18	1.06
16.70	1.14	1.14	625.20	627.33	1.06
16.73	1.14	1.13	625.35	627.48	1.06
16.77	1.13	1.13	625.49	627.62	1.07
16.80	1.13	1.13	625.62	627.75	1.07
16.83	1.13	1.12	625.74	627.87	1.07
16.87	1.12	1.12	625.85	627.98	1.07
16.90	1.12	1.12	625.96	628.09	1.07
16.93	1.12	1.11	626.06	628.19	1.07
16.97	1.11	1.11	626.15	628.29	1.07
17.00	1.11	1.11	626.24	628.37	1.07
17.03	1.11	1.10	626.32	628.45	1.07
17.07	1.10	1.10	626.39	628.53	1.07
17.10	1.10	1.10	626.46	628.59	1.07
17.13	1.10	1.09	626.52	628.65	1.07
17.17	1.09	1.09	626.57	628.71	1.07
17.20	1.09	1.09	626.61	628.75	1.07
17.23	1.09	1.08	626.65	628.79	1.07
17.27	1.08	1.08	626.68	628.82	1.07
17.30	1.08	1.08	626.71	628.85	1.07
17.33	1.08	1.07	626.73	628.87	1.07
17.37	1.07	1.07	626.74	628.88	1.07
17.40	1.07	1.07	626.75	628.88	1.07
17.43	1.07	1.06	626.74	628.88	1.07
17.47	1.06	1.06	626.74	628.88	1.07
17.50	1.06	1.06	626.72	628.86	1.07
17.53	1.06	1.05	626.70	628.84	1.07
17.57	1.05	1.05	626.67	628.81	1.07
17.60	1.05	1.05	626.64	628.78	1.07

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
17.63	1.05	1.04	626.60	628.74	1.07
17.67	1.04	1.04	626.55	628.69	1.07
17.70	1.04	1.04	626.50	628.63	1.07
17.73	1.04	1.03	626.44	628.57	1.07
17.77	1.03	1.03	626.37	628.51	1.07
17.80	1.03	1.03	626.30	628.43	1.07
17.83	1.03	1.02	626.22	628.35	1.07
17.87	1.02	1.02	626.13	628.27	1.07
17.90	1.02	1.02	626.04	628.17	1.07
17.93	1.02	1.01	625.94	628.08	1.07
17.97	1.01	1.01	625.84	627.97	1.07
18.00	1.01	1.01	625.73	627.86	1.07
18.03	1.01	1.00	625.61	627.74	1.07
18.07	1.00	1.00	625.49	627.62	1.07
18.10	1.00	0.99	625.36	627.49	1.06
18.13	0.99	0.99	625.22	627.35	1.06
18.17	0.99	0.99	625.08	627.21	1.06
18.20	0.99	0.98	624.93	627.06	1.06
18.23	0.98	0.98	624.78	626.90	1.06
18.27	0.98	0.98	624.61	626.74	1.06
18.30	0.98	0.97	624.45	626.57	1.06
18.33	0.97	0.97	624.28	626.40	1.06
18.37	0.97	0.97	624.10	626.22	1.06
18.40	0.97	0.96	623.91	626.03	1.06
18.43	0.96	0.96	623.72	625.84	1.06
18.47	0.96	0.95	623.52	625.64	1.06
18.50	0.95	0.95	623.32	625.44	1.06
18.53	0.95	0.95	623.11	625.22	1.06
18.57	0.95	0.94	622.90	625.01	1.06
18.60	0.94	0.94	622.68	624.79	1.06
18.63	0.94	0.94	622.45	624.56	1.05
18.67	0.94	0.93	622.22	624.32	1.05
18.70	0.93	0.93	621.98	624.08	1.05
18.73	0.93	0.92	621.73	623.84	1.05
18.77	0.92	0.92	621.48	623.58	1.05
18.80	0.92	0.92	621.23	623.33	1.05
18.83	0.92	0.91	620.96	623.06	1.05
18.87	0.91	0.91	620.70	622.79	1.05
18.90	0.91	0.90	620.42	622.52	1.05
18.93	0.90	0.90	620.14	622.24	1.05
18.97	0.90	0.90	619.86	621.95	1.05
19.00	0.90	0.89	619.57	621.66	1.04

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
19.03	0.89	0.89	619.27	621.36	1.04
19.07	0.89	0.89	618.97	621.06	1.04
19.10	0.89	0.88	618.66	620.75	1.04
19.13	0.88	0.88	618.35	620.43	1.04
19.17	0.88	0.87	618.03	620.11	1.04
19.20	0.87	0.87	617.71	619.78	1.04
19.23	0.87	0.87	617.38	619.45	1.04
19.27	0.87	0.86	617.04	619.11	1.04
19.30	0.86	0.86	616.70	618.77	1.03
19.33	0.86	0.85	616.35	618.42	1.03
19.37	0.85	0.85	616.00	618.07	1.03
19.40	0.85	0.85	615.65	617.71	1.03
19.43	0.85	0.84	615.28	617.34	1.03
19.47	0.84	0.84	614.91	616.97	1.03
19.50	0.84	0.83	614.54	616.59	1.03
19.53	0.83	0.83	614.16	616.21	1.03
19.57	0.83	0.83	613.78	615.83	1.02
19.60	0.83	0.82	613.39	615.43	1.02
19.63	0.82	0.82	612.99	615.03	1.02
19.67	0.82	0.81	612.59	614.63	1.02
19.70	0.81	0.81	612.19	614.22	1.02
19.73	0.81	0.81	611.77	613.81	1.02
19.77	0.81	0.80	611.36	613.39	1.02
19.80	0.80	0.80	610.94	612.97	1.01
19.83	0.80	0.79	610.51	612.54	1.01
19.87	0.79	0.79	610.08	612.10	1.01
19.90	0.79	0.78	609.64	611.66	1.01
19.93	0.78	0.78	609.20	611.22	1.01
19.97	0.78	0.78	608.75	610.76	1.01
20.00	0.78	0.77	608.30	610.31	1.01
20.03	0.77	0.77	607.84	609.85	1.00
20.07	0.77	0.76	607.38	609.38	1.00
20.10	0.76	0.76	606.91	608.91	1.00
20.13	0.76	0.76	606.44	608.44	1.00
20.17	0.76	0.75	605.96	607.96	1.00
20.20	0.75	0.75	605.48	607.47	1.00
20.23	0.75	0.75	605.00	606.98	0.99
20.27	0.75	0.74	604.51	606.49	0.99
20.30	0.74	0.74	604.01	606.00	0.99
20.33	0.74	0.74	603.52	605.50	0.99
20.37	0.74	0.73	603.02	605.00	0.99
20.40	0.73	0.73	602.52	604.49	0.98

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
20.43	0.73	0.73	602.02	603.99	0.98
20.47	0.73	0.73	601.52	603.48	0.98
20.50	0.73	0.73	601.02	602.98	0.98
20.53	0.73	0.72	600.52	602.47	0.98
20.57	0.72	0.72	600.01	601.97	0.98
20.60	0.72	0.72	599.51	601.46	0.97
20.63	0.72	0.72	599.01	600.96	0.97
20.67	0.72	0.72	598.51	600.45	0.97
20.70	0.72	0.72	598.01	599.95	0.97
20.73	0.72	0.72	597.52	599.45	0.97
20.77	0.72	0.72	597.02	598.95	0.97
20.80	0.72	0.72	596.53	598.46	0.96
20.83	0.72	0.72	596.04	597.96	0.96
20.87	0.72	0.72	595.55	597.47	0.96
20.90	0.72	0.71	595.06	596.98	0.96
20.93	0.71	0.71	594.58	596.49	0.96
20.97	0.71	0.71	594.09	596.01	0.96
21.00	0.71	0.71	593.61	595.52	0.95
21.03	0.71	0.71	593.14	595.04	0.95
21.07	0.71	0.71	592.66	594.56	0.95
21.10	0.71	0.71	592.19	594.08	0.95
21.13	0.71	0.71	591.72	593.61	0.95
21.17	0.71	0.71	591.25	593.14	0.95
21.20	0.71	0.71	590.78	592.67	0.94
21.23	0.71	0.71	590.31	592.20	0.94
21.27	0.71	0.71	589.85	591.73	0.94
21.30	0.71	0.71	589.39	591.27	0.94
21.33	0.71	0.71	588.93	590.81	0.94
21.37	0.71	0.71	588.47	590.34	0.94
21.40	0.71	0.71	588.02	589.89	0.93
21.43	0.71	0.71	587.57	589.43	0.93
21.47	0.71	0.70	587.11	588.98	0.93
21.50	0.70	0.70	586.67	588.52	0.93
21.53	0.70	0.70	586.22	588.07	0.93
21.57	0.70	0.70	585.77	587.63	0.93
21.60	0.70	0.70	585.33	587.18	0.92
21.63	0.70	0.70	584.89	586.73	0.92
21.67	0.70	0.70	584.45	586.29	0.92
21.70	0.70	0.70	584.01	585.85	0.92
21.73	0.70	0.70	583.57	585.41	0.92
21.77	0.70	0.70	583.14	584.97	0.92
21.80	0.70	0.70	582.71	584.54	0.92

HYDROGRAPH DISCHARGE TABLE Cont'd

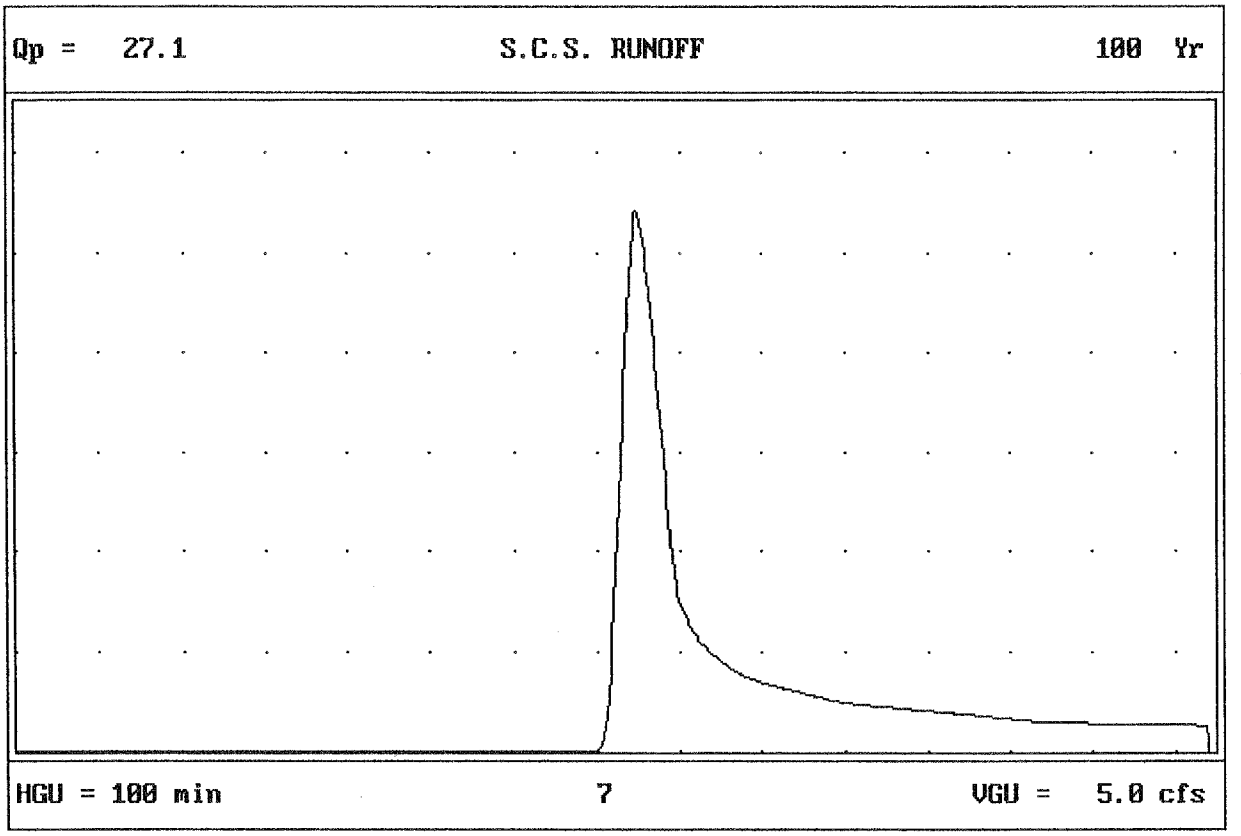
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
21.83	0.70	0.70	582.28	584.11	0.91
21.87	0.70	0.70	581.85	583.67	0.91
21.90	0.70	0.70	581.42	583.24	0.91
21.93	0.70	0.70	581.00	582.82	0.91
21.97	0.70	0.70	580.57	582.39	0.91
22.00	0.70	0.69	580.15	581.97	0.91
22.03	0.69	0.69	579.73	581.54	0.91
22.07	0.69	0.69	579.31	581.12	0.90
22.10	0.69	0.69	578.90	580.70	0.90
22.13	0.69	0.69	578.48	580.28	0.90
22.17	0.69	0.69	578.07	579.87	0.90
22.20	0.69	0.69	577.66	579.45	0.90
22.23	0.69	0.69	577.25	579.04	0.90
22.27	0.69	0.69	576.84	578.63	0.90
22.30	0.69	0.69	576.43	578.22	0.89
22.33	0.69	0.69	576.03	577.81	0.89
22.37	0.69	0.69	575.62	577.40	0.89
22.40	0.69	0.69	575.22	577.00	0.89
22.43	0.69	0.69	574.82	576.59	0.89
22.47	0.69	0.69	574.42	576.19	0.89
22.50	0.69	0.69	574.02	575.79	0.89
22.53	0.69	0.68	573.62	575.39	0.88
22.57	0.68	0.68	573.23	574.99	0.88
22.60	0.68	0.68	572.84	574.60	0.88
22.63	0.68	0.68	572.44	574.20	0.88
22.67	0.68	0.68	572.05	573.81	0.88
22.70	0.68	0.68	571.66	573.42	0.88
22.73	0.68	0.68	571.28	573.03	0.88
22.77	0.68	0.68	570.89	572.64	0.87
22.80	0.68	0.68	570.51	572.25	0.87
22.83	0.68	0.68	570.12	571.87	0.87
22.87	0.68	0.68	569.74	571.48	0.87
22.90	0.68	0.68	569.36	571.10	0.87
22.93	0.68	0.68	568.98	570.72	0.87
22.97	0.68	0.68	568.60	570.33	0.87
23.00	0.68	0.68	568.23	569.95	0.86
23.03	0.68	0.67	567.85	569.58	0.86
23.07	0.67	0.67	567.48	569.20	0.86
23.10	0.67	0.67	567.10	568.82	0.86
23.13	0.67	0.67	566.73	568.45	0.86
23.17	0.67	0.67	566.36	568.08	0.86
23.20	0.67	0.67	565.99	567.71	0.86

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
23.23	0.67	0.67	565.62	567.33	0.86
23.27	0.67	0.67	565.26	566.97	0.85
23.30	0.67	0.67	564.89	566.60	0.85
23.33	0.67	0.67	564.53	566.23	0.85
23.37	0.67	0.67	564.16	565.86	0.85
23.40	0.67	0.67	563.80	565.50	0.85
23.43	0.67	0.67	563.44	565.14	0.85
23.47	0.67	0.67	563.08	564.77	0.85
23.50	0.67	0.67	562.72	564.41	0.85
23.53	0.67	0.66	562.36	564.05	0.84
23.57	0.66	0.66	562.01	563.69	0.84
23.60	0.66	0.66	561.65	563.34	0.84
23.63	0.66	0.66	561.30	562.98	0.84
23.67	0.66	0.66	560.95	562.63	0.84
23.70	0.66	0.66	560.59	562.27	0.84
23.73	0.66	0.66	560.24	561.92	0.84
23.77	0.66	0.66	559.89	561.57	0.84
23.80	0.66	0.66	559.54	561.21	0.83
23.83	0.66	0.66	559.20	560.86	0.83
23.87	0.66	0.66	558.85	560.51	0.83
23.90	0.66	0.66	558.50	560.17	0.83
23.93	0.66	0.66	558.16	559.82	0.83
23.97	0.66	0.00	557.82	559.47	0.83
24.00	0.00	0.00	556.82	558.47	0.83

Maximum outflow (cfs) = 1.07
Maximum storage (cu ft) = 37669
Maximum elevation (ft) = 83.47

100 YEAR – 30 MINUTE STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 178968 / 4.109

HYDROLOGIC REPORT

100 YR STORM INFLOW...
WETLAND 1.....
.....

Hyd. No. 7

Hydrograph type	= S.C.S. RUNOFF	Peak discharge	= 27.13 cfs
Storm frequency	= 100 yr	Time interval	= 2 min
Basin area	= 65 ac	Basin curve No.	= 70
Ave basin slope	= 1 %	Hydraulic len	= 1200 ft
Basin lag	= 29.4 min	Time of concen	= 49.16 min
Total precip.	= 3.10 in	Distribution	= S.C.S. II

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
11.77	0.52	11.80	0.84	11.83	1.31	11.87	2.03
11.90	3.06	11.93	4.42	11.97	6.02	12.00	7.73
12.03	9.49	12.07	11.30	12.10	13.15	12.13	15.02
12.17	16.91	12.20	18.78	12.23	20.61	12.27	22.37
12.30	24.00	12.33	25.40	12.37	26.46	12.40	27.05
12.43	27.13	12.47	26.87	12.50	26.45	12.53	25.96
12.57	25.42	12.60	24.83	12.63	24.18	12.67	23.49
12.70	22.74	12.73	21.96	12.77	21.12	12.80	20.25
12.83	19.34	12.87	18.40	12.90	17.43	12.93	16.43
12.97	15.41	13.00	14.39	13.03	13.36	13.07	12.34
13.10	11.34	13.13	10.39	13.17	9.52	13.20	8.76
13.23	8.18	13.27	7.78	13.30	7.50	13.33	7.27
13.37	7.06	13.40	6.86	13.43	6.67	13.47	6.50
13.50	6.34	13.53	6.19	13.57	6.05	13.60	5.92
13.63	5.80	13.67	5.69	13.70	5.58	13.73	5.48
13.77	5.39	13.80	5.30	13.83	5.21	13.87	5.12
13.90	5.04	13.93	4.96	13.97	4.88	14.00	4.80
14.03	4.73	14.07	4.66	14.10	4.59	14.13	4.52
14.17	4.45	14.20	4.39	14.23	4.33	14.27	4.27
14.30	4.21	14.33	4.15	14.37	4.10	14.40	4.05
14.43	4.00	14.47	3.95	14.50	3.90	14.53	3.86
14.57	3.82	14.60	3.78	14.63	3.74	14.67	3.71
14.70	3.67	14.73	3.64	14.77	3.61	14.80	3.58
14.83	3.55	14.87	3.52	14.90	3.50	14.93	3.47
14.97	3.45	15.00	3.43	15.03	3.40	15.07	3.38
15.10	3.36	15.13	3.34	15.17	3.32	15.20	3.30
15.23	3.28	15.27	3.26	15.30	3.24	15.33	3.22
15.37	3.20	15.40	3.18	15.43	3.16	15.47	3.14
15.50	3.12	15.53	3.10	15.57	3.08	15.60	3.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
15.63	3.03	15.67	3.01	15.70	2.99	15.73	2.97
15.77	2.95	15.80	2.93	15.83	2.91	15.87	2.89
15.90	2.87	15.93	2.84	15.97	2.82	16.00	2.80
16.03	2.78	16.07	2.76	16.10	2.74	16.13	2.72
16.17	2.69	16.20	2.67	16.23	2.65	16.27	2.63
16.30	2.61	16.33	2.59	16.37	2.57	16.40	2.56
16.43	2.54	16.47	2.52	16.50	2.50	16.53	2.49
16.57	2.47	16.60	2.46	16.63	2.44	16.67	2.43
16.70	2.42	16.73	2.41	16.77	2.39	16.80	2.38
16.83	2.37	16.87	2.36	16.90	2.35	16.93	2.34
16.97	2.33	17.00	2.33	17.03	2.32	17.07	2.31
17.10	2.30	17.13	2.29	17.17	2.29	17.20	2.28
17.23	2.27	17.27	2.26	17.30	2.26	17.33	2.25
17.37	2.24	17.40	2.23	17.43	2.23	17.47	2.22
17.50	2.21	17.53	2.20	17.57	2.20	17.60	2.19
17.63	2.18	17.67	2.17	17.70	2.17	17.73	2.16
17.77	2.15	17.80	2.14	17.83	2.14	17.87	2.13
17.90	2.12	17.93	2.11	17.97	2.10	18.00	2.10
18.03	2.09	18.07	2.08	18.10	2.07	18.13	2.07
18.17	2.06	18.20	2.05	18.23	2.04	18.27	2.03
18.30	2.03	18.33	2.02	18.37	2.01	18.40	2.00
18.43	1.99	18.47	1.99	18.50	1.98	18.53	1.97
18.57	1.96	18.60	1.95	18.63	1.95	18.67	1.94
18.70	1.93	18.73	1.92	18.77	1.91	18.80	1.91
18.83	1.90	18.87	1.89	18.90	1.88	18.93	1.87
18.97	1.86	19.00	1.86	19.03	1.85	19.07	1.84
19.10	1.83	19.13	1.82	19.17	1.82	19.20	1.81
19.23	1.80	19.27	1.79	19.30	1.78	19.33	1.77
19.37	1.77	19.40	1.76	19.43	1.75	19.47	1.74
19.50	1.73	19.53	1.72	19.57	1.71	19.60	1.71
19.63	1.70	19.67	1.69	19.70	1.68	19.73	1.67
19.77	1.66	19.80	1.66	19.83	1.65	19.87	1.64
19.90	1.63	19.93	1.62	19.97	1.61	20.00	1.60
20.03	1.60	20.07	1.59	20.10	1.58	20.13	1.57
20.17	1.56	20.20	1.55	20.23	1.55	20.27	1.54
20.30	1.53	20.33	1.52	20.37	1.52	20.40	1.51
20.43	1.50	20.47	1.50	20.50	1.49	20.53	1.48
20.57	1.48	20.60	1.47	20.63	1.47	20.67	1.46
20.70	1.46	20.73	1.46	20.77	1.45	20.80	1.45
20.83	1.45	20.87	1.44	20.90	1.44	20.93	1.44
20.97	1.44	21.00	1.43	21.03	1.43	21.07	1.43
21.10	1.43	21.13	1.43	21.17	1.43	21.20	1.42
21.23	1.42	21.27	1.42	21.30	1.42	21.33	1.42
21.37	1.42	21.40	1.42	21.43	1.41	21.47	1.41
21.50	1.41	21.53	1.41	21.57	1.41	21.60	1.41
21.63	1.41	21.67	1.40	21.70	1.40	21.73	1.40

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
21.77	1.40	21.80	1.40	21.83	1.40	21.87	1.40
21.90	1.39	21.93	1.39	21.97	1.39	22.00	1.39
22.03	1.39	22.07	1.39	22.10	1.39	22.13	1.38
22.17	1.38	22.20	1.38	22.23	1.38	22.27	1.38
22.30	1.38	22.33	1.38	22.37	1.37	22.40	1.37
22.43	1.37	22.47	1.37	22.50	1.37	22.53	1.37
22.57	1.37	22.60	1.36	22.63	1.36	22.67	1.36
22.70	1.36	22.73	1.36	22.77	1.36	22.80	1.35
22.83	1.35	22.87	1.35	22.90	1.35	22.93	1.35
22.97	1.35	23.00	1.35	23.03	1.34	23.07	1.34
23.10	1.34	23.13	1.34	23.17	1.34	23.20	1.34
23.23	1.34	23.27	1.33	23.30	1.33	23.33	1.33
23.37	1.33	23.40	1.33	23.43	1.33	23.47	1.32
23.50	1.32	23.53	1.32	23.57	1.32	23.60	1.32
23.63	1.32	23.67	1.32	23.70	1.31	23.73	1.31
23.77	1.31	23.80	1.31	23.83	1.31	23.87	1.31
23.90	1.30	23.93	1.30	23.97	1.30	24.00	0.00

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0

HYDROLOGIC REPORT

100 YR STORM ROUTED...
WETLAND 1.....
.....

Hyd. No. 8

Hydrograph type = RESERVOIR ROUTE
Storm frequency = 100 yr
Inflow hyd. no. = 7

Peak discharge = 3.86 cfs
Time interval = 2 min
Reservoir no. = 1

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
11.83	1.31	2.03	5.37	5.38	0.00
11.87	2.03	3.06	8.70	8.71	0.01
11.90	3.06	4.42	13.77	13.79	0.01
11.93	4.42	6.02	21.22	21.25	0.01
11.97	6.02	7.73	31.62	31.65	0.02
12.00	7.73	9.49	45.31	45.36	0.03
12.03	9.49	11.30	62.46	62.53	0.04
12.07	11.30	13.15	83.16	83.26	0.05
12.10	13.15	15.02	107.49	107.61	0.06
12.13	15.02	16.91	135.50	135.66	0.08
12.17	16.91	18.78	167.21	167.43	0.11
12.20	18.78	20.61	202.60	202.89	0.14
12.23	20.61	22.37	241.63	241.99	0.18
12.27	22.37	24.00	284.13	284.62	0.24
12.30	24.00	25.40	329.81	330.50	0.34
12.33	25.40	26.46	378.31	379.21	0.45
12.37	26.46	27.05	429.06	430.17	0.55
12.40	27.05	27.13	481.28	482.57	0.65
12.43	27.13	26.87	533.97	535.46	0.75
12.47	26.87	26.45	586.11	587.97	0.93
12.50	26.45	25.96	637.22	639.43	1.11
12.53	25.96	25.42	687.12	689.63	1.25
12.57	25.42	24.83	735.77	738.50	1.37
12.60	24.83	24.18	783.06	786.02	1.48
12.63	24.18	23.49	828.90	832.07	1.59

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
12.67	23.49	22.74	873.19	876.57	1.69
12.70	22.74	21.96	915.84	919.42	1.79
12.73	21.96	21.12	956.71	960.54	1.91
12.77	21.12	20.25	995.70	999.79	2.04
12.80	20.25	19.34	1032.75	1037.08	2.17
12.83	19.34	18.40	1067.80	1072.35	2.27
12.87	18.40	17.43	1100.87	1105.54	2.33
12.90	17.43	16.43	1131.92	1136.70	2.39
12.93	16.43	15.41	1160.89	1165.78	2.44
12.97	15.41	14.39	1187.74	1192.73	2.49
13.00	14.39	13.36	1212.46	1217.54	2.54
13.03	13.36	12.34	1235.03	1240.21	2.59
13.07	12.34	11.34	1255.47	1260.73	2.63
13.10	11.34	10.39	1273.83	1279.16	2.67
13.13	10.39	9.52	1290.16	1295.56	2.70
13.17	9.52	8.76	1304.61	1310.07	2.73
13.20	8.76	8.18	1317.39	1322.89	2.75
13.23	8.18	7.78	1328.76	1334.33	2.78
13.27	7.78	7.50	1338.99	1344.72	2.86
13.30	7.50	7.27	1348.39	1354.27	2.94
13.33	7.27	7.06	1357.14	1363.16	3.01
13.37	7.06	6.86	1365.32	1371.47	3.07
13.40	6.86	6.67	1372.97	1379.24	3.13
13.43	6.67	6.50	1380.12	1386.50	3.19
13.47	6.50	6.34	1386.80	1393.29	3.24
13.50	6.34	6.19	1393.06	1399.64	3.29
13.53	6.19	6.05	1398.90	1405.58	3.34
13.57	6.05	5.92	1404.38	1411.14	3.38
13.60	5.92	5.80	1409.50	1416.35	3.42
13.63	5.80	5.69	1414.29	1421.22	3.46
13.67	5.69	5.58	1418.79	1425.78	3.50
13.70	5.58	5.48	1422.99	1430.06	3.53
13.73	5.48	5.39	1426.94	1434.06	3.56
13.77	5.39	5.30	1430.62	1437.81	3.59
13.80	5.30	5.21	1434.07	1441.31	3.62
13.83	5.21	5.12	1437.29	1444.58	3.65
13.87	5.12	5.04	1440.28	1447.62	3.67
13.90	5.04	4.96	1443.07	1450.45	3.69
13.93	4.96	4.88	1445.64	1453.07	3.71
13.97	4.88	4.80	1448.02	1455.48	3.73
14.00	4.80	4.73	1450.21	1457.71	3.75
14.03	4.73	4.66	1452.22	1459.75	3.76

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
14.07	4.66	4.59	1454.05	1461.61	3.78
14.10	4.59	4.52	1455.71	1463.29	3.79
14.13	4.52	4.45	1457.21	1464.82	3.80
14.17	4.45	4.39	1458.55	1466.18	3.81
14.20	4.39	4.33	1459.75	1467.40	3.82
14.23	4.33	4.27	1460.80	1468.46	3.83
14.27	4.27	4.21	1461.71	1469.39	3.84
14.30	4.21	4.15	1462.50	1470.19	3.85
14.33	4.15	4.10	1463.16	1470.86	3.85
14.37	4.10	4.05	1463.70	1471.41	3.86
14.40	4.05	4.00	1464.12	1471.84	3.86
14.43	4.00	3.95	1464.44	1472.17	3.86
14.47	3.95	3.90	1464.66	1472.39	3.86
14.50	3.90	3.86	1464.78	1472.51	3.86
14.53	3.86	3.82	1464.81	1472.54	3.86
14.57	3.82	3.78	1464.76	1472.49	3.86
14.60	3.78	3.74	1464.63	1472.35	3.86
14.63	3.74	3.71	1464.42	1472.15	3.86
14.67	3.71	3.67	1464.15	1471.87	3.86
14.70	3.67	3.64	1463.82	1471.53	3.86
14.73	3.64	3.61	1463.42	1471.13	3.85
14.77	3.61	3.58	1462.97	1470.67	3.85
14.80	3.58	3.55	1462.47	1470.16	3.85
14.83	3.55	3.52	1461.92	1469.60	3.84
14.87	3.52	3.50	1461.32	1468.99	3.84
14.90	3.50	3.47	1460.68	1468.34	3.83
14.93	3.47	3.45	1460.00	1467.65	3.83
14.97	3.45	3.43	1459.29	1466.93	3.82
15.00	3.43	3.40	1458.53	1466.16	3.81
15.03	3.40	3.38	1457.75	1465.36	3.81
15.07	3.38	3.36	1456.93	1464.53	3.80
15.10	3.36	3.34	1456.08	1463.67	3.79
15.13	3.34	3.32	1455.21	1462.78	3.79
15.17	3.32	3.30	1454.30	1461.86	3.78
15.20	3.30	3.28	1453.37	1460.92	3.77
15.23	3.28	3.26	1452.42	1459.95	3.77
15.27	3.26	3.24	1451.44	1458.95	3.76
15.30	3.24	3.22	1450.43	1457.93	3.75
15.33	3.22	3.20	1449.41	1456.89	3.74
15.37	3.20	3.18	1448.36	1455.82	3.73
15.40	3.18	3.16	1447.28	1454.73	3.73
15.43	3.16	3.14	1446.18	1453.62	3.72

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
15.47	3.14	3.12	1445.07	1452.48	3.71
15.50	3.12	3.10	1443.92	1451.32	3.70
15.53	3.10	3.08	1442.76	1450.14	3.69
15.57	3.08	3.06	1441.57	1448.93	3.68
15.60	3.06	3.03	1440.36	1447.70	3.67
15.63	3.03	3.01	1439.13	1446.45	3.66
15.67	3.01	2.99	1437.88	1445.18	3.65
15.70	2.99	2.97	1436.60	1443.88	3.64
15.73	2.97	2.95	1435.31	1442.57	3.63
15.77	2.95	2.93	1433.99	1441.23	3.62
15.80	2.93	2.91	1432.65	1439.87	3.61
15.83	2.91	2.89	1431.30	1438.49	3.60
15.87	2.89	2.87	1429.92	1437.09	3.59
15.90	2.87	2.84	1428.52	1435.67	3.58
15.93	2.84	2.82	1427.10	1434.23	3.56
15.97	2.82	2.80	1425.66	1432.77	3.55
16.00	2.80	2.78	1424.20	1431.28	3.54
16.03	2.78	2.76	1422.72	1429.78	3.53
16.07	2.76	2.74	1421.23	1428.26	3.52
16.10	2.74	2.72	1419.71	1426.72	3.51
16.13	2.72	2.69	1418.17	1425.16	3.49
16.17	2.69	2.67	1416.62	1423.58	3.48
16.20	2.67	2.65	1415.05	1421.99	3.47
16.23	2.65	2.63	1413.46	1420.38	3.46
16.27	2.63	2.61	1411.86	1418.75	3.44
16.30	2.61	2.59	1410.24	1417.10	3.43
16.33	2.59	2.57	1408.61	1415.45	3.42
16.37	2.57	2.56	1406.97	1413.78	3.40
16.40	2.56	2.54	1405.31	1412.10	3.39
16.43	2.54	2.52	1403.65	1410.41	3.38
16.47	2.52	2.50	1401.98	1408.71	3.37
16.50	2.50	2.49	1400.30	1407.00	3.35
16.53	2.49	2.47	1398.61	1405.29	3.34
16.57	2.47	2.46	1396.92	1403.57	3.32
16.60	2.46	2.44	1395.23	1401.85	3.31
16.63	2.44	2.43	1393.53	1400.13	3.30
16.67	2.43	2.42	1391.84	1398.41	3.28
16.70	2.42	2.41	1390.15	1396.69	3.27
16.73	2.41	2.39	1388.46	1394.97	3.26
16.77	2.39	2.38	1386.77	1393.26	3.24
16.80	2.38	2.37	1385.09	1391.55	3.23
16.83	2.37	2.36	1383.41	1389.84	3.22

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
16.87	2.36	2.35	1381.74	1388.14	3.20
16.90	2.35	2.34	1380.07	1386.45	3.19
16.93	2.34	2.33	1378.41	1384.77	3.18
16.97	2.33	2.33	1376.76	1383.09	3.16
17.00	2.33	2.32	1375.12	1381.42	3.15
17.03	2.32	2.31	1373.48	1379.76	3.14
17.07	2.31	2.30	1371.86	1378.11	3.13
17.10	2.30	2.29	1370.24	1376.47	3.11
17.13	2.29	2.29	1368.64	1374.84	3.10
17.17	2.29	2.28	1367.04	1373.21	3.09
17.20	2.28	2.27	1365.45	1371.60	3.08
17.23	2.27	2.26	1363.88	1370.00	3.06
17.27	2.26	2.26	1362.31	1368.41	3.05
17.30	2.26	2.25	1360.75	1366.83	3.04
17.33	2.25	2.24	1359.21	1365.26	3.03
17.37	2.24	2.23	1357.67	1363.70	3.01
17.40	2.23	2.23	1356.14	1362.14	3.00
17.43	2.23	2.22	1354.62	1360.60	2.99
17.47	2.22	2.21	1353.11	1359.07	2.98
17.50	2.21	2.20	1351.61	1357.54	2.97
17.53	2.20	2.20	1350.12	1356.03	2.95
17.57	2.20	2.19	1348.64	1354.52	2.94
17.60	2.19	2.18	1347.16	1353.02	2.93
17.63	2.18	2.17	1345.70	1351.53	2.92
17.67	2.17	2.17	1344.24	1350.05	2.91
17.70	2.17	2.16	1342.79	1348.58	2.89
17.73	2.16	2.15	1341.34	1347.11	2.88
17.77	2.15	2.14	1339.91	1345.65	2.87
17.80	2.14	2.14	1338.48	1344.20	2.86
17.83	2.14	2.13	1337.06	1342.76	2.85
17.87	2.13	2.12	1335.64	1341.32	2.84
17.90	2.12	2.11	1334.24	1339.89	2.83
17.93	2.11	2.10	1332.84	1338.47	2.82
17.97	2.10	2.10	1331.44	1337.05	2.80
18.00	2.10	2.09	1330.06	1335.64	2.79
18.03	2.09	2.08	1328.68	1334.24	2.78
18.07	2.08	2.07	1327.30	1332.84	2.77
18.10	2.07	2.07	1325.91	1331.45	2.77
18.13	2.07	2.06	1324.51	1330.05	2.77
18.17	2.06	2.05	1323.10	1328.63	2.77
18.20	2.05	2.04	1321.69	1327.21	2.76
18.23	2.04	2.03	1320.26	1325.78	2.76

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
18.27	2.03	2.03	1318.82	1324.33	2.76
18.30	2.03	2.02	1317.37	1322.88	2.75
18.33	2.02	2.01	1315.92	1321.42	2.75
18.37	2.01	2.00	1314.45	1319.94	2.75
18.40	2.00	1.99	1312.97	1318.46	2.74
18.43	1.99	1.99	1311.48	1316.97	2.74
18.47	1.99	1.98	1309.99	1315.46	2.74
18.50	1.98	1.97	1308.48	1313.95	2.74
18.53	1.97	1.96	1306.96	1312.43	2.73
18.57	1.96	1.95	1305.43	1310.89	2.73
18.60	1.95	1.95	1303.90	1309.35	2.73
18.63	1.95	1.94	1302.35	1307.80	2.72
18.67	1.94	1.93	1300.79	1306.23	2.72
18.70	1.93	1.92	1299.23	1304.66	2.72
18.73	1.92	1.91	1297.65	1303.08	2.71
18.77	1.91	1.91	1296.06	1301.48	2.71
18.80	1.91	1.90	1294.47	1299.88	2.71
18.83	1.90	1.89	1292.86	1298.27	2.70
18.87	1.89	1.88	1291.24	1296.65	2.70
18.90	1.88	1.87	1289.62	1295.02	2.70
18.93	1.87	1.86	1287.98	1293.37	2.69
18.97	1.86	1.86	1286.34	1291.72	2.69
19.00	1.86	1.85	1284.68	1290.06	2.69
19.03	1.85	1.84	1283.02	1288.39	2.68
19.07	1.84	1.83	1281.34	1286.71	2.68
19.10	1.83	1.82	1279.66	1285.02	2.68
19.13	1.82	1.82	1277.97	1283.32	2.67
19.17	1.82	1.81	1276.26	1281.60	2.67
19.20	1.81	1.80	1274.55	1279.88	2.67
19.23	1.80	1.79	1272.83	1278.15	2.66
19.27	1.79	1.78	1271.09	1276.42	2.66
19.30	1.78	1.77	1269.35	1274.67	2.66
19.33	1.77	1.77	1267.60	1272.91	2.65
19.37	1.77	1.76	1265.84	1271.14	2.65
19.40	1.76	1.75	1264.07	1269.36	2.65
19.43	1.75	1.74	1262.29	1267.57	2.64
19.47	1.74	1.73	1260.49	1265.77	2.64
19.50	1.73	1.72	1258.69	1263.97	2.64
19.53	1.72	1.71	1256.89	1262.15	2.63
19.57	1.71	1.71	1255.07	1260.32	2.63
19.60	1.71	1.70	1253.24	1258.49	2.62
19.63	1.70	1.69	1251.40	1256.64	2.62

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
19.67	1.69	1.68	1249.55	1254.79	2.62
19.70	1.68	1.67	1247.69	1252.92	2.61
19.73	1.67	1.66	1245.83	1251.05	2.61
19.77	1.66	1.66	1243.95	1249.16	2.61
19.80	1.66	1.65	1242.07	1247.27	2.60
19.83	1.65	1.64	1240.17	1245.37	2.60
19.87	1.64	1.63	1238.27	1243.46	2.59
19.90	1.63	1.62	1236.35	1241.53	2.59
19.93	1.62	1.61	1234.43	1239.60	2.59
19.97	1.61	1.60	1232.50	1237.66	2.58
20.00	1.60	1.60	1230.55	1235.71	2.58
20.03	1.60	1.59	1228.60	1233.75	2.58
20.07	1.59	1.58	1226.64	1231.79	2.57
20.10	1.58	1.57	1224.67	1229.81	2.57
20.13	1.57	1.56	1222.69	1227.82	2.56
20.17	1.56	1.55	1220.71	1225.82	2.56
20.20	1.55	1.55	1218.71	1223.82	2.56
20.23	1.55	1.54	1216.71	1221.81	2.55
20.27	1.54	1.53	1214.69	1219.79	2.55
20.30	1.53	1.52	1212.67	1217.76	2.54
20.33	1.52	1.52	1210.65	1215.73	2.54
20.37	1.52	1.51	1208.61	1213.68	2.54
20.40	1.51	1.50	1206.57	1211.64	2.53
20.43	1.50	1.50	1204.53	1209.58	2.53
20.47	1.50	1.49	1202.48	1207.53	2.52
20.50	1.49	1.48	1200.43	1205.46	2.52
20.53	1.48	1.48	1198.37	1203.40	2.51
20.57	1.48	1.47	1196.31	1201.33	2.51
20.60	1.47	1.47	1194.25	1199.26	2.51
20.63	1.47	1.46	1192.19	1197.19	2.50
20.67	1.46	1.46	1190.12	1195.12	2.50
20.70	1.46	1.46	1188.06	1193.05	2.50
20.73	1.46	1.45	1185.99	1190.98	2.49
20.77	1.45	1.45	1183.93	1188.90	2.49
20.80	1.45	1.45	1181.86	1186.83	2.48
20.83	1.45	1.44	1179.80	1184.76	2.48
20.87	1.44	1.44	1177.74	1182.69	2.48
20.90	1.44	1.44	1175.68	1180.63	2.47
20.93	1.44	1.44	1173.63	1178.56	2.47
20.97	1.44	1.43	1171.57	1176.50	2.46
21.00	1.43	1.43	1169.52	1174.44	2.46
21.03	1.43	1.43	1167.47	1172.39	2.46

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
21.07	1.43	1.43	1165.43	1170.34	2.45
21.10	1.43	1.43	1163.39	1168.29	2.45
21.13	1.43	1.43	1161.36	1166.25	2.45
21.17	1.43	1.42	1159.33	1164.21	2.44
21.20	1.42	1.42	1157.30	1162.18	2.44
21.23	1.42	1.42	1155.28	1160.15	2.43
21.27	1.42	1.42	1153.26	1158.12	2.43
21.30	1.42	1.42	1151.25	1156.10	2.43
21.33	1.42	1.42	1149.24	1154.09	2.42
21.37	1.42	1.42	1147.24	1152.08	2.42
21.40	1.42	1.41	1145.24	1150.07	2.42
21.43	1.41	1.41	1143.24	1148.07	2.41
21.47	1.41	1.41	1141.25	1146.07	2.41
21.50	1.41	1.41	1139.27	1144.08	2.41
21.53	1.41	1.41	1137.29	1142.09	2.40
21.57	1.41	1.41	1135.31	1140.11	2.40
21.60	1.41	1.41	1133.34	1138.13	2.39
21.63	1.41	1.40	1131.37	1136.15	2.39
21.67	1.40	1.40	1129.41	1134.18	2.39
21.70	1.40	1.40	1127.45	1132.21	2.38
21.73	1.40	1.40	1125.49	1130.25	2.38
21.77	1.40	1.40	1123.54	1128.30	2.38
21.80	1.40	1.40	1121.60	1126.34	2.37
21.83	1.40	1.40	1119.66	1124.39	2.37
21.87	1.40	1.39	1117.72	1122.45	2.37
21.90	1.39	1.39	1115.79	1120.51	2.36
21.93	1.39	1.39	1113.86	1118.57	2.36
21.97	1.39	1.39	1111.93	1116.64	2.35
22.00	1.39	1.39	1110.01	1114.72	2.35
22.03	1.39	1.39	1108.10	1112.79	2.35
22.07	1.39	1.39	1106.18	1110.87	2.34
22.10	1.39	1.38	1104.28	1108.96	2.34
22.13	1.38	1.38	1102.37	1107.05	2.34
22.17	1.38	1.38	1100.47	1105.14	2.33
22.20	1.38	1.38	1098.58	1103.24	2.33
22.23	1.38	1.38	1096.69	1101.34	2.33
22.27	1.38	1.38	1094.80	1099.45	2.32
22.30	1.38	1.38	1092.92	1097.56	2.32
22.33	1.38	1.37	1091.04	1095.67	2.32
22.37	1.37	1.37	1089.16	1093.79	2.31
22.40	1.37	1.37	1087.29	1091.91	2.31
22.43	1.37	1.37	1085.42	1090.03	2.31

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
22.47	1.37	1.37	1083.56	1088.16	2.30
22.50	1.37	1.37	1081.70	1086.30	2.30
22.53	1.37	1.37	1079.84	1084.44	2.30
22.57	1.37	1.36	1077.99	1082.58	2.29
22.60	1.36	1.36	1076.14	1080.72	2.29
22.63	1.36	1.36	1074.30	1078.87	2.29
22.67	1.36	1.36	1072.46	1077.02	2.28
22.70	1.36	1.36	1070.62	1075.18	2.28
22.73	1.36	1.36	1068.79	1073.34	2.27
22.77	1.36	1.35	1066.96	1071.51	2.27
22.80	1.35	1.35	1065.14	1069.67	2.27
22.83	1.35	1.35	1063.32	1067.85	2.26
22.87	1.35	1.35	1061.50	1066.02	2.26
22.90	1.35	1.35	1059.69	1064.20	2.25
22.93	1.35	1.35	1057.89	1062.39	2.25
22.97	1.35	1.35	1056.11	1060.59	2.24
23.00	1.35	1.34	1054.32	1058.80	2.24
23.03	1.34	1.34	1052.55	1057.01	2.23
23.07	1.34	1.34	1050.79	1055.24	2.23
23.10	1.34	1.34	1049.03	1053.47	2.22
23.13	1.34	1.34	1047.29	1051.72	2.21
23.17	1.34	1.34	1045.55	1049.97	2.21
23.20	1.34	1.34	1043.82	1048.23	2.20
23.23	1.34	1.33	1042.10	1046.49	2.20
23.27	1.33	1.33	1040.39	1044.77	2.19
23.30	1.33	1.33	1038.68	1043.05	2.19
23.33	1.33	1.33	1036.99	1041.35	2.18
23.37	1.33	1.33	1035.30	1039.65	2.17
23.40	1.33	1.33	1033.62	1037.96	2.17
23.43	1.33	1.32	1031.95	1036.27	2.16
23.47	1.32	1.32	1030.28	1034.60	2.16
23.50	1.32	1.32	1028.63	1032.93	2.15
23.53	1.32	1.32	1026.98	1031.27	2.15
23.57	1.32	1.32	1025.34	1029.62	2.14
23.60	1.32	1.32	1023.71	1027.98	2.14
23.63	1.32	1.32	1022.08	1026.34	2.13
23.67	1.32	1.31	1020.46	1024.71	2.12
23.70	1.31	1.31	1018.85	1023.09	2.12
23.73	1.31	1.31	1017.25	1021.48	2.11
23.77	1.31	1.31	1015.66	1019.88	2.11
23.80	1.31	1.31	1014.07	1018.28	2.10
23.83	1.31	1.31	1012.49	1016.69	2.10

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
23.87	1.31	1.30	1010.92	1015.10	2.09
23.90	1.30	1.30	1009.35	1013.53	2.09
23.93	1.30	1.30	1007.79	1011.96	2.08
23.97	1.30	0.00	1006.24	1010.40	2.08
24.00	0.00	0.00	1003.41	1007.54	2.07

Maximum outflow (cfs) = 3.86
Maximum storage (cu ft) = 88121
Maximum elevation (ft) = 84.10

Stormwater Management Summary

Extended Detention Wetland 2

Area Draining into SWM Basin:	54.7 ~~24.5~~ Ac ±
Minimum Pond Area:	0.319 Ac
Designed Pond Area (at Permanent Pool):	2.050 Ac

Outlet Structure Summary

Invert of Wet Detention Pond:	80.0 ft.
Draw Down Orifice:	2 in. Dia.
Invert of Draw Down Orifice (Permanent Pool Elevation):	83.0 ft.
Permanent Pool Depth:	3.0 ft.
Principal Spillway:	3 ft. X 3 ft. Box
Principal Spillway Elevation:	84.0 ft.
Emergency Spillway Elevation:	84.25 ft.
Top of Dam:	85.0 ft.
Draw Down Time:	2 Days ±

Hydrologic Summary

Existing Condition:

Storm	Q (cfs)
10 Yr.	**22.42**

Post Development:

Storm	Inflow Q_P (cfs)	Volume of Runoff (cf)	Outflow Q_P (cfs)	Max. Storm Elevation (ft)
1 Inch Event	26.47	7,714	0.06	83.08
10 Yr. – 24 Hr.	58.11	233,801	7.04	84.24
10 Yr. – 5 Min.	21.20	15,262	**0.14**	83.08
100 Yr. – 5 Min.	30.06	21,647	0.24	83.18

Design Parameters / Calculations

- Detain first 1 inch of rainfall above permanent pool elevation.
- Remove 85% TSS (minimum).
- Allow 2 to 5 day draw down to permanent pool elevation.
- Design side slopes no steeper than 3:1.
- Design 6 feet wide vegetated perimeter shelf (at a minimum) at no steeper than 6:1 slope.
- Maintain the following percentages for permanent storage area:
  - Forebay – 15%
  - Low Marsh (9" – 18" deep) – 35%
  - High Marsh (0 – 9" deep) – 35%
  - Micro Pool – 15%

Minimum Pond Area:

STORMWATER POND CALCULATIONS SUMMARY

Project Name	City of Rocky Mount LCID Landfill - Wetland 2		
Designer	PWS	***Date***	9/11/02

Area Draining to Pond (ADP)

2382732

Current Project	1067220	SF	24.500 AC
Contingency for Future Growth	0	SF	0.000 AC
Total	1067220	SF	~~24.500~~ 54.70 AC

Built-Upon Area (BUA)

595083

Current Project:

Building	43560	SF	1.000 AC
Drives/Parking	0	SF	0.000 AC
Contingency for Future Growth	0	SF	0.000 AC
Total	43560	SF	13.68 ~~1.000~~ AC

BUA/ADP	~~0.041~~ 0.25	
Runoff from 1" Rainfall	7714	CF

Pond Surface Area = 1.30% x DA
= 0.0130 x ~~24.5~~ Acres
= ~~**0.319**~~ **Acres** (minimum)

Storage Volumes

Contour	Z	Area	ΔS	ACC S
83	0	97,570	---	---
84	1	101,919	99,745	99,745
85	2	106,326	104,123	104,123

Permanent Pool Storage

Main Pool (Includes Micro Pool)

Contour	Z	Area	ΔS	ACC S
81	0	8,158	---	---
81.5	0.5	19,691	6,962	6,962
82	1	31,925	12,904	19,866
83	2	61,119	46,522	66,388

Forebay

Contour	Z	Area	ΔS	ACC S
80	0	10,927	---	---
81	1	17,640	14,283.5	14,283.5
82	2	22,915	20,277.5	34,561
83	3	28,246	25,580.5	60,141.5

Basin SA (Designed Pond) = **2.05 Acres** (area obtained by planimeter)
Thus, the Designed Pond is *greater* than the minimum calculated pond surface area.

Sediment Storage Zone:

Acres Disturbed = ~~24.5~~ Ac. ±
Volume of Sediment = ~~24.5~~ Ac x 1800 cf/yr x 1 yr
= ~~44,100~~ CF of Sediment

$$Q_{min} = \frac{Volume}{Days} = \frac{cf}{sec}$$

$$Q_{min} = \frac{54,604 \text{ cf}}{(2 \text{ days})(24 \text{ hr})(60 \text{ min})(60 \text{ sec})}$$

$$Q_{min} = 0.316 \text{ cfs}$$

Finally, using the orifice equation, the orifice size can be determined:

$$Q = C\,A\sqrt{2\,G\,\Delta H}$$

$$A = \frac{Q}{C\sqrt{2\,G\,\Delta H}}$$

Where,

Q	$= 0.316$ cfs
C	$= 0.63$
g	$= 32.2$ ft/sec^2
ΔH	$= 0.833$ ft

$$A = \frac{0.316}{0.63\sqrt{2\,(32.2)(0.833)}}$$

$A =$ **0.0097** sf required → 0.0085

Orifice	Area
1" ϕ	0.0055 sf
1.5" ϕ	0.0123 sf
2" ϕ	0.0218 sf
3" ϕ	0.0491 sf
4" ϕ	0.0872 sf

3"

Use 1.5" draw down orifice. This will allow for draw down to occur within 2 days.

Extended Detention Wetland 2

Stormwater Pond Stage/Storage And Hydrologic Reports

STAGE / STORAGE TABLE

1. RESERVOIR No = 2. 2. RESERVOIR NAME = WETLAND 2...
3. S = Ks * Z^b
   Ks = 0..... b = 0.....
   START ELEV = 0..... INCREMENT = 0...

	STAGE ft	ELEVATION ft	CO AREA sq ft	INC STORAGE cu ft	TOT STORAGE cu ft
4	0.00	83.00.	97570...	0	0
5	1.00	84.00.	101919..	99744	99744
6	2.00	85.00.	106326..	104122	203866
7	0.00	0.00.	0.....	0	0

OUTLET STRUCTURES

Reservoir: 2

CULVERT STRUC A. Q=CoA[2gh/k]^.5

1. WIDTH (in) = 12.
2. HEIGHT (in) = 12.
3. No. BARRELS = 1..
4. INVERT ELEV. = 83.....
5. Co = 0.60
6. CULVERT LENGTH (ft) = 50..
7. CULVERT SLOPE (%) = 1...
8. MANNING'S N-VALUE = .013

CULVERT STRUC B. Q=CoA[2gh/k]^.5

9. WIDTH (in) = ~~1.5~~ 3
10. HEIGHT (in) = ~~1.5~~ 3
11. No. BARRELS = 1..
12. INVERT ELEV. = 83.....
13. Co = 0.60
14. CULVERT LENGTH (ft) = .25.
15. CULVERT SLOPE (%) = .25.
16. MANNING'S N-VALUE = .013
17. MULTI-STAGE OPTION ? (Y/N) N

WEIR STRUCTURE A. Q=CwLH^EXP

18. CREST LENGTH (ft) = 9.....
19. CREST ELEVATION = 84.....
20. Cw = 3.00
21. EXP = 1.50
22. MULTI-STAGE OPTION ? (Y/N) N

WEIR STRUCTURE B. Q=CwLH^EXP

23. CREST LENGTH (ft) = 50.....
24. CREST ELEVATION = 84.25..
25. Cw = 3.00
26. EXP = 1.50
27. MULTI-STAGE OPTION ? (Y/N) N

1 HYDROLOGIC REPORT

STAGE / STORAGE / DISCHARGE

0

RESERVOIR NUMBER = 2

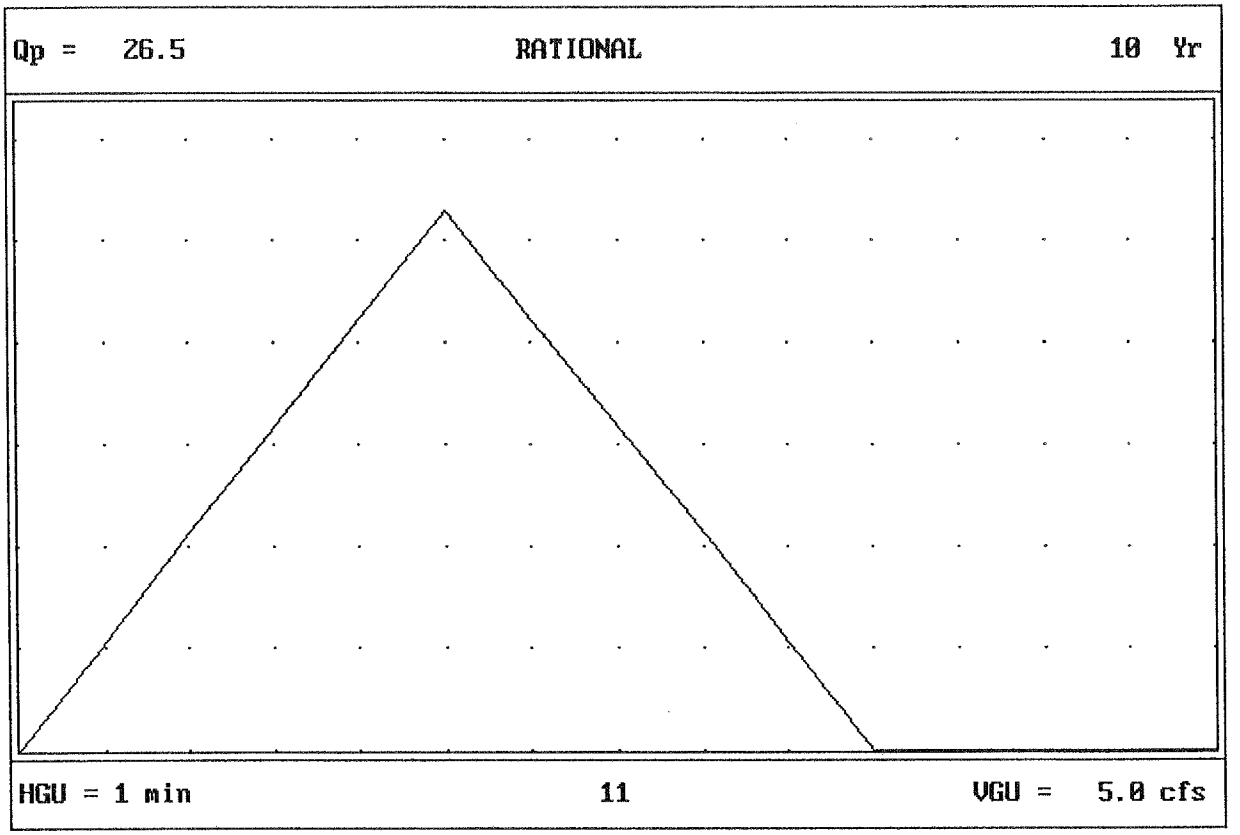
RESERVOIR NAME = WETLAND 2...
STORAGE VALUES WERE INPUT MANUALLY

DISCHARGE VALUES: CULVERT STRUCT A. Q = .6 *A*[2gh/k]^.5 * 1
CULVERT STRUCT B. Q = .6 *A*[2gh/k]^.5 * 1
WEIR STRUCT A. Q = 3 * 9 * H ^ 1.5
WEIR STRUCT B. Q = 3 * 50 * H ^ 1.5

ELEVATION	DISCHARGE (cfs)			
	CULVERT A	CULVERT B	WEIR A	WEIR B
83.00	0.00	0.00	0.00	0.00
84.00	2.55	0.06	0.00	0.00
85.00	4.42	0.08	27.00	97.43
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00

STAGE	ELEVATION	INC STOR cu ft	TOT STOR cu ft	OUTFLOW cfs
0.00	83.00	0	0	0.00
1.00	84.00	99744	99744	2.61
2.00	85.00	104122	203866	128.93
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00
0.00	0.00	0	0	0.00

1-INCH RUNOFF: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 7940 / 0.182

HYDROLOGIC REPORT

1 INCH RUNOFF INFLOW..
WETLAND 2.....
.....

Hyd. No. 11

Hydrograph type	= RATIONAL	Peak discharge	= 26.47 cfs
Storm frequency	= 10 yr	Time interval	= 1 min
Time of conc.	= 5 min	Intensity	= 7.20 in/hr
Runoff coeff.	= .15	Basin area	= 24.5 ac

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
0.02	5.29	0.03	10.59	0.05	15.88	0.07	21.17
0.08	26.47	0.10	21.17	0.12	15.88	0.13	10.59
0.15	5.29	0.17	0.00	0.18	0.00	0.20	0.00

1
0

HYDROLOGIC REPORT

1 INCH RUNOFF ROUTED..
WETLAND 2.....
.....

Hyd. No. 12

Hydrograph type = RESERVOIR ROUTE Peak discharge = 0.06 cfs
Storm frequency = 10 yr Time interval = 1 min
Inflow hyd. no. = 11 Reservoir no. = 2

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.00	0.00	5.29	0.00	0.00	0.00
0.02	5.29	10.59	5.29	5.29	0.00
0.03	10.59	15.88	21.16	21.17	0.00
0.05	15.88	21.17	47.61	47.63	0.01
0.07	21.17	26.47	84.62	84.66	0.02
0.08	26.47	21.17	132.20	132.27	0.03
0.10	21.17	15.88	179.76	179.85	0.04
0.12	15.88	10.59	216.71	216.82	0.05
0.13	10.59	5.29	243.07	243.18	0.06
0.15	5.29	0.00	258.83	258.95	0.06
0.17	0.00	0.00	264.00	264.12	0.06
0.18	0.00	0.00	263.87	264.00	0.06
0.20	0.00	0.00	263.75	263.87	0.06
0.22	0.00	0.00	263.62	263.75	0.06
0.23	0.00	0.00	263.50	263.62	0.06
0.25	0.00	0.00	263.37	263.50	0.06
0.27	0.00	0.00	263.25	263.37	0.06
0.28	0.00	0.00	263.12	263.25	0.06
0.30	0.00	0.00	263.00	263.12	0.06
0.32	0.00	0.00	262.88	263.00	0.06
0.33	0.00	0.00	262.75	262.88	0.06
0.35	0.00	0.00	262.63	262.75	0.06
0.37	0.00	0.00	262.50	262.63	0.06
0.38	0.00	0.00	262.38	262.50	0.06
0.40	0.00	0.00	262.26	262.38	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.42	0.00	0.00	262.13	262.26	0.06
0.43	0.00	0.00	262.01	262.13	0.06
0.45	0.00	0.00	261.88	262.01	0.06
0.47	0.00	0.00	261.76	261.88	0.06
0.48	0.00	0.00	261.64	261.76	0.06
0.50	0.00	0.00	261.51	261.64	0.06
0.52	0.00	0.00	261.39	261.51	0.06
0.53	0.00	0.00	261.27	261.39	0.06
0.55	0.00	0.00	261.14	261.27	0.06
0.57	0.00	0.00	261.02	261.14	0.06
0.58	0.00	0.00	260.90	261.02	0.06
0.60	0.00	0.00	260.77	260.90	0.06
0.62	0.00	0.00	260.65	260.77	0.06
0.63	0.00	0.00	260.53	260.65	0.06
0.65	0.00	0.00	260.41	260.53	0.06
0.67	0.00	0.00	260.28	260.41	0.06
0.68	0.00	0.00	260.16	260.28	0.06
0.70	0.00	0.00	260.04	260.16	0.06
0.72	0.00	0.00	259.91	260.04	0.06
0.73	0.00	0.00	259.79	259.91	0.06
0.75	0.00	0.00	259.67	259.79	0.06
0.77	0.00	0.00	259.55	259.67	0.06
0.78	0.00	0.00	259.42	259.55	0.06
0.80	0.00	0.00	259.30	259.42	0.06
0.82	0.00	0.00	259.18	259.30	0.06
0.83	0.00	0.00	259.06	259.18	0.06
0.85	0.00	0.00	258.93	259.06	0.06
0.87	0.00	0.00	258.81	258.93	0.06
0.88	0.00	0.00	258.69	258.81	0.06
0.90	0.00	0.00	258.57	258.69	0.06
0.92	0.00	0.00	258.45	258.57	0.06
0.93	0.00	0.00	258.32	258.45	0.06
0.95	0.00	0.00	258.20	258.32	0.06
0.97	0.00	0.00	258.08	258.20	0.06
0.98	0.00	0.00	257.96	258.08	0.06
1.00	0.00	0.00	257.84	257.96	0.06
1.02	0.00	0.00	257.71	257.84	0.06
1.03	0.00	0.00	257.59	257.71	0.06
1.05	0.00	0.00	257.47	257.59	0.06
1.07	0.00	0.00	257.35	257.47	0.06
1.08	0.00	0.00	257.23	257.35	0.06
1.10	0.00	0.00	257.11	257.23	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
1.12	0.00	0.00	256.99	257.11	0.06
1.13	0.00	0.00	256.86	256.99	0.06
1.15	0.00	0.00	256.74	256.86	0.06
1.17	0.00	0.00	256.62	256.74	0.06
1.18	0.00	0.00	256.50	256.62	0.06
1.20	0.00	0.00	256.38	256.50	0.06
1.22	0.00	0.00	256.26	256.38	0.06
1.23	0.00	0.00	256.14	256.26	0.06
1.25	0.00	0.00	256.02	256.14	0.06
1.27	0.00	0.00	255.90	256.02	0.06
1.28	0.00	0.00	255.78	255.90	0.06
1.30	0.00	0.00	255.65	255.78	0.06
1.32	0.00	0.00	255.53	255.65	0.06
1.33	0.00	0.00	255.41	255.53	0.06
1.35	0.00	0.00	255.29	255.41	0.06
1.37	0.00	0.00	255.17	255.29	0.06
1.38	0.00	0.00	255.05	255.17	0.06
1.40	0.00	0.00	254.93	255.05	0.06
1.42	0.00	0.00	254.81	254.93	0.06
1.43	0.00	0.00	254.69	254.81	0.06
1.45	0.00	0.00	254.57	254.69	0.06
1.47	0.00	0.00	254.45	254.57	0.06
1.48	0.00	0.00	254.33	254.45	0.06
1.50	0.00	0.00	254.21	254.33	0.06
1.52	0.00	0.00	254.09	254.21	0.06
1.53	0.00	0.00	253.97	254.09	0.06
1.55	0.00	0.00	253.85	253.97	0.06
1.57	0.00	0.00	253.73	253.85	0.06
1.58	0.00	0.00	253.61	253.73	0.06
1.60	0.00	0.00	253.49	253.61	0.06
1.62	0.00	0.00	253.37	253.49	0.06
1.63	0.00	0.00	253.25	253.37	0.06
1.65	0.00	0.00	253.13	253.25	0.06
1.67	0.00	0.00	253.01	253.13	0.06
1.68	0.00	0.00	252.89	253.01	0.06
1.70	0.00	0.00	252.77	252.89	0.06
1.72	0.00	0.00	252.65	252.77	0.06
1.73	0.00	0.00	252.54	252.65	0.06
1.75	0.00	0.00	252.42	252.54	0.06
1.77	0.00	0.00	252.30	252.42	0.06
1.78	0.00	0.00	252.18	252.30	0.06
1.80	0.00	0.00	252.06	252.18	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
1.82	0.00	0.00	251.94	252.06	0.06
1.83	0.00	0.00	251.82	251.94	0.06
1.85	0.00	0.00	251.70	251.82	0.06
1.87	0.00	0.00	251.58	251.70	0.06
1.88	0.00	0.00	251.46	251.58	0.06
1.90	0.00	0.00	251.35	251.46	0.06
1.92	0.00	0.00	251.23	251.35	0.06
1.93	0.00	0.00	251.11	251.23	0.06
1.95	0.00	0.00	250.99	251.11	0.06
1.97	0.00	0.00	250.87	250.99	0.06
1.98	0.00	0.00	250.75	250.87	0.06
2.00	0.00	0.00	250.64	250.75	0.06
2.02	0.00	0.00	250.52	250.64	0.06
2.03	0.00	0.00	250.40	250.52	0.06
2.05	0.00	0.00	250.28	250.40	0.06
2.07	0.00	0.00	250.16	250.28	0.06
2.08	0.00	0.00	250.04	250.16	0.06
2.10	0.00	0.00	249.93	250.04	0.06
2.12	0.00	0.00	249.81	249.93	0.06
2.13	0.00	0.00	249.69	249.81	0.06
2.15	0.00	0.00	249.57	249.69	0.06
2.17	0.00	0.00	249.45	249.57	0.06
2.18	0.00	0.00	249.34	249.45	0.06
2.20	0.00	0.00	249.22	249.34	0.06
2.22	0.00	0.00	249.10	249.22	0.06
2.23	0.00	0.00	248.98	249.10	0.06
2.25	0.00	0.00	248.87	248.98	0.06
2.27	0.00	0.00	248.75	248.87	0.06
2.28	0.00	0.00	248.63	248.75	0.06
2.30	0.00	0.00	248.51	248.63	0.06
2.32	0.00	0.00	248.40	248.51	0.06
2.33	0.00	0.00	248.28	248.40	0.06
2.35	0.00	0.00	248.16	248.28	0.06
2.37	0.00	0.00	248.05	248.16	0.06
2.38	0.00	0.00	247.93	248.05	0.06
2.40	0.00	0.00	247.81	247.93	0.06
2.42	0.00	0.00	247.69	247.81	0.06
2.43	0.00	0.00	247.58	247.69	0.06
2.45	0.00	0.00	247.46	247.58	0.06
2.47	0.00	0.00	247.34	247.46	0.06
2.48	0.00	0.00	247.23	247.34	0.06
2.50	0.00	0.00	247.11	247.23	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
2.52	0.00	0.00	246.99	247.11	0.06
2.53	0.00	0.00	246.88	246.99	0.06
2.55	0.00	0.00	246.76	246.88	0.06
2.57	0.00	0.00	246.64	246.76	0.06
2.58	0.00	0.00	246.53	246.64	0.06
2.60	0.00	0.00	246.41	246.53	0.06
2.62	0.00	0.00	246.30	246.41	0.06
2.63	0.00	0.00	246.18	246.30	0.06
2.65	0.00	0.00	246.06	246.18	0.06
2.67	0.00	0.00	245.95	246.06	0.06
2.68	0.00	0.00	245.83	245.95	0.06
2.70	0.00	0.00	245.71	245.83	0.06
2.72	0.00	0.00	245.60	245.71	0.06
2.73	0.00	0.00	245.48	245.60	0.06
2.75	0.00	0.00	245.37	245.48	0.06
2.77	0.00	0.00	245.25	245.37	0.06
2.78	0.00	0.00	245.14	245.25	0.06
2.80	0.00	0.00	245.02	245.14	0.06
2.82	0.00	0.00	244.90	245.02	0.06
2.83	0.00	0.00	244.79	244.90	0.06
2.85	0.00	0.00	244.67	244.79	0.06
2.87	0.00	0.00	244.56	244.67	0.06
2.88	0.00	0.00	244.44	244.56	0.06
2.90	0.00	0.00	244.33	244.44	0.06
2.92	0.00	0.00	244.21	244.33	0.06
2.93	0.00	0.00	244.10	244.21	0.06
2.95	0.00	0.00	243.98	244.10	0.06
2.97	0.00	0.00	243.87	243.98	0.06
2.98	0.00	0.00	243.75	243.87	0.06
3.00	0.00	0.00	243.64	243.75	0.06
3.02	0.00	0.00	243.52	243.64	0.06
3.03	0.00	0.00	243.41	243.52	0.06
3.05	0.00	0.00	243.29	243.41	0.06
3.07	0.00	0.00	243.18	243.29	0.06
3.08	0.00	0.00	243.06	243.18	0.06
3.10	0.00	0.00	242.95	243.06	0.06
3.12	0.00	0.00	242.83	242.95	0.06
3.13	0.00	0.00	242.72	242.83	0.06
3.15	0.00	0.00	242.60	242.72	0.06
3.17	0.00	0.00	242.49	242.60	0.06
3.18	0.00	0.00	242.37	242.49	0.06
3.20	0.00	0.00	242.26	242.37	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.22	0.00	0.00	242.14	242.26	0.06
3.23	0.00	0.00	242.03	242.14	0.06
3.25	0.00	0.00	241.92	242.03	0.06
3.27	0.00	0.00	241.80	241.92	0.06
3.28	0.00	0.00	241.69	241.80	0.06
3.30	0.00	0.00	241.57	241.69	0.06
3.32	0.00	0.00	241.46	241.57	0.06
3.33	0.00	0.00	241.35	241.46	0.06
3.35	0.00	0.00	241.23	241.35	0.06
3.37	0.00	0.00	241.12	241.23	0.06
3.38	0.00	0.00	241.00	241.12	0.06
3.40	0.00	0.00	240.89	241.00	0.06
3.42	0.00	0.00	240.78	240.89	0.06
3.43	0.00	0.00	240.66	240.78	0.06
3.45	0.00	0.00	240.55	240.66	0.06
3.47	0.00	0.00	240.44	240.55	0.06
3.48	0.00	0.00	240.32	240.44	0.06
3.50	0.00	0.00	240.21	240.32	0.06
3.52	0.00	0.00	240.10	240.21	0.06
3.53	0.00	0.00	239.98	240.10	0.06
3.55	0.00	0.00	239.87	239.98	0.06
3.57	0.00	0.00	239.76	239.87	0.06
3.58	0.00	0.00	239.64	239.76	0.06
3.60	0.00	0.00	239.53	239.64	0.06
3.62	0.00	0.00	239.42	239.53	0.06
3.63	0.00	0.00	239.30	239.42	0.06
3.65	0.00	0.00	239.19	239.30	0.06
3.67	0.00	0.00	239.08	239.19	0.06
3.68	0.00	0.00	238.96	239.08	0.06
3.70	0.00	0.00	238.85	238.96	0.06
3.72	0.00	0.00	238.74	238.85	0.06
3.73	0.00	0.00	238.63	238.74	0.06
3.75	0.00	0.00	238.51	238.63	0.06
3.77	0.00	0.00	238.40	238.51	0.06
3.78	0.00	0.00	238.29	238.40	0.06
3.80	0.00	0.00	238.18	238.29	0.06
3.82	0.00	0.00	238.06	238.18	0.06
3.83	0.00	0.00	237.95	238.06	0.06
3.85	0.00	0.00	237.84	237.95	0.06
3.87	0.00	0.00	237.73	237.84	0.06
3.88	0.00	0.00	237.61	237.73	0.06
3.90	0.00	0.00	237.50	237.61	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.92	0.00	0.00	237.39	237.50	0.06
3.93	0.00	0.00	237.28	237.39	0.06
3.95	0.00	0.00	237.17	237.28	0.06
3.97	0.00	0.00	237.05	237.17	0.06
3.98	0.00	0.00	236.94	237.05	0.06
4.00	0.00	0.00	236.83	236.94	0.06
4.02	0.00	0.00	236.72	236.83	0.06
4.03	0.00	0.00	236.61	236.72	0.06
4.05	0.00	0.00	236.50	236.61	0.06
4.07	0.00	0.00	236.38	236.50	0.06
4.08	0.00	0.00	236.27	236.38	0.06
4.10	0.00	0.00	236.16	236.27	0.06
4.12	0.00	0.00	236.05	236.16	0.06
4.13	0.00	0.00	235.94	236.05	0.06
4.15	0.00	0.00	235.83	235.94	0.06
4.17	0.00	0.00	235.72	235.83	0.06
4.18	0.00	0.00	235.60	235.72	0.06
4.20	0.00	0.00	235.49	235.60	0.06
4.22	0.00	0.00	235.38	235.49	0.06
4.23	0.00	0.00	235.27	235.38	0.06
4.25	0.00	0.00	235.16	235.27	0.06
4.27	0.00	0.00	235.05	235.16	0.06
4.28	0.00	0.00	234.94	235.05	0.06
4.30	0.00	0.00	234.83	234.94	0.06
4.32	0.00	0.00	234.72	234.83	0.06
4.33	0.00	0.00	234.60	234.72	0.06
4.35	0.00	0.00	234.49	234.60	0.06
4.37	0.00	0.00	234.38	234.49	0.06
4.38	0.00	0.00	234.27	234.38	0.06
4.40	0.00	0.00	234.16	234.27	0.06
4.42	0.00	0.00	234.05	234.16	0.06
4.43	0.00	0.00	233.94	234.05	0.06
4.45	0.00	0.00	233.83	233.94	0.06
4.47	0.00	0.00	233.72	233.83	0.06
4.48	0.00	0.00	233.61	233.72	0.06
4.50	0.00	0.00	233.50	233.61	0.06
4.52	0.00	0.00	233.39	233.50	0.06
4.53	0.00	0.00	233.28	233.39	0.06
4.55	0.00	0.00	233.17	233.28	0.06
4.57	0.00	0.00	233.06	233.17	0.06
4.58	0.00	0.00	232.95	233.06	0.06
4.60	0.00	0.00	232.84	232.95	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
4.62	0.00	0.00	232.73	232.84	0.05
4.63	0.00	0.00	232.62	232.73	0.05
4.65	0.00	0.00	232.51	232.62	0.05
4.67	0.00	0.00	232.40	232.51	0.05
4.68	0.00	0.00	232.29	232.40	0.05
4.70	0.00	0.00	232.18	232.29	0.05
4.72	0.00	0.00	232.07	232.18	0.05
4.73	0.00	0.00	231.96	232.07	0.05
4.75	0.00	0.00	231.85	231.96	0.05
4.77	0.00	0.00	231.74	231.85	0.05
4.78	0.00	0.00	231.63	231.74	0.05
4.80	0.00	0.00	231.52	231.63	0.05
4.82	0.00	0.00	231.41	231.52	0.05
4.83	0.00	0.00	231.31	231.41	0.05
4.85	0.00	0.00	231.20	231.31	0.05
4.87	0.00	0.00	231.09	231.20	0.05
4.88	0.00	0.00	230.98	231.09	0.05
4.90	0.00	0.00	230.87	230.98	0.05
4.92	0.00	0.00	230.76	230.87	0.05
4.93	0.00	0.00	230.65	230.76	0.05
4.95	0.00	0.00	230.54	230.65	0.05
4.97	0.00	0.00	230.43	230.54	0.05
4.98	0.00	0.00	230.32	230.43	0.05
5.00	0.00	0.00	230.22	230.32	0.05
5.02	0.00	0.00	230.11	230.22	0.05
5.03	0.00	0.00	230.00	230.11	0.05
5.05	0.00	0.00	229.89	230.00	0.05
5.07	0.00	0.00	229.78	229.89	0.05
5.08	0.00	0.00	229.67	229.78	0.05
5.10	0.00	0.00	229.56	229.67	0.05
5.12	0.00	0.00	229.46	229.56	0.05
5.13	0.00	0.00	229.35	229.46	0.05
5.15	0.00	0.00	229.24	229.35	0.05
5.17	0.00	0.00	229.13	229.24	0.05
5.18	0.00	0.00	229.02	229.13	0.05
5.20	0.00	0.00	228.92	229.02	0.05
5.22	0.00	0.00	228.81	228.92	0.05
5.23	0.00	0.00	228.70	228.81	0.05
5.25	0.00	0.00	228.59	228.70	0.05
5.27	0.00	0.00	228.48	228.59	0.05
5.28	0.00	0.00	228.38	228.48	0.05
5.30	0.00	0.00	228.27	228.38	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
5.32	0.00	0.00	228.16	228.27	0.05
5.33	0.00	0.00	228.05	228.16	0.05
5.35	0.00	0.00	227.94	228.05	0.05
5.37	0.00	0.00	227.84	227.94	0.05
5.38	0.00	0.00	227.73	227.84	0.05
5.40	0.00	0.00	227.62	227.73	0.05
5.42	0.00	0.00	227.51	227.62	0.05
5.43	0.00	0.00	227.41	227.51	0.05
5.45	0.00	0.00	227.30	227.41	0.05
5.47	0.00	0.00	227.19	227.30	0.05
5.48	0.00	0.00	227.09	227.19	0.05
5.50	0.00	0.00	226.98	227.09	0.05
5.52	0.00	0.00	226.87	226.98	0.05
5.53	0.00	0.00	226.76	226.87	0.05
5.55	0.00	0.00	226.66	226.76	0.05
5.57	0.00	0.00	226.55	226.66	0.05
5.58	0.00	0.00	226.44	226.55	0.05
5.60	0.00	0.00	226.34	226.44	0.05
5.62	0.00	0.00	226.23	226.34	0.05
5.63	0.00	0.00	226.12	226.23	0.05
5.65	0.00	0.00	226.02	226.12	0.05
5.67	0.00	0.00	225.91	226.02	0.05
5.68	0.00	0.00	225.80	225.91	0.05
5.70	0.00	0.00	225.70	225.80	0.05
5.72	0.00	0.00	225.59	225.70	0.05
5.73	0.00	0.00	225.48	225.59	0.05
5.75	0.00	0.00	225.38	225.48	0.05
5.77	0.00	0.00	225.27	225.38	0.05
5.78	0.00	0.00	225.16	225.27	0.05
5.80	0.00	0.00	225.06	225.16	0.05
5.82	0.00	0.00	224.95	225.06	0.05
5.83	0.00	0.00	224.85	224.95	0.05
5.85	0.00	0.00	224.74	224.85	0.05
5.87	0.00	0.00	224.63	224.74	0.05
5.88	0.00	0.00	224.53	224.63	0.05
5.90	0.00	0.00	224.42	224.53	0.05
5.92	0.00	0.00	224.32	224.42	0.05
5.93	0.00	0.00	224.21	224.32	0.05
5.95	0.00	0.00	224.10	224.21	0.05
5.97	0.00	0.00	224.00	224.10	0.05
5.98	0.00	0.00	223.89	224.00	0.05
6.00	0.00	0.00	223.79	223.89	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.02	0.00	0.00	223.68	223.79	0.05
6.03	0.00	0.00	223.58	223.68	0.05
6.05	0.00	0.00	223.47	223.58	0.05
6.07	0.00	0.00	223.36	223.47	0.05
6.08	0.00	0.00	223.26	223.36	0.05
6.10	0.00	0.00	223.15	223.26	0.05
6.12	0.00	0.00	223.05	223.15	0.05
6.13	0.00	0.00	222.94	223.05	0.05
6.15	0.00	0.00	222.84	222.94	0.05
6.17	0.00	0.00	222.73	222.84	0.05
6.18	0.00	0.00	222.63	222.73	0.05
6.20	0.00	0.00	222.52	222.63	0.05
6.22	0.00	0.00	222.42	222.52	0.05
6.23	0.00	0.00	222.31	222.42	0.05
6.25	0.00	0.00	222.21	222.31	0.05
6.27	0.00	0.00	222.10	222.21	0.05
6.28	0.00	0.00	222.00	222.10	0.05
6.30	0.00	0.00	221.89	222.00	0.05
6.32	0.00	0.00	221.79	221.89	0.05
6.33	0.00	0.00	221.68	221.79	0.05
6.35	0.00	0.00	221.58	221.68	0.05
6.37	0.00	0.00	221.47	221.58	0.05
6.38	0.00	0.00	221.37	221.47	0.05
6.40	0.00	0.00	221.26	221.37	0.05
6.42	0.00	0.00	221.16	221.26	0.05
6.43	0.00	0.00	221.06	221.16	0.05
6.45	0.00	0.00	220.95	221.06	0.05
6.47	0.00	0.00	220.85	220.95	0.05
6.48	0.00	0.00	220.74	220.85	0.05
6.50	0.00	0.00	220.64	220.74	0.05
6.52	0.00	0.00	220.53	220.64	0.05
6.53	0.00	0.00	220.43	220.53	0.05
6.55	0.00	0.00	220.33	220.43	0.05
6.57	0.00	0.00	220.22	220.33	0.05
6.58	0.00	0.00	220.12	220.22	0.05
6.60	0.00	0.00	220.02	220.12	0.05
6.62	0.00	0.00	219.91	220.02	0.05
6.63	0.00	0.00	219.81	219.91	0.05
6.65	0.00	0.00	219.70	219.81	0.05
6.67	0.00	0.00	219.60	219.70	0.05
6.68	0.00	0.00	219.50	219.60	0.05
6.70	0.00	0.00	219.39	219.50	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.72	0.00	0.00	219.29	219.39	0.05
6.73	0.00	0.00	219.19	219.29	0.05
6.75	0.00	0.00	219.08	219.19	0.05
6.77	0.00	0.00	218.98	219.08	0.05
6.78	0.00	0.00	218.88	218.98	0.05
6.80	0.00	0.00	218.77	218.88	0.05
6.82	0.00	0.00	218.67	218.77	0.05
6.83	0.00	0.00	218.57	218.67	0.05
6.85	0.00	0.00	218.46	218.57	0.05
6.87	0.00	0.00	218.36	218.46	0.05
6.88	0.00	0.00	218.26	218.36	0.05
6.90	0.00	0.00	218.15	218.26	0.05
6.92	0.00	0.00	218.05	218.15	0.05
6.93	0.00	0.00	217.95	218.05	0.05
6.95	0.00	0.00	217.84	217.95	0.05
6.97	0.00	0.00	217.74	217.84	0.05
6.98	0.00	0.00	217.64	217.74	0.05
7.00	0.00	0.00	217.54	217.64	0.05
7.02	0.00	0.00	217.43	217.54	0.05
7.03	0.00	0.00	217.33	217.43	0.05
7.05	0.00	0.00	217.23	217.33	0.05
7.07	0.00	0.00	217.13	217.23	0.05
7.08	0.00	0.00	217.02	217.13	0.05
7.10	0.00	0.00	216.92	217.02	0.05
7.12	0.00	0.00	216.82	216.92	0.05
7.13	0.00	0.00	216.72	216.82	0.05
7.15	0.00	0.00	216.61	216.72	0.05
7.17	0.00	0.00	216.51	216.61	0.05
7.18	0.00	0.00	216.41	216.51	0.05
7.20	0.00	0.00	216.31	216.41	0.05
7.22	0.00	0.00	216.21	216.31	0.05
7.23	0.00	0.00	216.10	216.21	0.05
7.25	0.00	0.00	216.00	216.10	0.05
7.27	0.00	0.00	215.90	216.00	0.05
7.28	0.00	0.00	215.80	215.90	0.05
7.30	0.00	0.00	215.70	215.80	0.05
7.32	0.00	0.00	215.59	215.70	0.05
7.33	0.00	0.00	215.49	215.59	0.05
7.35	0.00	0.00	215.39	215.49	0.05
7.37	0.00	0.00	215.29	215.39	0.05
7.38	0.00	0.00	215.19	215.29	0.05
7.40	0.00	0.00	215.09	215.19	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
7.42	0.00	0.00	214.98	215.09	0.05
7.43	0.00	0.00	214.88	214.98	0.05
7.45	0.00	0.00	214.78	214.88	0.05
7.47	0.00	0.00	214.68	214.78	0.05
7.48	0.00	0.00	214.58	214.68	0.05
7.50	0.00	0.00	214.48	214.58	0.05
7.52	0.00	0.00	214.38	214.48	0.05
7.53	0.00	0.00	214.27	214.38	0.05
7.55	0.00	0.00	214.17	214.27	0.05
7.57	0.00	0.00	214.07	214.17	0.05
7.58	0.00	0.00	213.97	214.07	0.05
7.60	0.00	0.00	213.87	213.97	0.05
7.62	0.00	0.00	213.77	213.87	0.05
7.63	0.00	0.00	213.67	213.77	0.05
7.65	0.00	0.00	213.57	213.67	0.05
7.67	0.00	0.00	213.47	213.57	0.05
7.68	0.00	0.00	213.37	213.47	0.05
7.70	0.00	0.00	213.27	213.37	0.05
7.72	0.00	0.00	213.16	213.27	0.05
7.73	0.00	0.00	213.06	213.16	0.05
7.75	0.00	0.00	212.96	213.06	0.05
7.77	0.00	0.00	212.86	212.96	0.05
7.78	0.00	0.00	212.76	212.86	0.05
7.80	0.00	0.00	212.66	212.76	0.05
7.82	0.00	0.00	212.56	212.66	0.05
7.83	0.00	0.00	212.46	212.56	0.05
7.85	0.00	0.00	212.36	212.46	0.05
7.87	0.00	0.00	212.26	212.36	0.05
7.88	0.00	0.00	212.16	212.26	0.05
7.90	0.00	0.00	212.06	212.16	0.05
7.92	0.00	0.00	211.96	212.06	0.05
7.93	0.00	0.00	211.86	211.96	0.05
7.95	0.00	0.00	211.76	211.86	0.05
7.97	0.00	0.00	211.66	211.76	0.05
7.98	0.00	0.00	211.56	211.66	0.05
8.00	0.00	0.00	211.46	211.56	0.05
8.02	0.00	0.00	211.36	211.46	0.05
8.03	0.00	0.00	211.26	211.36	0.05
8.05	0.00	0.00	211.16	211.26	0.05
8.07	0.00	0.00	211.06	211.16	0.05
8.08	0.00	0.00	210.96	211.06	0.05
8.10	0.00	0.00	210.86	210.96	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
8.12	0.00	0.00	210.76	210.86	0.05
8.13	0.00	0.00	210.66	210.76	0.05
8.15	0.00	0.00	210.56	210.66	0.05
8.17	0.00	0.00	210.46	210.56	0.05
8.18	0.00	0.00	210.37	210.46	0.05
8.20	0.00	0.00	210.27	210.37	0.05
8.22	0.00	0.00	210.17	210.27	0.05
8.23	0.00	0.00	210.07	210.17	0.05
8.25	0.00	0.00	209.97	210.07	0.05
8.27	0.00	0.00	209.87	209.97	0.05
8.28	0.00	0.00	209.77	209.87	0.05
8.30	0.00	0.00	209.67	209.77	0.05
8.32	0.00	0.00	209.57	209.67	0.05
8.33	0.00	0.00	209.47	209.57	0.05
8.35	0.00	0.00	209.37	209.47	0.05
8.37	0.00	0.00	209.28	209.37	0.05
8.38	0.00	0.00	209.18	209.28	0.05
8.40	0.00	0.00	209.08	209.18	0.05
8.42	0.00	0.00	208.98	209.08	0.05
8.43	0.00	0.00	208.88	208.98	0.05
8.45	0.00	0.00	208.78	208.88	0.05
8.47	0.00	0.00	208.68	208.78	0.05
8.48	0.00	0.00	208.59	208.68	0.05
8.50	0.00	0.00	208.49	208.59	0.05
8.52	0.00	0.00	208.39	208.49	0.05
8.53	0.00	0.00	208.29	208.39	0.05
8.55	0.00	0.00	208.19	208.29	0.05
8.57	0.00	0.00	208.09	208.19	0.05
8.58	0.00	0.00	208.00	208.09	0.05
8.60	0.00	0.00	207.90	208.00	0.05
8.62	0.00	0.00	207.80	207.90	0.05
8.63	0.00	0.00	207.70	207.80	0.05
8.65	0.00	0.00	207.60	207.70	0.05
8.67	0.00	0.00	207.50	207.60	0.05
8.68	0.00	0.00	207.41	207.50	0.05
8.70	0.00	0.00	207.31	207.41	0.05
8.72	0.00	0.00	207.21	207.31	0.05
8.73	0.00	0.00	207.11	207.21	0.05
8.75	0.00	0.00	207.02	207.11	0.05
8.77	0.00	0.00	206.92	207.02	0.05
8.78	0.00	0.00	206.82	206.92	0.05
8.80	0.00	0.00	206.72	206.82	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
8.82	0.00	0.00	206.62	206.72	0.05
8.83	0.00	0.00	206.53	206.62	0.05
8.85	0.00	0.00	206.43	206.53	0.05
8.87	0.00	0.00	206.33	206.43	0.05
8.88	0.00	0.00	206.23	206.33	0.05
8.90	0.00	0.00	206.14	206.23	0.05
8.92	0.00	0.00	206.04	206.14	0.05
8.93	0.00	0.00	205.94	206.04	0.05
8.95	0.00	0.00	205.85	205.94	0.05
8.97	0.00	0.00	205.75	205.85	0.05
8.98	0.00	0.00	205.65	205.75	0.05
9.00	0.00	0.00	205.55	205.65	0.05
9.02	0.00	0.00	205.46	205.55	0.05
9.03	0.00	0.00	205.36	205.46	0.05
9.05	0.00	0.00	205.26	205.36	0.05
9.07	0.00	0.00	205.17	205.26	0.05
9.08	0.00	0.00	205.07	205.17	0.05
9.10	0.00	0.00	204.97	205.07	0.05
9.12	0.00	0.00	204.88	204.97	0.05
9.13	0.00	0.00	204.78	204.88	0.05
9.15	0.00	0.00	204.68	204.78	0.05
9.17	0.00	0.00	204.59	204.68	0.05
9.18	0.00	0.00	204.49	204.59	0.05
9.20	0.00	0.00	204.39	204.49	0.05
9.22	0.00	0.00	204.30	204.39	0.05
9.23	0.00	0.00	204.20	204.30	0.05
9.25	0.00	0.00	204.10	204.20	0.05
9.27	0.00	0.00	204.01	204.10	0.05
9.28	0.00	0.00	203.91	204.01	0.05
9.30	0.00	0.00	203.82	203.91	0.05
9.32	0.00	0.00	203.72	203.82	0.05
9.33	0.00	0.00	203.62	203.72	0.05
9.35	0.00	0.00	203.53	203.62	0.05
9.37	0.00	0.00	203.43	203.53	0.05
9.38	0.00	0.00	203.33	203.43	0.05
9.40	0.00	0.00	203.24	203.33	0.05
9.42	0.00	0.00	203.14	203.24	0.05
9.43	0.00	0.00	203.05	203.14	0.05
9.45	0.00	0.00	202.95	203.05	0.05
9.47	0.00	0.00	202.86	202.95	0.05
9.48	0.00	0.00	202.76	202.86	0.05
9.50	0.00	0.00	202.66	202.76	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
9.52	0.00	0.00	202.57	202.66	0.05
9.53	0.00	0.00	202.47	202.57	0.05
9.55	0.00	0.00	202.38	202.47	0.05
9.57	0.00	0.00	202.28	202.38	0.05
9.58	0.00	0.00	202.19	202.28	0.05
9.60	0.00	0.00	202.09	202.19	0.05
9.62	0.00	0.00	202.00	202.09	0.05
9.63	0.00	0.00	201.90	202.00	0.05
9.65	0.00	0.00	201.80	201.90	0.05
9.67	0.00	0.00	201.71	201.80	0.05
9.68	0.00	0.00	201.61	201.71	0.05
9.70	0.00	0.00	201.52	201.61	0.05
9.72	0.00	0.00	201.42	201.52	0.05
9.73	0.00	0.00	201.33	201.42	0.05
9.75	0.00	0.00	201.23	201.33	0.05
9.77	0.00	0.00	201.14	201.23	0.05
9.78	0.00	0.00	201.04	201.14	0.05
9.80	0.00	0.00	200.95	201.04	0.05
9.82	0.00	0.00	200.85	200.95	0.05
9.83	0.00	0.00	200.76	200.85	0.05
9.85	0.00	0.00	200.66	200.76	0.05
9.87	0.00	0.00	200.57	200.66	0.05
9.88	0.00	0.00	200.48	200.57	0.05
9.90	0.00	0.00	200.38	200.48	0.05
9.92	0.00	0.00	200.29	200.38	0.05
9.93	0.00	0.00	200.19	200.29	0.05
9.95	0.00	0.00	200.10	200.19	0.05
9.97	0.00	0.00	200.00	200.10	0.05
9.98	0.00	0.00	199.91	200.00	0.05
10.00	0.00	0.00	199.81	199.91	0.05
10.02	0.00	0.00	199.72	199.81	0.05
10.03	0.00	0.00	199.63	199.72	0.05
10.05	0.00	0.00	199.53	199.63	0.05
10.07	0.00	0.00	199.44	199.53	0.05
10.08	0.00	0.00	199.34	199.44	0.05
10.10	0.00	0.00	199.25	199.34	0.05
10.12	0.00	0.00	199.15	199.25	0.05
10.13	0.00	0.00	199.06	199.15	0.05
10.15	0.00	0.00	198.97	199.06	0.05
10.17	0.00	0.00	198.87	198.97	0.05
10.18	0.00	0.00	198.78	198.87	0.05
10.20	0.00	0.00	198.68	198.78	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.22	0.00	0.00	198.59	198.68	0.05
10.23	0.00	0.00	198.50	198.59	0.05
10.25	0.00	0.00	198.40	198.50	0.05
10.27	0.00	0.00	198.31	198.40	0.05
10.28	0.00	0.00	198.22	198.31	0.05
10.30	0.00	0.00	198.12	198.22	0.05
10.32	0.00	0.00	198.03	198.12	0.05
10.33	0.00	0.00	197.94	198.03	0.05
10.35	0.00	0.00	197.84	197.94	0.05
10.37	0.00	0.00	197.75	197.84	0.05
10.38	0.00	0.00	197.66	197.75	0.05
10.40	0.00	0.00	197.56	197.66	0.05
10.42	0.00	0.00	197.47	197.56	0.05
10.43	0.00	0.00	197.38	197.47	0.05
10.45	0.00	0.00	197.28	197.38	0.05
10.47	0.00	0.00	197.19	197.28	0.05
10.48	0.00	0.00	197.10	197.19	0.05
10.50	0.00	0.00	197.00	197.10	0.05
10.52	0.00	0.00	196.91	197.00	0.05
10.53	0.00	0.00	196.82	196.91	0.05
10.55	0.00	0.00	196.72	196.82	0.05
10.57	0.00	0.00	196.63	196.72	0.05
10.58	0.00	0.00	196.54	196.63	0.05
10.60	0.00	0.00	196.45	196.54	0.05
10.62	0.00	0.00	196.35	196.45	0.05
10.63	0.00	0.00	196.26	196.35	0.05
10.65	0.00	0.00	196.17	196.26	0.05
10.67	0.00	0.00	196.08	196.17	0.05
10.68	0.00	0.00	195.98	196.08	0.05
10.70	0.00	0.00	195.89	195.98	0.05
10.72	0.00	0.00	195.80	195.89	0.05
10.73	0.00	0.00	195.71	195.80	0.05
10.75	0.00	0.00	195.61	195.71	0.05
10.77	0.00	0.00	195.52	195.61	0.05
10.78	0.00	0.00	195.43	195.52	0.05
10.80	0.00	0.00	195.34	195.43	0.05
10.82	0.00	0.00	195.24	195.34	0.05
10.83	0.00	0.00	195.15	195.24	0.05
10.85	0.00	0.00	195.06	195.15	0.05
10.87	0.00	0.00	194.97	195.06	0.05
10.88	0.00	0.00	194.88	194.97	0.05
10.90	0.00	0.00	194.78	194.88	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

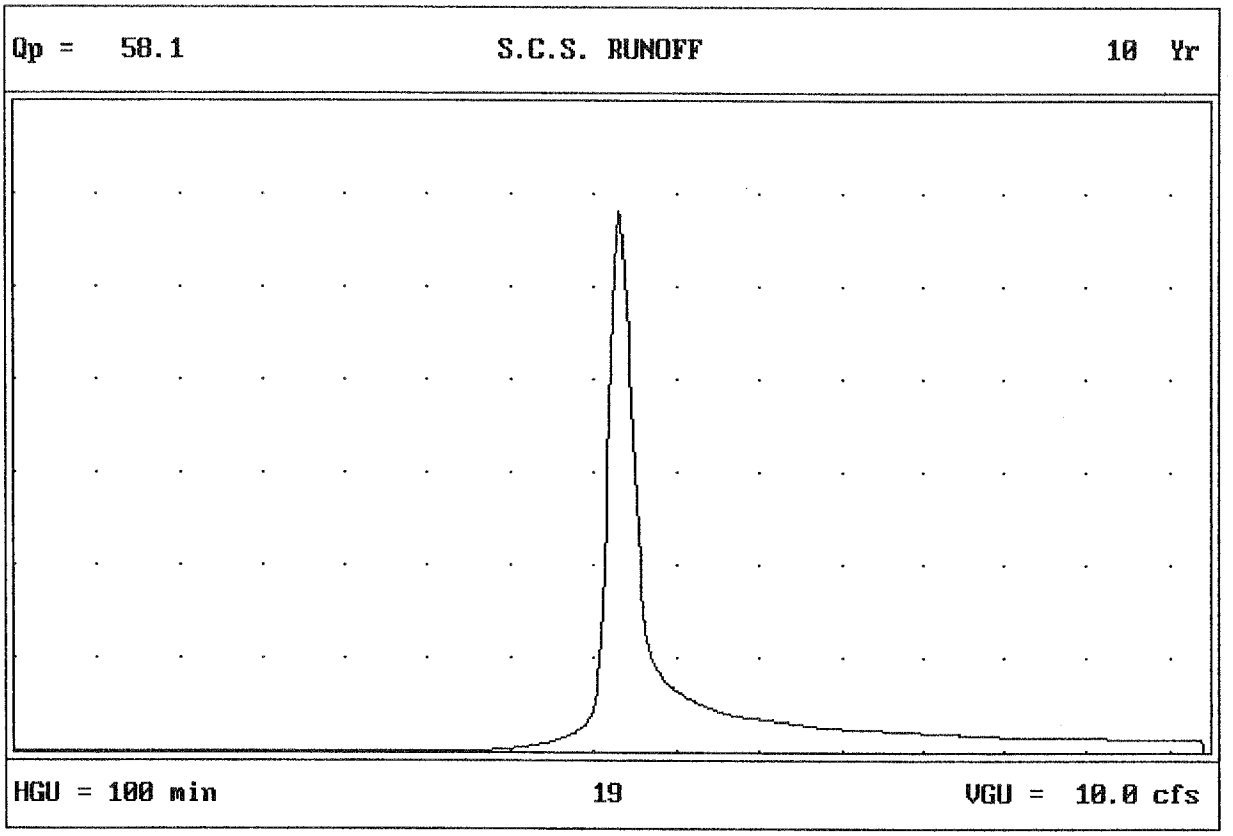
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.92	0.00	0.00	194.69	194.78	0.05
10.93	0.00	0.00	194.60	194.69	0.05
10.95	0.00	0.00	194.51	194.60	0.05
10.97	0.00	0.00	194.42	194.51	0.05
10.98	0.00	0.00	194.32	194.42	0.05
11.00	0.00	0.00	194.23	194.32	0.05
11.02	0.00	0.00	194.14	194.23	0.05
11.03	0.00	0.00	194.05	194.14	0.05
11.05	0.00	0.00	193.96	194.05	0.05
11.07	0.00	0.00	193.87	193.96	0.05
11.08	0.00	0.00	193.77	193.87	0.05
11.10	0.00	0.00	193.68	193.77	0.05
11.12	0.00	0.00	193.59	193.68	0.05
11.13	0.00	0.00	193.50	193.59	0.05
11.15	0.00	0.00	193.41	193.50	0.05
11.17	0.00	0.00	193.32	193.41	0.05
11.18	0.00	0.00	193.23	193.32	0.05
11.20	0.00	0.00	193.14	193.23	0.05
11.22	0.00	0.00	193.04	193.14	0.05
11.23	0.00	0.00	192.95	193.04	0.05
11.25	0.00	0.00	192.86	192.95	0.05
11.27	0.00	0.00	192.77	192.86	0.05
11.28	0.00	0.00	192.68	192.77	0.05
11.30	0.00	0.00	192.59	192.68	0.05
11.32	0.00	0.00	192.50	192.59	0.05
11.33	0.00	0.00	192.41	192.50	0.05
11.35	0.00	0.00	192.32	192.41	0.05
11.37	0.00	0.00	192.23	192.32	0.05
11.38	0.00	0.00	192.14	192.23	0.05
11.40	0.00	0.00	192.04	192.14	0.05
11.42	0.00	0.00	191.95	192.04	0.05
11.43	0.00	0.00	191.86	191.95	0.05
11.45	0.00	0.00	191.77	191.86	0.05
11.47	0.00	0.00	191.68	191.77	0.05
11.48	0.00	0.00	191.59	191.68	0.05
11.50	0.00	0.00	191.50	191.59	0.05
11.52	0.00	0.00	191.41	191.50	0.05
11.53	0.00	0.00	191.32	191.41	0.05
11.55	0.00	0.00	191.23	191.32	0.05
11.57	0.00	0.00	191.14	191.23	0.05
11.58	0.00	0.00	191.05	191.14	0.05
11.60	0.00	0.00	190.96	191.05	0.05

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
11.62	0.00	0.00	190.87	190.96	0.05
11.63	0.00	0.00	190.78	190.87	0.05
11.65	0.00	0.00	190.69	190.78	0.05
11.67	0.00	0.00	190.60	190.69	0.05
11.68	0.00	0.00	190.51	190.60	0.04
11.70	0.00	0.00	190.42	190.51	0.04
11.72	0.00	0.00	190.33	190.42	0.04
11.73	0.00	0.00	190.24	190.33	0.04
11.75	0.00	0.00	190.15	190.24	0.04
11.77	0.00	0.00	190.06	190.15	0.04
11.78	0.00	0.00	189.97	190.06	0.04
11.80	0.00	0.00	189.88	189.97	0.04
11.82	0.00	0.00	189.79	189.88	0.04
11.83	0.00	0.00	189.70	189.79	0.04
11.85	0.00	0.00	189.61	189.70	0.04
11.87	0.00	0.00	189.52	189.61	0.04
11.88	0.00	0.00	189.43	189.52	0.04
11.90	0.00	0.00	189.34	189.43	0.04
11.92	0.00	0.00	189.25	189.34	0.04
11.93	0.00	0.00	189.17	189.25	0.04
11.95	0.00	0.00	189.08	189.17	0.04
11.97	0.00	0.00	188.99	189.08	0.04
11.98	0.00	0.00	188.90	188.99	0.04
12.00	0.00	0.00	188.81	188.90	0.04

Maximum outflow (cfs) = 0.06
Maximum storage (cu ft) = 7922
Maximum elevation (ft) = 83.08

10 YEAR – 24 HOUR STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 233801 / 5.367

HYDROLOGIC REPORT

10 YR 24 HR STORM.....
INFLOW.....
WETLAND 2.....

Hyd. No. 19

Hydrograph type	= S.C.S. RUNOFF	Peak discharge	= 58.11 cfs
Storm frequency	= 10 yr	Time interval	= 2 min
Basin area	= 24.5 ac	Basin curve No.	= 70
Ave basin slope	= 2 %	Hydraulic len	= 1000 ft
Basin lag	= 18.0 min	Time of concen	= 30.04 min
Total precip.	= 5.80 in	Distribution	= S.C.S. II

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
10.83	1.03	10.87	1.08	10.90	1.14	10.93	1.19
10.97	1.25	11.00	1.31	11.03	1.37	11.07	1.42
11.10	1.49	11.13	1.55	11.17	1.62	11.20	1.70
11.23	1.78	11.27	1.87	11.30	1.97	11.33	2.08
11.37	2.21	11.40	2.34	11.43	2.49	11.47	2.64
11.50	2.80	11.53	2.99	11.57	3.24	11.60	3.58
11.63	4.05	11.67	4.70	11.70	5.57	11.73	6.73
11.77	8.24	11.80	10.26	11.83	12.94	11.87	16.44
11.90	20.96	11.93	26.38	11.97	32.27	12.00	38.12
12.03	43.61	12.07	48.63	12.10	52.91	12.13	56.16
12.17	58.02	12.20	58.11	12.23	56.47	12.27	53.71
12.30	50.48	12.33	47.13	12.37	43.69	12.40	40.17
12.43	36.60	12.47	33.02	12.50	29.47	12.53	25.98
12.57	22.61	12.60	19.46	12.63	16.65	12.67	14.33
12.70	12.64	12.73	11.56	12.77	10.90	12.80	10.40
12.83	9.94	12.87	9.53	12.90	9.15	12.93	8.80
12.97	8.49	13.00	8.20	13.03	7.94	13.07	7.71
13.10	7.49	13.13	7.30	13.17	7.12	13.20	6.95
13.23	6.80	13.27	6.66	13.30	6.52	13.33	6.39
13.37	6.27	13.40	6.15	13.43	6.04	13.47	5.93
13.50	5.82	13.53	5.72	13.57	5.62	13.60	5.52
13.63	5.43	13.67	5.34	13.70	5.25	13.73	5.17
13.77	5.08	13.80	5.00	13.83	4.92	13.87	4.85
13.90	4.77	13.93	4.70	13.97	4.62	14.00	4.55
14.03	4.48	14.07	4.42	14.10	4.35	14.13	4.29
14.17	4.22	14.20	4.16	14.23	4.11	14.27	4.06
14.30	4.01	14.33	3.96	14.37	3.92	14.40	3.88
14.43	3.84	14.47	3.81	14.50	3.77	14.53	3.74
14.57	3.72	14.60	3.69	14.63	3.66	14.67	3.64

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
14.70	3.62	14.73	3.59	14.77	3.57	14.80	3.55
14.83	3.53	14.87	3.50	14.90	3.48	14.93	3.46
14.97	3.44	15.00	3.41	15.03	3.39	15.07	3.37
15.10	3.35	15.13	3.32	15.17	3.30	15.20	3.28
15.23	3.25	15.27	3.23	15.30	3.21	15.33	3.19
15.37	3.16	15.40	3.14	15.43	3.12	15.47	3.09
15.50	3.07	15.53	3.05	15.57	3.02	15.60	3.00
15.63	2.98	15.67	2.95	15.70	2.93	15.73	2.91
15.77	2.88	15.80	2.86	15.83	2.83	15.87	2.81
15.90	2.79	15.93	2.76	15.97	2.74	16.00	2.72
16.03	2.69	16.07	2.67	16.10	2.64	16.13	2.62
16.17	2.60	16.20	2.58	16.23	2.56	16.27	2.54
16.30	2.52	16.33	2.50	16.37	2.49	16.40	2.47
16.43	2.46	16.47	2.45	16.50	2.44	16.53	2.43
16.57	2.42	16.60	2.41	16.63	2.40	16.67	2.39
16.70	2.38	16.73	2.37	16.77	2.36	16.80	2.35
16.83	2.35	16.87	2.34	16.90	2.33	16.93	2.32
16.97	2.31	17.00	2.30	17.03	2.30	17.07	2.29
17.10	2.28	17.13	2.27	17.17	2.26	17.20	2.26
17.23	2.25	17.27	2.24	17.30	2.23	17.33	2.22
17.37	2.21	17.40	2.21	17.43	2.20	17.47	2.19
17.50	2.18	17.53	2.17	17.57	2.16	17.60	2.15
17.63	2.15	17.67	2.14	17.70	2.13	17.73	2.12
17.77	2.11	17.80	2.10	17.83	2.10	17.87	2.09
17.90	2.08	17.93	2.07	17.97	2.06	18.00	2.05
18.03	2.04	18.07	2.04	18.10	2.03	18.13	2.02
18.17	2.01	18.20	2.00	18.23	1.99	18.27	1.98
18.30	1.98	18.33	1.97	18.37	1.96	18.40	1.95
18.43	1.94	18.47	1.93	18.50	1.92	18.53	1.92
18.57	1.91	18.60	1.90	18.63	1.89	18.67	1.88
18.70	1.87	18.73	1.86	18.77	1.86	18.80	1.85
18.83	1.84	18.87	1.83	18.90	1.82	18.93	1.81
18.97	1.80	19.00	1.79	19.03	1.79	19.07	1.78
19.10	1.77	19.13	1.76	19.17	1.75	19.20	1.74
19.23	1.73	19.27	1.72	19.30	1.72	19.33	1.71
19.37	1.70	19.40	1.69	19.43	1.68	19.47	1.67
19.50	1.66	19.53	1.65	19.57	1.64	19.60	1.64
19.63	1.63	19.67	1.62	19.70	1.61	19.73	1.60
19.77	1.59	19.80	1.58	19.83	1.57	19.87	1.56
19.90	1.56	19.93	1.55	19.97	1.54	20.00	1.53
20.03	1.52	20.07	1.51	20.10	1.50	20.13	1.49
20.17	1.49	20.20	1.48	20.23	1.47	20.27	1.46
20.30	1.46	20.33	1.45	20.37	1.45	20.40	1.44
20.43	1.44	20.47	1.44	20.50	1.43	20.53	1.43
20.57	1.43	20.60	1.42	20.63	1.42	20.67	1.42
20.70	1.42	20.73	1.42	20.77	1.42	20.80	1.41

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
20.83	1.41	20.87	1.41	20.90	1.41	20.93	1.41
20.97	1.41	21.00	1.40	21.03	1.40	21.07	1.40
21.10	1.40	21.13	1.40	21.17	1.40	21.20	1.39
21.23	1.39	21.27	1.39	21.30	1.39	21.33	1.39
21.37	1.39	21.40	1.38	21.43	1.38	21.47	1.38
21.50	1.38	21.53	1.38	21.57	1.38	21.60	1.37
21.63	1.37	21.67	1.37	21.70	1.37	21.73	1.37
21.77	1.37	21.80	1.36	21.83	1.36	21.87	1.36
21.90	1.36	21.93	1.36	21.97	1.36	22.00	1.36
22.03	1.35	22.07	1.35	22.10	1.35	22.13	1.35
22.17	1.35	22.20	1.35	22.23	1.34	22.27	1.34
22.30	1.34	22.33	1.34	22.37	1.34	22.40	1.34
22.43	1.33	22.47	1.33	22.50	1.33	22.53	1.33
22.57	1.33	22.60	1.33	22.63	1.32	22.67	1.32
22.70	1.32	22.73	1.32	22.77	1.32	22.80	1.32
22.83	1.31	22.87	1.31	22.90	1.31	22.93	1.31
22.97	1.31	23.00	1.31	23.03	1.30	23.07	1.30
23.10	1.30	23.13	1.30	23.17	1.30	23.20	1.29
23.23	1.29	23.27	1.29	23.30	1.29	23.33	1.29
23.37	1.29	23.40	1.28	23.43	1.28	23.47	1.28
23.50	1.28	23.53	1.28	23.57	1.28	23.60	1.27
23.63	1.27	23.67	1.27	23.70	1.27	23.73	1.27
23.77	1.27	23.80	1.26	23.83	1.26	23.87	1.26
23.90	1.26	23.93	1.26	23.97	1.26	24.00	0.00

HYDROLOGIC REPORT

10 YR 24 HR STORM.....
ROUTED.....
WETLAND 2.....

Hyd. No. 20

Hydrograph type = RESERVOIR ROUTE
Storm frequency = 10 yr
Inflow hyd. no. = 19

Peak discharge = 7.04 cfs
Time interval = 2 min
Reservoir no. = 2

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.83	1.03	1.08	33.89	33.93	0.02
10.87	1.08	1.14	35.97	36.01	0.02
10.90	1.14	1.19	38.15	38.19	0.02
10.93	1.19	1.25	40.44	40.48	0.02
10.97	1.25	1.31	42.84	42.88	0.02
11.00	1.31	1.37	45.36	45.40	0.02
11.03	1.37	1.42	47.99	48.04	0.02
11.07	1.42	1.49	50.73	50.78	0.02
11.10	1.49	1.55	53.59	53.64	0.03
11.13	1.55	1.62	56.58	56.63	0.03
11.17	1.62	1.70	59.70	59.75	0.03
11.20	1.70	1.78	62.96	63.02	0.03
11.23	1.78	1.87	66.37	66.44	0.03
11.27	1.87	1.97	69.96	70.02	0.03
11.30	1.97	2.08	73.72	73.79	0.03
11.33	2.08	2.21	77.70	77.77	0.04
11.37	2.21	2.34	81.92	81.99	0.04
11.40	2.34	2.49	86.39	86.47	0.04
11.43	2.49	2.64	91.14	91.22	0.04
11.47	2.64	2.80	96.17	96.26	0.05
11.50	2.80	2.99	101.51	101.61	0.05
11.53	2.99	3.24	107.21	107.31	0.05
11.57	3.24	3.58	113.34	113.44	0.05
11.60	3.58	4.05	120.05	120.17	0.06
11.63	4.05	4.70	127.57	127.69	0.06

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
11.67	4.70	5.57	136.19	136.32	0.06
11.70	5.57	6.73	146.32	146.46	0.07
11.73	6.73	8.24	158.47	158.62	0.07
11.77	8.24	10.26	173.26	173.43	0.08
11.80	10.26	12.94	191.58	191.77	0.10
11.83	12.94	16.44	214.55	214.78	0.11
11.87	16.44	20.96	243.66	243.93	0.13
11.90	20.96	26.38	280.74	281.06	0.16
11.93	26.38	32.27	327.69	328.08	0.20
11.97	32.27	38.12	385.77	386.35	0.29
12.00	38.12	43.61	455.35	456.16	0.41
12.03	43.61	48.63	536.01	537.07	0.53
12.07	48.63	52.91	626.93	628.25	0.66
12.10	52.91	56.16	726.70	728.47	0.88
12.13	56.16	58.02	833.41	835.77	1.18
12.17	58.02	58.11	944.82	947.59	1.38
12.20	58.11	56.47	1057.76	1060.94	1.59
12.23	56.47	53.71	1168.72	1172.33	1.81
12.27	53.71	50.48	1274.74	1278.91	2.09
12.30	50.48	47.13	1374.35	1378.94	2.29
12.33	47.13	43.69	1467.12	1471.97	2.43
12.37	43.69	40.17	1552.90	1557.94	2.52
12.40	40.17	36.60	1631.59	1636.76	2.59
12.43	36.60	33.02	1702.59	1708.36	2.88
12.47	33.02	29.47	1765.65	1772.22	3.29
12.50	29.47	25.98	1820.86	1828.14	3.64
12.53	25.98	22.61	1868.14	1876.31	4.08
12.57	22.61	19.46	1907.74	1916.73	4.50
12.60	19.46	16.65	1940.14	1949.80	4.83
12.63	16.65	14.33	1966.04	1976.25	5.10
12.67	14.33	12.64	1986.39	1997.02	5.31
12.70	12.64	11.56	2002.39	2013.35	5.48
12.73	11.56	10.90	2015.08	2026.59	5.75
12.77	10.90	10.40	2025.55	2037.54	6.00
12.80	10.40	9.94	2034.44	2046.84	6.20
12.83	9.94	9.53	2042.03	2054.78	6.38
12.87	9.53	9.15	2048.45	2061.50	6.52
12.90	9.15	8.80	2053.83	2067.13	6.65
12.93	8.80	8.49	2058.28	2071.78	6.75
12.97	8.49	8.20	2061.90	2075.57	6.83
13.00	8.20	7.94	2064.79	2078.59	6.90
13.03	7.94	7.71	2067.03	2080.93	6.95

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
13.07	7.71	7.49	2068.70	2082.68	6.99
13.10	7.49	7.30	2069.86	2083.90	7.02
13.13	7.30	7.12	2070.58	2084.65	7.03
13.17	7.12	6.95	2070.91	2084.99	7.04
13.20	6.95	6.80	2070.90	2084.98	7.04
13.23	6.80	6.66	2070.58	2084.65	7.03
13.27	6.66	6.52	2070.00	2084.04	7.02
13.30	6.52	6.39	2069.18	2083.18	7.00
13.33	6.39	6.27	2068.14	2082.09	6.98
13.37	6.27	6.15	2066.90	2080.80	6.95
13.40	6.15	6.04	2065.49	2079.32	6.92
13.43	6.04	5.93	2063.91	2077.67	6.88
13.47	5.93	5.82	2062.19	2075.87	6.84
13.50	5.82	5.72	2060.34	2073.94	6.80
13.53	5.72	5.62	2058.38	2071.88	6.75
13.57	5.62	5.52	2056.30	2069.71	6.70
13.60	5.52	5.43	2054.13	2067.44	6.65
13.63	5.43	5.34	2051.88	2065.08	6.60
13.67	5.34	5.25	2049.55	2062.64	6.55
13.70	5.25	5.17	2047.15	2060.13	6.49
13.73	5.17	5.08	2044.69	2057.56	6.44
13.77	5.08	5.00	2042.18	2054.94	6.38
13.80	5.00	4.92	2039.63	2052.26	6.32
13.83	4.92	4.85	2037.03	2049.55	6.26
13.87	4.85	4.77	2034.40	2046.80	6.20
13.90	4.77	4.70	2031.74	2044.02	6.14
13.93	4.70	4.62	2029.06	2041.21	6.08
13.97	4.62	4.55	2026.35	2038.38	6.01
14.00	4.55	4.48	2023.63	2035.53	5.95
14.03	4.48	4.42	2020.89	2032.67	5.89
14.07	4.42	4.35	2018.14	2029.79	5.82
14.10	4.35	4.29	2015.39	2026.91	5.76
14.13	4.29	4.22	2012.63	2024.02	5.70
14.17	4.22	4.16	2009.87	2021.14	5.63
14.20	4.16	4.11	2007.11	2018.26	5.57
14.23	4.11	4.06	2004.37	2015.39	5.51
14.27	4.06	4.01	2001.59	2012.54	5.47
14.30	4.01	3.96	1998.76	2009.65	5.44
14.33	3.96	3.92	1995.90	2006.73	5.41
14.37	3.92	3.88	1993.01	2003.78	5.38
14.40	3.88	3.84	1990.10	2000.81	5.35
14.43	3.84	3.81	1987.17	1997.82	5.32

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
14.47	3.81	3.77	1984.23	1994.82	5.29
14.50	3.77	3.74	1981.29	1991.81	5.26
14.53	3.74	3.72	1978.35	1988.81	5.23
14.57	3.72	3.69	1975.41	1985.81	5.20
14.60	3.69	3.66	1972.47	1982.81	5.17
14.63	3.66	3.64	1969.55	1979.83	5.14
14.67	3.64	3.62	1966.63	1976.85	5.11
14.70	3.62	3.59	1963.73	1973.89	5.08
14.73	3.59	3.57	1960.84	1970.94	5.05
14.77	3.57	3.55	1957.97	1968.01	5.02
14.80	3.55	3.53	1955.11	1965.09	4.99
14.83	3.53	3.50	1952.27	1962.19	4.96
14.87	3.50	3.48	1949.44	1959.30	4.93
14.90	3.48	3.46	1946.63	1956.43	4.90
14.93	3.46	3.44	1943.82	1953.57	4.87
14.97	3.44	3.41	1941.03	1950.72	4.84
15.00	3.41	3.39	1938.26	1947.88	4.81
15.03	3.39	3.37	1935.49	1945.06	4.79
15.07	3.37	3.35	1932.74	1942.25	4.76
15.10	3.35	3.32	1930.00	1939.45	4.73
15.13	3.32	3.30	1927.27	1936.67	4.70
15.17	3.30	3.28	1924.55	1933.89	4.67
15.20	3.28	3.25	1921.84	1931.12	4.64
15.23	3.25	3.23	1919.14	1928.37	4.61
15.27	3.23	3.21	1916.45	1925.63	4.59
15.30	3.21	3.19	1913.77	1922.89	4.56
15.33	3.19	3.16	1911.10	1920.17	4.53
15.37	3.16	3.14	1908.44	1917.45	4.50
15.40	3.14	3.12	1905.79	1914.74	4.48
15.43	3.12	3.09	1903.15	1912.05	4.45
15.47	3.09	3.07	1900.52	1909.36	4.42
15.50	3.07	3.05	1897.89	1906.68	4.39
15.53	3.05	3.02	1895.27	1904.00	4.37
15.57	3.02	3.00	1892.66	1901.34	4.34
15.60	3.00	2.98	1890.06	1898.68	4.31
15.63	2.98	2.95	1887.46	1896.03	4.29
15.67	2.95	2.93	1884.87	1893.39	4.26
15.70	2.93	2.91	1882.29	1890.76	4.23
15.73	2.91	2.88	1879.72	1888.13	4.20
15.77	2.88	2.86	1877.15	1885.50	4.18
15.80	2.86	2.83	1874.59	1882.89	4.15
15.83	2.83	2.81	1872.03	1880.28	4.12

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
15.87	2.81	2.79	1869.48	1877.67	4.10
15.90	2.79	2.76	1866.93	1875.08	4.07
15.93	2.76	2.74	1864.39	1872.48	4.04
15.97	2.74	2.72	1861.86	1869.90	4.02
16.00	2.72	2.69	1859.33	1867.31	3.99
16.03	2.69	2.67	1856.80	1864.74	3.97
16.07	2.67	2.64	1854.29	1862.16	3.94
16.10	2.64	2.62	1851.77	1859.60	3.91
16.13	2.62	2.60	1849.26	1857.04	3.89
16.17	2.60	2.58	1846.76	1854.49	3.86
16.20	2.58	2.56	1844.27	1851.94	3.84
16.23	2.56	2.54	1841.79	1849.41	3.81
16.27	2.54	2.52	1839.32	1846.89	3.78
16.30	2.52	2.50	1836.86	1844.38	3.76
16.33	2.50	2.49	1834.42	1841.89	3.73
16.37	2.49	2.47	1832.00	1839.42	3.71
16.40	2.47	2.46	1829.58	1836.96	3.69
16.43	2.46	2.45	1827.16	1834.51	3.68
16.47	2.45	2.44	1824.74	1832.07	3.66
16.50	2.44	2.43	1822.33	1829.63	3.65
16.53	2.43	2.42	1819.93	1827.20	3.63
16.57	2.42	2.41	1817.54	1824.77	3.62
16.60	2.41	2.40	1815.16	1822.36	3.60
16.63	2.40	2.39	1812.79	1819.96	3.59
16.67	2.39	2.38	1810.43	1817.57	3.57
16.70	2.38	2.37	1808.09	1815.20	3.56
16.73	2.37	2.36	1805.75	1812.84	3.54
16.77	2.36	2.35	1803.43	1810.49	3.53
16.80	2.35	2.35	1801.13	1808.15	3.51
16.83	2.35	2.34	1798.83	1805.83	3.50
16.87	2.34	2.33	1796.55	1803.52	3.48
16.90	2.33	2.32	1794.28	1801.22	3.47
16.93	2.32	2.31	1792.03	1798.94	3.45
16.97	2.31	2.30	1789.78	1796.66	3.44
17.00	2.30	2.30	1787.55	1794.40	3.42
17.03	2.30	2.29	1785.33	1792.15	3.41
17.07	2.29	2.28	1783.12	1789.92	3.40
17.10	2.28	2.27	1780.93	1787.69	3.38
17.13	2.27	2.26	1778.74	1785.48	3.37
17.17	2.26	2.26	1776.57	1783.28	3.35
17.20	2.26	2.25	1774.40	1781.09	3.34
17.23	2.25	2.24	1772.25	1778.91	3.33

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
17.27	2.24	2.23	1770.11	1776.74	3.31
17.30	2.23	2.22	1767.98	1774.58	3.30
17.33	2.22	2.21	1765.86	1772.43	3.29
17.37	2.21	2.21	1763.75	1770.29	3.27
17.40	2.21	2.20	1761.64	1768.16	3.26
17.43	2.20	2.19	1759.55	1766.05	3.25
17.47	2.19	2.18	1757.47	1763.94	3.23
17.50	2.18	2.17	1755.40	1761.84	3.22
17.53	2.17	2.16	1753.34	1759.75	3.21
17.57	2.16	2.15	1751.29	1757.67	3.19
17.60	2.15	2.15	1749.24	1755.61	3.18
17.63	2.15	2.14	1747.21	1753.55	3.17
17.67	2.14	2.13	1745.19	1751.49	3.15
17.70	2.13	2.12	1743.17	1749.45	3.14
17.73	2.12	2.11	1741.16	1747.42	3.13
17.77	2.11	2.10	1739.16	1745.39	3.12
17.80	2.10	2.10	1737.17	1743.38	3.10
17.83	2.10	2.09	1735.19	1741.37	3.09
17.87	2.09	2.08	1733.22	1739.37	3.08
17.90	2.08	2.07	1731.25	1737.38	3.07
17.93	2.07	2.06	1729.29	1735.40	3.05
17.97	2.06	2.05	1727.34	1733.42	3.04
18.00	2.05	2.04	1725.40	1731.46	3.03
18.03	2.04	2.04	1723.47	1729.50	3.02
18.07	2.04	2.03	1721.54	1727.55	3.00
18.10	2.03	2.02	1719.62	1725.60	2.99
18.13	2.02	2.01	1717.71	1723.67	2.98
18.17	2.01	2.00	1715.80	1721.74	2.97
18.20	2.00	1.99	1713.91	1719.82	2.95
18.23	1.99	1.98	1712.01	1717.90	2.94
18.27	1.98	1.98	1710.13	1715.99	2.93
18.30	1.98	1.97	1708.25	1714.09	2.92
18.33	1.97	1.96	1706.38	1712.20	2.91
18.37	1.96	1.95	1704.52	1710.31	2.90
18.40	1.95	1.94	1702.66	1708.43	2.88
18.43	1.94	1.93	1700.81	1706.55	2.87
18.47	1.93	1.92	1698.97	1704.69	2.86
18.50	1.92	1.92	1697.13	1702.82	2.85
18.53	1.92	1.91	1695.30	1700.97	2.84
18.57	1.91	1.90	1693.47	1699.12	2.82
18.60	1.90	1.89	1691.65	1697.28	2.81
18.63	1.89	1.88	1689.83	1695.44	2.80

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
18.67	1.88	1.87	1688.03	1693.61	2.79
18.70	1.87	1.86	1686.22	1691.78	2.78
18.73	1.86	1.86	1684.43	1689.96	2.77
18.77	1.86	1.85	1682.63	1688.14	2.76
18.80	1.85	1.84	1680.85	1686.34	2.74
18.83	1.84	1.83	1679.07	1684.53	2.73
18.87	1.83	1.82	1677.29	1682.73	2.72
18.90	1.82	1.81	1675.52	1680.94	2.71
18.93	1.81	1.80	1673.75	1679.15	2.70
18.97	1.80	1.79	1671.99	1677.37	2.69
19.00	1.79	1.79	1670.24	1675.59	2.68
19.03	1.79	1.78	1668.49	1673.82	2.67
19.07	1.78	1.77	1666.74	1672.05	2.65
19.10	1.77	1.76	1665.00	1670.29	2.64
19.13	1.76	1.75	1663.26	1668.53	2.63
19.17	1.75	1.74	1661.53	1666.77	2.62
19.20	1.74	1.73	1659.80	1665.02	2.61
19.23	1.73	1.72	1658.06	1663.28	2.61
19.27	1.72	1.72	1656.31	1661.52	2.61
19.30	1.72	1.71	1654.53	1659.74	2.61
19.33	1.71	1.70	1652.75	1657.96	2.60
19.37	1.70	1.69	1650.95	1656.15	2.60
19.40	1.69	1.68	1649.13	1654.34	2.60
19.43	1.68	1.67	1647.31	1652.50	2.60
19.47	1.67	1.66	1645.46	1650.66	2.60
19.50	1.66	1.65	1643.60	1648.80	2.60
19.53	1.65	1.64	1641.73	1646.92	2.59
19.57	1.64	1.64	1639.85	1645.03	2.59
19.60	1.64	1.63	1637.94	1643.13	2.59
19.63	1.63	1.62	1636.03	1641.21	2.59
19.67	1.62	1.61	1634.10	1639.27	2.59
19.70	1.61	1.60	1632.16	1637.33	2.59
19.73	1.60	1.59	1630.20	1635.36	2.58
19.77	1.59	1.58	1628.22	1633.39	2.58
19.80	1.58	1.57	1626.24	1631.40	2.58
19.83	1.57	1.56	1624.23	1629.39	2.58
19.87	1.56	1.56	1622.22	1627.37	2.58
19.90	1.56	1.55	1620.19	1625.34	2.58
19.93	1.55	1.54	1618.14	1623.29	2.57
19.97	1.54	1.53	1616.09	1621.23	2.57
20.00	1.53	1.52	1614.01	1619.15	2.57
20.03	1.52	1.51	1611.93	1617.06	2.57

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
20.07	1.51	1.50	1609.82	1614.96	2.57
20.10	1.50	1.49	1607.71	1612.84	2.56
20.13	1.49	1.49	1605.58	1610.71	2.56
20.17	1.49	1.48	1603.44	1608.56	2.56
20.20	1.48	1.47	1601.29	1606.41	2.56
20.23	1.47	1.46	1599.12	1604.24	2.56
20.27	1.46	1.46	1596.95	1602.06	2.56
20.30	1.46	1.45	1594.76	1599.87	2.55
20.33	1.45	1.45	1592.57	1597.68	2.55
20.37	1.45	1.44	1590.37	1595.47	2.55
20.40	1.44	1.44	1588.17	1593.27	2.55
20.43	1.44	1.44	1585.96	1591.05	2.55
20.47	1.44	1.43	1583.75	1588.84	2.54
20.50	1.43	1.43	1581.53	1586.62	2.54
20.53	1.43	1.43	1579.31	1584.39	2.54
20.57	1.43	1.42	1577.09	1582.17	2.54
20.60	1.42	1.42	1574.87	1579.94	2.54
20.63	1.42	1.42	1572.65	1577.72	2.53
20.67	1.42	1.42	1570.43	1575.49	2.53
20.70	1.42	1.42	1568.20	1573.26	2.53
20.73	1.42	1.42	1565.98	1571.04	2.53
20.77	1.42	1.41	1563.76	1568.81	2.53
20.80	1.41	1.41	1561.54	1566.59	2.53
20.83	1.41	1.41	1559.32	1564.36	2.52
20.87	1.41	1.41	1557.10	1562.14	2.52
20.90	1.41	1.41	1554.88	1559.92	2.52
20.93	1.41	1.41	1552.66	1557.70	2.52
20.97	1.41	1.40	1550.44	1555.47	2.52
21.00	1.40	1.40	1548.23	1553.25	2.51
21.03	1.40	1.40	1546.01	1551.03	2.51
21.07	1.40	1.40	1543.79	1548.81	2.51
21.10	1.40	1.40	1541.58	1546.59	2.51
21.13	1.40	1.40	1539.36	1544.37	2.51
21.17	1.40	1.39	1537.15	1542.16	2.50
21.20	1.39	1.39	1534.93	1539.94	2.50
21.23	1.39	1.39	1532.72	1537.72	2.50
21.27	1.39	1.39	1530.51	1535.50	2.50
21.30	1.39	1.39	1528.29	1533.29	2.50
21.33	1.39	1.39	1526.08	1531.07	2.49
21.37	1.39	1.38	1523.87	1528.86	2.49
21.40	1.38	1.38	1521.66	1526.64	2.49
21.43	1.38	1.38	1519.45	1524.43	2.49

HYDROGRAPH DISCHARGE TABLE Cont'd

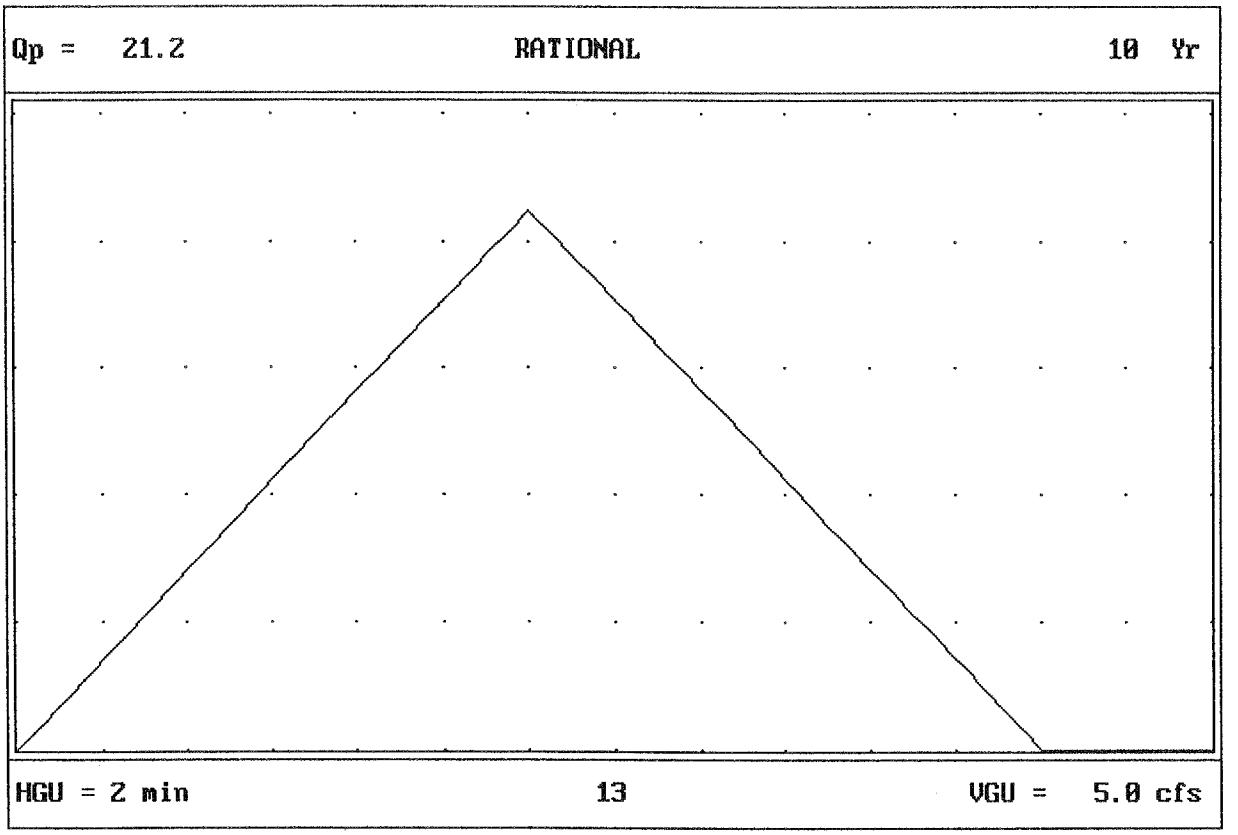
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
21.47	1.38	1.38	1517.24	1522.21	2.49
21.50	1.38	1.38	1515.03	1520.00	2.49
21.53	1.38	1.38	1512.82	1517.79	2.48
21.57	1.38	1.37	1510.61	1515.58	2.48
21.60	1.37	1.37	1508.41	1513.37	2.48
21.63	1.37	1.37	1506.20	1511.15	2.48
21.67	1.37	1.37	1503.99	1508.94	2.48
21.70	1.37	1.37	1501.79	1506.73	2.47
21.73	1.37	1.37	1499.58	1504.52	2.47
21.77	1.37	1.36	1497.38	1502.32	2.47
21.80	1.36	1.36	1495.17	1500.11	2.47
21.83	1.36	1.36	1492.97	1497.90	2.47
21.87	1.36	1.36	1490.77	1495.69	2.46
21.90	1.36	1.36	1488.57	1493.49	2.46
21.93	1.36	1.36	1486.38	1491.29	2.46
21.97	1.36	1.36	1484.19	1489.09	2.45
22.00	1.36	1.35	1482.00	1486.90	2.45
22.03	1.35	1.35	1479.81	1484.71	2.45
22.07	1.35	1.35	1477.63	1482.52	2.44
22.10	1.35	1.35	1475.45	1480.33	2.44
22.13	1.35	1.35	1473.28	1478.15	2.44
22.17	1.35	1.35	1471.11	1475.97	2.43
22.20	1.35	1.34	1468.94	1473.80	2.43
22.23	1.34	1.34	1466.77	1471.63	2.43
22.27	1.34	1.34	1464.61	1469.46	2.42
22.30	1.34	1.34	1462.45	1467.29	2.42
22.33	1.34	1.34	1460.29	1465.13	2.42
22.37	1.34	1.34	1458.13	1462.96	2.41
22.40	1.34	1.33	1455.98	1460.81	2.41
22.43	1.33	1.33	1453.83	1458.65	2.41
22.47	1.33	1.33	1451.69	1456.50	2.41
22.50	1.33	1.33	1449.55	1454.35	2.40
22.53	1.33	1.33	1447.41	1452.21	2.40
22.57	1.33	1.33	1445.27	1450.06	2.40
22.60	1.33	1.32	1443.14	1447.92	2.39
22.63	1.32	1.32	1441.00	1445.78	2.39
22.67	1.32	1.32	1438.88	1443.65	2.39
22.70	1.32	1.32	1436.75	1441.52	2.38
22.73	1.32	1.32	1434.63	1439.39	2.38
22.77	1.32	1.32	1432.51	1437.26	2.38
22.80	1.32	1.31	1430.39	1435.14	2.37
22.83	1.31	1.31	1428.28	1433.02	2.37

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
22.87	1.31	1.31	1426.17	1430.90	2.37
22.90	1.31	1.31	1424.06	1428.79	2.37
22.93	1.31	1.31	1421.95	1426.68	2.36
22.97	1.31	1.31	1419.85	1424.57	2.36
23.00	1.31	1.30	1417.75	1422.46	2.36
23.03	1.30	1.30	1415.65	1420.36	2.35
23.07	1.30	1.30	1413.56	1418.26	2.35
23.10	1.30	1.30	1411.47	1416.16	2.35
23.13	1.30	1.30	1409.38	1414.07	2.34
23.17	1.30	1.29	1407.29	1411.97	2.34
23.20	1.29	1.29	1405.21	1409.88	2.34
23.23	1.29	1.29	1403.13	1407.80	2.33
23.27	1.29	1.29	1401.05	1405.71	2.33
23.30	1.29	1.29	1398.97	1403.63	2.33
23.33	1.29	1.29	1396.90	1401.55	2.33
23.37	1.29	1.28	1394.83	1399.48	2.32
23.40	1.28	1.28	1392.76	1397.40	2.32
23.43	1.28	1.28	1390.70	1395.33	2.32
23.47	1.28	1.28	1388.64	1393.26	2.31
23.50	1.28	1.28	1386.58	1391.20	2.31
23.53	1.28	1.28	1384.52	1389.14	2.31
23.57	1.28	1.27	1382.47	1387.08	2.30
23.60	1.27	1.27	1380.42	1385.02	2.30
23.63	1.27	1.27	1378.37	1382.96	2.30
23.67	1.27	1.27	1376.32	1380.91	2.30
23.70	1.27	1.27	1374.28	1378.86	2.29
23.73	1.27	1.27	1372.23	1376.81	2.29
23.77	1.27	1.26	1370.20	1374.77	2.29
23.80	1.26	1.26	1368.16	1372.73	2.28
23.83	1.26	1.26	1366.13	1370.69	2.28
23.87	1.26	1.26	1364.09	1368.65	2.28
23.90	1.26	1.26	1362.07	1366.61	2.27
23.93	1.26	1.26	1360.04	1364.58	2.27
23.97	1.26	0.00	1358.02	1362.55	2.27
24.00	0.00	0.00	1354.74	1359.27	2.26

Maximum outflow (cfs) = 7.04
Maximum storage (cu ft) = 124677
Maximum elevation (ft) = 84.24

10 YEAR – 5 MINUTE STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 15262 / 0.350

1
0

HYDROLOGIC REPORT

10 YR STORM INFLOW....
WETLAND 2.....
.....

Hyd. No. 13

Hydrograph type	= RATIONAL	Peak discharge	= 21.20 cfs
Storm frequency	= 10 yr	Time interval	= 1 min
Time of conc.	= 12 min	Intensity	= 5.77 in/hr
Runoff coeff.	= .15	Basin area	= 24.5 ac

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
0.02	1.77	0.03	3.53	0.05	5.30	0.07	7.07
0.08	8.83	0.10	10.60	0.12	12.36	0.13	14.13
0.15	15.90	0.17	17.66	0.18	19.43	0.20	21.20
0.22	19.43	0.23	17.66	0.25	15.90	0.27	14.13
0.28	12.36	0.30	10.60	0.32	8.83	0.33	7.07
0.35	5.30	0.37	3.53	0.38	1.77	0.40	0.00

1
0

HYDROLOGIC REPORT

10 YR STORM ROUTED....
WETLAND 2.....
.....

Hyd. No. 14

Hydrograph type = RESERVOIR ROUTE Peak discharge = 0.14 cfs
Storm frequency = 10 yr Time interval = 1 min
Inflow hyd. no. = 13 Reservoir no. = 2

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.00	0.00	1.77	0.00	0.00	0.00
0.02	1.77	3.53	1.77	1.77	0.00
0.03	3.53	5.30	7.06	7.06	0.00
0.05	5.30	7.07	15.89	15.89	0.00
0.07	7.07	8.83	28.24	28.25	0.01
0.08	8.83	10.60	44.11	44.14	0.01
0.10	10.60	12.36	63.51	63.54	0.01
0.12	12.36	14.13	86.44	86.48	0.02
0.13	14.13	15.90	112.88	112.93	0.03
0.15	15.90	17.66	142.84	142.91	0.03
0.17	17.66	19.43	176.32	176.40	0.04
0.18	19.43	21.20	213.31	213.41	0.05
0.20	21.20	19.43	253.82	253.94	0.06
0.22	19.43	17.66	294.31	294.45	0.07
0.23	17.66	15.90	331.25	331.40	0.08
0.25	15.90	14.13	364.63	364.81	0.09
0.27	14.13	12.36	394.45	394.66	0.10
0.28	12.36	10.60	420.73	420.95	0.11
0.30	10.60	8.83	443.46	443.69	0.12
0.32	8.83	7.07	462.63	462.89	0.13
0.33	7.07	5.30	478.27	478.53	0.13
0.35	5.30	3.53	490.36	490.63	0.14
0.37	3.53	1.77	498.92	499.20	0.14
0.38	1.77	0.00	503.94	504.22	0.14
0.40	0.00	0.00	505.42	505.70	0.14

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.42	0.00	0.00	505.14	505.42	0.14
0.43	0.00	0.00	504.86	505.14	0.14
0.45	0.00	0.00	504.57	504.86	0.14
0.47	0.00	0.00	504.29	504.57	0.14
0.48	0.00	0.00	504.01	504.29	0.14
0.50	0.00	0.00	503.73	504.01	0.14
0.52	0.00	0.00	503.45	503.73	0.14
0.53	0.00	0.00	503.17	503.45	0.14
0.55	0.00	0.00	502.89	503.17	0.14
0.57	0.00	0.00	502.61	502.89	0.14
0.58	0.00	0.00	502.33	502.61	0.14
0.60	0.00	0.00	502.05	502.33	0.14
0.62	0.00	0.00	501.77	502.05	0.14
0.63	0.00	0.00	501.49	501.77	0.14
0.65	0.00	0.00	501.21	501.49	0.14
0.67	0.00	0.00	500.93	501.21	0.14
0.68	0.00	0.00	500.65	500.93	0.14
0.70	0.00	0.00	500.38	500.65	0.14
0.72	0.00	0.00	500.10	500.38	0.14
0.73	0.00	0.00	499.82	500.10	0.14
0.75	0.00	0.00	499.54	499.82	0.14
0.77	0.00	0.00	499.26	499.54	0.14
0.78	0.00	0.00	498.99	499.26	0.14
0.80	0.00	0.00	498.71	498.99	0.14
0.82	0.00	0.00	498.43	498.71	0.14
0.83	0.00	0.00	498.15	498.43	0.14
0.85	0.00	0.00	497.88	498.15	0.14
0.87	0.00	0.00	497.60	497.88	0.14
0.88	0.00	0.00	497.32	497.60	0.14
0.90	0.00	0.00	497.05	497.32	0.14
0.92	0.00	0.00	496.77	497.05	0.14
0.93	0.00	0.00	496.50	496.77	0.14
0.95	0.00	0.00	496.22	496.50	0.14
0.97	0.00	0.00	495.95	496.22	0.14
0.98	0.00	0.00	495.67	495.95	0.14
1.00	0.00	0.00	495.40	495.67	0.14
1.02	0.00	0.00	495.12	495.40	0.14
1.03	0.00	0.00	494.85	495.12	0.14
1.05	0.00	0.00	494.57	494.85	0.14
1.07	0.00	0.00	494.30	494.57	0.14
1.08	0.00	0.00	494.02	494.30	0.14
1.10	0.00	0.00	493.75	494.02	0.14

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
1.12	0.00	0.00	493.48	493.75	0.14
1.13	0.00	0.00	493.20	493.48	0.14
1.15	0.00	0.00	492.93	493.20	0.14
1.17	0.00	0.00	492.66	492.93	0.14
1.18	0.00	0.00	492.38	492.66	0.14
1.20	0.00	0.00	492.11	492.38	0.14
1.22	0.00	0.00	491.84	492.11	0.14
1.23	0.00	0.00	491.57	491.84	0.14
1.25	0.00	0.00	491.30	491.57	0.14
1.27	0.00	0.00	491.02	491.30	0.14
1.28	0.00	0.00	490.75	491.02	0.14
1.30	0.00	0.00	490.48	490.75	0.14
1.32	0.00	0.00	490.21	490.48	0.14
1.33	0.00	0.00	489.94	490.21	0.14
1.35	0.00	0.00	489.67	489.94	0.14
1.37	0.00	0.00	489.40	489.67	0.14
1.38	0.00	0.00	489.13	489.40	0.14
1.40	0.00	0.00	488.86	489.13	0.14
1.42	0.00	0.00	488.59	488.86	0.14
1.43	0.00	0.00	488.32	488.59	0.13
1.45	0.00	0.00	488.05	488.32	0.13
1.47	0.00	0.00	487.78	488.05	0.13
1.48	0.00	0.00	487.51	487.78	0.13
1.50	0.00	0.00	487.24	487.51	0.13
1.52	0.00	0.00	486.97	487.24	0.13
1.53	0.00	0.00	486.70	486.97	0.13
1.55	0.00	0.00	486.43	486.70	0.13
1.57	0.00	0.00	486.17	486.43	0.13
1.58	0.00	0.00	485.90	486.17	0.13
1.60	0.00	0.00	485.63	485.90	0.13
1.62	0.00	0.00	485.36	485.63	0.13
1.63	0.00	0.00	485.09	485.36	0.13
1.65	0.00	0.00	484.83	485.09	0.13
1.67	0.00	0.00	484.56	484.83	0.13
1.68	0.00	0.00	484.29	484.56	0.13
1.70	0.00	0.00	484.03	484.29	0.13
1.72	0.00	0.00	483.76	484.03	0.13
1.73	0.00	0.00	483.49	483.76	0.13
1.75	0.00	0.00	483.23	483.49	0.13
1.77	0.00	0.00	482.96	483.23	0.13
1.78	0.00	0.00	482.70	482.96	0.13
1.80	0.00	0.00	482.43	482.70	0.13

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
1.82	0.00	0.00	482.16	482.43	0.13
1.83	0.00	0.00	481.90	482.16	0.13
1.85	0.00	0.00	481.63	481.90	0.13
1.87	0.00	0.00	481.37	481.63	0.13
1.88	0.00	0.00	481.11	481.37	0.13
1.90	0.00	0.00	480.84	481.11	0.13
1.92	0.00	0.00	480.58	480.84	0.13
1.93	0.00	0.00	480.31	480.58	0.13
1.95	0.00	0.00	480.05	480.31	0.13
1.97	0.00	0.00	479.79	480.05	0.13
1.98	0.00	0.00	479.52	479.79	0.13
2.00	0.00	0.00	479.26	479.52	0.13
2.02	0.00	0.00	479.00	479.26	0.13
2.03	0.00	0.00	478.73	479.00	0.13
2.05	0.00	0.00	478.47	478.73	0.13
2.07	0.00	0.00	478.21	478.47	0.13
2.08	0.00	0.00	477.94	478.21	0.13
2.10	0.00	0.00	477.68	477.94	0.13
2.12	0.00	0.00	477.42	477.68	0.13
2.13	0.00	0.00	477.16	477.42	0.13
2.15	0.00	0.00	476.90	477.16	0.13
2.17	0.00	0.00	476.64	476.90	0.13
2.18	0.00	0.00	476.37	476.64	0.13
2.20	0.00	0.00	476.11	476.37	0.13
2.22	0.00	0.00	475.85	476.11	0.13
2.23	0.00	0.00	475.59	475.85	0.13
2.25	0.00	0.00	475.33	475.59	0.13
2.27	0.00	0.00	475.07	475.33	0.13
2.28	0.00	0.00	474.81	475.07	0.13
2.30	0.00	0.00	474.55	474.81	0.13
2.32	0.00	0.00	474.29	474.55	0.13
2.33	0.00	0.00	474.03	474.29	0.13
2.35	0.00	0.00	473.77	474.03	0.13
2.37	0.00	0.00	473.51	473.77	0.13
2.38	0.00	0.00	473.26	473.51	0.13
2.40	0.00	0.00	473.00	473.26	0.13
2.42	0.00	0.00	472.74	473.00	0.13
2.43	0.00	0.00	472.48	472.74	0.13
2.45	0.00	0.00	472.22	472.48	0.13
2.47	0.00	0.00	471.96	472.22	0.13
2.48	0.00	0.00	471.71	471.96	0.13
2.50	0.00	0.00	471.45	471.71	0.13

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
2.52	0.00	0.00	471.19	471.45	0.13
2.53	0.00	0.00	470.93	471.19	0.13
2.55	0.00	0.00	470.68	470.93	0.13
2.57	0.00	0.00	470.42	470.68	0.13
2.58	0.00	0.00	470.16	470.42	0.13
2.60	0.00	0.00	469.91	470.16	0.13
2.62	0.00	0.00	469.65	469.91	0.13
2.63	0.00	0.00	469.39	469.65	0.13
2.65	0.00	0.00	469.14	469.39	0.13
2.67	0.00	0.00	468.88	469.14	0.13
2.68	0.00	0.00	468.63	468.88	0.13
2.70	0.00	0.00	468.37	468.63	0.13
2.72	0.00	0.00	468.12	468.37	0.13
2.73	0.00	0.00	467.86	468.12	0.13
2.75	0.00	0.00	467.61	467.86	0.13
2.77	0.00	0.00	467.35	467.61	0.13
2.78	0.00	0.00	467.10	467.35	0.13
2.80	0.00	0.00	466.84	467.10	0.13
2.82	0.00	0.00	466.59	466.84	0.13
2.83	0.00	0.00	466.34	466.59	0.13
2.85	0.00	0.00	466.08	466.34	0.13
2.87	0.00	0.00	465.83	466.08	0.13
2.88	0.00	0.00	465.57	465.83	0.13
2.90	0.00	0.00	465.32	465.57	0.13
2.92	0.00	0.00	465.07	465.32	0.13
2.93	0.00	0.00	464.82	465.07	0.13
2.95	0.00	0.00	464.56	464.82	0.13
2.97	0.00	0.00	464.31	464.56	0.13
2.98	0.00	0.00	464.06	464.31	0.13
3.00	0.00	0.00	463.81	464.06	0.13
3.02	0.00	0.00	463.55	463.81	0.13
3.03	0.00	0.00	463.30	463.55	0.13
3.05	0.00	0.00	463.05	463.30	0.13
3.07	0.00	0.00	462.80	463.05	0.13
3.08	0.00	0.00	462.55	462.80	0.13
3.10	0.00	0.00	462.30	462.55	0.13
3.12	0.00	0.00	462.05	462.30	0.13
3.13	0.00	0.00	461.80	462.05	0.13
3.15	0.00	0.00	461.55	461.80	0.13
3.17	0.00	0.00	461.30	461.55	0.13
3.18	0.00	0.00	461.05	461.30	0.13
3.20	0.00	0.00	460.80	461.05	0.12

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.22	0.00	0.00	460.55	460.80	0.12
3.23	0.00	0.00	460.30	460.55	0.12
3.25	0.00	0.00	460.05	460.30	0.12
3.27	0.00	0.00	459.80	460.05	0.12
3.28	0.00	0.00	459.55	459.80	0.12
3.30	0.00	0.00	459.30	459.55	0.12
3.32	0.00	0.00	459.05	459.30	0.12
3.33	0.00	0.00	458.80	459.05	0.12
3.35	0.00	0.00	458.55	458.80	0.12
3.37	0.00	0.00	458.31	458.55	0.12
3.38	0.00	0.00	458.06	458.31	0.12
3.40	0.00	0.00	457.81	458.06	0.12
3.42	0.00	0.00	457.56	457.81	0.12
3.43	0.00	0.00	457.32	457.56	0.12
3.45	0.00	0.00	457.07	457.32	0.12
3.47	0.00	0.00	456.82	457.07	0.12
3.48	0.00	0.00	456.57	456.82	0.12
3.50	0.00	0.00	456.33	456.57	0.12
3.52	0.00	0.00	456.08	456.33	0.12
3.53	0.00	0.00	455.84	456.08	0.12
3.55	0.00	0.00	455.59	455.84	0.12
3.57	0.00	0.00	455.34	455.59	0.12
3.58	0.00	0.00	455.10	455.34	0.12
3.60	0.00	0.00	454.85	455.10	0.12
3.62	0.00	0.00	454.61	454.85	0.12
3.63	0.00	0.00	454.36	454.61	0.12
3.65	0.00	0.00	454.12	454.36	0.12
3.67	0.00	0.00	453.87	454.12	0.12
3.68	0.00	0.00	453.63	453.87	0.12
3.70	0.00	0.00	453.38	453.63	0.12
3.72	0.00	0.00	453.14	453.38	0.12
3.73	0.00	0.00	452.89	453.14	0.12
3.75	0.00	0.00	452.65	452.89	0.12
3.77	0.00	0.00	452.41	452.65	0.12
3.78	0.00	0.00	452.16	452.41	0.12
3.80	0.00	0.00	451.92	452.16	0.12
3.82	0.00	0.00	451.68	451.92	0.12
3.83	0.00	0.00	451.43	451.68	0.12
3.85	0.00	0.00	451.19	451.43	0.12
3.87	0.00	0.00	450.95	451.19	0.12
3.88	0.00	0.00	450.70	450.95	0.12
3.90	0.00	0.00	450.46	450.70	0.12

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
3.92	0.00	0.00	450.22	450.46	0.12
3.93	0.00	0.00	449.98	450.22	0.12
3.95	0.00	0.00	449.74	449.98	0.12
3.97	0.00	0.00	449.49	449.74	0.12
3.98	0.00	0.00	449.25	449.49	0.12
4.00	0.00	0.00	449.01	449.25	0.12
4.02	0.00	0.00	448.77	449.01	0.12
4.03	0.00	0.00	448.53	448.77	0.12
4.05	0.00	0.00	448.29	448.53	0.12
4.07	0.00	0.00	448.05	448.29	0.12
4.08	0.00	0.00	447.81	448.05	0.12
4.10	0.00	0.00	447.57	447.81	0.12
4.12	0.00	0.00	447.33	447.57	0.12
4.13	0.00	0.00	447.09	447.33	0.12
4.15	0.00	0.00	446.85	447.09	0.12
4.17	0.00	0.00	446.61	446.85	0.12
4.18	0.00	0.00	446.37	446.61	0.12
4.20	0.00	0.00	446.13	446.37	0.12
4.22	0.00	0.00	445.89	446.13	0.12
4.23	0.00	0.00	445.65	445.89	0.12
4.25	0.00	0.00	445.41	445.65	0.12
4.27	0.00	0.00	445.17	445.41	0.12
4.28	0.00	0.00	444.93	445.17	0.12
4.30	0.00	0.00	444.70	444.93	0.12
4.32	0.00	0.00	444.46	444.70	0.12
4.33	0.00	0.00	444.22	444.46	0.12
4.35	0.00	0.00	443.98	444.22	0.12
4.37	0.00	0.00	443.74	443.98	0.12
4.38	0.00	0.00	443.51	443.74	0.12
4.40	0.00	0.00	443.27	443.51	0.12
4.42	0.00	0.00	443.03	443.27	0.12
4.43	0.00	0.00	442.80	443.03	0.12
4.45	0.00	0.00	442.56	442.80	0.12
4.47	0.00	0.00	442.32	442.56	0.12
4.48	0.00	0.00	442.09	442.32	0.12
4.50	0.00	0.00	441.85	442.09	0.12
4.52	0.00	0.00	441.61	441.85	0.12
4.53	0.00	0.00	441.38	441.61	0.12
4.55	0.00	0.00	441.14	441.38	0.12
4.57	0.00	0.00	440.91	441.14	0.12
4.58	0.00	0.00	440.67	440.91	0.12
4.60	0.00	0.00	440.44	440.67	0.12

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
4.62	0.00	0.00	440.20	440.44	0.12
4.63	0.00	0.00	439.97	440.20	0.12
4.65	0.00	0.00	439.73	439.97	0.12
4.67	0.00	0.00	439.50	439.73	0.12
4.68	0.00	0.00	439.26	439.50	0.12
4.70	0.00	0.00	439.03	439.26	0.12
4.72	0.00	0.00	438.80	439.03	0.12
4.73	0.00	0.00	438.56	438.80	0.12
4.75	0.00	0.00	438.33	438.56	0.12
4.77	0.00	0.00	438.09	438.33	0.12
4.78	0.00	0.00	437.86	438.09	0.12
4.80	0.00	0.00	437.63	437.86	0.12
4.82	0.00	0.00	437.39	437.63	0.12
4.83	0.00	0.00	437.16	437.39	0.12
4.85	0.00	0.00	436.93	437.16	0.12
4.87	0.00	0.00	436.70	436.93	0.12
4.88	0.00	0.00	436.46	436.70	0.12
4.90	0.00	0.00	436.23	436.46	0.12
4.92	0.00	0.00	436.00	436.23	0.12
4.93	0.00	0.00	435.77	436.00	0.12
4.95	0.00	0.00	435.54	435.77	0.12
4.97	0.00	0.00	435.31	435.54	0.12
4.98	0.00	0.00	435.07	435.31	0.12
5.00	0.00	0.00	434.84	435.07	0.12
5.02	0.00	0.00	434.61	434.84	0.12
5.03	0.00	0.00	434.38	434.61	0.12
5.05	0.00	0.00	434.15	434.38	0.12
5.07	0.00	0.00	433.92	434.15	0.12
5.08	0.00	0.00	433.69	433.92	0.12
5.10	0.00	0.00	433.46	433.69	0.12
5.12	0.00	0.00	433.23	433.46	0.11
5.13	0.00	0.00	433.00	433.23	0.11
5.15	0.00	0.00	432.77	433.00	0.11
5.17	0.00	0.00	432.54	432.77	0.11
5.18	0.00	0.00	432.31	432.54	0.11
5.20	0.00	0.00	432.08	432.31	0.11
5.22	0.00	0.00	431.85	432.08	0.11
5.23	0.00	0.00	431.63	431.85	0.11
5.25	0.00	0.00	431.40	431.63	0.11
5.27	0.00	0.00	431.17	431.40	0.11
5.28	0.00	0.00	430.94	431.17	0.11
5.30	0.00	0.00	430.71	430.94	0.11

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
5.32	0.00	0.00	430.48	430.71	0.11
5.33	0.00	0.00	430.26	430.48	0.11
5.35	0.00	0.00	430.03	430.26	0.11
5.37	0.00	0.00	429.80	430.03	0.11
5.38	0.00	0.00	429.57	429.80	0.11
5.40	0.00	0.00	429.35	429.57	0.11
5.42	0.00	0.00	429.12	429.35	0.11
5.43	0.00	0.00	428.89	429.12	0.11
5.45	0.00	0.00	428.67	428.89	0.11
5.47	0.00	0.00	428.44	428.67	0.11
5.48	0.00	0.00	428.21	428.44	0.11
5.50	0.00	0.00	427.99	428.21	0.11
5.52	0.00	0.00	427.76	427.99	0.11
5.53	0.00	0.00	427.54	427.76	0.11
5.55	0.00	0.00	427.31	427.54	0.11
5.57	0.00	0.00	427.08	427.31	0.11
5.58	0.00	0.00	426.86	427.08	0.11
5.60	0.00	0.00	426.63	426.86	0.11
5.62	0.00	0.00	426.41	426.63	0.11
5.63	0.00	0.00	426.18	426.41	0.11
5.65	0.00	0.00	425.96	426.18	0.11
5.67	0.00	0.00	425.73	425.96	0.11
5.68	0.00	0.00	425.51	425.73	0.11
5.70	0.00	0.00	425.29	425.51	0.11
5.72	0.00	0.00	425.06	425.29	0.11
5.73	0.00	0.00	424.84	425.06	0.11
5.75	0.00	0.00	424.61	424.84	0.11
5.77	0.00	0.00	424.39	424.61	0.11
5.78	0.00	0.00	424.17	424.39	0.11
5.80	0.00	0.00	423.94	424.17	0.11
5.82	0.00	0.00	423.72	423.94	0.11
5.83	0.00	0.00	423.50	423.72	0.11
5.85	0.00	0.00	423.28	423.50	0.11
5.87	0.00	0.00	423.05	423.28	0.11
5.88	0.00	0.00	422.83	423.05	0.11
5.90	0.00	0.00	422.61	422.83	0.11
5.92	0.00	0.00	422.39	422.61	0.11
5.93	0.00	0.00	422.16	422.39	0.11
5.95	0.00	0.00	421.94	422.16	0.11
5.97	0.00	0.00	421.72	421.94	0.11
5.98	0.00	0.00	421.50	421.72	0.11
6.00	0.00	0.00	421.28	421.50	0.11

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.02	0.00	0.00	421.06	421.28	0.11
6.03	0.00	0.00	420.84	421.06	0.11
6.05	0.00	0.00	420.62	420.84	0.11
6.07	0.00	0.00	420.39	420.62	0.11
6.08	0.00	0.00	420.17	420.39	0.11
6.10	0.00	0.00	419.95	420.17	0.11
6.12	0.00	0.00	419.73	419.95	0.11
6.13	0.00	0.00	419.51	419.73	0.11
6.15	0.00	0.00	419.29	419.51	0.11
6.17	0.00	0.00	419.07	419.29	0.11
6.18	0.00	0.00	418.85	419.07	0.11
6.20	0.00	0.00	418.64	418.85	0.11
6.22	0.00	0.00	418.42	418.64	0.11
6.23	0.00	0.00	418.20	418.42	0.11
6.25	0.00	0.00	417.98	418.20	0.11
6.27	0.00	0.00	417.76	417.98	0.11
6.28	0.00	0.00	417.54	417.76	0.11
6.30	0.00	0.00	417.32	417.54	0.11
6.32	0.00	0.00	417.10	417.32	0.11
6.33	0.00	0.00	416.89	417.10	0.11
6.35	0.00	0.00	416.67	416.89	0.11
6.37	0.00	0.00	416.45	416.67	0.11
6.38	0.00	0.00	416.23	416.45	0.11
6.40	0.00	0.00	416.01	416.23	0.11
6.42	0.00	0.00	415.80	416.01	0.11
6.43	0.00	0.00	415.58	415.80	0.11
6.45	0.00	0.00	415.36	415.58	0.11
6.47	0.00	0.00	415.15	415.36	0.11
6.48	0.00	0.00	414.93	415.15	0.11
6.50	0.00	0.00	414.71	414.93	0.11
6.52	0.00	0.00	414.50	414.71	0.11
6.53	0.00	0.00	414.28	414.50	0.11
6.55	0.00	0.00	414.06	414.28	0.11
6.57	0.00	0.00	413.85	414.06	0.11
6.58	0.00	0.00	413.63	413.85	0.11
6.60	0.00	0.00	413.42	413.63	0.11
6.62	0.00	0.00	413.20	413.42	0.11
6.63	0.00	0.00	412.99	413.20	0.11
6.65	0.00	0.00	412.77	412.99	0.11
6.67	0.00	0.00	412.56	412.77	0.11
6.68	0.00	0.00	412.34	412.56	0.11
6.70	0.00	0.00	412.13	412.34	0.11

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
6.72	0.00	0.00	411.91	412.13	0.11
6.73	0.00	0.00	411.70	411.91	0.11
6.75	0.00	0.00	411.48	411.70	0.11
6.77	0.00	0.00	411.27	411.48	0.11
6.78	0.00	0.00	411.06	411.27	0.11
6.80	0.00	0.00	410.84	411.06	0.11
6.82	0.00	0.00	410.63	410.84	0.11
6.83	0.00	0.00	410.42	410.63	0.11
6.85	0.00	0.00	410.20	410.42	0.11
6.87	0.00	0.00	409.99	410.20	0.11
6.88	0.00	0.00	409.78	409.99	0.11
6.90	0.00	0.00	409.56	409.78	0.11
6.92	0.00	0.00	409.35	409.56	0.11
6.93	0.00	0.00	409.14	409.35	0.11
6.95	0.00	0.00	408.93	409.14	0.11
6.97	0.00	0.00	408.71	408.93	0.11
6.98	0.00	0.00	408.50	408.71	0.11
7.00	0.00	0.00	408.29	408.50	0.11
7.02	0.00	0.00	408.08	408.29	0.11
7.03	0.00	0.00	407.87	408.08	0.11
7.05	0.00	0.00	407.65	407.87	0.11
7.07	0.00	0.00	407.44	407.65	0.11
7.08	0.00	0.00	407.23	407.44	0.11
7.10	0.00	0.00	407.02	407.23	0.11
7.12	0.00	0.00	406.81	407.02	0.11
7.13	0.00	0.00	406.60	406.81	0.11
7.15	0.00	0.00	406.39	406.60	0.11
7.17	0.00	0.00	406.18	406.39	0.11
7.18	0.00	0.00	405.97	406.18	0.11
7.20	0.00	0.00	405.76	405.97	0.11
7.22	0.00	0.00	405.55	405.76	0.10
7.23	0.00	0.00	405.34	405.55	0.10
7.25	0.00	0.00	405.13	405.34	0.10
7.27	0.00	0.00	404.92	405.13	0.10
7.28	0.00	0.00	404.71	404.92	0.10
7.30	0.00	0.00	404.50	404.71	0.10
7.32	0.00	0.00	404.29	404.50	0.10
7.33	0.00	0.00	404.08	404.29	0.10
7.35	0.00	0.00	403.87	404.08	0.10
7.37	0.00	0.00	403.67	403.87	0.10
7.38	0.00	0.00	403.46	403.67	0.10
7.40	0.00	0.00	403.25	403.46	0.10

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
7.42	0.00	0.00	403.04	403.25	0.10
7.43	0.00	0.00	402.83	403.04	0.10
7.45	0.00	0.00	402.63	402.83	0.10
7.47	0.00	0.00	402.42	402.63	0.10
7.48	0.00	0.00	402.21	402.42	0.10
7.50	0.00	0.00	402.00	402.21	0.10
7.52	0.00	0.00	401.80	402.00	0.10
7.53	0.00	0.00	401.59	401.80	0.10
7.55	0.00	0.00	401.38	401.59	0.10
7.57	0.00	0.00	401.18	401.38	0.10
7.58	0.00	0.00	400.97	401.18	0.10
7.60	0.00	0.00	400.76	400.97	0.10
7.62	0.00	0.00	400.56	400.76	0.10
7.63	0.00	0.00	400.35	400.56	0.10
7.65	0.00	0.00	400.14	400.35	0.10
7.67	0.00	0.00	399.94	400.14	0.10
7.68	0.00	0.00	399.73	399.94	0.10
7.70	0.00	0.00	399.53	399.73	0.10
7.72	0.00	0.00	399.32	399.53	0.10
7.73	0.00	0.00	399.12	399.32	0.10
7.75	0.00	0.00	398.91	399.12	0.10
7.77	0.00	0.00	398.71	398.91	0.10
7.78	0.00	0.00	398.50	398.71	0.10
7.80	0.00	0.00	398.30	398.50	0.10
7.82	0.00	0.00	398.09	398.30	0.10
7.83	0.00	0.00	397.89	398.09	0.10
7.85	0.00	0.00	397.68	397.89	0.10
7.87	0.00	0.00	397.48	397.68	0.10
7.88	0.00	0.00	397.28	397.48	0.10
7.90	0.00	0.00	397.07	397.28	0.10
7.92	0.00	0.00	396.87	397.07	0.10
7.93	0.00	0.00	396.66	396.87	0.10
7.95	0.00	0.00	396.46	396.66	0.10
7.97	0.00	0.00	396.26	396.46	0.10
7.98	0.00	0.00	396.05	396.26	0.10
8.00	0.00	0.00	395.85	396.05	0.10
8.02	0.00	0.00	395.65	395.85	0.10
8.03	0.00	0.00	395.45	395.65	0.10
8.05	0.00	0.00	395.24	395.45	0.10
8.07	0.00	0.00	395.04	395.24	0.10
8.08	0.00	0.00	394.84	395.04	0.10
8.10	0.00	0.00	394.64	394.84	0.10

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
8.12	0.00	0.00	394.44	394.64	0.10
8.13	0.00	0.00	394.23	394.44	0.10
8.15	0.00	0.00	394.03	394.23	0.10
8.17	0.00	0.00	393.83	394.03	0.10
8.18	0.00	0.00	393.63	393.83	0.10
8.20	0.00	0.00	393.43	393.63	0.10
8.22	0.00	0.00	393.23	393.43	0.10
8.23	0.00	0.00	393.03	393.23	0.10
8.25	0.00	0.00	392.83	393.03	0.10
8.27	0.00	0.00	392.63	392.83	0.10
8.28	0.00	0.00	392.43	392.63	0.10
8.30	0.00	0.00	392.23	392.43	0.10
8.32	0.00	0.00	392.02	392.23	0.10
8.33	0.00	0.00	391.82	392.02	0.10
8.35	0.00	0.00	391.63	391.82	0.10
8.37	0.00	0.00	391.43	391.63	0.10
8.38	0.00	0.00	391.23	391.43	0.10
8.40	0.00	0.00	391.03	391.23	0.10
8.42	0.00	0.00	390.83	391.03	0.10
8.43	0.00	0.00	390.63	390.83	0.10
8.45	0.00	0.00	390.43	390.63	0.10
8.47	0.00	0.00	390.23	390.43	0.10
8.48	0.00	0.00	390.03	390.23	0.10
8.50	0.00	0.00	389.83	390.03	0.10
8.52	0.00	0.00	389.63	389.83	0.10
8.53	0.00	0.00	389.44	389.63	0.10
8.55	0.00	0.00	389.24	389.44	0.10
8.57	0.00	0.00	389.04	389.24	0.10
8.58	0.00	0.00	388.84	389.04	0.10
8.60	0.00	0.00	388.64	388.84	0.10
8.62	0.00	0.00	388.45	388.64	0.10
8.63	0.00	0.00	388.25	388.45	0.10
8.65	0.00	0.00	388.05	388.25	0.10
8.67	0.00	0.00	387.86	388.05	0.10
8.68	0.00	0.00	387.66	387.86	0.10
8.70	0.00	0.00	387.46	387.66	0.10
8.72	0.00	0.00	387.27	387.46	0.10
8.73	0.00	0.00	387.07	387.27	0.10
8.75	0.00	0.00	386.87	387.07	0.10
8.77	0.00	0.00	386.68	386.87	0.10
8.78	0.00	0.00	386.48	386.68	0.10
8.80	0.00	0.00	386.28	386.48	0.10

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
8.82	0.00	0.00	386.09	386.28	0.10
8.83	0.00	0.00	385.89	386.09	0.10
8.85	0.00	0.00	385.70	385.89	0.10
8.87	0.00	0.00	385.50	385.70	0.10
8.88	0.00	0.00	385.31	385.50	0.10
8.90	0.00	0.00	385.11	385.31	0.10
8.92	0.00	0.00	384.92	385.11	0.10
8.93	0.00	0.00	384.72	384.92	0.10
8.95	0.00	0.00	384.53	384.72	0.10
8.97	0.00	0.00	384.33	384.53	0.10
8.98	0.00	0.00	384.14	384.33	0.10
9.00	0.00	0.00	383.94	384.14	0.10
9.02	0.00	0.00	383.75	383.94	0.10
9.03	0.00	0.00	383.56	383.75	0.10
9.05	0.00	0.00	383.36	383.56	0.10
9.07	0.00	0.00	383.17	383.36	0.10
9.08	0.00	0.00	382.97	383.17	0.10
9.10	0.00	0.00	382.78	382.97	0.10
9.12	0.00	0.00	382.59	382.78	0.10
9.13	0.00	0.00	382.39	382.59	0.10
9.15	0.00	0.00	382.20	382.39	0.10
9.17	0.00	0.00	382.01	382.20	0.10
9.18	0.00	0.00	381.82	382.01	0.10
9.20	0.00	0.00	381.62	381.82	0.10
9.22	0.00	0.00	381.43	381.62	0.10
9.23	0.00	0.00	381.24	381.43	0.10
9.25	0.00	0.00	381.05	381.24	0.10
9.27	0.00	0.00	380.85	381.05	0.10
9.28	0.00	0.00	380.66	380.85	0.10
9.30	0.00	0.00	380.47	380.66	0.10
9.32	0.00	0.00	380.28	380.47	0.10
9.33	0.00	0.00	380.09	380.28	0.10
9.35	0.00	0.00	379.90	380.09	0.10
9.37	0.00	0.00	379.70	379.90	0.10
9.38	0.00	0.00	379.51	379.70	0.10
9.40	0.00	0.00	379.32	379.51	0.10
9.42	0.00	0.00	379.13	379.32	0.10
9.43	0.00	0.00	378.94	379.13	0.10
9.45	0.00	0.00	378.75	378.94	0.10
9.47	0.00	0.00	378.56	378.75	0.10
9.48	0.00	0.00	378.37	378.56	0.10
9.50	0.00	0.00	378.18	378.37	0.10

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
9.52	0.00	0.00	377.99	378.18	0.09
9.53	0.00	0.00	377.80	377.99	0.09
9.55	0.00	0.00	377.61	377.80	0.09
9.57	0.00	0.00	377.42	377.61	0.09
9.58	0.00	0.00	377.23	377.42	0.09
9.60	0.00	0.00	377.04	377.23	0.09
9.62	0.00	0.00	376.85	377.04	0.09
9.63	0.00	0.00	376.66	376.85	0.09
9.65	0.00	0.00	376.48	376.66	0.09
9.67	0.00	0.00	376.29	376.48	0.09
9.68	0.00	0.00	376.10	376.29	0.09
9.70	0.00	0.00	375.91	376.10	0.09
9.72	0.00	0.00	375.72	375.91	0.09
9.73	0.00	0.00	375.53	375.72	0.09
9.75	0.00	0.00	375.35	375.53	0.09
9.77	0.00	0.00	375.16	375.35	0.09
9.78	0.00	0.00	374.97	375.16	0.09
9.80	0.00	0.00	374.78	374.97	0.09
9.82	0.00	0.00	374.59	374.78	0.09
9.83	0.00	0.00	374.41	374.59	0.09
9.85	0.00	0.00	374.22	374.41	0.09
9.87	0.00	0.00	374.03	374.22	0.09
9.88	0.00	0.00	373.85	374.03	0.09
9.90	0.00	0.00	373.66	373.85	0.09
9.92	0.00	0.00	373.47	373.66	0.09
9.93	0.00	0.00	373.29	373.47	0.09
9.95	0.00	0.00	373.10	373.29	0.09
9.97	0.00	0.00	372.91	373.10	0.09
9.98	0.00	0.00	372.73	372.91	0.09
10.00	0.00	0.00	372.54	372.73	0.09
10.02	0.00	0.00	372.35	372.54	0.09
10.03	0.00	0.00	372.17	372.35	0.09
10.05	0.00	0.00	371.98	372.17	0.09
10.07	0.00	0.00	371.80	371.98	0.09
10.08	0.00	0.00	371.61	371.80	0.09
10.10	0.00	0.00	371.43	371.61	0.09
10.12	0.00	0.00	371.24	371.43	0.09
10.13	0.00	0.00	371.06	371.24	0.09
10.15	0.00	0.00	370.87	371.06	0.09
10.17	0.00	0.00	370.69	370.87	0.09
10.18	0.00	0.00	370.50	370.69	0.09
10.20	0.00	0.00	370.32	370.50	0.09

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.22	0.00	0.00	370.13	370.32	0.09
10.23	0.00	0.00	369.95	370.13	0.09
10.25	0.00	0.00	369.77	369.95	0.09
10.27	0.00	0.00	369.58	369.77	0.09
10.28	0.00	0.00	369.40	369.58	0.09
10.30	0.00	0.00	369.22	369.40	0.09
10.32	0.00	0.00	369.03	369.22	0.09
10.33	0.00	0.00	368.85	369.03	0.09
10.35	0.00	0.00	368.67	368.85	0.09
10.37	0.00	0.00	368.48	368.67	0.09
10.38	0.00	0.00	368.30	368.48	0.09
10.40	0.00	0.00	368.12	368.30	0.09
10.42	0.00	0.00	367.93	368.12	0.09
10.43	0.00	0.00	367.75	367.93	0.09
10.45	0.00	0.00	367.57	367.75	0.09
10.47	0.00	0.00	367.39	367.57	0.09
10.48	0.00	0.00	367.20	367.39	0.09
10.50	0.00	0.00	367.02	367.20	0.09
10.52	0.00	0.00	366.84	367.02	0.09
10.53	0.00	0.00	366.66	366.84	0.09
10.55	0.00	0.00	366.48	366.66	0.09
10.57	0.00	0.00	366.30	366.48	0.09
10.58	0.00	0.00	366.11	366.30	0.09
10.60	0.00	0.00	365.93	366.11	0.09
10.62	0.00	0.00	365.75	365.93	0.09
10.63	0.00	0.00	365.57	365.75	0.09
10.65	0.00	0.00	365.39	365.57	0.09
10.67	0.00	0.00	365.21	365.39	0.09
10.68	0.00	0.00	365.03	365.21	0.09
10.70	0.00	0.00	364.85	365.03	0.09
10.72	0.00	0.00	364.67	364.85	0.09
10.73	0.00	0.00	364.49	364.67	0.09
10.75	0.00	0.00	364.31	364.49	0.09
10.77	0.00	0.00	364.13	364.31	0.09
10.78	0.00	0.00	363.95	364.13	0.09
10.80	0.00	0.00	363.77	363.95	0.09
10.82	0.00	0.00	363.59	363.77	0.09
10.83	0.00	0.00	363.41	363.59	0.09
10.85	0.00	0.00	363.23	363.41	0.09
10.87	0.00	0.00	363.05	363.23	0.09
10.88	0.00	0.00	362.87	363.05	0.09
10.90	0.00	0.00	362.69	362.87	0.09

HYDROGRAPH DISCHARGE TABLE Cont'd

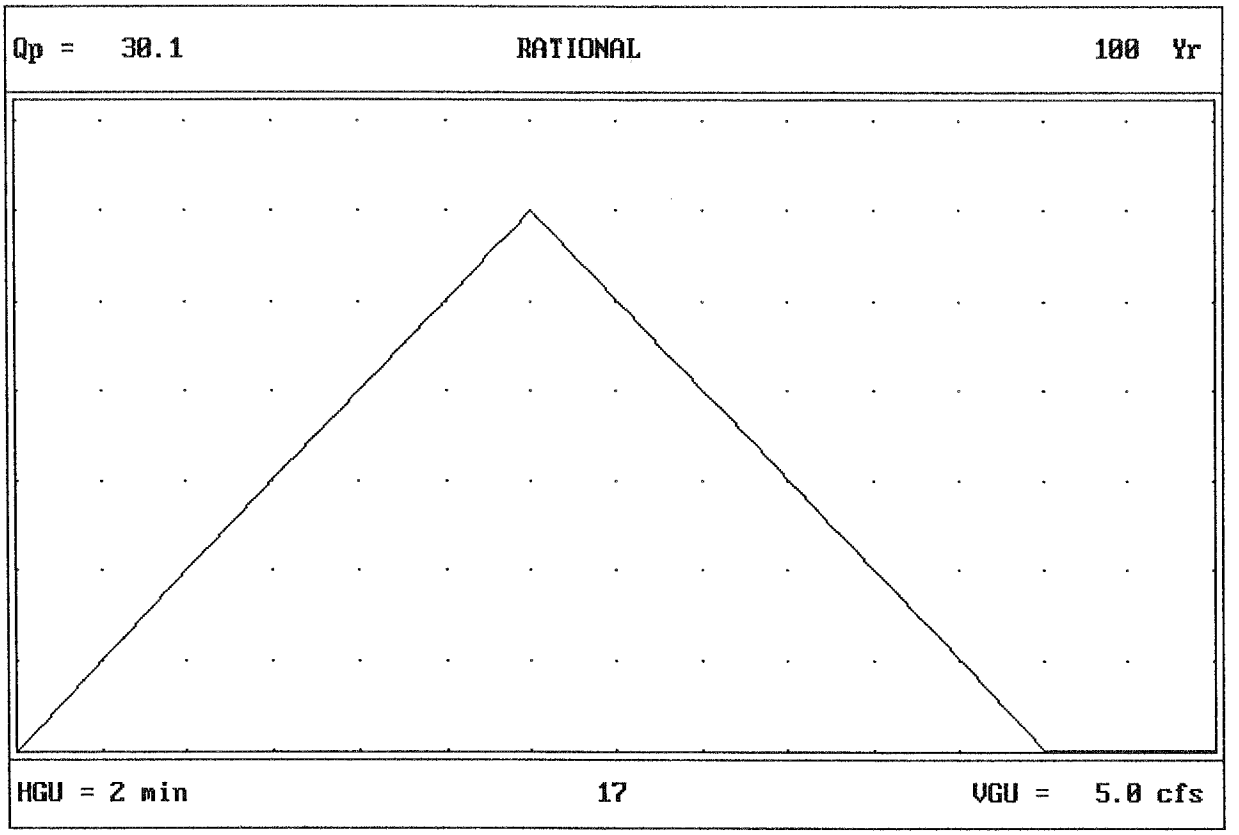
TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
10.92	0.00	0.00	362.51	362.69	0.09
10.93	0.00	0.00	362.34	362.51	0.09
10.95	0.00	0.00	362.16	362.34	0.09
10.97	0.00	0.00	361.98	362.16	0.09
10.98	0.00	0.00	361.80	361.98	0.09
11.00	0.00	0.00	361.62	361.80	0.09
11.02	0.00	0.00	361.44	361.62	0.09
11.03	0.00	0.00	361.27	361.44	0.09
11.05	0.00	0.00	361.09	361.27	0.09
11.07	0.00	0.00	360.91	361.09	0.09
11.08	0.00	0.00	360.73	360.91	0.09
11.10	0.00	0.00	360.56	360.73	0.09
11.12	0.00	0.00	360.38	360.56	0.09
11.13	0.00	0.00	360.20	360.38	0.09
11.15	0.00	0.00	360.02	360.20	0.09
11.17	0.00	0.00	359.85	360.02	0.09
11.18	0.00	0.00	359.67	359.85	0.09
11.20	0.00	0.00	359.49	359.67	0.09
11.22	0.00	0.00	359.32	359.49	0.09
11.23	0.00	0.00	359.14	359.32	0.09
11.25	0.00	0.00	358.97	359.14	0.09
11.27	0.00	0.00	358.79	358.97	0.09
11.28	0.00	0.00	358.61	358.79	0.09
11.30	0.00	0.00	358.44	358.61	0.09
11.32	0.00	0.00	358.26	358.44	0.09
11.33	0.00	0.00	358.09	358.26	0.09
11.35	0.00	0.00	357.91	358.09	0.09
11.37	0.00	0.00	357.74	357.91	0.09
11.38	0.00	0.00	357.56	357.74	0.09
11.40	0.00	0.00	357.39	357.56	0.09
11.42	0.00	0.00	357.21	357.39	0.09
11.43	0.00	0.00	357.04	357.21	0.09
11.45	0.00	0.00	356.86	357.04	0.09
11.47	0.00	0.00	356.69	356.86	0.09
11.48	0.00	0.00	356.51	356.69	0.09
11.50	0.00	0.00	356.34	356.51	0.09
11.52	0.00	0.00	356.16	356.34	0.09
11.53	0.00	0.00	355.99	356.16	0.09
11.55	0.00	0.00	355.82	355.99	0.09
11.57	0.00	0.00	355.64	355.82	0.09
11.58	0.00	0.00	355.47	355.64	0.09
11.60	0.00	0.00	355.29	355.47	0.09

HYDROGRAPH DISCHARGE TABLE Cont'd

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
11.62	0.00	0.00	355.12	355.29	0.09
11.63	0.00	0.00	354.95	355.12	0.09
11.65	0.00	0.00	354.78	354.95	0.09
11.67	0.00	0.00	354.60	354.78	0.09
11.68	0.00	0.00	354.43	354.60	0.09
11.70	0.00	0.00	354.26	354.43	0.09
11.72	0.00	0.00	354.08	354.26	0.09
11.73	0.00	0.00	353.91	354.08	0.09
11.75	0.00	0.00	353.74	353.91	0.09
11.77	0.00	0.00	353.57	353.74	0.09
11.78	0.00	0.00	353.39	353.57	0.09
11.80	0.00	0.00	353.22	353.39	0.09
11.82	0.00	0.00	353.05	353.22	0.09
11.83	0.00	0.00	352.88	353.05	0.09
11.85	0.00	0.00	352.71	352.88	0.09
11.87	0.00	0.00	352.54	352.71	0.09
11.88	0.00	0.00	352.36	352.54	0.09
11.90	0.00	0.00	352.19	352.36	0.09
11.92	0.00	0.00	352.02	352.19	0.09
11.93	0.00	0.00	351.85	352.02	0.09
11.95	0.00	0.00	351.68	351.85	0.09
11.97	0.00	0.00	351.51	351.68	0.09
11.98	0.00	0.00	351.34	351.51	0.09
12.00	0.00	0.00	351.17	351.34	0.09

Maximum outflow (cfs) = 0.14
Maximum storage (cu ft) = 15167
Maximum elevation (ft) = 83.15

100 YEAR – 5 MINUTE STORM: *INFLOW HYDROGRAPH*



VOL = (cuft/acft) = 21647 / 0.497

1
0

HYDROLOGIC REPORT

100 YR STORM INFLOW...
WETLAND 2.....
.....

Hyd. No. 17

Hydrograph type = RATIONAL
Storm frequency = 100 yr
Time of conc. = 12 min
Runoff coeff. = .15

Peak discharge = 30.06 cfs
Time interval = 1 min
Intensity = 8.18 in/hr
Basin area = 24.5 ac

HYDROGRAPH DISCHARGE TABLE

TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfs)		TIME--OUTFLOW (hrs cfS)	
0.02	2.51	0.03	5.01	0.05	7.52	0.07	10.02
0.08	12.53	0.10	15.03	0.12	17.54	0.13	20.04
0.15	22.55	0.17	25.05	0.18	27.56	0.20	30.06
0.22	27.56	0.23	25.05	0.25	22.55	0.27	20.04
0.28	17.54	0.30	15.03	0.32	12.53	0.33	10.02
0.35	7.52	0.37	5.01	0.38	2.51	0.40	0.00

1
0

HYDROLOGIC REPORT

100 YR STORM ROUTED...
WETLAND 2.....
.....

Hyd. No. 18

Hydrograph type = RESERVOIR ROUTE Peak discharge = 0.24 cfs
Storm frequency = 100 yr Time interval = 1 min
Inflow hyd. no. = 17 Reservoir no. = 2

HYDROGRAPH DISCHARGE TABLE

TIME hrs	INFLOW (i) cfs	INFLOW (j) cfs	2S/dt-O (i) cfs	2S/dt+O (j) cfs	OUTFLOW cfs
0.02	2.51	5.01	2.50	2.51	0.00
0.03	5.01	7.52	10.02	10.02	0.00
0.05	7.52	10.02	22.53	22.54	0.01
0.07	10.02	12.53	40.05	40.07	0.01
0.08	12.53	15.03	62.57	62.60	0.01
0.10	15.03	17.54	90.09	90.13	0.02
0.12	17.54	20.04	122.60	122.66	0.03
0.13	20.04	22.55	160.10	160.18	0.04
0.15	22.55	25.05	202.60	202.70	0.05
0.17	25.05	27.56	250.08	250.20	0.06
0.18	27.56	30.06	302.56	302.70	0.07
0.20	30.06	27.56	360.00	360.18	0.09
0.22	27.56	25.05	417.41	417.63	0.11
0.23	25.05	22.55	469.77	470.02	0.13
0.25	22.55	20.04	517.08	517.37	0.15
0.27	20.04	17.54	559.35	559.67	0.16
0.28	17.54	15.03	596.58	596.93	0.17
0.30	15.03	12.53	628.78	629.15	0.19
0.32	12.53	10.02	655.95	656.34	0.20
0.33	10.02	7.52	678.08	678.50	0.21
0.35	7.52	5.01	695.17	695.61	0.22
0.37	5.01	2.51	707.22	707.69	0.23
0.38	2.51	0.00	714.26	714.74	0.24

Maximum outflow (cfs) = 0.24
Maximum storage (cu ft) = 21496
Maximum elevation (ft) = 83.22

STORM SEWER PIPE CALCULATIONS

Culvert Calculator Report
Drainage Pipe Under Wetland #1

Solve For: Section Size

Culvert Summary					
Allowable HW Elevation	84.25	ft	Headwater Depth/ Height	0.63	
Computed Headwater Elevation	83.63	ft	Discharge	1.07	cfs
Inlet Control HW Elev	83.61	ft	Tailwater Elevation	82.50	ft
Outlet Control HW Elev	83.63	ft	Control Type	Entrance Control	

Grades					
Upstream Invert	83.00	ft	Downstream Invert	82.50	ft
Length	50.00	ft	Constructed Slope	0.010000	ft/ft

Hydraulic Profile					
Profile	S2		Depth, Downstream	0.38	ft
Slope Type	Steep		Normal Depth	0.38	ft
Flow Regime	Supercritical		Critical Depth	0.44	ft
Velocity Downstream	3.97	ft/s	Critical Slope	0.005851	ft/ft

Section					
Section Shape	Circular		Mannings Coefficient	0.013	
Section Material	Concrete		Span	1.00	ft
Section Size	12 inch		Rise	1.00	ft
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev	83.63	ft	Upstream Velocity Head	0.17	ft
Ke	0.20		Entrance Loss	0.03	ft

Inlet Control Properties					
Inlet Control HW Elev	83.61	ft	Flow Control	Unsubmerged	
Inlet Type	Groove end w/headwall		Area Full	0.8	ft²
K	0.00780		HDS 5 Chart	1	
M	2.00000		HDS 5 Scale	2	
C	0.02920		Equation Form	1	
Y	0.74000				

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Appian Consulting Engineers, PA
37 Brookside Road Waterbury, CT 06708 USA (203) 755-1666

Culvert Calculator Report
Drainage Pipe Under Wetland #2

Solve For: Section Size

Culvert Summary			
Allowable HW Elevation	84.25 ft	Headwater Depth/ Height	0.23
Computed Headwater Elevation	83.23 ft	Discharge	0.14 cfs
Inlet Control HW Elev	83.20 ft	Tailwater Elevation	82.50 ft
Outlet Control HW Elev	83.23 ft	Control Type	Entrance Control

Grades			
Upstream Invert	83.00 ft	Downstream Invert	82.00 ft
Length	50.00 ft	Constructed Slope	0.020000 ft/ft

Hydraulic Profile			
Profile	CompositeS1S2	Depth, Downstream	0.50 ft
Slope Type	Steep	Normal Depth	0.11 ft
Flow Regime	N/A	Critical Depth	0.15 ft
Velocity Downstream	0.36 ft/s	Critical Slope	0.006036 ft/ft

Section			
Section Shape	Circular	Mannings Coefficient	0.013
Section Material	Concrete	Span	1.00 ft
Section Size	12 inch	Rise	1.00 ft
Number Sections	1		

Outlet Control Properties			
Outlet Control HW Elev	83.23 ft	Upstream Velocity Head	0.05 ft
Ke	0.50	Entrance Loss	0.03 ft

Inlet Control Properties			
Inlet Control HW Elev	83.20 ft	Flow Control	Unsubmerged
Inlet Type	Square edge w/headwall	Area Full	0.8 ft²
K	0.00980	HDS 5 Chart	1
M	2.00000	HDS 5 Scale	1
C	0.03980	Equation Form	1
Y	0.67000		

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DITCH LINER CALCULATIONS

DITCH CALCULATIONS FOR DITCH: PROPOSED D-1

S= 0.00500 ft/ft Q= 3.8 cfs V= 2.98 fps
D= 0.65 ft L= 800.0 ft (n= 0.02000)

Sc= 0.00913 ft/ft Vc= 3.19 fps Dc= 0.6 ft
TT in channel= 4.469 MIN

TRACTIVE FORCE in channel= 0.20 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

****
* DITCH AND PIPE CALCULATION PROGRAM *
*
* Appian Consulting Engineers, P. A. *
* P. O. Box 7966 *
* Rocky Mount, N. C. 27804 *
* (919) 972-7703 *
****

DITCH CALCULATIONS FOR DITCH: PROPOSED D-2

S= 0.00500 ft/ft Q= 31.0 cfs V= 5.03 fps
D= 1.43 ft L= 600.0 ft (n= 0.02000)

Sc= 0.00691 ft/ft Vc= 4.85 fps Dc= 1.5 ft
TT in channel= 1.987 MIN

TRACTIVE FORCE in channel= 0.45 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

A temporary lining is needed. Use a JUTE NET.
Roll out lining parallel to the direction of flow and over the protective mulch and seed bed. Anchor and bury the upstream end in a 6 inch trench and tamp firmly.
Join adjacent ends by an 18 inch overlap and staple. Staple the lining 12 inches o. c. across the top end and every 3 feet around the edges and bottom. Side laps are to be 3 inches minimum and stapled together. Staple each strip down the center at 3 feet. Do not stretch the net when appling staples.

DITCH CALCULATIONS FOR DITCH: PROPOSED D-2 (GRASS LINED)

S= 0.00500 ft/ft Q= 31.0 cfs V= 3.31 fps
D= 1.77 ft L= 600.0 ft (n= 0.03500)

Sc= 0.02117 ft/ft Vc= 4.85 fps Dc= 1.5 ft
TT in channel= 3.023 MIN

TRACTIVE FORCE in channel= 0.55 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

****
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****

DITCH CALCULATIONS FOR DITCH: PROPOSED D-3

S= 0.00500 ft/ft Q= 6.2 cfs V= 2.22 fps
D= 0.97 ft L= 300.0 ft (n= 0.03500)

Sc= 0.02621 ft/ft Vc= 3.52 fps Dc= 0.8 ft
TT in channel= 2.257 MIN

TRACTIVE FORCE in channel= 0.30 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

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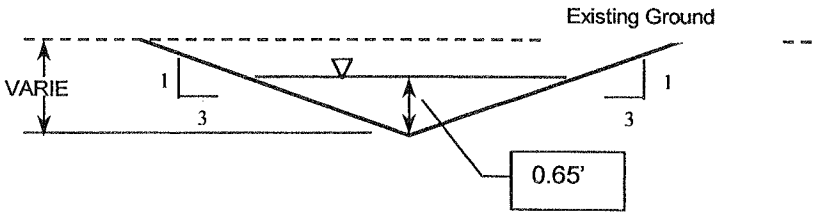
Ditch Sections

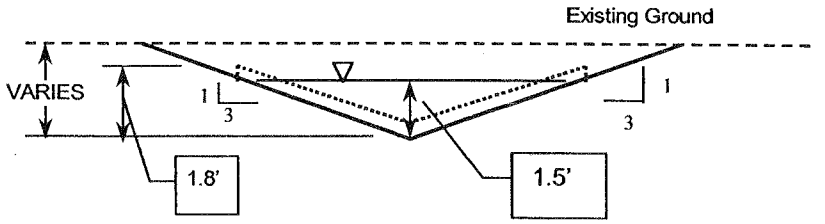
D-1



Apply seed, fertilizer, straw mulch and tack w/ liquid emulsified asphalt at the rate of 10 gallons per 1,000 sf

TYPICAL DITCH SECTION – NO LINER
Not to Scale

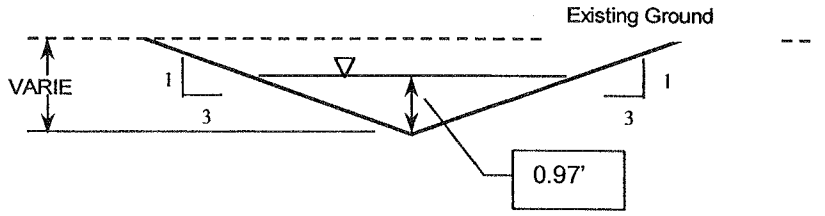
D-2



Apply seed, fertilizer, straw mulch, jute netting and tack w/ liquid emulsified asphalt at the rate of 10 gallons per 1,000 sf

TYPICAL DITCH SECTION – WITH LINER
Not to Scale

D-3



Apply seed, fertilizer, straw mulch and tack w/ liquid emulsified asphalt at the rate of 10 gallons per 1,000 sf

TYPICAL DITCH SECTION – NO LINER
Not to Scale

DITCH CALCULATIONS FOR DITCH: EX. D-1

S= 0.00300 ft/ft Q= 14.3 cfs V= 2.25 fps
D= 1.46 ft L= 100.0 ft (n= 0.03500)

Sc= 0.02346 ft/ft Vc= 4.15 fps Dc= 1.1 ft
TT in channel= 0.740 MIN

TRACTIVE FORCE in channel= 0.27 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

****
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*
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****

DITCH CALCULATIONS FOR DITCH: EX. D-2

S= 0.00300 ft/ft Q= 0.4 cfs V= 0.65 fps
D= 0.17 ft L= 210.0 ft (n= 0.03500)

Sc= 0.04341 ft/ft Vc= 1.52 fps Dc= 0.1 ft
TT in channel= 5.387 MIN

TRACTIVE FORCE in channel= 0.03 psf

TRAPEZOIDAL CHANNEL B= 3.0 ft
LT SS= 2.0:1 RT SS= 2.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

****
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****

DITCH CALCULATIONS FOR DITCH: EX. D-3

S= 0.00400 ft/ft Q= 1.0 cfs V= 1.29 fps
D= 0.51 ft L= 105.0 ft (n= 0.03500)

Sc= 0.03346 ft/ft Vc= 2.44 fps Dc= 0.4 ft
TT in channel= 1.357 MIN

TRACTIVE FORCE in channel= 0.13 psf

VEE CHANNEL B= 0.0 ft
LT SS= 3.0:1 RT SS= 3.0:1

Channel does not need a liner at this velocity
Apply seed, fertilizer, straw mulch and tack with a liquid emulsified asphalt blown from a sprayer. Use rapid setting RS or CRS liquid asphalt at the rate of 10 gallons per 1000 SF.

****
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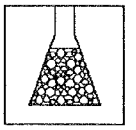


OUTLET PROTECTION CALCULATIONS

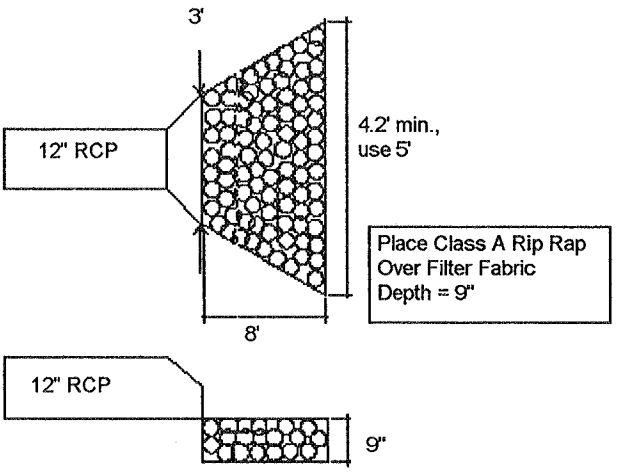
Outlet Protection @ Wetland 1

KNOWN:

Q_{10}= 1.07 cfs
v = 3.97 fps
d_o = 12"
Use Figure 8.06.b

FIND:

La = 8'
d_{50} = 0.1', use 6" Class A Rip Rap



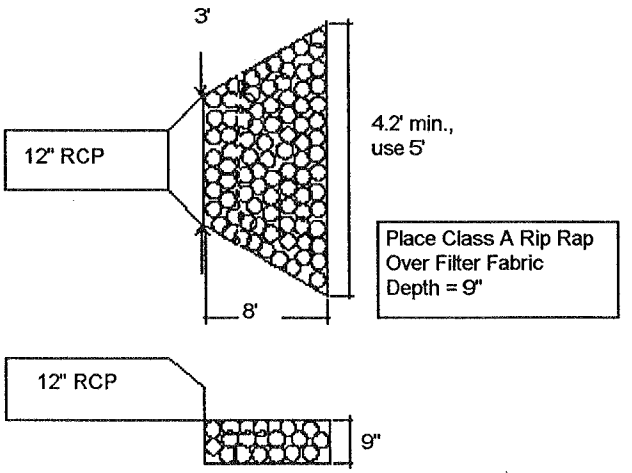
Outlet Protection @ Wetland 2

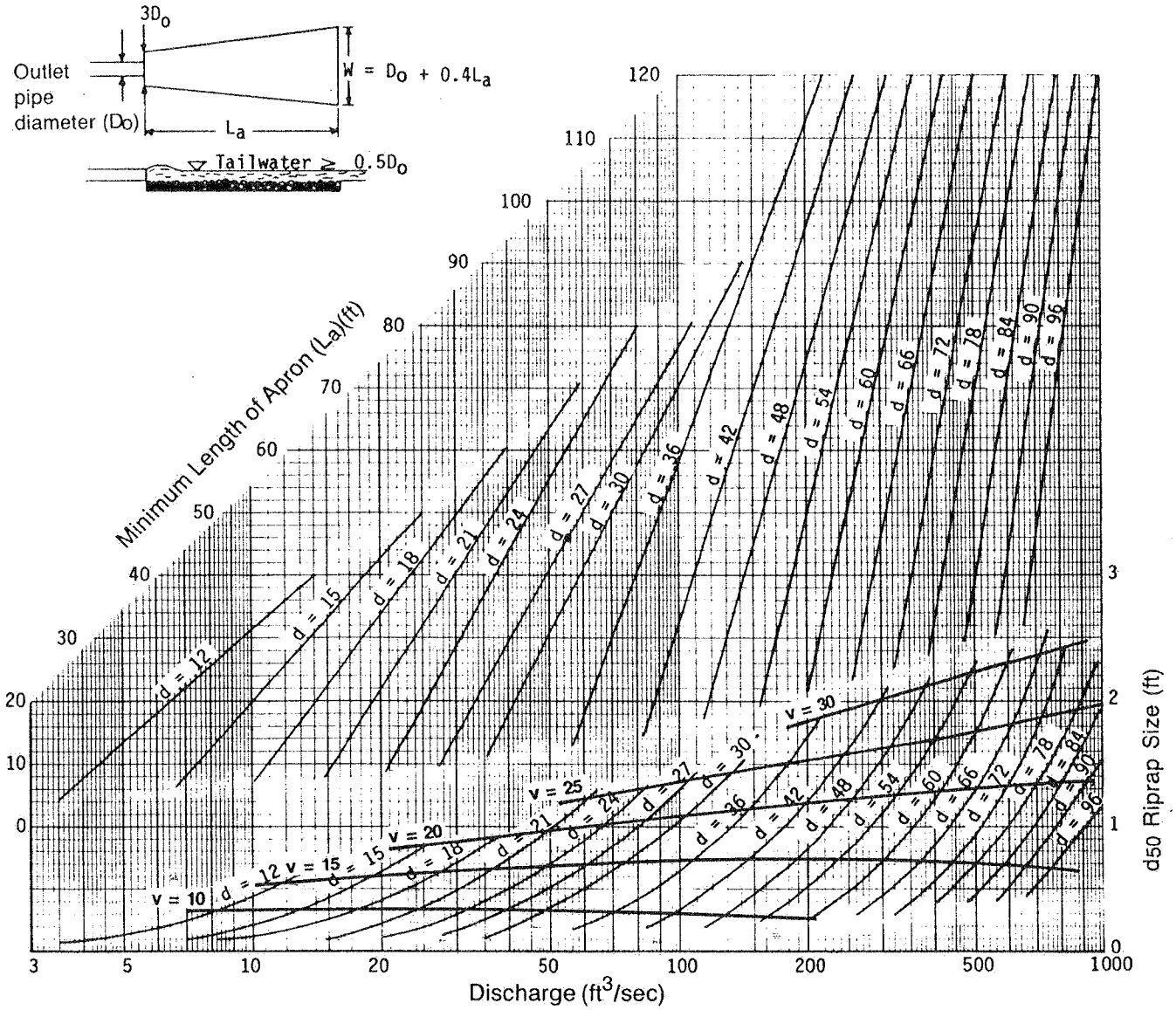
KNOWN:

Q_{10}= 0.14 cfs
v = 0.36 fps
d_o = 12"
Use Figure 8.06.b

FIND:

La = 8'
d_{50} = 0.1', use 6" Class A Rip Rap





Curves may not be extrapolated.

Figure 8.06b Design of outlet protection from a round pipe flowing full, maximum tailwater condition ($T_w \geq 0.5$ diameter).

APPENDIX

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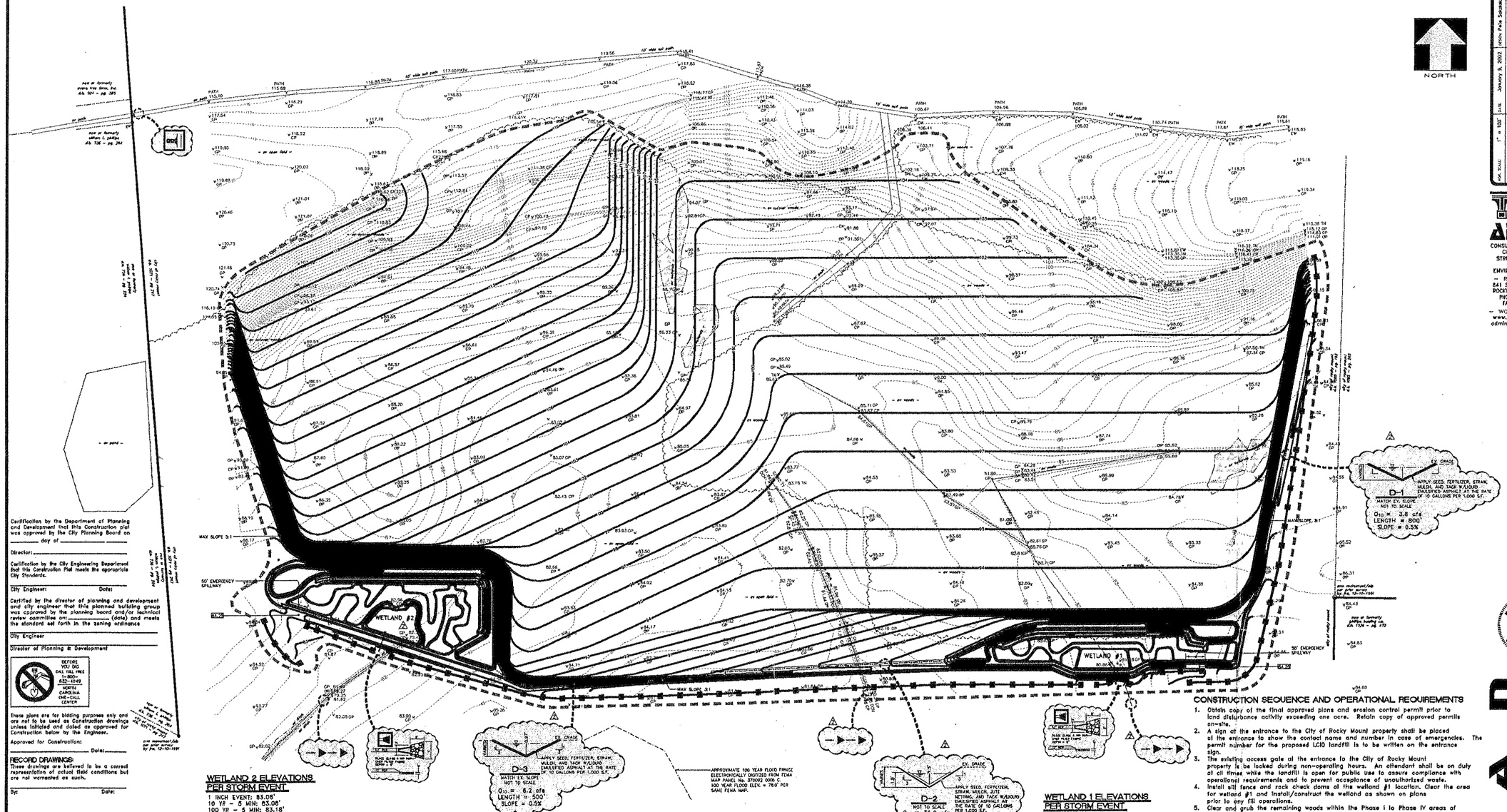


Certification by the Department of Planning and Development that this Construction plat was approved by the City Planning Board on

_____ day of _____

Director: _____

Certification by the City Engineering Department that this Construction Plat meets the appropriate City Standards.

City Engineer: _____ Date: _____

Certified by the director of planning and development and city engineer that this planned building group was approved by the planning board and/or technical review committee on _____ (date) and meets the standard set forth in the zoning ordinance

City Engineer _____

Director of Planning & Development _____

BEFORE YOU DIG CALL TOLL FREE 1-800-632-4949 NORTH CAROLINA ONE-CALL CENTER

These plans are for bidding purposes only and are not to be used as Construction drawings unless initialed and dated as approved for Construction below by the Engineer.

Approved for Construction: _____ Date: _____

RECORD DRAWINGS

These drawings are believed to be a correct representation of actual field conditions but are not warranted as such.

By: _____ Date: _____

WETLAND 2 ELEVATIONS PER STORM EVENT

1 INCH EVENT: 83.08'
10 YR – 5 MIN: 83.08'
100 YR – 5 MIN: 83.18'

NOTE:
1. WATER WILL NOT TOP SPILLWAY ELEVATION AT Q100, 5 MIN STORM.
2. SPILLWAY TO BE GRASS LINED

WETLAND 1 ELEVATIONS PER STORM EVENT

1 INCH EVENT: 83.17'
10 YR – 30 MIN: 83.47'
100 YR – 30 MIN: 84.10'

NOTE:
1. WATER WILL NOT TOP SPILLWAY ELEVATION AT Q100, 30 MIN. STORM.
2. SPILLWAY TO BE GRASS LINED

PLANTING SCHEDULE

PLANT ZONE A (0"–8" DEPTH)	PROPOSED PLANTED SPECIES (COVER 5,100 SF)	– SOFT STEM BULRUSH (SCIRPUS VALIDUS) 33% – SMARTWEED (POLYGONUM SPP.) 33% – SOFTRUSH (JUNCUS EFFESUS) 33%
PLANT ZONE B (9"–18" DEPTH)	PROPOSED PLANTED SPECIES (COVER 5,100 SF)	– COONTAIL (CERATOPHYLLUM DWOERSOM) 33% – DUCKWEED (LEMMA SPP.) 33% – WILD CELERY (VALISNERIA AMERICAN) 33%

GENERAL NOTES – EXTENDED DETENTION WETLANDS

1. Wetland detention basin shall be seeded and stabilized within 14 days of completion of construction. This might be in the form of final vegetation, or a temporary means of providing stabilization till the vegetation becomes established.
2. If the wetland basin is used as a temporary means to hold sediment during construction by the contractor, the sediment must be cleaned out, graded, and vegetated within 14 days of completion of construction.
3. Contractor shall take special precaution to protect inlet to forebay and outlet from scour during large storm events during construction.
4. A 15' drainage and access easement has been added for access for cleaning out extended detention wetland area by equipment.
5. Extended detention wetland will be maintained by the owner. Refer to operation and maintenance agreement.

LEGEND

- 101.01
- 104.01
- 105.01
- 106.01
- TD — 103.07
- GL — 103.09
- LIMITS OF DISTURBANCE

TOTAL AREA DISTURBED = 79.74 AC.

SCALE: 1" = 100'
0 100 200 300 400

CONSTRUCTION SAFETY

These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

EXISTING CONDITIONS

The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

ADA AND LEGAL DISCLAIMER

This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws, the owner should have this document reviewed by his attorney to determine legal compliance.

BOUNDARY DESCRIPTION SHOWN IS NOT FOR RECORDATION.

COLORED COVER SHEETS

In an effort to maintain quality design and construction, Appian has established a plan cover sheet protocol to ensure that the involved parties are all working from the most recent plan revision. Appian has assigned colors to the plan cover sheet to correspond with stages of the design / construction process: WHITE for agency review/ preliminary phase; BLUE for the bidding phase; and GOLD for the construction phase. Contractor should note that the only set of plans to be used for construction are those with a gold cover. Contractor is to contact the project engineer to obtain the most current plan.

CONSTRUCTION SEQUENCE AND OPERATIONAL REQUIREMENTS

1. Obtain copy of the final approved plans and erosion control permit prior to land disturbance activity exceeding one acre. Retain copy of approved permits on-site.
2. A sign at the entrance to the City of Rocky Mount property shall be placed at the entrance to show the contact name and number in case of emergencies. The permit number for the proposed LCID landfill is to be written on the entrance sign.
3. The existing access gate at the entrance to the City of Rocky Mount property is be locked during non-operating hours. An attendant shall be on duty at all times while the landfill is open for public use to assure compliance with operational requirements and to prevent acceptance of unauthorized waste.
4. Install silt fence and rock check dams at the wetland #1 location. Clear the area for wetland #1 and install/construct the wetland as shown on plans prior to any fill operations.
5. Clear and grub the remaining woods within the Phase I to Phase IV areas of the landfill. Place cover as specified on plan over the existing ground to ensure that waste shall be four feet above the seasonal high water table.
6. Begin fill operations within Phase I as shown on plans. The landfill shall accept only land clearing waste, inert debris, untreated wood, and yard trash. Solid waste shall be compacted as densely as practical into cells. Adequate soil cover shall be applied monthly, or when the active area reaches one acre in size, whichever occurs first. Install drainage ditches as shown on plans (D–1 & D–2).
7. If the area for each phase is close to being filled prior to the expiration of the permit for that phase or if the permit expires, permission from NCDENR, Solid Waste Management Division, Solid Waste Section must be obtained and a new permit in hand prior to continuing fill into a new phase.
8. Clear the area for wetland #2 and install/construct the wetland as shown on plans prior to any fill operations for Phase V.
9. Install diversion ditches as necessary.
10. Inspect all erosion control devices weekly and after each rainfall event. Make repairs immediately as necessary.
11. 120 calendar days after completion of any phase of disposal operations, or upon revocation of a permit, the disposal area shall be covered with a minimum of one foot of suitable soil cover sloped to allow surface water runoff in a controlled manner. The site shall be left in a condition, which is safe to the public and the community.
12. The operator is to complete a yearly inspection of the perimeter of the site to check for any indications of methane or other gas disturbances due to the landfill. The concentration of explosive gases generated by the facility shall not exceed twenty five (25) percent of the lower explosive limit for the gases in facility structures nor shall it exceed the lower explosive limit for the gases at the property boundary.
13. No surface water is to be impounded over the waste area. All surface runoff is to be diverted to flow to its original course.
14. Ensure that no waste is disposed of into existing waters (wetlands that will will be filled). The Division of Solid Waste reserves the right to require ground water or surface water monitoring, or both should they deem them necessary under sections .0601 and .0602 of Solid Waste Management Rules.
15. Open burning of solid waste is prohibited.
16. Access roads shall be of all-weather construction and properly maintained.
17. Omit
18. Permanently seed all disturbed areas once at grade and soil cover is placed. Do not remove protection devices until an adequate ground cover is achieved.
19. After the site is stabilized and the project complete, remove all temporary measures and permanently seed the disturbed areas. Notify the Project Engineer prior to removing any temporary erosion control measure.
20. The projected land use after completion of the landfill is pasture land.

APPIAN
CONSULTING ENGINEERS, P.A.
CIVIL, MUNICIPAL &
STRUCTURAL ENGINEERS
COMPREHENSIVE
ENVIRONMENTAL SERVICES
– ROCKY MOUNT: –
841 SOUTH WESLEYAN BLVD.
ROCKY MOUNT, N.C. 27804
PHONE: (252) 972-7703
FAX: (252) 972-7638
– WORLD WIDE WEB: –
www.appianengineers.com
admin@appianengineers.com

NORTH CAROLINA PROFESSIONAL SEAL 9421 ENGINEER ROBERT L. APPIAN

REVISIONS			
DESCRIPTION	DATE	BY	CHK
COMMENTS BASED ON DEM	4-26-02	RS	DH
COMMENTS PER REVIEW	6-18-02	RS	DH

HOR. SCALE: 1" = 100' | DATE: January 9, 2002 | DRAWN BY: Chris Hance | CHKD: Hicks Pate Schofield | APP'D: Bobby Joyner

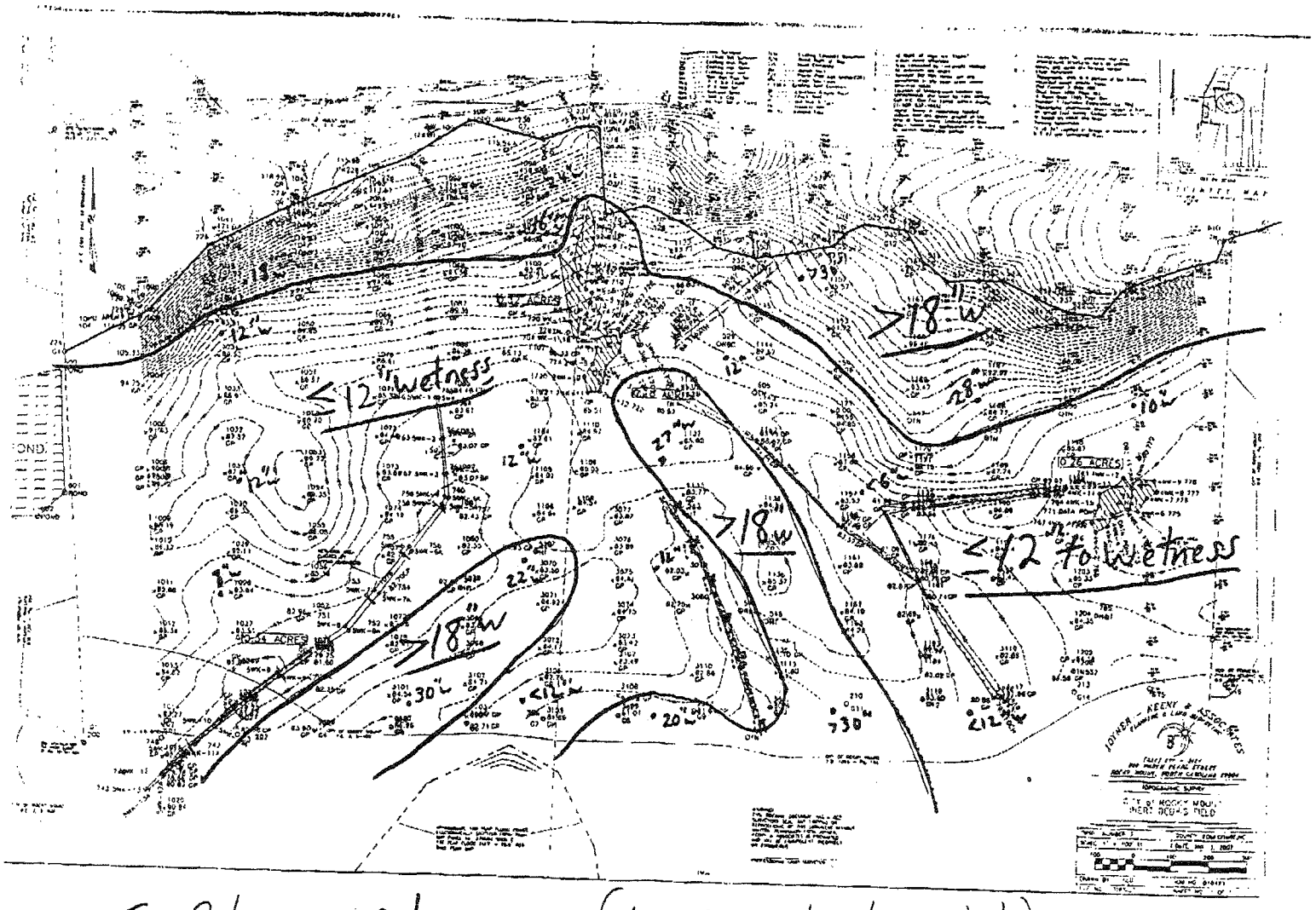
VER. SCALE: AS NOTED

APPIAN

EROSION CONTROL PLAN for City of Rocky Mount LCID Landfill Rocky Mount, North Carolina

01-065
D-
CE-7

APPENDIX VI



To: Pete p.1 (LCID Soil Wetness Study)

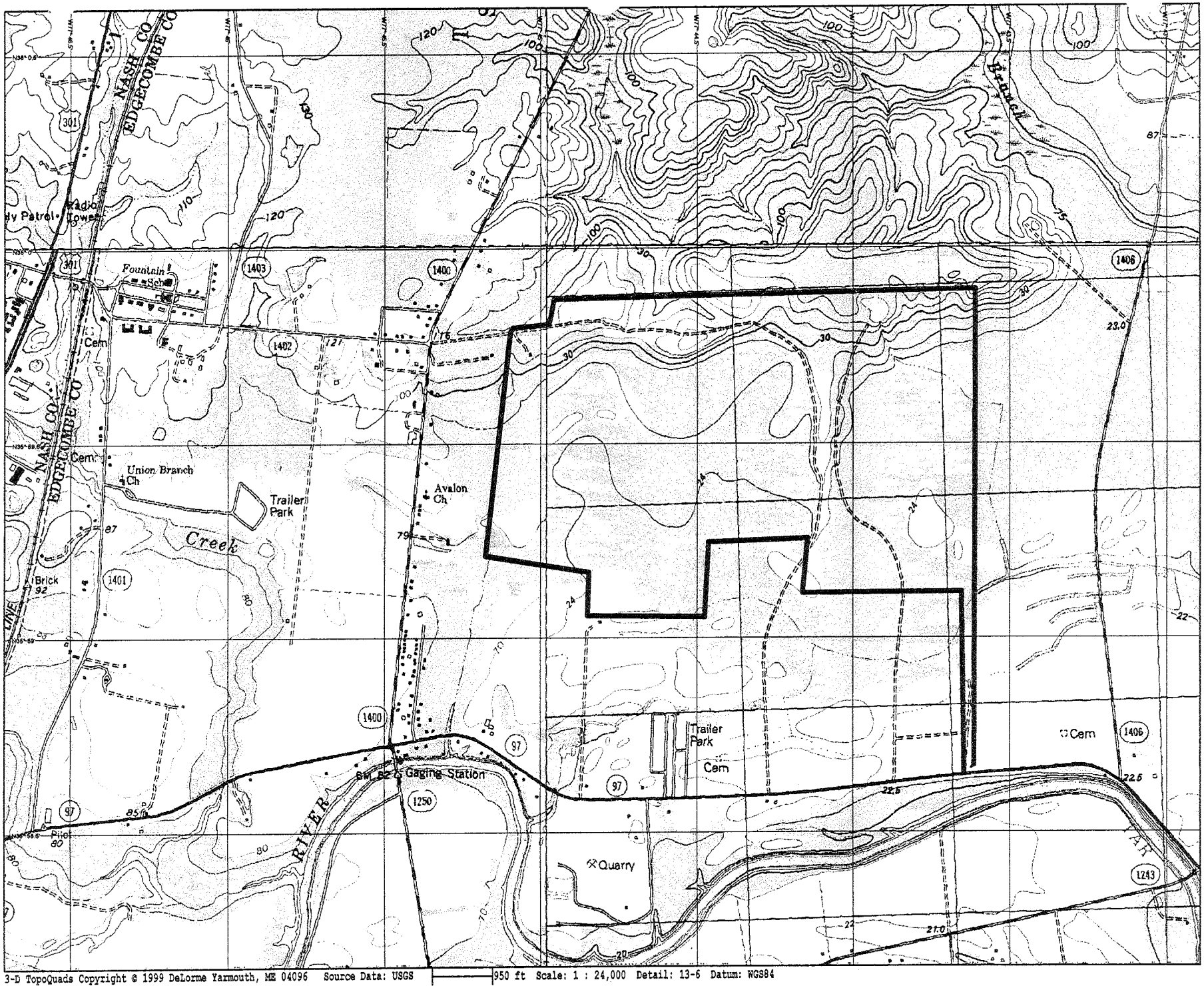
From: John 2-27-02

Notes: Areas ≤12"w will require about 3' of fill
& other areas less with deeper depths to wetness

Call if questions

21)

2 370 000 FEET
EXISTING PATH
PROPOSED LCID LANDFILL SITE
TAR RIVER
TAR RIVER
water
1400
1243
97



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS

950 ft Scale: 1 : 24,000 Detail: 13-6 Datum: WGS84

APPENDIX VIII

CITY OF ROCKY MOUNT

OFFICE OF
THE CITY MANAGER

August 13, 2002

NC Division of Waste Management/Solid Waste Section
NC Department of Environment and Natural Resources
Attn: Mr. James C. Coffey
1646 Mail Service Center
Raleigh, NC 27699-1646

Dear Mr. Coffey:

The City of Rocky Mount has submitted plans for an LCID landfill on City owned property near the Regional Wastewater Treatment Facility on NC 97 east of Rocky Mount. Under regulation .0565, we are required to verify that the landfill site complies with the zoning ordinance.

The proposed landfill will cover approximately 100 acres in an area zoned for agricultural use. The zoning ordinance defines "fill" as "any material to raise the elevation of the surface of the land, excluding a grade base and paving". "Fill" is allowed as a use by right in the agricultural zone.

The signature below from zoning inspector Debbie Baines is submitted as verification of compliance with the City's zoning regulations.

Sincerely,

Peter Varney

Peter Varney
Assistant City Manager

CC: Douglas S. Roberson, Jr.
Peter Sokalski

This is to verify that the proposed LCID landfill at the Rocky Mount Regional Wastewater Treatment Facility conforms to the City of Rocky Mount's zoning regulations.

Debbie Baines

Zoning Inspector

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