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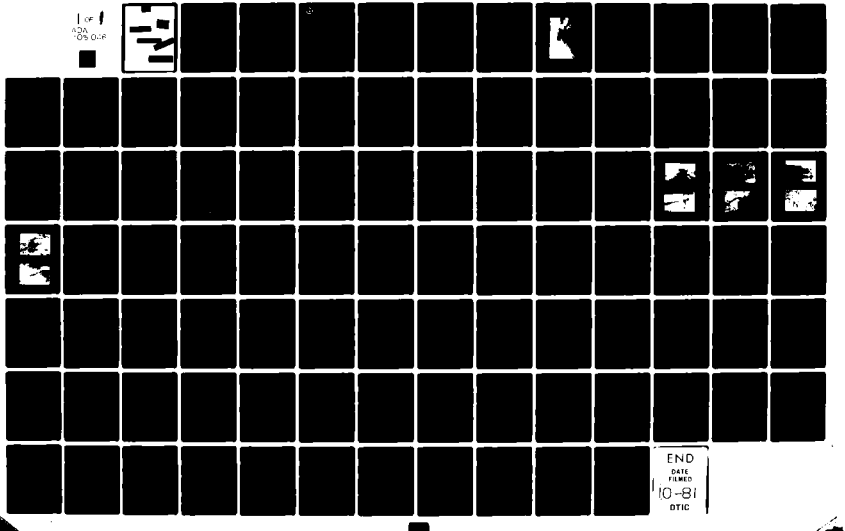

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Parker Lake Number 2 Dam (MO 30809).
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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE	READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A105046	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Phase I Dam Inspection Report National Dam Safety Program Parker Lake #2 Dam (MO 30809) Perry County, Missouri	5. TYPE OF REPORT & PERIOD COVERED Final Report
	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Kenneth Balk and Associates, Inc.	8. CONTRACT OR GRANT NUMBER(s) DACW43-78-C-0169
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Engineer District, St. Louis Dam Inventory and Inspection Section, LMSED-PD 210 Tucker Blvd., North, St. Louis, Mo. 63101	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Engineer District, St. Louis Dam Inventory and Inspection Section, LMSED-PD 210 Tucker Blvd., North, St. Louis, Mo. 63101	12. REPORT DATE November 1978
	13. NUMBER OF PAGES Approximately 80
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS. (of this report) UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Dam Safety, Lake, Dam Inspection, Private Dams

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report was prepared under the National Program of Inspection of Non-Federal Dams. This report assesses the general condition of the dam with respect to safety, based on available data and on visual inspection, to determine if the dam poses hazards to human life or property.

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT, CORPS OF ENGINEERS
210 NORTH 12TH STREET
ST. LOUIS, MISSOURI 63101

IN REPLY REFER TO

SUBJECT: Parker Lake No. 2 Dam Phase I Inspection Report

This report presents the results of field inspection and evaluation of the Parker Lake No. 2 Dam.

It was prepared under the National Program of Inspection of Non-Federal Dams.

This dam has been classified as unsafe because of the following deficiencies:

1) A seriously inadequate spillway that will pass only 20 percent of the Probable Maximum Flood.

2) Through-seepage near a bulge on the downstream embankment slope.

3) Presence of cracks and a bulge on the downstream embankment slope, the significance of which cannot be completely evaluated due to recent construction. The cracks, bulge, and through-seepage could be interrelated.

SUBMITTED BY: SIGNED 6 APR 1979
Chief, Engineering Division — Date

APPROVED BY: SIGNED 9 APR 1979
Colonel, CE, District Engineer — Date

PARKER LAKE #2 DAM

PERRY COUNTY, MISSOURI

MISSOURI INVENTORY NO. 30809

PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM

PREPARED BY

Kenneth Balk & Associates, Inc.
St. Louis, Missouri
Shannon & Wilson, Inc.
St. Louis, Missouri

PREPARED FOR

ST. LOUIS DISTRICT, CORPS OF ENGINEERS

JANUARY, 1979

PHASE I REPORT

NATIONAL DAM SAFETY PROGRAM

Name of Dam	Parker Lake #2
State Located	Missouri
County Located	Perry County
Stream	Tributary To Jordan Branch Creek
Date of Inspection	September 7, 1978

Parker Lake #2 Dam, No. 30809 was inspected using the "Recommended Guidelines for Safety Inspection of Dams". These guidelines were developed by the Chief of Engineers, U. S. Army, Washington, D.C., with the help of Federal and state agencies, professional engineering organizations, and private engineers. The resulting guidelines are considered to represent a consensus of the engineering profession.

Parker Lake #2 Dam was visually inspected by an interdisciplinary team of engineers from Kenneth Balk & Associates, Inc. and Shannon & Wilson, Inc. The purpose of the inspection was to make a preliminary assessment of the general condition of the dam with respect to safety in order to determine if, in the opinion of the interdisciplinary team, the dam poses recognizable hazards to human life or property. This assessment is based solely upon data made available and visual evidence observed during the site visit.

To make a complete assessment of the safety of the dam would require detailed studies and engineering analyses beyond the scope of this preliminary assessment.

Based on the criteria in the guidelines, the dam is in the high hazard potential classification, which means that loss of life and appreciable property loss could occur in the event of failure of the dam. The estimated damage zone extends ten miles downstream of the dam. Within the damage zone are four homes, one State highway crossing, and four County road crossings. There is some farming in the floodplain. Parker Lake #2 Dam is in the intermediate size classification since it is greater than 40 feet high but less than 100 feet high.

The inspection and evaluation indicate that the spillway of Parker Lake #2 does not meet the criteria set forth in the guidelines for a dam having the above size and hazard potential. Parker Lake #2 is an intermediate size dam with a high hazard potential, required by the guidelines to pass the PMF. The PMF or Probable Maximum Flood is defined as the flood discharge that may be expected from the most severe combination of critical meterological and hydrologic conditions that are reasonably possible in the region. However, it was determined that the spillway will only pass approximately 20 percent of the PMF without overtopping the dam.

The evaluation of Parker Lake #2 also indicated that the spillway will not pass the 100-year flood; that is, a flood having a 1 percent chance of being equalled or exceeded during any given year.

It should be noted that the aforementioned evaluation included the effect of Parker Lake No. 1, located a short distance upstream.

Deficiencies visually observed by the inspection team were seepage at the toe and below a bulge on the downstream face of the embankment near the left abutment, and some small trees on the upstream embankment slope. Cracks observed on the crest towards the right abutment may be related to the bulge on the downstream slope near the left abutment and may be signs of a prior slope instability. This is a serious deficiency which should be further explored. The upstream slope to the waterline is steeper than good engineering practice would dictate and this is considered a deficiency which should be evaluated. Other deficiencies found were the lack of seepage records, operational records, seepage and stability analyses comparable to the requirements of the recommended guidelines and seismic stability analyses.

We recommend that prompt action be taken to correct or control the deficiencies described. A detailed report discussing each of these deficiencies is attached.

Ervin H. Baumeyer, P.E.
Principal-In-Charge
Kenneth Balk and Associates, Inc.
St. Louis, Missouri

Lutz Kunze, P.E.
Principal Engineer
Shannon & Wilson, Inc.
St. Louis, Missouri

Overview of Lake and Dam

PHASE I INSPECTION REPORT
NATIONAL DAM SAFETY PROGRAM
PARKER LAKE #2 DAM - ID NO. 30809

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LIST OF PHOTOGRAPHS

SECTION 1 - PROJECT INFORMATION

1.1 GENERAL

a. Authority. The National Dam Inspection Act, Public Law 92-367, authorized the Secretary of the Army, through the Corps of Engineers, to initiate a program of safety inspection of dams throughout the United States. Pursuant to the above, the St. Louis District, Corps of Engineers, District Engineer directed that a safety inspection of the Parker Lake #2 Dam be made.

b. Purpose of Inspection. The purpose of the inspection was to make an assessment of the general condition of the dam with respect to safety, based upon data made available and visual inspection, in order to determine if the dam poses hazards to human life or property.

c. Evaluation Criteria. Criteria used to evaluate the dam were furnished by the Department of the Army, Office of the Chief of Engineers, in "Recommended Guidelines for Safety Inspection of Dams". These guidelines were developed with the help of several Federal agencies and many State agencies, professional engineering organizations, and private engineers.

1.2 DESCRIPTION OF PROJECT

a. Description of Dam and Appurtenances.

(1) The dam is an earth structure built on Jordan Branch Creek in the southern part of Perry County, Missouri. Topography adjacent to the valley is rolling to steep. Most of the area in the vicinity of the dam is covered with a residual soil overlying dolomite. Topography in the vicinity of the dam is shown on Plate 1.

Approximately 4100 feet upstream from the Parker Lake No. 2 Dam is the dam for Parker Lake No. 1. Discharges from Parker Lake No. 1 flow for a short distance, (on the order of 300 feet) before entering the reservoir of Parker Lake No. 2. Parker Lake No. 1 has a reservoir area of approximately 17.5 acres.

(2) Pertinent physical data are given in paragraph 1.3 below.

b. Location. The dam is located in the southeastern portion of Perry County, Missouri, as shown on Plate 2. The lake formed by the dam is on the Missouri-Perry County Parker Lake quadrangle sheet in the SW 1/4 of Section 32, T35N, R9E.

c. Size Classification. Criteria for determining the size classification of dams and impoundments are presented in the guidelines referenced in paragraph 1.1c above. Based on these criteria, this dam and impoundment is in the Intermediate size category.

d. Hazard Classification. Guidelines for determining hazard classification are presented in the same guidelines as referenced in paragraph c. Based on referenced guidelines, the Corps of Engineers has determined that this dam is in the High Hazard Classification and thus has been selected by the Corps of Engineers for a Phase I inspection.

e. Ownership. This dam is owned by Mrs. F. M. Parker, Silver Lake, Mo.

f. Purpose of Dam. The dam forms a recreational lake.

g. Design and Construction History. There are no known design plans or construction records. According to information supplied by the Owner, the dam was completed in 1965. According to Mrs. Parker and Mr. Skaggs, a local contractor, the dam had experienced a leak in the past and the downstream slope of the embankment was flattened to 4 H to 1 V. This construction was completed September 2, 1978.

h. Normal Operating Procedure. Normal rainfall, runoff, transpiration, evaporation and spillway discharge, all combine to maintain a relatively stable water surface elevation.

1.3 PERTINENT DATA

a. Drainage Area -

(1) Directly tributary to Parker Lake No. 1 - 290 Acres.

(2) Directly tributary to Parker Lake No. 2 - 298 Acres.

(3) Total - 588 Acres.

b. Discharge at Damsite.

(1) All discharge at the damsite is through an uncontrolled spillway.

(2) Estimated experienced maximum flood at damsite - two feet below top of dam, discharge of approximately 45.8 cfs.

(3) Estimated ungated spillway capacity at maximum pool elevation - 111 c.f.s.

c. Elevation (U.S.G.S.)

(1) Top of dam - 778± (see Plate 3).

(2) Spillway crest - 771.80

(3) Streambed at centerline of dam - 722±

(4) Maximum tailwater - unknown.

d. Reservoir. Length of maximum pool - 3900 feet ±.

e. Storage (Acre-feet). Top of dam - 322.

f. Reservoir Surface (Acres).

(1) Top of dam - 59.

(2) Spillway crest - 50

g. Dam.

(1) Type - earth embankment.

(2) Length - 500 feet.

(3) Height - 56 feet maximum.

(4) Top width - 30 feet.

(5) Side Slopes - (Measured with a slope meter/inclinometer in degrees and converted to ratios.)

(a) Downstream - 4 H. to 1 V.

(b) Upstream - 1.2 H to 1 V to water line.

(6) Zoning - unknown

(7) Impervious core - unknown

(8) Cutoff - unknown

(9) Grout curtain - unknown

h. Diversion and Regulating Tunnel. None.

i. Spillway.

(1) Type - 2-36 inch diameter reinforced concrete pipes.

(2) Crest elevation -
Invert Western R.C.P. = 771.8, Length = 28', Slope = 0.54%
Invert Eastern R.C.P. = 774.7, Length = 61.5, Slope = 2.32%

j. Regulating Outlets. - None.

SECTION 2 - ENGINEERING DATA

2.1 DESIGN

No design data were found to be readily available.

2.2 CONSTRUCTION

The dam was completed in 1965 according to the owner. Evidence of remedial construction relative to flattening the downstream slope of the embankment was visible and was considered in this report.

2.3 OPERATION

No records of the maximum loading on the dam were available.

2.4 EVALUATION

a. Availability. No engineering or geological data were readily available.

b. Adequacy. No engineering data was available to make a detailed assessment of the design, construction, and operation. The lack of seepage and stability analyses comparable to the requirements of the recommended guidelines is a deficiency which should be corrected.

c. Validity. No valid engineering data on design were available.

SECTION 3 - VISUAL INSPECTION

3.1 FINDINGS

a. General. A visual inspection of the Parker Lake #2 Dam was carried out on September 7, 1978. Personnel making inspection were employees of Kenneth Balk and Associates, Inc. and Shannon and Wilson, Inc. of St. Louis and included civil, geotechnical, and structural engineers and an engineering geologist. Specific observations are discussed below.

b. Dam. The inspection team observed the following at the dam. The dam is an earth structure which shows the evidence of the recent construction reported in Section 1. The construction equipment presumed to have been used was still parked on the right abutment and consisted of a dozer and a pan-scraper. No compaction equipment, such as a sheepsfoot, was in evidence and compaction of the fill is assumed to have been accomplished with the equipment in evidence. The fill material consists of reddish-brown and brown clayey silt and silty clay. The upstream slope is steep due to the new fill bladed off the crest which also covers the riprap at the waterline. The riprap visible consisted of rock ranging in size from 2 to 14 inches. It is not known whether an appropriate filter layer has been placed under the riprap. Trees are growing at the waterline at each end of the dam.

At the time of inspection, workmen were seeding, fertilizing, and mulching the shoulders of the crest and the downstream slopes of the embankment in order to provide slope and erosion protection.

Several longitudinal cracks, 0.5-inch wide and 15 to 20 feet long, were observed on the crest right of the center of the dam and towards the right abutment. A large hump or bulge was found at the toe of the downstream face of the embankment and toward the left abutment. The crest of the bulge also showed signs of cracking. The cracks in the crest of the embankment and the bulge may be the result of the recent construction or may be evidence of some slope instability prior to the recent construction. It appears that the bulge was constructed to stop a leak that may have existed at that location (see Section 1.2g). Although the cracks in the crest and the bulge at the toe are at opposite ends of the dam, they may be related, however, this is only an assumption which should be further explored.

Standing water and seepage was observed at the toe of the bulge. Water was observed flowing at a rate of 20 to 40 GPM slightly to the right and downstream of the toe of the bulge. The water appeared iron-stained and oil-slicked. The ground below the bulge and the area toward the left abutment was soft and wet. No detrimental settlement, depressions, animal burrows, or present slope instability were observed, however, the recent construction may have covered or corrected existing deficiencies, if any.

c. Appurtenant Structures. The spillways consist of two 36 inch diameter reinforced concrete pipe, (R.C.P.) culverts, one located at the juncture of the left abutment and the embankment and the other located in the embankment near the right abutment. The left or western spillway pipe has its entrance approach somewhat cluttered with weeds and brush which are impeding entrance efficiency and the pipe was partially blocked by debris. The outlet channel follows the juncture line of the abutment and the dam and is cut in residual soil. The outlet channel does not have any erosion protection and spillway discharges may endanger the integrity of the dam.

The right abutment or eastern spillway pipe is also partially blocked by debris and discharges onto the back slope of the embankment producing in our opinion, an undesirable outfall condition. Sustained discharges will endanger the integrity of the dam.

d. Reservoir Area. No wave wash, excessive erosion or slides were observed along the shore of the reservoir.

e. Damsite Geology.

(1) Right Abutment: Exposed rock on the right abutment, upstream and downstream of the dam consists of two distinguished beds of dolomite. The four feet thick upper bed consists of light gray, hard, medium to fine grained, moderately weathered arenaceous dolomite thin to medium bedded, with almost horizontal bedding with a few thin beds of limestone and sandstone. The dolomite contains cavities ranging in size from 1/4 inch to 1 inch in diameter throughout which are filled with siliceous and calcareous material.

Underlying this formation is a massive, light gray, finely crystalline dolomite. This formation also has cavities but they are very small and are mostly along bedding planes. Formation is moderately bedded, hard, slightly weathered, with horizontal bedding. Joint patterns in both the formations are similar. Most of the joints are vertical with strike ranging from 25^{o} to 63^{o} NW. Joint openings range from 1/4 inch to 3 inches with open joints, approximately 35 percent and closed joints 65 percent. The filling material is siliceous and calcareous with sand grains.

(2) Left Abutment: The rock on the left abutment consists of light gray dolomite, finely crystalline, hard, relatively fresh and contains small scattered groups of cavities which range in size from 1/10 to 1/4 inch, mostly filled with siliceous material or sand grains. Quartz lenses are also present at places. Most of the joints are vertical with openings 1/8 inch to 2 inches, strike could not be determined. Moderately to sparsely jointed, filling material; calcareous and siliceous.

Both of the abutments are covered with a residual soil. Relative positions of these formations in the regional stratigraphic column, could not be determined due to the small exposures and the absence of any marker bed.

3.2 EVALUATION

The conditions observed, in our opinion, are significant enough to indicate a need for prompt remedial action. In the opinion of the inspection team, the services of a professional engineer experienced in the design of dams should be obtained to evaluate the deficiencies noted.

1. The spillway pipes are partially blocked by debris and the outlet channels have no protection against erosion from sustained discharges.

2. Seepage evident at the base of the bulge is considered through-seepage which left uncontrolled may cause piping which would adversely affect the stability of the dam.

3. The bulge noted on the downstream slope of the dam is not a deficiency in inself, however, taken in conjunction with cracks noted on the crest of the dam may be evidence of a prior slope instability, which should be further explored.

4. The steep upstream slope (to the waterline) is considered a condition which would not endanger the dam but may slough or slide. Since the crest of the dam is wide (40 feet minimum), the owner may trim the upstream face to an acceptable slope and still maintain adequate crest width.

5. The slope protection for the recently flattened downstream slope should be inspected periodically to see that the slope protection is adequate for protection against erosion.

SECTION 4 - OPERATIONAL PROCEDURES

4.1 PROCEDURES

No regulating structures exist. The lake level is controlled by rainfall, runoff, evaporation, and the capacity of uncontrolled spillways.

4.2 MAINTENANCE OF DAM

No maintenance records of the dam were available. Judging from the trees and partially blocked spillway pipes, the dam receives little if any regular maintenance

4.3 MAINTENANCE OF OPERATING FACILITIES

No regulating structures exist.

4.4 DESCRIPTION OF ANY WARNING SYSTEM IN EFFECT

The inspection team is not aware of any existing warning system for this dam.

4.5 EVALUATION

In our opinion, the corditions observed, i.e., trees and partially blocked spillway pipes, require a regular maintenance program. A warning system would be desirable.

SECTION 5 - HYDRAULIC/HYDROLOGIC

5.1 EVALUATION OF FEATURES

a. Design Data. There were no hydraulic and hydrological design data made available.

b. Experience Data. The drainage area and lake surface area are developed from USGS Parker Lake, Mo. Quadrangle 7.5 minute series, dated 1959. The spillway and dam layout are from surveys made during the inspection.

c Visual Observations. The spillway tubes, two 36 inch diameter reinforced concrete pipes, are in good condition. Their entrances, however, are partially blocked with weeds and brush, and the pipes are partially blocked by debris. The outlet channel of the western tube does not have any erosion protection. The discharge from the eastern tube is onto the back slope of the embankment. Sustained discharges from either or both tubes will have an adverse effect on the integrity of the dam.

d. Overtopping Potential. The spillways have been found to be inadequate to pass the Probable Maximum Flood (PMF) without overtopping the dam. The probable maximum flood is defined as the flood discharge that may be expected from the most severe combination of critical meteorological and hydrologic conditions that are reasonably possible in the region.

The evaluation of the spillways of Parker Lake No. 2 took into account the existence of Parker Lake No. 1, located a short distance upstream from the upstream end of the pool of Parker Lake No. 2. Parker Lake No. 1 is approximately 17.45 acres in pool area and provides approximately 40.3 acre feet of useable storage, prior to overtopping the dam. As the dam is overtopped, and before total failure occurs, the amount of water stored, along with the outflow rate, of course, increases. The effect of this storage is a reduction in the inflow rate to Parker Lake No. 2.

It should be noted that the above result assumes no failure of the Parker Lake No. 1 Dam.

For the PMF condition, preliminary computations indicate that due to the inability of Parker Lake No. 1 to accommodate even a minor percentage of the flood, the probability of the failure of Parker Lake No. 2 Dam might be increased due to the early failure of Parker Lake No. 1 Dam. In our opinion, further investigation and evaluation of the situation is in order and should be promptly accomplished.

The effect of 100% of the PMF and 50% of the PMF on Parker Lake No. 2 Dam is as follows:

PMF	Dam	Maximum Depth Over Dam (Ft.)	Maximum Storage (Ac-Ft.)	Duration of Overtopping (Hours)	Peak Outflow Rate (CFS)
100%		4.2	580	10.2	5270
50%		1.8	430	8.3	1620

The spillways for Parker Lake No. 2 have been found to be adequate to pass a flood of approximately 20% of the PMF.

For the 100 year flood, an event which has a 1% chance of being equaled or exceeded at least once in any given year, the spillways of the Parker Lake No. 2 dam have been found to be adequate.

The estimated damage zone extends ten miles downstream of the dam. Within the damage zone are four homes, one State highway crossing, and four County road crossings. There is some farming in the floodplain.

SECTION 6 - STRUCTURAL STABILITY

6.1 EVALUATION OF STRUCTURAL STABILITY

a. Visual Observations. Visually observed conditions which can affect the structural stability of this dam have been discussed in Section 3.

b. Design and Construction Data. No design or construction data relating to the structural stability of the dam were found except that discussed in Section 1.2.

c. Operating Records. There are no regulating structures. The lack of seepage and stability analyses comparable to the requirements of the recommended guidelines is a deficiency which should be corrected.

d. Post-Construction Changes. No post-construction changes other than referenced in Section 1, paragraph 1.2 g. exists.

e. Seismic Stability. The location of Parker No. 2 Dam is in Seismic Zone 2. No engineering data was available to evaluate the seismic stability of the dam.

SECTION 7 - ASSESSMENT/REMEDIAL MEASURES

7.1 DAM ASSESSMENT

a. Safety.

(1) Spillways. The spillways, consisting of two 36-inch RCP's will not pass the minimum required flood without overtopping the dam. Furthermore, corrective measures should be taken to clean out partially blocked spillway pipes.

(2) Dam. Corrective measures, in our opinion, should be taken promptly for the deficiencies visually observed; i.e., seepage at the toe and below the bulge and growth of trees on the embankment. The relationship or connection of the bulge and the cracks at the crest may be a sign of a prior slope instability and should be further explored.

(3) In our opinion, the services of a professional engineer experienced in the design of dams should be retained to evaluate these deficiencies.

b. Adequacy of Information. Due to the lack of engineering design and construction data, except that discussed in Section 1, the conclusions of this report are based on performance and external visual conditions. The lack of seepage and stability analyses comparable to the requirements of the recommended guidelines is a deficiency which should be corrected. The inspection team considers that these data are sufficient to support the conclusions herein.

c. Urgency. A program should be developed as soon as possible to monitor at regular intervals the deficiencies described in this report. The remedial measures recommended in paragraph 7.2 should be accomplished in the near future. The item recommended in paragraph 7.2.a should be pursued on a high priority basis.

d. Necessity for Phase II. Based on the result of the Phase I inspection, no Phase II inspection is recommended.

7.2 REMEDIAL MEASURES

a. Alternatives. The spillway will pass only 20 percent of the probable maximum flood without overtopping. The spillway capacity and/or height of dam should be increased to pass the probable maximum flood.

b. O&M Procedures. The following O&M procedures are recommended:

(1) Seepage observed at the toe and below a bulge on the downstream face of the embankment near the left abutment, should be monitored to determine the quantity of flow and sedimentation. Corrective measures should be designed based on appropriate analyses.

(2) Trees and excessive vegetation should be removed from the upstream face of the embankment.

(3) The cause of the bulge mentioned in (1) above, and the cause of the cracks observed on the crest toward the right abutment should be determined to ascertain whether there is any relationship between the two, and if either or both pose a hazard to the stability of the dam.

(4) Consideration should be given to flattening the upstream slope of the embankment.

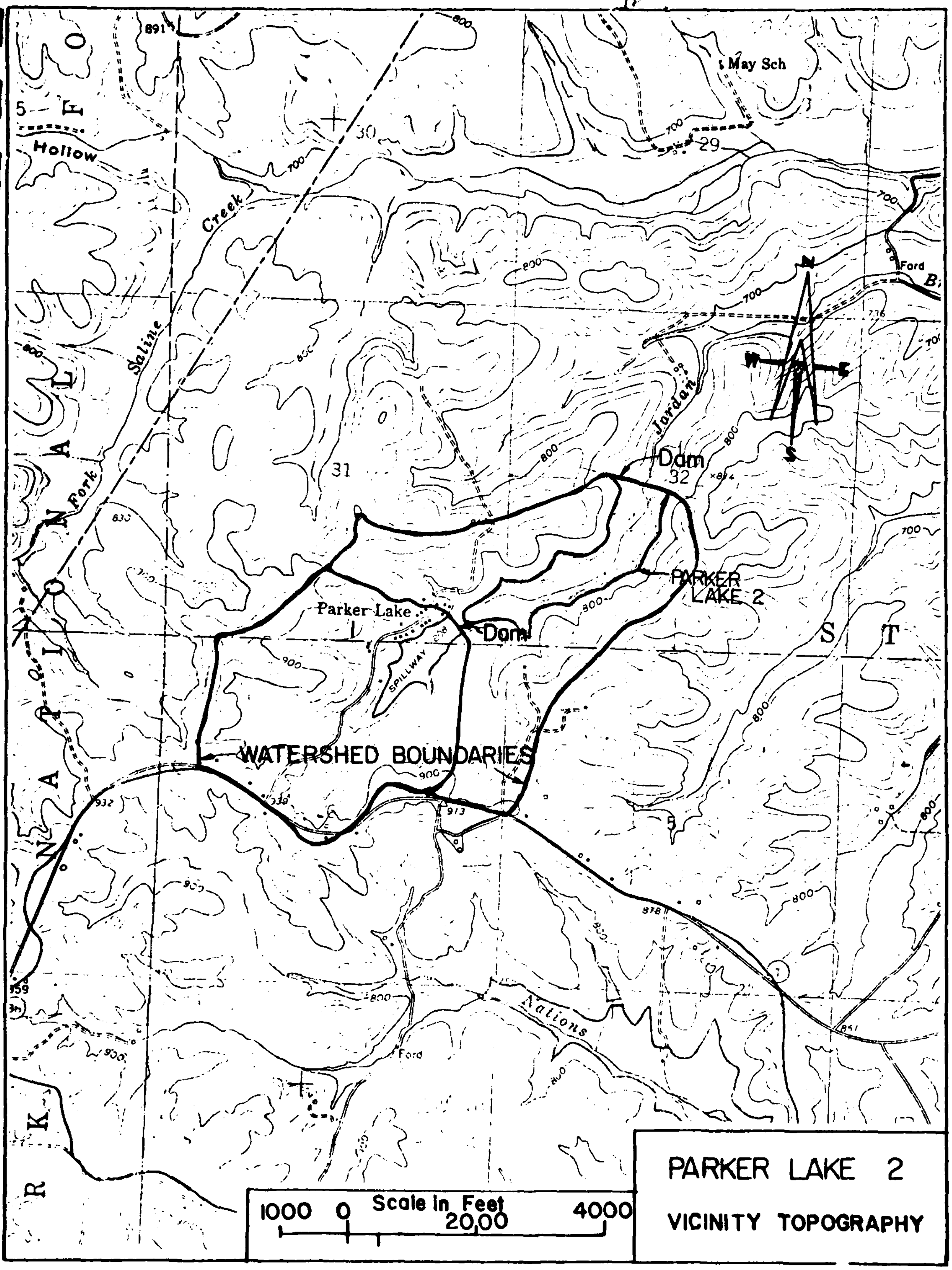
(5) The slope protection for the recently flattened downstream slope should be monitored to assure adequate protection against erosion.

(6) Partially blocked spillway pipe culverts should be cleaned out immediately.

(7) Erosion protection should be provided in the spillway outlet channels.

(8) Up-to-date records of all future maintenance and repairs should be kept.

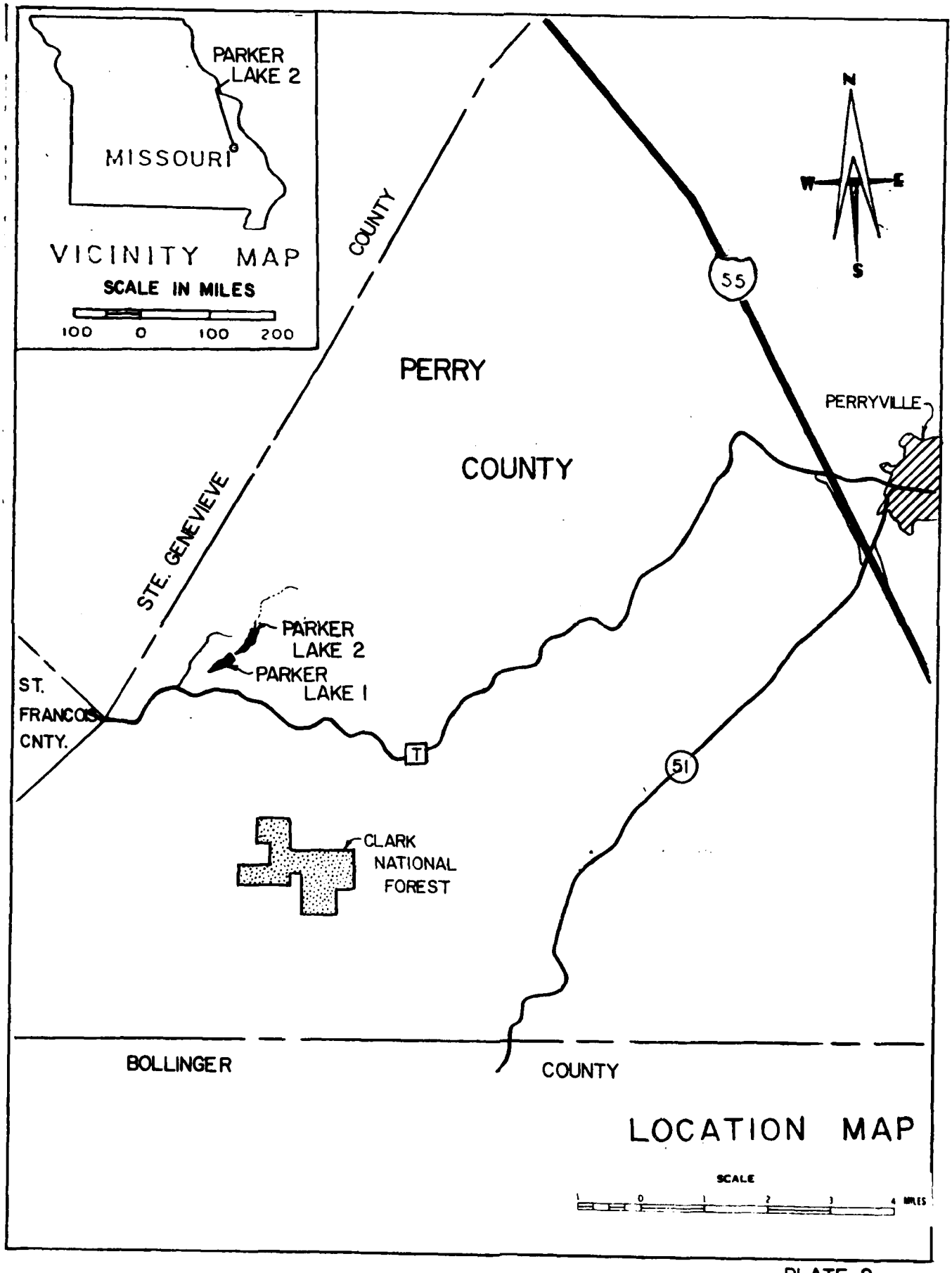
(9) The dam should be periodically inspected by an engineer experienced in the design and construction of dams.



PARKER LAKE 2

VICINITY TOPOGRAPHY

PLATE I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COUNTY
LOCATION MAP
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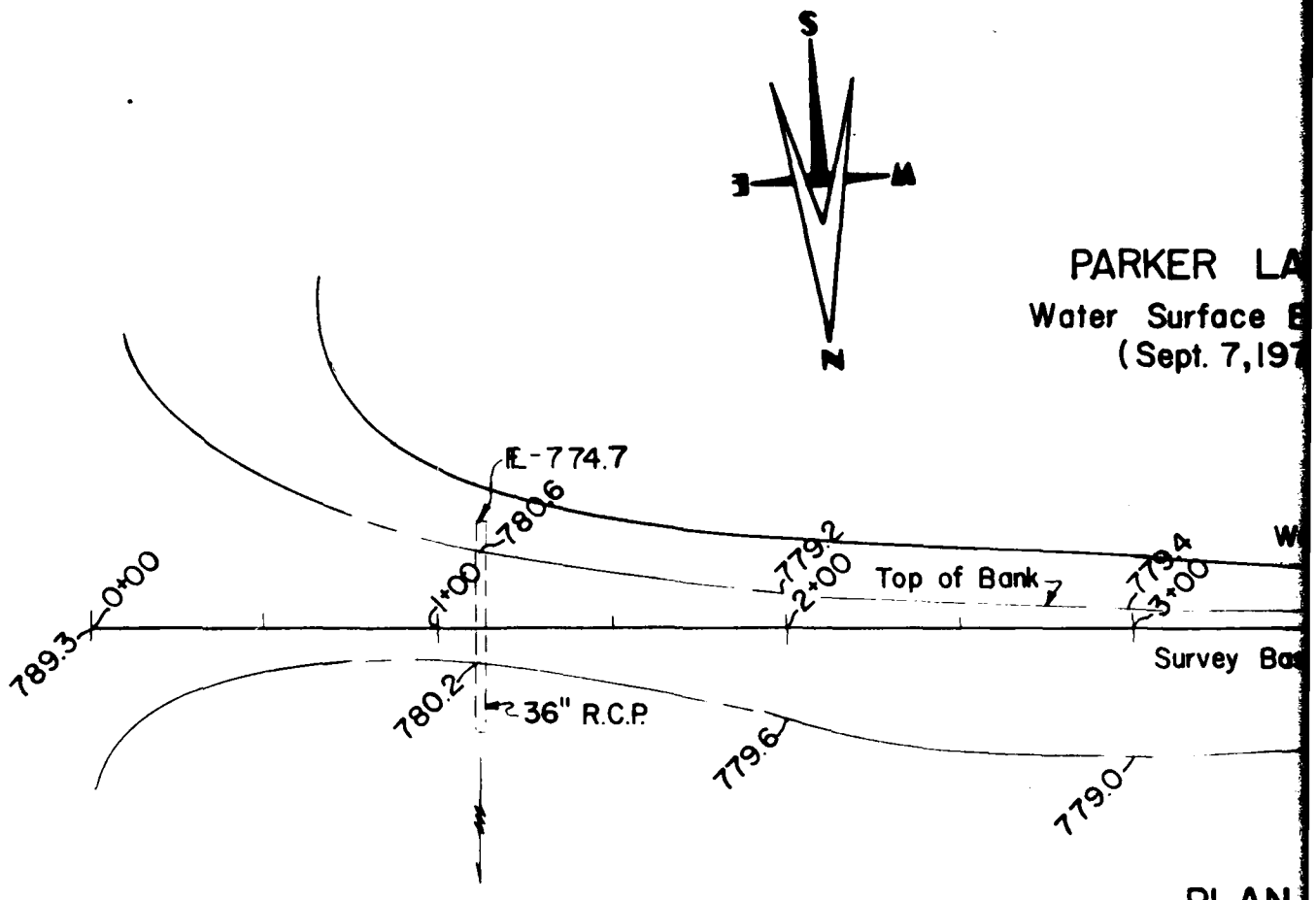
PLATE 2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2+00
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Survey Ba
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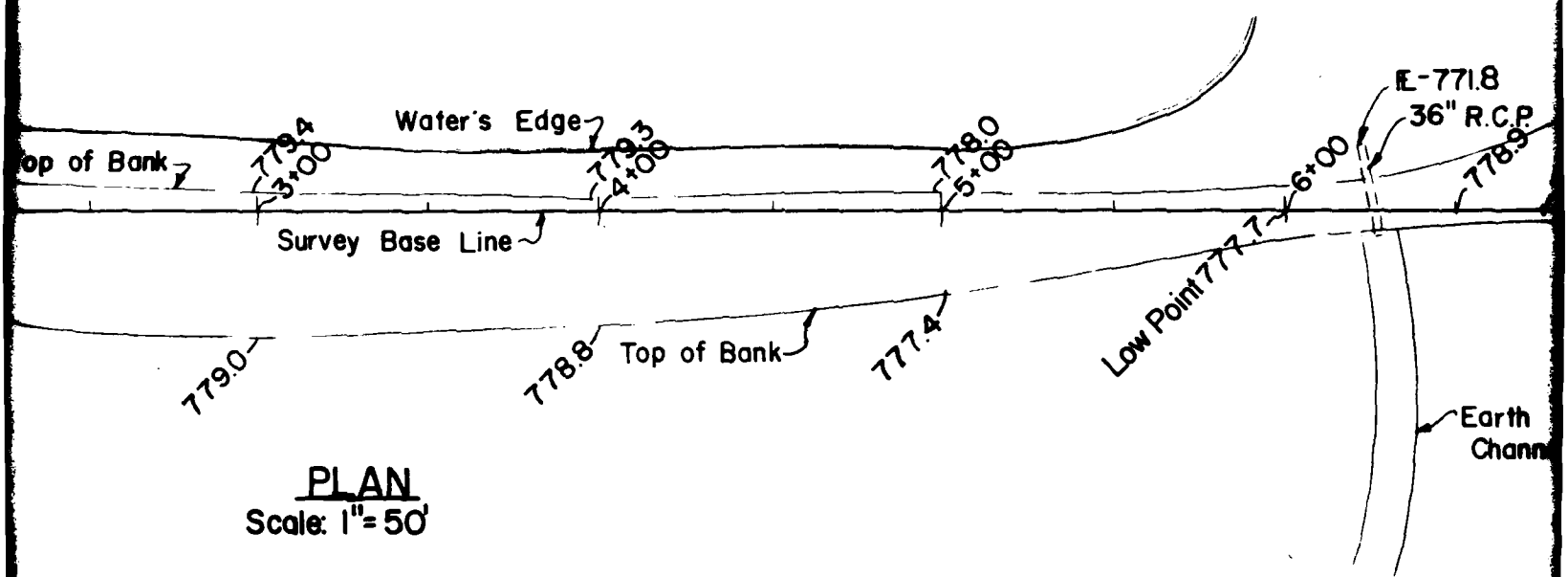
PARKER LAKE #2

Water Surface Elev. 770.7
(Sept. 7, 1978)



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PARKER LA

TOP OF DAM EL

Kenneth Balk & Assc., In

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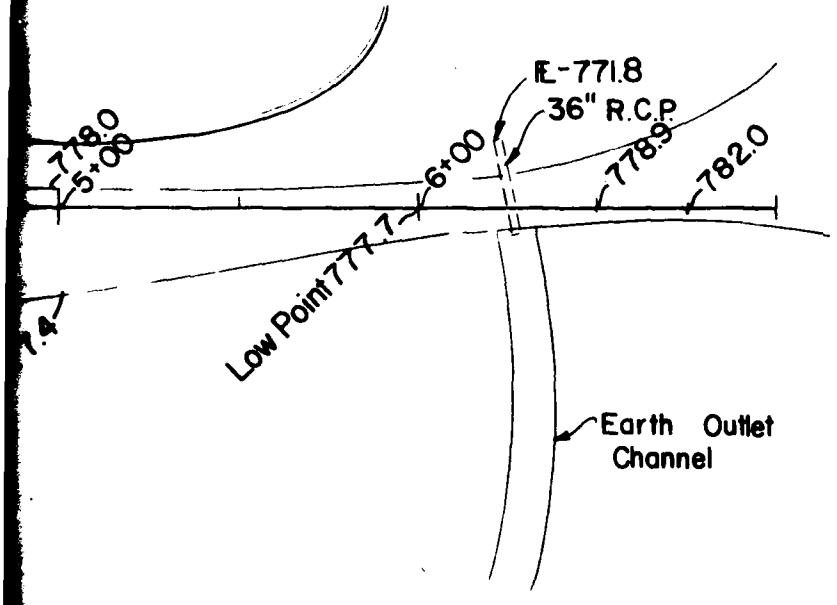
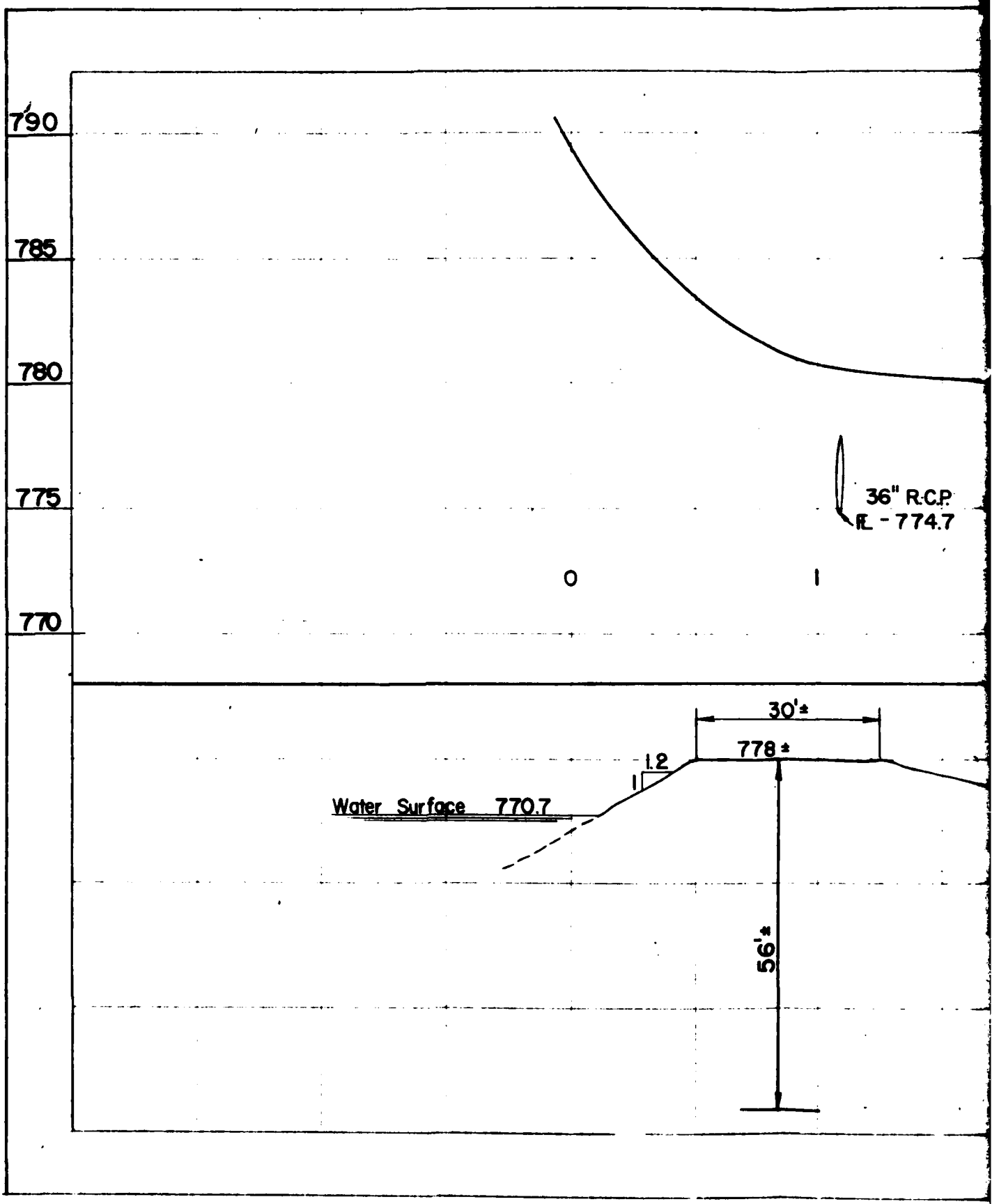


PARKER LAKE #2

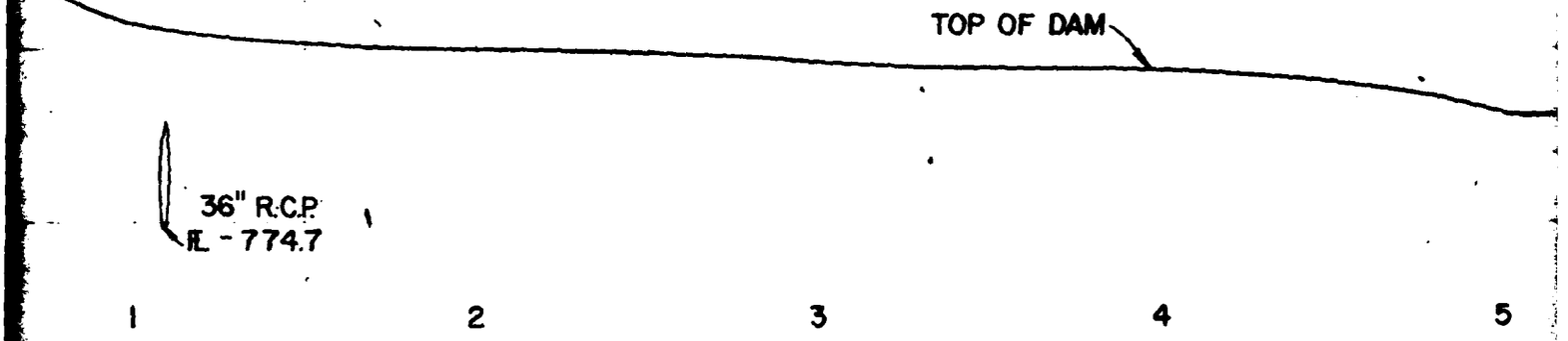
TOP OF DAM ELEVATIONS

Kenneth Balk & Assc., Inc. Jan. 1979

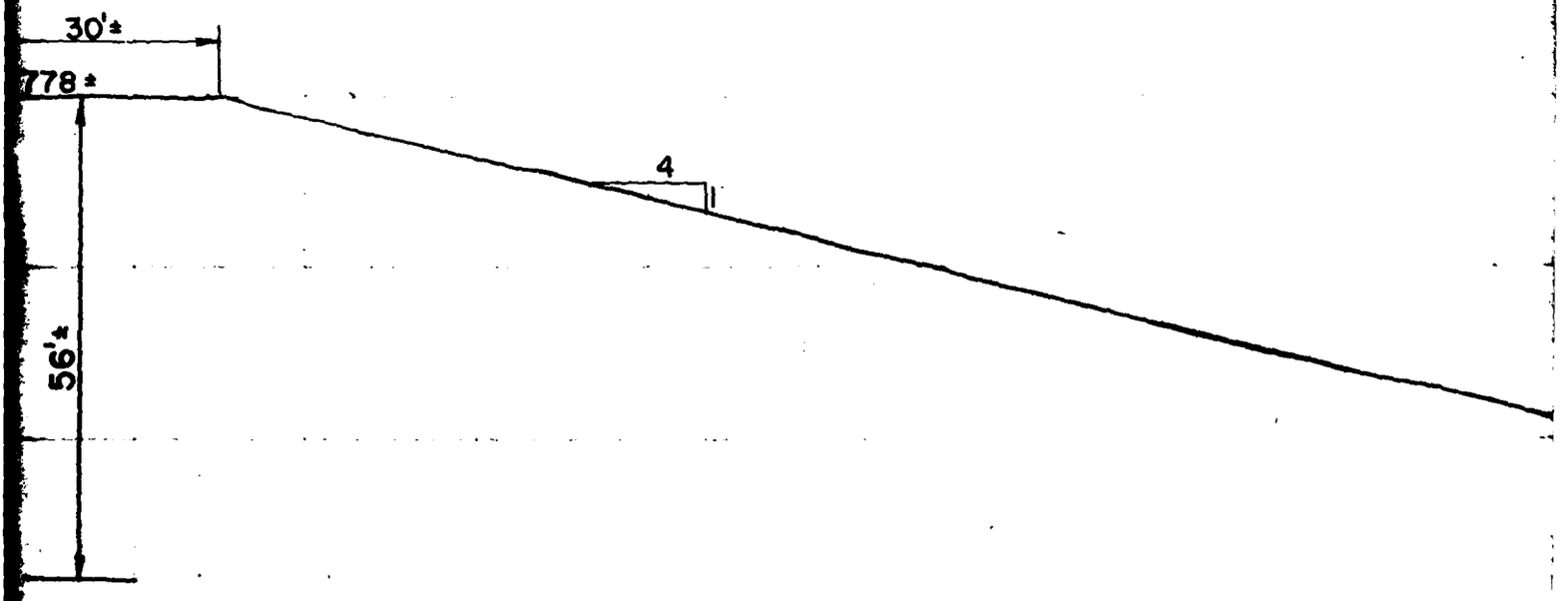
PLATE 3


790
785
780
775
770
36" R.C.P.
I.E. - 774.7
0
1
30'±
778 ±
1.2
1
Water Surface 770.7
56'±

2 1

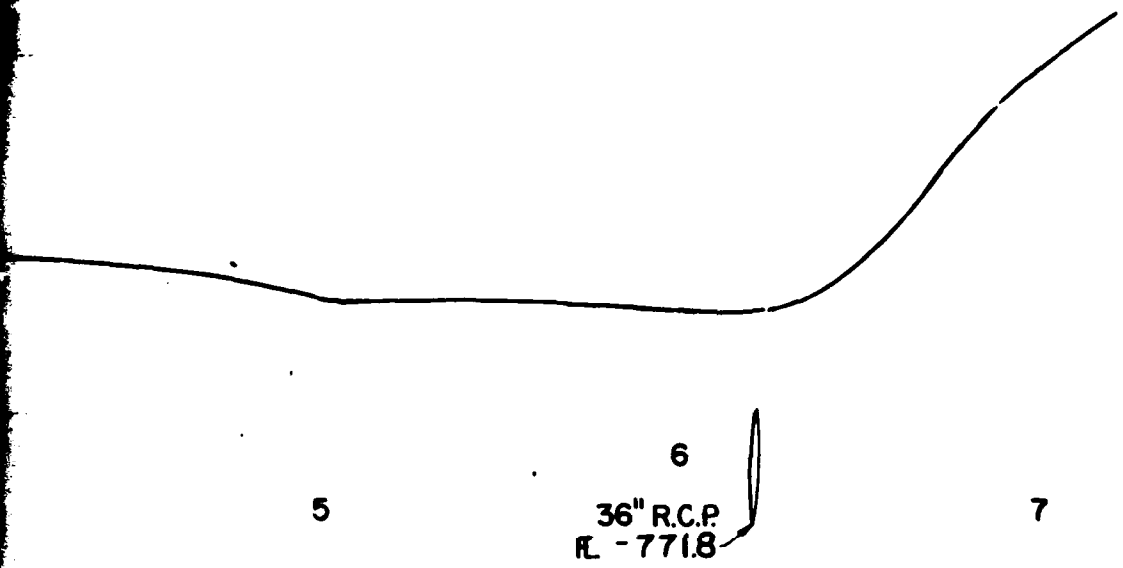


TOP OF DAM PROFILE
Scale: 1"=5' V., 1"=50' H.



TYPICAL CROSS SECTION
Scale: 1"= 20' Horiz. & Vert.

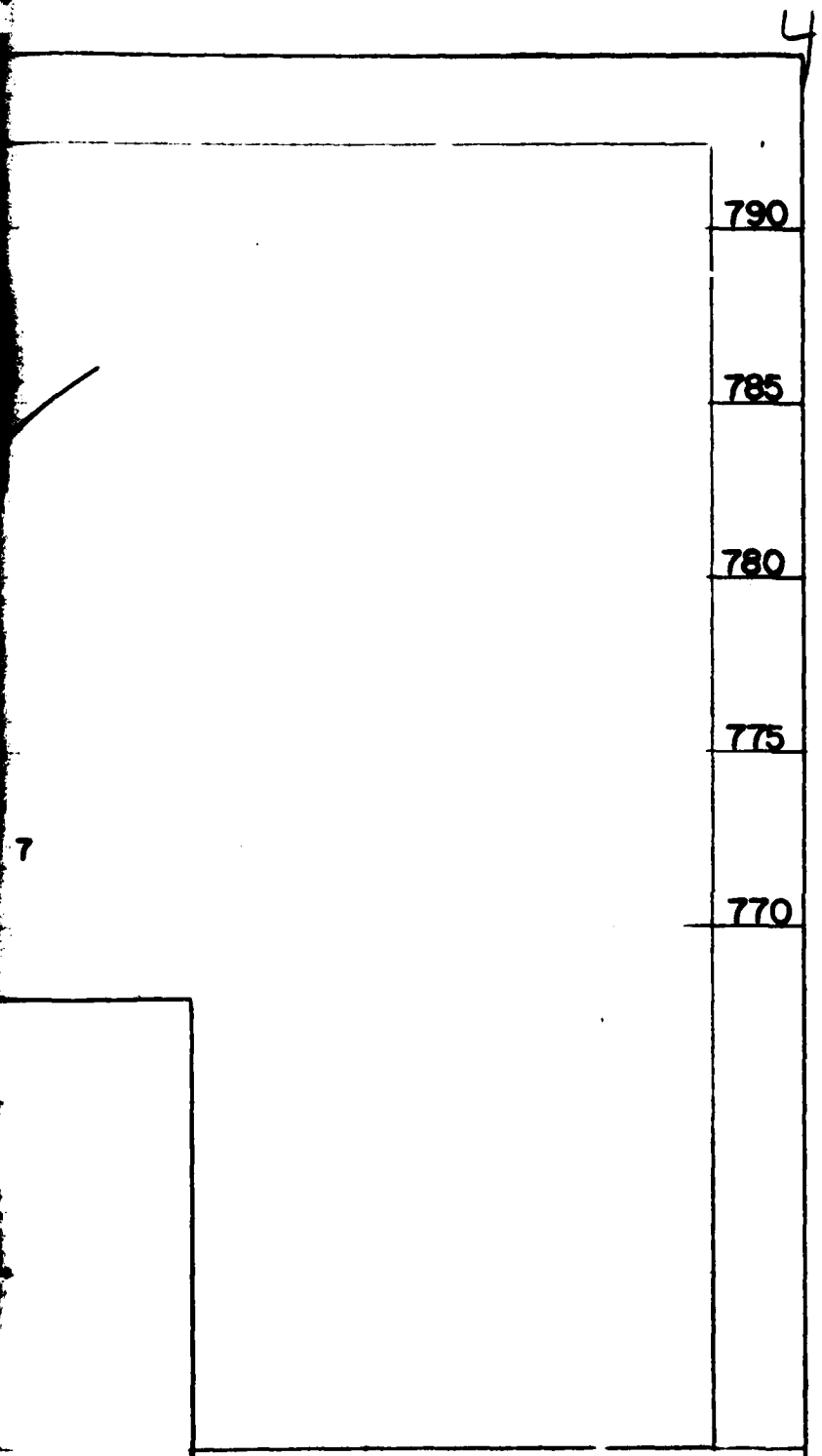
31



PARKER LA

DAM PROFILE
CROSS SECT

Kenneth Balk & Assc.



PARKER LAKE #2

DAM PROFILE and CROSS SECTION

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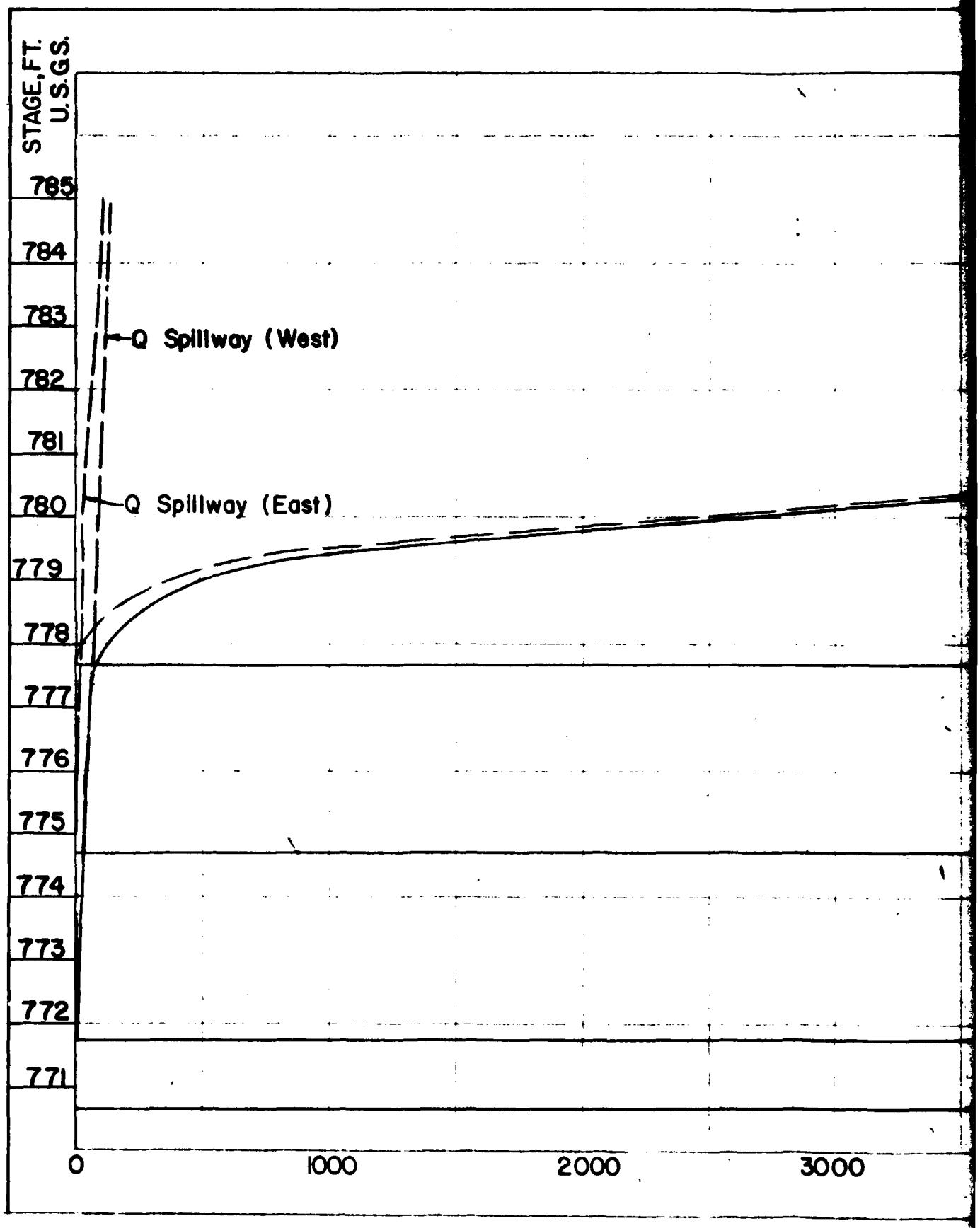
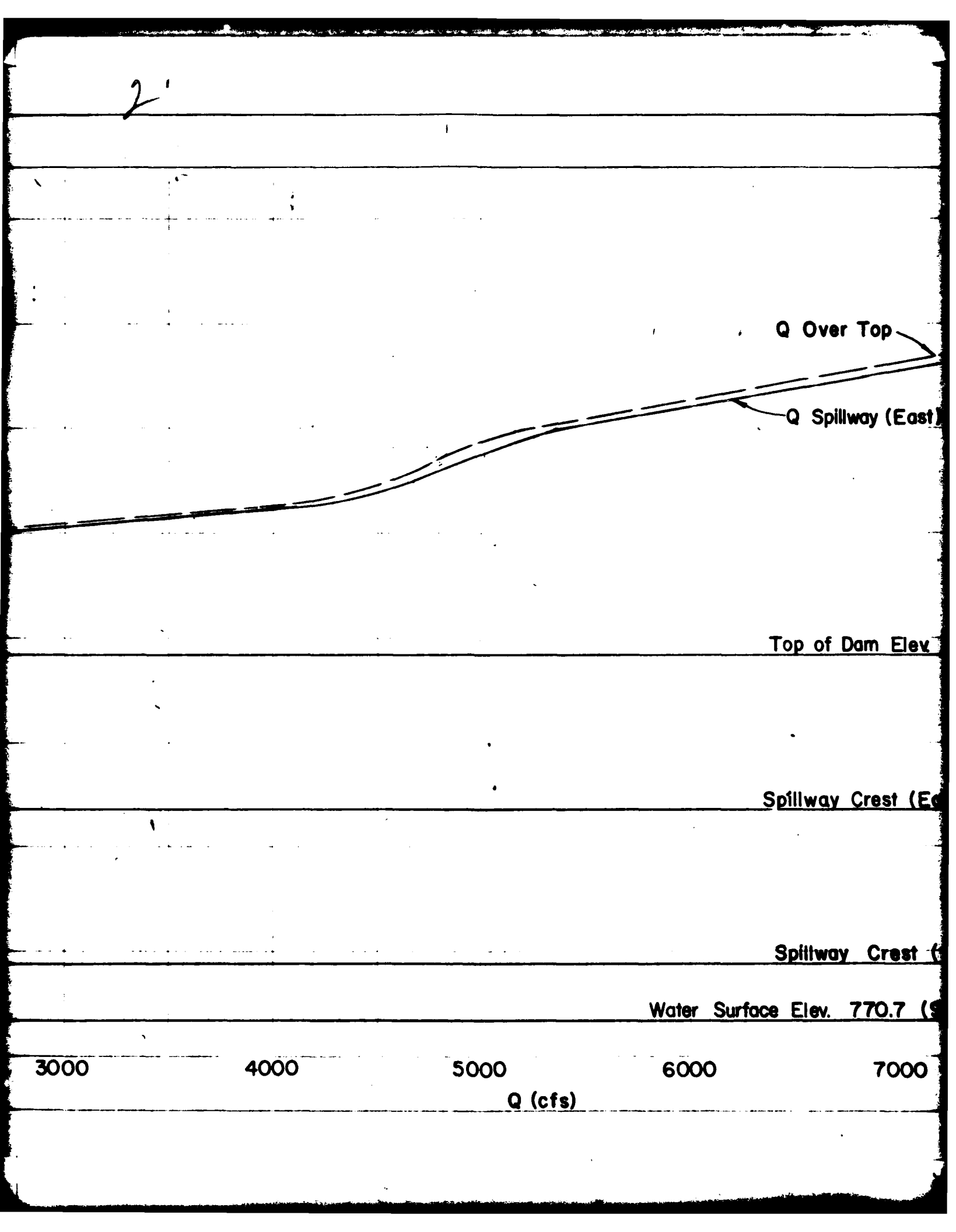
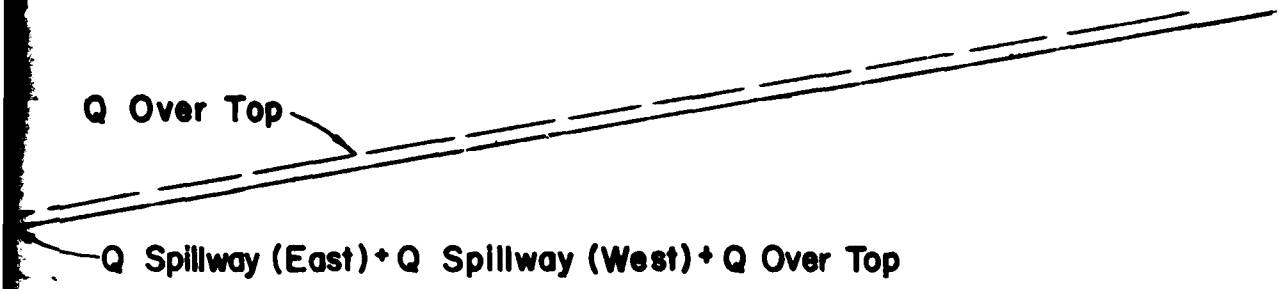
PLATE 4


STAGE, FT. U.S.G.S.
785
784
783
782
781
780
779
778
777
776
775
774
773
772
771
Q Spillway (West)
Q Spillway (East)
0
1000
2000
3000

2'


Q Over Top
Q Spillway (East)
Top of Dam Elev
Spillway Crest (E
Spillway Crest (
Water Surface Elev. 770.7 (
3000
4000
5000
6000
7000
Q (cfs)



Top of Dam Elev. 777.7

Spillway Crest (East Tube) 774.7

Spillway Crest (West Tube) 771.8

face Elev. 770.7 (9-7-78)

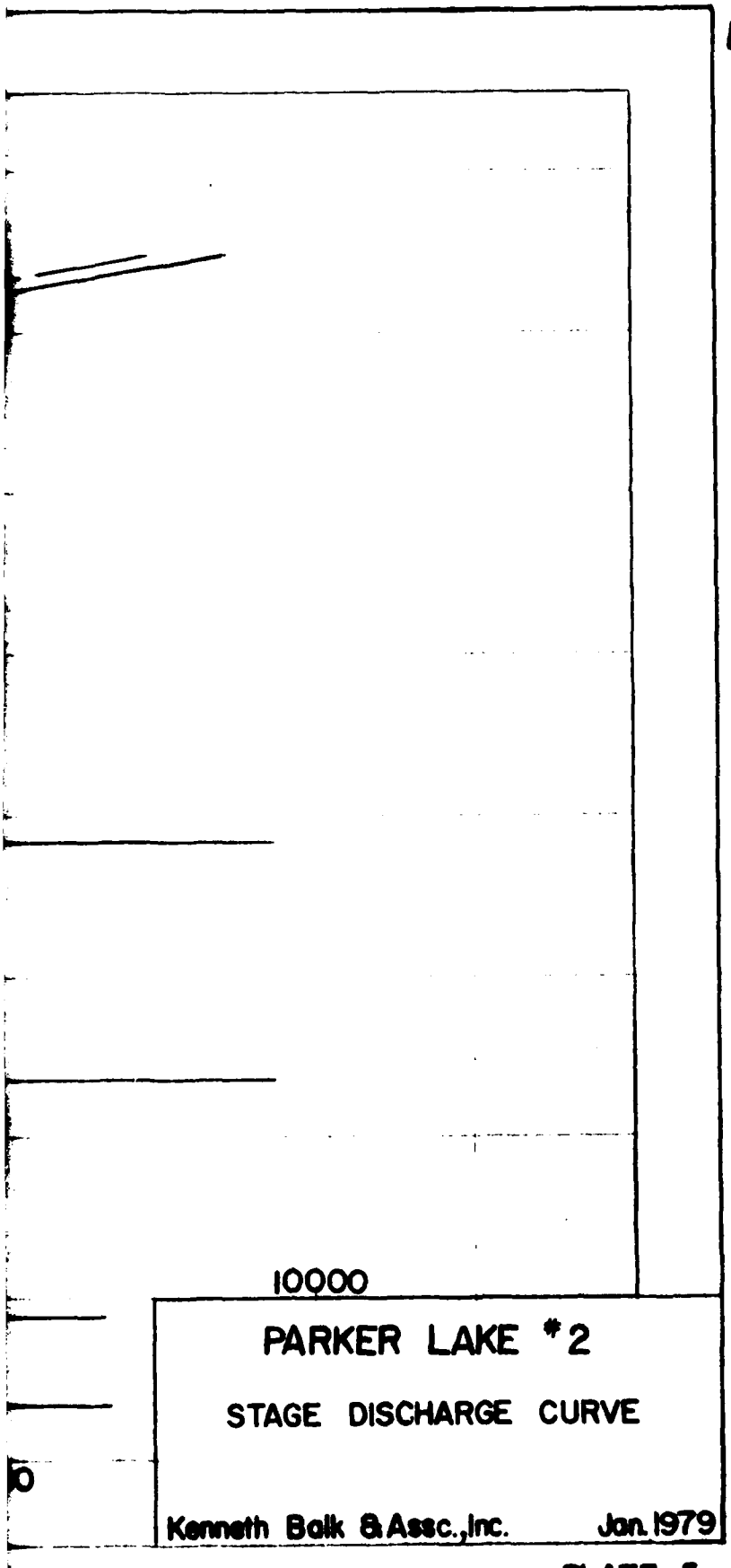
7000 8000 9000

10000

PARKER LAKE

STAGE DISCHARGE

Kenneth Balk & Assc., Inc.

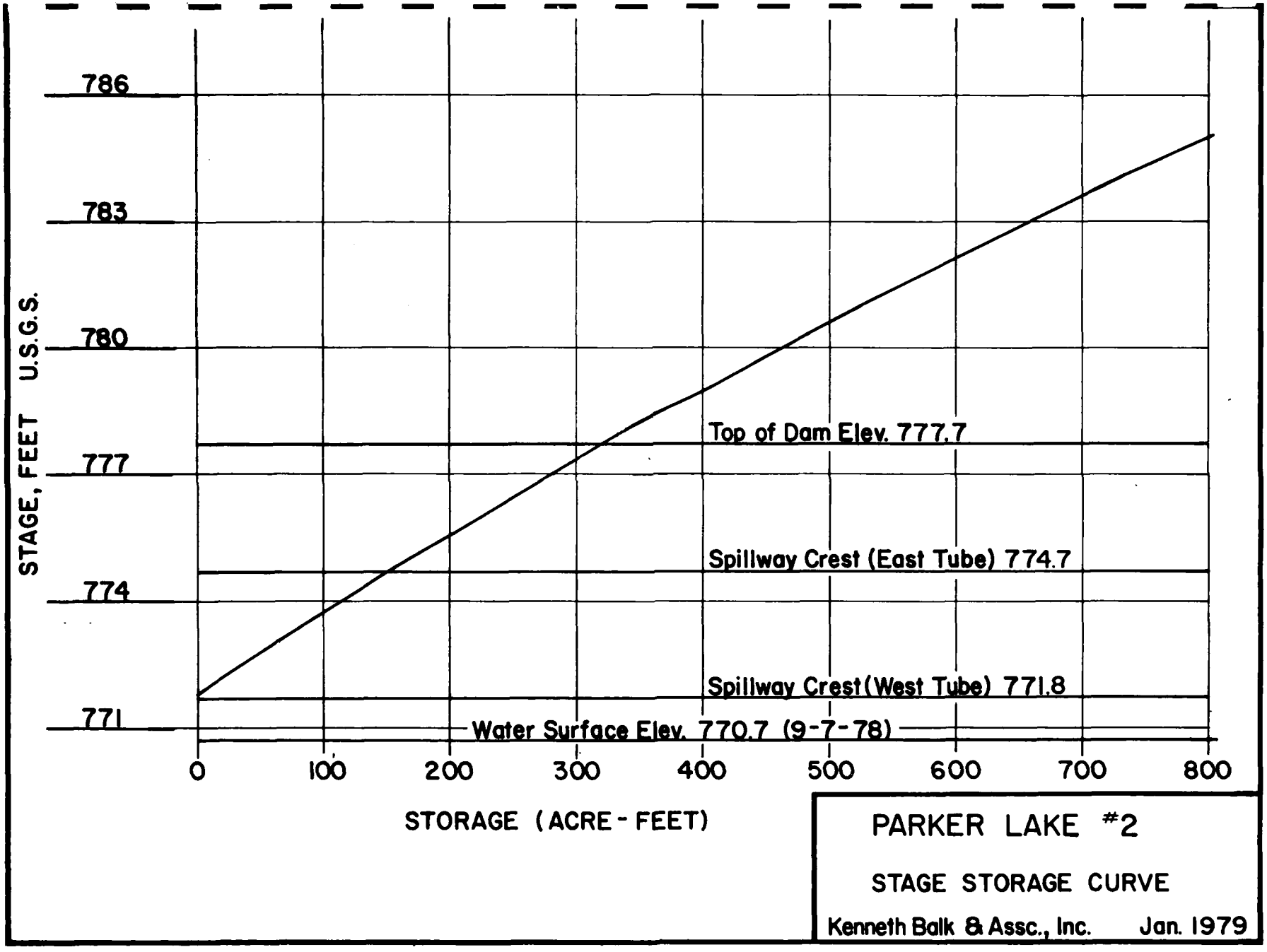


PARKER LAKE #2

STAGE DISCHARGE CURVE

Kenneth Balk & Assc., Inc. Jan. 1979

PLATE 5



PARKER LAKE #2

STAGE STORAGE CURVE

Kenneth Balk & Assc., Inc. Jan. 1979

PLATE 6

PHOTO 1 Overview of Lake and Dam

PHOTO 2 Crest of Dam

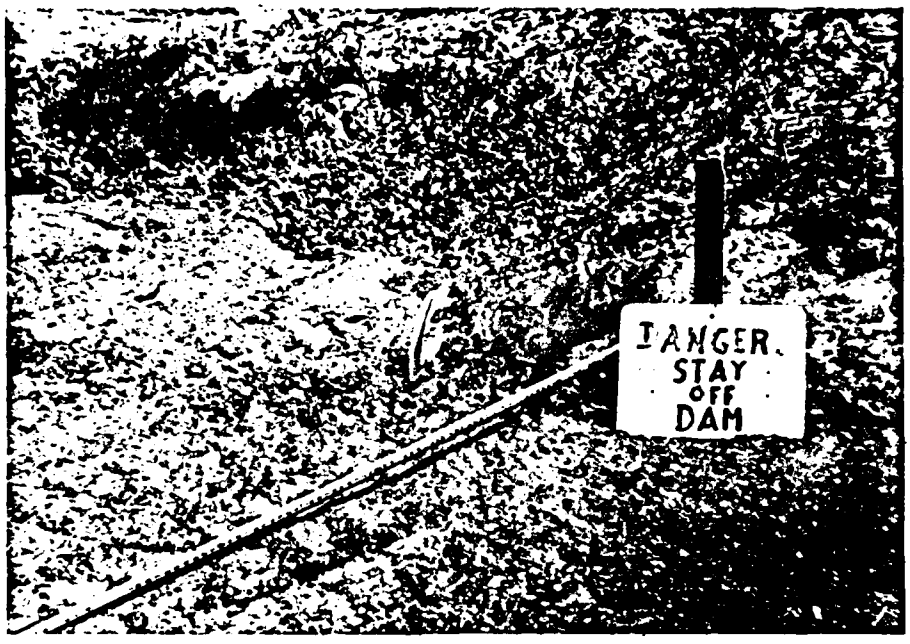


PHOTO 3 Eastern Spillway Exit and Sign.

PHOTO 4 — Eastern Spillway Entrance

PHOTO 5 Western Spillway Exit

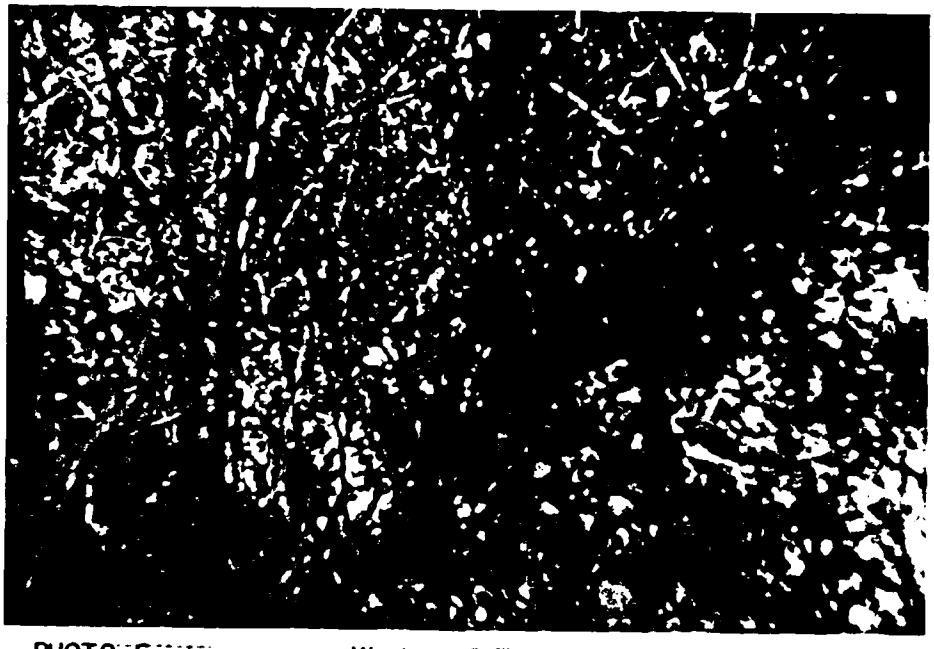


PHOTO 6 Western Spillway Entrance

PHOTO 7 Rock Outcrop on Right Abutment

PHOTO 8 Bulge in Downstream Slope of Embankment Near Left Abutment

APPENDIX A

HYDROLOGIC AND HYDRAULIC ANALYSIS METHODOLOGY

HYDROLOGIC AND HYDRAULIC ANALYSIS METHODOLOGY

1. The hydrologic analysis used in development of the overtopping potential is based on applying a hypothetical storm to a unit hydrograph to obtain the inflow hydrograph for a reservoir routing. The Probable Maximum Precipitation is derived and determined from regional charts prepared by the National Weather Service in "Hydrometeorological Report No. 33." Reduction factors have not been applied. A 24-hour storm duration is assumed with the total rainfall depth distributed over 6-hour periods in accordance with procedures outlined in EM 1110-2-1411 (SPF Determination). The maximum 6-hour rainfall period is then distributed to hourly increments by the same criteria. Within-the-hour distribution is based upon NOAA Technical Memorandum NWS HYDRO-35. The nonpeak 6-hour rainfall periods are distributed uniformly. All distributed values are arranged in a critical sequence by the SPF criteria. The final inflow hydrograph is produced by utilizing the Soil Conservation Service dimensionless unit hydrograph using Hydrologic Soils Groups "B" and "C", Antecedent Moisture Condition III, and SCS CN 84 used to determine rainfall excess.

Lag time was estimated using methods outlined in "Design of Small Dams", by the United States Department of The Interior, Bureau of Reclamation. Using this source, lag time is taken as 60% of the time of concentration.

Time of concentration was estimated utilizing methods outlined in the source quoted above, supplemented by data obtained during field investigation. The results of the field investigation indicated that a minimum time of 20 minutes should prevail over a lesser value obtained using the methods outlined in the quoted source. For this lake, a lag time of 0.20 hours was therefore selected.

2. The reservoir routing is accomplished by using Modified Puls routing techniques wherein the flood hydrograph is routed through lake storage. Hydraulic capacities of the outlet works, spillway, and crest of dam are used as outlet controls in the routing. Storage in the pool area is defined by an elevation-storage capacity curve. The hydraulic capacity of the outlet works, spillway, and top of dam are defined by elevation-discharge curves.

3. Dam overtopping analysis has been conducted by hydrologic methods for this dam and lake. This computation determines the percentage of the PMF hydrograph that the reservoir can contain without the dam being overtopped. An output summary in the hydrologic appendix displays this information as well as other characteristics of the simulated dam overtopping.

4. The above methodology has been accomplished for this report using the systemized computer program HEC-1 (Dam Safety Version), July 1978, prepared by the Hydrologic Engineering Center, U.S. Army Corps of Engineers, Davis, California. The numeric parameters estimated for this site are listed in the attached computer printout. Definitions of these variables are contained in the "User's Manual" for the computer program.

5. The inflow hydrograph was routed through the reservoir using HEC-1's Modified Puls option. Releases were calculated for: 1) the principal spillways, and, 2) the flow over the top of the dam. These releases were then combined at each of their respective elevations.

Flow through the 36 inch diameter R.C.P. spillways was estimated by considering them to be short tubes.

The Bernoulli equation was written between the lake water surface and the energy gradient elevation in the pipe at its outlet.

For a less than full condition, this equation is as follows:

$$\text{Stage} = \text{I.E.} + d_f + \frac{V^2}{2g} + h_e$$

Where:

Stage = Lake water surface elevation

I.E. = Pipe Invert Elevation At Entrance

d_f = Normal depth of flow for a given discharge rate

$\frac{V^2}{2g}$ = Velocity head

h_e = Entrance loss = $k_e \frac{V^2}{2g}$, with

$k_e = 0.5$

The equation thus reduces to:

$$\text{Stage} = \text{I.E.} + d_f + 1.5 \frac{V^2}{2g}$$

or, for the western pipe:

$$\text{Stage} = 771.76 + d_f + 1.5 \frac{V^2}{2g}$$

and, for the eastern pipe:

$$\text{Stage} = 774.67 + d_f + 1.5 \frac{V^2}{2g}$$

For the full and more than full flow condition:

$$\text{Stage} = \text{I.E.} + D + \frac{V^2}{2g} + h_f + h_e$$

Where:

I.E. = Pipe Invert Elevation At Exit

D = Pipe Diameter = 2.5

h_f = friction loss = $L \times \left(\frac{Q}{K_c}\right)^2$

L = Length

Q = Discharge Rate

K_c = conveyance coefficient = 666.6

$\frac{V^2}{2g}$ = velocity head

h_e = entrance loss = $k_e \frac{V^2}{2g}$, with

$k_e = 0.5$

with proper substitution of values, the equation reduces to:

Western Tube:

$$Q = \left[\frac{\text{Stage} - 774.61}{.00053}\right]^{\frac{1}{2}}$$

Eastern Tube:

$$Q = \left[\frac{\text{Stage} - 776.16}{.00061}\right]^{\frac{1}{2}}$$

Flow over the top of dam was calculated using the weir flow equation:

$$Q = CL(H)^{1.5}$$

where: C = Varies with head as outlined in "Handbook of Hydraulics" by Horace Williams King, revised by Ernest F. Brater.

L = Length in feet (varies with water surface)

H = Head of water in feet (varies with water surface)

Q = Discharge in cfs

```
FLOOD HYDROGRAPH PACKAGE (HEC-1)
DAM SAFETY VERSION      JULY 1978
  LAST MODIFICATION  3 AUG 78
**********************************
    1              A1                    PARKER LAKE NO 2 MULTI RESERVOIR ROUTING
    2              A2                              JAN. 1979
    3              A3                          MO. INV. NO. 30809
    4              R    288      -0       5       -0       -0       -0       -0       -0       -4       -0
    5              R1     5
    6              J      1        6        1
    7              J1   .10      .20      .30      .40      .50     1.00
    8              K      0 INFLOW                                          3        1
    9              K1      SUBARRA  RUNOFF FOR PARKER LAKE NO 1
   10              M      1        2      .45                               1                 1
   11              P                26      100      120      130
   12              T                                                                  -1       -84                .05
   13              W2              .20
   14              X    .90       -.1       3
   15              K      1 ROUTING                                 2        2        1
   16              K1      RESERVOIR ROUTING FOR PARKER LAKE NO 1
   17              Y                                        1        1
   18              Y1     1                                                  -808.0       -1
   19              Y4 808.0    808.5    809.0    809.5    810.0    810.5    811.0    811.5    812.0    812.5
   20              Y4 813.0    813.5    814.0
   21              Y5     0      6.1     15.8     29.1     48.6    125.4    206.2    415.6    726.7   1738.1
   22              Y52589.6   3366.0   4400.7
   23              $S     0      9.1     18.5     29.2     40.3     52.0     64.4     77.5     91.2    105.7
   24              $S 120.8    136.5    152.9
   25              $E 808.0    808.5    809.0    809.5    810.0    810.5    811.0    811.5    812.0    812.5
   26              $E 813.0    813.5    814.0
   27              $$ 808.0
   28              $D 811.0
   29              K      0 INFLOW                                          3        1
   30              K1      SUBARRA  RUNOFF  FOR PARKER  LAKE NO 2
   31              M      1        2      .47                               1                 1
   32              P                26      100      120      130
   33              T                                                                  -1       -84                .05
   34              W2              .20
   35              X    .94       -.1       3
   36              K      2                                 2        2        1
   37              K1          PARKER NO. 1 AND PARKER NO 2 HYDROGRAPHS COMBINED
   38              K      1 ROUTING                                 2        2        1
   39              K1      RESERVOIR ROUTING FOR PARKER LAKE NO 2
   40              Y                                        1        1
   41              Y1     1                                                  -771.8       -1
   42              Y4 771.8    772.0    773.0    774.0    775.0    776.0    777.0    778.0    779.0    780.0
   43              Y4 781.0    782.0    783.0    784.0    785.0
   44              Y5     0      0.3      5.5     19.2     33.9     51.8     73.5    127.4    481.5   2588.5
   45              Y54681.0   5355.1   6824.1   8293.4   9746.3
   46              $S     0     12.0     62.7    115.0    168.8    224.3    281.3    339.8    400.0    461.4
   47              $S 525.2    591.2    659.6    730.4    803.6
   48              $E 771.8    772.0    773.0    774.0    775.0    776.0    777.0    778.0    779.0    780.0
   49              $E 781.0    782.0    783.0    784.0    785.0
   50              $$ 771.8
```

PREVIEW OF SEQUENCE OF STREAM NETWORK CALCULATIONS

```
RUNOFF HYDROGRAPH AT       NFLOW
ROUTE HYDROGRAPH TO        OUTING
RUNOFF HYDROGRAPH AT       NFLOW
COMBINE  2 HYDROGRAPHS AT
ROUTE HYDROGRAPH TO        OUTING
END OF NETWORK
```

```
**********
FLOOD HYDROGRAPH PACKAGE (HEC-1)
DAM SAFETY VERSION      JULY 1978
  LAST MODIFICATION  3 AUG 79
**********

RUN  DATE= 01/04/79.
     TIME= 09.57.17.
```

PARKER LAKE NO 2 MULTI RESERVOIR ROUTING
JAN. 1979
MO. INV. NO. 30809

JOB SPECIFICATION

NQ	NHR	NMIN	IDAY	IHR	IMIN	METRC	IPLT	IPRT	NSTAN
288	-0	5	-0	-0	-0	-0	-0	-4	-0

JOPER	NWT	LROPT	TRACE
5	-0	-0	-0

MULTI-PLAN ANALYSES TO BE PERFORMED
NPLAN= 1 NRTIO= 6 LRTIO= 1

RTIOS= .10 .20 .30 .40 .50 1.00

********** ********** ********** ********** **********

SUB-AREA RUNOFF COMPUTATION

SUBAREA RUNOFF FOR PARKER LAKE NO 1

ISTAQ	ICOMP	IECON	ITAPE	JPLT	JPRT	INAME	ISTAGE	IAUTO
NFLOW	0	-0	-0	-0	3	1	-0	-0

HYDROGRAPH DATA

IHYDG	IUHG	TAREA	SNAP	TRSDA	TRSPC	RATIO	ISNOW	ISAME	LOCAL
1	2	.45	-0.00	.45	1.00	-0.000	-0	1	-0

PRECIP DATA

SPFE	PMS	R6	R12	R24	R48	R72	R96
-0.00	26.00	100.00	120.00	130.00	-0.00	-0.00	-0.00

LOSS DATA

LROPT	STRKR	DLTKR	RTIOL	ERAIN	STRKS	RTIOK	STRTL	CNSTL	ALSMX	RTIMP
-0	-0.00	-0.00	1.00	-0.00	-0.00	1.00	-1.00	-84.00	-0.00	.05

CURVE NO = -84.00 WETNESS = -1.00 EFFECT CN = 84.00

UNIT HYDROGRAPH DATA
TC= -0.00 LAG= .20

RECESSION DATA
STRTQ= .90 QRCSN= -.10 RTIOR= 3.00

UNIT HYDROGRAPH 14 END OF PERIOD ORDINATES, TC= -0.00 HOURS, LAG= .20 VOL= 1.00

219.	723.	897.	717.	399.	229.	130.	75.	43.	24.
14.	8.	5.	2.					

END-OF-PERIOD FLOW

MO.DA	HR.MN	PERIOD	RAIN	EXCS	LOSS	COMP Q	MO.DA	HR.MN	PERIOD	RAIN	EXCS	LOSS	COMP Q
1.01	.05	1	.01	.00	.01	1.	1.01	12.05	145	.22	.20	.01	266.
1.01	.10	2	.01	.00	.01	1.	1.01	12.10	146	.22	.21	.01	366.
1.01	.15	3	.01	.00	.01	2.	1.01	12.15	147	.22	.21	.01	489.
1.01	.20	4	.01	.00	.01	2.	1.01	12.20	148	.22	.21	.01	588.
1.01	.25	5	.01	.00	.01	3.	1.01	12.25	149	.22	.21	.01	644.
1.01	.30	6	.01	.00	.01	3.	1.01	12.30	150	.22	.21	.01	677.
1.01	.35	7	.01	.00	.01	3.	1.01	12.35	151	.22	.21	.01	696.
1.01	.40	8	.01	.00	.01	3.	1.01	12.40	152	.22	.21	.01	708.
1.01	.45	9	.01	.00	.01	3.	1.01	12.45	153	.22	.21	.01	715.
1.01	.50	10	.01	.00	.01	3.	1.01	12.50	154	.22	.21	.01	720.
1.01	.55	11	.01	.00	.01	3.	1.01	12.55	155	.22	.21	.01	723.
1.01	1.00	12	.01	.00	.01	3.	1.01	13.00	156	.22	.21	.01	726.
1.01	1.05	13	.01	.00	.01	3.	1.01	13.05	157	.26	.25	.01	737.
1.01	1.10	14	.01	.00	.01	3.	1.01	13.10	158	.26	.25	.01	769.
1.01	1.15	15	.01	.00	.01	3.	1.01	13.15	159	.26	.25	.01	807.
1.01	1.20	16	.01	.00	.01	3.	1.01	13.20	160	.26	.25	.01	839.
1.01	1.25	17	.01	.00	.01	3.	1.01	13.25	161	.26	.25	.01	857.
1.01	1.30	18	.01	.00	.01	3.	1.01	13.30	162	.26	.25	.01	867.
1.01	1.35	19	.01	.00	.01	3.	1.01	13.35	163	.26	.25	.01	874.
1.01	1.40	20	.01	.00	.01	3.	1.01	13.40	164	.26	.25	.01	878.
1.01	1.45	21	.01	.00	.01	3.	1.01	13.45	165	.26	.25	.01	881.
1.01	1.50	22	.01	.00	.01	3.	1.01	13.50	166	.26	.25	.01	883.
1.01	1.55	23	.01	.00	.01	3.	1.01	13.55	167	.26	.25	.01	884.
1.01	2.00	24	.01	.00	.01	3.	1.01	14.00	168	.26	.25	.01	886.
1.01	2.05	25	.01	.00	.01	3.	1.01	14.05	169	.32	.32	.01	901.
1.01	2.10	26	.01	.00	.01	3.	1.01	14.10	170	.32	.32	.01	948.
1.01	2.15	27	.01	.00	.01	3.	1.01	14.15	171	.32	.32	.01	1006.
1.01	2.20	28	.01	.00	.01	3.	1.01	14.20	172	.32	.32	.01	1052.
1.01	2.25	29	.01	.00	.01	3.	1.01	14.25	173	.32	.32	.01	1078.
1.01	2.30	30	.01	.00	.01	3.	1.01	14.30	174	.32	.32	.00	1094.
1.01	2.35	31	.01	.00	.01	4.	1.01	14.35	175	.32	.32	.00	1103.
1.01	2.40	32	.01	.00	.01	4.	1.01	14.40	176	.32	.32	.00	1109.
1.01	2.45	33	.01	.00	.01	5.	1.01	14.45	177	.32	.32	.00	1112.
1.01	2.50	34	.01	.00	.01	6.	1.01	14.50	178	.32	.32	.00	1114.
1.01	2.55	35	.01	.00	.01	6.	1.01	14.55	179	.32	.32	.00	1116.
1.01	3.00	36	.01	.00	.01	7.	1.01	15.00	180	.32	.32	.00	1117.
1.01	3.05	37	.01	.00	.01	7.	1.01	15.05	181	.20	.20	.00	1090.
1.01	3.10	38	.01	.00	.01	8.	1.01	15.10	182	.40	.39	.00	1043.
1.01	3.15	39	.01	.00	.01	9.	1.01	15.15	183	.40	.39	.00	1071.
1.01	3.20	40	.01	.00	.01	9.	1.01	15.20	184	.59	.59	.01	1200.
1.01	3.25	41	.01	.00	.01	10.	1.01	15.25	185	.69	.69	.01	1453.
1.01	3.30	42	.01	.00	.01	10.	1.01	15.30	186	1.68	1.67	.01	1964.
1.01	3.35	43	.01	.00	.01	11.	1.01	15.35	187	2.77	2.75	.02	3167.
1.01	3.40	44	.01	.00	.01	11.	1.01	15.40	188	1.09	1.08	.01	4627.
1.01	3.45	45	.01	.00	.01	12.	1.01	15.45	189	.69	.69	.00	5102.
1.01	3.50	46	.01	.00	.01	12.	1.01	15.50	190	.59	.59	.00	4522.
1.01	3.55	47	.01	.00	.01	13.	1.01	15.55	191	.40	.39	.00	3547.
1.01	4.00	48	.01	.00	.01	13.	1.01	16.00	192	.40	.39	.00	2764.
1.01	4.05	49	.01	.00	.01	14.	1.01	16.05	193	.30	.30	.00	2183.
1.01	4.10	50	.01	.00	.01	14.	1.01	16.10	194	.30	.30	.00	1759.
1.01	4.15	51	.01	.00	.01	15.	1.01	16.15	195	.30	.30	.00	1473.
1.01	4.20	52	.01	.00	.01	15.	1.01	16.20	196	.30	.30	.00	1291.
1.01	4.25	53	.01	.00	.01	16.	1.01	16.25	197	.30	.30	.00	1189.
1.01	4.30	54	.01	.01	.01	16.	1.01	16.30	198	.30	.30	.00	1130.
1.01	4.35	55	.01	.01	.01	17.	1.01	16.35	199	.30	.30	.00	1095.

1.01	4.40	56	.01	.01	.01	17.	1.01	16.40	200	.30	.30	.00	1073.
1.01	4.45	57	.01	.01	.01	18.	1.01	16.45	201	.30	.30	.00	1061.
1.01	4.50	58	.01	.01	.01	18.	1.01	16.50	202	.30	.30	.00	1056.
1.01	4.55	59	.01	.01	.01	18.	1.01	16.55	203	.30	.30	.00	1054.
1.01	5.00	60	.01	.01	.01	19.	1.01	17.00	204	.30	.30	.00	1053.
1.01	5.05	61	.01	.01	.01	19.	1.01	17.05	205	.24	.24	.00	1038.
1.01	5.10	62	.01	.01	.01	19.	1.01	17.10	206	.24	.24	.00	992.
1.01	5.15	63	.01	.01	.01	20.	1.01	17.15	207	.24	.24	.00	934.
1.01	5.20	64	.01	.01	.01	20.	1.01	17.20	208	.24	.24	.00	887.
1.01	5.25	65	.01	.01	.01	21.	1.01	17.25	209	.24	.24	.00	861.
1.01	5.30	66	.01	.01	.01	21.	1.01	17.30	210	.24	.24	.00	847.
1.01	5.35	67	.01	.01	.01	21.	1.01	17.35	211	.24	.24	.00	838.
1.01	5.40	68	.01	.01	.01	22.	1.01	17.40	212	.24	.24	.00	833.
1.01	5.45	69	.01	.01	.01	22.	1.01	17.45	213	.24	.24	.00	831.
1.01	5.50	70	.01	.01	.01	22.	1.01	17.50	214	.24	.24	.00	829.
1.01	5.55	71	.01	.01	.01	23.	1.01	17.55	215	.24	.24	.00	828.
1.01	6.00	72	.01	.01	.01	23.	1.01	18.00	216	.24	.24	.00	828.
1.01	6.05	73	.07	.04	.04	29.	1.01	18.05	217	.02	.02	.00	780.
1.01	6.10	74	.07	.04	.03	51.	1.01	18.10	218	.02	.02	.00	624.
1.01	6.15	75	.07	.04	.03	78.	1.01	18.15	219	.02	.02	.00	488.
1.01	6.20	76	.07	.04	.03	102.	1.01	18.20	220	.02	.02	.00	438.
1.01	6.25	77	.07	.04	.03	118.	1.01	18.25	221	.02	.02	.00	392.
1.01	6.30	78	.07	.04	.03	130.	1.01	18.30	222	.02	.02	.00	351.
1.01	6.35	79	.07	.05	.03	139.	1.01	18.35	223	.02	.02	.00	315.
1.01	6.40	80	.07	.05	.03	146.	1.01	18.40	224	.02	.02	.00	282.
1.01	6.45	81	.07	.05	.02	152.	1.01	18.45	225	.02	.02	.00	253.
1.01	6.50	82	.07	.05	.02	157.	1.01	18.50	226	.02	.02	.00	226.
1.01	6.55	83	.07	.05	.02	162.	1.01	18.55	227	.02	.02	.00	203.
1.01	7.00	84	.07	.05	.02	166.	1.01	19.00	228	.02	.02	.00	182.
1.01	7.05	85	.07	.05	.02	170.	1.01	19.05	229	.02	.02	.00	163.
1.01	7.10	86	.07	.05	.02	173.	1.01	19.10	230	.02	.02	.00	146.
1.01	7.15	87	.07	.05	.02	177.	1.01	19.15	231	.02	.02	.00	131.
1.01	7.20	88	.07	.05	.02	180.	1.01	19.20	232	.02	.02	.00	117.
1.01	7.25	89	.07	.05	.02	183.	1.01	19.25	233	.02	.02	.00	105.
1.01	7.30	90	.07	.06	.02	185.	1.01	19.30	234	.02	.02	.00	94.
1.01	7.35	91	.07	.06	.02	188.	1.01	19.35	235	.02	.02	.00	84.
1.01	7.40	92	.07	.06	.02	190.	1.01	19.40	236	.02	.02	.00	75.
1.01	7.45	93	.07	.06	.02	193.	1.01	19.45	237	.02	.02	.00	75.
1.01	7.50	94	.07	.06	.01	195.	1.01	19.50	238	.02	.02	.00	75.
1.01	7.55	95	.07	.06	.01	197.	1.01	19.55	239	.02	.02	.00	75.
1.01	8.00	96	.07	.06	.01	199.	1.01	20.00	240	.02	.02	.00	75.
1.01	8.05	97	.07	.06	.01	201.	1.01	20.05	241	.02	.02	.00	75.
1.01	8.10	98	.07	.06	.01	202.	1.01	20.10	242	.02	.02	.00	75.
1.01	8.15	99	.07	.06	.01	204.	1.01	20.15	243	.02	.02	.00	75.
1.01	8.20	100	.07	.06	.01	206.	1.01	20.20	244	.02	.02	.00	75.
1.01	8.25	101	.07	.06	.01	207.	1.01	20.25	245	.02	.02	.00	75.
1.01	8.30	102	.07	.06	.01	209.	1.01	20.30	246	.02	.02	.00	75.
1.01	8.35	103	.07	.06	.01	210.	1.01	20.35	247	.02	.02	.00	75.
1.01	8.40	104	.07	.06	.01	211.	1.01	20.40	248	.02	.02	.00	75.
1.01	8.45	105	.07	.06	.01	212.	1.01	20.45	249	.02	.02	.00	75.
1.01	8.50	106	.07	.06	.01	214.	1.01	20.50	250	.02	.02	.00	75.
1.01	8.55	107	.07	.06	.01	215.	1.01	20.55	251	.02	.02	.00	75.
1.01	9.00	108	.07	.06	.01	216.	1.01	21.00	252	.02	.02	.00	75.
1.01	9.05	109	.07	.06	.01	217.	1.01	21.05	253	.02	.02	.00	75.
1.01	9.10	110	.07	.06	.01	218.	1.01	21.10	254	.02	.02	.00	75.
1.01	9.15	111	.07	.06	.01	219.	1.01	21.15	255	.02	.02	.00	75.
1.01	9.20	112	.07	.06	.01	220.	1.01	21.20	256	.02	.02	.00	75.
1.01	9.25	113	.07	.06	.01	221.	1.01	21.25	257	.02	.02	.00	75.
1.01	9.30	114	.07	.06	.01	221.	1.01	21.30	258	.02	.02	.00	75.

1.01	9.35	115	.07	.06	.01	222.	1.01	21.35	259	.02	.02	.00	75.
1.01	9.40	116	.07	.06	.01	223.	1.01	21.40	260	.02	.02	.00	75.
1.01	9.45	117	.07	.06	.01	224.	1.01	21.45	261	.02	.02	.00	75.
1.01	9.50	118	.07	.06	.01	224.	1.01	21.50	262	.02	.02	.00	75.
1.01	9.55	119	.07	.07	.01	225.	1.01	21.55	263	.02	.02	.00	75.
1.01	10.00	120	.07	.07	.01	226.	1.01	22.00	264	.02	.02	.00	75.
1.01	10.05	121	.07	.07	.01	226.	1.01	22.05	265	.02	.02	.00	75.
1.01	10.10	122	.07	.07	.01	227.	1.01	22.10	266	.02	.02	.00	75.
1.01	10.15	123	.07	.07	.01	228.	1.01	22.15	267	.02	.02	.00	75.
1.01	10.20	124	.07	.07	.01	228.	1.01	22.20	268	.02	.02	.00	75.
1.01	10.25	125	.07	.07	.01	229.	1.01	22.25	269	.02	.02	.00	75.
1.01	10.30	126	.07	.07	.01	229.	1.01	22.30	270	.02	.02	.00	75.
1.01	10.35	127	.07	.07	.01	230.	1.01	22.35	271	.02	.02	.00	75.
1.01	10.40	128	.07	.07	.01	230.	1.01	22.40	272	.02	.02	.00	75.
1.01	10.45	129	.07	.07	.01	231.	1.01	22.45	273	.02	.02	.00	75.
1.01	10.50	130	.07	.07	.01	231.	1.01	22.50	274	.02	.02	.00	75.
1.01	10.55	131	.07	.07	.01	232.	1.01	22.55	275	.02	.02	.00	75.
1.01	11.00	132	.07	.07	.01	232.	1.01	23.00	276	.02	.02	.00	75.
1.01	11.05	133	.07	.07	.01	232.	1.01	23.05	277	.02	.02	.00	75.
1.01	11.10	134	.07	.07	.01	233.	1.01	23.10	278	.02	.02	.00	75.
1.01	11.15	135	.07	.07	.00	233.	1.01	23.15	279	.02	.02	.00	75.
1.01	11.20	136	.07	.07	.00	234.	1.01	23.20	280	.02	.02	.00	75.
1.01	11.25	137	.07	.07	.00	234.	1.01	23.25	281	.02	.02	.00	75.
1.01	11.30	138	.07	.07	.00	234.	1.01	23.30	282	.02	.02	.00	75.
1.01	11.35	139	.07	.07	.00	235.	1.01	23.35	283	.02	.02	.00	75.
1.01	11.40	140	.07	.07	.00	235.	1.01	23.40	284	.02	.02	.00	75.
1.01	11.45	141	.07	.07	.00	235.	1.01	23.45	285	.02	.02	.00	75.
1.01	11.50	142	.07	.07	.00	236.	1.01	23.50	286	.02	.02	.00	75.
1.01	11.55	143	.07	.07	.00	236.	1.01	23.55	287	.02	.02	.00	75.
1.01	12.00	144	.07	.07	.00	236.	1.02	0.00	288	.02	.02	.00	75.
									SUM	33.80	31.73	2.07	112176.
										(859.)	(806.)	(53.)	(3176.47)

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	5102.	1229.	389.	389.	112140.
CMS	144.	35.	11.	11.	3175.
INCHES		25.41	32.20	32.20	32.20
MM		645.50	817.79	817.79	817.79
AC-FT		610.	772.	772.	772.
THOUS CU M		752.	953.	953.	953.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 1

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	510.	123.	39.	39.	11214.
CMS	14.	3.	1.	1.	318.
INCHES		2.54	3.22	3.22	3.22
MM		64.55	81.78	81.78	81.78
AC-FT		61.	77.	77.	77.
THOUS CU M		75.	95.	95.	95.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 2

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1020.	246.	78.	78.	22428.
CMS	29.	7.	2.	2.	635.
INCHES		5.08	6.44	6.44	6.44
MM		129.10	163.56	163.56	163.56
AC-FT		122.	154.	154.	154.
THOUS CU M		150.	191.	191.	191.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 3

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1531.	369.	117.	117.	33642.
CMS	43.	10.	3.	3.	953.
INCHES		7.62	9.66	9.66	9.66
MM		193.65	245.34	245.34	245.34
AC-FT		183.	232.	232.	232.
THOUS CU M		226.	286.	286.	286.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 4

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	2041.	492.	156.	156.	44856.
CMS	58.	14.	4.	4.	1270.
INCHES		10.17	12.88	12.88	12.88
MM		258.20	327.12	327.12	327.12
AC-FT		244.	309.	309.	309.
THOUS CU M		301.	381.	381.	381.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 5

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	2551.	615.	195.	195.	56070.
CMS	72.	17.	6.	6.	1588.
INCHES		12.71	16.10	16.10	16.10
MM		322.75	408.90	408.90	408.90
AC-FT		305.	386.	386.	386.
THOUS CU M		376.	476.	476.	476.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 6

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	5102.	1229.	389.	389.	112140.
CMS	144.	35.	11.	11.	3175.
INCHES		25.41	32.20	32.20	32.20
MM		645.50	817.79	817.79	817.79
AC-FT		610.	772.	772.	772.
THOUS CU M		752.	953.	953.	953.

HYDROGRAPH ROUTING

RESERVOIR ROUTING FOR PARKER LAKE NO 1

ISTAO	ICOMP	IECON	ITAPE	JPLT	JPRT	INAME	ISTAGE	IAUTO
OUTING	1	-0	-0	2	2	1	-0	-0

ROUTING DATA

QLOSS	CLOSS	AVG	IPES	ISAME	IOPT	IPMP	LSTR
-0.0	-0.000	-0.00	1	1	-0	-0	-0

NSTPS	NSTDL	LAG	AMSKK	X	TSK	STORA	ISPRAT
1	-0	-0	-0.000	-0.000	-0.000	-808.	-1

STAGE	808.0	808.5	809.0	809.5	810.0	810.5	811.0	811.5	812.0	812.5
	813.0	813.5	814.0							
FLOW	0.	6.	16.	29.	49.	125.	206.	416.	727.	1738.
	2590.	3366.	4401.							
CAPACITY=	0.	9.	19.	29.	40.	52.	64.	78.	91.	106.
	121.	136.	153.							
ELEVATION=	808.	808.	809.	809.	810.	810.	811.	811.	812.	813.
	813.	813.	814.							

CREL	SPWID	COOW	EXPW	ELEVL	COOL	CAREA	EXPL
808.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0

DAM DATA

TOPEL	COOD	EXPD	DAMWID
810.0	-0.0	-0.0	-0.

UNITED COMPUTING SYSTEMS, INC.

STATION OUTING, PLAN 1, RATIO 1

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	2.	2.	2.	2.	2.	2.	2.	2.
2.	2.	2.	3.	3.	3.	3.	3.	3.	3.
3.	3.	3.	3.	3.	4.	4.	4.	4.	4.
4.	4.	4.	4.	4.	4.	4.	5.	5.	5.
5.	5.	5.	5.	5.	5.	5.	5.	5.	6.
6.	6.	6.	6.	6.	6.	6.	7.	7.	7.
8.	8.	9.	9.	10.	10.	10.	11.	11.	12.
12.	13.	13.	14.	14.	15.	15.	16.	17.	17.
18.	19.	19.	20.	21.	22.	23.	23.	24.	25.
26.	26.	27.	28.	29.	30.	33.	37.	43.	48.
62.	73.	80.	86.	89.	91.	93.	94.	94.	95.

96.	96.	96.	97.	97.	97.	97.	97.	97.	96.
96.	95.	95.	94.	94.	93.	92.	92.	90.	88.
86.	84.	82.	79.	77.	75.	72.	70.	68.	65.
63.	61.	59.	56.	54.	52.	50.	49.	48.	48.
47.	47.	46.	46.	45.	45.	44.	44.	43.	43.
43.	42.	42.	41.	41.	41.	40.	40.	39.	39.
39.	38.	38.	38.	37.	37.	36.	36.	36.	35.
35.	35.	34.	34.	34.	33.	33.	33.	33.	32.
32.	32.	31.	31.	31.	31.	30.	30.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	2.	2.	2.	2.	2.
2.	2.	2.	2.	3.	3.	3.	3.	3.	3.
3.	3.	4.	4.	4.	4.	4.	4.	4.	5.
5.	5.	5.	5.	5.	5.	5.	6.	6.	6.
6.	6.	6.	6.	6.	7.	7.	7.	7.	7.
7.	7.	7.	8.	8.	8.	8.	8.	8.	8.
8.	9.	9.	9.	9.	9.	9.	10.	10.	10.
11.	11.	12.	12.	13.	13.	13.	14.	14.	15.
15.	16.	16.	17.	17.	18.	18.	19.	19.	20.
20.	21.	22.	22.	23.	23.	24.	25.	25.	26.
26.	27.	28.	28.	29.	30.	31.	34.	37.	40.
42.	44.	45.	46.	46.	47.	47.	47.	47.	47.
47.	48.	48.	48.	48.	48.	48.	48.	48.	48.
47.	47.	47.	47.	47.	47.	47.	47.	47.	46.
46.	46.	45.	45.	45.	44.	44.	44.	43.	43.
43.	42.	42.	42.	41.	41.	41.	40.	40.	40.
39.	39.	39.	39.	38.	38.	38.	38.	37.	37.
37.	37.	36.	36.	36.	36.	36.	35.	35.	35.
35.	34.	34.	34.	34.	34.	33.	33.	33.	33.
33.	32.	32.	32.	32.	32.	32.	31.	31.	31.
31.	31.	31.	30.	30.	30.	30.	30.		

UNITED COMPUTING SYSTEMS, INC.

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.2	808.2	808.2	808.2
808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2
808.3	808.3	808.3	808.3	808.3	808.3	808.3	808.3	808.3	808.3
808.3	808.3	808.3	808.3	808.4	808.4	808.4	808.4	808.4	808.4
808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.4	808.5
808.5	808.5	808.5	808.5	808.5	808.5	808.5	808.5	808.5	808.6

808.6	808.6	808.6	808.7	808.7	808.7	808.7	808.7	808.8	808.8
808.8	808.8	808.9	808.9	808.9	809.0	809.0	809.0	809.0	809.1
809.1	809.1	809.1	809.2	809.2	809.2	809.3	809.3	809.3	809.3
809.4	809.4	809.4	809.4	809.5	809.5	809.6	809.7	809.8	810.0
810.1	810.2	810.2	810.2	810.3	810.3	810.3	810.3	810.3	810.3
810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3
810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3
810.2	810.2	810.2	810.2	810.2	810.2	810.2	810.1	810.1	810.1
810.1	810.1	810.1	810.1	810.0	810.0	810.0	810.0	810.0	810.0
810.0	809.9	809.9	809.9	809.9	809.9	809.9	809.9	809.9	809.9
809.8	809.8	809.8	809.8	809.8	809.8	809.8	809.8	809.8	809.8
809.7	809.7	809.7	809.7	809.7	809.7	809.7	809.7	809.7	809.7
809.7	809.6	809.6	809.6	809.6	809.6	809.6	809.6	809.6	809.6
809.6	809.6	809.6	809.6	809.5	809.5	809.5	809.5		

PEAK OUTFLOW IS 97. AT TIME 17.17 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	97.	69.	24.	24.	6887.
CMS	3.	2.	1.	1.	195.
INCHES		1.43	1.98	1.98	1.98
MM		36.43	50.23	50.23	50.23
AC-FT		34.	47.	47.	47.
THOUS CU M		42.	59.	59.	59.

MAXIMUM STORAGE = 48.

STATION OUTING, PLAN 1, RATIO 2

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	2.	2.	2.	2.	2.	2.	3.	3.
3.	3.	3.	3.	3.	4.	4.	4.	4.	4.
4.	5.	5.	5.	5.	5.	6.	6.	6.	6.
6.	7.	7.	7.	7.	8.	8.	8.	8.	9.
9.	9.	9.	10.	10.	10.	10.	11.	11.	11.
11.	11.	12.	12.	12.	12.	13.	13.	13.	13.
14.	14.	14.	14.	15.	15.	15.	16.	17.	18.
19.	20.	21.	22.	23.	24.	25.	26.	28.	29.
30.	32.	34.	36.	37.	39.	41.	42.	44.	45.
47.	51.	58.	65.	72.	78.	85.	91.	96.	102.
107.	112.	116.	121.	127.	137.	153.	181.	229.	305.
358.	386.	397.	397.	389.	378.	364.	351.	338.	325.
314.	303.	294.	285.	277.	269.	261.	253.	245.	237.
230.	224.	218.	212.	207.	205.	203.	200.	196.	192.
187.	182.	177.	172.	167.	162.	157.	151.	146.	141.
136.	131.	127.	122.	117.	113.	109.	105.	101.	97.
93.	90.	87.	83.	80.	77.	75.	72.	70.	67.
65.	63.	61.	59.	57.	55.	53.	51.	50.	49.
48.	48.	47.	47.	47.	46.	46.	45.	45.	45.
44.	44.	44.	43.	43.	43.	42.	42.	42.	41.
41.	41.	40.	40.	40.	40.	39.	39.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	3.	3.	3.	3.	4.	4.	4.
4.	4.	5.	5.	5.	5.	6.	6.	6.	6.
7.	7.	7.	7.	8.	8.	8.	8.	9.	9.
9.	10.	10.	10.	10.	11.	11.	11.	11.	12.
12.	12.	12.	13.	13.	13.	13.	14.	14.	14.
14.	14.	15.	15.	15.	15.	16.	16.	16.	16.
17.	17.	17.	17.	18.	18.	18.	19.	20.	20.
21.	22.	23.	24.	25.	25.	26.	27.	28.	29.
30.	31.	32.	33.	34.	35.	36.	37.	38.	39.
40.	41.	42.	43.	44.	45.	46.	47.	48.	48.
49.	50.	51.	51.	52.	54.	56.	61.	66.	71.
74.	76.	76.	76.	76.	75.	74.	73.	73.	73.

71.	70.	70.	69.	69.	68.	68.	67.	67.	66.
66.	65.	65.	65.	64.	64.	64.	63.	63.	62.
61.	61.	60.	59.	58.	58.	57.	56.	55.	54.
54.	53.	52.	51.	51.	50.	49.	49.	48.	48.
47.	47.	46.	46.	45.	45.	44.	44.	43.	43.
43.	42.	42.	42.	42.	41.	41.	41.	40.	40.
40.	40.	40.	39.	39.	39.	39.	39.	38.	38.
38.	38.	37.	37.	37.	37.	37.	37.	36.	36.
36.	36.	36.	35.	35.	35.	35.	35.		

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.2	808.2	808.2	808.2	808.2	808.2
808.2	808.2	808.3	808.3	808.3	808.3	808.3	808.3	808.3	808.4
808.4	808.4	808.4	808.4	808.4	808.4	808.5	808.5	808.5	808.5
808.5	808.5	808.5	808.5	808.6	808.6	808.6	808.6	808.6	808.6
808.6	808.7	808.7	808.7	808.7	808.7	808.7	808.7	808.7	808.8
808.8	808.8	808.8	808.8	808.8	808.8	808.8	808.9	808.9	808.9
808.9	808.9	808.9	808.9	808.9	809.0	809.0	809.0	809.0	809.1
809.1	809.2	809.2	809.2	809.3	809.3	809.4	809.4	809.4	809.5
809.5	809.6	809.6	809.7	809.7	809.8	809.8	809.8	809.9	809.9
810.0	810.0	810.1	810.1	810.2	810.2	810.2	810.3	810.3	810.3
810.4	810.4	810.4	810.5	810.5	810.6	810.7	810.8	811.1	811.2
811.4	811.4	811.5	811.5	811.4	811.4	811.4	811.3	811.3	811.3
811.3	811.2	811.2	811.2	811.2	811.2	811.1	811.1	811.1	811.1
811.1	811.0	811.0	811.0	811.0	811.0	811.0	811.0	810.9	810.9
810.9	810.9	810.8	810.8	810.8	810.7	810.7	810.7	810.6	810.6
810.6	810.5	810.5	810.5	810.4	810.4	810.4	810.4	810.3	810.3
810.3	810.3	810.2	810.2	810.2	810.2	810.2	810.2	810.1	810.1
810.1	810.1	810.1	810.1	810.1	810.0	810.0	810.0	810.0	810.0
810.0	810.0	810.0	810.0	809.9	809.9	809.9	809.9	809.9	809.9
809.9	809.9	809.9	809.9	809.9	809.8	809.8	809.8	809.8	809.8
809.8	809.8	809.8	809.8	809.8	809.8	809.8	809.8		

PEAK OUTFLOW IS 397. AT TIME 16.08 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	397.	194.	60.	60.	17384.
CMS	11.	5.	2.	2.	492.
INCHES		4.00	4.99	4.99	4.99
MM		101.63	126.78	126.78	126.78
AC-FT		96.	120.	120.	120.
THOUS CU M		118.	148.	148.	148.

MAXIMUM STORAGE = 76.

OVN

STATION OUTING, PLAN 1, RATIO 3

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	3.	3.	3.	3.	4.	4.	4.
4.	4.	5.	5.	5.	5.	6.	6.	6.	7.
7.	7.	8.	8.	9.	9.	9.	10.	10.	10.
11.	11.	12.	12.	12.	13.	13.	13.	14.	14.
15.	15.	15.	16.	16.	16.	17.	17.	18.	18.
19.	19.	20.	20.	21.	21.	21.	22.	22.	23.
23.	23.	24.	24.	25.	25.	26.	27.	29.	31.
33.	35.	37.	39.	41.	43.	46.	48.	54.	62.
71.	79.	87.	95.	102.	109.	116.	123.	129.	136.
142.	150.	157.	164.	172.	179.	185.	192.	198.	204.
211.	225.	235.	246.	262.	288.	338.	428.	578.	703.
861.	894.	835.	741.	695.	654.	613.	575.	540.	509.
482.	458.	438.	420.	408.	398.	386.	375.	363.	352.
342.	333.	324.	316.	309.	303.	297.	288.	275.	261.
247.	233.	219.	206.	200.	195.	189.	184.	178.	172.
166.	161.	155.	150.	144.	139.	134.	129.	124.	120.
116.	112.	109.	104.	100.	97.	94.	91.	88.	85.
82.	79.	77.	74.	72.	70.	68.	66.	64.	62.
60.	59.	57.	56.	54.	53.	51.	50.	49.	48.
48.	48.	47.	47.	47.	47.	46.	46.	46.	45.
45.	45.	45.	44.	44.	44.	44.	43.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	2.	2.	2.	2.	2.	3.
3.	3.	4.	4.	4.	5.	5.	5.	6.	6.
6.	7.	7.	7.	8.	8.	9.	9.	9.	10.
10.	10.	11.	11.	12.	12.	12.	13.	13.	13.
14.	14.	15.	15.	15.	16.	16.	16.	17.	17.
18.	18.	18.	19.	19.	19.	20.	20.	20.	21.
21.	21.	22.	22.	22.	23.	23.	23.	24.	24.
24.	25.	25.	25.	26.	26.	27.	28.	29.	30.
31.	33.	34.	35.	36.	37.	39.	40.	41.	42.
44.	45.	46.	47.	48.	50.	51.	52.	53.	54.
55.	56.	57.	58.	59.	60.	61.	62.	63.	64.
65.	66.	66.	67.	68.	69.	73.	78.	85.	90.
93.	94.	93.	91.	90.	88.	86.	85.	83.	82.

80.	79.	78.	78.	77.	76.	76.	75.	74.	74.
73.	72.	72.	71.	71.	70.	70.	70.	69.	68.
67.	66.	65.	64.	64.	63.	62.	61.	60.	59.
58.	57.	57.	56.	55.	54.	53.	53.	52.	51.
51.	50.	49.	49.	48.	48.	47.	47.	46.	46.
45.	45.	45.	44.	44.	44.	43.	43.	43.	42.
42.	42.	42.	41.	41.	41.	41.	41.	40.	40.
40.	40.	40.	39.	39.	39.	39.	39.	39.	39.
38.	38.	38.	38.	38.	38.	37.	37.		

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.2	808.2	808.2	808.2	808.2	808.3	808.3	808.3	808.3	808.3
808.3	808.4	808.4	808.4	808.4	808.4	808.5	808.5	808.5	808.5
808.5	808.6	808.6	808.6	808.6	808.6	808.7	808.7	808.7	808.7
808.7	808.8	808.8	808.8	808.8	808.8	808.9	808.9	808.9	808.9
808.9	809.0	809.0	809.0	809.0	809.0	809.0	809.1	809.1	809.1
809.1	809.1	809.1	809.2	809.2	809.2	809.2	809.2	809.2	809.3
809.3	809.3	809.3	809.3	809.3	809.4	809.4	809.4	809.5	809.5
809.6	809.6	809.7	809.8	809.8	809.9	809.9	810.0	810.0	810.1
810.1	810.2	810.2	810.3	810.3	810.4	810.4	810.5	810.5	810.6
810.6	810.7	810.7	810.7	810.8	810.8	810.9	810.9	810.9	811.0
811.0	811.0	811.1	811.1	811.1	811.2	811.3	811.5	811.8	812.0
812.1	812.1	812.1	812.0	811.9	811.9	811.8	811.8	811.7	811.6
811.6	811.6	811.5	811.5	811.5	811.5	811.4	811.4	811.4	811.3
811.3	811.3	811.3	811.3	811.2	811.2	811.2	811.2	811.2	811.1
811.1	811.1	811.0	811.0	811.0	810.9	810.9	810.9	810.8	810.8
810.8	810.7	810.7	810.7	810.6	810.6	810.6	810.5	810.5	810.5
810.4	810.4	810.4	810.4	810.3	810.3	810.3	810.3	810.3	810.2
810.2	810.2	810.2	810.2	810.2	810.1	810.1	810.1	810.1	810.1
810.1	810.1	810.1	810.0	810.0	810.0	810.0	810.0	810.0	810.0
810.0	810.0	810.0	810.0	810.0	809.9	809.9	809.9	809.[illegible]	809.9
809.9	809.9	809.9	809.9	809.9	809.9	809.9	809.9		

PEAK OUTFLOW IS 894. AT TIME 16.00 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	894.	320.	98.	98.	28233.
CMS	25.	9.	3.	3.	799.
INCHES		6.61	8.11	8.11	8.11
MM		167.85	205.89	205.89	205.89
AC-FT		159.	194.	194.	194.
THOUS CU M		196.	240.	240.	240.

MAXIMUM STORAGE = 94.

CVN

STATION OUTING. PLAN 1. RATIO 4

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	2.	2.	2.	2.	2.
3.	3.	3.	4.	4.	4.	4.	5.	5.	5.
6.	6.	6.	7.	7.	8.	8.	9.	9.	10.
10.	11.	11.	12.	12.	13.	13.	14.	14.	15.
15.	16.	16.	17.	18.	18.	19.	20.	20.	21.
21.	22.	23.	23.	24.	24.	25.	26.	26.	27.
27.	28.	28.	29.	30.	30.	31.	32.	33.	33.
34.	35.	36.	36.	37.	38.	40.	42.	44.	47.
53.	63.	72.	82.	91.	100.	108.	117.	125.	134.
143.	152.	161.	169.	177.	185.	192.	199.	206.	222.
240.	258.	275.	292.	307.	321.	334.	345.	356.	365.
373.	378.	383.	390.	404.	441.	526.	675.	1082.	1408.
1488.	1401.	1241.	1066.	903.	768.	703.	668.	636.	606.
580.	558.	539.	522.	507.	493.	477.	461.	445.	430.
417.	409.	400.	393.	387.	381.	375.	366.	351.	334.
317.	299.	282.	265.	249.	233.	218.	205.	199.	193.
187.	181.	175.	169.	163.	158.	152.	147.	142.	137.
132.	128.	123.	119.	115.	112.	108.	105.	101.	98.
95.	92.	90.	87.	84.	82.	80.	78.	76.	74.
72.	70.	68.	66.	65.	63.	62.	60.	59.	58.
57.	55.	54.	53.	52.	51.	50.	49.	49.	48.
48.	48.	48.	48.	47.	47.	47.	47.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	2.	2.	2.	3.	3.	3.	4.
4.	4.	5.	5.	6.	6.	7.	7.	8.	8.
8.	9.	9.	10.	10.	11.	11.	12.	12.	13.
13.	14.	14.	15.	15.	16.	16.	17.	17.	18.
18.	19.	19.	20.	20.	21.	21.	22.	22.	23.
23.	24.	24.	25.	25.	26.	26.	26.	27.	27.
28.	28.	29.	29.	30.	30.	30.	31.	31.	32.
32.	32.	33.	33.	34.	34.	35.	36.	38.	39.
41.	42.	44.	45.	47.	48.	49.	51.	52.	53.
55.	56.	57.	59.	60.	61.	62.	63.	64.	65.
67.	68.	69.	70.	71.	72.	72.	73.	74.	74.
75.	75.	75.	76.	77.	79.	82.	89.	96.	101.
102.	101.	99.	96.	94.	92.	90.	89.	87.	86.

85.	84.	83.	82.	82.	81.	80.	80.	79.	78.
78.	77.	77.	76.	76.	75.	75.	74.	73.	72.
71.	70.	69.	68.	67.	66.	65.	64.	63.	62.
61.	61.	60.	59.	58.	57.	56.	55.	54.	54.
53.	52.	52.	51.	50.	50.	49.	49.	48.	48.
47.	47.	47.	46.	46.	45.	45.	45.	44.	44.
44.	44.	43.	43.	43.	43.	42.	42.	42.	42.
42.	41.	41.	41.	41.	41.	41.	40.	40.	40.
40.	40.	40.	40.	40.	39.	39.	39.		

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.2	808.2	808.2
808.2	808.2	808.3	808.3	808.3	808.3	808.4	808.4	808.4	808.4
808.5	808.5	808.5	808.5	808.6	808.6	808.6	808.6	808.7	808.7
808.7	808.7	808.8	808.8	808.8	808.8	808.9	808.9	808.9	808.9
809.0	809.0	809.0	809.0	809.1	809.1	809.1	809.1	809.2	809.2
809.2	809.2	809.3	809.3	809.3	809.3	809.3	809.4	809.4	809.4
809.4	809.5	809.5	809.5	809.5	809.5	809.6	809.6	809.6	809.6
809.6	809.6	809.7	809.7	809.7	809.7	809.8	809.8	809.9	810.0
810.0	810.1	810.2	810.2	810.3	810.3	810.4	810.4	810.5	810.6
810.6	810.7	810.7	810.8	810.8	810.9	810.9	811.0	811.0	811.0
811.1	811.1	811.2	811.2	811.2	811.3	811.3	811.3	811.4	811.4
811.4	811.4	811.4	811.4	811.5	811.5	811.7	811.9	812.2	812.3
812.4	812.3	812.3	812.2	812.1	812.0	812.0	811.9	811.9	811.8
811.8	811.7	811.7	811.7	811.6	811.6	811.6	811.6	811.5	811.5
811.5	811.5	811.5	811.4	811.4	811.4	811.4	811.4	811.3	811.3
811.3	811.2	811.2	811.1	811.1	811.1	811.0	811.0	811.0	810.9
810.9	810.8	810.8	810.8	810.7	810.7	810.7	810.6	810.6	810.6
810.5	810.5	810.5	810.5	810.4	810.4	810.4	810.4	810.3	810.3
810.3	810.3	810.3	810.2	810.2	810.2	810.2	810.2	810.2	810.2
810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.1
810.1	810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0
810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0		

PEAK OUTFLOW IS 1488. AT TIME 15.92 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1488.	446.	136.	136.	39164.
CMS	42.	13.	4.	4.	1109.
INCHES		9.23	11.24	11.24	11.24
MM		234.38	285.61	285.61	285.61
AC-FT		221.	270.	270.	270.
THOUS CU M		273.	333.	333.	333.

MAXIMUM STORAGE = 102.

CVN

STATION OUTING. PLAN 1. RATIO 5

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	2.	2.	2.	2.	2.	3.	3.
3.	4.	4.	4.	5.	5.	6.	6.	6.	7.
8.	8.	9.	9.	10.	11.	11.	12.	12.	13.
14.	14.	15.	15.	16.	17.	18.	19.	19.	20.
21.	22.	22.	23.	24.	25.	25.	26.	27.	28.
28.	29.	30.	31.	32.	33.	34.	35.	36.	37.
38.	39.	40.	41.	42.	43.	44.	44.	45.	46.
47.	48.	49.	52.	55.	60.	66.	75.	86.	96.
107.	118.	128.	139.	148.	158.	167.	176.	185.	195.
205.	228.	249.	269.	287.	303.	317.	330.	342.	354.
368.	383.	398.	413.	432.	449.	464.	478.	489.	499.
506.	510.	513.	521.	541.	586.	687.	1110.	1622.	1896.
1935.	1819.	1609.	1368.	1151.	973.	836.	737.	704.	681.
660.	642.	625.	611.	599.	586.	571.	555.	538.	522.
508.	495.	484.	474.	465.	458.	450.	436.	414.	395.
375.	356.	336.	317.	298.	279.	261.	244.	228.	212.
202.	195.	190.	184.	178.	172.	166.	161.	155.	150.
145.	140.	136.	132.	128.	124.	120.	116.	113.	109.
106.	103.	100.	98.	95.	93.	90.	88.	86.	83.
81.	80.	78.	76.	74.	73.	71.	70.	68.	67.
66.	64.	63.	62.	61.	60.	59.	58.	57.	56.
55.	55.	54.	53.	52.	52.	51.	51.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	2.	2.	2.	2.	2.	2.	2.	2.
2.	2.	2.	2.	3.	3.	3.	4.	4.	5.
5.	6.	6.	7.	7.	8.	8.	9.	9.	10.
11.	11.	12.	12.	13.	14.	14.	15.	15.	16.
17.	17.	18.	18.	19.	20.	20.	21.	22.	22.
23.	23.	24.	25.	25.	26.	26.	27.	28.	28.
29.	29.	30.	30.	31.	32.	32.	33.	33.	34.
34.	35.	35.	36.	36.	37.	37.	38.	38.	39.
39.	40.	40.	41.	41.	42.	43.	44.	46.	48.
49.	51.	52.	54.	56.	57.	58.	60.	61.	63.
64.	66.	67.	68.	69.	70.	71.	72.	73.	74.
75.	75.	76.	77.	78.	79.	80.	80.	81.	81.
81.	82.	82.	82.	83.	85.	89.	97.	104.	108.
109.	107.	104.	100.	97.	95.	93.	91.	90.	89.

82.	81.	80.	80.	80.	79.	79.	78.	77.	76.
75.	74.	73.	71.	70.	69.	68.	67.	66.	65.
64.	63.	62.	61.	60.	59.	58.	57.	57.	56.
55.	54.	54.	53.	52.	52.	51.	51.	50.	50.
49.	49.	48.	48.	47.	47.	47.	46.	46.	44.
45.	45.	45.	44.	44.	44.	44.	43.	43.	43.
43.	43.	43.	42.	42.	42.	42.	42.	42.	41.
41.	41.	41.	41.	41.	41.	41.	41.		

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	809.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	809.0	808.0
809.0	808.0	808.0	809.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	809.0	809.0	808.0	808.0	808.0	808.0
808.0	809.1	808.1	808.1	808.1	809.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.2	808.2	808.2	808.2	808.2
808.3	808.3	808.3	808.4	808.4	808.4	808.5	808.5	808.5	808.5
808.6	808.6	808.6	808.7	808.7	808.7	808.8	808.8	808.8	808.9
808.9	809.0	809.0	809.0	809.0	809.0	809.1	809.1	809.1	809.2
809.2	809.2	809.2	809.3	809.3	809.3	809.4	809.4	809.4	809.4
809.5	809.5	809.5	809.6	809.6	809.6	809.6	809.7	809.7	809.7
809.7	809.8	809.8	809.8	809.8	809.8	809.9	809.9	809.9	809.9
810.0	810.0	810.0	810.0	810.0	810.1	810.1	810.2	810.2	810.3
810.4	810.5	810.5	810.6	810.6	810.7	810.8	810.8	810.9	810.9
811.0	811.1	811.1	811.1	811.2	811.2	811.3	811.3	811.3	811.4
811.4	811.4	811.5	811.5	811.5	811.6	811.6	811.6	811.6	811.6
811.6	811.7	811.7	811.7	811.7	811.8	811.9	812.2	812.4	812.6
812.6	812.5	812.4	812.3	812.2	812.1	812.1	812.0	812.0	811.9
811.9	811.9	811.8	811.8	811.8	811.8	811.7	811.7	811.7	811.7
811.6	811.6	811.6	811.6	811.6	811.6	811.6	811.5	811.5	811.5
811.4	811.4	811.3	811.3	811.2	811.2	811.1	811.1	811.1	811.0
811.0	810.9	810.9	810.9	810.8	810.8	810.8	810.7	810.7	810.7
810.6	810.6	810.6	810.5	810.5	810.5	810.5	810.4	810.4	810.4
810.4	810.4	810.3	810.3	810.3	810.3	810.3	810.3	810.2	810.2
810.2	810.2	810.2	810.2	810.2	810.2	810.1	810.1	810.1	810.1
810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.1	810.0
810.0	810.0	810.0	810.0	810.0	810.0	810.0	810.0		

PEAK OUTFLOW IS 1935. AT TIME 15.92 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1935.	574.	174.	174.	50172.
CMS	55.	16.	5.	5.	1421.
INCHES		11.87	14.40	14.40	14.40
MM		301.57	365.88	365.88	365.88
AC-FT		285.	346.	346.	346.
THOUS CU M		351.	426.	426.	426.

MAXIMUM STORAGE = 109.

•OVN•

STATION OUTING, PLAN 1, RATIO 6

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	2.	2.	2.	2.	2.
2.	2.	2.	2.	2.	2.	2.	2.	3.	3.
3.	3.	3.	3.	3.	4.	4.	5.	5.	6.
7.	8.	9.	10.	11.	12.	13.	15.	16.	17.
19.	20.	22.	23.	25.	26.	28.	29.	31.	33.
35.	37.	39.	42.	44.	46.	48.	52.	60.	67.
73.	80.	86.	92.	97.	103.	108.	113.	118.	123.
127.	132.	136.	140.	144.	148.	151.	155.	158.	161.
164.	167.	170.	173.	175.	178.	180.	183.	185.	187.
189.	191.	193.	195.	197.	203.	221.	254.	292.	330.
367.	402.	442.	482.	517.	547.	573.	599.	627.	655.
683.	709.	742.	794.	827.	849.	962.	871.	880.	897.
928.	967.	1005.	1036.	1060.	1078.	1091.	1099.	1105.	1110.
1107.	1091.	1078.	1100.	1188.	1390.	1828.	2501.	3198.	3[illegible]6.
3879.	3648.	3182.	2829.	2463.	2111.	1828.	1586.	1403.	1279.
1197.	1144.	1109.	1088.	1071.	1050.	1016.	975.	936.	904.
880.	863.	851.	843.	837.	834.	822.	776.	714.	677.
639.	600.	562.	523.	486.	450.	416.	393.	370.	347.
325.	305.	285.	265.	247.	230.	214.	203.	198.	192.
187.	182.	178.	173.	169.	165.	161.	157.	154.	150.
147.	144.	141.	138.	135.	133.	130.	128.	125.	123.
121.	119.	117.	115.	114.	112.	110.	109.	107.	106.
105.	103.	102.	101.	100.	99.	98.	97.	96.	95.
94.	93.	92.	92.	91.	90.	90.	89.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	2.	2.	2.	2.	2.	3.	3.
3.	3.	3.	3.	3.	3.	4.	4.	4.	4.
4.	4.	4.	5.	5.	6.	6.	7.	8.	9.
10.	11.	12.	13.	14.	15.	16.	18.	19.	20.
21.	22.	23.	24.	26.	27.	28.	29.	30.	32.
33.	34.	35.	36.	37.	39.	40.	41.	42.	43.
44.	45.	46.	47.	48.	49.	49.	50.	51.	52.
52.	53.	54.	54.	55.	55.	56.	56.	57.	57.
58.	58.	59.	59.	60.	60.	60.	61.	61.	61.
62.	62.	62.	63.	63.	64.	65.	67.	70.	72.
74.	77.	79.	80.	82.	83.	84.	86.	87.	88.
89.	90.	91.	92.	93.	93.	93.	93.	93.	94.
94.	95.	95.	96.	96.	96.	96.	97.	97.	97.
97.	96.	96.	97.	98.	101.	107.	119.	133.	142.
143.	139.	133.	126.	119.	112.	107.	104.	101.	99.

98.	97.	97.	96.	96.	96.	95.	95.	94.	94.
93.	93.	93.	93.	93.	93.	93.	92.	91.	89.
87.	84.	84.	82.	81.	79.	78.	76.	75.	73.
72.	71.	69.	68.	67.	66.	65.	64.	63.	62.
62.	61.	60.	59.	59.	58.	57.	57.	56.	56.
55.	55.	54.	54.	54.	53.	53.	52.	52.	52.
51.	51.	51.	50.	50.	50.	50.	49.	49.	49.
49.	49.	48.	48.	48.	48.	48.	48.	47.	47.
47.	47.	47.	47.	47.	47.	47.	46.		

STAGE

808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0	808.0
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1	808.1
808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2	808.2
808.2	808.2	808.2	808.3	808.3	808.3	808.4	808.4	808.4	808.5
808.5	808.6	808.7	808.7	808.8	808.8	808.9	808.9	809.0	809.0
809.1	809.2	809.2	809.3	809.3	809.4	809.4	809.5	809.6	809.6
809.7	809.7	809.8	809.8	809.9	809.9	810.0	810.0	810.1	810.1
810.2	810.2	810.2	810.3	810.3	810.4	810.4	810.4	810.5	810.5
810.5	810.5	810.6	810.6	810.6	810.6	810.7	810.7	810.7	810.7
810.7	810.8	810.8	810.8	810.8	810.8	810.8	810.9	810.9	810.9
810.9	810.9	810.9	810.9	810.9	811.0	811.0	811.1	811.2	811.3
811.4	811.5	811.5	811.6	811.7	811.7	811.8	811.8	811.8	811.9
811.9	812.0	812.0	812.0	812.0	812.1	812.1	812.1	812.1	812.1
812.1	812.1	812.1	812.2	812.2	812.2	812.2	812.2	812.2	812.2
812.2	812.2	812.2	812.2	812.2	812.3	812.6	812.9	813.4	813.7
813.7	813.6	813.4	813.2	812.9	812.7	812.6	812.4	812.3	812.3
812.2	812.2	812.2	812.2	812.2	812.2	812.1	812.1	812.1	812.1
812.1	812.1	812.1	812.1	812.1	812.1	812.0	812.0	812.0	811.9
811.9	811.8	811.7	811.7	811.6	811.6	811.5	811.4	811.4	811.3
811.3	811.2	811.2	811.1	811.1	811.1	811.0	811.0	810.9	810.9
810.9	810.9	810.8	810.8	810.8	810.7	810.7	810.7	810.7	810.7
810.6	810.6	810.6	810.6	810.6	810.5	810.5	810.5	810.5	810.5
810.5	810.5	810.4	810.4	810.4	810.4	810.4	810.4	810.4	810.4
810.4	810.4	810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3
810.3	810.3	810.3	810.3	810.3	810.3	810.3	810.3		

PEAK OUTFLOW IS 3879. AT TIME 15.92 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	3879.	1201.	366.	366.	105378.
CMS	110.	34.	10.	10.	2984.
INCHES		24.83	30.25	30.25	30.25
MM		630.59	768.47	768.47	768.47
AC-FT		596.	726.	726.	726.
THOUS CU M		735.	895.	895.	895.

MAXIMUM STORAGE = 143.

OVN

********** ********** ********** ********** **********

SUB-AREA RUNOFF COMPUTATION

SUBAREA RUNOFF FOR PARKER LAKE NO 2

	ISTAQ	ICOMP	IECON	ITAPE	JPLT	JPRT	INAME	ISTAGE	IAUTO
NFLOW		0	-0	-0	-0	3	1	-0	-0

HYDROGRAPH DATA

IHYDG	IUHG	TAREA	SNAP	TRSDA	TRSPC	RATIO	ISNOW	ISAME	LOCAL
1	2	.47	-0.00	.47	1.00	-0.000	-0	1	-0

PRECIP DATA

SPFE	PMS	R6	R12	R24	R48	R72	R96
-0.00	26.00	100.00	120.00	130.00	-0.00	-0.00	-0.00

LOSS DATA

LROPT	STRKR	DLTKR	PTIOL	ERAIN	STRKS	RTIOK	STRTL	CNSTL	ALSMX	RTIMP
-0	-0.00	-0.00	1.00	-0.00	-0.00	1.00	-1.00	-84.00	-0.00	.05

CURVE NO = -84.00 WETNESS = -1.00 EFFECT CN = 84.00

UNIT HYDROGRAPH DATA

TC= -0.00 LAG= .20

RECESSION DATA

STRTQ= .94 QRCSN= -.10 RTIOR= 3.00

UNIT HYDROGRAPH 14 END OF PERIOD ORDINATES. TC= -0.00 HOURS. LAG= .20 VOL= 1.00

229. 755. 936. 748. 416. 239. 136. 78. 44. 25.
14. 9. 5. 2.

0 END-OF-PERIOD FLOW

MO.DA	HR.MN	PERIOD	RAIN	EXCS	LOSS	COMP Q	MO.DA	HR.MN	PERIOD	RAIN	EXCS	LOSS	COMP Q
1.01	.05	1	.01	.00	.01	1.	1.01	12.05	145	.22	.20	.01	278.
1.01	.10	2	.01	.00	.01	1.	1.01	12.10	146	.22	.21	.01	382.
1.01	.15	3	.01	.00	.01	2.	1.01	12.15	147	.22	.21	.01	510.
1.01	.20	4	.01	.00	.01	3.	1.01	12.20	148	.22	.21	.01	614.
1.01	.25	5	.01	.00	.01	3.	1.01	12.25	149	.22	.21	.01	672.
1.01	.30	6	.01	.00	.01	3.	1.01	12.30	150	.22	.21	.01	707.
1.01	.35	7	.01	.00	.01	3.	1.01	12.35	151	.22	.21	.01	727.
1.01	.40	8	.01	.00	.01	3.	1.01	12.40	152	.22	.21	.01	739.
1.01	.45	9	.01	.00	.01	3.	1.01	12.45	153	.22	.21	.01	747.
1.01	.50	10	.01	.00	.01	3.	1.01	12.50	154	.22	.21	.01	752.
1.01	.55	11	.01	.00	.01	3.	1.01	12.55	155	.22	.21	.01	755.
1.01	1.00	12	.01	.00	.01	3.	1.01	13.00	156	.22	.21	.01	758.
1.01	1.05	13	.01	.00	.01	3.	1.01	13.05	157	.26	.25	.01	770.
1.01	1.10	14	.01	.00	.01	3.	1.01	13.10	158	.26	.25	.01	803.
1.01	1.15	15	.01	.00	.01	3.	1.01	13.15	159	.26	.25	.01	843.
1.01	1.20	16	.01	.00	.01	3.	1.01	13.20	160	.26	.25	.01	876.
1.01	1.25	17	.01	.00	.01	3.	1.01	13.25	161	.26	.25	.01	895.
1.01	1.30	18	.01	.00	.01	3.	1.01	13.30	162	.26	.25	.01	906.

1.01	1.35	19	.01	.00	.01	3.
1.01	1.40	20	.01	.00	.01	3.
1.01	1.45	21	.01	.00	.01	3.
1.01	1.50	22	.01	.00	.01	3.
1.01	1.55	23	.01	.00	.01	3.
1.01	2.00	24	.01	.00	.01	3.
1.01	2.05	25	.01	.00	.01	3.
1.01	2.10	26	.01	.00	.01	3.
1.01	2.15	27	.01	.00	.01	3.
1.01	2.20	28	.01	.00	.01	3.
1.01	2.25	29	.01	.00	.01	3.
1.01	2.30	30	.01	.00	.01	3.
1.01	2.35	31	.01	.00	.01	4.
1.01	2.40	32	.01	.00	.01	5.
1.01	2.45	33	.01	.00	.01	5.
1.01	2.50	34	.01	.00	.01	6.
1.01	2.55	35	.01	.00	.01	6.
1.01	3.00	36	.01	.00	.01	7.
1.01	3.05	37	.01	.00	.01	8.
1.01	3.10	38	.01	.00	.01	8.
1.01	3.15	39	.01	.00	.01	9.
1.01	3.20	40	.01	.00	.01	10.
1.01	3.25	41	.01	.00	.01	10.
1.01	3.30	42	.01	.00	.01	11.
1.01	3.35	43	.01	.00	.01	11.
1.01	3.40	44	.01	.00	.01	12.
1.01	3.45	45	.01	.00	.01	12.
1.01	3.50	46	.01	.00	.01	13.
1.01	3.55	47	.01	.00	.01	14.
1.01	4.00	48	.01	.00	.01	14.
1.01	4.05	49	.01	.00	.01	15.
1.01	4.10	50	.01	.00	.01	15.
1.01	4.15	51	.01	.00	.01	16.
1.01	4.20	52	.01	.00	.01	16.
1.01	4.25	53	.01	.00	.01	17.
1.01	4.30	54	.01	.01	.01	17.
1.01	4.35	55	.01	.01	.01	17.
1.01	4.40	56	.01	.01	.01	18.
1.01	4.45	57	.01	.01	.01	18.
1.01	4.50	58	.01	.01	.01	19.
1.01	4.55	59	.01	.01	.01	19.
1.01	5.00	60	.01	.01	.01	20.
1.01	5.05	61	.01	.01	.01	20.
1.01	5.10	62	.01	.01	.01	20.
1.01	5.15	63	.01	.01	.01	21.
1.01	5.20	64	.01	.01	.01	21.
1.01	5.25	65	.01	.01	.01	22.
1.01	5.30	66	.01	.01	.01	22.
1.01	5.35	67	.01	.01	.01	22.
1.01	5.40	68	.01	.01	.01	23.
1.01	5.45	69	.01	.01	.01	23.
1.01	5.50	70	.01	.01	.01	23.
1.01	5.55	71	.01	.01	.01	24.
1.01	6.00	72	.01	.01	.01	24.
1.01	6.05	73	.07	.04	.04	31.
1.01	6.10	74	.07	.04	.03	53.
1.01	6.15	75	.07	.04	.03	82.
1.01	6.20	76	.07	.04	.03	107.
1.01	6.25	77	.07	.04	.03	124.

1.01	13.35	163	.26	.25	.01	913.
1.01	13.40	164	.26	.25	.01	917.
1.01	13.45	165	.26	.25	.01	920.
1.01	13.50	166	.26	.25	.01	922.
1.01	13.55	167	.26	.25	.01	924.
1.01	14.00	168	.26	.25	.01	925.
1.01	14.05	169	.32	.32	.01	941.
1.01	14.10	170	.32	.32	.01	990.
1.01	14.15	171	.32	.32	.01	1050.
1.01	14.20	172	.32	.32	.01	1099.
1.01	14.25	173	.32	.32	.01	1126.
1.01	14.30	174	.32	.32	.00	1143.
1.01	14.35	175	.32	.32	.00	1152.
1.01	14.40	176	.32	.32	.00	1158.
1.01	14.45	177	.32	.32	.00	1161.
1.01	14.50	178	.32	.32	.00	1164.
1.01	14.55	179	.32	.32	.00	1165.
1.01	15.00	180	.32	.32	.00	1167.
1.01	15.05	181	.20	.20	.00	1139.
1.01	15.10	182	.40	.39	.00	1089.
1.01	15.15	183	.40	.39	.00	1119.
1.01	15.20	184	.59	.59	.01	1253.
1.01	15.25	185	.69	.69	.01	1518.
1.01	15.30	186	1.68	1.67	.01	2051.
1.01	15.35	187	2.77	2.75	.02	3308.
1.01	15.40	188	1.09	1.08	.01	4833.
1.01	15.45	189	.69	.69	.00	5329.
1.01	15.50	190	.59	.59	.00	4723.
1.01	15.55	191	.40	.39	.00	3705.
1.01	16.00	192	.40	.39	.00	2887.
1.01	16.05	193	.30	.30	.00	2280.
1.01	16.10	194	.30	.30	.00	1837.
1.01	16.15	195	.30	.30	.00	1539.
1.01	16.20	196	.30	.30	.00	1349.
1.01	16.25	197	.30	.30	.00	1242.
1.01	16.30	198	.30	.30	.00	1181.
1.01	16.35	199	.30	.30	.00	1144.
1.01	16.40	200	.30	.30	.00	1121.
1.01	16.45	201	.30	.30	.00	1108.
1.01	16.50	202	.30	.30	.00	1103.
1.01	16.55	203	.30	.30	.00	1101.
1.01	17.00	204	.30	.30	.00	1100.
1.01	17.05	205	.24	.24	.00	1085.
1.01	17.10	206	.24	.24	.00	1036.
1.01	17.15	207	.24	.24	.00	975.
1.01	17.20	208	.24	.24	.00	927.
1.01	17.25	209	.24	.24	.00	900.
1.01	17.30	210	.24	.24	.00	884.
1.01	17.35	211	.24	.24	.00	876.
1.01	17.40	212	.24	.24	.00	871.
1.01	17.45	213	.24	.24	.00	868.
1.01	17.50	214	.24	.24	.00	866.
1.01	17.55	215	.24	.24	.00	865.
1.01	18.00	216	.24	.24	.00	865.
1.01	18.05	217	.02	.02	.00	815.
1.01	18.10	218	.02	.02	.00	652.
1.01	18.15	219	.02	.02	.00	510.
1.01	18.20	220	.02	.02	.00	457.
1.01	18.25	221	.02	.02	.00	409.

1.	6.		.	.	.		1.	18.3	2	.0	.0	.0	
1.01	6.35	79	.07	.05	.03	145.	1.01	18.35	223	.02	.02	.00	329.
1.01	6.40	80	.07	.05	.03	152.	1.01	18.40	224	.02	.02	.00	294.
1.01	6.45	81	.07	.05	.02	159.	1.01	18.45	225	.02	.02	.00	264.
1.01	6.50	82	.07	.05	.02	1	1.01	18.50	226	.02	.02	.00	236.
1.01	6.55	83	.07	.05	.02	169.	1.01	18.55	227	.02	.02	.00	212.
1.01	7.00	84	.07	.05	.02	173.	1.01	19.00	228	.02	.02	.00	190.
1.01	7.05	85	.07	.05	.02	177.	1.01	19.05	229	.02	.02	.00	170.
1.01	7.10	86	.07	.05	.02	181.	1.01	19.10	230	.02	.02	.00	152.
1.01	7.15	87	.07	.05	.02	185.	1.01	19.15	231	.02	.02	.00	136.
1.01	7.20	88	.07	.05	.02	188.	1.01	19.20	232	.02	.02	.00	122.
1.01	7.25	89	.07	.05	.02	191.	1.01	19.25	233	.02	.02	.00	110.
1.01	7.30	90	.07	.06	.02	194.	1.01	19.30	234	.02	.02	.00	98.
1.01	7.35	91	.07	.06	.02	196.	1.01	19.35	235	.02	.02	.00	88.
1.01	7.40	92	.07	.06	.02	199.	1.01	19.40	236	.02	.02	.00	79.
1.01	7.45	93	.07	.06	.02	201.	1.01	19.45	237	.02	.02	.00	79.
1.01	7.50	94	.07	.06	.01	203.	1.01	19.50	238	.02	.02	.00	79.
1.01	7.55	95	.07	.06	.01	206.	1.01	19.55	239	.02	.02	.00	79.
1.01	8.00	96	.07	.06	.01	208.	1.01	20.00	240	.02	.02	.00	79.
1.01	8.05	97	.07	.06	.01	210.	1.01	20.05	241	.02	.02	.00	79.
1.01	8.10	98	.07	.06	.01	211.	1.01	20.10	242	.02	.02	.00	79.
1.01	8.15	99	.07	.06	.01	213.	1.01	20.15	243	.02	.02	.00	79.
1.01	8.20	100	.07	.06	.01	215.	1.01	20.20	244	.02	.02	.00	79.
1.01	8.25	101	.07	.06	.01	216.	1.01	20.25	245	.02	.02	.00	79.
1.01	8.30	102	.07	.06	.01	218.	1.01	20.30	246	.02	.02	.00	79.
1.01	8.35	103	.07	.06	.01	219.	1.01	20.35	247	.02	.02	.00	79.
1.01	8.40	104	.07	.06	.01	221.	1.01	20.40	248	.02	.02	.00	79.
1.01	8.45	105	.07	.06	.01	222.	1.01	20.45	249	.02	.02	.00	79.
1.01	8.50	106	.07	.06	.01	223.	1.01	20.50	250	.02	.02	.00	79.
1.01	8.55	107	.07	.06	.01	224.	1.01	20.55	251	.02	.02	.00	79.
1.01	9.00	108	.07	.06	.01	225.	1.01	21.00	252	.02	.02	.00	79.
1.01	9.05	109	.07	.06	.01	226.	1.01	21.05	253	.02	.02	.00	79.
1.01	9.10	110	.07	.06	.01	227.	1.01	21.10	254	.02	.02	.00	79.
1.01	9.15	111	.07	.06	.01	228.	1.01	21.15	255	.02	.02	.00	79.
1.01	9.20	112	.07	.06	.01	229.	1.01	21.20	256	.02	.02	.00	79.
1.01	9.25	113	.07	.06	.01	230.	1.01	21.25	257	.02	.02	.00	79.
1.01	9.30	114	.07	.06	.01	231.	1.01	21.30	258	.02	.02	.00	79.
1.01	9.35	115	.07	.06	.01	232.	1.01	21.35	259	.02	.02	.00	79.
1.01	9.40	116	.07	.06	.01	233.	1.01	21.40	260	.02	.02	.00	79.
1.01	9.45	117	.07	.06	.01	234.	1.01	21.45	261	.02	.02	.00	79.
1.01	9.50	118	.07	.06	.01	234.	1.01	21.50	262	.02	.02	.00	79.
1.01	9.55	119	.07	.07	.01	235.	1.01	21.55	263	.02	.02	.00	79.
1.01	10.00	120	.07	.07	.01	236.	1.01	22.00	264	.02	.02	.00	79.
1.01	10.05	121	.07	.07	.01	236.	1.01	22.05	265	.02	.02	.00	79.
1.01	10.10	122	.07	.07	.01	237.	1.01	22.10	266	.02	.02	.00	79.
1.01	10.15	123	.07	.07	.01	238.	1.01	22.15	267	.02	.02	.00	79.
1.01	10.20	124	.07	.07	.01	238.	1.01	22.20	268	.02	.02	.00	79.
1.01	10.25	125	.07	.07	.01	239.	1.01	22.25	269	.02	.02	.00	79.
1.01	10.30	126	.07	.07	.01	239.	1.01	22.30	270	.02	.02	.00	79.
1.01	10.35	127	.07	.07	.01	240.	1.01	22.35	271	.02	.02	.00	79.
1.01	10.40	128	.07	.07	.01	240.	1.01	22.40	272	.02	.02	.00	79.
1.01	10.45	129	.07	.07	.01	241.	1.01	22.45	273	.02	.02	.00	79.
1.01	10.50	130	.07	.07	.01	241.	1.01	22.50	274	.02	.02	.00	79.
1.01	10.55	131	.07	.07	.01	242.	1.01	22.55	275	.02	.02	.00	79.
1.01	11.00	132	.07	.07	.01	242.	1.01	23.00	276	.02	.02	.00	79.
1.01	11.05	133	.07	.07	.01	243.	1.01	23.05	277	.02	.02	.00	79.
1.01	11.10	134	.07	.07	.01	243.	1.01	23.10	278	.02	.02	.00	79.
1.01	11.15	135	.07	.07	.00	244.	1.01	23.15	279	.02	.02	.00	79.
1.01	11.20	136	.07	.07	.00	244.	1.01	23.20	280	.02	.02	.00	79.

1.01	11.25	137	.07	.07	.00	244.	1.01	23.25	281	.02	.02	.00	79.
1.01	11.30	138	.07	.07	.00	245.	1.01	23.30	282	.02	.02	.00	79.
1.01	11.35	139	.07	.07	.00	245.	1.01	23.35	283	.02	.02	.00	79.
1.01	11.40	140	.07	.07	.00	245.	1.01	23.40	284	.02	.02	.00	79.
1.01	11.45	141	.07	.07	.00	246.	1.01	23.45	285	.02	.02	.00	79.
1.01	11.50	142	.07	.07	.00	246.	1.01	23.50	286	.02	.02	.00	79.
1.01	11.55	143	.07	.07	.00	246.	1.01	23.55	287	.02	.02	.00	79.
1.01	12.00	144	.07	.07	.00	247.	1.02	0.00	288	.02	.02	.00	79.
								SUM	33.80	31.73	2.07	117195.
									(859.)	(806.)	(53.)	(3318.59)

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	5329.	1284.	407.	407.	117124.
CMS	151.	36.	12.	12.	3317.
INCHES		25.41	32.20	32.20	32.20
MM		645.50	817.79	817.79	817.79
AC-FT		637.	807.	807.	807.
THOUS CU M		785.	995.	995.	995.

UNITED COMPUTING SYSTEMS, INC.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 1

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	533.	128.	41.	41.	11712.
CMS	15.	4.	1.	1.	332.
INCHES		2.54	3.22	3.22	3.22
MM		64.55	81.78	81.78	81.78
AC-FT		64.	81.	81.	81.
THOUS CU M		79.	99.	99.	99.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 2

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1066.	257.	81.	81.	23425.
CMS	30.	7.	2.	2.	663.
INCHES		5.08	6.44	6.44	6.44
MM		129.10	163.56	163.56	163.56
AC-FT		127.	161.	161.	161.
THOUS CU M		157.	199.	199.	199.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 3

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1599.	385.	122.	122.	35137.
CMS	45.	11.	3.	3.	995.
INCHES		7.62	9.66	9.66	9.66
MM		193.65	245.34	245.34	245.34
AC-FT		191.	242.	242.	242.
THOUS CU M		236.	298.	298.	298.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 4

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	2132.	514.	163.	163.	46850.
CMS	60.	15.	5.	5.	1327.
INCHES		10.17	12.88	12.88	12.88
MM		258.20	327.12	327.12	327.12
AC-FT		255.	323.	323.	323.
THOUS CU M		314.	398.	398.	398.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 5

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	2664.	642.	203.	203.	58562.
CMS	75.	18.	6.	6.	1658.
INCHES		12.71	16.10	16.10	16.10
MM		322.75	408.90	408.90	408.90
AC-FT		318.	403.	403.	403.
THOUS CU M		393.	497.	497.	497.

HYDROGRAPH AT STANFLOW FOR PLAN 1, RTIO 6

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	5329.	1284.	407.	407.	117124.
CMS	151.	36.	12.	12.	3317.
INCHES		25.41	32.20	32.20	32.20
MM		645.50	817.79	817.79	817.79
AC-FT		637.	807.	807.	807.
THOUS CU M		785.	995.	995.	995.

********** ********** ********** ********** **********

COMBINE HYDROGRAPHS

PARKER NO. 1 AND PARKER NO 2 HYDROGRAPHS COMBINED

ISTAQ	ICOMP	IECON	ITAPE	JPLT	JPRT	INAME	ISTAGE	IAUTO
	2	-0	-0	2	2	1	-0	-0

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 1

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	2.	2.	2.
2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
2.	2.	2.	2.	2.	2.	2.	3.	3.	3.

3.	3.	3.	6.	9.	11.	13.	14.	15.	16.
17.	17.	18.	18.	19.	19.	20.	20.	20.	21.
21.	21.	22.	22.	22.	23.	23.	23.	23.	24.
24.	24.	24.	25.	25.	25.	25.	25.	26.	26.
26.	26.	26.	26.	27.	27.	27.	27.	27.	27.
28.	28.	28.	28.	28.	28.	28.	29.	29.	29.
29.	29.	29.	29.	30.	30.	30.	30.	30.	30.
30.	30.	30.	31.	34.	44.	57.	68.	74.	78.
81.	82.	83.	84.	85.	86.	87.	91.	96.	99.
102.	103.	105.	106.	106.	107.	108.	108.	111.	116.
123.	129.	132.	134.	136.	138.	139.	140.	141.	141.
139.	135.	139.	153.	180.	235.	364.	520.	575.	520.
432.	361.	308.	269.	243.	226.	217.	212.	209.	207.
206.	206.	206.	207.	206.	201.	195.	190.	187.	185.
183.	182.	181.	181.	180.	180.	174.	157.	141.	134.
127.	121.	114.	109.	103.	98.	93.	89.	85.	81.
77.	73.	70.	66.	63.	60.	58.	56.	56.	55.
55.	55.	54.	54.	53.	53.	52.	52.	51.	51.
50.	50.	50.	49.	49.	48.	48.	48.	47.	47.
47.	46.	46.	45.	45.	45.	44.	44.	44.	43.
43.	43.	42.	42.	42.	41.	41.	41.	40.	40.
40.	40.	39.	39.	39.	38.	38.	38.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	575.	180.	65.	65.	18600.
CMS	16.	5.	2.	2.	527.
INCHES		1.82	2.61	2.61	2.61
MM		46.29	66.35	66.35	66.35
AC-FT		89.	128.	128.	128.
THOUS CU M		110.	158.	158.	158.

OVN

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 2

0.	0.	0.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	2.	2.	2.	2.	2.
2.	2.	2.	3.	3.	3.	3.	3.	3.	3.
3.	3.	4.	4.	4.	4.	4.	4.	4.	4.
4.	4.	5.	5.	5.	5.	5.	5.	5.	5.
5.	5.	7.	11.	17.	22.	26.	28.	30.	32.
33.	34.	35.	36.	37.	38.	39.	40.	41.	41.
42.	43.	43.	44.	45.	45.	46.	46.	47.	47.
48.	48.	49.	49.	50.	50.	50.	51.	51.	52.
52.	52.	53.	53.	54.	54.	55.	55.	55.	56.
56.	56.	57.	57.	58.	58.	58.	59.	59.	59.
60.	60.	60.	61.	61.	61.	62.	62.	62.	62.
63.	63.	63.	64.	70.	91.	117.	139.	151.	159.
164.	168.	171.	173.	174.	176.	179.	187.	196.	204.
209.	213.	214.	219.	221.	223.	225.	227.	232.	243.
257.	270.	283.	293.	302.	310.	317.	323.	330.	335.
335.	330.	340.	372.	431.	547.	815.	1147.	1294.	1250.
1099.	963.	853.	764.	697.	648.	613.	587.	566.	549.
535.	524.	514.	505.	494.	477.	457.	439.	425.	414.
405.	398.	391.	386.	380.	378.	366.	331.	298.	283.
269.	256.	243.	231.	220.	209.	199.	189.	180.	172.
164.	156.	149.	142.	135.	129.	124.	120.	116.	113.
109.	106.	102.	99.	96.	93.	90.	88.	85.	83.
81.	78.	76.	74.	72.	71.	69.	67.	65.	64.
64.	63.	63.	63.	62.	62.	62.	61.	61.	60.
60.	60.	59.	59.	59.	58.	58.	58.	57.	57.
57.	56.	56.	56.	56.	55.	55.	55.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1294.	423.	142.	142.	40809.
CMS	37.	12.	4.	4.	1156.
INCHES		4.27	5.73	5.73	5.73
MM		108.56	145.57	145.57	145.57
AC-FT		210.	281.	281.	281.
THOUS CU M		259.	347.	347.	347.

OVN

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 3

0.	0.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	2.	2.	2.	2.	2.	3.	3.	3.
3.	3.	4.	4.	4.	4.	4.	5.	5.	5.
5.	5.	5.	6.	6.	6.	6.	6.	6.	6.
7.	7.	7.	7.	7.	7.	7.	8.	8.	8.
8.	8.	10.	17.	26.	33.	38.	42.	45.	48.
50.	51.	53.	55.	56.	57.	59.	60.	61.	62.
63.	64.	65.	66.	67.	68.	69.	69.	70.	71.
72.	73.	74.	74.	75.	76.	77.	77.	78.	79.
79.	80.	81.	81.	82.	83.	83.	84.	84.	85.
85.	86.	87.	87.	88.	88.	89.	90.	90.	91.
91.	92.	92.	93.	94.	94.	95.	95.	96.	96.
97.	97.	98.	98.	108.	140.	179.	212.	230.	243.
251.	257.	261.	265.	268.	271.	276.	289.	307.	325.
339.	351.	361.	370.	378.	386.	393.	400.	411.	432.
458.	479.	495.	507.	517.	526.	534.	541.	548.	554.
556.	552.	570.	622.	717.	903.	1330.	1878.	2176.	2120.
1972.	1760.	1519.	1292.	1156.	1059.	986.	929.	883.	845.
814.	789.	768.	750.	734.	708.	679.	653.	633.	618.
605.	594.	584.	576.	569.	563.	541.	483.	428.	398.
370.	343.	318.	294.	280.	266.	253.	240.	229.	218.
207.	197.	188.	179.	171.	163.	158.	153.	148.	144.
139.	135.	131.	128.	124.	121.	117.	114.	111.	108.
106.	103.	100.	98.	96.	94.	91.	89.	88.	86.
84.	82.	81.	79.	78.	76.	75.	74.	73.	72.
72.	71.	71.	71.	70.	70.	70.	70.	69.	69.
69.	68.	68.	68.	68.	67.	67.	67.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	2176.	679.	220.	220.	63370.
CMS	62.	19.	6.	6.	1794.
INCHES		6.87	8.90	8.90	8.90
MM		174.42	226.04	226.04	226.04
AC-FT		337.	436.	436.	436.
THOUS CU M		415.	538.	538.	538.

OVN

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 4

0.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
2.	2.	2.	2.	3.	3.	3.	4.	4.	4.
4.	5.	5.	5.	5.	6.	6.	6.	6.	6.
7.	7.	7.	7.	8.	8.	8.	8.	8.	9.
9.	9.	9.	9.	9.	10.	10.	10.	10.	10.
11.	11.	13.	22.	34.	44.	51.	56.	60.	63.
66.	69.	71.	73.	75.	77.	78.	80.	81.	83.
84.	86.	87.	88.	90.	91.	92.	93.	95.	96.
97.	98.	99.	100.	101.	102.	103.	104.	105.	106.
107.	108.	109.	110.	110.	111.	112.	113.	114.	115.
116.	117.	118.	118.	119.	120.	121.	122.	122.	123.
124.	125.	126.	126.	127.	128.	129.	130.	131.	132.
132.	133.	134.	135.	148.	191.	244.	287.	313.	330.
343.	358.	371.	383.	393.	403.	416.	438.	463.	485.
501.	514.	526.	536.	545.	553.	561.	569.	582.	618.
660.	697.	726.	749.	769.	784.	798.	811.	822.	831.
828.	814.	830.	891.	1011.	1261.	1849.	2609.	3213.	3297.
2970.	2555.	2153.	1801.	1519.	1307.	1199.	1140.	1093.	1055.
1024.	999.	979.	962.	941.	907.	867.	832.	805.	784.
767.	756.	748.	740.	733.	727.	701.	626.	555.	517.
480.	446.	414.	383.	354.	327.	302.	281.	267.	254.
242.	230.	219.	208.	199.	189.	183.	178.	173.	168.
164.	159.	155.	151.	147.	143.	139.	136.	133.	130.
127.	124.	121.	118.	116.	114.	111.	109.	107.	105.
103.	101.	99.	98.	96.	95.	93.	92.	90.	89.
88.	87.	86.	85.	84.	83.	82.	81.	80.	80.
80.	79.	79.	79.	79.	79.	78.	78.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	3297.	939.	299.	299.	86014.
CMS	93.	27.	8.	8.	2436.
INCHES		9.49	12.08	12.08	12.08
MM		241.07	306.81	306.81	306.81
AC-FT		465.	592.	592.	592.
THOUS CU M		574.	731.	731.	731.

OVN

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 5

1.	1.	1.	1.	1.	1.	1.	2.	2.	2.
2.	2.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	2.	2.	2.
2.	2.	3.	3.	3.	4.	4.	4.	5.	5.
5.	6.	6.	6.	7.	7.	7.	8.	8.	8.
8.	9.	9.	9.	9.	10.	10.	10.	10.	11.
11.	11.	11.	12.	12.	12.	12.	13.	13.	13.
13.	13.	17.	28.	43.	55.	64.	70.	75.	79.
83.	86.	88.	91.	93.	96.	98.	100.	102.	104.
106.	108.	109.	111.	113.	114.	116.	117.	119.	120.
122.	123.	124.	126.	127.	128.	130.	131.	133.	134.
135.	136.	138.	139.	140.	141.	142.	143.	145.	146.
147.	148.	149.	150.	152.	153.	154.	155.	157.	158.
159.	160.	161.	162.	164.	165.	166.	167.	168.	169.
170.	171.	172.	175.	194.	251.	322.	382.	422.	450.
471.	488.	502.	515.	526.	537.	552.	577.	607.	633.
653.	681.	706.	728.	747.	764.	779.	792.	812.	849.
893.	933.	962.	984.	1008.	1028.	1045.	1059.	1072.	1082.
1076.	1055.	1072.	1147.	1300.	1612.	2341.	3527.	4287.	4257.
3788.	3263.	2749.	2286.	1920.	1647.	1457.	1327.	1276.	1241.
1214.	1193.	1176.	1161.	1141.	1104.	1059.	1018.	988.	964.
945.	930.	917.	907.	898.	890.	857.	762.	669.	623.
580.	539.	500.	464.	430.	397.	367.	339.	313.	288.
271.	258.	245.	233.	222.	211.	205.	200.	195.	189.
184.	180.	175.	171.	167.	163.	159.	156.	152.	149.
146.	143.	140.	137.	134.	132.	129.	127.	125.	123.
121.	119.	117.	115.	114.	112.	110.	109.	107.	106.
105.	104.	102.	101.	100.	99.	98.	97.	96.	96.
95.	94.	93.	92.	92.	91.	90.	90.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	4287.	1197.	378.	378.	108734.
CMS	121.	34.	11.	11.	3079.
INCHES		12.10	15.27	15.27	15.27
MM		307.35	387.86	387.86	387.86
AC-FT		593.	749.	749.	749.
THOUS CU M		732.	924.	924.	924.

OVN

SUM OF 2 HYDROGRAPHS AT PLAN 1 RTIO 6

1.	1.	2.	3.	3.	3.	3.	3.	3.	3.
3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
3.	3.	3.	3.	3.	3.	3.	3.	3.	4.
4.	5.	6.	6.	7.	8.	8.	9.	10.	10.
11.	11.	12.	13.	13.	14.	14.	15.	16.	16.
17.	17.	18.	18.	19.	19.	20.	20.	21.	21.
22.	22.	23.	23.	24.	24.	25.	25.	25.	26.
26.	27.	34.	56.	85.	111.	128.	141.	150.	158.
166.	172.	178.	183.	189.	193.	198.	202.	206.	211.
215.	219.	223.	227.	230.	234.	237.	240.	244.	248.
252.	255.	259.	262.	265.	269.	272.	278.	286.	294.
302.	309.	316.	323.	329.	336.	342.	348.	353.	359.
364.	369.	374.	378.	383.	387.	391.	395.	399.	402.
406.	409.	413.	416.	419.	422.	425.	427.	430.	432.
435.	437.	440.	442.	476.	584.	731.	868.	964.	1037.
1094.	1142.	1189.	1234.	1272.	1305.	1343.	1402.	1470.	1531.
1578.	1615.	1655.	1711.	1747.	1771.	1786.	1796.	1820.	1887.
1978.	2066.	2131.	2179.	2213.	2236.	2252.	2263.	2271.	2276.
2246.	2180.	2197.	2353.	2705.	3441.	5136.	7334.	8527.	8528.
7584.	6535.	5461.	4666.	4002.	3460.	3070.	2767.	2547.	2400.
2305.	2247.	2210.	2187.	2156.	2085.	1991.	1902.	1836.	1789.
1756.	1734.	1719.	1709.	1703.	1699.	1637.	1428.	1224.	1134.
1049.	967.	890.	818.	750.	687.	628.	582.	540.	500.
462.	427.	394.	364.	335.	308.	292.	282.	276.	271.
266.	261.	256.	252.	248.	244.	240.	236.	232.	229.
226.	222.	219.	217.	214.	211.	209.	206.	204.	202.
200.	198.	196.	194.	192.	191.	189.	187.	186.	184.
183.	182.	181.	179.	178.	177.	176.	175.	174.	173.
173.	172.	171.	170.	169.	169.	168.	167.		

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	8528.	2470.	773.	773.	222502.
CMS	241.	70.	22.	22.	6301.
INCHES		24.98	31.25	31.25	31.25
MM		634.39	793.67	793.67	793.67
AC-FT		1225.	1532.	1532.	1532.
THOUS CU M		1511.	1890.	1890.	1890.

OVN

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                                   HYDROGRAPH ROUTING

                  RESERVOIR ROUTING FOR PARKER LAKE NO 2
                           ISTAQ   ICOMP   IECON   ITAPE    JPLT    JPRT   INAME  ISTAGE   IAUTO
                           OUTING      1      -0      -0       2       2       1      -0      -0
                                             ROUTING DATA
                  QLOSS    CLOSS     AVG    IRES   ISAME    IOPT    IPMP            LSTR
                   -0.0   -0.000   -0.00       1       1      -0      -0              -0

                           NSTPS   NSTDL     LAG   AMSKK       X     TSK   STORA  ISPRAT
                               1      -0      -0  -0.000  -0.000  -0.000   -772.      -1

 STAGE       771.8     772.0     773.0     774.0     775.0     776.0     777.0     778.0     779.0     780.0
             781.0     782.0     783.0     784.0     785.0

 FLOW           0.        0.        7.       19.       34.       52.       73.      127.      481.     2588.
             4681.     5355.     6824.     8293.     9746.

CAPACITY=       0.       12.       63.      115.      169.      224.      281.      340.      400.      462.
              525.      591.      660.      730.      804.

ELEVATION=     772.      772.      773.      774.      775.      776.      777.      778.      779.      780.
               781.      782.      783.      784.      785.

                        CREL   SPWID    COQW    EXPW   ELEVL    COQL   CAREA    EXPL
                       771.8    -0.0    -0.0    -0.0    -0.0    -0.0    -0.0    -0.0

                                          DAM DATA
                                   TOPEL    COQD    EXPD  DAMWID
                                   777.7    -0.0    -0.0     -0.

                               STATION OUTING, PLAN 1, RATIO 1

                              END-OF-PERIOD HYDROGRAPH ORDINATES

                                            OUTFLOW
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        0.
              0.        0.        0.        0.        0.        0.        0.        0.        0.        1.
              1.        1.        1.        1.        1.        1.        1.        1.        1.        1.
              1.        1.        2.        2.        2.        2.        2.        2.        2.        2.
```

UNITED COMPUTING SYSTEMS, INC.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2.	2.	2.	3.	3.	3.	3.	3.	3.	3.
3.	3.	4.	4.	4.	4.	4.	5.	5.	6.
6.	6.	7.	7.	8.	8.	8.	9.	9.	9.
10.	10.	10.	11.	11.	11.	12.	12.	12.	12.
13.	13.	13.	14.	14.	14.	14.	15.	15.	15.
15.	15.	16.	16.	16.	16.	16.	16.	16.	17.
17.	17.	17.	17.	17.	17.	17.	17.	17.	17.
17.	17.	18.	18.	18.	18.	18.	18.	18.	18.
18.	18.	18.	18.	18.	18.	18.	18.	18.	18.
19.	19.	19.	19.	19.	19.	19.	19.	19.	19.
19.	19.	19.	19.	19.	19.	19.	19.	19.	19.
19.	19.	19.	19.	19.	20.	20.	20.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	2.	2.	2.	2.	2.	2.	2.
2.	3.	3.	3.	3.	3.	3.	3.	4.	4.
4.	4.	4.	4.	5.	5.	5.	5.	5.	5.
6.	6.	6.	6.	6.	6.	7.	7.	7.	7.
7.	8.	8.	8.	8.	8.	9.	9.	9.	9.
9.	9.	10.	10.	10.	10.	10.	11.	11.	11.
11.	11.	12.	12.	12.	12.	13.	13.	14.	14.
15.	15.	16.	16.	17.	18.	18.	19.	19.	20.
21.	21.	22.	23.	24.	24.	25.	26.	26.	27.
28.	29.	30.	31.	32.	32.	33.	34.	35.	36.
37.	38.	39.	40.	41.	43.	45.	48.	51.	55.
58.	61.	63.	65.	67.	68.	70.	71.	73.	74.
75.	77.	78.	80.	81.	82.	83.	85.	86.	87.
88.	89.	91.	92.	93.	94.	95.	96.	97.	98.
99.	100.	100.	101.	102.	102.	103.	103.	104.	104.
105.	105.	105.	106.	106.	106.	107.	107.	107.	107.
108.	108.	108.	108.	109.	109.	109.	109.	110.	110.
110.	110.	111.	111.	111.	111.	111.	112.	112.	112.
112.	112.	113.	113.	113.	113.	113.	113.	114.	114.
114.	114.	114.	114.	115.	115.	115.	115.	115.	115.
115.	116.	116.	116.	116.	116.	116.	116.		

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	772.0

772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0
772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0
772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.2
772.2	772.2	772.2	772.2	772.2	772.2	772.3	772.3	772.3	772.3
772.3	772.3	772.4	772.4	772.4	772.4	772.4	772.4	772.5	772.5
772.5	772.5	772.5	772.6	772.6	772.6	772.6	772.7	772.8	772.8
772.9	773.0	773.0	773.0	773.1	773.1	773.1	773.2	773.2	773.2
773.2	773.3	773.3	773.3	773.3	773.4	773.4	773.4	773.4	773.5
773.5	773.5	773.5	773.6	773.6	773.6	773.6	773.6	773.7	773.7
773.7	773.7	773.7	773.7	773.7	773.8	773.8	773.8	773.8	773.8
773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.8	773.9
773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9
773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9	773.9
773.9	773.9	774.0	774.0	774.0	774.0	774.0	774.0	774.0	774.0
774.0	774.0	774.0	774.0	774.0	774.0	774.0	774.0	774.0	774.0
774.0	774.0	774.0	774.0	774.0	774.0	774.0	774.0		

PEAK OUTFLOW IS 20. AT TIME 24.00 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	20.	18.	6.	6.	1649.
CMS	1.	1.	0.	0.	47.
INCHES		.18	.23	.23	.23
MM		4.56	5.88	5.88	5.88
AC-FT		9.	11.	11.	11.
THOUS CU M		11.	14.	14.	14.

MAXIMUM STORAGE = 116.

OVN

STATION OUTING, PLAN 1, RATIO 2

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
2.	3.	3.	3.	3.	3.	3.	3.	4.	4.
4.	4.	4.	5.	5.	5.	5.	5.	5.	6.
6.	6.	6.	7.	7.	8.	8.	9.	9.	10.
10.	11.	11.	12.	12.	13.	14.	16.	18.	20.
22.	24.	26.	27.	29.	30.	31.	32.	33.	34.
35.	36.	38.	39.	40.	41.	42.	42.	43.	44.
45.	46.	47.	47.	48.	49.	49.	50.	51.	51.
52.	52.	53.	53.	54.	54.	55.	55.	55.	56.
56.	56.	56.	57.	57.	57.	57.	57.	58.	58.
58.	58.	58.	58.	58.	58.	58.	59.	59.	59.
59.	59.	59.	59.	59.	59.	59.	59.	59.	59.
59.	59.	59.	59.	59.	59.	59.	59.	59.	59.
59.	59.	59.	59.	59.	59.	59.	59.	59.	59.
59.	59.	59.	59.	59.	59.	59.	59.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	2.	2.	2.	2.
2.	3.	3.	3.	3.	4.	4.	4.	4.	5.
5.	5.	5.	6.	6.	6.	7.	7.	7.	8.
8.	8.	9.	9.	9.	10.	10.	10.	11.	11.
11.	12.	12.	12.	13.	13.	13.	14.	14.	14.
15.	15.	16.	16.	16.	17.	17.	18.	18.	18.
19.	19.	20.	20.	20.	21.	21.	22.	22.	22.
23.	23.	24.	24.	25.	25.	26.	27.	28.	29.
30.	31.	32.	33.	34.	36.	37.	38.	39.	41.
42.	44.	45.	47.	48.	49.	51.	53.	54.	56.
57.	59.	61.	63.	65.	67.	69.	71.	73.	76.
78.	80.	82.	85.	87.	91.	95.	102.	110.	119.

127.	134.	140.	145.	150.	154.	159.	162.	166.	170.
173.	177.	180.	183.	186.	190.	192.	195.	198.	201.
203.	205.	208.	210.	213.	215.	217.	219.	221.	223.
224.	226.	227.	228.	229.	230.	231.	232.	233.	234.
235.	236.	236.	237.	237.	238.	238.	239.	239.	240.
240.	240.	241.	241.	241.	242.	242.	242.	242.	242.
243.	243.	243.	243.	243.	243.	243.	243.	243.	243.
243.	243.	243.	243.	243.	244.	244.	244.	244.	244.
244.	244.	244.	244.	244.	244.	244.	244.	244.	244.
244.	244.	243.	243.	243.	243.	243.	243.		

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	772.0	772.0	772.0	772.0	772.0	772.0
772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0
772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.1	772.1
772.1	772.1	772.1	772.2	772.2	772.2	772.2	772.2	772.2	772.2
772.2	772.2	772.2	772.2	772.2	772.3	772.3	772.3	772.3	772.3
772.4	772.4	772.4	772.4	772.4	772.5	772.5	772.5	772.5	772.6
772.6	772.6	772.7	772.7	772.7	772.7	772.8	772.8	772.8	772.9
772.9	772.9	773.0	773.0	773.0	773.1	773.1	773.2	773.2	773.2
773.3	773.3	773.4	773.4	773.5	773.5	773.6	773.7	773.9	774.1
774.2	774.3	774.5	774.6	774.7	774.7	774.8	774.9	775.0	775.0
775.1	775.1	775.2	775.3	775.3	775.4	775.4	775.5	775.5	775.6
775.6	775.7	775.7	775.7	775.8	775.8	775.9	775.9	775.9	776.0
776.0	776.0	776.0	776.1	776.1	776.1	776.1	776.1	776.2	776.2
776.2	776.2	776.2	776.2	776.2	776.2	776.2	776.3	776.3	776.3
776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3
776.3	776.3	776.3	776.3	776.3	776.3	776.3	776.3		

PEAK OUTFLOW IS 59. AT TIME 22.83 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	59.	57.	19.	19.	5420.
CMS	2.	2.	1.	1.	153.
INCHES		.58	.76	.76	.76
MM		14.73	19.33	19.33	19.33
AC-FT		28.	37.	37.	37.
THOUS CU M		35.	46.	46.	46.

MAXIMUM STORAGE = 244.

STATION OUTING, PLAN 1, RATIO 3

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	2.
2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
2.	2.	2.	3.	3.	3.	3.	3.	3.	3.
3.	3.	3.	3.	3.	4.	4.	4.	4.	4.
4.	5.	5.	5.	5.	5.	6.	6.	6.	6.
7.	7.	8.	9.	9.	10.	11.	11.	12.	13.
13.	14.	15.	16.	16.	17.	18.	19.	20.	21.
22.	23.	24.	25.	26.	28.	30.	33.	37.	42.
46.	50.	54.	58.	61.	63.	66.	68.	70.	72.
76.	80.	85.	89.	93.	97.	101.	104.	108.	111.
114.	117.	120.	123.	126.	136.	153.	167.	179.	188.
196.	202.	207.	211.	214.	216.	218.	219.	220.	220.
220.	219.	218.	217.	215.	213.	211.	209.	206.	204.
202.	199.	196.	194.	191.	188.	186.	183.	180.	177.
174.	172.	169.	166.	163.	161.	158.	155.	153.	150.
147.	145.	142.	140.	137.	135.	133.	130.	128.	127.
127.	126.	126.	126.	125.	125.	125.	124.	124.	124.
123.	123.	123.	122.	122.	122.	121.	121.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	2.	2.	2.	2.	2.	2.	3.	3.	3.
3.	4.	4.	5.	5.	5.	6.	6.	6.	7.
7.	8.	8.	9.	9.	9.	10.	10.	11.	11.
12.	12.	13.	13.	14.	14.	15.	15.	16.	16.
17.	18.	18.	19.	19.	20.	20.	21.	21.	22.
23.	23.	24.	24.	25.	26.	26.	27.	27.	28.
29.	29.	30.	30.	31.	32.	32.	33.	34.	34.
35.	35.	36.	37.	37.	38.	39.	41.	42.	44.
45.	47.	49.	51.	52.	54.	56.	58.	60.	62.
64.	67.	69.	72.	74.	77.	79.	82.	85.	87.
90.	94.	97.	100.	104.	107.	111.	114.	118.	121.
125.	129.	132.	136.	141.	146.	154.	165.	178.	193.
207.	212.	230.	239.	247.	255.	261.	267.	273.	279.

284.	289.	293.	298.	303.	307.	311.	315.	319.	322.
326.	329.	332.	335.	338.	341.	344.	347.	349.	350.
351.	353.	353.	354.	355.	355.	355.	355.	356.	356.
355.	355.	355.	355.	355.	354.	354.	354.	353.	353.
352.	352.	352.	351.	351.	350.	350.	349.	349.	348.
348.	347.	347.	346.	346.	345.	345.	345.	344.	344.
343.	343.	342.	342.	341.	341.	341.	340.	340.	340.
339.	339.	338.	338.	338.	337.	337.	337.	336.	336.
335.	335.	335.	334.	334.	334.	333.	333.		

UNITED COMPUTING SYSTEMS, INC.

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	772.0	772.0	772.0	772.0	772.0	772.0
772.0	772.0	772.0	772.0	772.0	772.0	772.1	772.1	772.1	772.1
772.1	772.1	772.1	772.1	772.1	772.2	772.2	772.2	772.2	772.2
772.2	772.2	772.2	772.2	772.3	772.3	772.3	772.3	772.3	772.3
772.3	772.3	772.4	772.4	772.4	772.4	772.4	772.4	772.4	772.4
772.4	772.5	772.5	772.5	772.5	772.5	772.5	772.6	772.6	772.6
772.7	772.7	772.7	772.8	772.8	772.8	772.9	772.9	772.9	773.0
773.0	773.1	773.1	773.2	773.2	773.3	773.3	773.4	773.4	773.5
773.5	773.6	773.7	773.7	773.8	773.8	773.9	774.0	774.1	774.1
774.2	774.3	774.3	774.4	774.5	774.6	774.7	774.9	775.2	775.4
775.7	775.9	776.1	776.3	776.4	776.5	776.6	776.8	776.9	777.0
777.0	777.1	777.2	777.3	777.4	777.4	777.5	777.6	777.6	777.7
777.8	777.8	777.9	777.9	778.0	778.0	778.1	778.1	778.1	778.2
778.2	778.2	778.2	778.2	778.2	778.3	778.3	778.3	778.3	778.3
778.3	778.3	778.3	778.3	778.2	778.2	778.2	778.2	778.2	778.2
778.2	778.2	778.2	778.2	778.2	778.2	778.2	778.2	778.1	778.1
778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1
778.1	778.0	778.0	778.0	778.0	778.0	778.0	778.0	778.0	778.0
778.0	778.0	778.0	778.0	778.0	778.0	778.0	777.9	777.9	777.9
777.9	777.9	777.9	777.9	777.9	777.9	777.9	777.9		

PEAK OUTFLOW IS 220. AT TIME 19.17 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	220.	168.	52.	52.	14994.
CMS	6.	5.	1.	1.	425.
INCHES		1.70	2.11	2.11	2.11
MM		43.07	53.48	53.48	53.48
AC-FT		83.	103.	103.	103.
THOUS CU M		103.	127.	127.	127.

MAXIMUM STORAGE = 356.

OVN

STATION OUTING, PLAN 1, RATIO 4

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	2.
2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
3.	3.	3.	3.	3.	3.	3.	3.	3.	3.
4.	4.	4.	4.	4.	4.	4.	4.	4.	4.
5.	5.	5.	5.	5.	5.	5.	6.	6.	6.
6.	7.	7.	8.	9.	9.	10.	11.	11.	12.
13.	14.	15.	15.	16.	17.	18.	19.	20.	21.
22.	24.	25.	26.	28.	29.	30.	32.	33.	35.
37.	39.	40.	42.	44.	47.	50.	55.	63.	71.
97.	104.	118.	143.	203.	251.	291.	326.	357.	385.
411.	435.	457.	478.	561.	637.	690.	723.	743.	754.
759.	759.	758.	755.	751.	747.	740.	724.	696.	662.
628.	593.	559.	525.	492.	477.	471.	464.	457.	449.
441.	433.	425.	416.	408.	400.	391.	383.	375.	367.
359.	351.	343.	336.	328.	321.	314.	307.	300.	293.
287.	281.	274.	268.	262.	256.	251.	245.	240.	234.
229.	224.	219.	214.	210.	205.	201.	196.	192.	188.
184.	180.	177.	173.	170.	166.	163.	160.	156.	153.
150.	148.	145.	142.	140.	137.	135.	133.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	2.	2.	2.	2.	2.	2.	2.
2.	2.	2.	2.	2.	3.	3.	3.	4.	4.
5.	5.	6.	6.	7.	7.	8.	8.	9.	9.
10.	10.	11.	11.	12.	13.	13.	14.	15.	15.
16.	17.	17.	18.	19.	19.	20.	21.	21.	22.
23.	24.	24.	25.	26.	27.	27.	28.	29.	30.
30.	31.	32.	33.	34.	34.	35.	36.	37.	38.
38.	39.	40.	41.	42.	43.	43.	44.	45.	46.
47.	48.	49.	50.	51.	52.	53.	55.	57.	59.
61.	64.	66.	69.	71.	74.	77.	80.	83.	86.
89.	93.	96.	100.	103.	107.	111.	114.	118.	122.
126.	131.	136.	141.	146.	151.	156.	161.	167.	172.
179.	183.	188.	194.	200.	208.	218.	233.	253.	275.
226.	314.	330.	342.	353.	361.	368.	373.	379.	384.

388.	392.	396.	399.	402.	405.	406.	407.	408.	408.
408.	408.	408.	408.	408.	408.	408.	407.	406.	405.
404.	403.	402.	401.	400.	399.	398.	397.	396.	394.
393.	392.	390.	389.	388.	386.	385.	383.	382.	380.
379.	378.	376.	375.	374.	373.	372.	370.	369.	368.
367.	366.	365.	364.	363.	362.	361.	360.	359.	358.
357.	356.	355.	355.	354.	353.	352.	352.	351.	350.
349.	349.	348.	348.	347.	346.	346.	345.	345.	344.
344.	343.	343.	342.	342.	341.	341.	341.		

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	772.0
772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.0	772.1	772.1
772.1	772.1	772.1	772.1	772.1	772.1	772.2	772.2	772.2	772.2
772.2	772.2	772.2	772.3	772.3	772.3	772.3	772.3	772.3	772.3
772.4	772.4	772.4	772.4	772.4	772.4	772.5	772.5	772.5	772.5
772.5	772.5	772.6	772.6	772.6	772.6	772.6	772.6	772.7	772.7
772.7	772.7	772.7	772.7	772.8	772.8	772.8	772.8	772.9	772.9
773.0	773.0	773.1	773.1	773.2	773.2	773.3	773.3	773.4	773.4
773.5	773.6	773.6	773.7	773.8	773.8	773.9	774.0	774.1	774.1
774.2	774.3	774.4	774.5	774.6	774.7	774.8	774.9	775.0	775.1
775.2	775.3	775.4	775.5	775.6	775.7	775.9	776.2	776.5	776.9
777.2	777.6	777.8	778.0	778.2	778.3	778.5	778.6	778.6	778.7
778.8	778.9	778.9	779.0	779.0	779.1	779.1	779.1	779.1	779.1
779.1	779.1	779.1	779.1	779.1	779.1	779.1	779.1	779.1	779.1
779.1	779.1	779.0	779.0	779.0	779.0	779.0	779.0	778.9	778.9
778.9	778.9	778.8	778.8	778.8	778.8	778.7	778.7	778.7	778.7
778.7	778.6	778.6	778.6	778.6	778.5	778.5	778.5	778.5	778.5
778.5	778.4	778.4	778.4	778.4	778.4	778.3	778.3	778.3	778.3
778.3	778.3	778.3	778.2	778.2	778.2	778.2	778.2	778.2	778.2
778.2	778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1
778.1	778.1	7 .0	778.0	778.0	778.0	778.0	778.0		

PEAK OUTFLOW IS 759. AT TIME 17.67 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	759.	435.	127.	127.	36523.
CMS	22.	12.	4.	4.	1034.
INCHES		4.40	5.13	5.13	5.13
MM		111.84	130.28	130.28	130.28
AC-FT		216.	252.	252.	252.
THOUS CU M		266.	310.	310.	310.

MAXIMUM STORAGE = 408.

STATION OUTING, PLAN 1, RATIO 5

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	2.	2.	2.	2.	2.	2.	2.
2.	2.	3.	3.	3.	3.	3.	3.	3.	3.
4.	4.	4.	4.	4.	4.	4.	4.	4.	5.
5.	5.	5.	5.	5.	5.	6.	6.	6.	6.
6.	6.	6.	7.	7.	7.	8.	8.	9.	10.
10.	11.	12.	13.	14.	14.	15.	16.	17.	18.
19.	21.	22.	23.	24.	26.	27.	29.	30.	32.
33.	35.	37.	39.	41.	43.	46.	48.	50.	52.
55.	58.	60.	63.	66.	70.	77.	95.	119.	239.
389.	653.	1149.	1437.	1578.	1621.	1606.	1561.	1507.	1454.
1407.	1364.	1326.	1293.	1263.	1233.	1201.	1167.	1132.	1099.
1069.	1041.	1017.	995.	975.	958.	940.	913.	871.	824.
777.	731.	687.	643.	602.	562.	524.	488.	476.	469.
462.	454.	446.	438.	430.	421.	413.	405.	397.	389.
381.	373.	365.	357.	350.	343.	336.	328.	322.	315.
308.	302.	295.	289.	283.	277.	271.	266.	260.	255.
249.	244.	239.	234.	230.	225.	220.	216.	212.	208.
204.	200.	196.	192.	188.	185.	182.	178.	175.	172.
169.	166.	163.	160.	157.	155.	152.	150.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	2.	2.	2.	2.	2.	2.	2.
2.	3.	3.	3.	3.	3.	4.	4.	5.	5.
6.	6.	7.	8.	8.	9.	9.	10.	11.	11.
12.	13.	14.	14.	15.	16.	17.	18.	18.	19.
20.	21.	22.	22.	23.	24.	25.	26.	27.	28.
29.	30.	31.	31.	32.	33.	34.	35.	36.	37.
38.	39.	40.	41.	42.	43.	44.	45.	46.	47.
48.	50.	51.	52.	53.	54.	55.	56.	57.	58.
59.	61.	62.	63.	64.	66.	67.	70.	73.	75.
79.	82.	85.	89.	92.	96.	99.	103.	107.	111.
115.	120.	124.	129.	134.	139.	144.	150.	155.	160.
166.	172.	178.	185.	191.	198.	205.	212.	219.	226.
233.	240.	247.	254.	262.	272.	285.	304.	331.	359.
384.	405.	420.	428.	432.	433.	433.	432.	430.	428.
427.	426.	425.	424.	423.	422.	421.	420.	419.	418.

417.	416.	416.	415.	414.	414.	413.	413.	411.	410.
409.	407.	406.	405.	404.	402.	401.	400.	399.	398.
397.	395.	394.	393.	391.	390.	388.	387.	386.	384.
383.	382.	380.	379.	378.	376.	375.	374.	373.	372.
371.	369.	368.	367.	366.	365.	364.	363.	362.	361.
361.	360.	359.	358.	357.	356.	356.	355.	354.	353.
353.	352.	351.	351.	350.	350.	349.	348.	348.	347.
347.	346.	346.	345.	345.	344.	344.	344.		

UNITED COMPUTING SYSTEMS, INC.

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	772.0	772.0	772.0	772.0
772.0	772.0	772.0	772.0	772.1	772.1	772.1	772.1	772.1	772.1
772.2	772.2	772.2	772.2	772.2	772.2	772.3	772.3	772.3	772.3
772.3	772.3	772.4	772.4	772.4	772.4	772.4	772.5	772.5	772.5
772.5	772.5	772.6	772.6	772.6	772.6	772.6	772.7	772.7	772.7
772.7	772.7	772.8	772.8	772.8	772.8	772.8	772.9	772.9	772.9
772.9	773.0	773.0	773.0	773.0	773.1	773.1	773.1	773.2	773.2
773.3	773.4	773.4	773.5	773.6	773.6	773.7	773.8	773.8	773.9
774.0	774.1	774.2	774.3	774.4	774.4	774.5	774.6	774.7	774.8
775.0	775.1	775.2	775.3	775.4	775.5	775.7	775.8	775.9	776.0
776.2	776.3	776.4	776.5	776.7	776.8	777.1	777.4	777.8	778.3
778.7	779.1	779.3	779.5	779.5	779.5	779.5	779.5	779.5	779.5
779.4	779.4	779.4	779.4	779.4	779.4	779.3	779.3	779.3	779.3
779.3	779.3	779.3	779.2	779.2	779.2	779.2	779.2	779.2	779.2
779.1	779.1	779.1	779.1	779.1	779.0	779.0	779.0	779.0	779.0
778.9	778.9	778.9	778.9	778.9	778.8	778.8	778.8	778.8	778.7
778.7	778.7	778.7	778.6	778.6	778.6	778.6	778.6	778.5	778.5
778.5	778.5	778.5	778.5	778.4	778.4	778.4	778.4	778.4	778.4
778.3	778.3	778.3	778.3	778.3	778.3	778.3	778.3	778.2	778.2
778.2	778.2	778.2	778.2	778.2	778.2	778.2	778.1	778.1	778.1
778.1	778.1	778.1	778.1	778.1	778.1	778.1	778.1		

PEAK OUTFLOW IS 1621. AT TIME 16.33 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	1621.	723.	204.	204.	58827.
CMS	46.	20.	6.	6.	1666.
INCHES		7.31	8.26	8.26	8.26
MM		185.58	209.84	209.84	209.84
AC-FT		358.	405.	405.	405.
THOUS CU M		442.	500.	500.	500.

MAXIMUM STORAGE = 433.

CVN

STATION OUTING, PLAN 1, RATIO 6

END-OF-PERIOD HYDROGRAPH ORDINATES

OUTFLOW

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	1.	1.	1.	1.	1.	1.	2.	2.
2.	2.	2.	2.	3.	3.	3.	3.	3.	4.
4.	4.	4.	4.	5.	5.	5.	5.	6.	6.
6.	6.	7.	7.	8.	8.	9.	9.	10.	10.
11.	12.	12.	13.	13.	14.	15.	15.	16.	17.
17.	18.	19.	19.	20.	21.	22.	22.	23.	24.
25.	25.	26.	27.	28.	29.	30.	31.	33.	35.
37.	40.	42.	45.	47.	50.	53.	57.	60.	64.
68.	72.	80.	90.	100.	111.	121.	154.	220.	284.
350.	416.	490.	841.	1126.	1358.	1544.	1695.	1815.	1912.
1985.	2033.	2066.	2110.	2198.	2383.	2778.	3481.	4387.	4864.
5081.	5215.	5268.	5255.	5192.	5093.	4969.	4829.	4682.	4233.
3851.	3530.	3265.	3048.	2870.	2717.	2579.	2446.	2324.	2216.
2123.	2043.	1976.	1921.	1876.	1839.	1803.	1746.	1657.	1557.
1459.	1364.	1272.	1184.	1100.	1019.	943.	872.	806.	746.
690.	628.	590.	546.	504.	479.	472.	464.	457.	450.
443.	436.	429.	422.	415.	408.	402.	395.	389.	383.
377.	371.	365.	359.	353.	348.	342.	337.	332.	327.
322.	317.	312.	307.	303.	298.	294.	290.	286.	282.
278.	274.	271.	267.	263.	260.	257.	254.	250.	247.
244.	242.	239.	236.	233.	231.	228.	226.		

STORAGE

0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.	0.	0.	0.	0.	0.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	2.	2.	2.	2.	2.
2.	2.	2.	2.	3.	3.	3.	3.	3.	3.
3.	3.	4.	4.	4.	4.	4.	4.	5.	5.
5.	5.	5.	6.	6.	7.	8.	8.	9.	10.
12.	13.	14.	15.	16.	18.	19.	20.	22.	23.
25.	26.	28.	29.	31.	32.	34.	36.	37.	39.
41.	42.	44.	46.	48.	49.	51.	53.	55.	57.
59.	61.	63.	65.	67.	70.	72.	74.	77.	79.
81.	84.	86.	89.	91.	94.	97.	99.	102.	104.
107.	110.	112.	115.	118.	121.	123.	126.	129.	132.
135.	137.	140.	143.	146.	150.	154.	159.	165.	172.
179.	186.	194.	202.	211.	219.	228.	237.	246.	256.
267.	277.	288.	299.	310.	321.	333.	344.	355.	366.
378.	389.	400.	411.	419.	426.	431.	435.	439.	442.
444.	445.	446.	448.	450.	456.	467.	489.	516.	543.
564.	578.	582.	581.	575.	565.	553.	540.	525.	512.

500.	490.	482.	476.	470.	466.	461.	457.	454.	451.
448.	446.	444.	442.	441.	440.	439.	437.	434.	431.
429.	426.	423.	421.	418.	416.	413.	411.	409.	408.
406.	405.	403.	402.	401.	400.	398.	397.	396.	395.
393.	392.	391.	390.	389.	388.	386.	385.	384.	383.
382.	381.	380.	379.	378.	377.	376.	375.	375.	374.
373.	372.	371.	370.	370.	369.	368.	367.	367.	366.
365.	365.	364.	364.	363.	362.	362.	361.	361.	360.
360.	359.	359.	358.	358.	357.	357.	357.		

STAGE

771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8
771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.8	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9
771.9	771.9	771.9	771.9	771.9	771.9	771.9	771.9	772.0	772.0
772.0	772.0	772.0	772.1	772.1	772.1	772.1	772.2	772.2	772.2
772.3	772.3	772.3	772.3	772.4	772.4	772.4	772.5	772.5	772.5
772.6	772.6	772.6	772.7	772.7	772.7	772.8	772.8	772.8	772.9
772.9	773.0	773.0	773.0	773.1	773.1	773.2	773.2	773.3	773.3
773.4	773.4	773.5	773.5	773.5	773.6	773.6	773.7	773.7	773.8
773.8	773.9	774.0	774.0	774.1	774.1	774.2	774.2	774.3	774.3
774.4	774.4	774.5	774.5	774.6	774.6	774.7	774.8	774.9	775.1
775.2	775.3	775.5	775.6	775.8	775.9	776.1	776.2	776.4	776.6
776.7	776.9	777.1	777.3	777.5	777.7	777.9	778.1	778.3	778.4
778.6	778.8	779.0	779.2	779.3	779.4	779.5	779.6	779.6	779.7
779.7	779.7	779.8	779.8	779.8	779.9	780.1	780.4	780.9	781.3
781.6	781.8	781.9	781.9	781.8	781.6	781.4	781.2	781.0	780.8
780.6	780.5	780.3	780.2	780.1	780.1	780.0	779.9	779.9	779.8
779.8	779.7	779.7	779.7	779.7	779.6	779.6	779.6	779.6	779.5
779.5	779.4	779.4	779.3	779.3	779.3	779.2	779.2	779.2	779.1
779.1	779.1	779.1	779.0	779.0	779.0	779.0	779.0	778.9	778.9
778.9	778.9	778.9	778.8	778.8	778.8	778.8	778.8	778.7	778.7
778.7	778.7	778.7	778.7	778.6	778.6	778.6	778.6	778.6	778.6
778.5	778.5	778.5	778.5	778.5	778.5	778.5	778.5	778.4	778.4
778.4	778.4	778.4	778.4	778.4	778.4	778.4	778.4	778.3	778.3
778.3	778.3	778.3	778.3	778.3	778.3	778.3	778.3		

PEAK OUTFLOW IS 5268. AT TIME 16.08 HOURS

	PEAK	6-HOUR	24-HOUR	72-HOUR	TOTAL VOLUME
CFS	5268.	2140.	593.	593.	170713.
CMS	149.	61.	17.	17.	4834.
INCHES		21.63	23.97	23.97	23.97
MM		549.50	608.94	608.94	608.94
AC-FT		1061.	1176.	1176.	1176.
THOUS CU M		1309.	1450.	1450.	1450.

MAXIMUM STORAGE = 583.

PEAK FLOW AND STORAGE (END OF PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
FLOWS IN CUBIC FEET PER SECOND (CUBIC METERS PER SECOND)
AREA IN SQUARE MILES (SQUARE KILOMETERS)

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO FLOWS RATIO 1 .10	RATIO 2 .20	RATIO 3 .30	RATIO 4 .40	RATIO 5 .50	RATIO 6 1.00
HYDROGRAPH AT	NFLOW	.45	1	510.	1020.	1531.	2041.	2551.	5102.
		(1.17)		(14.45)(	28.90)(	43.34)(	57.79)(	72.24)(	144.48)(
ROUTED TO	OUTING	.45	1	97.	397.	894.	1488.	1935.	3879.
		(1.17)		(2.76)(	11.25)(	25.32)(	42.13)(	54.80)(	109.84)(
HYDROGRAPH AT	NFLOW	.47	1	533.	1066.	1599.	2132.	2664.	5329.
		(1.22)		(15.09)(	30.18)(	45.27)(	60.36)(	75.45)(	150.90)(
2 COMBINED		.92	1	575.	1294.	2176.	3297.	4287.	8528.
		(2.38)		(16.30)(	36.65)(	61.63)(	93.37)(	121.39)(	241.50)(
ROUTED TO	OUTING	.92	1	20.	59.	220.	759.	1621.	5268.
		(2.38)		(.55)(	1.67)(	6.23)(	21.50)(	45.90)(	149.19)(

SUMMARY OF DAM SAFETY ANALYSIS

PARKER LAKE #1

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	808.00	808.00	810.00
STORAGE	0.	0.	40.
OUTFLOW	0.	0.	49.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
.10	810.32	.32	48.	97.	3.92	17.17	0.00
.20	811.46	1.46	76.	397.	7.33	16.08	0.00
.30	812.08	2.08	94.	894.	9.25	16.00	0.00
.40	812.38	2.38	102.	1488.	10.67	15.92	0.00
.50	812.62	2.62	109.	1935.	12.17	15.92	0.00
1.00	813.71	3.71	143.	3879.	15.08	15.92	0.00

SUMMARY OF DAM SAFETY ANALYSIS

PARKER LAKE #2

PLAN 1 .....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	771.80	771.80	777.70
STORAGE	0.	0.	322.
OUTFLOW	0.	0.	111.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
.10	774.03	0.00	116.	20.	0.00	24.00	0.00
.20	776.34	0.00	244.	59.	0.00	22.83	0.00
.30	778.26	.56	356.	220.	6.50	19.17	0.00
.40	779.13	1.43	408.	759.	8.00	17.67	0.00
.50	779.54	1.84	433.	1621.	8.33	16.33	0.00
1.00	781.87	4.17	583.	5268.	10.17	16.08	0.00