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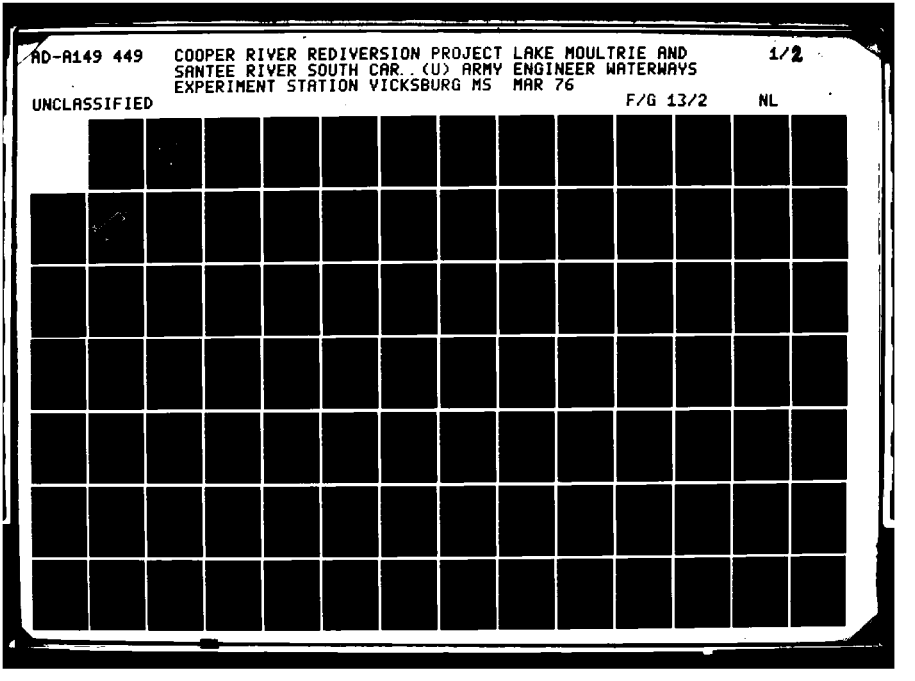

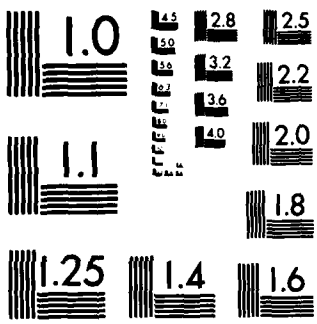

COOPER RIVER REDIVERSION PROJECT
LAKE MOULTRIE & SANTEE RIVER
SOUTH CAROLINA

BUSHY PARK
WATER SUPPLY TESTS

U.S. ARMY ENGINEER DISTRICT, CHARLESTON
CORPS OF ENGINEERS
CHARLESTON, SOUTH CAROLINA

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MARCH 1976

ABSTRACT

The Charleston Harbor model reproduced the Ashley, Cooper, and Wando Rivers, and a portion of the Atlantic Ocean. The model was of fixed-bed construction and was equipped with all the necessary appurtenances for accurate reproduction and measurement of tides, tidal currents, salinity intrusion, and other significant phenomena of the prototype.

Construction of the Santee-Cooper power project in 1940-1942 included diversion of flow from the Santee River into the Cooper River watershed. Average freshwater flow into Cooper River was increased from 72 cfs to 15,000 cfs, and maintenance dredging in Charleston rapidly increased from about 180,000 cu yd per year up to 10,000,000 cu yd today. Prior studies led to the conclusion that rediversion of a major portion of the Santee River flow would result in a substantial reduction in maintenance dredging in Charleston Harbor. The amount of Santee River flow to leave diverted into Cooper River became a critical value with respect to power generation at Pinopolis, water quality in Charleston Harbor, and the prevention of saltwater intrusion into the Back River Reservoir constructed to supply freshwater for the Bushy Park industrial area and the City of Charleston. The results of previous studies indicated that a weekly average flow of 3000 cfs would be satisfactory with respect to reduced maintenance dredging. The power requirements could also be satisfactorily met with a minimum weekly average flow of 3000 cfs. A detailed study involving various weekly schedules for release of the 3000 cfs on conditions in the upper reaches of Cooper River and the Bushy Park Reservoir was considered necessary.

Hydraulic and salinity tests were made for six weekly release schedules from the Pinopolis power plant. The first involved the continuous release of the existing weekly average freshwater discharge at the Pinopolis power generating station of 15,600 cfs, which is referred to as Schedule A. Schedules B, C, and D all involved release of the 3000-cfs weekly average flow; however, the respective daily flows were different. Schedule B had one day of 1325 cfs and six days of 3279 cfs; Schedule C had three days of zero flow and four days of 5250 cfs; and Schedule D had three days of 1200 cfs and four days of 4350 cfs. Schedule E reproduced a weekly average flow at Pinopolis of 3500 cfs, with 69 hours of zero flow, 3 hours of 28,500 cfs, and four days of 5250 cfs. Schedule BM also reproduced a weekly average flow at Pinopolis of 3500 cfs, but this schedule had one day of 1325 cfs and six days of 3860 cfs.

The results of the six tests indicated that, due to rediversion, tide levels in the upper Cooper River, Back River Reservoir, and the East Branch of the Cooper River were lowered by amounts between about 0.3 ft and 2.0 ft. Tides at stations in lower Cooper River (below mile 20), the Wando River, and the Ashley River were relatively unchanged. Surface and bottom ebb predominance was decreased drastically in the upper reaches of Cooper River, and was more nearly balanced throughout the length of Cooper River for rediversion conditions than for existing conditions. For existing conditions, the upstream limit of saltwater intrusion (100 ppm) was about Cooper River mile 25. For rediversion conditions, the upstream limit of saltwater intrusion was about mile 39 for Schedules B and D, mile 40.5 for Schedule C, and mile 36 for Schedules E and BM. The degree of salinity stratification was significantly reduced throughout the system for rediversion conditions.

PREFACE

This report presents the results of a model study ~~requested by the~~ previously U. S. Army Engineer District, Charleston, South Carolina. The study was performed during the period November 1973 to August 1974 in the existing Charleston Harbor model in the Hydraulics Laboratory, U. S. Army Engineer Waterways Experiment Station (WES), Vicksburg, Mississippi, under the direction of Mr. H. B. Simmons, Chief, Hydraulics Laboratory; Mr. F. A. Herrmann, Jr., Assistant Chief, Hydraulics Laboratory; Mr. R. A. Sager, Chief, Estuaries Division; Mr. W. H. Bobb, Chief, Interior Channel Branch; Mr. H. A. Benson, Project Engineer; and Mr. H. R. Smith, Senior Technician. Technical help was provided by Messrs. C. R. Herrington, J. Cessna, J. T. Cartwright, D. M. Stewart, and E. S. Jefferson. This report was prepared by Mr. Benson with the assistance of Messrs. Bobb, Herrmann, Sager, and Smith.

Director of the WES during the performance of this study was COL G. H. Hilt, CE. Technical Director was Mr. F. R. Brown.

CONTENTS

CONVERSION FACTORS, U. S. CUSTOMARY TO METRIC (SI) UNITS OF MEASUREMENT

U. S. customary units of measurement used in this report can be converted to metric (SI) units as follows:

Multiply	By	To Obtain
inches	2.54	centimetres
feet	0.3048	metres
miles (U. S. statute)	1.609344	kilometres
square feet	0.092903	square metres
square miles (U. S. statute)	2.58999	square kilometres
cubic yards	0.764555	cubic metres
feet per second	0.3048	metres per second
cubic feet per second	0.02831685	cubic metres per second

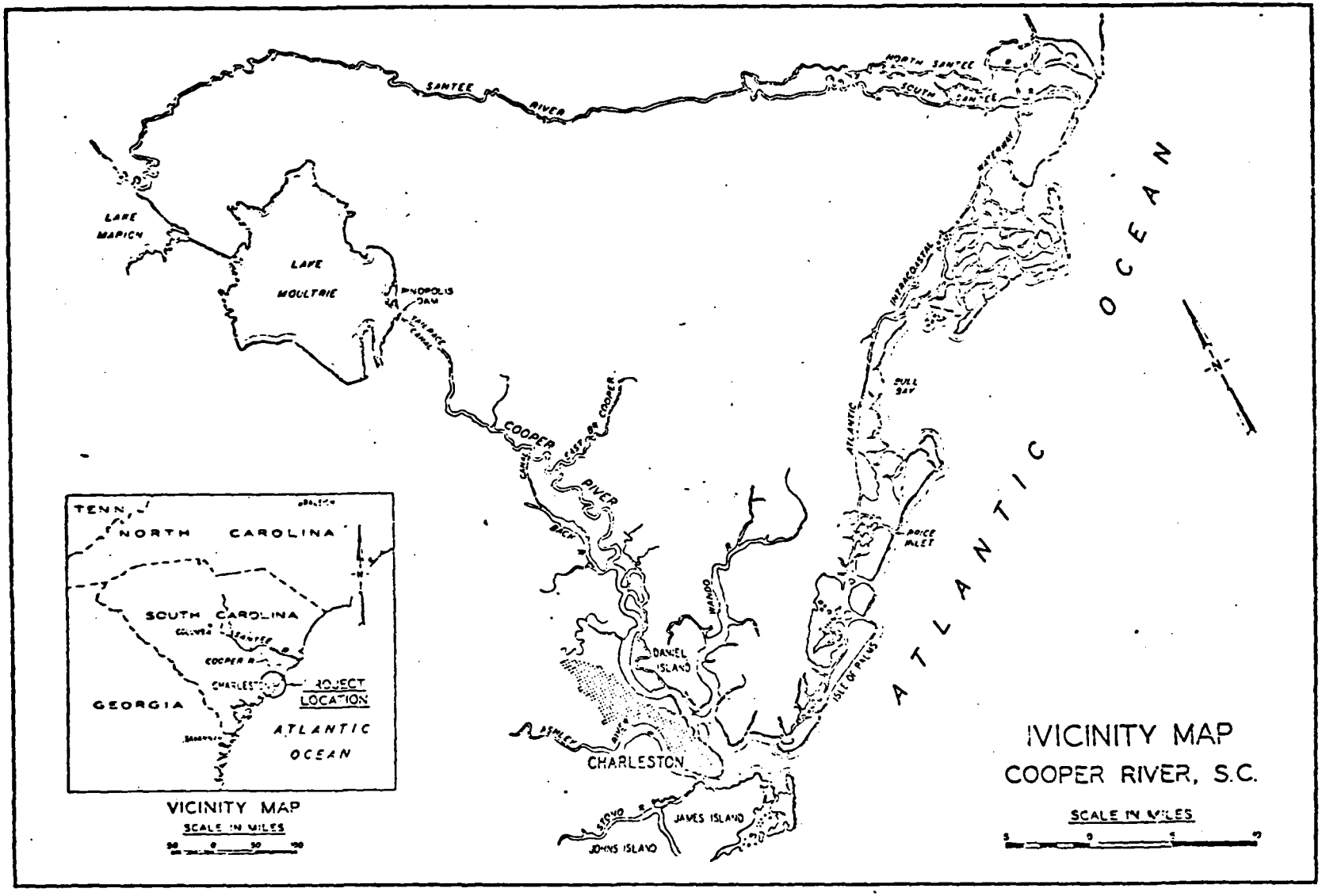

Figure 1. Vicinity map

COOPER RIVER REDIVERSION PROJECT
BUSHY PARK WATER SUPPLY TESTS
Hydraulic Model Investigation

PART I: INTRODUCTION

The Prototype

1. Charleston Harbor, an important South Carolina seaport, is located on the Atlantic Coast about 110 miles* southwest of the North Carolina-South Carolina state line, and is formed by the junction of the Ashley, Wando, and Cooper Rivers as shown in Figure 1. Prior to 1940, the estuary had a drainage area of about 1400 square miles, and the average freshwater inflow from all tributaries was on the order of 415 cfs (261 cfs from Ashley River, 82 cfs from Wando, and 72 cfs from Cooper River). The estuary was of the homogeneous type, being almost entirely salt water. Construction of the Santee-Cooper Hydroelectric Project was begun in 1940 and completed in 1942 and included a dam in the West Branch of the Cooper River at Pinopolis, SC, and diversion of Santee River flow through the Pinopolis power plant into the West Branch of the Cooper River. The drainage area of the Charleston estuary was thus increased to about 16,000 square miles, and the average annual freshwater inflow of the Cooper River was increased from 72 cfs to about 15,000 cfs. The estuary was changed to a partially mixed type, and density currents became a controlling factor with respect to shoaling in the harbor. Prior to completion of the Santee-Cooper power project, maintenance dredging in Charleston Harbor averaged about 180,000 cu yd per year. Since completion of the project, annual maintenance requirements in the navigation channels steadily increased up to 10,000,000 cu yd at the present time. The results of previous studies indicated that rediversion of a major portion of the Santee River flow from Cooper River back to the Santee

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* A table of factors for converting U. S. customary units of measurement to metric (SI) units is presented on page 3.

River is the best way to obtain a substantial reduction in maintenance dredging in Charleston Harbor. However, continuation of as much flow as possible through Pinopolis was considered desirable to minimize change to the Cooper River and harbor environment and to accommodate downstream needs of Bushy Park Reservoir at mile 43 and the Jefferies Steam Electric Generating Plant just below Pinopolis. The existing Cooper River Federal navigation channel and the portion maintained by the Navy have project depths of -35 ft mlw*.

Purpose of Model Study

2. The purpose of the model study was to determine the effects on tidal heights, current velocities, and salinities of various weekly hydrographs at Pinopolis which could result from the proposed rediversion project. The existing hydrograph has a weekly average flow of 15,600 cfs. Five suggested rediversion schedules were tested, including three with a weekly average flow of 3000 cfs and two with a weekly average flow of 3500 cfs.

* In this report, mlw refers to mean low water for the Custom House tide gage located on the Charleston waterfront (gage CR2 as shown in Plate 2).

PART II: THE MODEL

Description

3. The Charleston Harbor model reproduced the entire tidal portions of the Ashley, Cooper, and Wando Rivers and a portion of the Atlantic Ocean within the limits shown in Plate 1. The Ashley and Wando Rivers and the East Branch of the Cooper were reproduced to correct lengths and cross sections, but, in order to conserve space, were realigned to conform to the general alignment of the Cooper River.

4. The model was constructed to linear scale ratios, model to prototype, of 1:2000 horizontally and 1:100 vertically. These scale ratios fixed the following model-to-prototype relations: slope, 20:1; velocity, 1:10; time, 1:200; discharge, 1:2,000,000; and volume, 1:400,000,000. The salinity scale ratio was 1:1, and the model ocean supply was maintained at a salinity of 30,000 parts per million (ppm) total salts. One prototype tidal cycle of 12 hr and 25 min was reproduced in the model in 3.725 min. The model was approximately 137 ft long, 46 ft wide at the widest point, and covered an area of about 3600 sq ft. It was constructed within a shelter to protect it from the weather and to permit uninterrupted operation.

Model Appurtenances

5. The model was equipped with the necessary appurtenances to reproduce and measure all pertinent phenomena such as tidal elevations, saltwater concentrations, current velocities, freshwater inflows, and dye concentrations. Apparatus used in connection with the reproduction and measurement of these phenomena included an automatic tide generator and recorder, tide gages, conductivity (salinity) meters, chemical titration equipment, current velocity meters, freshwater inflow measuring devices, skimming and measuring weirs, and fluorometers for dye concentration determinations.

Tide generator and recorder

6. The reproduction of tidal action in the model was accomplished by means of a tide generator, located in the model ocean, which maintained a differential between a pumped inflow of salt water to the model and a gravity return flow to the supply sump as required to reproduce all characteristics of the prototype tides at the ocean control tide gage. A schematic drawing of the operation of this system is presented in Figure 2.

Tide gages

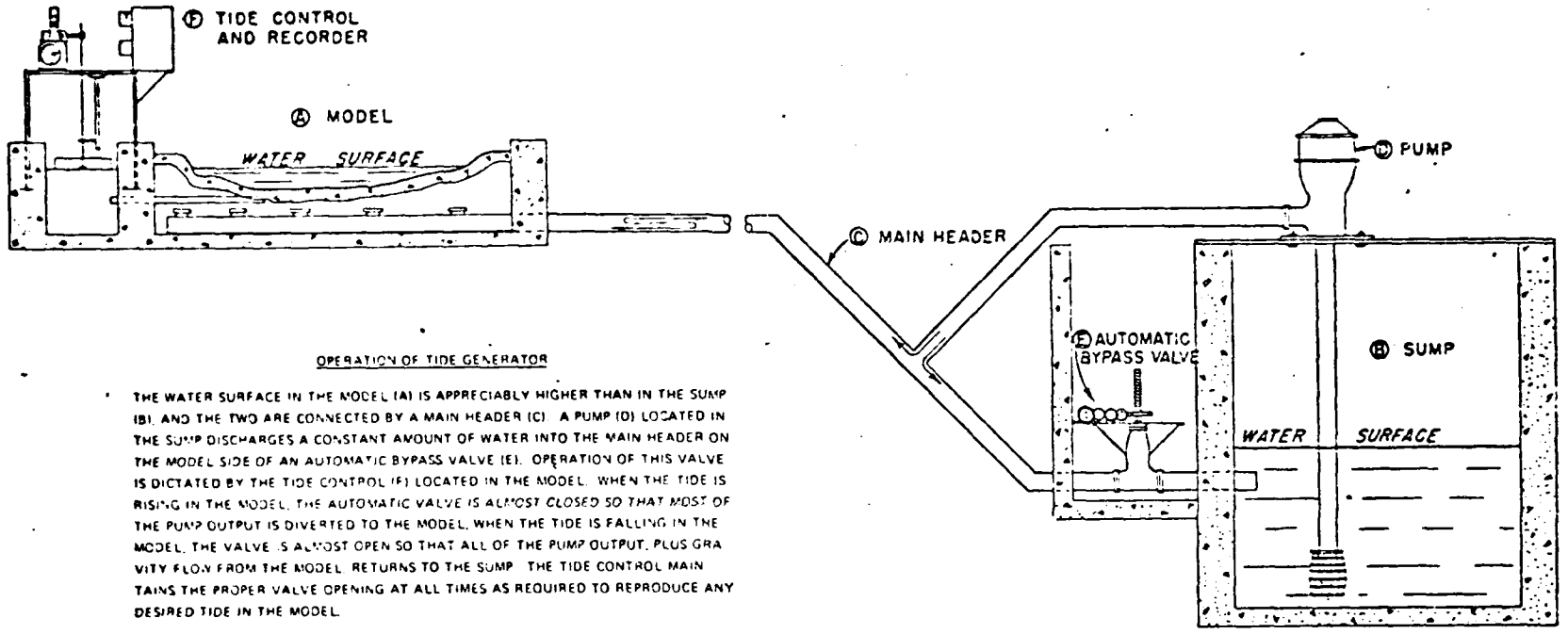
7. Automatic water surface transmitters were installed at the locations shown in Plate 2. Brush recorders were used to record the tidal elevations throughout the model. Portable point gages were used to measure tidal elevations at special points of interest.

Salinity meters

8. All salinity concentrations of samples taken from the model throughout the various tests with a concentration in excess of about 1.0 parts per thousand (ppt) were determined by use of salinity meters consisting primarily of conductivity cells especially built and calibrated for this purpose. The salinity meter is shown in Figure 3. One cell was used for salinities between 1.0 and 1.5 ppt; a second cell covered the range from 1.5 up to about 20.0 ppt; while a third cell was used for values greater than 20.0 ppt. The accuracy of the salinity meters is $\pm$ 2 percent of full scale above 1.0 ppt. The values were determined by chemical titration when concentrations were less than about 1.0 ppt.

Chemical titration equipment

9. This method of determining salinity concentration was used primarily to determine the salinity concentrations in critical areas known to be less than 1.0 ppt, for periodic calibration checks of the salinity meters, and to insure that a constant source salinity was maintained in the ocean supply sump. The titration equipment consisted of a graduated burette for measuring the volume of silver nitrate required to precipitate the salt, pipettes for measuring the volume of each sample, sample jars in which to perform the titration, a supply of



OPERATION OF TIDE GENERATOR

THE WATER SURFACE IN THE MODEL (A) IS APPRECIABLY HIGHER THAN IN THE SUMP (B), AND THE TWO ARE CONNECTED BY A MAIN HEADER (C). A PUMP (D) LOCATED IN THE SUMP DISCHARGES A CONSTANT AMOUNT OF WATER INTO THE MAIN HEADER ON THE MODEL SIDE OF AN AUTOMATIC BYPASS VALVE (E). OPERATION OF THIS VALVE IS DICTATED BY THE TIDE CONTROL (F) LOCATED IN THE MODEL. WHEN THE TIDE IS RISING IN THE MODEL, THE AUTOMATIC VALVE IS ALMOST CLOSED SO THAT MOST OF THE PUMP OUTPUT IS DIVERTED TO THE MODEL. WHEN THE TIDE IS FALLING IN THE MODEL, THE VALVE IS ALMOST OPEN SO THAT ALL OF THE PUMP OUTPUT, PLUS GRAVITY FLOW FROM THE MODEL, RETURNS TO THE SUMP. THE TIDE CONTROL MAINTAINS THE PROPER VALVE OPENING AT ALL TIMES AS REQUIRED TO REPRODUCE ANY DESIRED TIDE IN THE MODEL.

Figure 2. Schematic diagram of a typical tide generating system

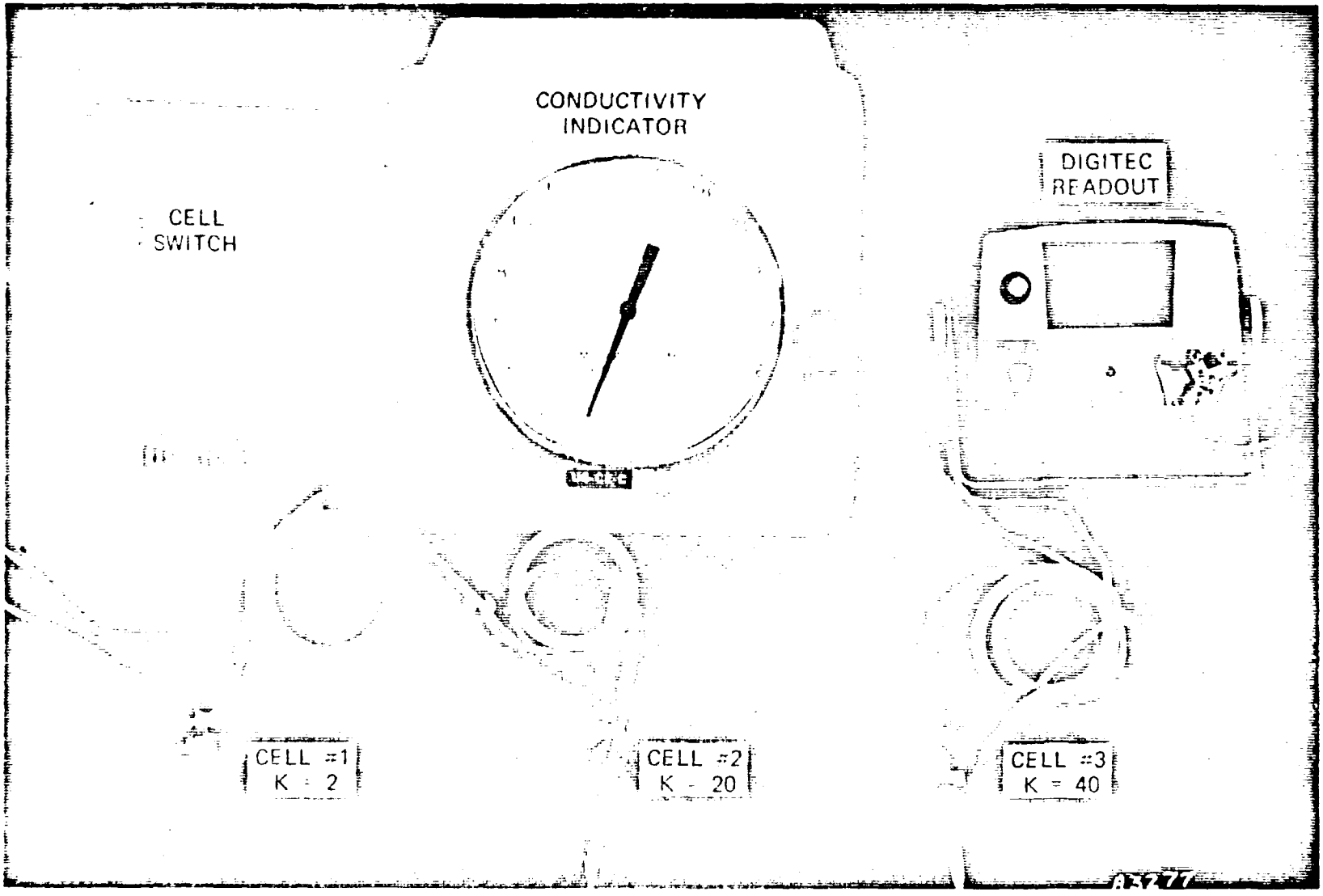


Figure 5. Salinity meter

silver nitrate, and a quantity of potassium chromate for use as an end-point indicator in the titration process. The method consisted of adding a known concentration of silver nitrate solution to a known volume of the model salinity sample; the amount of silver nitrate required to precipitate the salt contained in the sample was then converted to salinity in parts per thousand. The accuracy of the titration process was within ±0.1 ppt.

Current velocity meters

10. Current velocity measurements were obtained with miniature Price-type current meters (Figure 4). The five meter cups, constructed of either a light plastic or a metal material, were approximately 0.04 ft (4.0 ft prototype) in diameter and were mounted on a horizontal wheel 0.09 ft in diameter; the center of the cups was 0.05 ft (5.0 ft prototype) from the bottom of the frame. The meters were calibrated frequently to ensure accurate operation and were capable of measuring actual velocities as low as 0.03 fps (0.3 fps prototype).

Freshwater inflow measuring devices

11. All rivers with freshwater inflows were equipped with a constant head tank and either rotometers or Van Leer weirs for precise measurements of the respective flows. The Cooper River control at Pinopolis was equipped with a quick-opening valve to make it possible to simulate the flow changes dictated by the power-generating schedule being tested.

Skimming weir

12. A portion of the mixed salt water and fresh water that accumulated in the model ocean had to be wasted in order to maintain a constant volume. This was accomplished by means of a skimming weir that removed a quantity of water equal to the total of the freshwater inflows. Precise measurement of the discharge over the skimming weir was made by means of a Van Leer weir.

Limitations of the accuracy of model measurements

13. Measurements of tidal elevations in the model were made with point gages graduated to 0.001 ft, or 0.1 ft prototype, and with automatic

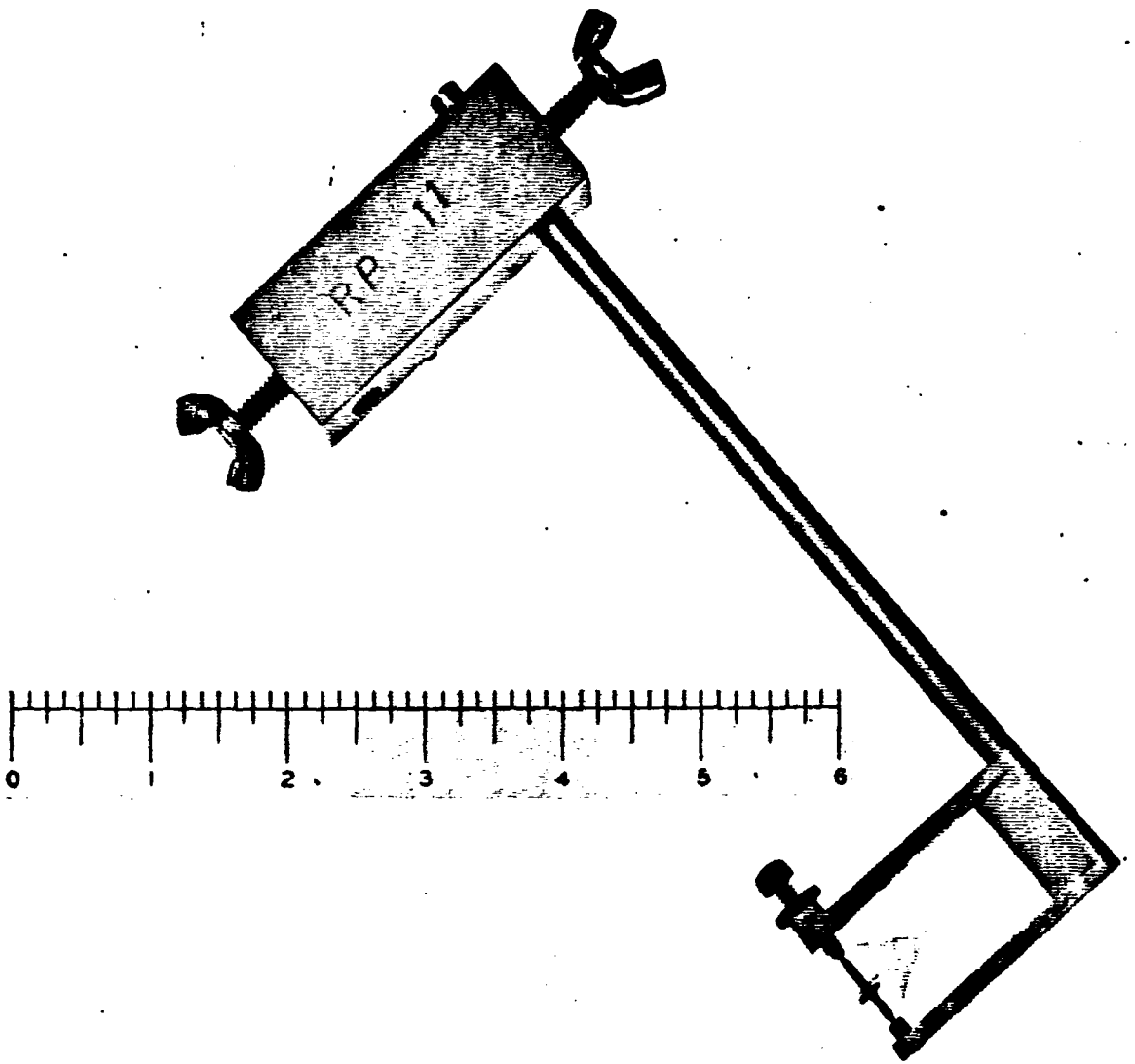


Figure 4. Miniature Price-type current meter

water-level transmitters, also graduated to 0.1 ft prototype. The limitations of the current velocity meters used in the model were mainly due to the size of the meter with respect to the 1:2000 horizontal scale to which the model was constructed. The horizontal spread of the entire meter cup wheel was about 0.11 ft in the model, which represents about 220 ft in the prototype, as compared with a horizontal distance of about 1.0 ft for prototype meters. The height of the meter cup was about 0.04 ft (4.0 ft prototype) as compared with only a few inches in prototype meters. The center line of the meter cup was about 0.05 ft above the bottom of the frame; therefore, bottom velocity measurements in the model were actually obtained at a point 5.0 ft (prototype) above the bottom, instead of about 2.0 ft above the bottom as usually obtained in prototype velocity measurements. The model velocities were determined by counting the number of revolutions of one meter cup in a 10-sec interval, which represented a period of about 33 min prototype, as compared with about 1-min observations in the prototype. Three or more model observations were averaged in an attempt to obtain the best data possible. In a physical model constructed to a 1:2000-horizontal scale, the critical feature in obtaining truly comparable base and plan test current measurements lies in the technicians' ability to locate the meter at exactly the same position in the cross section each time measurements are made. Horizontal errors in meter location in the order of 0.01 to 0.05 ft can result in large velocity differences, particularly in a narrow, sinuous channel such as Cooper River. This should be kept in mind when comparing corresponding velocity measurements.

PART III: TESTS AND RESULTS

14. Tests were conducted for six freshwater flow conditions at Pinopolis with the existing 35- by 600-ft Cooper River navigation channel. Freshwater inflows for the Ashley and Wando Rivers remained constant for all tests at 261 cfs and 82 cfs, respectively. All tests were conducted with a continuous reproduction of an average spring tide having a range of approximately 6.0 ft at Custom House (HW elevation = 6.3 ft; LW elevation = 0.3 ft). The model was operated with an ocean source salinity of 30,000 ppm.

15. For all tests, a combined withdrawal of 1150 cfs was pumped from Bushy Park Reservoir to simulate water usage by Charleston and industries located in the Industrial Park. Of the total withdrawal, 200 cfs was for the Charleston Public Works and was returned to the estuary at the City of Charleston at approximately the mouth of the Ashley River. A second 200 cfs, withdrawn for the Vernona Plant, was returned to the Cooper River at approximately mile 29. The withdrawal for the South Carolina Electric and Gas plant amounted to 750 cfs and was returned to the Cooper River at approximately mile 33. The locations of the various intakes and outfalls are shown in Plate 1.

16. Maps showing the locations of the tide, salinity, and velocity stations are shown in Plates 2 and 3. For all tests the model was operated until stable salinity conditions were obtained before any reported data were taken. This was achieved by operating the model with a constant freshwater inflow for a period of approximately 60 tidal cycles, or until the model consistently reproduced the hydraulic and salinity phenomena with respect to location and phase of the tidal cycle. The proposed weekly hydrograph was then started and continued throughout the remainder of the test.

17. The only differences between tests are the changes in daily Pinopolis releases dictated by the six weekly hydrographs that were reproduced. For the first test, a modification of the existing Cooper River average daily inflow which averaged 15,600 cfs for the week

(Schedule A) was reproduced. The model hydrograph is shown in Columns "M" of Table 1 along with corresponding prototype values listed in Columns "P." Inspection of the hourly prototype flows shows that several significant flow changes occur each day. The flow changes result from variations in the demand for electricity. Detailed reproduction of such a daily hydrograph in the model was not practical due to the time scale of the model; therefore, the simplified hydrograph shown in Columns "M" of Table 1 was used for the model tests. The model values were obtained by averaging the periods of relatively uniform discharges shown in Columns "P" of Table 1.

18. For the second test, the proposed Cooper River rediversion weekly hydrograph shown in Table 2 (Schedule B) was reproduced. The proposed flows consisted of sustained flows of 1325 cfs each Sunday, with sustained flows of 3279 cfs for the remaining six days of the week. The average inflow for the week was 3000 cfs.

19. The third test was conducted with the proposed Cooper River rediversion weekly hydrograph shown in Table 3 (Schedule C). This hydrograph invited maximum upstream intrusion of the salinity front during a generating week. The proposed flows consisted of zero flow for the 72-hr period from midnight Saturday to midnight Tuesday and a daily average flow of 5250 cfs for the remaining four days of the week. Schedule C also resulted in an average inflow of 3000 cfs for the week.

20. The fourth test was conducted with the proposed Cooper River rediversion weekly hydrograph shown in Table 4 (Schedule D). This hydrograph involved a sustained flow of 1200 cfs for 72 hours followed by a daily average flow of 4350 cfs for the remaining four days of the week. Schedule D resulted in an average weekly inflow of 3000 cfs.

21. The fifth test was conducted with the proposed Cooper River rediversion weekly hydrograph shown in Table 5 (Schedule E). This hydrograph was similar to Schedule C described in paragraph 19, except that the average weekly flow was increased from 3000 cfs to 3500 cfs. This was accomplished by decreasing the period of zero flow from 72 hours to 69 hours, releasing 28,500 cfs for the following 3-hr period, and

releasing a daily average flow of 5250 cfs for the remaining four days of the week.

22. The sixth test was conducted with the proposed Cooper River rediversion weekly hydrograph shown in Table 6 (Schedule BM). It was desired to increase Schedule B's weekly average flow from 3000 cfs to 3500 cfs. This was accomplished by reproducing the same sustained 1325-cfs flow each Sunday but increasing the sustained flow for the remaining six days of the week from 3279 to 3862 cfs.

Tides

23. The locations of the 17 tide gage stations are shown in Plate 2. Hourly tidal heights were measured for each station for 14 tidal cycles for the hydrographs of Schedules A, B, C, D, and E. The tidal curves shown in Plates 4-15 are the average curves measured over the 14 cycles at each tide station with the exception of the tidal curves of Schedule BM. The tidal curves for Schedule BM are for a sustained flow of 3500 cfs. This was necessary because of operational problems with the automatic tide gages. Because these problems could not be resolved, it was necessary to use point gages for the Schedule BM tide measurements. Since neither the time nor personnel required were available to make manual tide measurements at all gages throughout the 14-cycle period, it was necessary to simplify the measurement procedure by introducing a constant freshwater inflow. Because the tide measurements for Schedule B did not exhibit marked variations throughout the weekly cycle, this procedure was determined to be a reasonable approximation.

24. The effects of the 3000-cfs rediversion hydrographs on the seven-day average of the tidal heights throughout the estuary are shown by comparisons of the existing Schedule A weekly hydrograph and the rediversion Schedules B, C, and D. Examination of Plates 4-9 shows little or no change at the downstream Cooper River stations (CR2, CR3, and CR4). The data from the upstream Cooper River stations (CR5, CR6, CR7, and CR8) show progressively more pronounced decreases in water surface elevations due to the reduced flow of Schedules B, C, and D.

The mean water level at CR5 decreased about 0.3 ft, while the levels for CR6, CR7, and CR8 decreased approximately 0.7, 1.2, and 2.0 ft, respectively. Water surface elevations for Stations BR1 and BR2, in Back River Reservoir, were lowered approximately 0.7 ft after rediversion, while the tide range in the reservoir was unchanged. Tide heights after rediversion in the upper end of the East Branch of the Cooper River (EC1) were lowered about 1.4 ft at high water and by varying amounts at low water with the Schedule B test being most pronounced. The Wando River (Stations WR1, WR2, and WR3), the Ashley River (Stations AR1 and AR2), and Clouter Creek (Station CC1) experienced changes which were generally less than 0.3 ft as a result of the reduced flow necessitated by the rediversion.

25. The effects of the 3500-cfs rediversion hydrographs on tidal heights throughout the estuary are shown by comparisons of the existing Schedule A weekly hydrograph and the rediversion Schedules E and BM. Examination of the comparative curves shown in Plates 10-15 shows basically the same effects for Schedules E and BM as were noted and described for Schedules B, C, and D. There was little or no change in the lower portion of the Cooper River, as indicated by measurements at gages CR2, CR3, and CR4. The data from the upstream Cooper River Stations CR5, CR6, CR7, and CR8 show a progressively more pronounced decrease in water surface elevations for both Schedules E and BM of approximately 0.4, 0.8, 1.2, and 2.0 ft, respectively. Water levels at Station EC1 in the upper end of the East Branch of the Cooper River decreased about 1.0 ft after rediversion. Water surface elevations in Back River Reservoir were lowered an average of approximately 0.8 ft for Schedule E and approximately 1.2 ft for Schedule BM. Changes in the Wando River (Stations WR1, WR2, and WR3), the Ashley River (Stations AR1 and AR2), and Clouter Creek (Station CC1) were generally less than 0.4 ft. Differences on the order of about 0.3-0.4 ft exist between the results of Schedules E and BM at a few stations, notably CR4, CR5, WR1, BR1, BR2, and AR1. These differences are probably due to the differences between taking data during reproduction of the Schedule E hydrograph and during a sustained flow which was substituted for Schedule BM as mentioned previously. Therefore, these differences are not considered to be significant.

26. In general, the reduction of the mean Cooper River freshwater discharge from 15,600 cfs to 3000 cfs or 3500 cfs will result in a lowering of the tidal levels throughout the upstream portions of the Cooper River only.

27. Maximum and minimum tide heights at six selected stations (CR5, CR6, CR7, CR8, BR1, and BR2) located either in upper Cooper River or in Back River Reservoir for Schedules A-E are shown in Plates 16-45. Each plate shows the inverted weekly hydrograph (both prototype and model) along with the corresponding water surface levels at the various locations.

28. Plates 16-21 show maximum and minimum tide heights in upper reaches of the estuary throughout a week's operation with Schedule A. In the model, Schedule A had low flows on Sunday (except from 8:00 to 11:00 A.M.) and for the rest of the week had flows varying from 1200 cfs to 26,585 cfs during each day. All six stations showed substantial decreases in high- and low-tide levels all day for Sunday and Monday morning and relative stability throughout the remainder of the week. At Station CR5, the influence of the daily fluctuations of freshwater inflow on the differences between successive high and low waters was quite small. The influence on low-water elevations increased progressively at stations farther upstream, however. At Station CR5, successive low-water elevations differed by about 3.5 ft. Except for the Sunday/Monday morning period, successive high-water elevations at Cooper River stations varied by about 0.2 ft. The Back River stations exhibited the same type of weekly fluctuations; however, elevations of successive high and low waters varied by about 0.5 ft.

29. Plates 22-27 show the maximum and minimum tide heights in upper reaches of the estuary throughout a week's operation with the rediversion Schedule B. In the model, Schedule B had a sustained low flow of 1325 cfs Sunday with a sustained flow of 3250 cfs for the remaining six days of the week. During this relatively stable hydrograph, high-water levels for the six stations remained relatively constant from cycle to cycle, with minor overall fluctuations. Low-water elevations also remained at a fairly constant level during the week with the

greatest overall change, an increase of approximately 0.6 ft, recorded at Station CR8. Tidal ranges and mean tide levels remained relatively constant during the week with Schedule B.

30. The maximum and minimum tide heights in upper reaches of the estuary with Schedule C are shown in Plates 28-33. In the model, Schedule C had zero flow for the first three days of the week followed by a sustained flow of 5250 cfs for the remaining four days. Stations CR5 and CR6 experienced a gradual rise in water surface elevations during the latter part of the week. At Stations CR7 and CR8 a somewhat greater rise occurred, especially at low water, during the 5250-cfs flow. High-water elevations increased about 0.6 ft and 0.4 ft, while low-water elevations increased about 1.1 and 1.3 ft at Stations CR7 and CR8, respectively. Tide ranges were relatively unchanged throughout the week except at Stations CR7 and CR8. The tidal range at Station CR7 decreased from about 3.3 ft on Monday to about 2.9 ft during the latter part of the week, while at Station CR8 the tide range decreased from about 2.5 ft to about 1.6 ft. In Back River Reservoir at Stations BR1 and BR2, a gradual rise in water surface elevation occurred as the week progressed with little or no variation in tidal ranges as shown in Plates 32 and 33.

31. The maximum and minimum tide heights in upper reaches of the estuary with Schedule D are shown in Plates 34-39. In the model, Schedule D had 1200-cfs flow during the three-day period from Sunday through Tuesday with the remaining four days regulated at 4350 cfs. At Station CR5 in Cooper River the Schedule D hydrograph caused minimal change in the water level. A gradual increase in the tide level occurred at Station CR6 during the 4350-cfs flow period, with an associated decrease in tidal range of about 0.2 ft. The increase in water surface elevations was more pronounced at Stations CR7 and CR8, with approximately 0.2- to 0.4-ft-range reductions occurring during the high-flow period of the hydrograph. In Back River Reservoir at Stations BR1 and BR2 a slight, gradual rise in water elevation occurred during the latter part of the week with minimal variation occurring in tide range as is shown in Plates 38 and 39.

32. The maximum and minimum tide heights in upper reaches of the estuary with Schedule E are shown in Plates 40-45. In the model, Schedule E had zero flow during the first 69 hours of the week followed by three hours of 28,500-cfs flow, which is followed by a sustained flow of 5250 cfs for the remaining four days. Maximum and minimum water levels remained fairly constant from Sunday through Tuesday at all locations; then a sharp increase occurred on Wednesday as a result of the 28,500-cfs release during the three-hour period between 9:00 P.M. and 12:00 midnight Tuesday. Subsequently, water levels decreased slightly and remained constant (but significantly higher than Sunday-Tuesday levels) during the remainder of the week. Compared to Sunday-Tuesday levels, low-water peak elevations increased from about 0.3 ft at Station CR5 to about 1.4 ft at Station CR8. Low-water levels during the latter part of the week were increased by amounts varying between about 0.2 ft at Station CR5 to about 1.1 ft at Station CR8 (compared to Sunday-Tuesday levels). High-water levels fluctuated in similar fashion, but the changes were of a lesser magnitude. The tide range was reduced during the week by amounts varying from about 0.3 ft at Station CR5 to about 0.7 ft at Station CR8. Stations BR1 and BR2 in Back River Reservoir were affected in the same manner, with tide levels changing approximately 0.5 ft overall during the week.

Current velocities

33. Current measurements were made throughout the estuary for Pinopolis release Schedules A, B, E, and BM and at six selected locations for release Schedules C and D. The current measurements were made during the last tidal cycles of sustained high flow for each hydrograph. Stations utilized for the overall survey included all even-numbered mile stations in Cooper River from mile 0 to mile 44, mile stations 1, 3, 5, 7, 9, and 13 in Wando River, mile stations 1, 3, 5, and 9 in Ashley River, and mile 1 in Clouter Creek. The six selected locations occupied during tests of Schedules C and D were mile 1 in Ashley River and miles 30, 34, 38, 42, and 44 in Cooper River. The locations of all current velocity stations are shown in Plate 3. Measurements were made hourly throughout

a tidal cycle at surface and bottom depths for all conditions tested and the results are presented in Tables 7-46 and in Plates 46-85. The tables also include the times of occurrence and the values of maximum flood and ebb velocities and the computed percentage of the total flow which is in an ebb direction, commonly referred to as ebb predominance. This expression is derived from a conventional plot of velocity versus time over a tidal cycle at any given point. The areas subtended by both ebb and flood portions of the curve are measured (or calculated) and summarized. The area subtended by the ebb portion of the curve is then divided by the total area to determine what percentage of the total flow is in the ebb direction. Predominance values greater than 50 percent indicate that the net flow at the point of measurement is in the downstream or ebb direction. Values less than 50 percent indicate that net flow is in an upstream or flood direction. Plots of surface and bottom flow predominance along Cooper River are presented in Plates 86 and 87, respectively.

34. The effects of rediversion of a major portion of the Cooper River freshwater flow on current velocities can be seen by comparing the curves for Schedule A (the existing 15,600-cfs average weekly flow hydrograph) to similar curves for the various rediversion release schedules. Schedules B, E, and BM generally increased surface flood velocities upstream of approximately mile 20 in the Cooper River, but caused smaller changes (generally reductions) to surface flood velocities downstream of mile 20 (see Plates 46-68). Throughout Cooper River, surface ebb velocities at over half the measurement locations were relatively unchanged by Schedules B, E, and BM. At the locations where changes in strength of ebb velocities were noted, about half were increases and half were decreases. Schedules B, E, and BM resulted in a significant phase shift of surface velocities upstream of about Cooper River mile 30.

35. Schedules B, E, and BM significantly increased maximum bottom flood velocities upstream of mile 20, while ebb velocities remained relatively unchanged. Maximum bottom ebb velocities were generally increased from the jetties to the mouth of the Cooper River (approximately miles 2 to 14); while above mile 14, ebb velocities in the Cooper

River were generally reduced or unchanged as a result of rediversion. Upstream from about mile 30, a significant phase shift of bottom velocities was observed.

36. As seen in Plates 86 and 87, Schedules B, E, and BM resulted in drastic changes of surface and bottom flow predominance in the upstream portion of Cooper River. At the surface, ebb predominances above about mile 28 were reduced from 80-100 percent for Schedule A to 50-80 percent for the rediversion schedules. In the vicinity of miles 7-13, surface ebb predominances were reduced from about 65 percent to 50-60 percent. At the bottom, ebb predominances upstream of mile 15 were reduced from about 50-100 percent for Schedule A to about 35-65 percent for the rediversion schedules. Between about miles 5 and 15, bottom ebb predominances were increased about 20-50 percent for Schedule A to about 30-60 percent for rediversion conditions. It can thus be seen that, for rediversion conditions, surface and bottom flow predominance throughout the length of Cooper River would be more nearly balanced for rediversion conditions than for existing conditions.

37. In the Wando River, overall effects of the flow reduction to conform to Schedules B, E, or BM appear to be minimal (Tables 30-35). Random increases and decreases in both overall flow and maximum current values occurred. At the three downstream locations measured, miles 1, 3, and 5, bottom ebb flow predominance increased slightly for the rediversion schedules.

38. In the Ashley River, the overall effect of the rediversion to Schedules B, E, or BM or surface flow also appears to be minimal (Tables 36-39). Surface flow prediminance for the four hydrographs tested was in the ebb direction and was generally reduced slightly by the rediversion. At bottom depth, random increases and decreases in both flow predominance and maximum current values occurred.

39. The measurements in Clouter Creek show a general reduction in maximum ebb velocities, while the ebb flow predominance was relatively unchanged (Table 40).

40. The effects of Schedules B, C, and D are shown in Tables 41-46 and Plates 80-87. In Cooper River, surface flood velocities were generally increased at the five selected stations, while the surface ebb velocities had slight random increases or decreases as a result of the rediversion from Schedule A to Schedules B, C, or D. Maximum bottom flood velocities were increased at these selected stations, while bottom ebb velocities remained generally unchanged or were slightly reduced. Both surface and bottom flow are predominantly ebb, and the rediversion significantly reduced ebb predominances at the five Cooper River stations presented (Plates 86 and 87).

41. At mile 3 in the Wando River, surface and bottom maximum ebb velocities were relatively unchanged, while maximum surface and bottom flood velocities decreased slightly due to the rediversion from Schedule A to Schedules B, C, or D (Plate 85 and Table 46). Ebb predominances at both surface and bottom depths increased slightly, making the overall flow predominantly in the ebb direction.

Salinities

42. Profiles of salinity concentrations in Cooper River for surface and bottom depths, at times of both high- and low-water slack, for the existing Schedule A hydrograph and for the rediversion hydrographs, Schedules B, C, D, E, and BM, are shown in Plates 88-93, respectively. The salinity values shown in the six plates were determined by averaging measurements made during Tuesday after the low-flow period of the weekly release hydrograph and measurements made during Saturday after the high-flow period. During the hydrograph week, the salinity front migrated slightly farther upstream and slightly farther downstream than is indicated by the profiles which show the average locations during the week. Considering the capabilities of the model and the limits of accuracy of the salinity measuring equipment and the variability of the background concentrations, the exact location of the 10-ppm value is difficult to define. The location of the 100-ppm value is considered to be accurate; therefore, all discussion of the salinity fronts refers to the location of the 100-ppm values.

43. The upstream limit of intrusion (100 ppm) of ocean salt water (high-water slack, bottom) was at approximately mile 25 for existing or Schedule A conditions. The upstream limit of intrusion of ocean salt water for the 3000-cfs rediversion Schedules B and D was at approximately "The Tee," mile 39; while for Schedule C, with zero flow for 72 hours, the salt front moved upstream to approximately mile 40.5. The 3500-cfs rediversion Schedules E and BM held the salt front at approximately mile 36, or 3-1/2 miles below "The Tee" and seven miles below the entrance canal to Back River Reservoir. It can also be seen in Plates 88-93 that the rediversion schedules significantly reduced the degree of stratification throughout the length of Cooper River. That is, surface and bottom salinities were more nearly identical for rediversion conditions than for existing conditions.

44. The salinity profiles in Plates 88-93 have been drawn to show an upstream limit of 10 ppm.

45. Profiles of salinity concentrations in Cooper River for bottom depths, at times of high-water slack, for the six schedules tested are repeated in Plate 94 for direct comparison of the effects of each schedule on the salinity distribution in the Cooper River.

46. Salinities were also measured at seven locations in Ashley River, eight locations in Wando River, one location in Clouter Creek, and two locations each in Back River Reservoir and in the East Branch of the Cooper River. The results of measurements at these locations at high-water slack for the existing Schedule A and the rediversion Schedules B, C, D, E, and BM are listed in Table 47, and low-water slack values are listed in Table 48. Salinities in the Ashley River were generally increased on the order of 7 to 12 ppt as a result of the rediversion. Salinities in the Wando River were generally increased on the order of 8 to 13 ppt. Salinities in Clouter Creek were also increased on the order of 13 to 17 ppt. Within the accuracy of the salinity measuring system, ocean salt was not detected at the two Back River Reservoir stations or in the lower end of the East Branch of the Cooper River. The degree of stratification in the Ashley and Wando Rivers and Clouter Creek was reduced significantly by the rediversion schedules.

PART IV: CONCLUSIONS

47. Based on the results of the model tests reported herein, rediversion of the Cooper River from an existing weekly average flow of 15,600 cfs to weekly average flows of either 3000 cfs or 3500 cfs had the following effects on tides, currents, and salinities in the Charleston estuary for the existing 35- by 600-ft Cooper River navigation channel:

a. Tide ranges and levels downstream of mile 20 in Cooper River remained relatively unchanged. Tide levels and ranges in the Wando River and Ashley River were also essentially unchanged. Mean tide levels in the upstream portion of Cooper River were decreased by amounts varying between approximately 0.3 ft at mile 33 to about 2.0 ft at mile 50.5. Mean tide levels in the East Branch of the Cooper River and in Back River Reservoir were decreased approximately 1.0 ft.

b. Surface flood velocities were generally increased upstream of approximately mile 20 in the Cooper River and were relatively unchanged downstream of mile 20. Surface ebb velocities throughout Cooper River were essentially unchanged. Surface velocities upstream of about mile 30 experienced a significant phase shift.

c. Maximum bottom flood velocities were significantly increased upstream of about mile 20, while velocities downstream of mile 20 remained relatively unchanged in Cooper River. Maximum bottom ebb velocities were generally increased from about mile 2 to mile 14, while upstream of mile 14 velocities were generally reduced slightly or were unchanged. A significant phase shift of bottom velocities occurred upstream from about mile 36.

d. Predominance of surface and bottom ebb flow was drastically reduced in the upper reaches of Cooper River. Downstream of the mouth of the Wando River, surface ebb predominance was decreased and bottom ebb predominance was increased. Throughout the length of Cooper River, rediversion inflows resulted in more nearly balanced flow predominance at both the surface and bottom.

e. Changes in flow conditions in Wando River, Ashley River, and Clouter Creek were minimal.

f. The limit of the average intrusion of ocean salt water (100 ppm) in Cooper River was moved upstream approximately 10 to 15 miles as a result of rediversion. For release schedules averaging 3000 cfs, the weekly average limit of intrusion of salt water was located in the vicinity of "The Tee" between river miles 39 and 40.5. For schedules averaging 3500 cfs, the weekly average limit of intrusion of salt water was located at about mile 36.

g. The degree of stratification (that is, the difference between surface and bottom salinity) was significantly reduced throughout the length of the Cooper River.

h. Salt water was not detected in the Back River Reservoir for any of the Pinopolis release schedules tested.

i. Salinities in the Ashley and Wando Rivers and in Clouter Creek were increased by amounts varying between 4 and 17 ppt. The degree of stratification was also significantly reduced.

TABLE 1

SCHEDULE A
PINOPOLIS HOURLY RELEASES - "Typical Week"
(based on average flow for life of plant)
Weekly Average -- 15,600 cfs

DAYS	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	P	M	P	M	P	M	P	M	P	M	P	M	P	M
HOURS														
1 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
2 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
3 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
4 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
5 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
6 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200
7 A.M.	1,200	1,200	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
8 A.M.	12,600	12,600	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
9 A.M.	12,600	12,600	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
10 A.M.	12,600	12,600	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
11 A.M.	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
12 NOON	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
1 P.M.	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
2 P.M.	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
3 P.M.	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
4 P.M.	1,200	1,200	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585	25,800	26,585
5 P.M.	1,200	1,200	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585
6 P.M.	1,200	1,200	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585
7 P.M.	1,200	1,200	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585
8 P.M.	1,200	1,200	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585
9 P.M.	1,200	1,200	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585	28,000	26,585
10 P.M.	1,200	1,200	17,100	11,367	17,100	11,367	17,100	11,367	17,100	11,367	17,100	11,367	17,100	11,367
11 P.M.	1,200	1,200	11,000	11,367	11,000	11,367	11,000	11,367	11,000	11,367	11,000	11,367	11,000	11,367
12 P.M.	1,200	1,200	6,000	11,367	6,000	11,367	6,000	11,367	6,000	11,367	6,000	11,367	6,000	11,367
TOTAL	64,900		426,000		426,000		426,000		426,000		426,000		426,000	
DLY. AVG.	2,704		17,750		17,750		17,750		17,750		17,750		17,750	

TABLE 2

SCHEDULE B
PINOPOLIS RELEASES AFTER REDIVERSION
Weekly Average - 3000 cfs

DAYS	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	P	M	P	M	P	M	P	M	P	M	P	M	P	M
HOURS														
1 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
2 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
3 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
4 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
5 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
6 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
7 A.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
8 A.M.	2,200	1,325	2,200	3,279	2,200	3,279	2,200	3,279	2,200	3,279	2,200	3,279	2,200	3,279
9 A.M.	2,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
10 A.M.	2,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
11 A.M.	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
12 NOON	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
1 P.M.	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
2 P.M.	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
3 P.M.	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
4 P.M.	1,200	1,325	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279	4,500	3,279
5 P.M.	1,200	1,325	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279
6 P.M.	1,200	1,325	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279
7 P.M.	1,200	1,325	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279
8 P.M.	1,200	1,325	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279
9 P.M.	1,200	1,325	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279	5,200	3,279
10 P.M.	1,200	1,325	3,000	3,279	3,000	3,279	3,000	3,279	3,000	3,279	3,000	3,279	3,000	3,279
11 P.M.	1,200	1,325	1,900	3,279	1,900	3,279	1,900	3,279	1,900	3,279	1,900	3,279	1,900	3,279
12 P.M.	1,200	1,325	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279	1,200	3,279
TOTAL	31,800		78,700		78,700		78,700		78,700		78,700		78,700	
DLY. AVG.	1,325		3,279		3,279		3,279		3,279		3,279		3,279	

TABLE 3

SCHEDULE C
PINOPOLIS RELEASES AFTER REDIVERSION
"Zero" flow for 72 hours
Weekly Average - 3000 cfs

DAYS	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	P	M	P	M	P	M	P	M	P	M	P	M	P	M
HOURS														
1 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
2 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
3 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
4 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
5 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
6 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
7 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
8 A.M.	0	0	0	0	0	0	3,700	5,250	3,700	5,250	3,700	5,250	3,700	5,250
9 A.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
10 A.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
11 A.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
12 NOON	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
1 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
2 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
3 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
4 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
5 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
6 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
7 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
8 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
9 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
10 P.M.	0	0	0	0	0	0	5,000	5,250	5,000	5,250	5,000	5,250	5,000	5,250
11 P.M.	0	0	0	0	0	0	3,200	5,250	3,200	5,250	3,200	5,250	3,200	5,250
12 P.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
TOTAL	0		0		0		126,000		126,000		126,000		126,000	
DLY. AVG.	0		0		0		5,250		5,250		5,250		5,250	

TABLE 4

SCHEDULE D
PINOPOLIS RELEASES AFTER REDIVERSION
1200 cfs for 72 Hours
Weekly Average - 3000 cfs

DAYS	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	P	M	P	M	P	M	P	M	P	M	P	M	P	M
HOURS														
1 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
2 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
3 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
4 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
5 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
6 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
7 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
8 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	3,050	4,350	3,050	4,350	3,050	4,350	3,050	4,350
9 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
10 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
11 A.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
12 NOON	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
1 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
2 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
3 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
4 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	6,150	4,350	6,150	4,350	6,150	4,350	6,150	4,350
5 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	7,150	4,350	7,150	4,350	7,150	4,350	7,150	4,350
6 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	7,150	4,350	7,150	4,350	7,150	4,350	7,150	4,350
7 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	7,150	4,350	7,150	4,350	7,150	4,350	7,150	4,350
8 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	7,150	4,350	7,150	4,350	7,150	4,350	7,150	4,350
9 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	7,150	4,350	7,150	4,350	7,150	4,350	7,150	4,350
10 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	4,150	4,350	4,150	4,350	4,150	4,350	4,150	4,350
11 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	2,650	4,350	2,650	4,350	2,650	4,350	2,650	4,350
12 P.M.	1,200	1,200	1,200	1,200	1,200	1,200	1,200	4,350	1,200	4,350	1,200	4,350	1,200	4,350
TOTAL	28,800		28,800		28,800		104,400		104,400		104,400		104,400	
DLY. AVG.	1,200		1,200		1,200		4,350		4,350		4,350		4,350	

TABLE 5

SCHEDULE E
PINOPOLIS RELEASES AFTER REDIVERSION
"Zero" flow for 69 hours
Weekly Average - 3500 cfs

DAYS	SUNDAY		MONDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY	
	P	M	P	M	P	M	P	M	P	M	P	M	P	M
HOURS														
1 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
2 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
3 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
4 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
5 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
6 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
7 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
8 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
9 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
10 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
11 A.M.	0	0	0	0	0	0	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
12 Noon	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
1 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
2 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
3 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
4 P.M.	0	0	0	0	0	0	7,500	5,250	7,500	5,250	7,500	5,250	7,500	5,250
5 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
6 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
7 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
8 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
9 P.M.	0	0	0	0	0	0	8,900	5,250	8,900	5,250	8,900	5,250	8,900	5,250
10 P.M.	0	0	0	0	28,500	28,500	5,000	5,250	5,000	5,250	5,000	5,250	5,000	5,250
11 P.M.	0	0	0	0	28,500	28,500	3,200	5,250	3,200	5,250	3,200	5,250	3,200	5,250
12 P.M.	0	0	0	0	28,500	28,500	1,200	5,250	1,200	5,250	1,200	5,250	1,200	5,250
TOTAL	0		0		85,500		126,000		126,000		126,000		126,000	
DLY. AVG.	0		0		3,560		5,250		5,250		5,250		5,250	

TABLE 6

SCHEDULE BM
PINOPOLIS RELEASES AFTER REDIVERSION
WEEKLY AVERAGE - 3500 cfs

Days	Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	M	M	M	M	M	M	M
Hours							
1 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
2 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
3 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
4 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
5 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
6 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
7 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
8 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
9 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
10 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
11 AM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
12 NOON	1,325	3,862	3,862	3,862	3,862	3,862	3,862
1 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
2 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
3 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
4 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
5 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
6 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
7 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
8 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
9 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
10 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
11 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
12 PM	1,325	3,862	3,862	3,862	3,862	3,862	3,862
TOTAL	31,800	92,700	92,700	92,700	92,700	92,700	92,700
DLY AVG	1,325	3,862	3,862	3,862	3,862	3,862	3,862

TABLE 7

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 00

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.3	-2.1	-1.8	-1.7
1.0	-1.9	-2.0	-1.5	-1.6
2.0	-0.3	-1.0	-0.7	-0.5
3.0	-0.6	0.1	-0.4	0.1
4.0	-0.3	0.1	0.1	0.1
5.0	0.1	0.1	0.1	0.1
6.0	0.1	0.1	0.1	0.1
7.0	-0.3	0.1	0.1	0.1
8.0	-0.4	-0.6	-0.5	0.1
9.0	-0.5	-0.8	-0.9	-0.7
10.0	-0.6	-0.8	-0.9	-0.8
11.0	-1.5	-0.9	-1.1	-0.8

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	0.1	-0.4	0.1	0.4
1.0	0.1	-0.5	-0.3	0.3
2.0	-0.5	-0.3	-0.7	0.7
3.0	-0.5	-0.3	-0.7	0.3
4.0	-0.3	0.1	-0.7	0.1
5.0	-0.3	0.1	-0.5	0.1
6.0	0.1	0.1	-0.3	0.1
7.0	0.1	0.1	0.1	0.1
8.0	0.1	0.1	0.1	0.1
9.0	-0.3	-0.4	-0.3	0.1
10.0	-0.6	-0.5	-0.5	0.1
11.0	-0.6	-0.5	-0.5	0.5

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	5.0	0.1	0.	-2.3	98.1
B	3.0	0.1	0.	-2.1	94.2
E	4.0	0.1	0.	-1.8	94.5
BM	3.0	0.1	0.	-1.7	91.1

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	0.	0.1	10.0	-0.6	87.9
B	4.0	0.1	10.0	-0.5	85.2
E	0.	0.1	2.0	-0.7	94.9
BM	2.0	0.7	4.0	0.1	0.

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 8

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 02

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.0	-3.5	-2.7	-1.9
1.0	-1.9	-2.0	-1.8	-1.2
2.0	-0.3	-0.4	-0.7	-0.4
3.0	0.1	0.3	0.3	0.1
4.0	0.1	0.5	0.7	0.4
5.0	0.3	0.4	0.7	0.5
6.0	0.3	0.3	0.5	0.5
7.0	0.1	0.1	0.3	0.1
8.0	0.1	-0.3	-0.3	-0.3
9.0	-0.9	-1.2	-1.0	-0.9
10.0	-1.5	-2.3	-2.2	-1.7
11.0	-2.3	-3.3	-2.5	-2.4

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.3	-1.4	-1.2	-1.2
1.0	-0.6	-1.1	-0.5	-0.5
2.0	-1.0	-0.1	0.5	-0.3
3.0	-0.8	0.3	0.9	0.9
4.0	0.1	0.6	0.9	0.9
5.0	0.5	0.5	0.7	0.7
6.0	0.1	0.2	0.7	0.7
7.0	0.1	0.1	0.4	0.4
8.0	0.1	0.1	0.1	0.1
9.0	-0.3	-0.5	-0.5	-0.5
10.0	-0.5	-1.2	-0.9	-0.9
11.0	-0.5	-1.9	-1.6	-1.6

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	0.3	0.	-3.0	91.8
B	4.0	0.5	0.	-3.5	90.7
E	4.0	0.7	0.	-2.7	83.8
BM	5.0	0.5	11.0	-2.4	86.6

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	0.5	2.0	-1.0	82.6
B	4.0	0.6	11.0	-1.9	80.5
E	3.0	0.9	11.0	-1.6	55.8
BM	3.0	0.9	11.0	-1.6	60.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 9

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 04

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.8	-3.0	-2.5	-2.1
1.0	-1.2	-1.9	-1.3	-1.3
2.0	0.1	0.5	0.8	-0.4
3.0	1.4	2.0	2.3	1.6
4.0	2.4	2.4	2.6	2.4
5.0	2.0	2.4	2.4	1.9
6.0	1.7	1.7	1.8	1.8
7.0	1.0	1.1	1.2	1.0
8.0	0.1	-0.1	-0.3	-0.6
9.0	-1.5	-1.5	-1.4	-1.3
10.0	-2.2	-2.5	-2.3	-2.1
11.0	-2.9	-3.4	-2.9	-2.3

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.3	-1.7	-2.0	-1.7
1.0	-0.3	-0.5	-0.8	-0.7
2.0	1.9	1.1	0.8	0.8
3.0	2.3	2.0	1.5	1.5
4.0	2.1	1.7	1.7	1.6
5.0	1.8	1.8	1.6	1.7
6.0	1.1	1.4	1.6	1.6
7.0	0.8	0.8	0.9	0.9
8.0	0.1	0.1	0.5	0.4
9.0	-0.8	-1.3	-1.2	-1.2
10.0	-1.3	-1.7	-1.8	-1.5
11.0	-1.6	-2.0	-2.0	-1.6

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	2.4	11.0	-2.9	57.3
B	4.0	2.4	11.0	-3.4	57.7
E	4.0	2.6	11.0	-2.9	51.4
BM	4.0	2.4	11.0	-2.3	55.6

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.3	11.0	-1.6	37.1
B	3.0	2.0	11.0	-2.0	49.2
E	4.0	1.7	0.	-2.0	40.5
BM	5.0	1.7	0.	-1.7	46.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 10

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 06

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.0	-2.4	-2.9	-2.9
1.0	-1.9	-0.9	-1.6	-1.5
2.0	0.4	0.1	-1.3	1.4
3.0	1.6	0.9	1.5	1.7
4.0	2.1	1.8	1.9	1.9
5.0	2.0	1.7	1.8	2.0
6.0	1.5	1.5	1.6	1.6
7.0	0.6	0.1	0.8	0.8
8.0	-0.3	-1.6	0.1	0.3
9.0	-2.1	-2.5	-2.1	-2.1
10.0	-3.7	-3.1	-3.5	-3.5
11.0	-4.1	-3.1	-3.8	-4.2

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.8	-2.4	-2.3	-2.5
1.0	-0.6	-1.6	-0.8	-0.9
2.0	1.7	0.1	0.1	0.1
3.0	1.9	1.6	1.4	1.6
4.0	2.0	1.6	1.5	1.7
5.0	2.3	1.8	1.5	1.7
6.0	2.0	1.4	1.7	1.9
7.0	1.2	0.9	1.1	1.3
8.0	0.2	0.1	0.1	0.1
9.0	-1.2	-1.6	-1.3	-1.7
10.0	-2.2	-2.6	-3.2	-3.6
11.0	-2.4	-3.1	-3.0	-3.4

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	2.1	11.0	-4.1	67.8
B	4.0	1.8	10.0	-3.1	70.2
E	4.0	1.9	11.0	-3.8	68.4
BM	5.0	2.0	11.0	-4.2	62.5

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	2.3	11.0	-2.4	44.6
B	5.0	1.8	11.0	-3.1	62.1
E	6.0	1.7	10.0	-3.2	61.4
BM	6.0	1.9	10.0	-3.6	61.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE II

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 08

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.2	-1.4	-1.2	-1.6
1.0	-1.0	-0.6	-0.6	-0.7
2.0	-0.1	0.3	0.1	0.9
3.0	0.8	1.2	1.2	1.1
4.0	1.0	1.7	1.5	1.7
5.0	1.5	1.9	1.6	1.8
6.0	1.0	1.5	1.2	1.4
7.0	0.8	1.2	0.8	1.2
8.0	0.1	0.5	0.1	0.3
9.0	-1.6	-0.8	-0.9	-1.0
10.0	-2.2	-2.0	-2.4	-2.3
11.0	-2.2	-1.9	-1.6	-1.9

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	0.1	-1.0	-0.7	-0.9
1.0	-0.3	-0.4	0.1	-0.3
2.0	0.3	0.6	1.1	0.9
3.0	1.9	1.0	1.2	1.2
4.0	1.3	1.1	1.2	1.3
5.0	1.0	0.8	1.2	1.4
6.0	0.9	0.9	1.0	1.0
7.0	0.5	0.7	0.8	0.8
8.0	0.1	0.1	0.1	0.1
9.0	-0.5	-0.7	-0.9	-0.9
10.0	-0.8	-1.7	-1.1	-1.2
11.0	-0.7	-1.4	-1.0	-0.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	1.5	0.	-2.2	65.8
B	5.0	1.9	10.0	-2.0	46.8
E	5.0	1.6	10.0	-2.4	52.5
BM	5.0	1.8	10.0	-2.3	49.1

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	1.9	10.0	-0.8	29.4
B	4.0	1.1	10.0	-1.7	51.4
E	3.0	1.2	10.0	-1.1	37.8
BM	5.0	1.4	10.0	-1.2	39.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 12

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 10

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.1	-2.3	-1.8	-2.0
1.0	-1.1	-1.4	-1.4	-1.4
2.0	0.1	0.2	0.1	0.1
3.0	0.6	2.1	1.8	1.7
4.0	1.9	2.4	1.8	2.0
5.0	1.7	1.6	1.4	1.2
6.0	1.6	2.3	0.9	1.1
7.0	0.6	1.2	0.9	0.7
8.0	0.1	0.3	0.1	0.1
9.0	-0.9	-1.5	0.1	-1.3
10.0	-2.4	-2.7	-2.3	-2.3
11.0	-2.8	-3.0	-2.6	-2.6

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.2	-1.5	-1.1	-0.9
1.0	0.1	-0.5	-0.5	-0.6
2.0	0.6	0.6	0.1	0.1
3.0	2.4	2.4	1.8	2.3
4.0	2.3	2.5	2.2	2.3
5.0	2.2	2.3	2.0	2.3
6.0	2.1	1.8	1.8	1.7
7.0	1.9	1.7	1.2	1.3
8.0	0.8	0.5	0.1	0.1
9.0	0.1	-0.8	-0.8	-0.8
10.0	-1.0	-2.0	-1.3	-1.5
11.0	-2.3	-1.5	-1.7	-1.4

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	4.0	1.9	11.0	-2.8	60.9
B	4.0	2.4	11.0	-3.0	54.6
E	3.0	1.8	11.0	-2.6	58.1
BM	4.0	2.0	11.0	-2.6	60.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	3.0	2.4	11.0	-2.3	30.4
B	4.0	2.3	10.0	-2.0	36.3
E	4.0	2.2	11.0	-1.7	39.6
BM	4.0	2.3	10.0	-1.5	37.2

Note: Time is expressed in hours after [illegible] of 75th meridian.
Velocities are expressed in [illegible] prototype.

TABLE 13

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR FINGERLING WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E AND BM

COOPER RIVER MILE 12

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.5	-0.8	-0.9	-1.4
1.0	-0.7	-0.6	-0.9	-1.5
2.0	0.1	-0.4	0.1	-0.8
3.0	0.1	0.3	0.3	1.3
4.0	0.7	1.2	1.3	1.6
5.0	0.5	1.2	0.9	1.5
6.0	0.3	1.6	0.9	1.5
7.0	0.2	1.4	0.8	1.5
8.0	0.1	0.4	0.1	0.3
9.0	-0.3	-1.0	-0.7	-0.8
10.0	-0.7	-1.0	-1.2	-1.4
11.0	-0.6	-1.0	-0.9	-1.5

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.4	-0.6	-0.5	-0.7
1.0	-0.4	-0.3	-0.5	-0.5
2.0	0.1	0.4	0.1	0.1
3.0	1.3	1.1	1.0	1.4
4.0	1.9	1.3	1.2	1.5
5.0	1.9	1.3	1.0	1.8
6.0	1.7	1.3	1.0	1.9
7.0	1.6	1.2	0.8	1.2
8.0	0.7	0.8	0.1	0.3
9.0	0.1	-0.3	0.1	-0.8
10.0	-0.4	-0.7	-0.8	-1.0
11.0	-0.3	-0.8	-0.7	-1.0

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	1.2	0.	-0.8	62.9
B	6.0	1.4	2.0	-1.0	46.4
E	4.0	1.2	10.0	-1.2	52.2
BM	4.0	1.5	1.0	-1.5	51.2

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	1.0	1.9	0.	-0.4	15.5
B	4.0	1.3	11.0	-0.8	29.2
E	4.	1.2	10.0	-0.8	32.7
BM	6.0	1.9	10.0	-1.0	35.5

Note: Time is expressed [illegible] transit of 74th meridian.
Velocities are [illegible] second prototype.

TABLE 14

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 14

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.0	-2.7	-2.9	-2.8
1.0	-2.7	-2.0	-2.6	-2.1
2.0	-0.7	-0.5	-0.9	-1.0
3.0	0.1	0.8	0.7	-0.3
4.0	1.0	1.3	1.1	1.5
5.0	1.6	1.2	1.1	0.9
6.0	2.3	1.0	1.4	0.9
7.0	0.8	0.7	0.7	0.9
8.0	0.4	0.5	0.5	0.2
9.0	0.1	-0.8	-0.9	-0.9
10.0	-3.2	-2.7	-1.8	-1.6
11.0	-3.6	-3.2	-2.7	-2.4

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.3	-2.7	-2.1	-1.6
1.0	-0.8	-2.0	-0.5	-0.5
2.0	0.1	-0.8	0.3	-0.5
3.0	0.8	0.8	1.8	1.4
4.0	1.3	1.3	1.7	1.6
5.0	1.6	1.3	1.6	1.6
6.0	1.9	1.1	1.5	1.6
7.0	1.6	0.6	1.4	1.6
8.0	0.7	0.4	1.0	0.9
9.0	0.1	-0.7	-0.3	0.1
10.0	-1.5	-2.6	-2.1	-1.7
11.0	-2.4	-3.2	-2.9	-2.4

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	6.0	2.3	11.0	-3.6	69.9
B	4.0	1.3	11.0	-3.2	70.7
E	6.0	1.4	0.	-2.9	70.9
BM	4.0	1.5	0.	-2.8	74.8

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	6.0	1.9	11.0	-2.4	49.5
B	4.0	1.3	11.0	-3.2	71.4
E	3.0	1.8	11.0	-2.9	49.7
BM	4.0	1.6	11.0	-2.4	45.9

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 15

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 16

	SURFACE			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.6	-2.7	-3.6	-3.0
1.0	-2.9	-2.6	-3.0	-2.5
2.0	-1.5	-1.1	-0.8	-0.9
3.0	0.5	0.5	0.1	0.3
4.0	0.3	0.8	0.6	0.9
5.0	0.6	1.0	1.0	1.6
6.0	0.7	0.8	1.2	0.8
7.0	0.3	0.5	0.3	0.4
8.0	-0.3	0.3	0.1	0.3
9.0	-1.8	-0.5	-0.5	-0.6
10.0	-3.4	-3.3	-2.3	-2.6
11.0	-3.6	-4.0	-3.8	-3.0

	BOTTOM			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.7	-1.1	-1.5	-1.4
1.0	-1.5	-0.9	-1.0	-1.1
2.0	-1.0	-0.5	-0.6	-0.3
3.0	0.8	1.2	0.1	2.0
4.0	1.5	1.9	1.5	2.5
5.0	1.7	1.7	1.6	2.1
6.0	1.6	1.7	1.3	2.1
7.0	1.4	1.5	1.2	1.9
8.0	1.0	1.0	0.8	1.4
9.0	-0.3	0.1	0.1	0.3
10.0	-1.7	-0.8	-1.3	-1.2
11.0	-2.4	-0.9	-1.3	-1.6

SURFACE

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	0.7	0.	-3.6	88.6
B	5.0	1.0	11.0	-4.0	80.3
E	6.0	1.2	11.0	-3.8	82.5
BM	5.0	1.6	0.	-3.0	76.8

BOTTOM

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	1.7	11.0	-2.4	55.8
B	4.0	1.9	0.	-1.1	33.2
E	5.0	1.6	0.	-1.5	47.9
BM	4.0	2.5	11.0	-1.6	33.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 16

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 18

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.3	-2.1	-2.4	-2.1
1.0	-1.7	-1.7	-2.1	-2.0
2.0	-1.0	-0.6	-1.1	-1.0
3.0	0.5	0.3	0.3	0.4
4.0	0.6	0.6	0.9	0.6
5.0	0.6	0.8	1.2	0.7
6.0	0.9	0.6	0.7	0.4
7.0	0.5	0.6	0.7	0.6
8.0	0.3	0.5	0.4	0.3
9.0	-0.6	-0.3	-0.4	-0.5
10.0	-1.9	-2.1	-2.1	-1.8
11.0	-2.1	-2.1	-2.4	-2.2

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.2	-1.3	-1.9	-1.2
1.0	-2.1	-1.2	-1.4	-1.0
2.0	-1.0	0.1	-0.4	0.1
3.0	0.5	1.9	1.9	1.9
4.0	0.6	1.9	2.1	1.8
5.0	0.7	1.5	2.1	2.0
6.0	1.7	1.5	2.1	2.0
7.0	1.8	0.5	1.9	1.8
8.0	1.3	0.9	1.3	1.6
9.0	-0.5	0.1	-0.5	0.3
10.0	-0.8	-1.1	-1.4	-0.9
11.0	-1.6	-1.3	-2.0	-1.2

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	0.9	0.	-2.3	75.3
B	5.0	0.8	0.	-2.1	73.5
E	5.0	1.2	0.	-2.4	73.2
BM	5.0	0.7	11.0	-2.2	78.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	1.8	0.	-2.2	58.0
B	3.0	1.9	0.	-1.3	39.8
E	4.0	2.1	11.0	-2.0	42.7
BM	5.0	2.0	0.	-1.2	20.9

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 17

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 20

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.9	-2.2	-1.9	-2.3
1.0	-1.7	-1.9	-1.8	-2.3
2.0	-0.9	-0.8	-1.0	-1.5
3.0	0.5	0.5	0.1	0.1
4.0	1.1	0.7	1.2	0.8
5.0	1.2	0.9	1.3	0.9
6.0	1.4	1.2	1.2	1.0
7.0	1.1	1.1	1.1	0.8
8.0	0.7	0.7	0.5	0.3
9.0	-0.4	-0.3	0.1	0.1
10.0	-1.6	-1.4	-1.6	-1.6
11.0	-1.8	-1.6	-1.8	-1.6

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.1	-1.3	-1.4	-1.5
1.0	-0.7	-1.2	-1.3	-1.4
2.0	-0.5	-0.6	-0.5	-0.7
3.0	0.5	1.1	0.1	0.1
4.0	1.3	1.7	1.3	1.0
5.0	1.5	1.7	1.6	1.0
6.0	1.5	1.4	1.0	0.9
7.0	1.5	1.4	1.0	1.0
8.0	1.1	1.1	0.9	0.8
9.0	-0.5	0.2	0.1	0.1
10.0	-0.9	-0.8	-0.9	-0.5
11.0	-1.2	-1.5	-1.2	-0.8

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	1.4	0.	-1.9	60.8
B	6.0	1.2	0.	-2.2	62.2
E	5.0	1.3	0.	-1.9	61.3
BM	6.0	1.0	0.	-2.3	71.6

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	1.5	11.0	-1.2	42.5
B	4.0	1.7	11.0	-1.5	41.3
E	5.0	1.6	0.	-1.4	49.2
BM	4.0	1.0	0.	-1.5	52.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 18

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 22

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.9	-1.6	-1.2	-1.4
1.0	-1.4	-1.3	-1.1	-1.1
2.0	-0.8	-0.7	-0.5	-0.8
3.0	0.1	0.1	0.1	0.1
4.0	0.6	0.9	0.8	0.8
5.0	0.5	0.7	0.5	0.8
6.0	0.3	1.2	0.5	1.1
7.0	0.3	0.8	0.5	0.9
8.0	0.2	0.5	0.3	0.8
9.0	0.1	0.1	0.1	0.1
10.0	-0.8	-0.9	-1.4	-1.5
11.0	-1.5	-1.5	-1.9	-2.0

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.5	-0.9	-0.6	-0.5
1.0	-1.5	-1.5	-0.7	-0.6
2.0	-1.2	-0.9	-0.6	-0.3
3.0	0.1	0.1	0.1	0.1
4.0	0.6	0.9	0.5	0.9
5.0	0.6	0.9	0.7	1.0
6.0	0.6	1.0	0.7	1.4
7.0	0.6	1.2	0.7	1.4
8.0	0.5	0.6	0.5	1.1
9.0	0.1	0.1	0.5	0.3
10.0	-0.7	-0.3	0.1	0.1
11.0	-1.5	-1.1	-0.9	-0.5

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.6	11.0	-1.5	75.8
B	6.0	1.2	0.	-1.6	60.1
E	4.0	0.8	11.0	-1.9	71.8
BM	6.0	1.1	11.0	-2.0	62.8

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.6	0.	-1.5	69.6
B	7.0	1.2	1.0	-1.5	52.3
E	5.0	0.7	11.0	-0.9	46.4
BM	6.0	1.4	1.0	-0.6	24.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 19

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 24

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.2	-3.2	-4.2	-3.1
1.0	-3.8	-3.0	-4.0	-2.8
2.0	-3.3	-2.7	-3.2	-1.7
3.0	1.2	-0.6	-0.7	0.6
4.0	1.4	1.1	1.2	1.4
5.0	1.2	1.6	1.8	1.6
6.0	1.2	1.4	1.7	1.6
7.0	1.5	1.6	1.6	1.7
8.0	1.2	1.4	1.3	1.2
9.0	-1.5	0.3	0.3	-0.1
10.0	-1.8	-1.6	-1.9	-1.9
11.0	-2.9	-2.8	-3.4	-3.1

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.9	-2.6	-2.9	-2.9
1.0	-3.0	-2.3	-2.5	-2.8
2.0	-2.7	-1.5	-1.3	-1.5
3.0	-1.2	0.8	0.8	0.6
4.0	0.8	1.4	1.3	1.3
5.0	0.9	1.3	1.3	1.6
6.0	1.0	1.6	1.4	1.6
7.0	1.0	1.8	1.4	1.5
8.0	0.9	1.3	1.1	1.3
9.0	-0.6	0.3	-0.1	0.5
10.0	-1.9	-1.4	-1.6	-1.3
11.0	-2.8	-2.4	-2.4	-2.4

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	1.5	1.0	-3.8	70.7
B	5.0	1.6	0.	-3.2	66.7
E	5.0	1.8	0.	-4.2	70.9
BM	7.0	1.7	0.	-3.1	63.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	1.0	1.0	-3.0	78.6
B	7.0	1.8	0.	-2.6	57.6
E	6.0	1.4	0.	-2.9	62.4
BM	5.0	1.6	0.	-2.9	59.8

Note: Time is expressed in hours after moon's transit of 74th meridian. Velocities are expressed in feet per second prototype.

TABLE 20

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 26

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.9	-1.0	-1.7	-0.9
1.0	-0.8	-0.9	-1.7	-0.8
2.0	-0.5	-1.2	-1.5	-0.9
3.0	0.1	-0.4	-0.6	0.1
4.0	0.2	0.6	0.6	0.4
5.0	0.5	0.8	0.8	0.9
6.0	0.7	0.9	0.9	0.5
7.0	0.5	1.2	1.2	0.1
8.0	0.5	0.8	0.8	0.1
9.0	0.1	0.2	0.1	0.1
10.0	-0.8	-0.3	-0.5	-0.7
11.0	-1.0	-0.5	-0.8	-0.6

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.9	-1.5	-1.5	-1.5
1.0	-1.7	-1.9	-1.9	-1.1
2.0	-1.6	-1.4	-1.4	-0.7
3.0	-0.8	-0.3	-0.3	0.1
4.0	0.1	0.7	0.7	0.7
5.0	0.1	0.9	0.9	1.1
6.0	0.3	1.1	1.1	0.9
7.0	0.4	1.2	1.2	0.9
8.0	0.3	1.2	1.2	0.7
9.0	0.1	0.6	0.6	0.3
10.0	-0.4	0.1	0.1	0.1
11.0	-1.0	-0.4	-0.4	-0.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	0.7	11.0	-1.0	61.4
B	7.0	1.2	2.0	-1.2	49.2
E	7.0	1.2	0.	-1.7	62.8
BM	5.0	0.9	0.	-0.9	64.3

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	0.4	0.	-1.9	86.8
B	7.0	1.2	1.0	-1.9	50.8
E	7.0	1.2	1.0	-1.9	50.8
BM	5.0	1.1	0.	-1.5	49.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 21

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 28

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.2	-2.2	-1.5	-1.6
1.0	-1.3	-1.7	-1.2	-1.4
2.0	-1.0	-1.6	-1.0	-0.8
3.0	-0.3	-0.7	-0.5	-0.4
4.0	0.1	0.1	0.1	0.5
5.0	0.2	0.7	0.3	0.2
6.0	0.4	1.3	0.2	0.7
7.0	0.3	1.6	0.2	0.1
8.0	0.4	1.2	0.2	0.2
9.0	0.1	0.7	0.1	0.1
10.0	-0.5	-0.6	-0.1	-0.8
11.0	-0.8	-1.1	-0.9	-1.0

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.3	-1.0	-0.9	-1.2
1.0	-1.4	-1.1	-0.9	-1.2
2.0	-1.3	-0.9	-0.8	-0.8
3.0	-0.8	-0.1	-0.5	-0.3
4.0	-0.3	0.6	0.1	0.5
5.0	0.1	1.3	0.9	1.0
6.0	0.2	1.2	1.4	1.4
7.0	0.5	1.3	1.5	1.6
8.0	0.4	1.5	1.5	1.6
9.0	0.1	0.9	0.9	1.2
10.0	-0.5	0.1	0.1	0.1
11.0	-1.1	-0.4	-0.5	-0.7

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	6.0	0.4	1.0	-1.3	79.5
B	7.0	1.6	0.	-2.2	60.2
E	5.0	0.3	0.	-1.5	83.4
BM	6.0	0.7	0.	-1.6	77.3

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	7.0	0.5	1.0	-1.4	85.7
B	8.0	1.5	1.0	-1.1	35.0
E	7.0	1.5	0.	-0.9	37.5
BM	7.0	1.6	0.	-1.2	38.4

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 22

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 30

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.5	-1.7	-1.9	-1.2
1.0	-2.6	-2.0	-2.1	-2.4
2.0	-2.3	-1.9	-1.8	-2.4
3.0	-1.4	-0.6	-0.5	-0.6
4.0	-0.3	0.2	0.1	0.1
5.0	0.1	0.7	0.8	1.1
6.0	0.3	0.6	1.0	1.2
7.0	0.4	0.4	1.1	1.0
8.0	0.2	0.3	0.9	0.9
9.0	0.1	0.1	0.7	0.6
10.0	-0.3	-0.3	0.1	0.1
11.0	-1.5	-1.0	-1.1	-0.8

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.1	-2.3	-1.5	-1.6
1.0	-2.3	-2.3	-1.7	-1.7
2.0	-2.4	-2.3	-1.5	-1.6
3.0	-2.0	-1.5	-0.7	-0.8
4.0	-0.6	0.1	0.3	0.1
5.0	0.1	0.6	1.1	0.7
6.0	0.1	1.3	1.1	1.2
7.0	0.1	1.3	1.5	1.4
8.0	0.3	0.8	1.3	1.1
9.0	0.1	0.6	1.1	0.9
10.0	-0.7	0.3	0.2	0.1
11.0	-1.6	-0.5	-0.7	-0.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	0.4	1.0	-2.6	92.8
B	5.0	0.7	1.0	-2.0	77.9
E	7.0	1.1	1.0	-2.1	63.5
BM	6.0	1.2	1.0	-2.4	61.8

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	8.0	0.3	2.0	-2.4	94.9
B	6.0	1.3	1.0	-2.3	64.7
E	7.0	1.5	1.0	-1.7	49.8
BM	7.0	1.4	1.0	-1.7	56.4

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 23

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 32

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.2	-2.7	-2.6	-2.9
1.0	-3.4	-2.8	-2.7	-3.0
2.0	-3.6	-3.2	-3.0	-2.8
3.0	-2.9	-1.3	-1.4	-1.3
4.0	-0.9	0.1	0.1	-0.6
5.0	-0.3	1.3	0.9	1.5
6.0	0.1	1.4	1.6	1.5
7.0	0.3	1.3	1.6	1.6
8.0	0.7	1.1	1.6	1.6
9.0	0.3	0.9	0.9	0.9
10.0	-0.5	0.1	0.3	0.3
11.0	-2.7	-1.8	0.1	-1.8

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.6	-2.4	-3.0	-3.3
1.0	-2.8	-2.6	-3.0	-3.6
2.0	-2.7	-2.6	-3.0	-3.6
3.0	-2.2	-0.9	-1.6	-2.1
4.0	-1.1	0.1	0.1	-0.4
5.0	-0.3	1.5	1.2	1.3
6.0	0.1	1.5	1.6	2.1
7.0	0.5	1.7	1.6	2.1
8.0	0.7	2.1	1.6	2.1
9.0	0.4	1.0	1.2	1.4
10.0	0.1	0.1	0.1	0.3
11.0	-2.0	-0.9	-1.8	-1.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.7	2.0	-3.6	93.1
B	6.0	1.4	2.0	-3.2	67.3
E	6.0	1.6	2.0	-3.0	58.0
BM	7.0	1.6	1.0	-3.0	65.8

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.7	1.0	-2.8	88.8
B	8.0	2.1	1.0	-2.6	55.9
E	6.0	1.6	0.	-3.0	64.0
BM	6.0	2.1	1.0	-3.6	63.6

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 24

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 34

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.5	-1.3	-0.9	-0.8
1.0	-0.5	-1.3	-1.0	-0.7
2.0	-0.5	-1.5	-0.9	-1.4
3.0	-0.4	-0.9	-0.9	-0.1
4.0	0.1	0.1	0.1	0.1
5.0	0.1	1.1	0.1	0.5
6.0	0.1	0.8	0.1	1.2
7.0	0.1	0.5	0.1	1.8
8.0	0.1	0.5	0.1	1.7
9.0	0.1	0.5	0.1	1.5
10.0	0.1	-0.1	0.1	0.4
11.0	-0.3	-0.8	0.1	0.1

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.8	-0.8	-0.7	-0.5
1.0	-1.0	-1.0	-0.9	-0.5
2.0	-0.8	-0.8	-0.9	-0.6
3.0	-0.3	-0.5	-0.6	-0.5
4.0	0.1	0.1	0.1	0.1
5.0	0.1	0.8	0.1	0.4
6.0	0.1	1.4	0.3	0.8
7.0	0.1	1.5	0.5	1.5
8.0	0.1	1.4	0.9	1.3
9.0	0.1	1.3	0.9	1.0
10.0	0.1	0.7	0.5	0.5
11.0	-0.8	-0.5	0.1	-0.2

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.1	0.	-0.5	84.6
B	5.0	1.1	2.0	-1.5	64.2
E	4.0	0.1	1.0	-1.0	77.6
BM	7.0	1.8	2.0	-1.4	29.2

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.1	1.0	-1.0	90.3
B	7.0	1.5	1.0	-1.0	39.2
E	8.0	0.9	1.0	-0.9	46.8
BM	7.0	1.5	2.0	-0.6	30.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 25

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 36

	SURFACE			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.2	-1.4	-1.6	-1.5
1.0	-1.4	-1.6	-1.7	-1.6
2.0	-1.6	-1.8	-1.6	-1.6
3.0	-1.5	-1.5	-1.0	-1.1
4.0	-0.7	0.1	0.1	-0.3
5.0	-0.3	1.0	0.3	0.5
6.0	0.1	1.0	0.5	1.0
7.0	0.1	1.6	0.6	1.6
8.0	0.1	2.1	1.6	1.7
9.0	0.1	1.6	1.8	2.0
10.0	0.1	0.7	0.8	1.0
11.0	-0.6	-0.3	0.1	-1.0

	BOTTOM			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.8	-0.6	-0.9	-1.0
1.0	-1.2	-0.6	-0.6	-0.9
2.0	-1.2	-0.7	-0.9	-1.0
3.0	-0.8	-0.5	-0.7	-0.6
4.0	-0.3	0.1	0.1	0.1
5.0	0.1	0.2	0.1	0.3
6.0	0.1	0.3	0.1	0.5
7.0	0.1	0.2	0.6	0.5
8.0	0.1	0.2	0.9	0.5
9.0	0.1	0.2	0.7	0.3
10.0	-0.3	0.2	0.4	0.1
11.0	-0.6	-0.4	0.1	-0.5

SURFACE

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	6.0	0.1	2.0	-1.6	96.0
B	8.0	2.1	2.0	-1.8	45.9
E	9.0	1.8	1.0	-1.7	50.4
BM	9.0	2.0	1.0	-1.6	50.6

BOTTOM

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	0.1	1.0	-1.2	94.7
B	6.0	0.3	2.0	-0.7	69.5
E	8.0	0.9	0.	-0.9	49.2
BM	6.0	0.5	2.0	-1.0	64.1

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 26

CHARLESTON HARBOR MODEL

BUSHY PARK WATERS DYE TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

COOPER RIVER MILE 38

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-REV
0.	-3.9	-3.3	-3.2	-3.0
1.0	-4.6	-4.0	-3.7	-3.7
2.0	-3.9	-4.2	-4.4	-4.4
3.0	-3.9	-3.7	-3.9	-3.2
4.0	-2.6	-0.3	-0.6	-0.5
5.0	-1.3	2.6	1.3	3.2
6.0	-0.4	4.0	1.5	4.6
7.0	0.2	4.0	1.7	4.7
8.0	0.7	4.1	1.6	4.7
9.0	0.3	3.9	1.5	4.4
10.0	-0.3	2.5	0.3	2.6
11.0	-2.2	-0.6	-0.3	-1.2

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-REV
0.	-3.4	-3.3	-2.3	-3.2
1.0	-4.1	-3.9	-2.5	-4.0
2.0	-4.3	-4.3	-2.9	-4.4
3.0	-4.5	-3.5	-2.5	-3.8
4.0	-2.5	-0.7	-0.5	-0.7
5.0	-1.1	2.0	1.0	2.5
6.0	-0.4	2.5	2.3	3.4
7.0	0.2	2.9	2.4	3.3
8.0	0.4	2.5	2.6	3.4
9.0	0.3	2.3	2.3	3.2
10.0	-1.3	0.8	2.3	2.1
11.0	-2.3	-1.1	-1.0	-0.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.7	1.0	-4.6	98.3
B	8.0	4.1	2.0	-4.2	44.4
E	7.0	1.7	2.0	-4.4	68.2
BM	7.0	4.7	2.0	-4.4	41.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.4	3.0	-4.5	96.7
B	7.0	2.9	2.0	-4.3	57.5
E	8.0	2.6	2.0	-3.9	49.7
BM	6.0	3.4	2.0	-4.4	49.9

Note: Time is expressed in hours [illegible] 75th meridian
Velocities are expressed in feet per second [illegible]

TABLE 27

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 40

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.7	-0.5	-1.4	-1.1
1.0	-1.5	-0.9	-1.6	-1.6
2.0	-2.2	-1.1	-2.2	-2.1
3.0	-2.5	-1.6	-2.4	-1.7
4.0	-2.3	-0.8	-1.5	-1.1
5.0	-1.2	0.1	-0.1	0.1
6.0	-0.8	0.9	0.7	1.2
7.0	-0.4	1.0	1.1	1.0
8.0	0.3	0.9	1.0	0.9
9.0	0.2	0.9	0.9	0.9
10.0	0.2	0.8	0.6	0.5
11.0	-0.5	0.2	0.1	0.1

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.5	-1.2	-0.8	-0.9
1.0	-1.9	-1.4	-1.7	-1.6
2.0	-2.3	-1.6	-2.1	-0.9
3.0	-2.0	-1.2	-2.0	-0.9
4.0	-2.1	-0.9	-1.1	-0.5
5.0	-1.6	-0.3	0.1	0.1
6.0	-1.1	0.1	0.4	1.2
7.0	-0.7	0.7	0.6	1.4
8.0	0.2	1.2	0.8	1.3
9.0	0.2	0.9	0.3	1.2
10.0	0.2	0.7	0.1	1.0
11.0	-0.8	0.1	0.1	0.1

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	8.0	0.3	3.0	-2.5	95.6
B	7.0	1.0	3.0	-1.6	50.9
E	7.0	1.1	3.0	-2.4	67.5
BM	6.0	1.2	2.0	-2.1	62.5

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	8.0	0.2	2.0	-2.3	97.2
B	8.0	1.2	2.0	-1.6	64.5
E	8.0	0.8	2.0	-2.1	76.2
BM	7.0	1.4	1.0	-1.6	43.4

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 28

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 42

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.5	-1.3	-2.4	-2.3
1.0	-1.1	-1.3	-3.0	-3.5
2.0	-2.0	-1.4	-3.8	-4.2
3.0	-2.2	-1.3	-4.0	-4.0
4.0	-2.2	-0.9	-3.0	-2.6
5.0	-1.2	-0.4	-0.4	0.5
6.0	-0.3	0.5	1.0	1.2
7.0	0.2	0.9	1.5	1.3
8.0	0.2	0.9	1.5	1.3
9.0	0.2	0.9	1.4	1.3
10.0	0.2	0.8	1.1	1.0
11.0	-0.4	0.3	0.2	0.3

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.7	-1.2	-2.5	-2.6
1.0	-2.3	-1.7	-3.2	-3.4
2.0	-2.9	-1.7	-3.7	-3.9
3.0	-3.1	-1.6	-3.7	-4.0
4.0	-3.0	-1.4	-2.9	-2.6
5.0	-2.5	-0.3	-0.7	-0.3
6.0	-1.6	0.1	1.2	1.2
7.0	-1.0	0.7	1.7	1.7
8.0	-0.4	1.2	1.7	1.9
9.0	0.2	1.3	1.5	1.9
10.0	0.2	1.1	1.5	1.5
11.0	-0.6	0.8	0.5	0.3

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	0.2	3.0	-2.2	94.8
B	7.0	0.9	2.0	-1.4	64.7
E	7.0	1.5	3.0	-4.0	71.3
BM	7.0	1.3	2.0	-4.2	70.6

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	9.0	0.2	3.0	-3.1	98.7
B	9.0	1.3	2.0	-1.7	60.4
E	7.0	1.7	2.0	-3.7	67.6
BM	8.0	1.9	3.0	-4.0	66.7

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 29
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 44

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.6	-1.3	-0.3	-0.7
1.0	-1.7	-1.3	-0.3	-0.8
2.0	-1.8	-1.2	-0.4	-0.8
3.0	-1.9	-1.0	-0.6	-0.6
4.0	-1.9	-0.9	-0.3	-0.1
5.0	-1.7	0.1	0.2	0.2
6.0	-1.6	1.0	0.3	0.1
7.0	-1.4	0.7	0.6	0.2
8.0	-1.1	0.6	0.5	0.1
9.0	-0.5	0.5	0.3	0.1
10.0	-0.8	0.2	0.2	0.1
11.0	-1.1	0.1	-0.5	0.1

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.1	-1.8	-0.4	-1.2
1.0	-1.1	-1.6	-0.5	-1.2
2.0	-1.3	-1.6	-0.1	-1.1
3.0	-1.1	-1.6	0.1	-1.1
4.0	-1.3	-1.1	-0.3	-0.7
5.0	-1.1	0.1	0.4	0.3
6.0	-1.0	1.2	0.5	0.6
7.0	-0.6	0.9	0.6	0.6
8.0	-0.4	0.5	0.8	0.4
9.0	-0.3	0.4	0.6	0.5
10.0	-0.1	0.2	0.3	0.2
11.0	-0.5	0.1	-0.5	-0.3

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	9.0	-0.5	3.0	-1.9	100.8
B	6.0	1.0	0.	-1.3	62.9
E	7.0	0.6	3.0	-0.6	56.2
BM	5.0	0.2	1.0	-0.8	72.5

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	10.0	-0.1	2.0	-1.3	100.8
B	6.0	1.2	0.	-1.8	69.2
E	8.0	0.9	1.0	-0.5	37.4
BM	6.0	0.6	0.	-1.2	69.2

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 30

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 01

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.0	-1.6	-1.4	-1.4
1.0	-1.2	-0.6	-0.5	-0.6
2.0	0.1	0.1	0.2	0.3
3.0	1.7	1.6	1.3	1.4
4.0	1.9	1.6	1.4	1.6
5.0	1.9	1.6	1.1	1.2
6.0	1.6	1.4	1.1	1.1
7.0	1.0	0.9	0.6	0.8
8.0	-0.4	0.1	-0.5	0.1
9.0	-1.7	-1.6	-1.5	-1.6
10.0	-2.8	-2.3	-2.5	-2.5
11.0	-2.9	-2.2	-2.4	-2.1

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.5	-1.6	-1.4	-1.0
1.0	0.1	-0.7	-0.6	-0.3
2.0	0.9	0.1	0.5	0.8
3.0	1.4	1.2	1.3	1.5
4.0	1.2	1.7	1.5	1.6
5.0	1.3	1.6	1.2	1.6
6.0	1.3	1.2	1.1	1.1
7.0	1.0	0.7	1.0	0.8
8.0	0.5	0.1	-0.3	0.1
9.0	-0.5	-1.4	-1.3	-0.8
10.0	-1.0	-2.3	-2.2	-2.0
11.0	-1.1	-2.3	-2.3	-2.3

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	4.0	1.9	11.0	-2.9	59.6
B	3.0	1.6	10.0	-2.3	55.4
E	4.0	1.4	10.0	-2.5	63.8
BM	4.0	1.6	10.0	-2.5	58.3

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	3.0	1.4	11.0	-1.1	31.5
B	4.0	1.7	10.0	-2.3	57.8
E	4.0	1.5	11.0	-2.3	57.5
BM	4.0	1.6	11.0	-2.3	49.6

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 31

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 03

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.0	-1.9	-1.4	-2.1
1.0	-0.8	-0.9	-0.5	-0.8
2.0	0.9	0.1	0.6	0.6
3.0	2.7	2.3	2.2	1.7
4.0	2.7	2.3	1.5	1.6
5.0	2.3	1.9	1.5	1.5
6.0	1.8	1.6	1.1	1.2
7.0	1.2	1.0	1.1	0.8
8.0	0.1	0.1	-0.1	0.3
9.0	-2.0	-1.9	-1.9	-2.2
10.0	-3.4	-3.2	-3.2	-3.9
11.0	-2.5	-3.1	-2.7	-3.1

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.1	-2.3	-2.0	-1.9
1.0	-1.1	-1.2	-1.1	-0.8
2.0	1.0	0.1	0.5	0.6
3.0	2.6	2.4	2.0	1.7
4.0	2.6	2.3	1.9	1.6
5.0	2.5	2.1	1.8	1.6
6.0	2.0	2.0	1.7	1.4
7.0	1.5	1.6	1.4	0.8
8.0	0.8	0.1	-0.1	0.3
9.0	-1.3	-1.4	-1.2	-1.4
10.0	-3.2	-3.1	-3.4	-3.1
11.0	-3.2	-3.1	-3.2	-3.0

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.7	10.0	-3.4	49.5
B	3.0	2.3	10.0	-3.2	56.0
E	3.0	2.2	10.0	-3.2	56.9
BM	3.0	1.7	10.0	-3.9	63.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.6	10.0	-3.2	48.7
B	3.0	2.4	10.0	-3.1	53.6
E	3.0	2.0	10.0	-3.4	56.3
BM	3.0	1.7	10.0	-3.1	58.4

Note: Time is expressed in hours after moon's transit of 74th meridian. Velocities are expressed in feet per second prototype.

TABLE 32

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 05

	SURFACE			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.7	-3.0	-2.2	-1.6
1.0	-2.2	-1.2	-1.4	-1.0
2.0	0.7	0.1	0.3	0.6
3.0	3.1	2.3	1.4	2.1
4.0	3.1	2.3	1.7	2.3
5.0	2.3	2.1	1.6	1.9
6.0	2.1	1.6	1.5	1.6
7.0	1.8	1.3	1.1	1.4
8.0	0.7	0.1	0.3	0.4
9.0	-1.3	-1.7	-2.0	-1.7
10.0	-3.7	-4.0	-4.1	-3.9
11.0	-4.3	-4.0	-3.5	-3.3

	BOTTOM			
TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-3.0	-2.3	-2.2	-2.3
1.0	-1.6	-1.3	-1.1	-1.0
2.0	0.9	0.1	0.5	0.4
3.0	3.0	2.0	2.0	2.1
4.0	2.8	2.1	2.0	2.3
5.0	2.3	1.9	1.7	1.9
6.0	2.1	1.4	1.3	1.5
7.0	2.0	0.9	1.1	1.3
8.0	0.9	0.1	0.3	0.4
9.0	-1.2	-1.6	-1.7	-1.6
10.0	-3.2	-3.0	-2.3	-4.0
11.0	-3.3	-3.4	-2.3	-3.4

SURFACE

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	3.1	11.0	-4.3	55.0
B	3.0	2.3	10.0	-4.0	60.7
E	4.0	1.7	10.0	-4.1	64.9
BM	4.0	2.3	10.0	-3.9	55.8

BOTTOM

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	3.0	11.0	-3.3	49.4
B	4.0	2.1	11.0	-3.4	60.4
E	3.0	2.0	10.0	-2.3	54.2
BM	4.0	2.3	10.0	-4.0	56.9

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 33

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 07

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.9	-0.9	-1.4	-0.9
1.0	-1.4	-0.9	0.1	-1.0
2.0	-0.1	0.1	0.1	0.1
3.0	1.4	1.2	1.2	1.3
4.0	1.4	1.3	1.2	1.8
5.0	1.1	1.2	1.2	1.7
6.0	1.0	1.0	1.0	1.5
7.0	1.0	1.0	0.7	1.4
8.0	0.7	0.5	0.4	0.7
9.0	-0.5	0.1	-0.1	-0.1
10.0	-1.8	-1.2	-1.1	-1.6
11.0	-2.0	-1.7	-1.8	-1.8

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.9	-1.4	-1.2	-1.5
1.0	-1.4	-0.9	-0.6	-1.0
2.0	-0.5	0.1	0.3	0.1
3.0	1.2	0.9	0.7	1.1
4.0	1.3	1.0	0.9	1.6
5.0	1.0	1.0	0.9	1.5
6.0	1.0	1.0	0.8	1.4
7.0	1.0	0.7	0.6	1.1
8.0	0.5	0.3	0.5	-0.3
9.0	-0.5	0.1	-0.3	-1.5
10.0	-1.8	-0.9	-0.9	-2.2
11.0	-2.1	-1.2	-0.9	-2.1

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	1.4	11.0	-2.0	56.2
B	4.0	1.3	11.0	-1.7	44.2
E	3.0	1.2	11.0	-1.8	45.5
BM	4.0	1.8	11.0	-1.8	42.1

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	1.3	11.0	-2.1	59.9
B	4.0	1.0	0.	-1.4	48.5
E	4.0	0.9	0.	-1.2	47.2
BM	4.0	1.6	10.0	-2.2	57.6

Note: Time is expressed in hours after moon's transit of 74th meridian. Velocities are expressed in feet per second prototype.

TABLE 34

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

WANDO RIVER MILE 09

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.2	-2.3	-2.6	-3.3
1.0	-1.0	-1.7	-1.8	-2.6
2.0	-0.5	0.1	0.3	-1.0
3.0	1.8	3.8	1.1	2.6
4.0	1.7	2.8	3.1	2.4
5.0	2.1	1.7	2.1	1.7
6.0	1.4	1.7	1.4	1.4
7.0	1.2	1.3	1.0	1.2
8.0	0.8	0.9	-0.6	0.4
9.0	-0.5	0.1	-1.0	-1.6
10.0	-1.4	-1.6	-2.7	-3.2
11.0	-1.4	-2.3	-3.0	-3.5

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.3	-1.6	-2.9	-3.2
1.0	-1.0	-1.0	-1.9	-1.7
2.0	-0.5	0.1	0.5	-0.5
3.0	1.4	3.9	2.9	2.1
4.0	1.8	3.0	2.1	1.7
5.0	2.4	2.0	1.4	1.0
6.0	1.9	1.6	1.1	0.9
7.0	1.4	1.6	0.8	0.8
8.0	0.7	0.8	0.3	0.4
9.0	-0.4	0.1	-1.0	-1.0
10.0	-1.2	-1.5	-2.4	-2.8
11.0	-1.4	-1.6	-2.9	-3.6

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	2.1	10.0	-1.4	42.3
B	3.0	3.8	0.	-2.3	42.0
E	4.0	3.1	11.0	-3.0	59.1
BM	3.0	2.6	11.0	-3.5	63.2

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	5.0	2.4	11.0	-1.4	40.3
B	3.0	3.9	0.	-1.6	33.8
E	3.0	2.9	11.0	-2.9	57.5
BM	3.0	2.1	11.0	-3.6	67.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 35

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 13

TIME IN HOURS	MIDDEPTH SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.2	-2.3	-1.8	-1.6
1.0	-2.1	-2.5	-1.5	-1.1
2.0	-1.3	-0.4	-0.3	0.1
3.0	0.5	1.6	0.1	1.6
4.0	1.5	1.6	1.4	1.6
5.0	1.3	1.0	1.1	1.4
6.0	1.0	0.9	0.9	1.0
7.0	0.9	0.9	0.7	0.9
8.0	0.7	0.7	0.7	0.6
9.0	-0.4	0.1	0.1	0.1
10.0	-2.0	-2.0	-0.9	-1.6
11.0	-2.0	-2.3	-1.6	-1.6

MIDDEPTH

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	4.0	1.5	0.	-2.2	65.0
B	3.0	1.6	1.0	-2.5	60.6
E	4.0	1.4	0.	-1.8	58.3
BM	3.0	1.6	0.	-1.6	46.9

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 36

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
ASHLEY RIVER MILE 01

TIME IN HOURS	SURFACE SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.5	-2.0	-1.8	-1.7
1.0	-0.9	-0.6	-0.9	-0.7
2.0	-0.8	0.5	0.1	0.3
3.0	0.6	1.9	1.7	1.9
4.0	0.9	1.9	1.4	2.1
5.0	0.8	2.0	1.2	2.0
6.0	1.5	1.5	1.0	1.3
7.0	0.1	0.6	0.3	0.7
8.0	0.1	-0.8	0.1	-0.6
9.0	-1.4	-1.5	-2.0	-1.6
10.0	-1.4	-2.0	-2.1	-1.9
11.0	-1.6	-2.3	-2.2	-2.0

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.9	-1.4	-1.1	-0.9
1.0	-0.3	-0.3	-0.4	-0.1
2.0	0.8	0.9	0.1	1.0
3.0	0.8	1.5	1.7	2.0
4.0	1.3	1.6	1.5	2.1
5.0	1.2	1.5	1.5	1.6
6.0	1.3	1.6	1.2	1.4
7.0	0.8	0.7	0.8	0.9
8.0	-0.3	-0.1	0.1	0.1
9.0	-0.9	-1.4	-1.4	-1.0
10.0	-1.4	-1.8	-1.6	-1.3
11.0	-1.5	-2.1	-1.6	-1.9

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PREDOMINANCE
A	6.0	1.5	11.0	-1.6	67.2
B	5.0	2.0	11.0	-2.3	59.0
E	3.0	1.7	11.0	-2.2	62.3
BM	4.0	2.1	11.0	-2.0	52.7

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PREDOMINANCE
A	4.0	1.3	11.0	-1.5	48.8
B	4.0	1.6	11.0	-2.1	50.3
E	3.0	1.7	10.0	-1.6	49.8
BM	4.0	2.1	11.0	-1.9	39.3

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 37

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, E, AND BM

ASHLEY RIVER MILE 03

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.7	-1.9	-1.4	-1.6
1.0	-1.0	-1.0	-0.7	-0.9
2.0	0.1	0.1	0.1	0.2
3.0	0.7	0.8	0.9	0.9
4.0	1.0	0.8	0.6	0.9
5.0	0.7	0.6	0.7	0.7
6.0	0.1	0.4	0.4	0.3
7.0	0.1	0.3	0.3	0.5
8.0	0.1	0.1	0.1	-0.1
9.0	-1.2	-0.9	-0.8	-1.1
10.0	-2.2	-2.2	-1.3	-2.0
11.0	-2.2	-2.3	-1.5	-2.0

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	0.1	-0.7	-0.8	-0.5
1.0	0.1	-0.5	-0.5	-0.5
2.0	0.1	0.3	0.1	0.5
3.0	1.2	1.3	1.2	1.3
4.0	0.8	1.0	1.2	1.3
5.0	0.9	1.1	1.1	1.3
6.0	0.9	0.7	0.8	0.7
7.0	0.8	0.5	0.6	0.5
8.0	0.1	0.1	0.1	0.1
9.0	0.1	-0.4	-0.4	-0.5
10.0	-1.0	-1.3	-1.3	-1.2
11.0	-0.6	-1.0	-1.1	-0.8

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	4.0	1.0	10.0	-2.2	75.9
B	3.0	0.8	11.0	-2.3	74.3
E	3.0	0.9	11.0	-1.5	67.5
BM	3.0	0.9	10.0	-2.0	70.4

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	3.0	1.2	10.0	-1.0	25.3
B	3.0	1.3	10.0	-1.3	45.2
E	3.0	1.2	10.0	-1.3	46.6
BM	3.0	1.3	10.0	-1.2	39.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 38

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
ASHLEY RIVER MILE 05

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.5	-2.3	-2.4	-2.1
1.0	-1.5	-1.0	-1.2	-1.3
2.0	-0.1	0.1	0.1	0.6
3.0	2.1	2.0	1.6	2.2
4.0	2.0	1.7	1.6	2.1
5.0	1.8	1.8	1.7	1.8
6.0	1.1	1.6	1.6	1.7
7.0	0.9	1.0	1.1	0.9
8.0	0.1	0.1	0.1	-0.3
9.0	-2.2	-2.3	-1.8	-2.1
10.0	-3.3	-3.0	-3.0	-3.1
11.0	-3.0	-3.0	-2.8	-2.9

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-1.9	-1.8	-1.7	-1.6
1.0	-1.0	-0.9	-0.9	-0.7
2.0	0.1	0.1	0.1	1.1
3.0	2.3	2.3	2.3	2.4
4.0	2.1	2.1	2.2	2.1
5.0	2.2	1.6	2.0	1.7
6.0	1.6	1.6	1.4	1.5
7.0	1.0	1.0	1.0	0.9
8.0	0.1	0.1	0.1	0.2
9.0	-1.4	-1.5	-1.6	-1.6
10.0	-2.5	-2.6	-3.0	-2.6
11.0	-2.4	-2.7	-2.4	-2.1

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.1	10.0	-3.3	62.7
B	3.0	2.0	10.0	-3.0	60.1
E	5.0	1.7	10.0	-3.0	60.5
BM	3.0	2.2	10.0	-3.1	58.5

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.3	10.0	-2.5	51.8
B	3.0	2.3	11.0	-2.7	53.2
E	3.0	2.3	10.0	-3.0	51.1
BM	3.0	2.4	10.0	-2.6	48.8

Note: Time is expressed in hours after moon's transit of 75th meridian.
Velocities are expressed in feet per second prototype.

TABLE 39

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
ASHLEY RIVER MILE 07

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.2	-1.6	-0.9	-2.0
1.0	-1.5	-0.9	-0.9	-1.6
2.0	0.1	0.1	0.1	-0.3
3.0	1.7	1.0	1.2	1.2
4.0	1.6	0.9	1.6	1.6
5.0	1.5	1.0	1.3	1.3
6.0	1.3	0.9	1.2	1.2
7.0	0.7	0.6	0.9	0.9
8.0	0.1	0.1	0.1	0.1
9.0	-1.9	-1.6	-1.1	-1.3
10.0	-2.9	-1.9	-2.2	-2.7
11.0	-2.4	-1.7	-1.9	-2.5

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-2.4	-1.6	-1.6	-2.1
1.0	-1.7	-0.8	-0.9	-1.2
2.0	0.1	0.1	0.1	-0.3
3.0	2.0	1.0	2.2	2.5
4.0	1.7	0.9	2.0	2.4
5.0	1.9	0.9	1.8	1.9
6.0	1.7	0.8	1.6	1.5
7.0	1.0	0.5	1.2	1.3
8.0	-0.3	0.1	0.1	0.3
9.0	-1.6	-1.0	-0.9	-1.0
10.0	-2.9	-2.3	-2.1	-2.1
11.0	-2.7	-2.1	-1.9	-2.3

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	1.7	10.0	-2.9	62.5
B	3.0	1.0	10.0	-1.9	64.5
E	4.0	1.6	10.0	-2.2	54.8
BM	4.0	1.6	10.0	-2.7	64.1

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.0	10.0	-2.9	60.8
B	3.0	1.0	10.0	-2.3	66.6
E	3.0	2.2	10.0	-2.1	46.9
BM	3.0	2.5	11.0	-2.3	50.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 40

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS
SCHEDULES A, B, E, AND BM
CLOUTER CREEK MILE 01

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.9	-1.1	-0.5	-1.0
1.0	-0.7	-0.7	-0.5	-0.8
2.0	-0.3	0.2	0.1	-0.5
3.0	0.5	0.5	0.5	0.1
4.0	0.8	0.7	0.5	0.8
5.0	0.8	0.6	0.7	0.2
6.0	1.1	0.9	0.8	0.2
7.0	0.9	0.9	0.9	0.3
8.0	0.2	0.3	0.2	0.7
9.0	-1.6	-1.2	-1.0	0.1
10.0	-1.7	-1.6	-1.1	-1.3
11.0	-1.3	-1.3	-0.8	-0.8

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH E	SCH B-MOD
0.	-0.8	-0.3	0.1	-0.3
1.0	-0.1	-0.3	0.1	0.1
2.0	0.5	-0.1	0.1	0.5
3.0	0.7	0.5	0.1	0.3
4.0	0.8	0.5	0.7	0.2
5.0	0.6	0.6	0.7	0.7
6.0	1.0	1.0	1.1	0.8
7.0	0.8	1.2	1.1	0.8
8.0	0.3	0.9	0.4	-0.5
9.0	-1.0	-1.1	-0.5	-0.3
10.0	-1.3	-1.1	-0.6	-0.9
11.0	-0.7	-0.6	-0.3	-0.5

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	6:0	1.1	10.0	-1.7	61.5
B	6:0	0.9	10.0	-1.6	60.2
E	7:0	0.9	10.0	-1.1	52.7
BM	4:0	0.8	10.0	-1.3	65.1

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	6:0	1.0	10.0	-1.3	45.6
B	7:0	1.2	9.0	-1.1	44.1
E	6:0	1.1	10.0	-0.6	24.4
BM	6:0	0.8	10.0	-0.9	41.6

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 41

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C AND D

COOPER RIVER MILE 30

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-2.5	-1.7	-0.8	-1.6
1.0	-2.6	-2.0	-1.0	-1.3
2.0	-2.3	-1.9	-0.9	-1.4
3.0	-1.4	-0.6	-0.8	-0.7
4.0	-0.3	0.2	0.1	0.1
5.0	0.1	0.7	0.4	0.5
6.0	0.3	0.6	1.4	1.0
7.0	0.4	0.4	1.4	0.9
8.0	0.2	0.3	1.2	0.6
9.0	0.1	0.1	1.0	0.3
10.0	-0.3	-0.3	0.1	-0.3
11.0	-1.5	-1.0	-0.9	-0.9

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-2.1	-2.3	-2.0	-1.9
1.0	-2.3	-2.3	-2.3	-2.3
2.0	-2.4	-2.3	-1.8	-2.1
3.0	-2.0	-1.5	-1.3	-1.0
4.0	-0.6	0.1	0.1	0.1
5.0	0.1	0.6	0.4	0.6
6.0	0.1	1.3	0.6	0.7
7.0	0.1	1.3	0.8	0.8
8.0	0.3	0.8	0.9	0.6
9.0	0.1	0.6	0.5	0.3
10.0	-0.7	0.3	0.1	0.1
11.0	-1.6	-0.5	-0.3	-0.8

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	0.4	1.0	-2.6	92.0
B	5.0	0.7	1.0	-2.0	77.9
C	6.0	1.4	1.0	-1.0	46.4
D	6.0	1.0	0.	-1.6	66.8

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PRE-DOMINANCE
A	8.0	0.3	2.0	-2.4	94.9
B	6.0	1.3	1.0	-2.3	64.1
C	8.0	0.9	1.0	-2.3	70.8
D	7.0	0.8	1.0	-2.3	72.6

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 42

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C AND D

COOPER RIVER MILE 34

TIME IN HOURS	SURFACE SCH A	SCH B	SCH C	SCH D
0.	-0.5	-1.3	-1.6	-1.3
1.0	-0.5	-1.3	-1.5	-1.8
2.0	-0.5	-1.5	-1.3	-1.5
3.0	-0.4	-0.9	-0.9	-1.0
4.0	0.1	0.1	-0.5	0.1
5.0	0.1	1.1	0.1	0.3
6.0	0.1	0.8	0.2	0.1
7.0	0.1	0.5	0.1	0.1
8.0	0.1	0.5	0.1	0.1
9.0	0.1	0.5	0.1	0.1
10.0	0.1	-0.1	0.1	0.1
11.0	-0.3	-0.8	0.1	-0.3

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH C	SCH D
0.	-0.8	-0.8	-0.9	-0.9
1.0	-1.0	-1.0	-1.1	-1.0
2.0	-0.8	-0.8	-1.0	-0.9
3.0	-0.3	-0.5	-0.6	-0.8
4.0	0.1	0.1	0.1	0.1
5.0	0.1	0.8	0.3	0.4
6.0	0.1	1.4	0.8	0.6
7.0	0.1	1.5	1.0	0.9
8.0	0.1	1.4	1.2	0.9
9.0	0.1	1.3	1.4	0.8
10.0	0.1	0.7	0.9	0.6
11.0	-0.8	-0.5	0.1	0.1

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.1	0.	-0.5	84.6
B	5.0	1.1	2.0	-1.5	64.2
C	6.0	0.2	0.	-1.6	87.5
D	5.0	0.3	1.0	-1.8	87.3

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	4.0	0.1	1.0	-1.0	90.3
B	7.0	1.5	1.0	-1.0	39.2
C	9.0	1.4	1.1	-1.1	39.4
D	7.0	0.9	1.0	-1.0	46.2

Note: Time is expressed in hours after moon's transit of 71th meridian.
Velocities are expressed in feet per second prototype.

TABLE 43

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C AND D

COOPER RIVER MILE 38

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-3.9	-3.3	-2.8	-3.1
1.0	-4.6	-4.0	-3.7	-4.0
2.0	-3.9	-4.2	-3.8	-4.5
3.0	-3.9	-3.7	-3.6	-4.0
4.0	-2.6	-0.3	-0.6	-0.8
5.0	-1.3	2.6	0.7	0.5
6.0	-0.4	4.0	1.7	1.1
7.0	0.2	4.0	2.0	1.5
8.0	0.7	4.1	2.2	1.7
9.0	0.3	3.9	2.2	1.5
10.0	-0.3	2.5	1.4	0.5
11.0	-2.2	-0.6	-0.3	-0.4

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-3.4	-3.3	-1.8	-2.9
1.0	-4.1	-3.9	-2.4	-3.5
2.0	-4.3	-4.3	-2.7	-3.6
3.0	-4.5	-3.5	-2.3	-3.3
4.0	-2.5	-0.7	0.4	-0.7
5.0	-1.1	2.0	1.3	0.5
6.0	-0.4	2.5	2.4	1.9
7.0	0.2	2.9	2.9	1.8
8.0	0.4	2.5	3.2	2.0
9.0	0.3	2.3	3.0	1.3
10.0	-1.3	0.8	1.9	1.2
11.0	-2.3	-1.1	-0.5	-0.5

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.7	1.0	-4.6	95.3
B	8.0	4.1	2.0	-4.2	44.4
C	8.0	2.2	2.0	-3.8	60.5
D	8.0	1.7	2.0	-4.5	71.5

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	MAXIMUM FLOOD VELOCITY DATA	MAXIMUM EBB TIME HOURS	MAXIMUM EBB VELOCITY DATA	EBB PREDOMINANCE
A	8.0	0.4	3.0	-4.5	96.7
B	7.0	2.9	2.0	-4.3	57.5
C	8.0	2.0	2.0	-3.6	64.0
D	8.0	3.2	2.0	-2.7	40.6

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 44

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C, AND D

COOPER RIVER MILE 42

TIME IN HOURS	SURFACE SCH A	SCH B	SCH C	SCH D
0.	-0.5	-1.3	-1.3	-1.3
1.0	-1.1	-1.3	-2.1	-2.0
2.0	-2.0	-1.4	-2.6	-2.3
3.0	-2.2	-1.3	-2.7	-2.6
4.0	-2.2	-0.9	-2.2	-1.9
5.0	-1.2	-0.1	-1.0	-0.3
6.0	-0.3	0.5	0.9	0.7
7.0	0.2	0.9	1.1	1.3
8.0	0.2	0.9	1.2	0.9
9.0	0.2	0.9	1.3	1.1
10.0	0.2	0.8	0.7	0.8
11.0	-0.4	0.3	0.2	0.3

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH C	SCH D
0.	-1.7	-1.2	-1.4	-1.0
1.0	-2.3	-1.7	-2.1	-1.7
2.0	-2.9	-1.7	-2.2	-2.0
3.0	-3.1	-1.6	-2.2	-2.1
4.0	-3.0	-1.4	-1.9	-1.3
5.0	-2.5	-0.3	-0.6	0.1
6.0	-1.6	0.1	0.5	0.6
7.0	-1.0	0.7	1.0	1.2
8.0	-0.4	1.2	1.0	1.3
9.0	0.2	1.3	1.0	1.3
10.0	0.2	1.1	1.0	1.1
11.0	-0.6	0.8	1.0	0.6

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	7.0	0.2	3.0	-2.2	94.8
B	7.0	0.9	2.0	-1.1	64.7
C	9.0	1.3	3.0	-2.7	68.2
D	7.0	1.3	3.0	-2.6	67.6

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	9.0	0.2	3.0	-2.1	90.2
B	9.0	1.0	2.0	-1.7	60.4
C	7.0	1.0	2.0	-2.2	65.6
D	8.0	1.3	3.0	-2.1	57.8

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 45

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C AND D

COOPER RIVER MILE 44

TIME IN HOURS	SURFACE SCH A	SCH B	SCH C	SCH D
0.	-1.6	-1.3	-0.9	-1.3
1.0	-1.7	-1.3	-1.6	-1.6
2.0	-1.8	-1.2	-1.8	-1.6
3.0	-1.9	-1.0	-1.4	-1.4
4.0	-1.9	-0.9	-1.1	-1.1
5.0	-1.7	0.1	0.1	0.1
6.0	-1.6	1.0	1.1	0.7
7.0	-1.4	0.7	1.3	0.9
8.0	-1.1	0.6	1.1	0.6
9.0	-0.5	0.5	0.9	0.4
10.0	-0.8	0.2	0.9	0.3
11.0	-1.1	0.1	0.3	0.1

TIME IN HOURS	BOTTOM SCH A	SCH B	SCH C	SCH D
0.	-1.1	-1.8	-1.6	-1.0
1.0	-1.1	-1.6	-2.0	-1.1
2.0	-1.3	-1.6	-1.8	-0.9
3.0	-1.1	-1.6	-1.9	-0.9
4.0	-1.3	-1.1	-1.6	-0.4
5.0	-1.1	0.1	0.1	0.1
6.0	-1.0	1.2	1.4	1.2
7.0	-0.6	0.9	1.3	1.2
8.0	-0.4	0.5	1.3	0.9
9.0	-0.3	0.4	1.0	0.8
10.0	-0.1	0.2	0.9	0.1
11.0	-0.5	0.1	0.1	-0.4

SURFACE

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PREDOMINANCE
A	9.0	-0.5	3.0	-1.9	100.0
B	6.0	1.0	0.	-1.3	62.9
C	7.0	1.3	2.0	-1.8	55.3
D	7.0	0.9	2.0	-1.6	68.2

BOTTOM

SCH	MAXIMUM FLOOD TIME HOURS	VELOCITY DATA	MAXIMUM EBB TIME HOURS	VELOCITY DATA	EBB PREDOMINANCE
A	10.0	-0.5	2.0	-1.3	100.0
B	5.0	1.2	0.	-1.8	69.2
C	6.0	1.4	1.0	-2.0	60.4
D	6.0	1.2	1.0	-1.1	53.9

Notes: Time is expressed in hours after 0000 hours, zone of 75th meridian.
Velocities are expressed in feet per second prototype.

TABLE 46

CHARLESTON HARBOR MODEL

BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR PINOPOLIS WEEKLY RELEASE HYDROGRAPHS

SCHEDULES A, B, C, AND D

WANDO RIVER MILE 3

SURFACE

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-2.0	-1.9	-1.6	-2.3
1.0	-0.8	-0.9	-0.7	-1.0
2.0	0.9	0.1	0.1	0.1
3.0	2.7	2.3	2.0	1.6
4.0	2.7	2.3	2.0	1.9
5.0	2.3	1.9	1.6	1.6
6.0	1.8	1.6	1.5	1.5
7.0	1.2	1.0	1.2	1.0
8.0	0.1	0.1	0.1	0.1
9.0	-2.0	-1.9	-2.0	-3.2
10.0	-3.4	-3.2	-3.1	-3.2
11.0	-2.5	-3.1	-2.4	-3.0

BOTTOM

TIME IN HOURS	SCH A	SCH B	SCH C	SCH D
0.	-2.1	-2.3	-1.8	-1.4
1.0	-1.1	-1.2	-1.1	-0.6
2.0	1.0	0.1	0.1	0.1
3.0	2.6	2.4	2.1	1.7
4.0	2.6	2.3	2.3	1.7
5.0	2.5	2.1	2.0	1.0
6.0	2.0	2.0	1.8	1.0
7.0	1.5	1.6	1.4	0.9
8.0	0.8	0.1	0.1	0.1
9.0	-1.3	-1.4	-1.4	-0.8
10.0	-3.2	-3.1	-3.1	-2.3
11.0	-3.2	-3.1	-2.4	-2.4

SURFACE

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.7	10.0	-3.4	49.5
B	3.0	2.3	10.0	-3.2	54.8
C	3.0	2.0	10.0	-3.1	55.5
D	4.0	1.9	9.0	-3.2	64.3

BOTTOM

	MAXIMUM FLOOD		MAXIMUM EBB		
SCH	TIME HOURS	VELOCITY DATA	TIME HOURS	VELOCITY DATA	EBB PRE-DOMINANCE
A	3.0	2.6	10.0	-3.2	48.2
B	3.0	2.4	10.0	-3.1	53.6
C	4.0	2.3	10.0	-3.1	51.8
D	3.0	1.7	11.0	-2.4	56.5

Note: Time is expressed in hours after moon's transit of 74th meridian.
Velocities are expressed in feet per second prototype.

TABLE 47

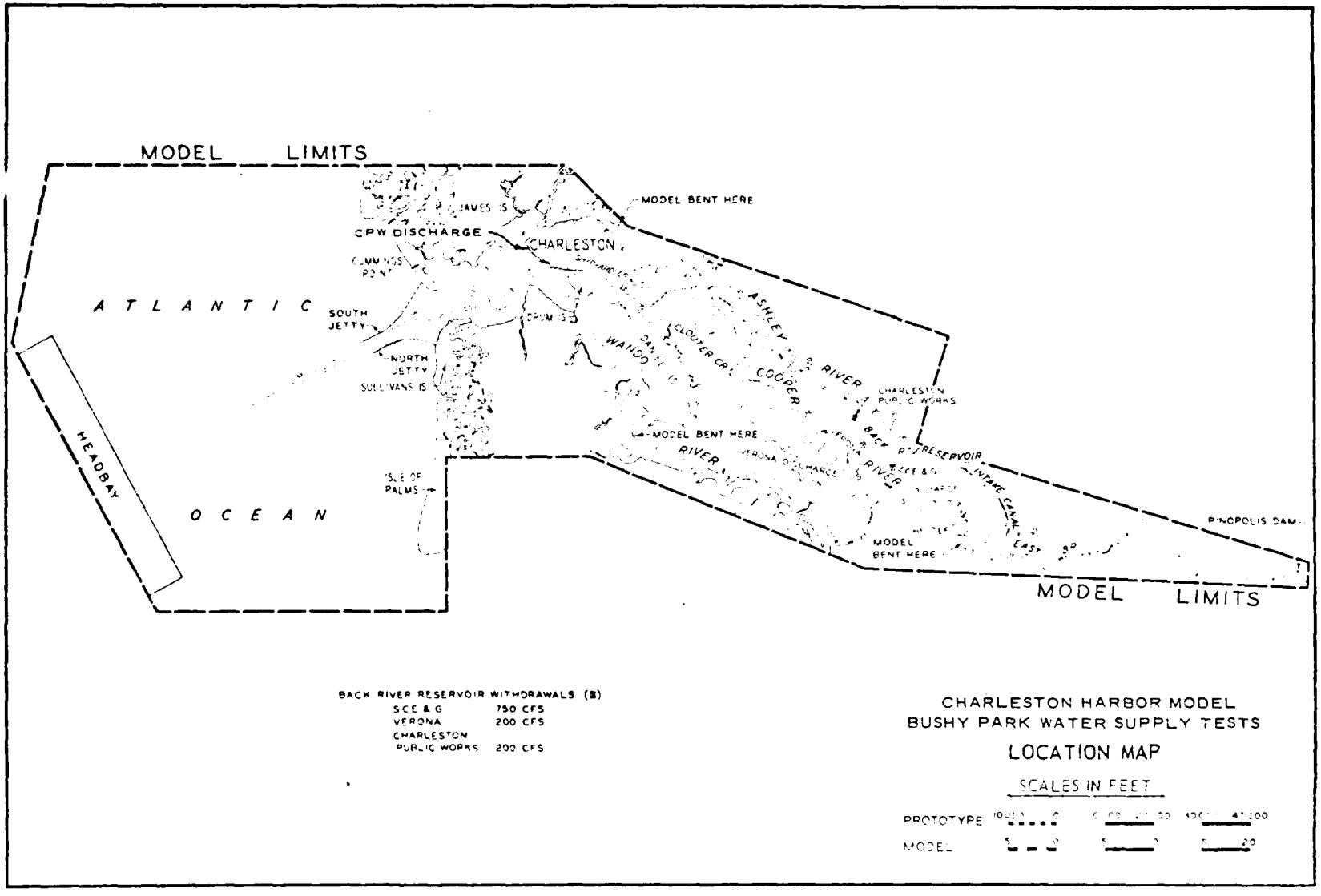
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
EFFECTS OF WEEKLY HYDROGRAPHS
ON SALINITIES IN PARTS PER THOUSAND
HIGH-WATER SLACK

MILE	SCH A		SCH B		SCH C		SCH D		SCH E		SCH BM	
STATION	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT
ASHLEY RIVER												
1	21.2	24.8	28.3	28.3	28.3	28.6	28.1	28.2	28.2	28.6	28.0	28.7
3	19.0	22.3	27.3	27.5	27.7	28.2	27.3	27.4	27.3	27.5	27.0	27.4
5	16.5	19.6	25.7	26.9	26.7	27.1	26.1	26.9	25.7	26.8	25.4	26.5
7	13.7	17.0	24.9	25.6	25.3	26.1	25.0	25.6	24.4	24.8	23.5	24.8
9	12.8	14.3	23.3	24.2	24.6	24.6	23.9	24.4	23.1	23.3	22.3	22.9
11	11.9	12.5	22.3	22.9	24.0	24.0	23.4	23.6	22.1	21.9	21.2	21.7
13	11.5	11.8	21.8	21.8	23.4	23.5	22.7	22.7	21.0	21.0	19.9	20.5
WANDO RIVER												
1	14.4	18.8	25.6	26.4	24.3	25.5	24.1	26.3	24.5	24.9	22.7	25.8
3	12.4	15.7	24.9	25.0	23.9	25.0	25.3	25.3	23.8	24.0	23.5	23.9
5	11.0	12.3	23.3	23.6	23.8	24.1	23.6	23.8	22.0	22.2	21.5	21.7
7	10.3	10.7	23.0	22.9	23.3	23.0	22.6	22.6	21.4	21.3	21.1	21.1
9	9.6	9.8	22.7	22.7	22.9	22.8	22.6	22.6	21.0	21.1	21.2	21.2
11	9.1	9.2	22.3	22.3	22.2	22.1	22.5	22.2	21.0	21.0	20.9	20.9
13	8.9	8.9	21.0	21.0	21.4	21.4	21.5	21.4	20.2	20.2	19.0	19.0
15	8.7	8.7	20.9	21.1	20.5	20.5	20.6	20.6	15.8	15.7	18.7	18.7
CLOUTER CREEK												
1	6.5	8.5	22.8	22.9	23.8	23.9	22.0	23.0	20.7	20.7	19.3	21.5
BACK RIVER RESERVOIR												
1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EAST BRANCH COOPER RIVER												
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
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 48

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
EFFECTS OF WEEKLY HYDROGRAPHS
ON SALINITIES IN PARTS PER THOUSAND
LOW-WATER SLACK

MILE	SCH A		SCH B		SCH C		SCH D		SCH E		SCH BM	
STATION	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT	SUR	BOT
					ASHLEY RIVER							
1	12.9	20.1	25.2	26.4	25.7	26.8	24.9	26.0	24.2	26.5	24.4	25.6
3	11.3	17.7	23.9	24.9	24.6	25.5	24.1	25.2	23.8	24.7	22.9	23.9
5	12.3	13.1	22.7	23.2	23.9	24.4	23.3	23.6	22.3	23.0	21.1	22.0
7	11.5	11.7	21.9	22.1	23.4	23.5	22.6	22.6	21.5	21.6	20.1	20.7
9	11.3	11.3	21.1	21.4	22.8	22.9	21.8	21.9	20.7	21.0	19.2	19.8
11	10.0	10.5	19.6	19.8	21.9	22.1	20.6	20.8	19.5	19.5	18.1	18.2
13	8.4	9.2	16.8	17.7	20.2	20.3	18.8	19.2	16.2	16.8	14.8	15.6
					WANDO RIVER							
1	10.0	16.0	22.6	23.7	22.7	24.1	22.6	23.2	21.3	22.1	20.9	23.2
3	9.7	10.3	22.7	22.7	22.8	23.1	22.5	22.6	21.3	21.4	21.1	21.4
5	9.2	9.3	22.3	22.4	22.6	23.2	22.4	22.1	21.3	21.4	21.0	21.0
7	9.0	9.0	22.1	22.2	21.8	22.3	22.0	22.0	20.7	21.0	21.0	20.7
9	8.8	8.9	21.4	21.3	21.2	21.4	21.6	21.2	20.4	20.3	20.4	20.4
11	8.6	8.7	20.4	20.6	20.4	20.7	20.6	20.4	19.4	19.2	19.1	19.5
13	8.2	8.4	19.1	19.5	18.8	19.1	19.4	19.6	19.1	19.2	20.2	20.2
15	7.7	7.8	17.9	17.8	18.0	17.9	17.8	17.9	17.4	17.6	18.7	18.7
					CLOUTER CREEK							
1	2.6	4.7	17.8	19.4	19.2	20.4	17.8	19.5	14.7	17.3	16.5	16.6
					BACK RIVER RESERVOIR							
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
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
					EAST BRANCH COOPER RIVER							
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



BACK RIVER RESERVOIR WITHDRAWALS (B)

SCE & G	750 CFS
VERONA	200 CFS
CHARLESTON PUBLIC WORKS	200 CFS

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
LOCATION MAP

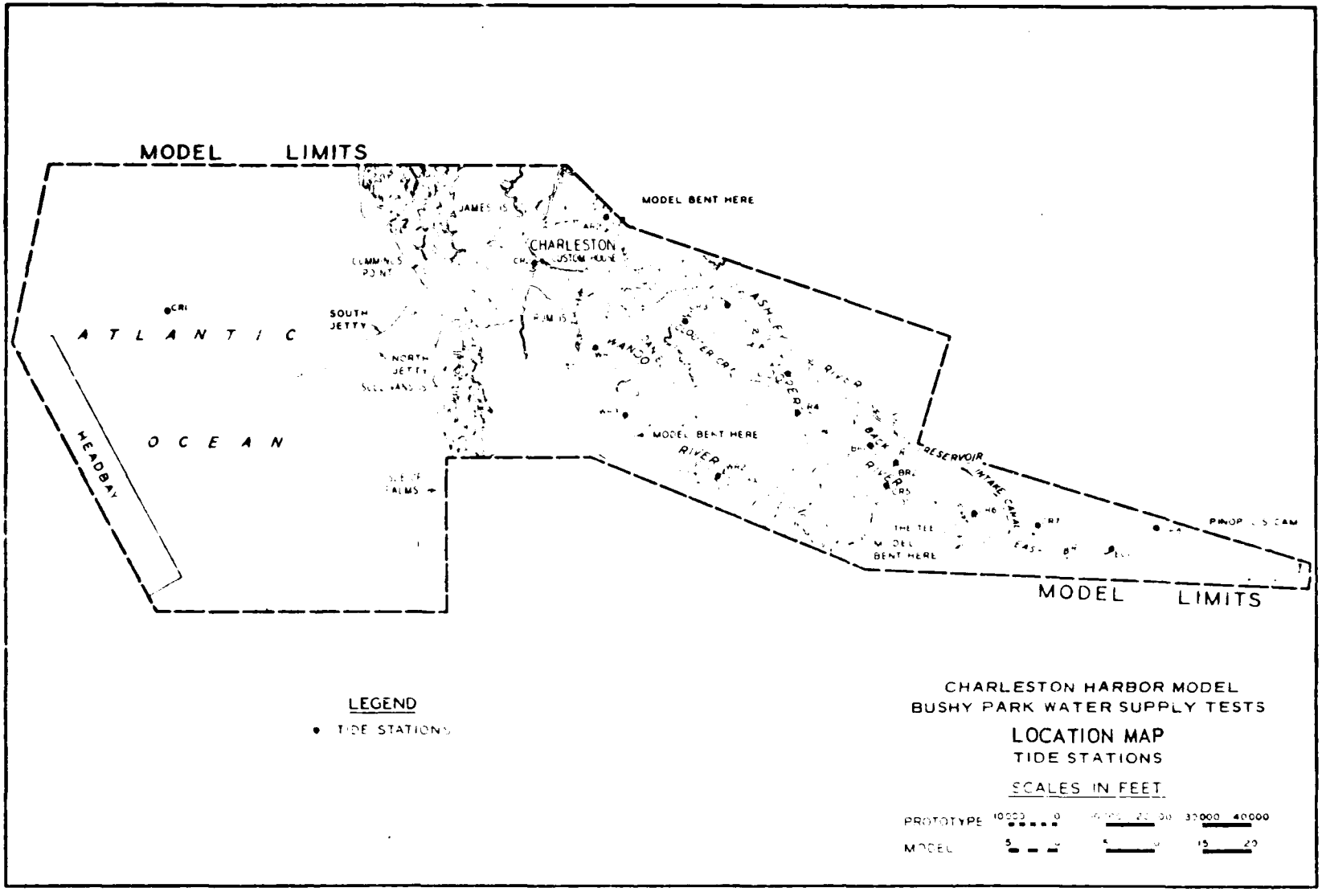
SCALES IN FEET

PROTOTYPE 10000 0 5000 10000 20000

MODEL 5 0 2½ 5 10

PLATE 1

PLATE 2


MODEL LIMITS
MODEL BENT HERE
CHARLESTON
SOUTH JETTY
NORTH JETTY
ATLANTIC
OCEAN
HEADBAY
MODEL BENT HERE
RIVER
RESERVOIR
INTAKE CANAL
MODEL BENT HERE
MODEL LIMITS
LEGEND
TIDE STATIONS
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
LOCATION MAP
TIDE STATIONS
SCALES IN FEET
PROTOTYPE
MODEL

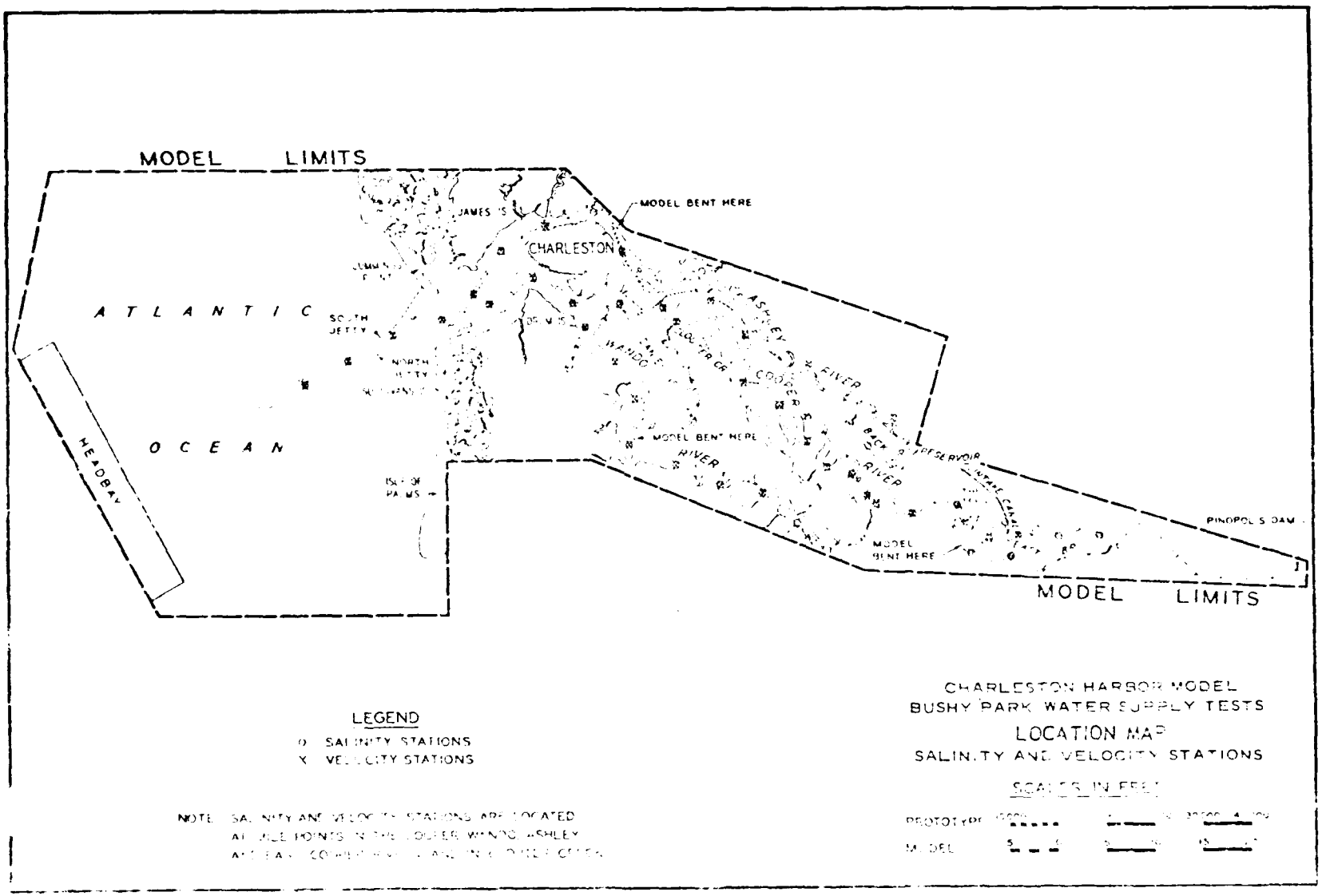
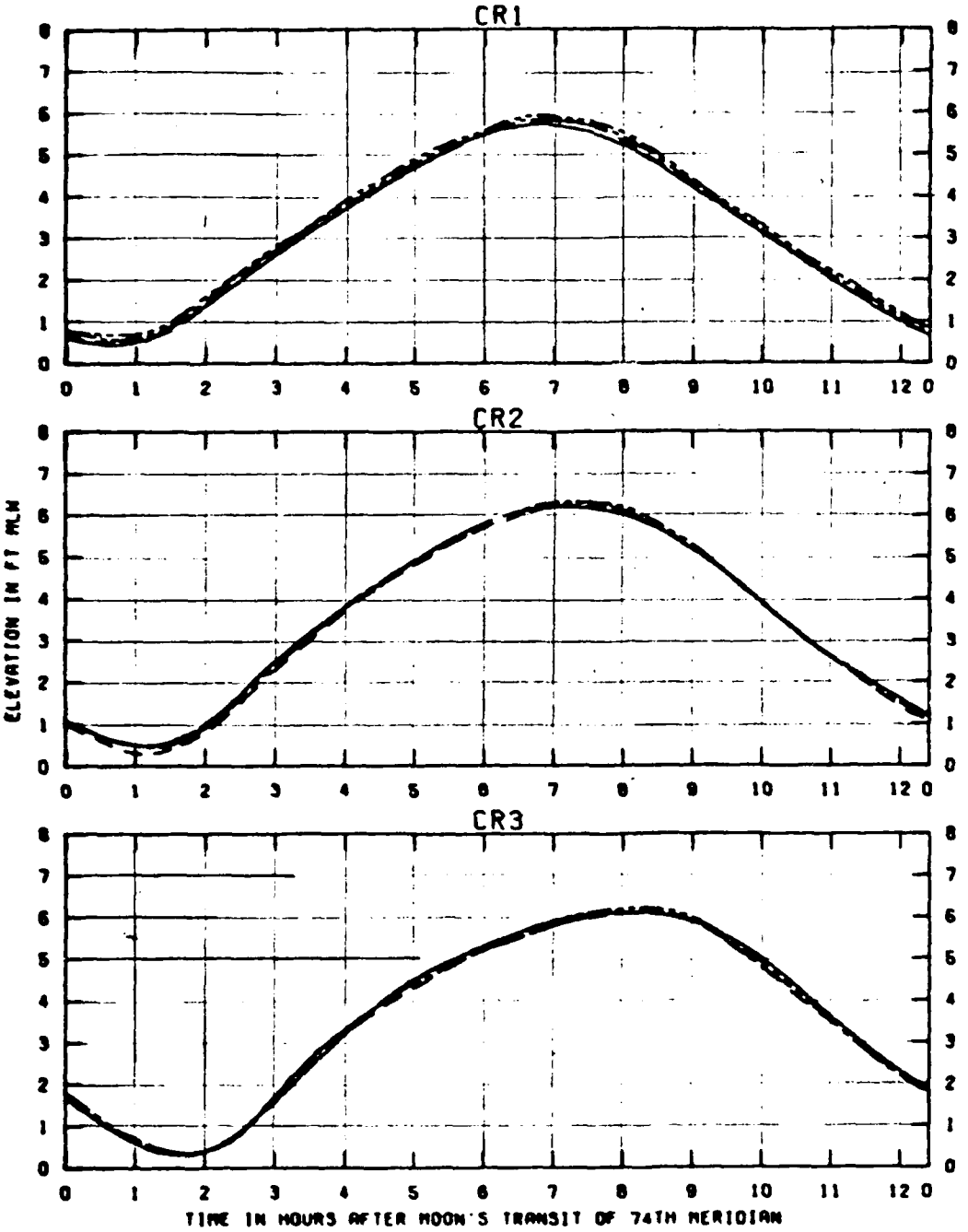

MODEL LIMITS
ATLANTIC
OCEAN
HEADBAY
CHARLESTON
MODEL BENT HERE
MODEL BENT HERE
MODEL BENT HERE
MODEL LIMITS
PINOPOLIS DAM
LEGEND
SALINITY STATIONS
VELOCITY STATIONS
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS
LOCATION MAP
SALINITY AND VELOCITY STATIONS
SCALES IN FEET

PLATE 3



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - -

Sch. C — · —

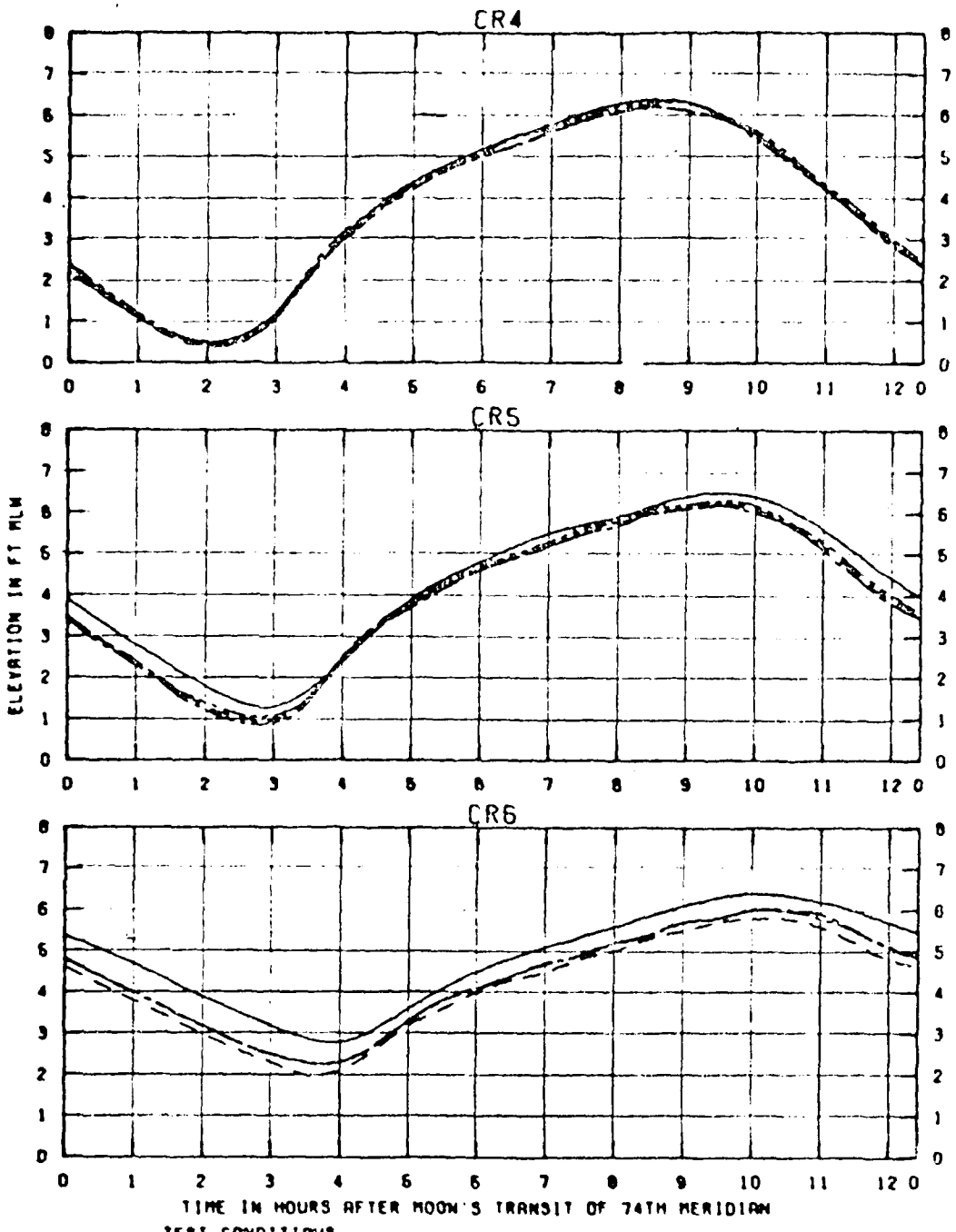
Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D

STATIONS
CR1, CR2, AND CR3

PLATE 4



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

Sch. C — · —

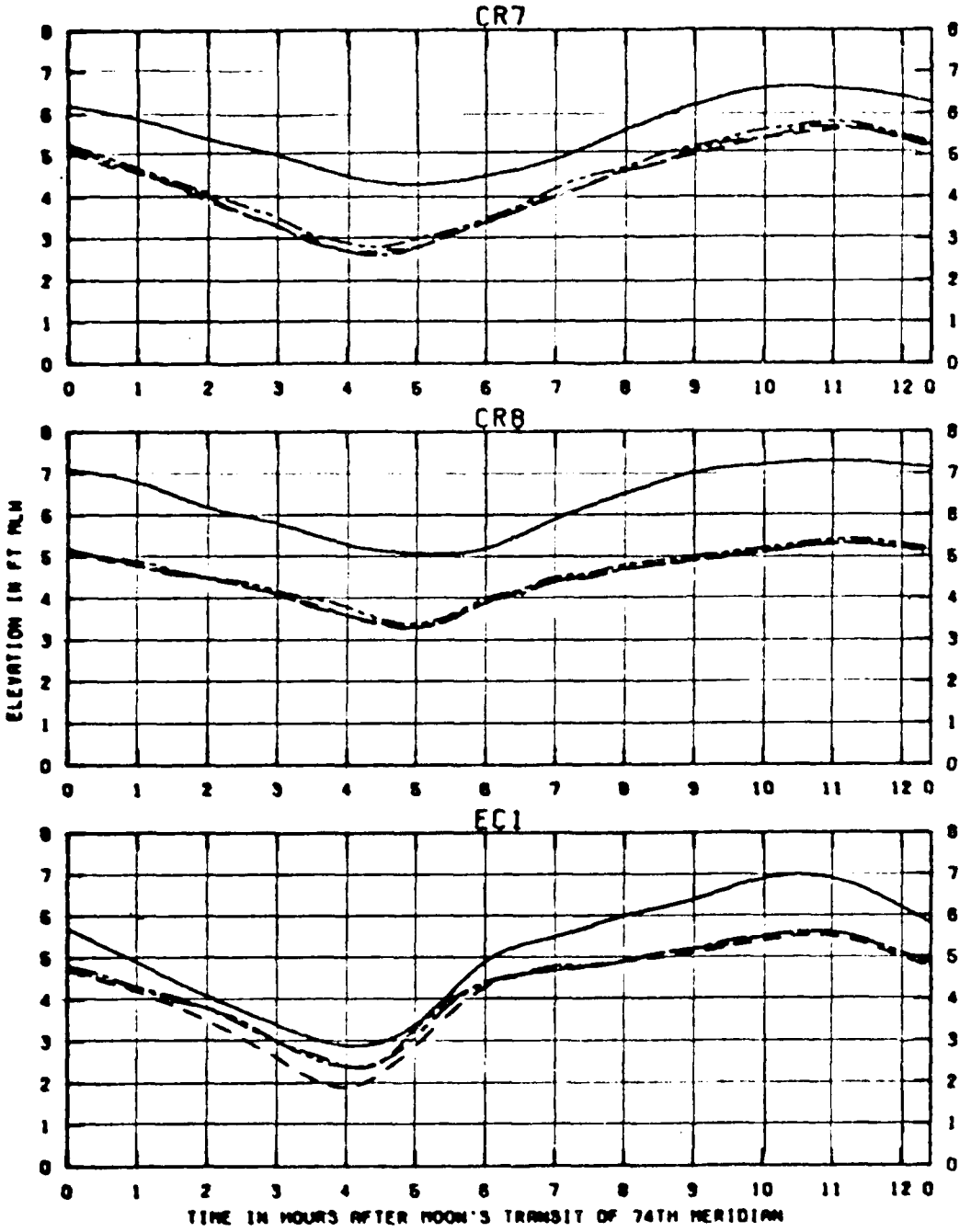
Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D

STATIONS
CR4, CR5, AND CR6

PLATE 5



TEST CONDITIONS

OCEAN TIDE RANGE	6.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 281 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - - -

Sch. C — · —

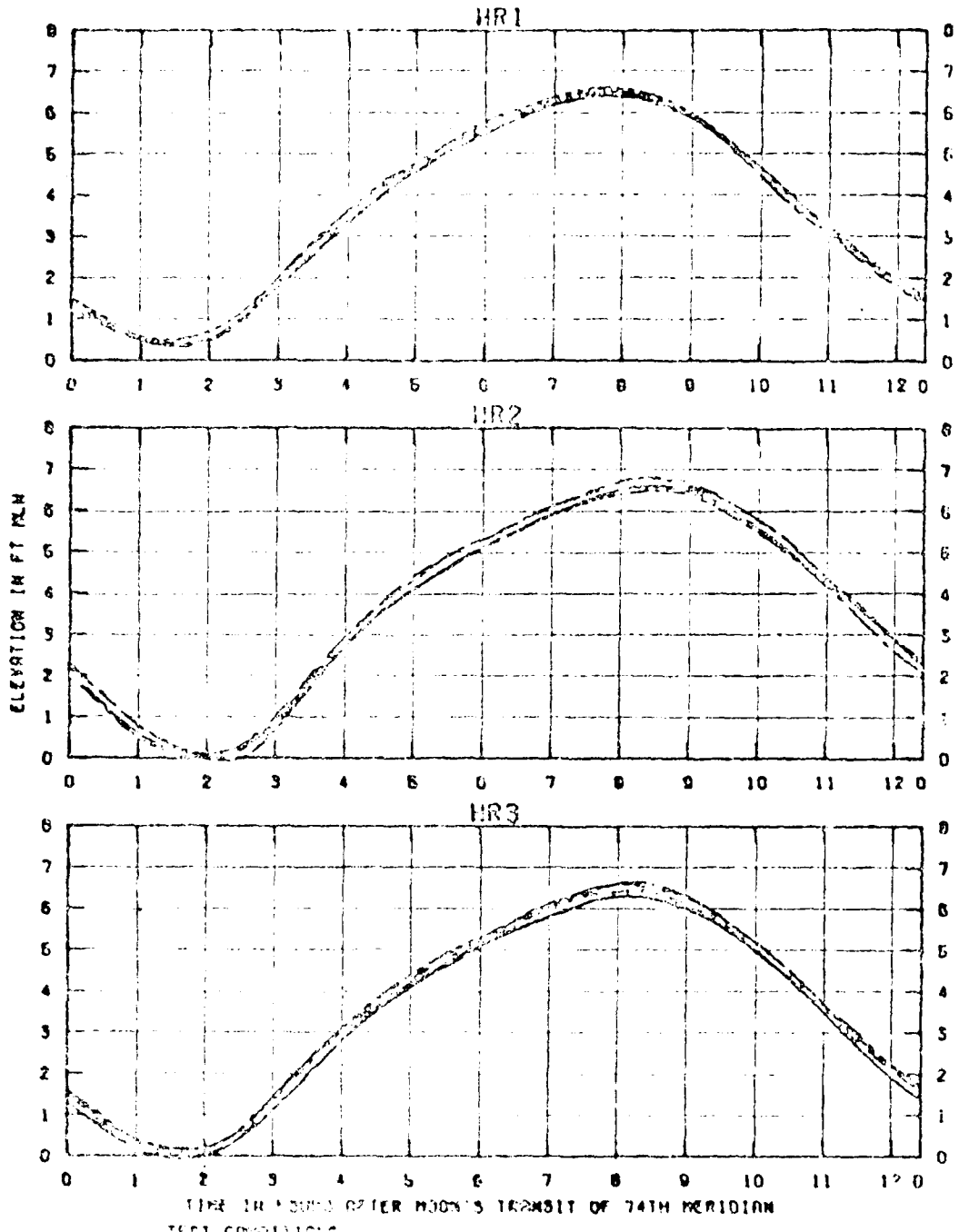
Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D

STATIONS
CR7, CR8, AND EC1

PLATE 6



TEST CONDITIONS

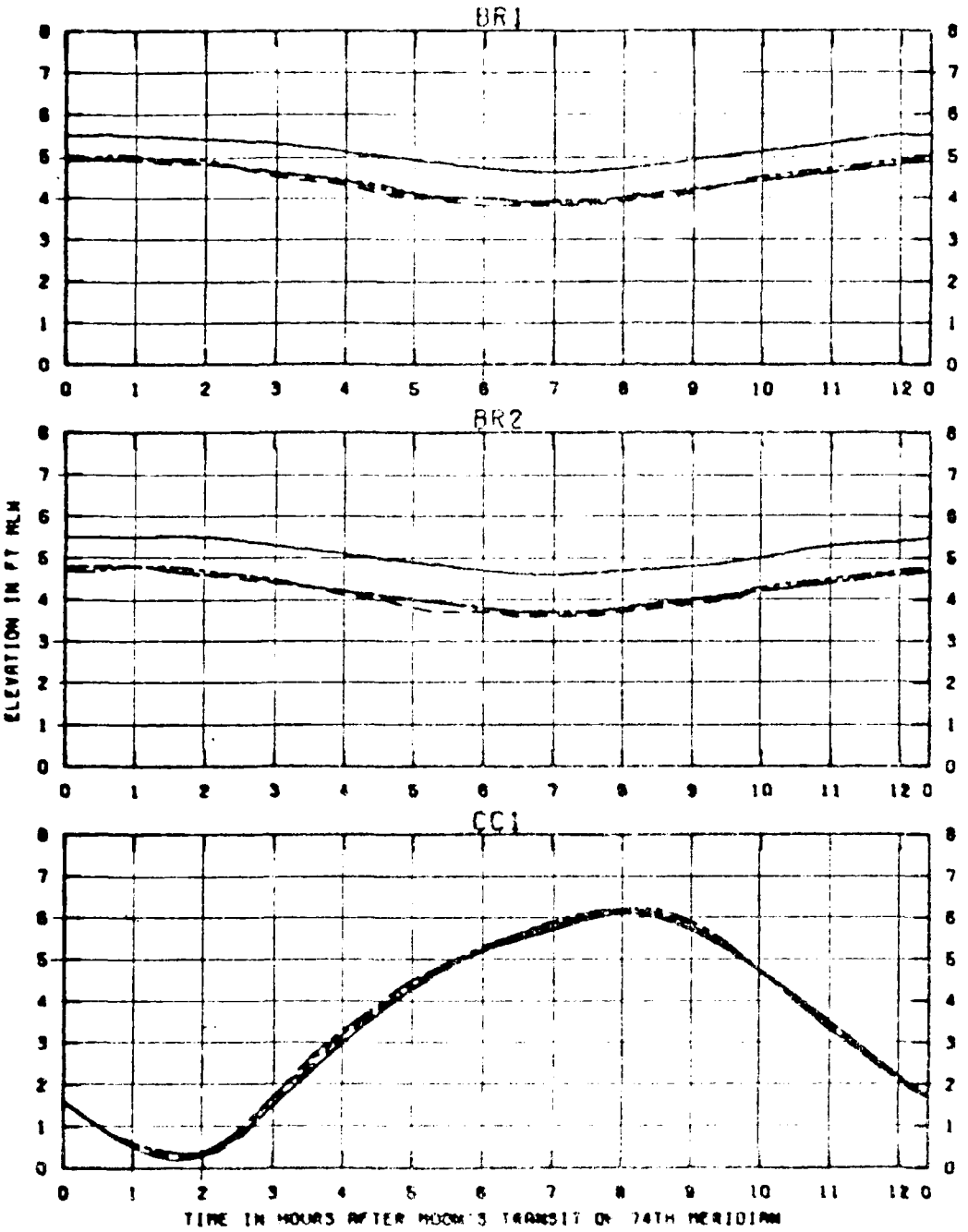
OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SOLIDS)	30.0 PPT
DUSHY POND COMBINED WITH OTHERS	1150 CFS
ASHLEY RIVER 731 CFS	[illegible] RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

CHARLESTON HARBOR MODEL
DUSHY POND WATER SUPPLY TESTS

TIDAL HEIGHTS FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D

STATIONS
HR1, HR2, AND HR3

PLATE 7



TEST CONDITIONS

OCEAN TIDE RANGE	[illegible] FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	150 CFS
ROMLEY RIVER 281 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

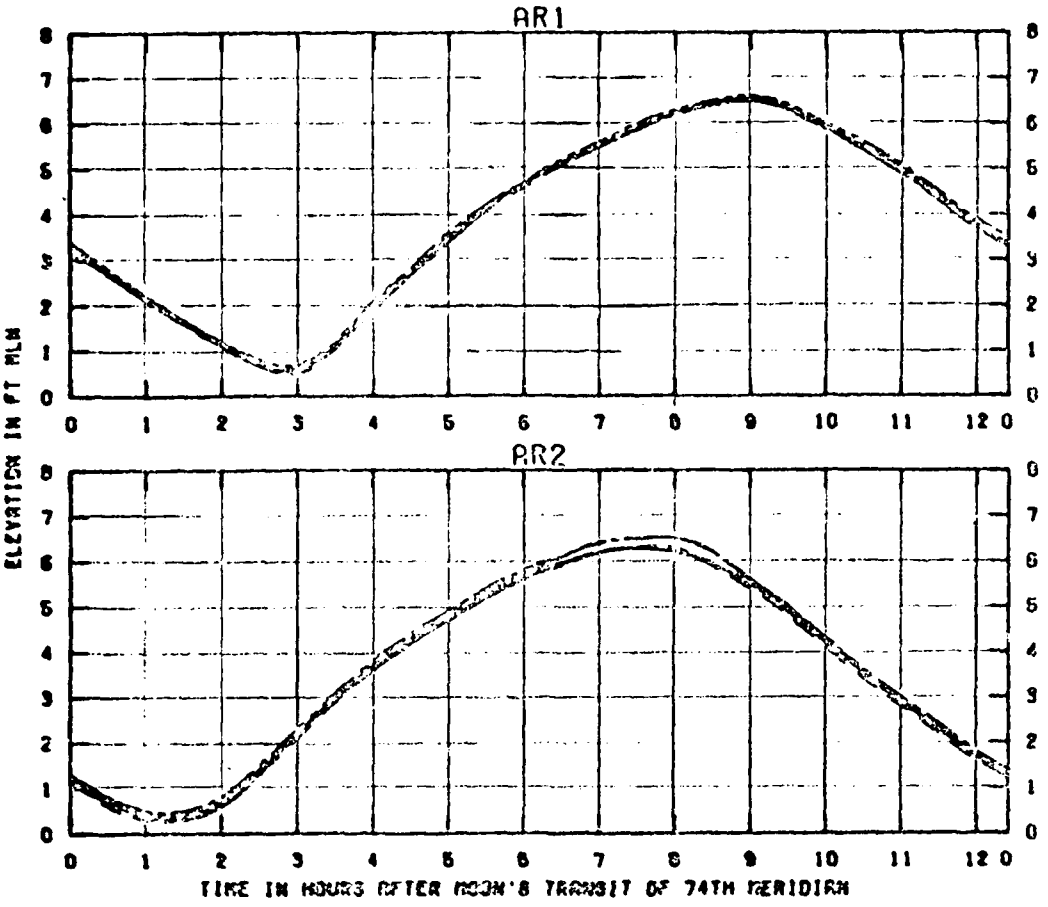
[illegible]
Sch. A
Sch. B
Sch. C
Sch. D

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, C, AND D

STATIONS
BR1, BR2, AND CC1

PLATE 8



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED HYDROGRAPHS	1150 CFS
ASHLEY RIVER 281 CFS COOPER RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————————

Sch. B - - - - -

Sch. C —— · ——

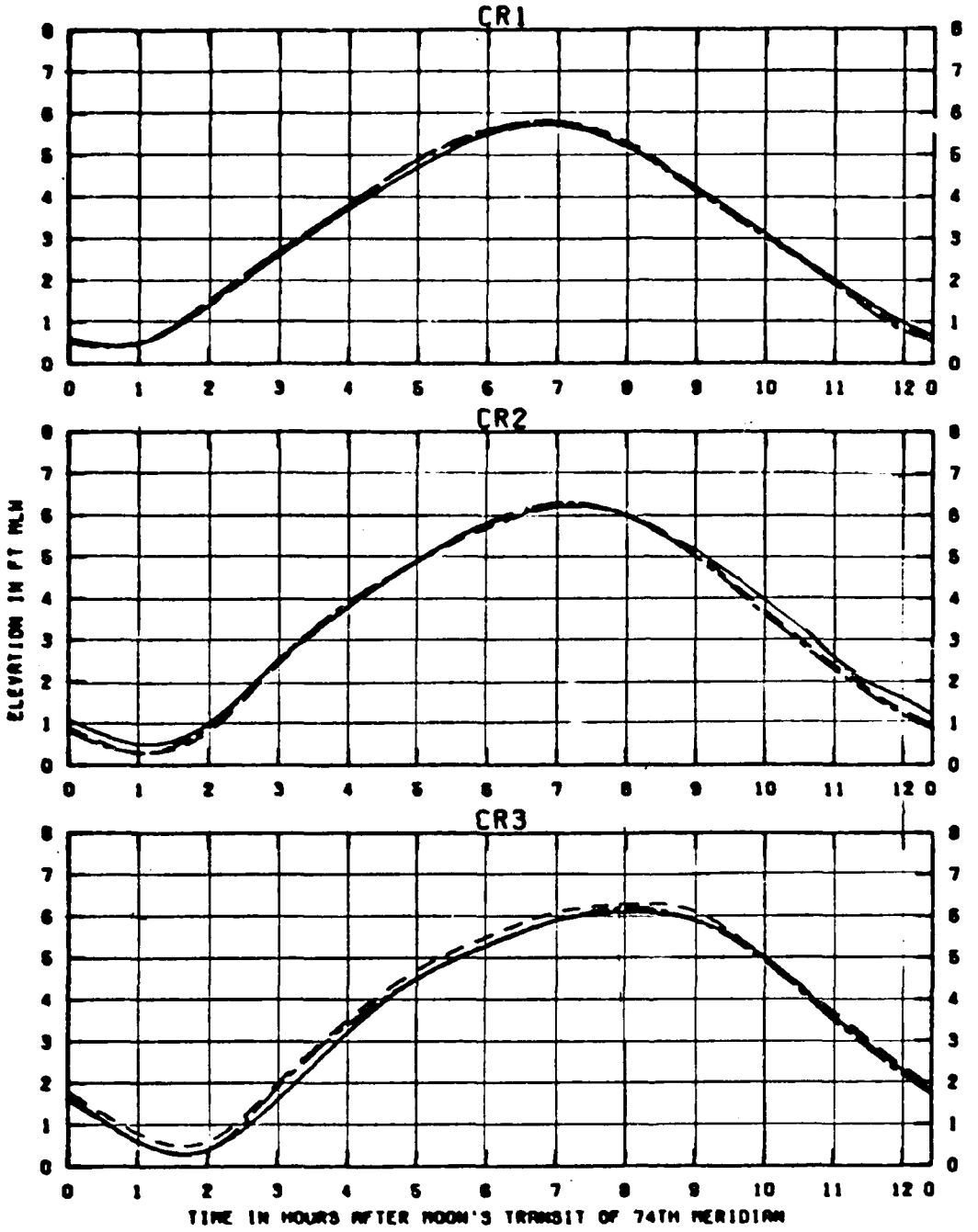
Sch. D —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, C, AND D

STATIONS
AR1 AND AR2

PLATE 9



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

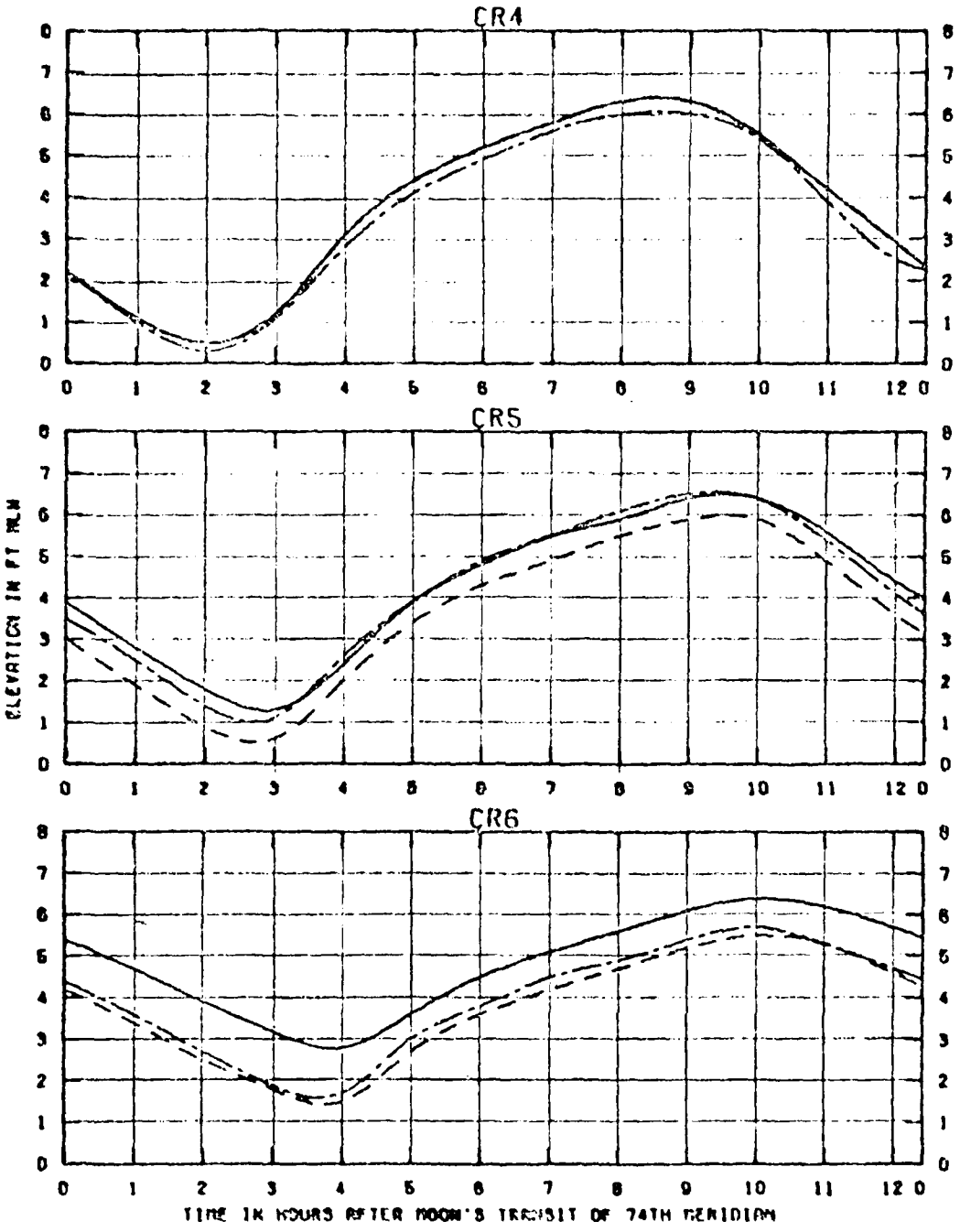
TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, E, AND BM

STATIONS
CR1, CR2, AND CR3

LEGEND

Sch. A ————
Sch. E - - - -
Sch. BM — · —

PLATE 10



TEST CONDITIONS

OCEAN TIDE RANGE	6.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 201 CFS	NORTH RIVER 62 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. E - - - - -

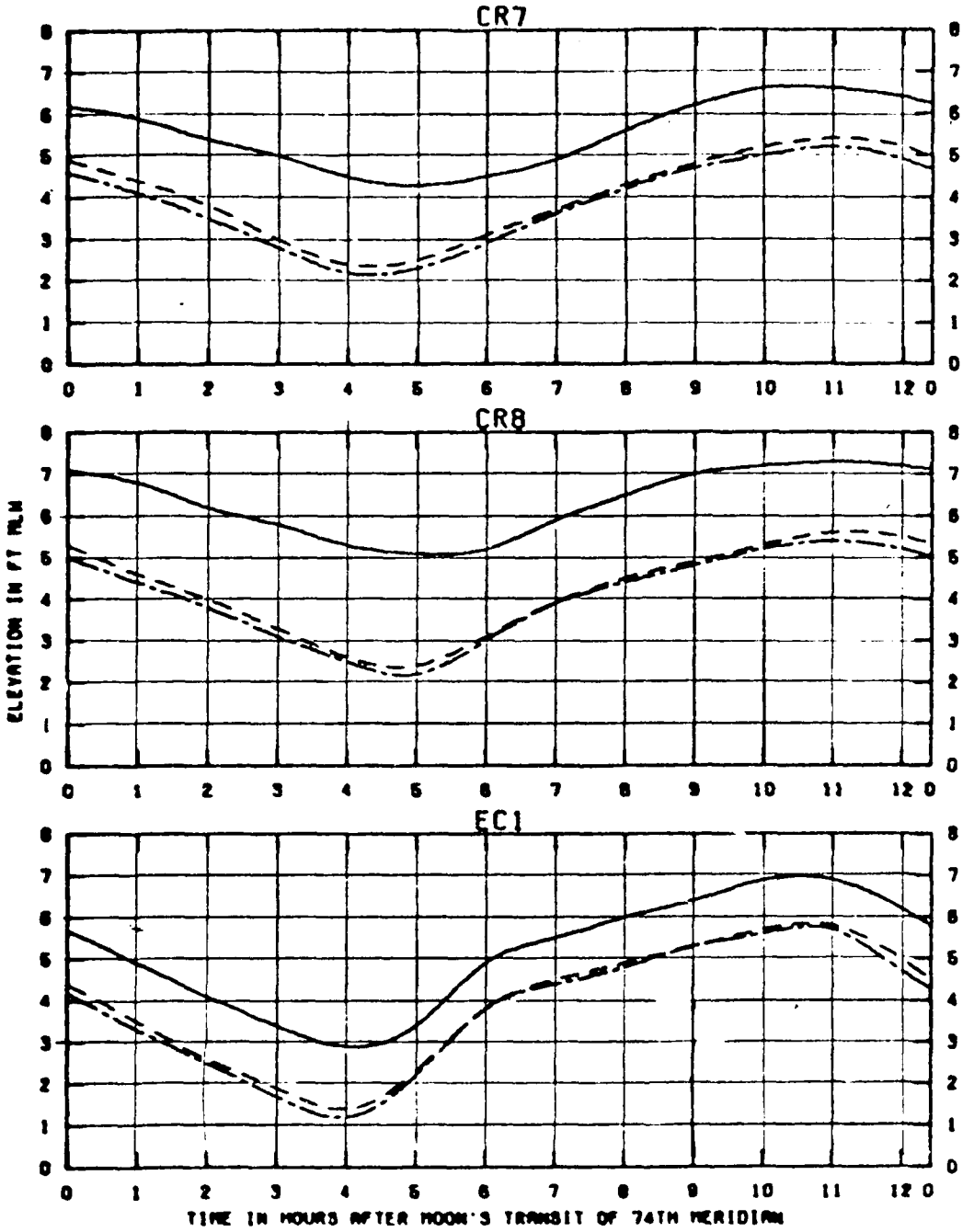
Sch. BM — · —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, E, AND BM

STATIONS
CR4, CR5, AND CR6

PLATE 11



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 281 CFS COOPER RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ———

Sch. E - - - -

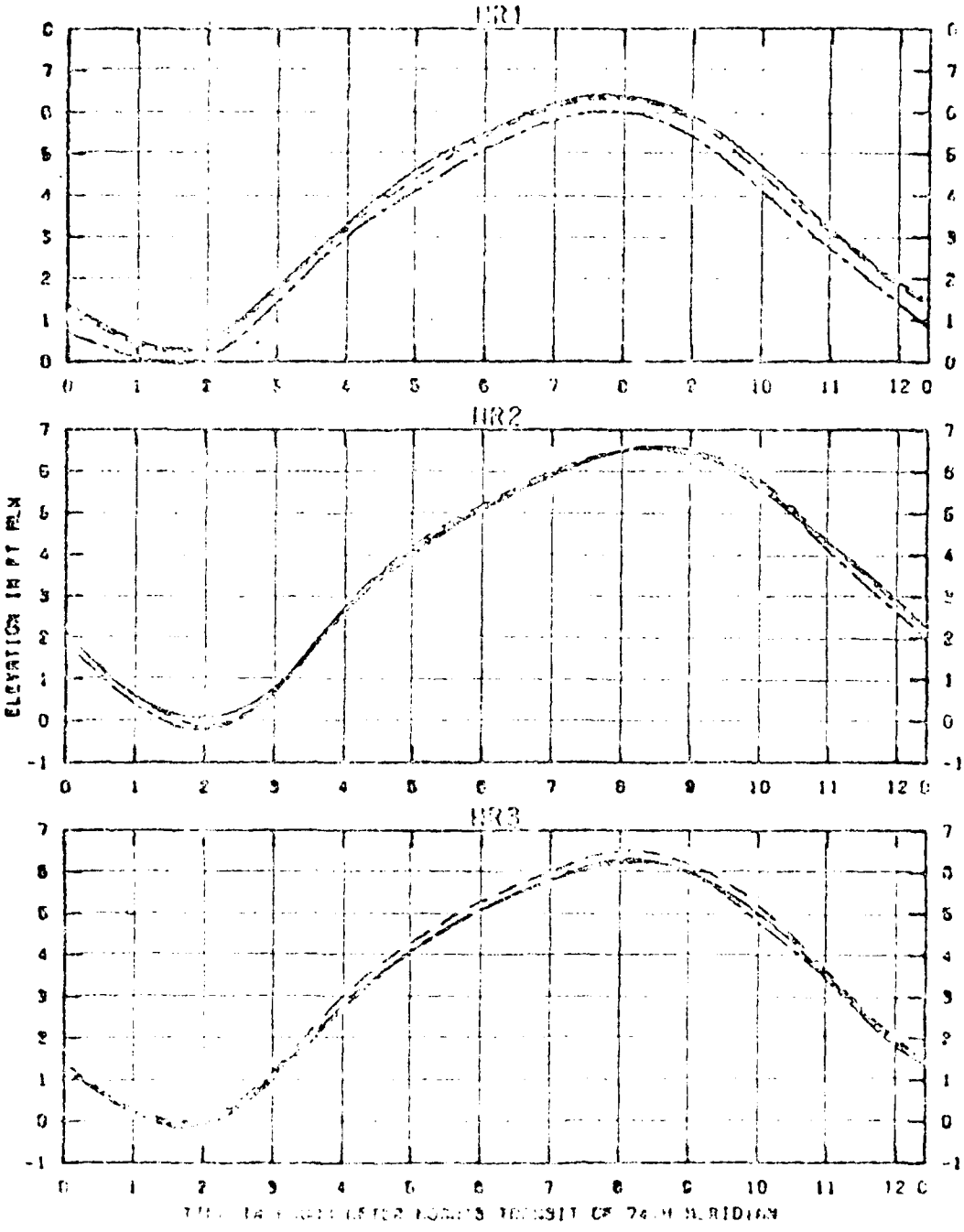
Sch. BM — · —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, E, AND BM

STATIONS
CR7, CR8, AND EC1

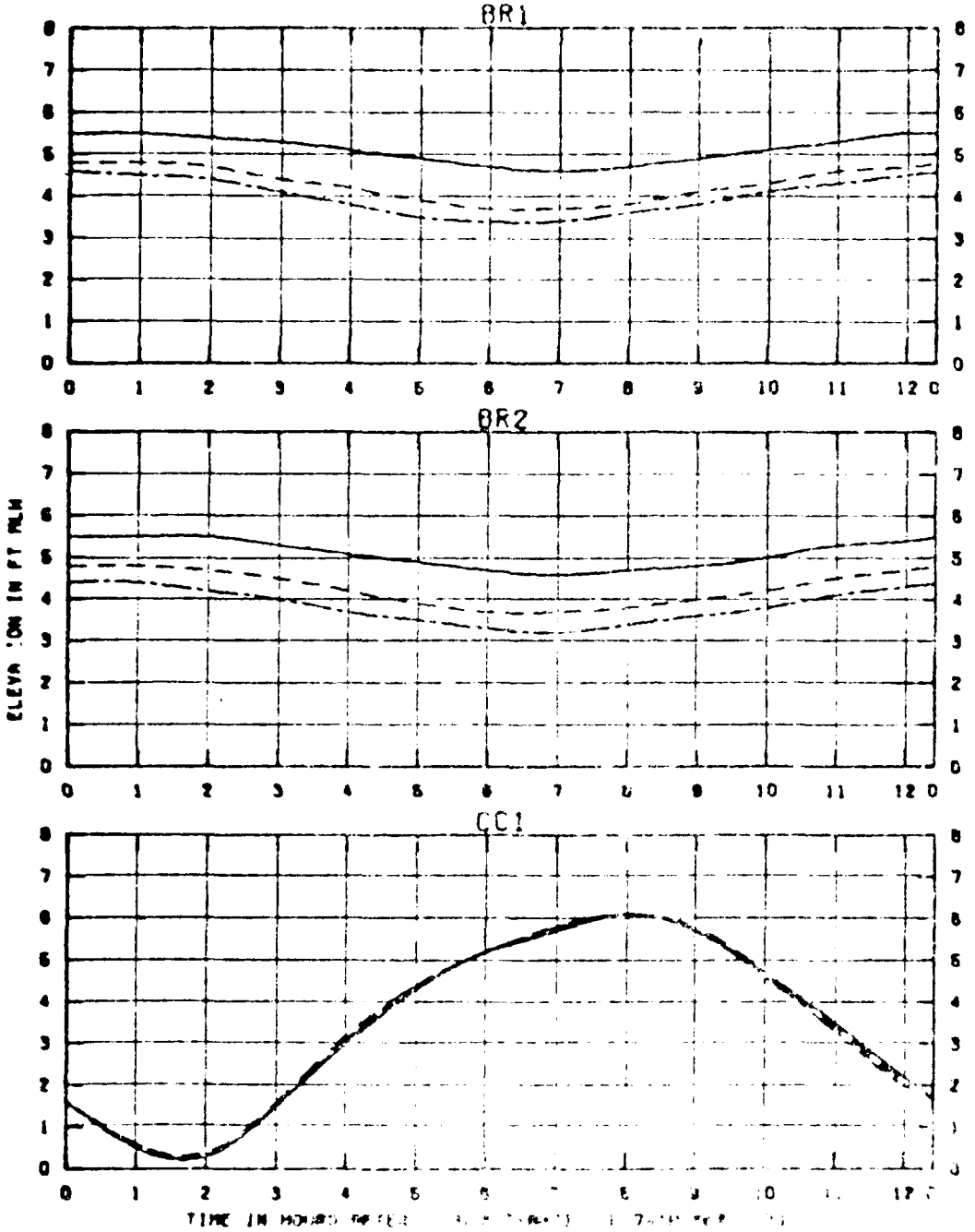
PLATE 12



TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, E, AND BM

STATIONS
HR1, HR2, AND HR3

PLATE 13



TEST CONDITIONS

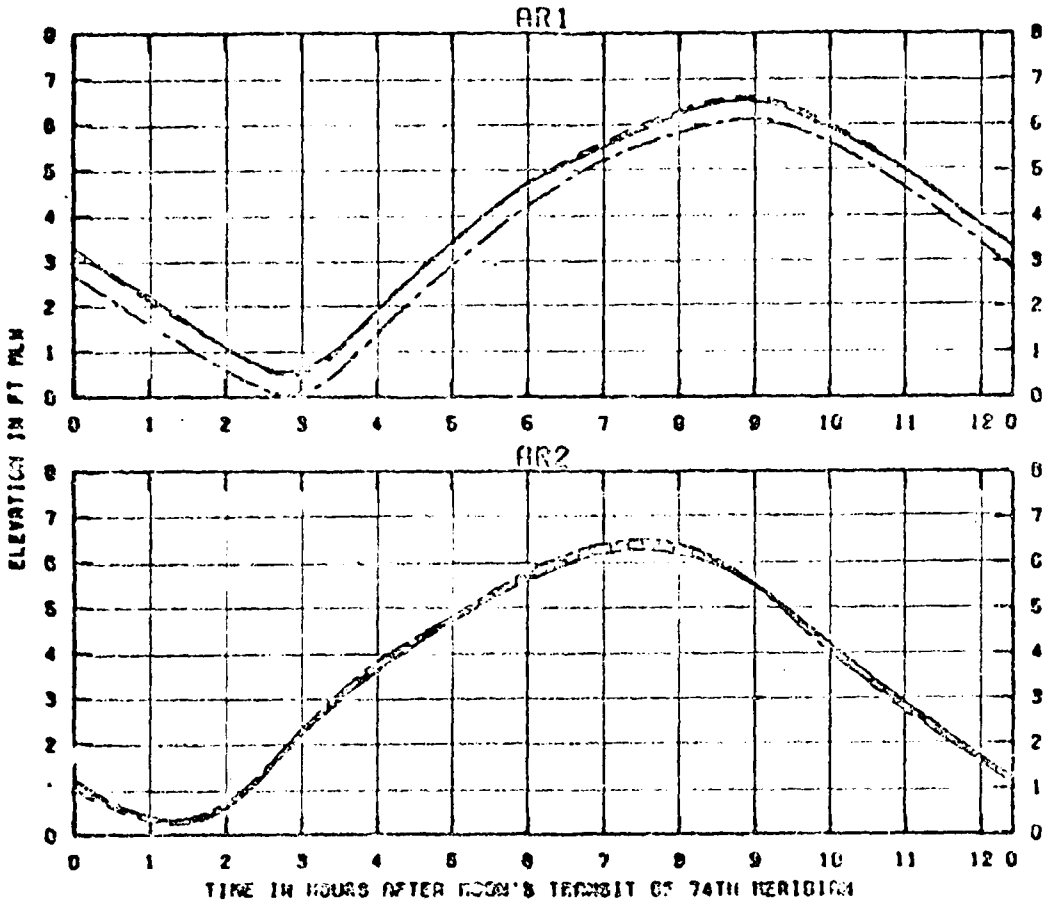
OCEAN TIDE RANGE
OCEAN SALINITY (TOTAL SALT)
BUSHY PARK COMBINED WITH SWALES
ROMLEY RIVER 281 CFS
COOPER RIVER -

TIDAL HEIGHTS FOR
PROGRAM
SCHEDULES A, B AND C

STATIONS
BR1, BR2 AND CC1

Sch. A
Sch. B
Sch. C

PLATE 14



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SOLT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 281 CFS	WANDO RIVER 62 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. E - - - - -

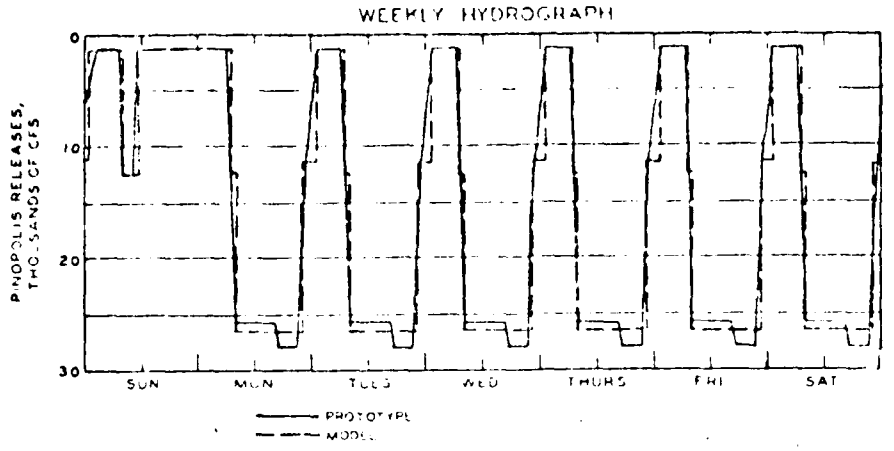
Sch. BM — · —

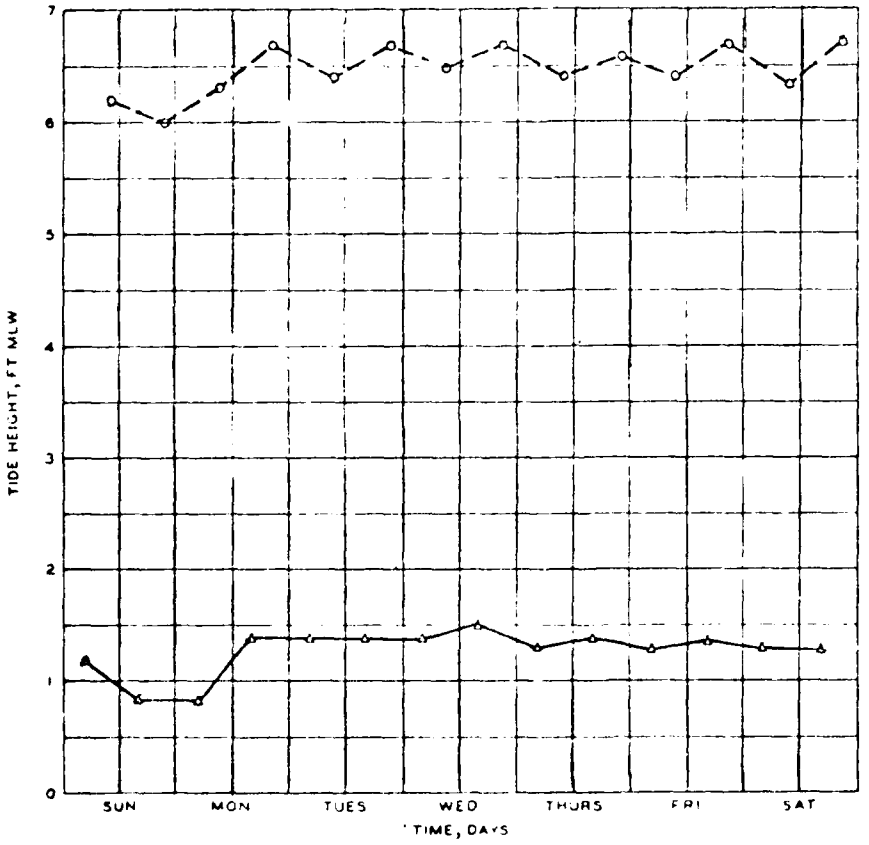
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

TIDAL HEIGHTS FOR
WEEKLY HYDROGRAPH
SCHEDULES A, E, AND BM

STATIONS
AR1 AND AR2

PLATE 15





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALTS) 30,000 PPM
ASHLEY RIVER 25 CFS MANGO RIVER 40 CFS
BUSHY PARK COMBINED WITHDRAWALS 15 CFS
COOPER RIVER FLOW 15,800 CFS SCHEDULE A

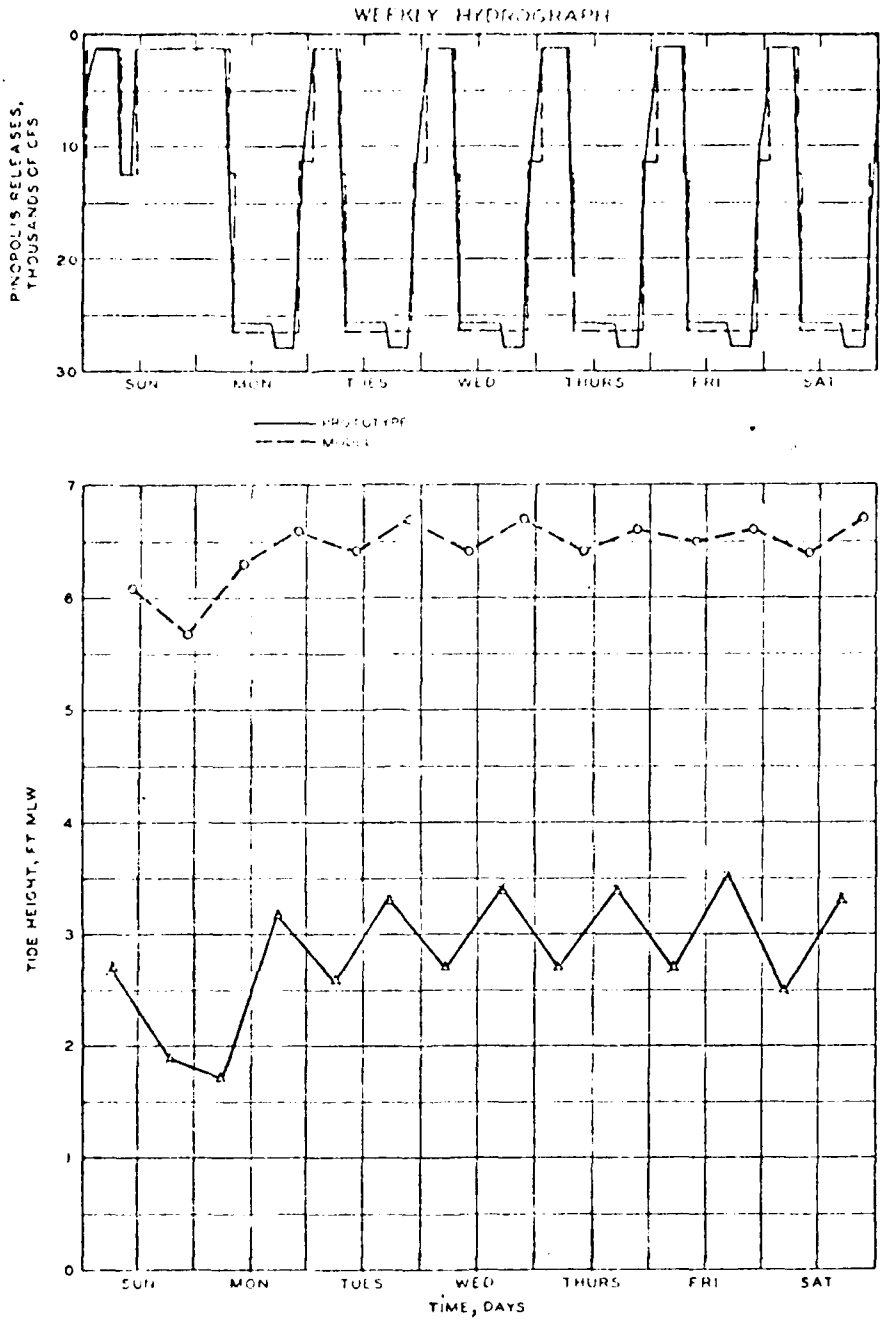
HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-5

PLATE 16



TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 2NDFF WANDO RIVER 80 CFS
BUSHY PARK COMBINED WITHDRAWAL 150 CFS
COOPER RIVER FLOW 15,800 CFS SCHEDULE A

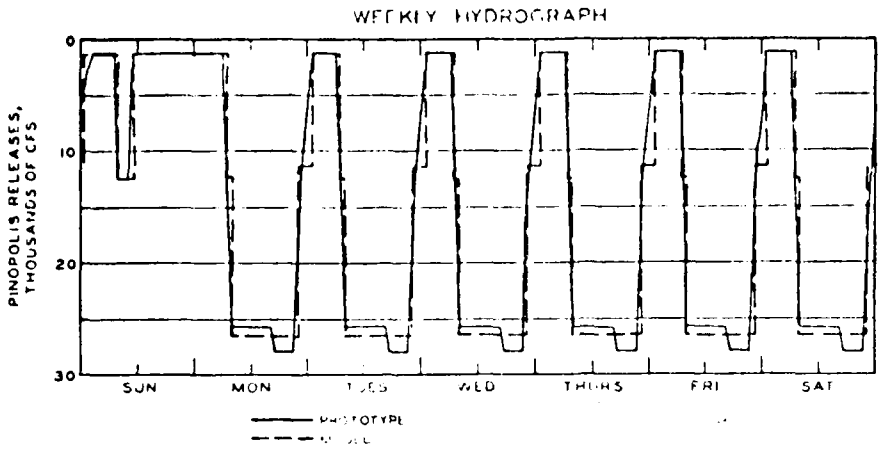
HIGH WATER
LOW WATER

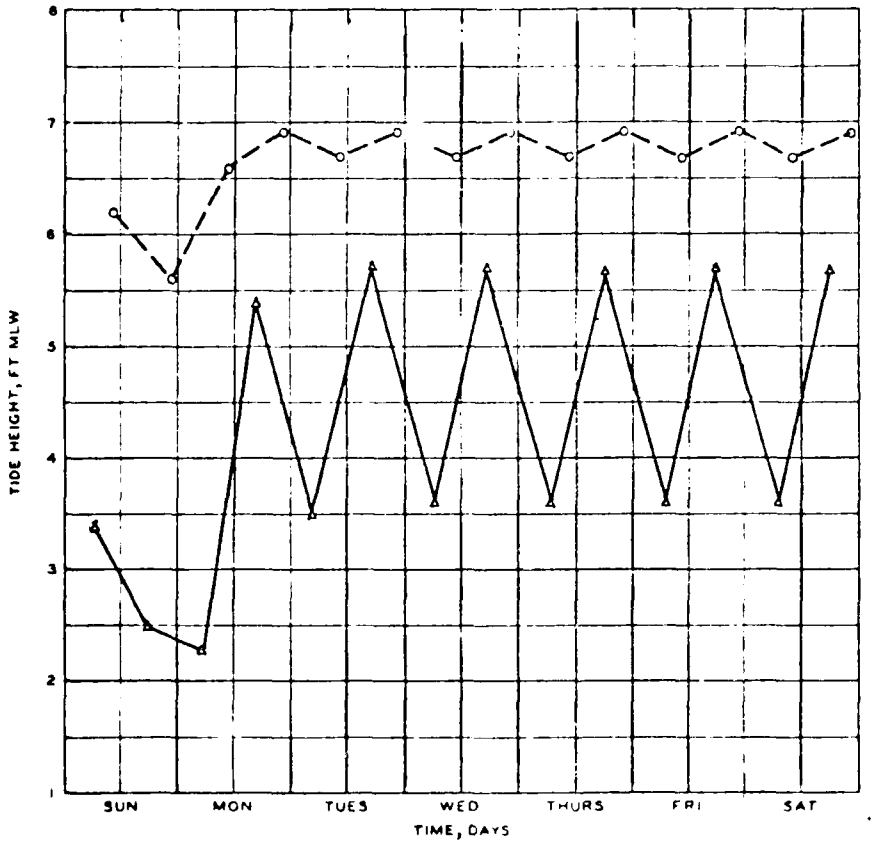
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-6

PLATE 17





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW: 13,800 CFS SCHEDULE 7A

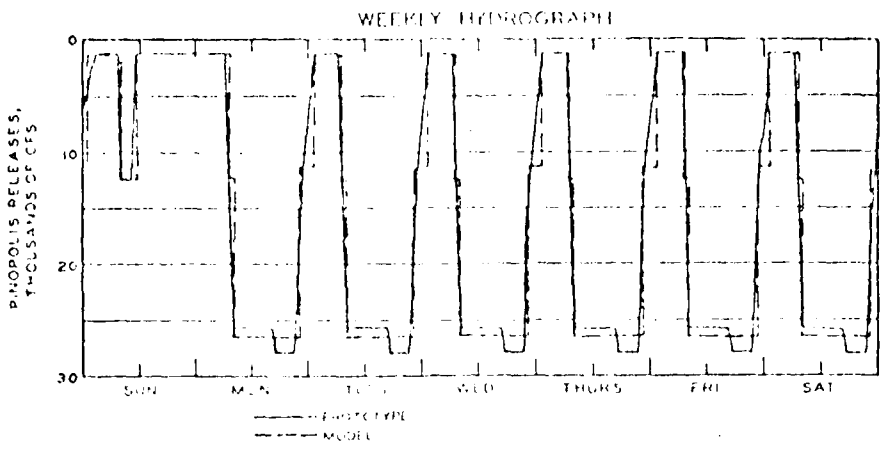
HIGH WATER
LOW WATER

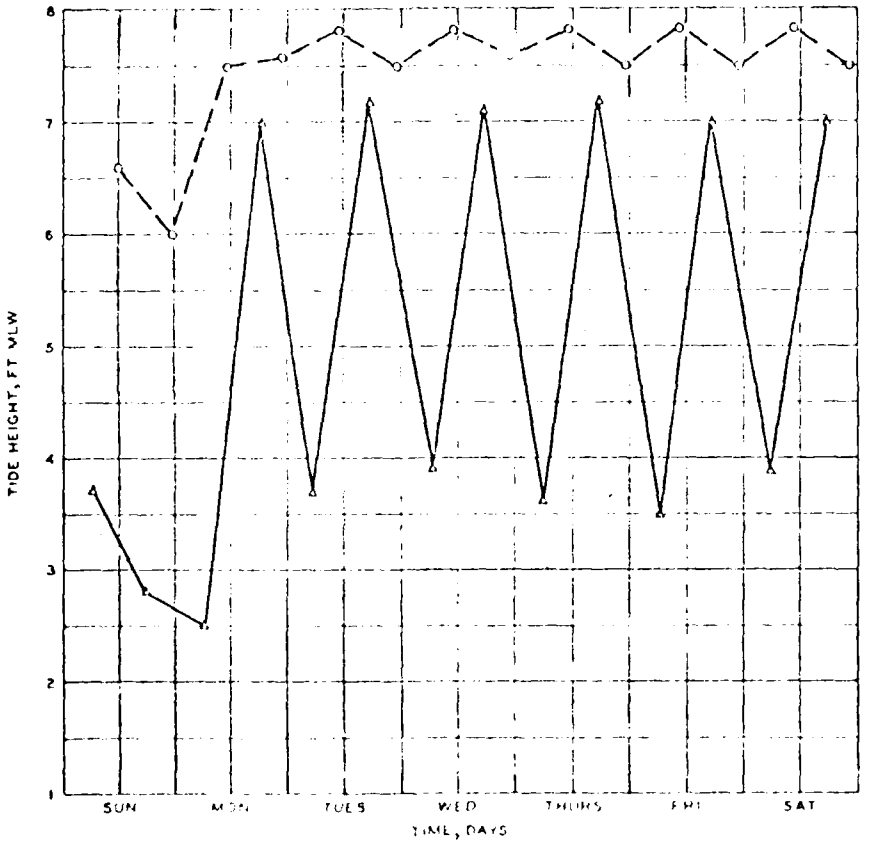
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-7

PLATE 18





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER ZERO FLOW WANDO RIVER 20 CFS
BUSHY PARK COMBINED WITHDRAWAL 450 CFS
COOPER RIVER FLOW 15,800 CFS SCHEDULE A

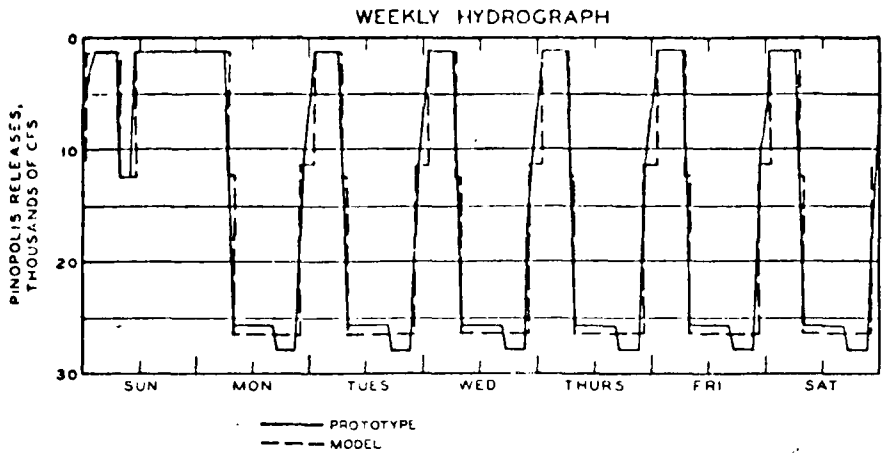
HIGH WATER
LOW WATER

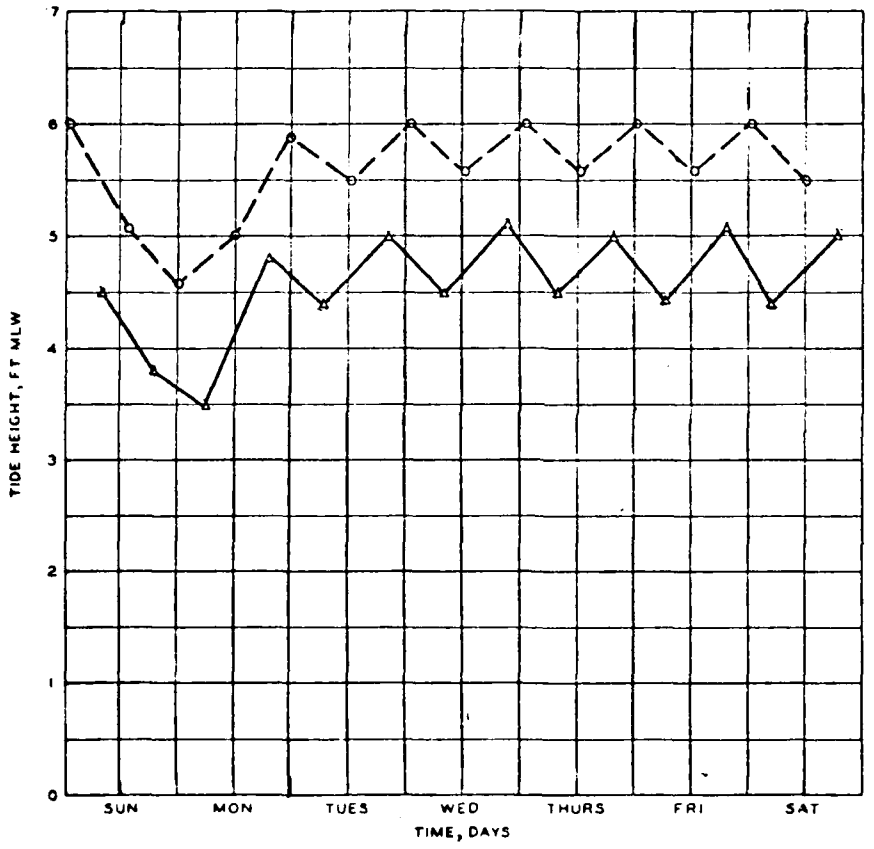
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-8

PLATE 19





TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30,000 PPM
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
COOPER RIVER FLOW 15,600 CFS SCHEDULE A	

HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

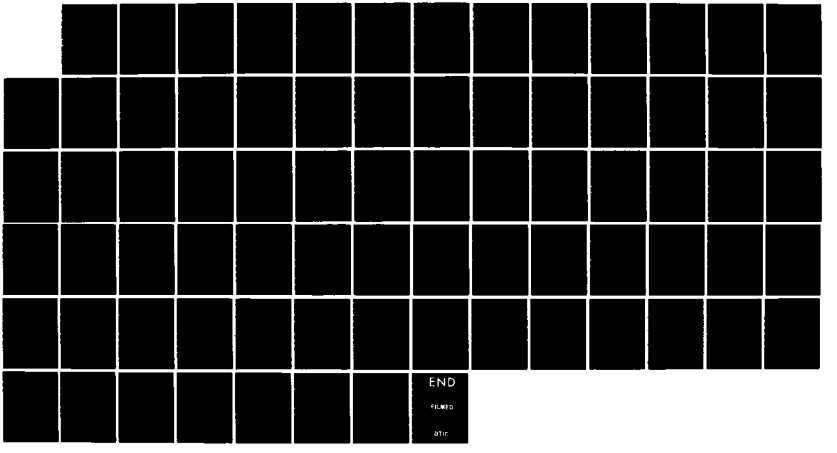
EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

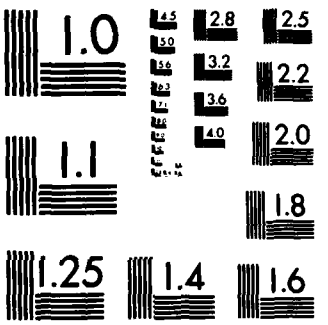
STATION BR-1

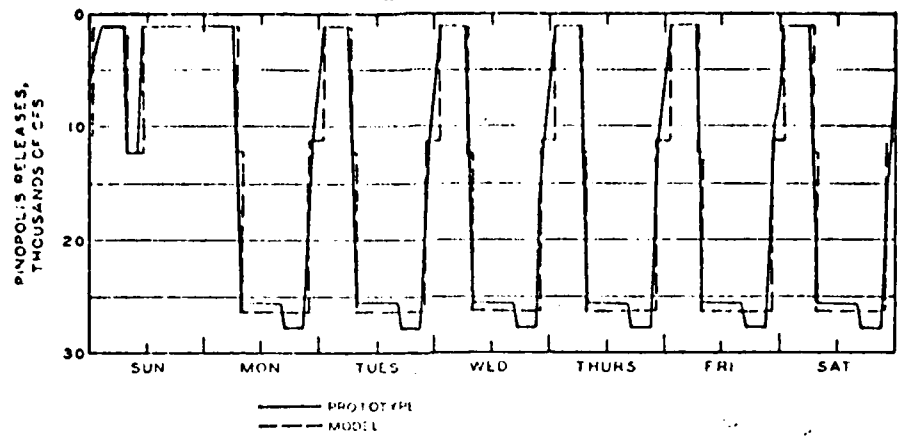
PLATE 20

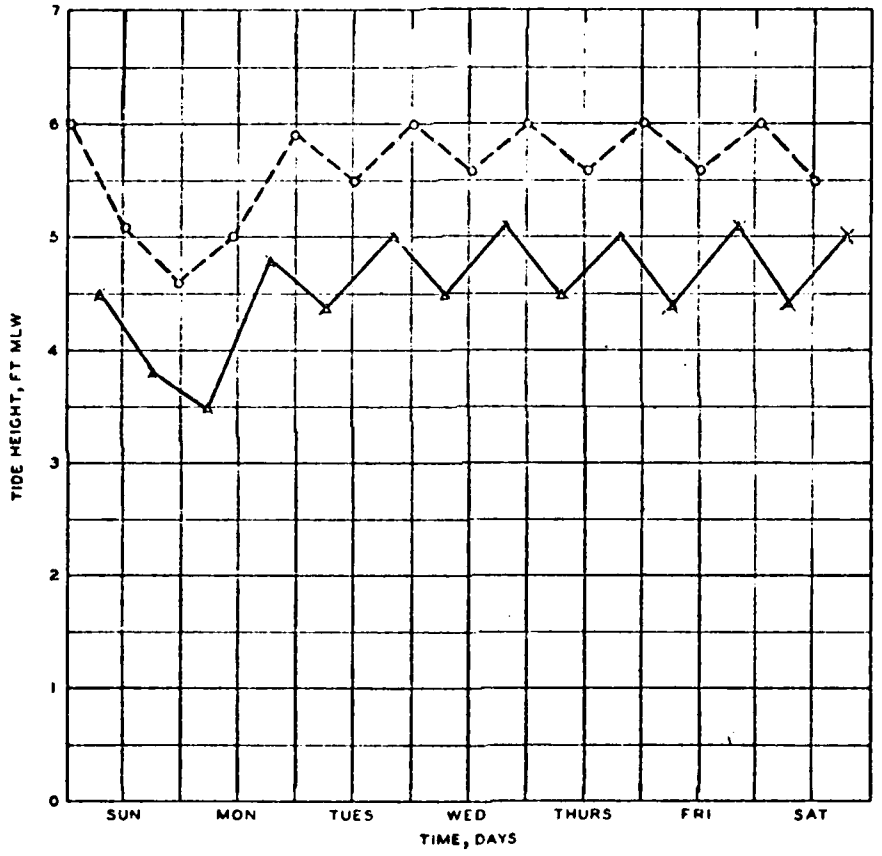
AD-A149 449 COOPER RIVER REDIVERSION PROJECT LAKE MOULTRIE AND SANTEE RIVER SOUTH CAR..(U) ARMY ENGINEER WATERWAYS EXPERIMENT STATION VICKSBURG MS MAR 76 2/2

UNCLASSIFIED F/G 13/2 NL









TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 15,800 CFS SCHEDULE A

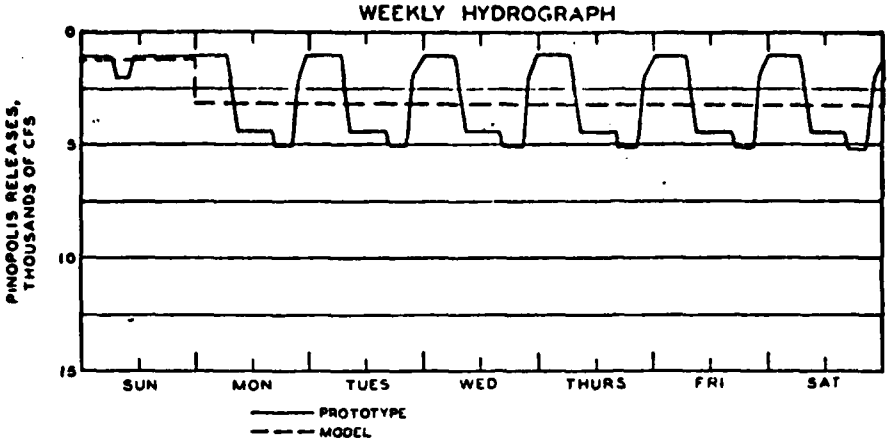
o—o HIGH WATER
a—a LOW WATER

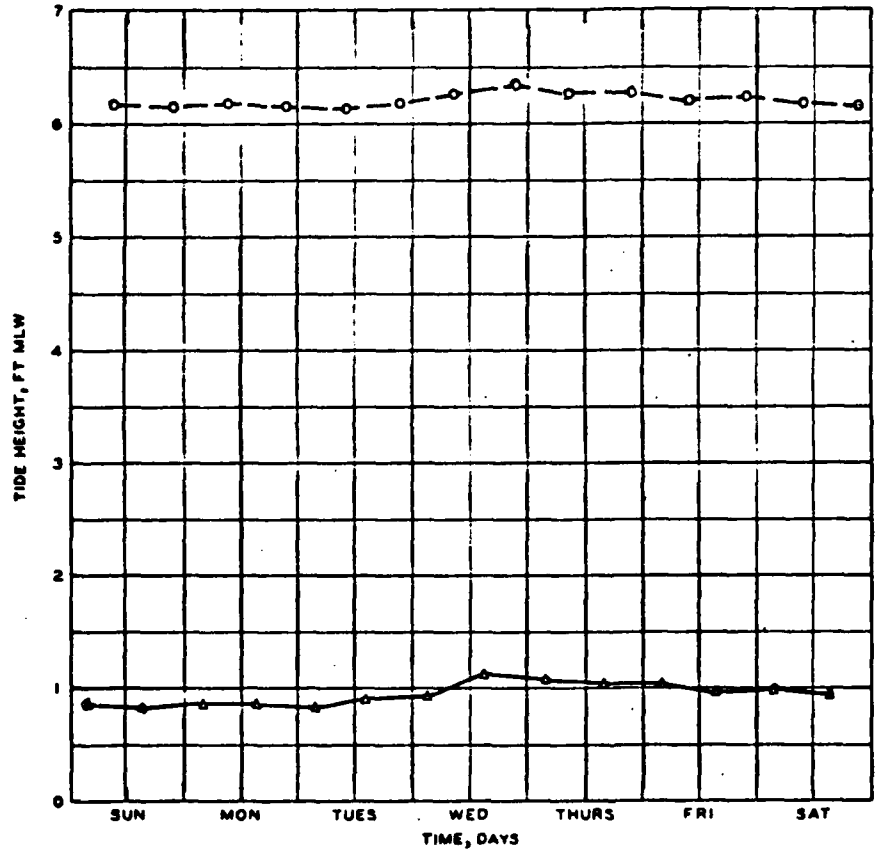
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE A WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-2

PLATE 21





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE B

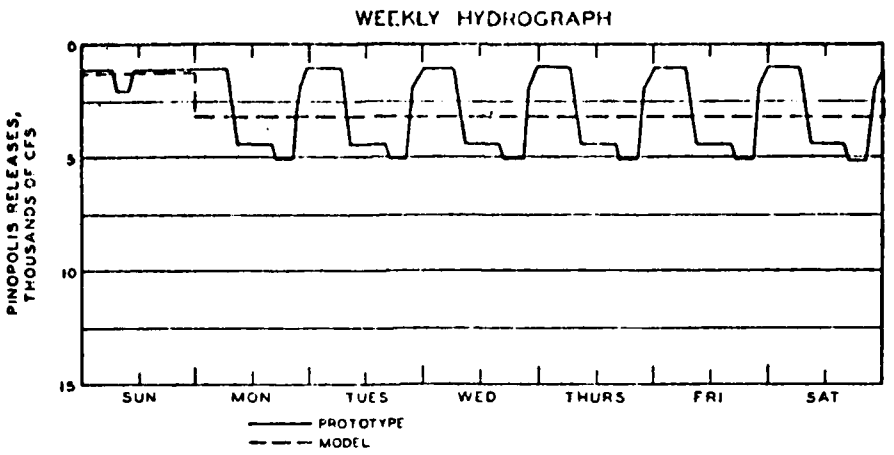
HIGH WATER
LOW WATER

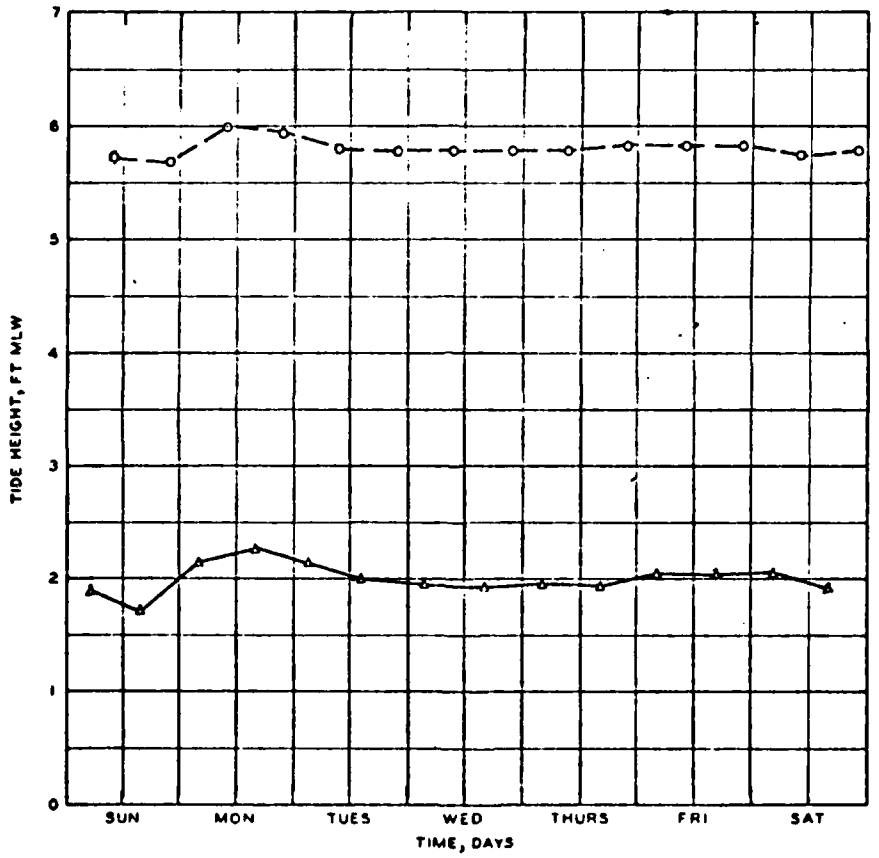
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-5

PLATE 22





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE B

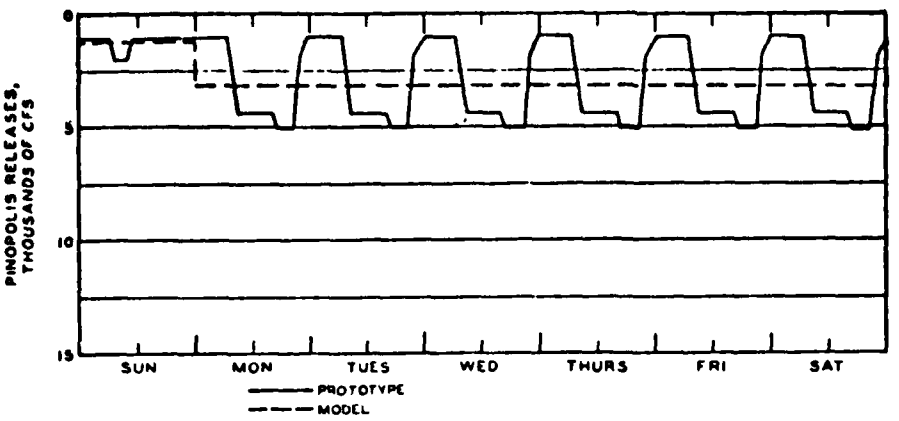
HIGH WATER
LOW WATER

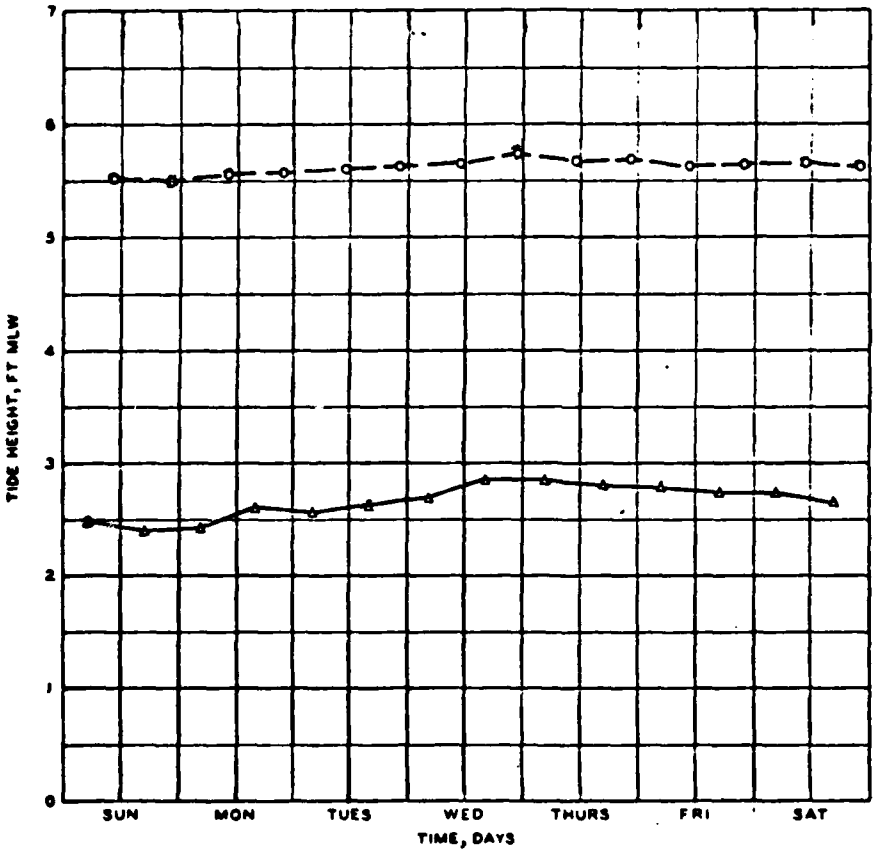
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-6

PLATE 23





TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30,000 PPM
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
COOPER RIVER FLOW 3000 CFS	SCHEDULE B

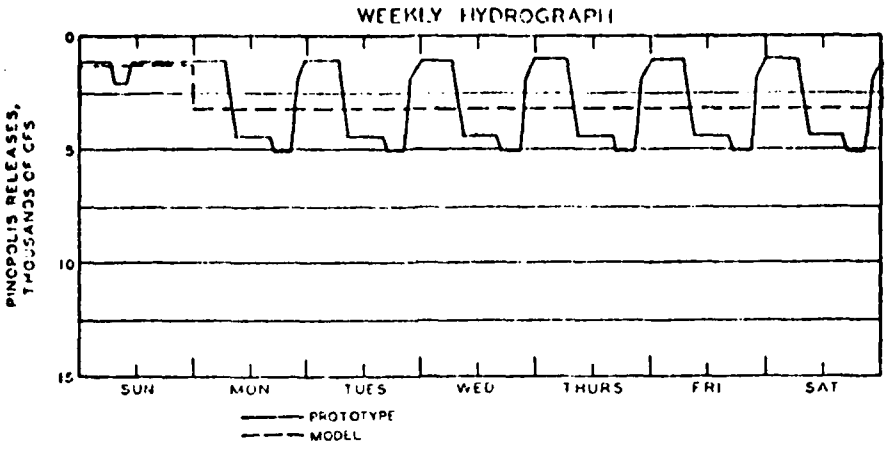
HIGH WATER
LOW WATER

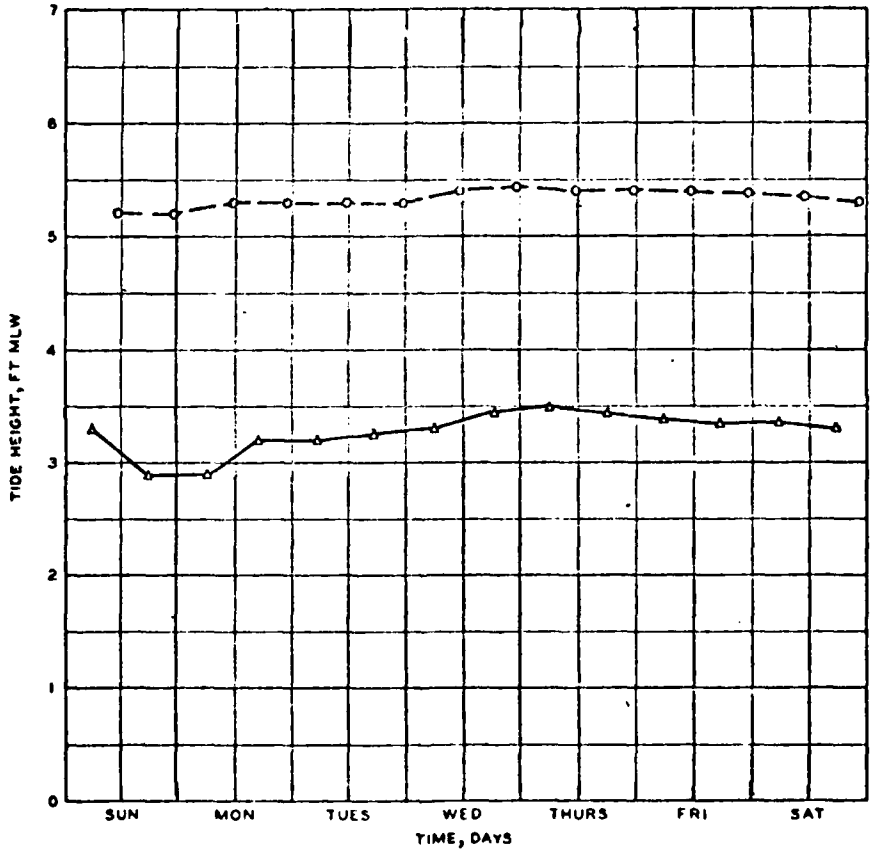
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-7

PLATE 24





TEST CONDITIONS

OCEAN TIDE RANGE 5.6 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE B

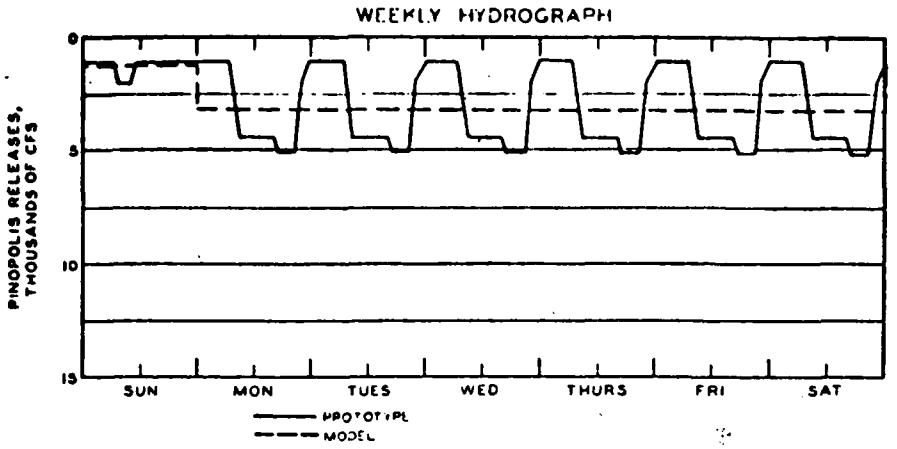
HIGH WATER
LOW WATER

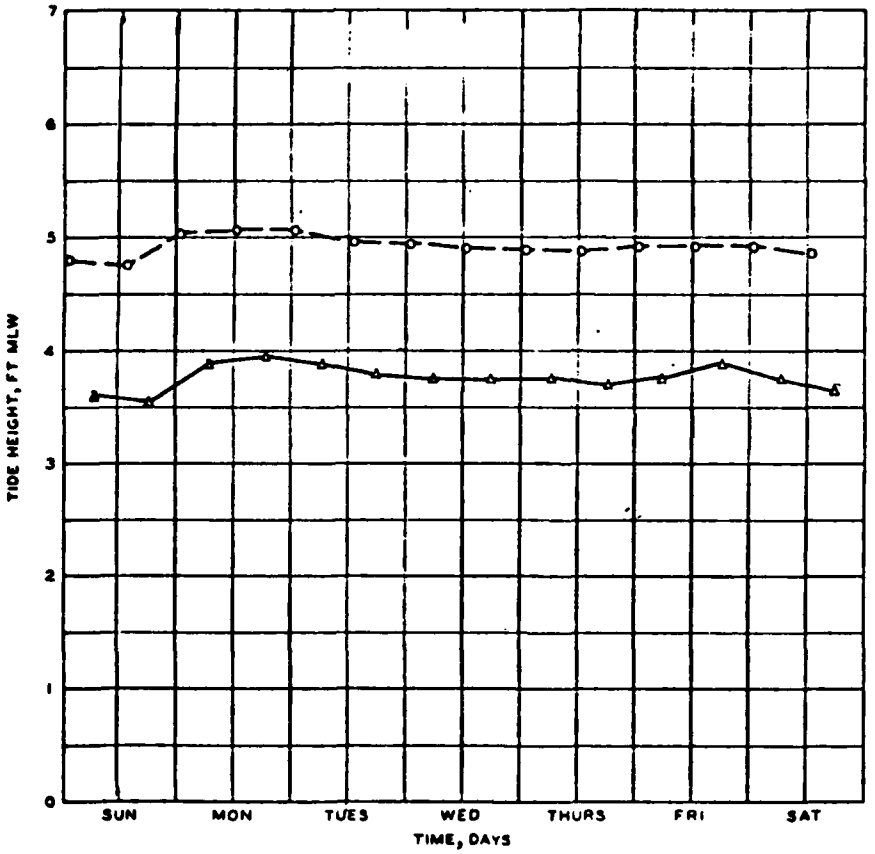
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-8

PLATE 25





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE B

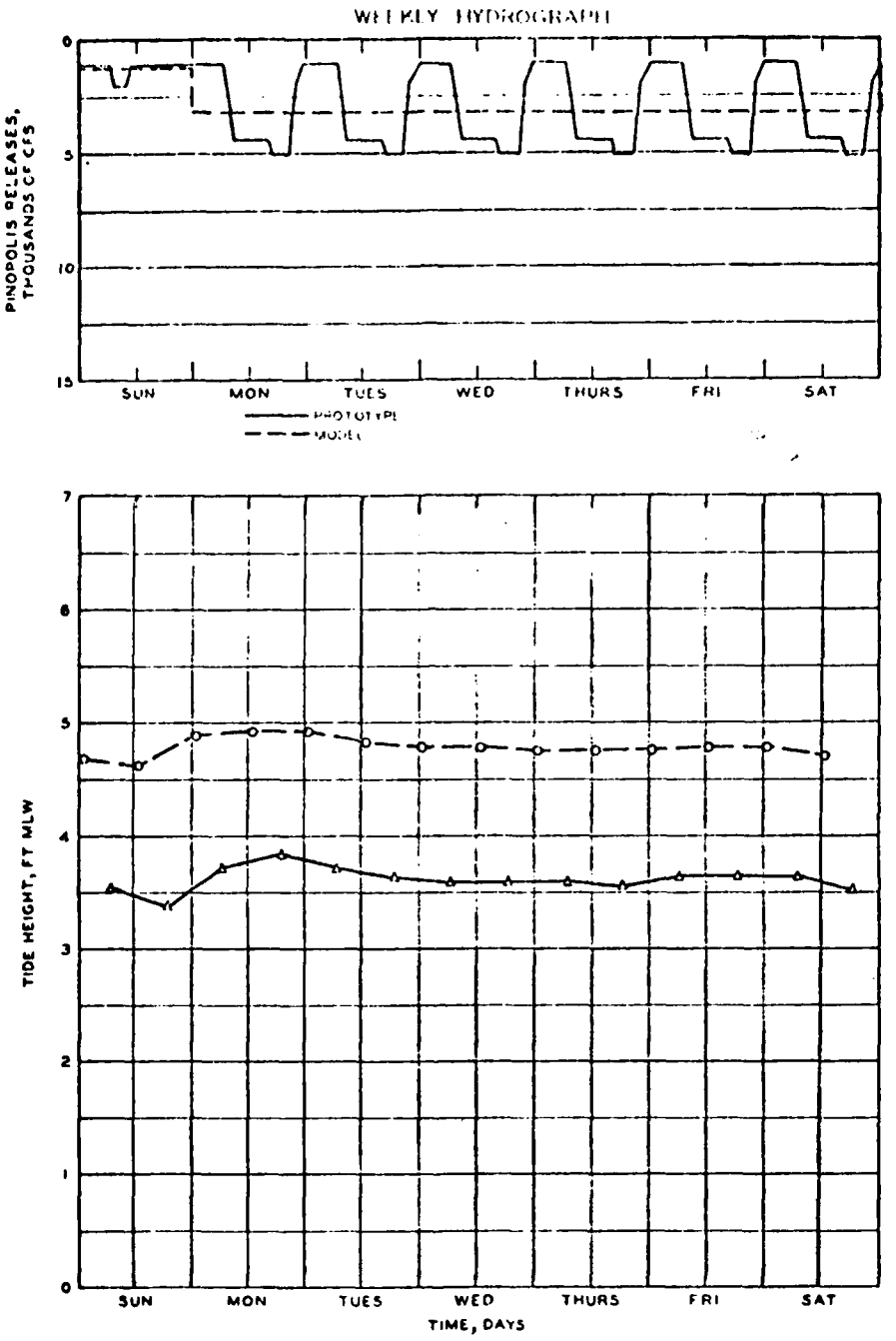
HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-1

PLATE 26



TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE B

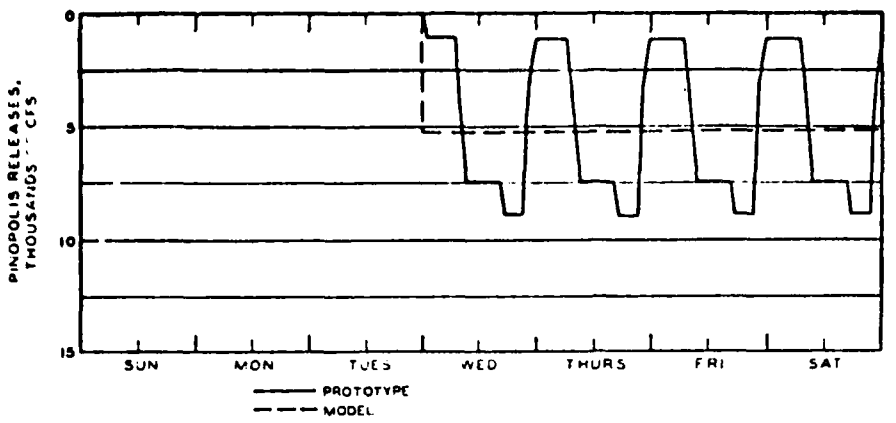
HIGH WATER
LOW WATER

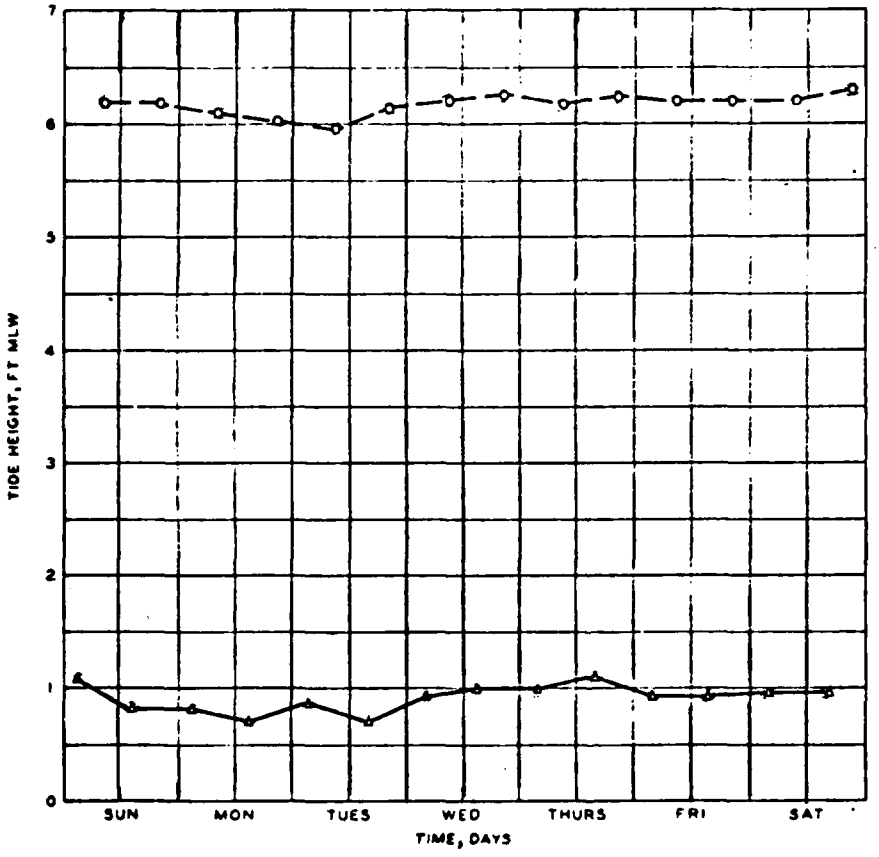
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE B WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-2

PLATE 27





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 281 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE C

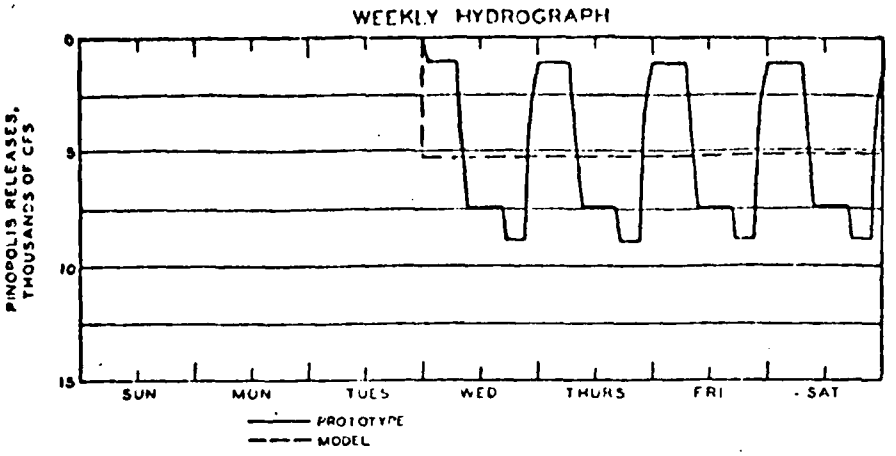
HIGH WATER
LOW WATER

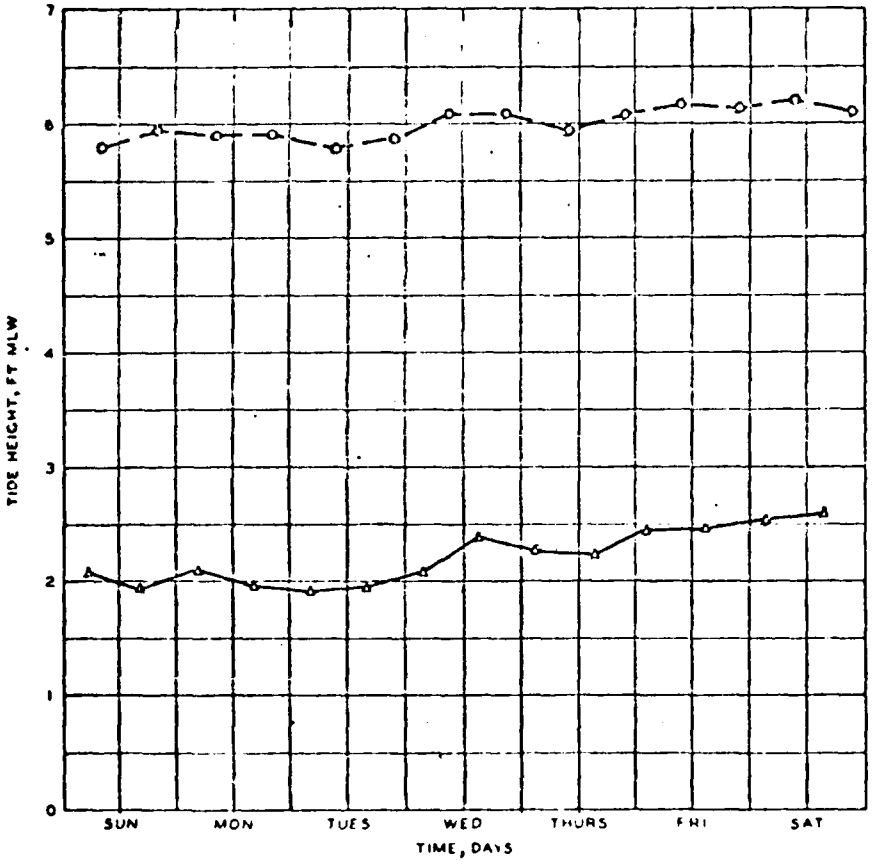
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-5

PLATE 28





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 24 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE C

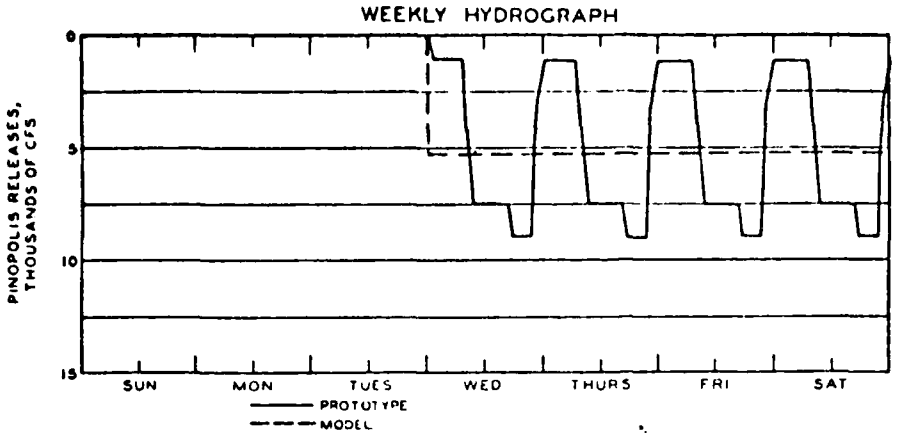
HIGH WATER
LOW WATER

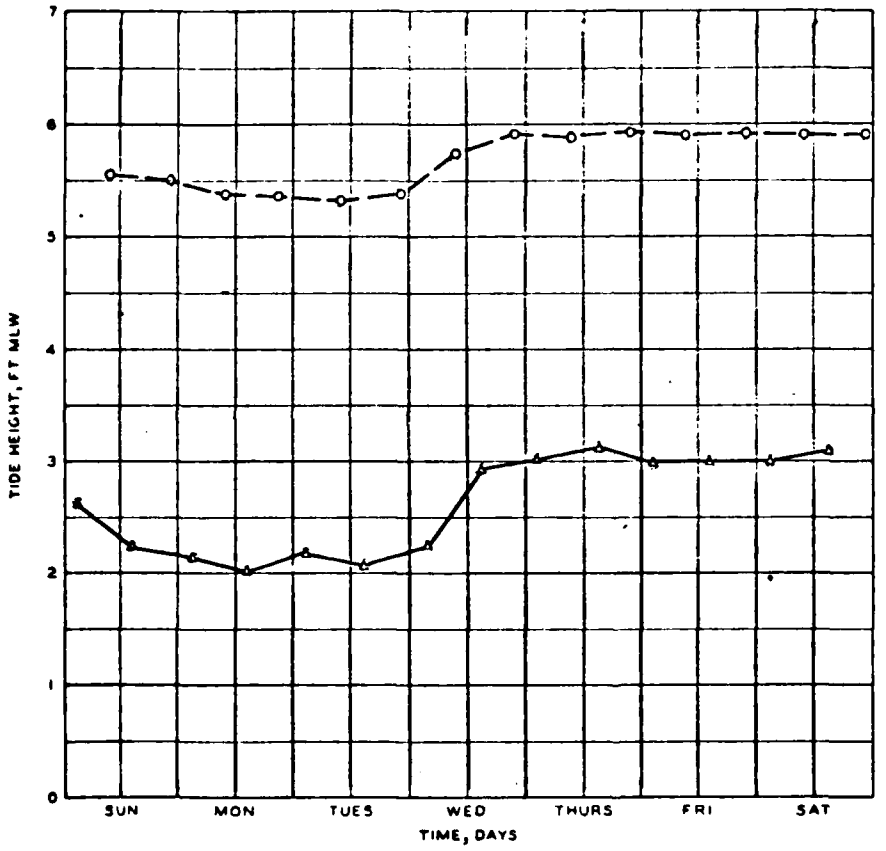
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-0

PLATE 29





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE C

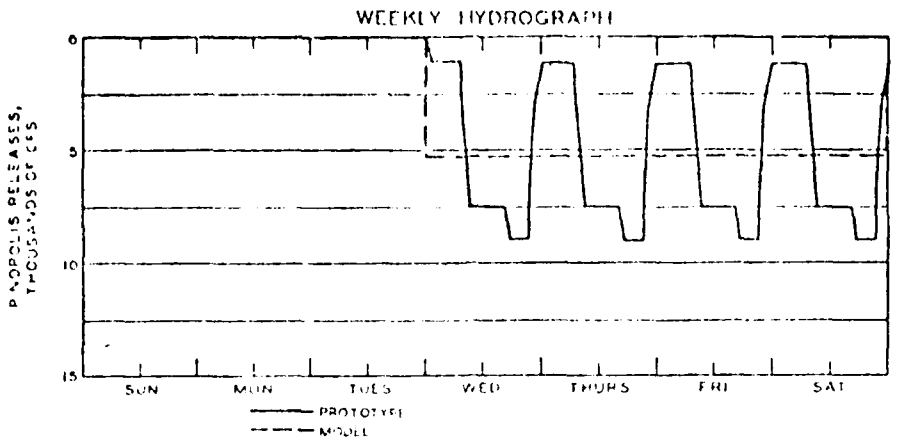
HIGH WATER
LOW WATER

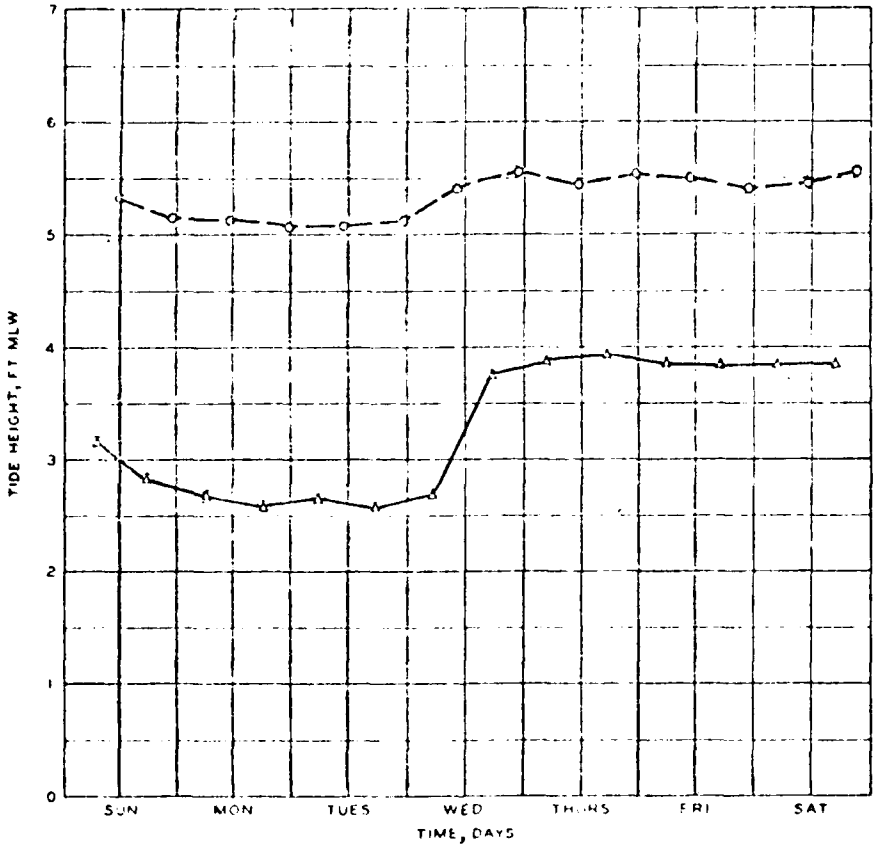
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-7

PLATE 30





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 2[illegible] CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWAL 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE C

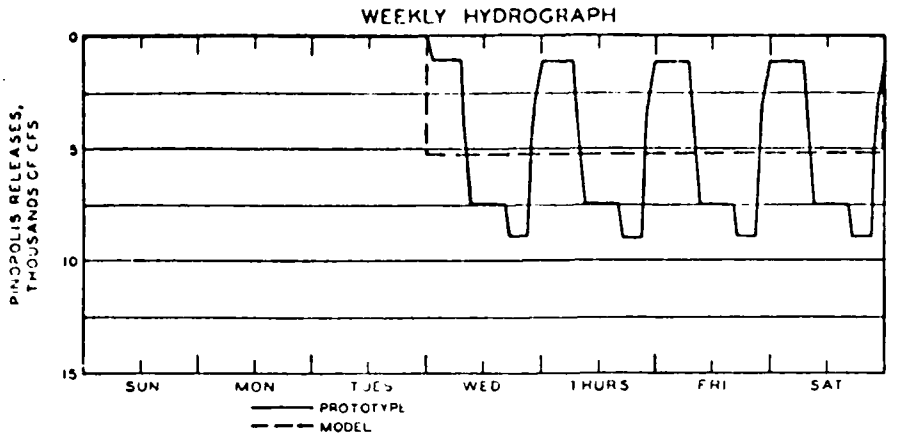
HIGH WATER
LOW WATER

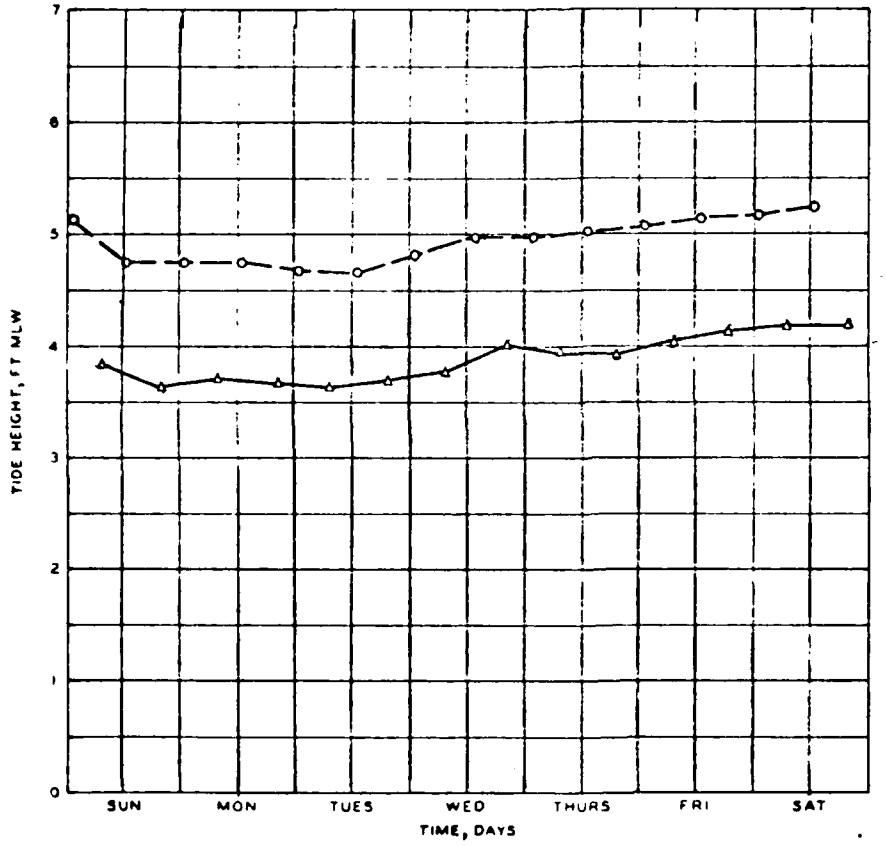
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-8

PLATE 31





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS, SCHEDULE C

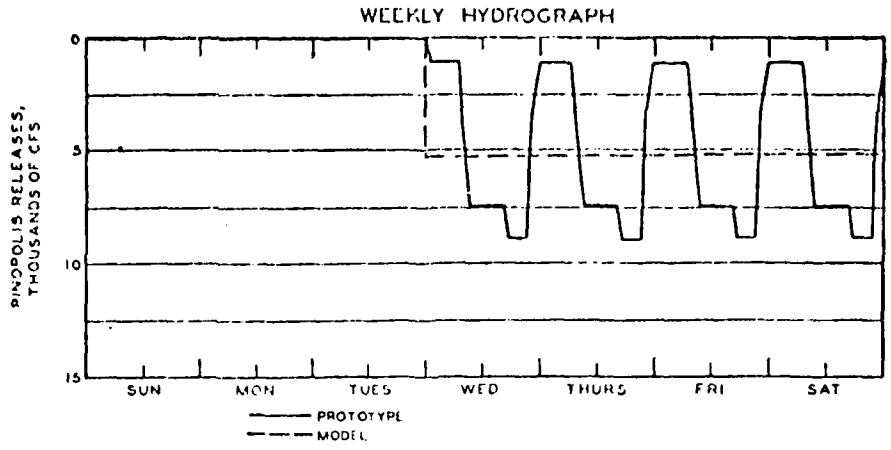
HIGH WATER
LOW WATER

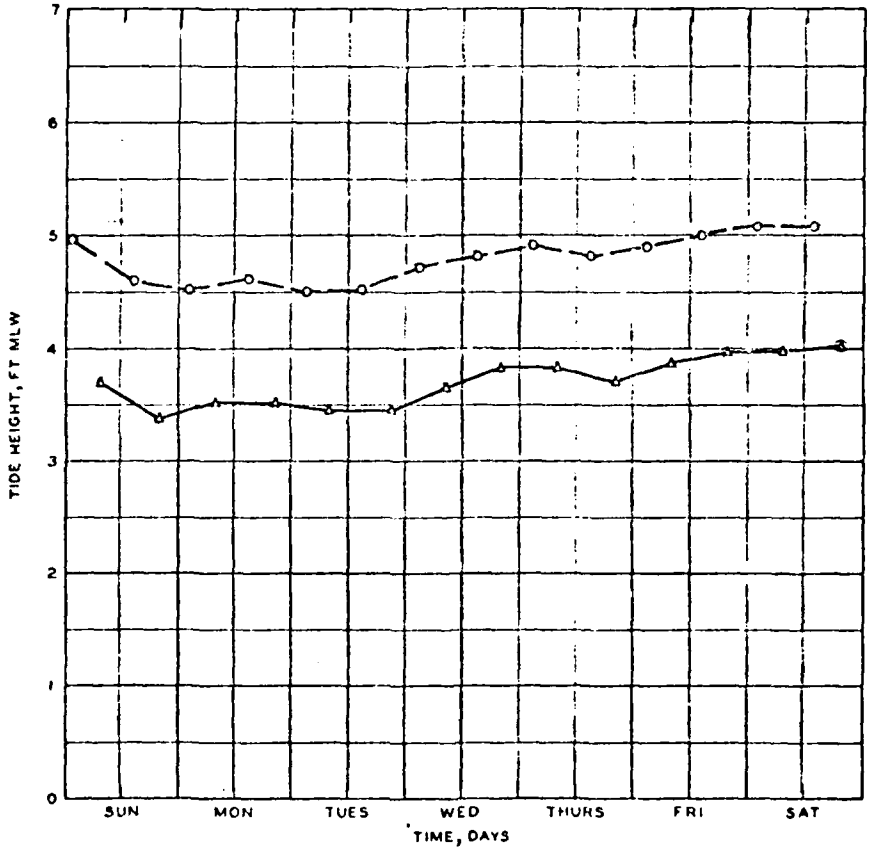
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-1

PLATE 32





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE C

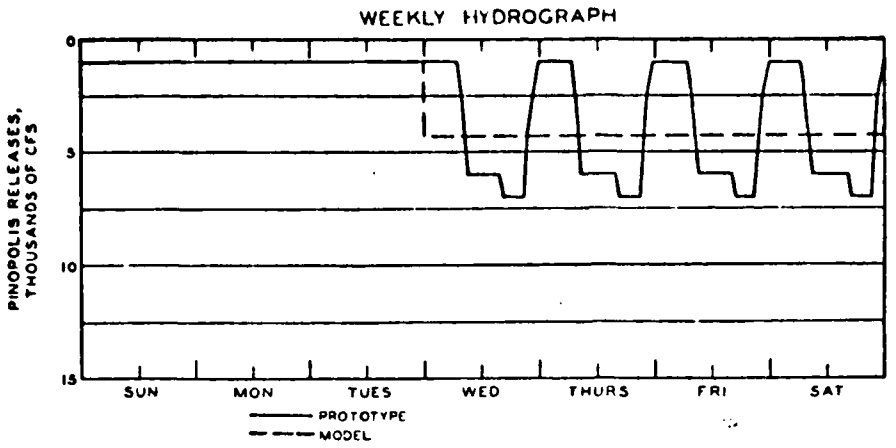
HIGH WATER
LOW WATER

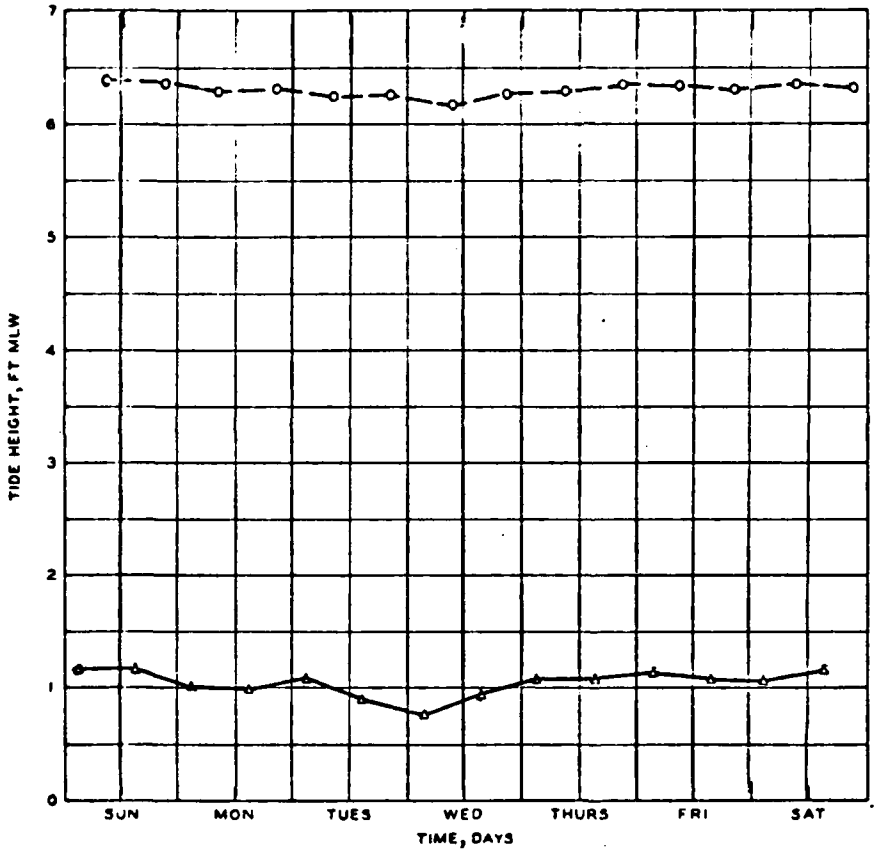
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE C WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-2

PLATE 33





TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30,000 PPM
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
COOPER RIVER FLOW 3000 CFS, SCHEDULE D	

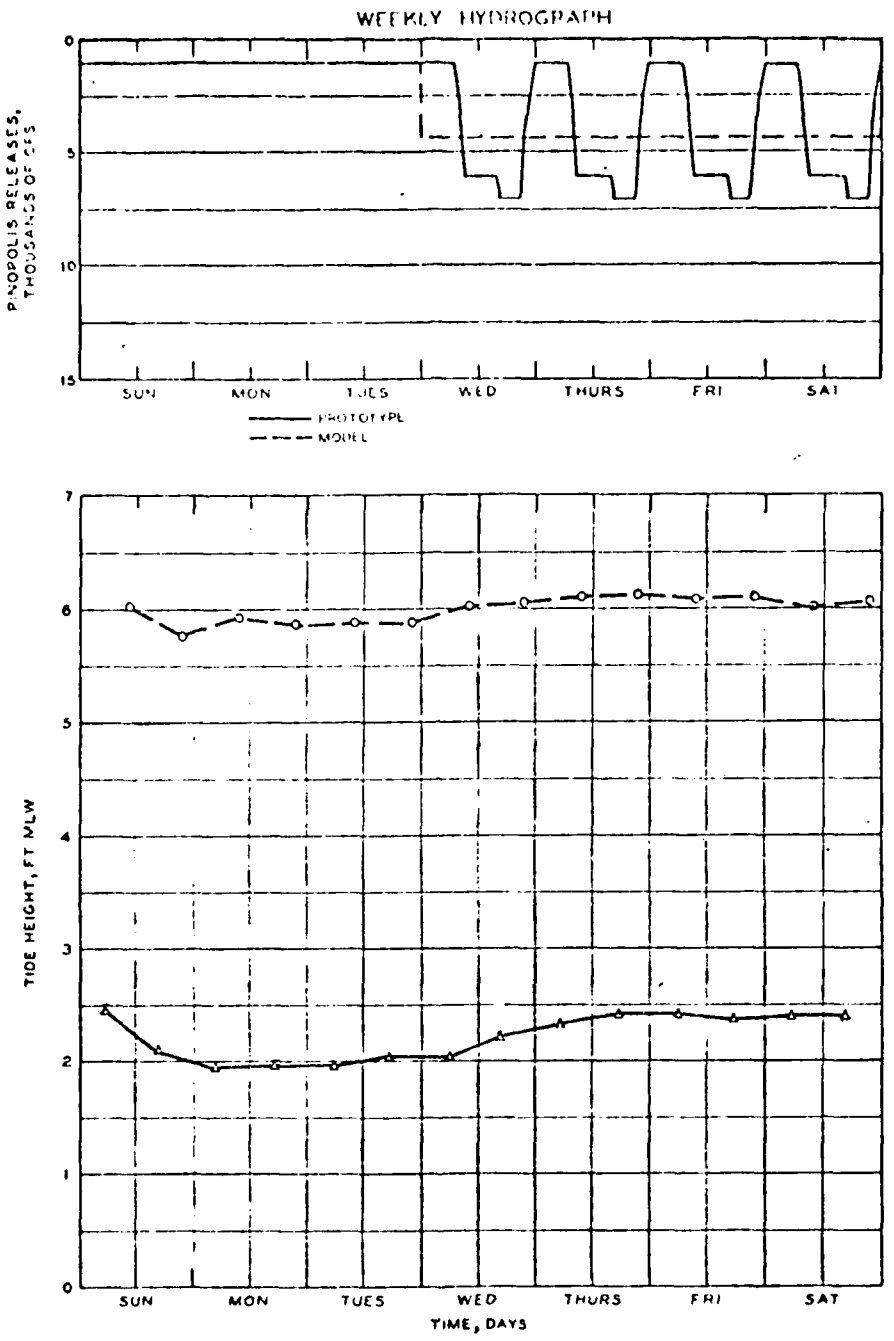
HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-5

PLATE 34



TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 2NICFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE D

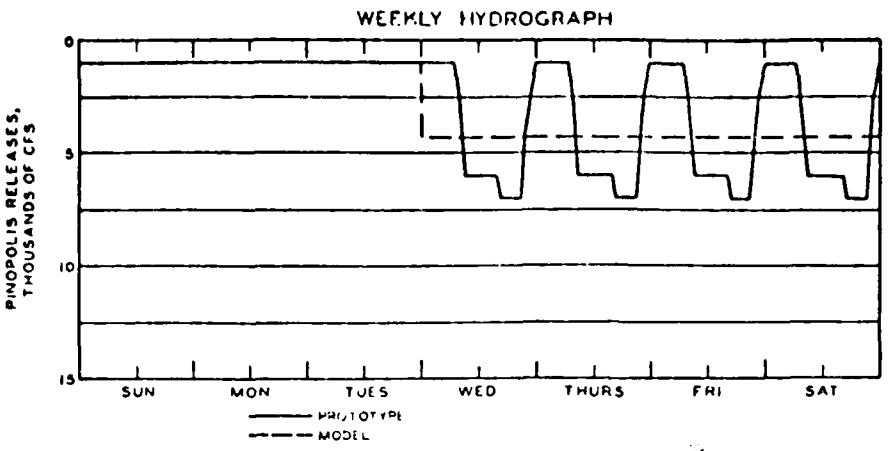
O—O HIGH WATER
Δ—Δ LOW WATER

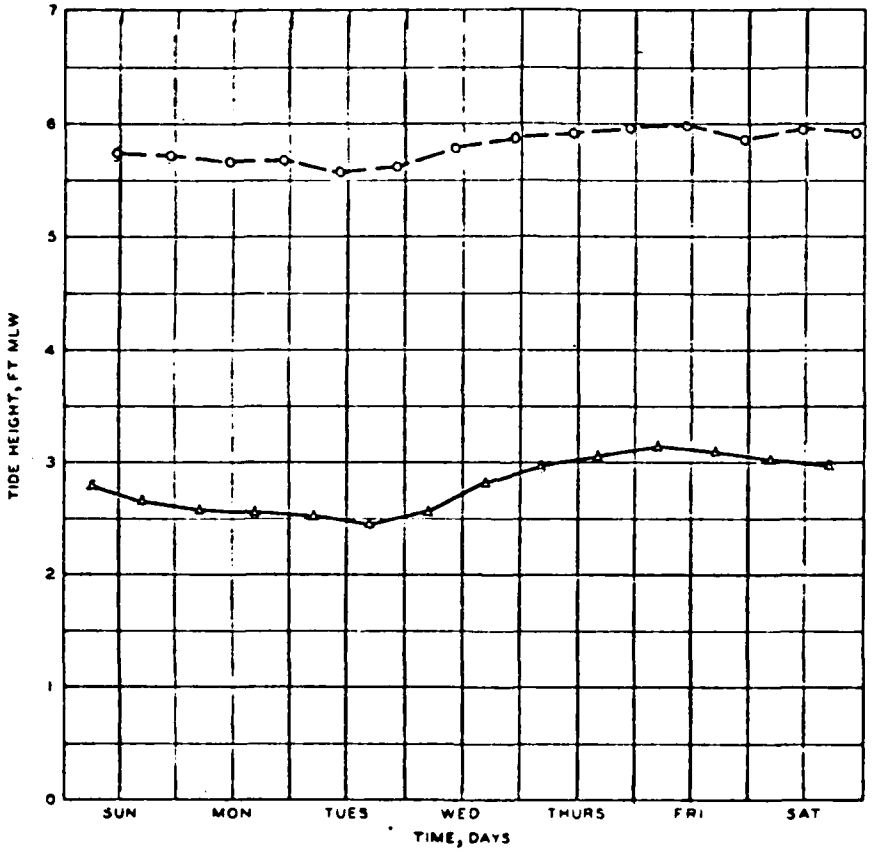
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-6

PLATE 35





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE D

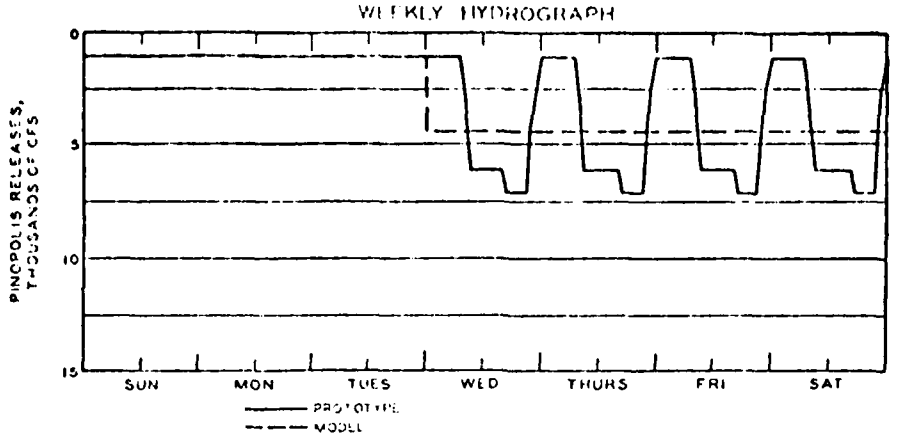
HIGH WATER
LOW WATER

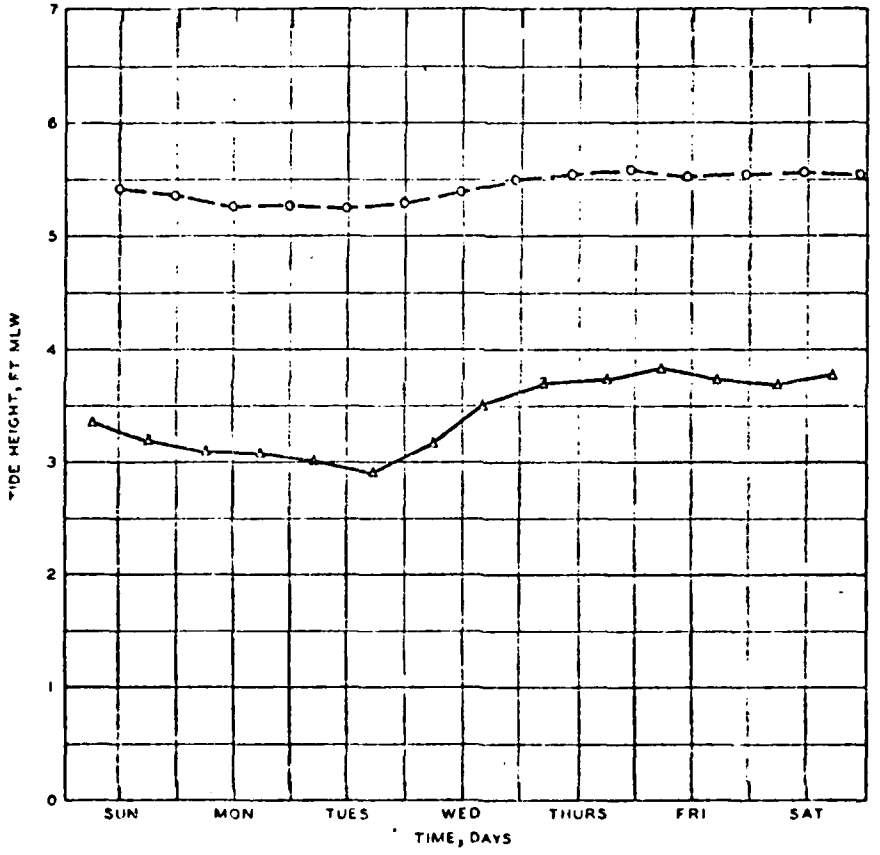
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-7

PLATE 36





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 P/M
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE D

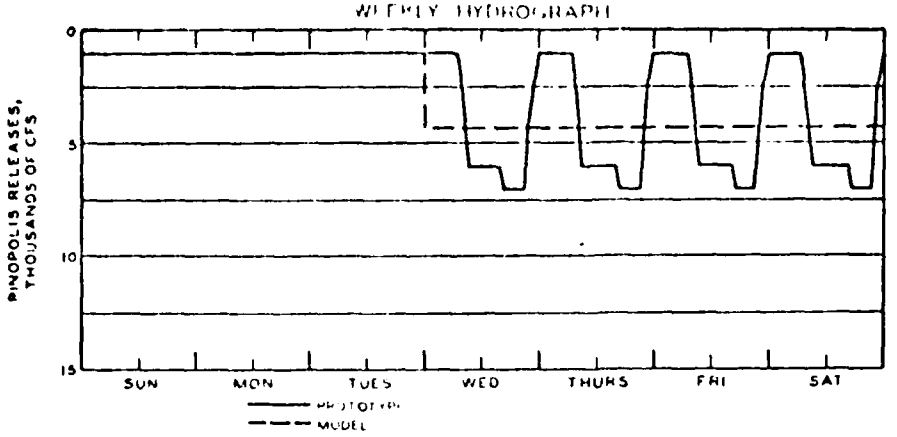
HIGH WATER
LOW WATER

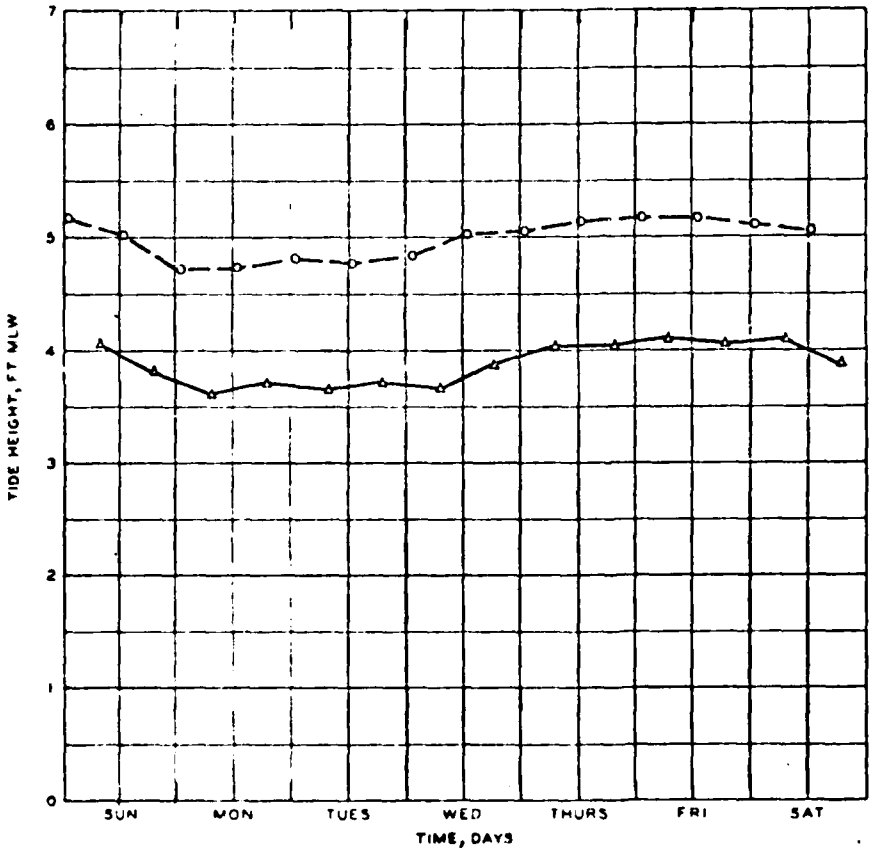
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-8

PLATE 37





TEST CONDITIONS

OCEAN TIDE RANGE 9.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK [illegible] WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE D

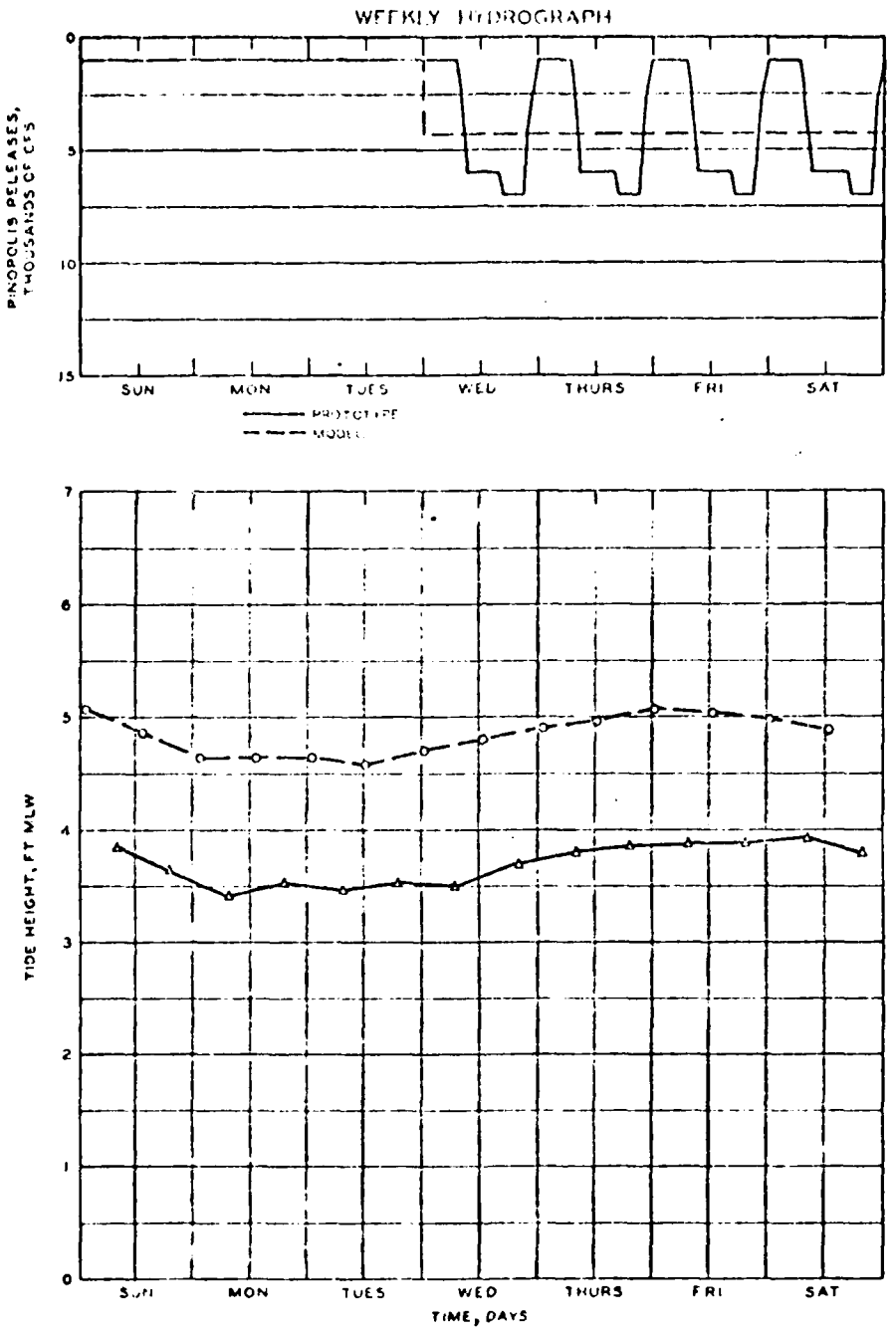
HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-1

PLATE 38



TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3000 CFS SCHEDULE D

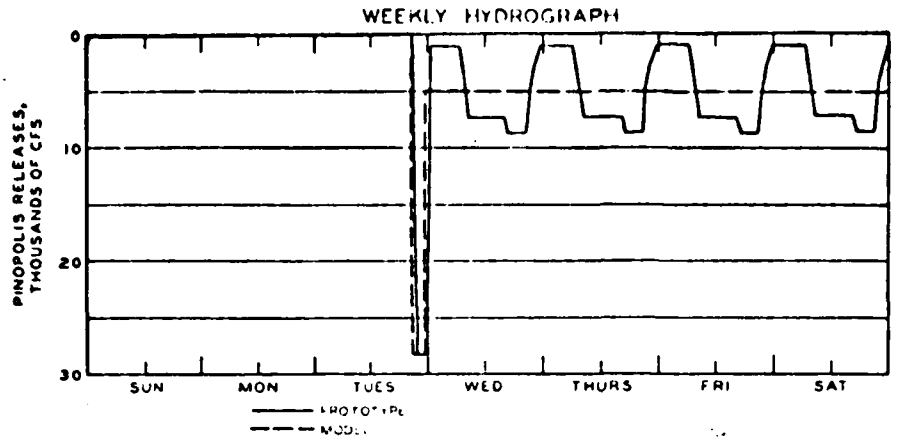
HIGH WATER
LOW WATER

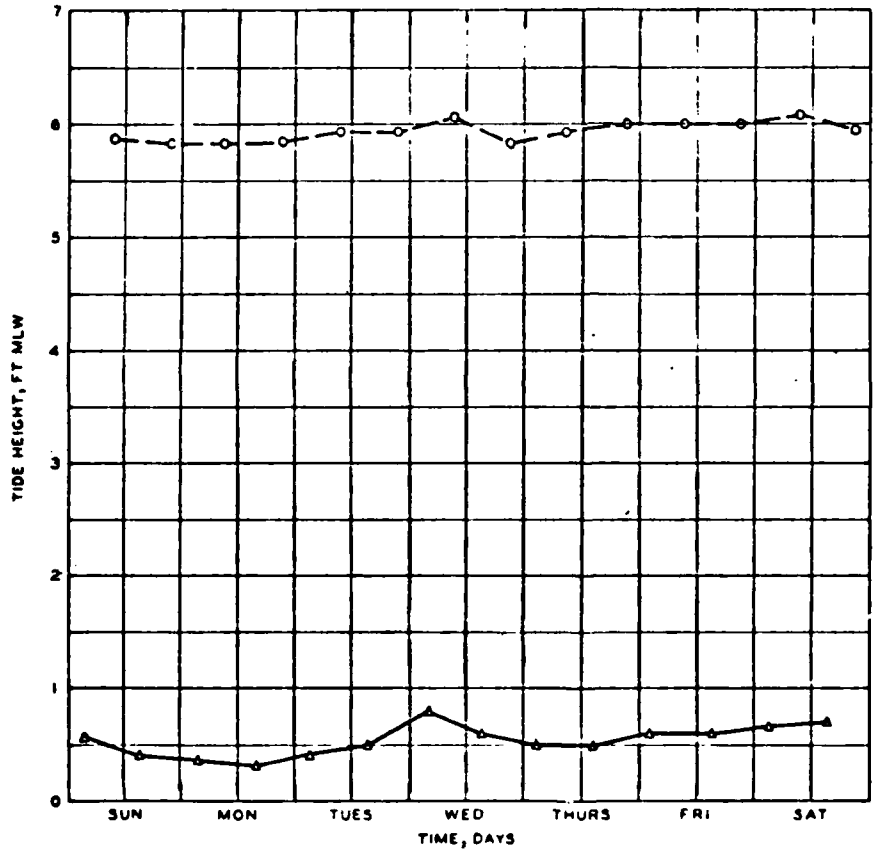
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE D WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-2

PLATE 39





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3300 CFS SCHEDULE E

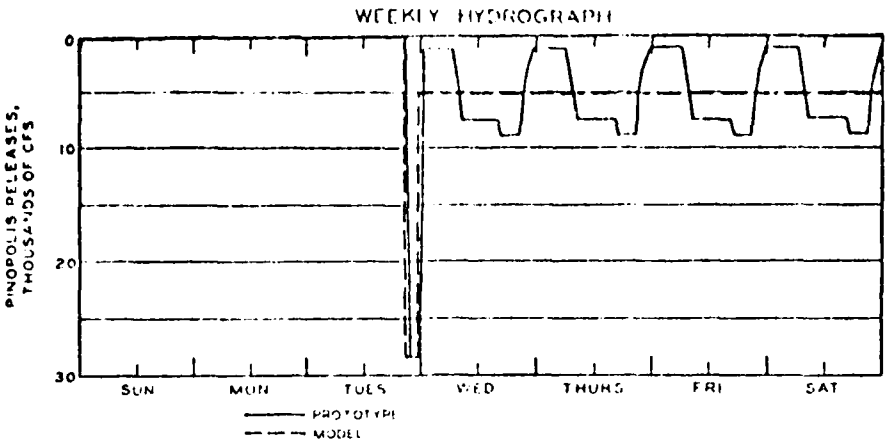
HIGH WATER
LOW WATER

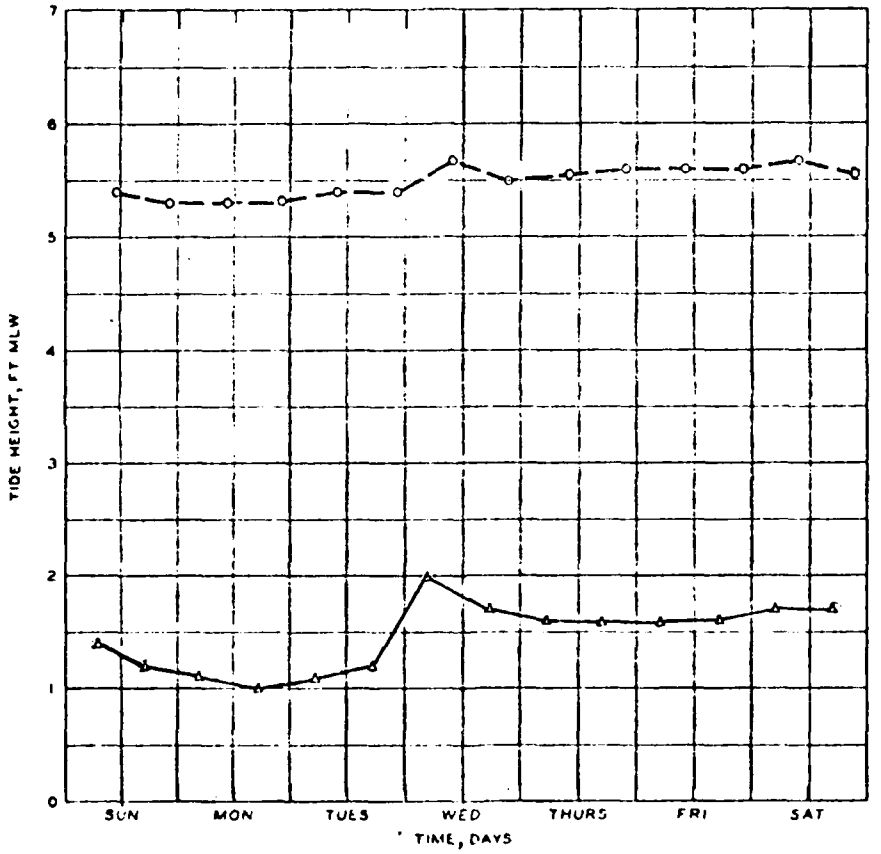
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-5

PLATE 40





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3500 CFS SCHEDULE E

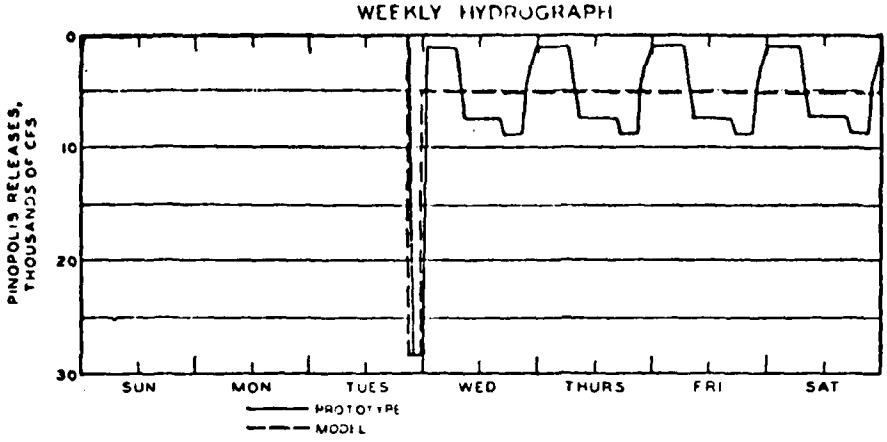
HIGH WATER
LOW WATER

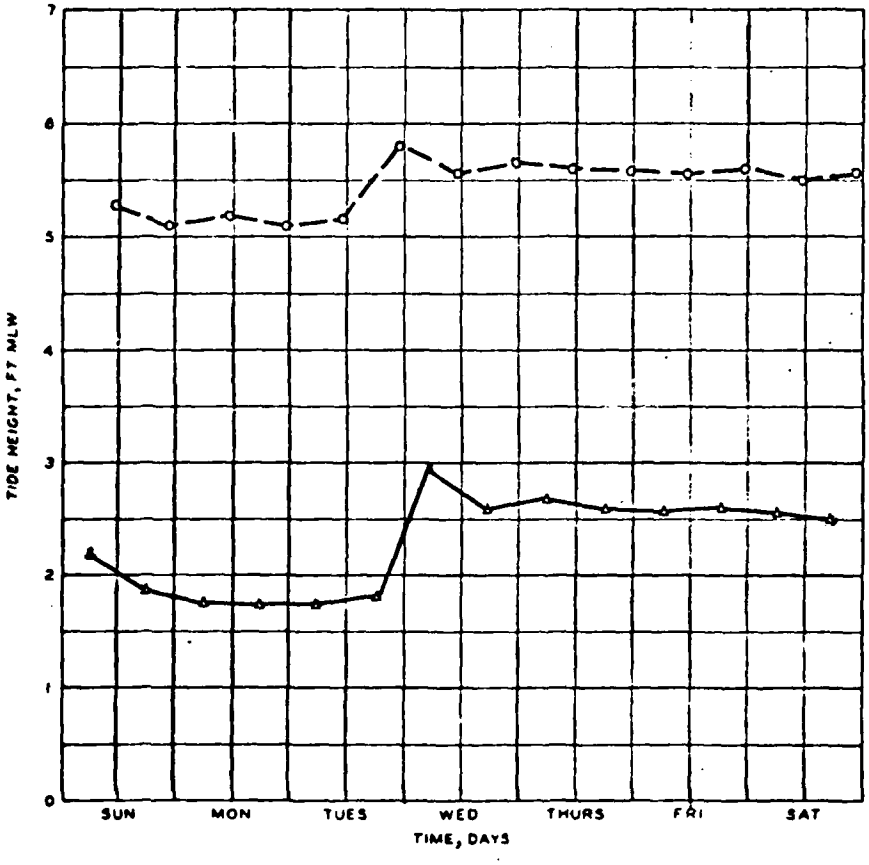
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-6

PLATE 41





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3500 CFS SCHEDULE E

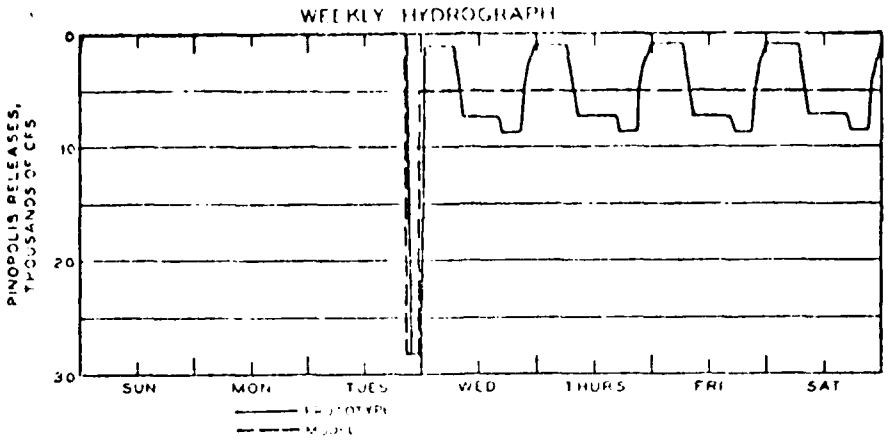
HIGH WATER
LOW WATER

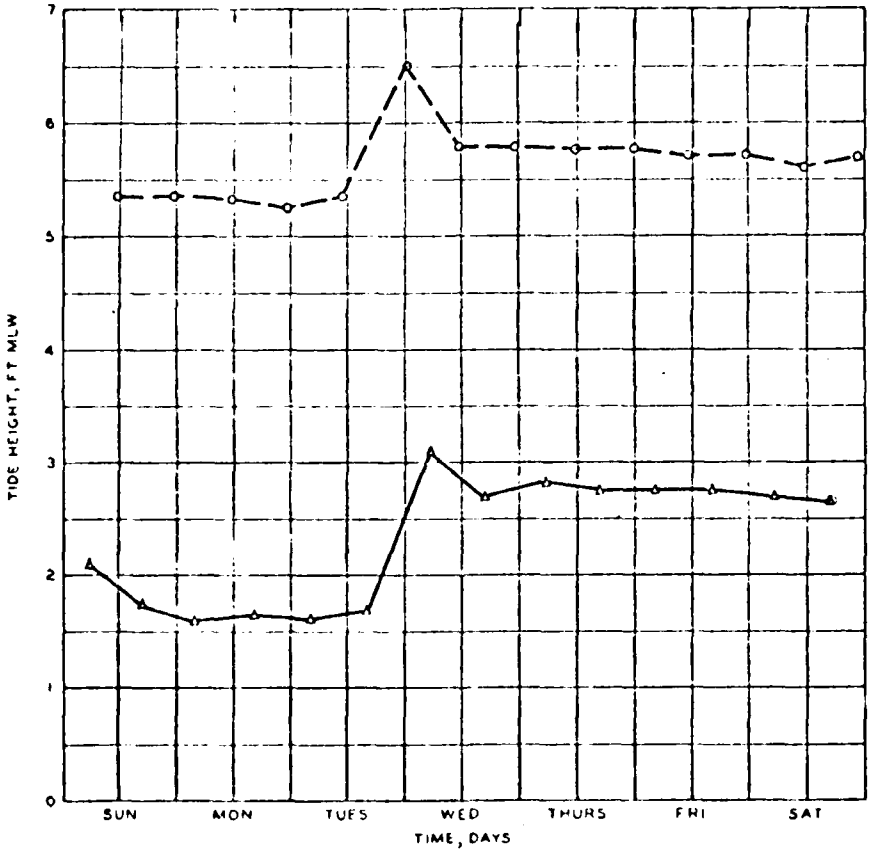
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-7

PLATE 42





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 261 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3500 CFS SCHEDULE E

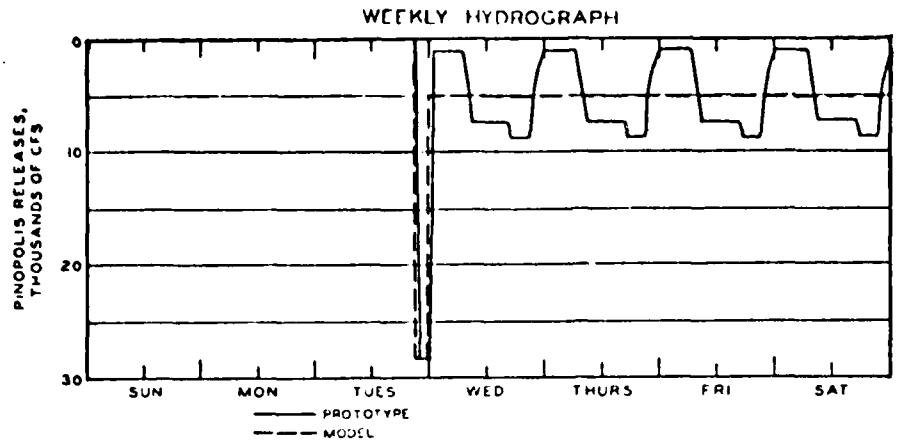
HIGH WATER
LOW WATER

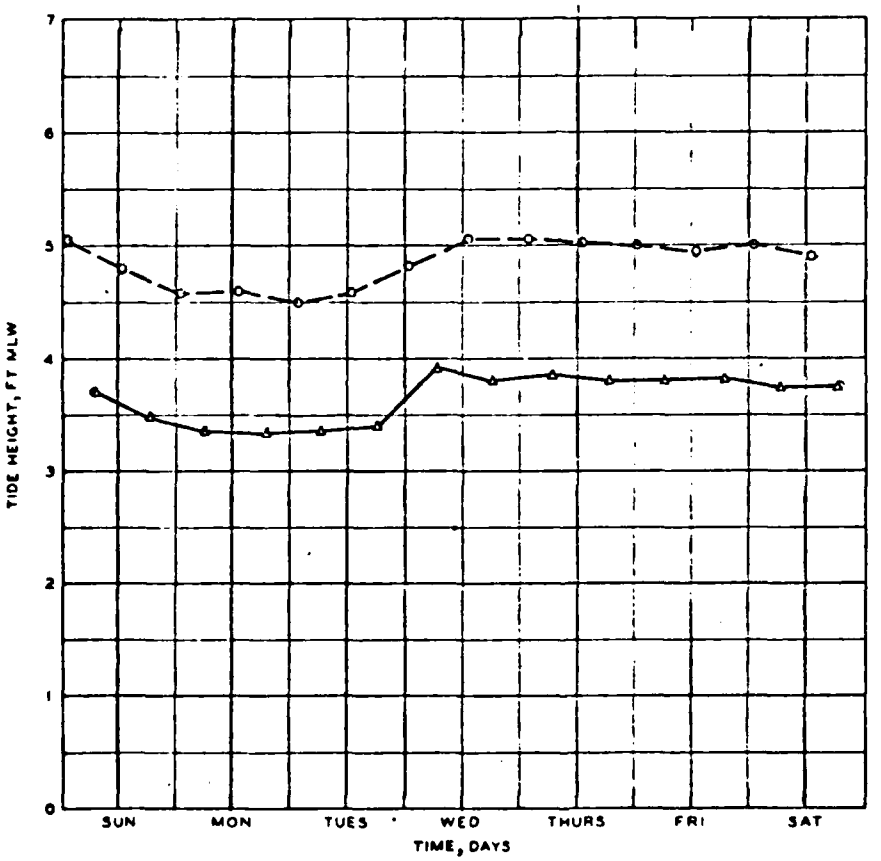
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION CR-8

PLATE 43





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 281 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWALS 1150 CFS
COOPER RIVER FLOW 3500 CFS SCHEDULE E

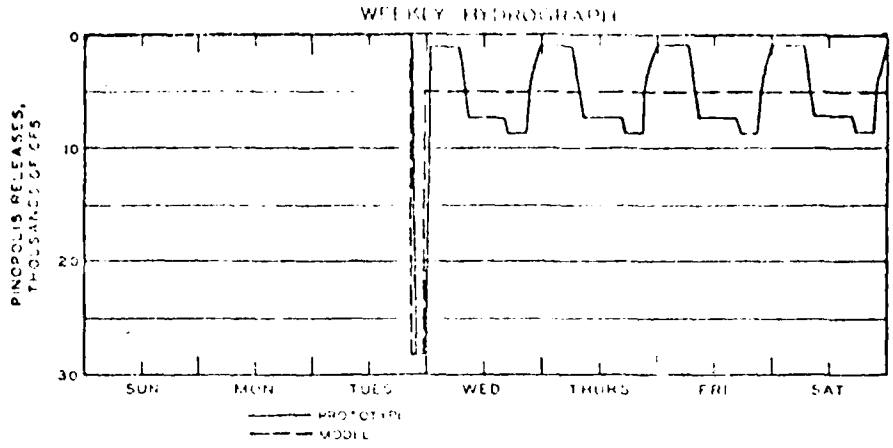
o—o HIGH WATER
▲—▲ LOW WATER

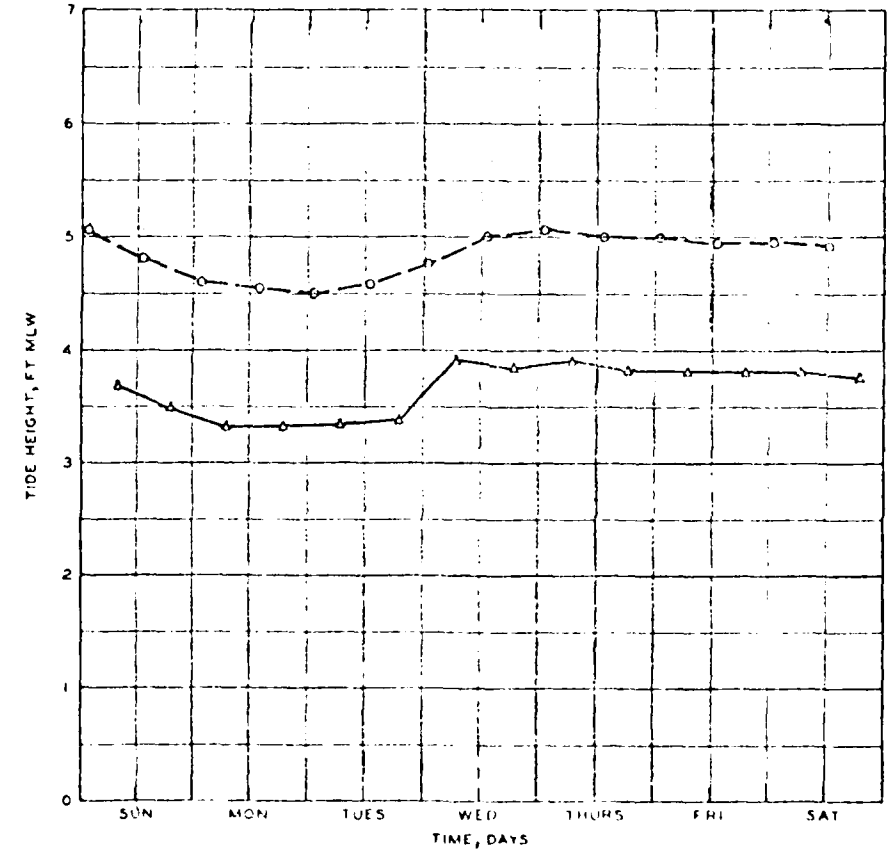
CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-1

PLATE 44





TEST CONDITIONS

OCEAN TIDE RANGE 5.4 FT
OCEAN SALINITY (TOTAL SALT) 30,000 PPM
ASHLEY RIVER 2 CFS WANDO RIVER 82 CFS
BUSHY PARK COMBINED WITHDRAWAL 150 CFS
COOPER RIVER FLOW 3900 CFS SCHEDULE E

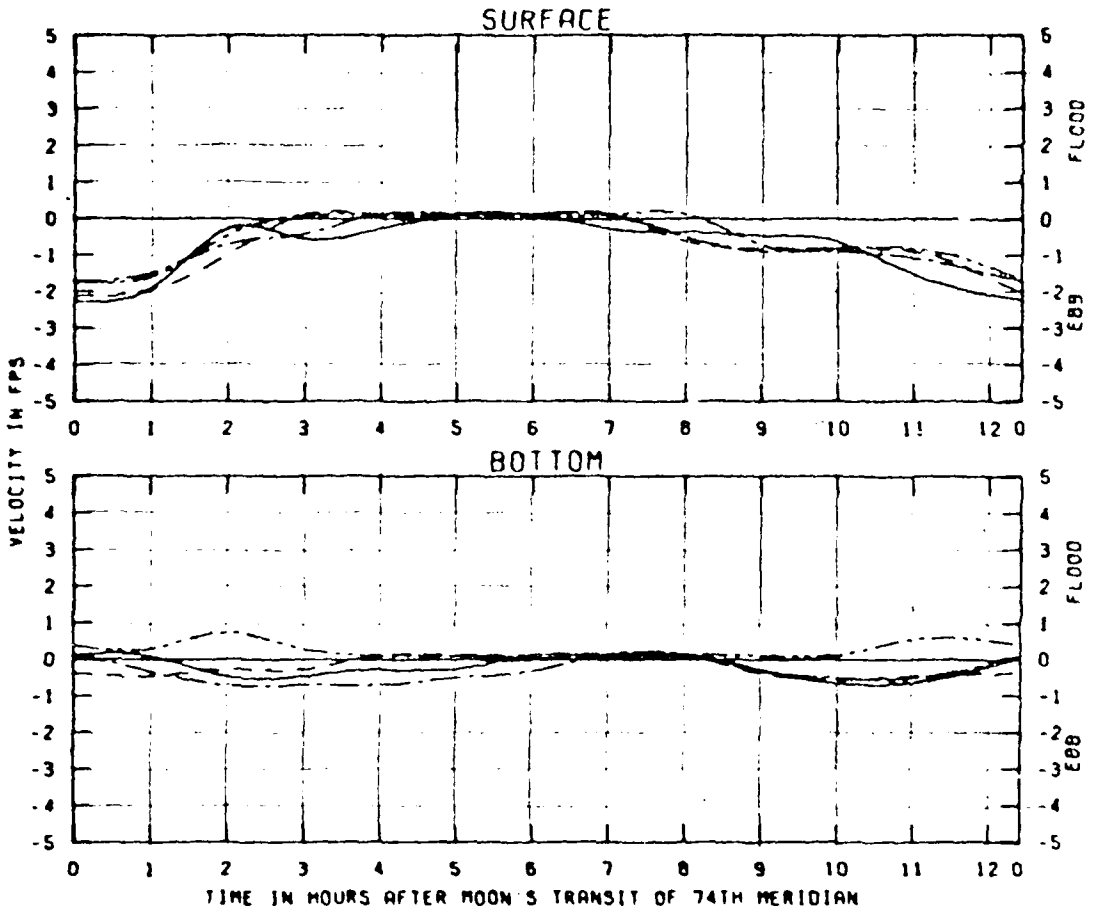
HIGH WATER
LOW WATER

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

EFFECTS OF SCHEDULE E WEEKLY HYDROGRAPH ON MAXIMUM AND MINIMUM TIDE HEIGHTS

STATION BR-2

PLATE 45



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - - -

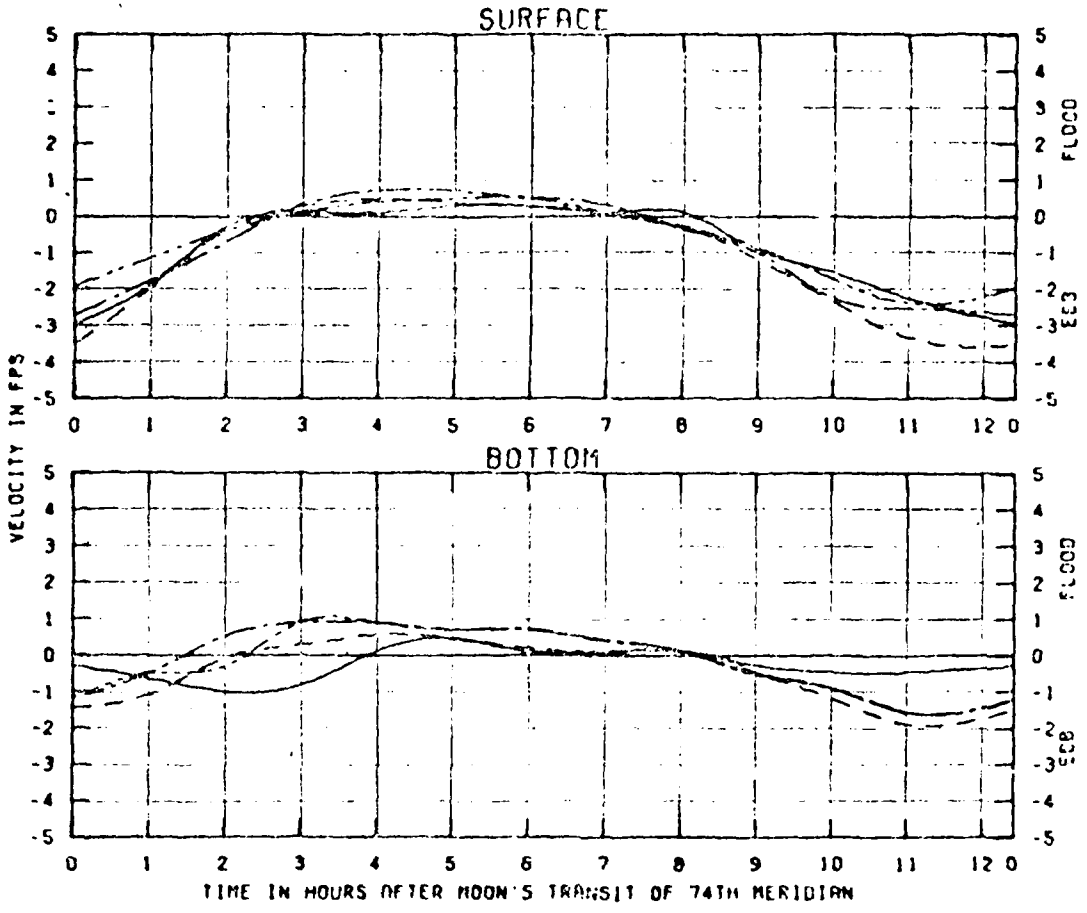
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 0

PLATE 46



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

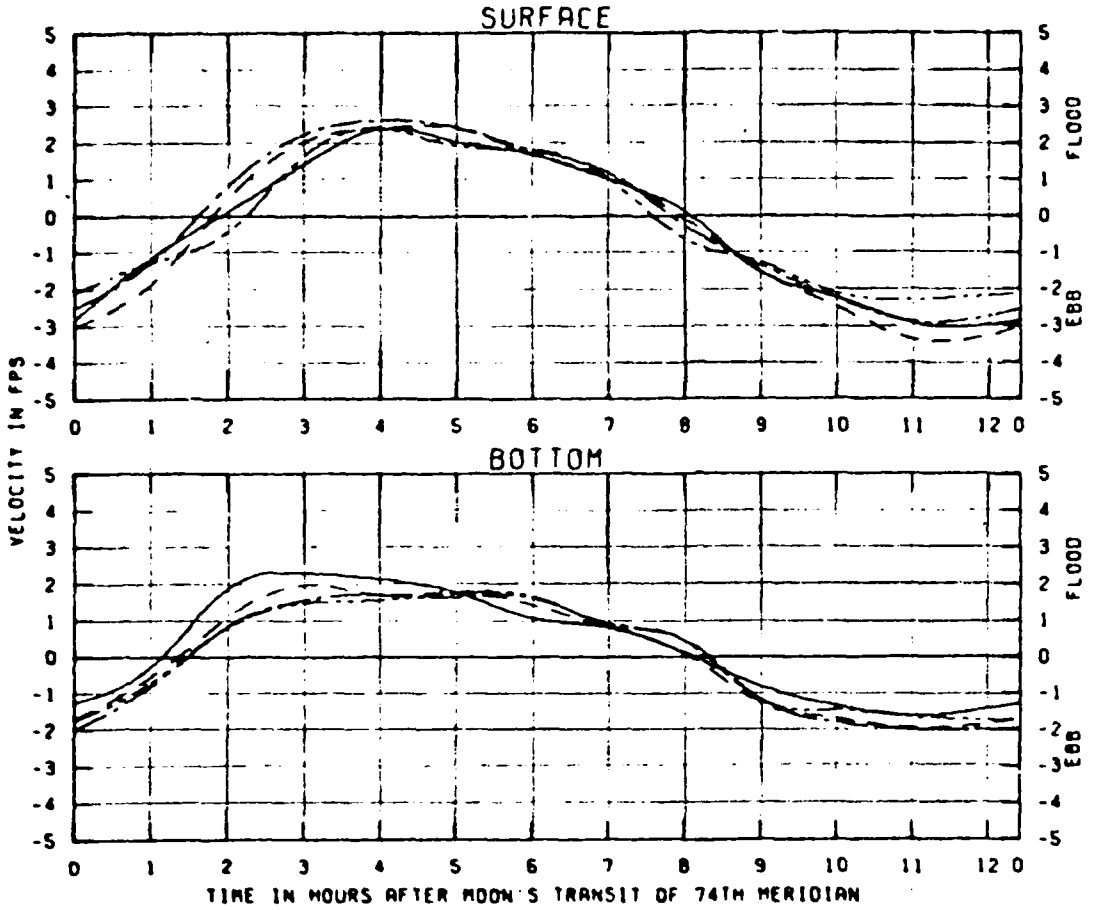
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 2

PLATE 47



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

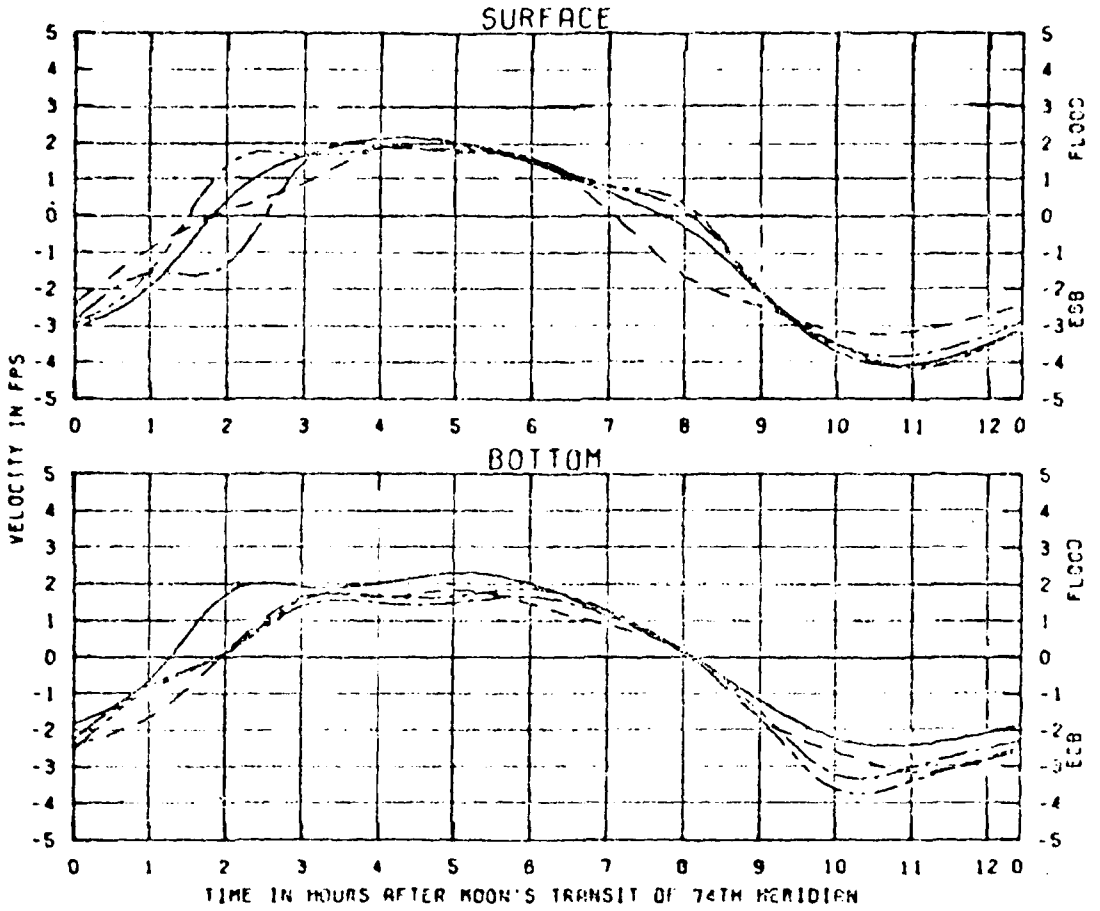
Sch. E —.·.—

Sch. BM —··—

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 4

PLATE 48



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

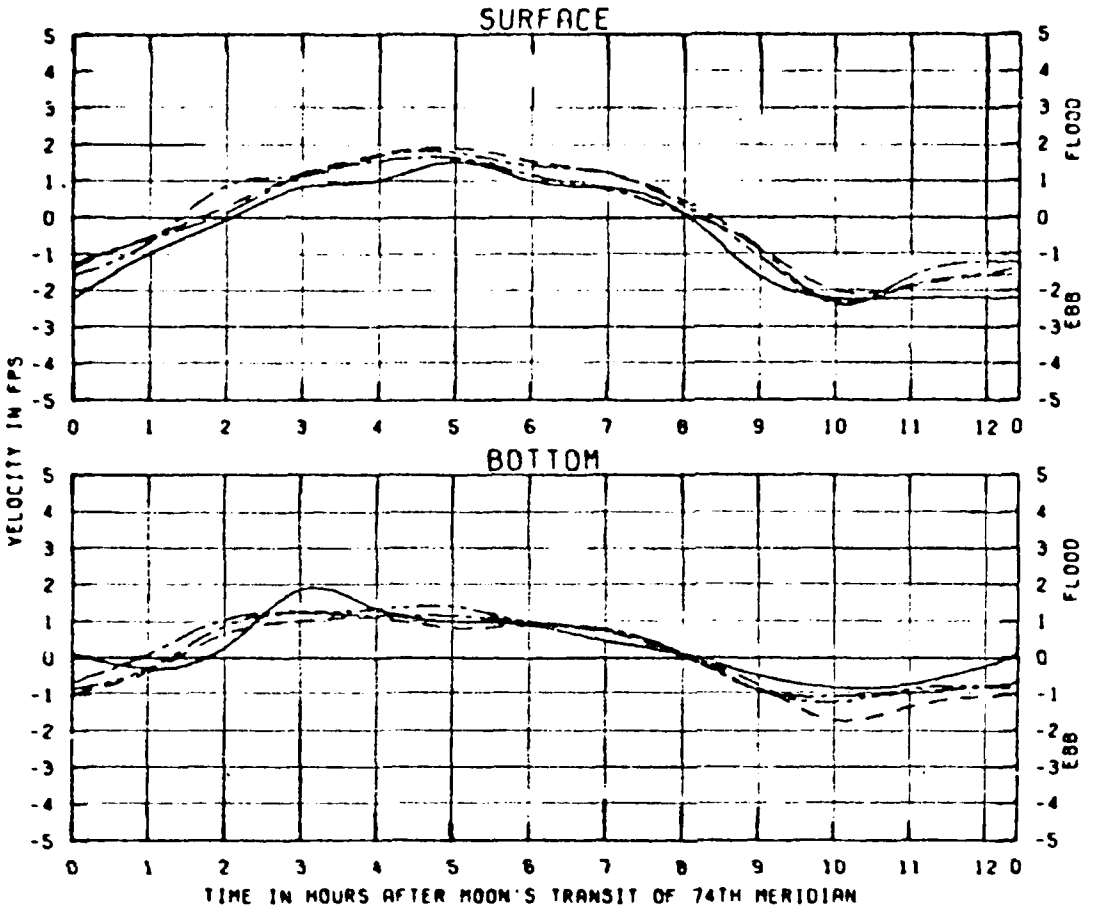
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 6

PLATE 49



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

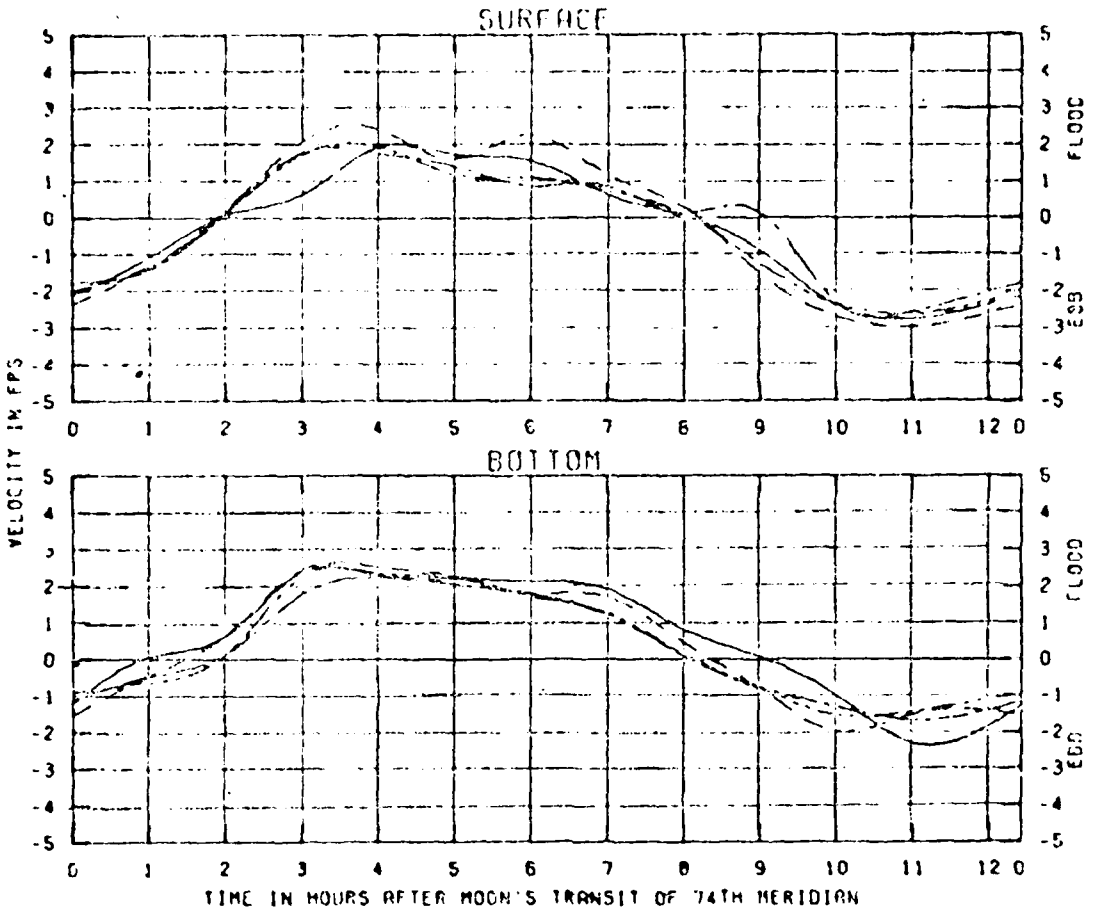
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 8

PLATE 50



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

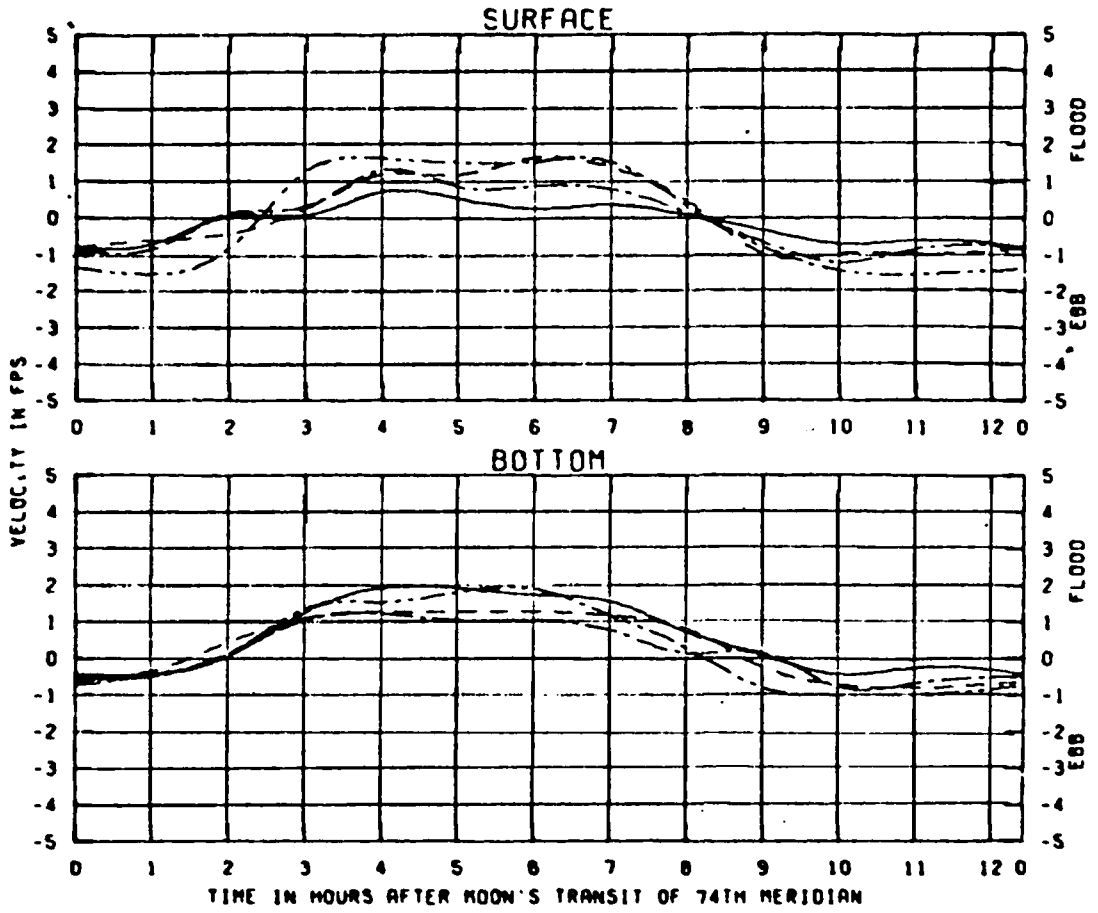
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 10

PLATE 51



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - -

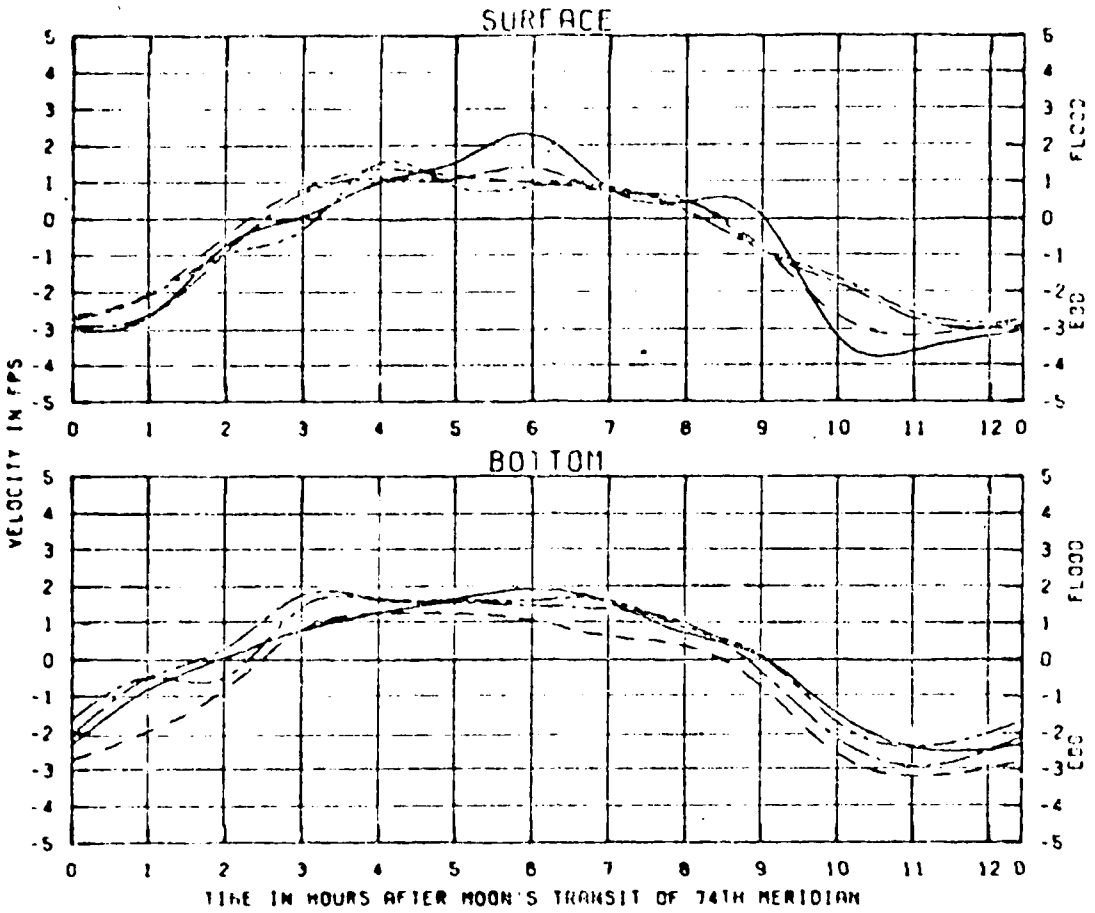
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 12

PLATE 52



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED HITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

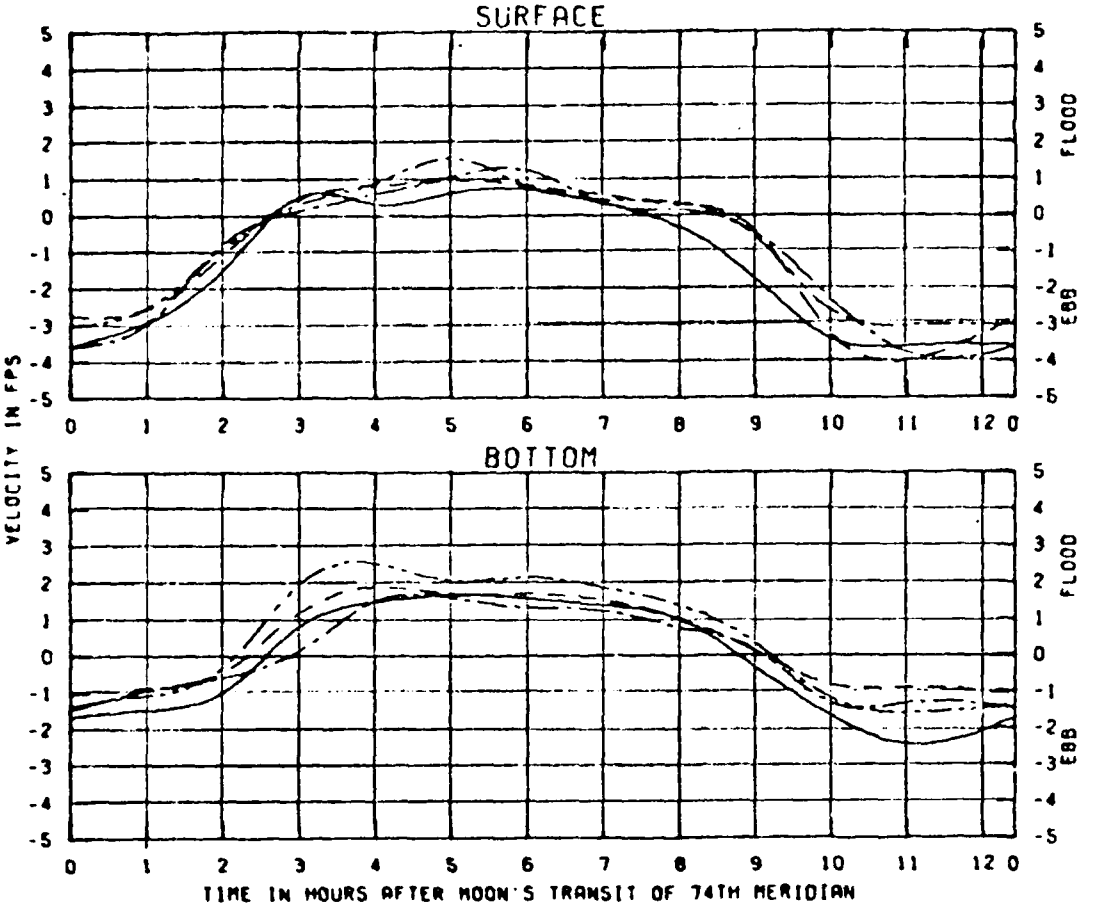
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 14

PLATE 53



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - - -

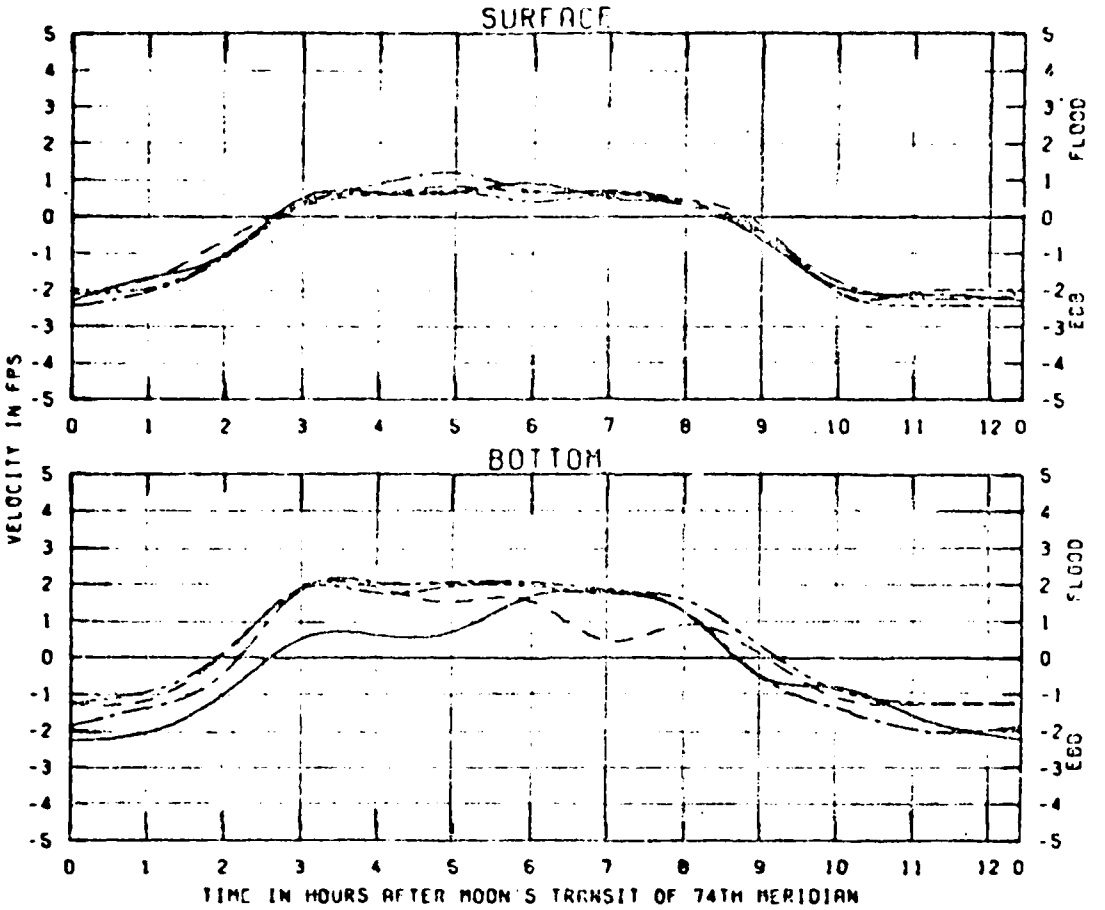
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 16

PLATE 54



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

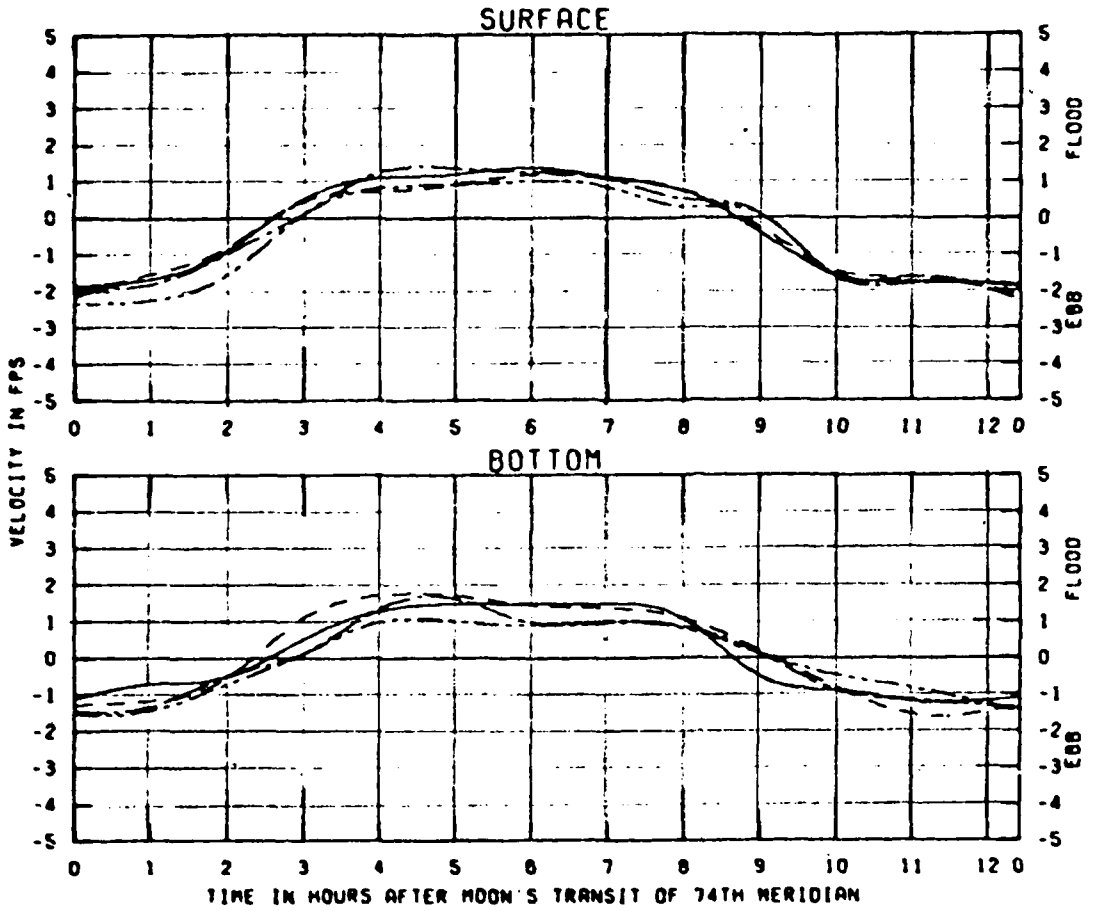
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 18

PLATE 55



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

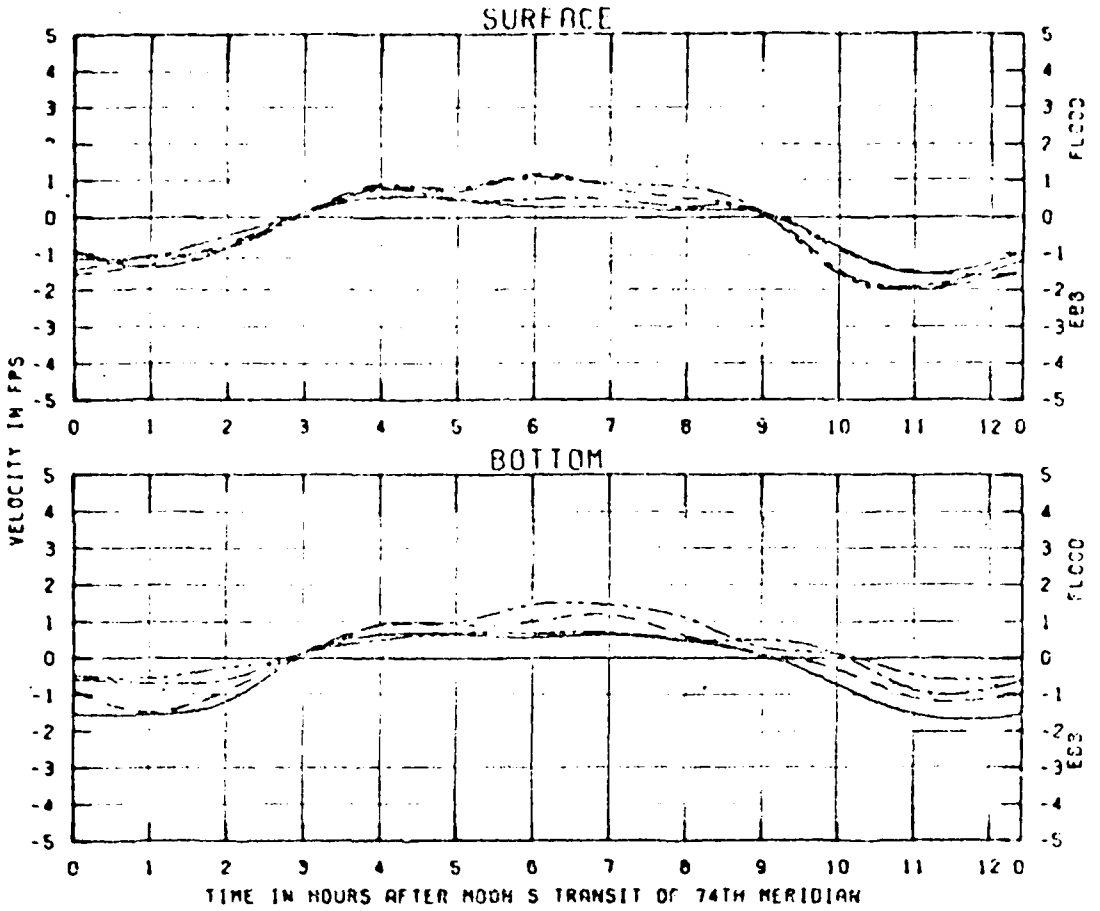
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 20

PLATE 56



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

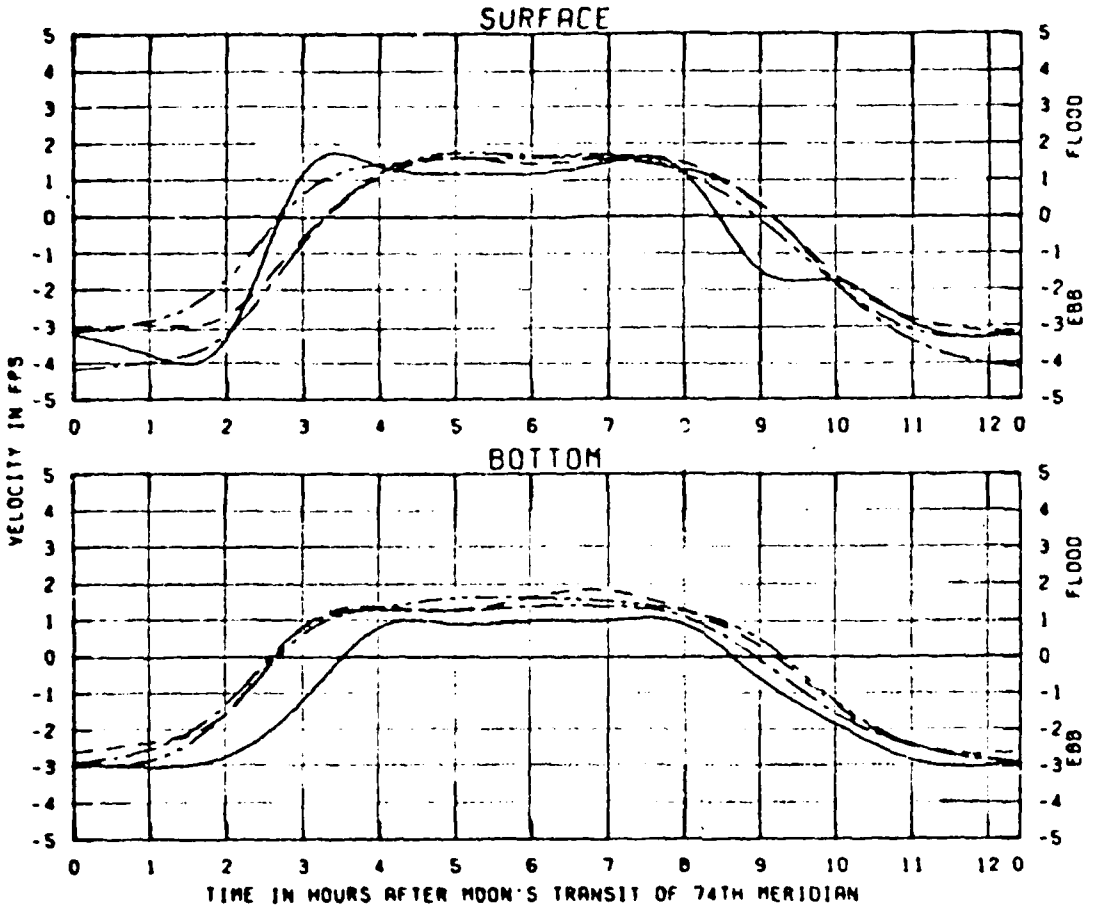
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 22

PLATE 57



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

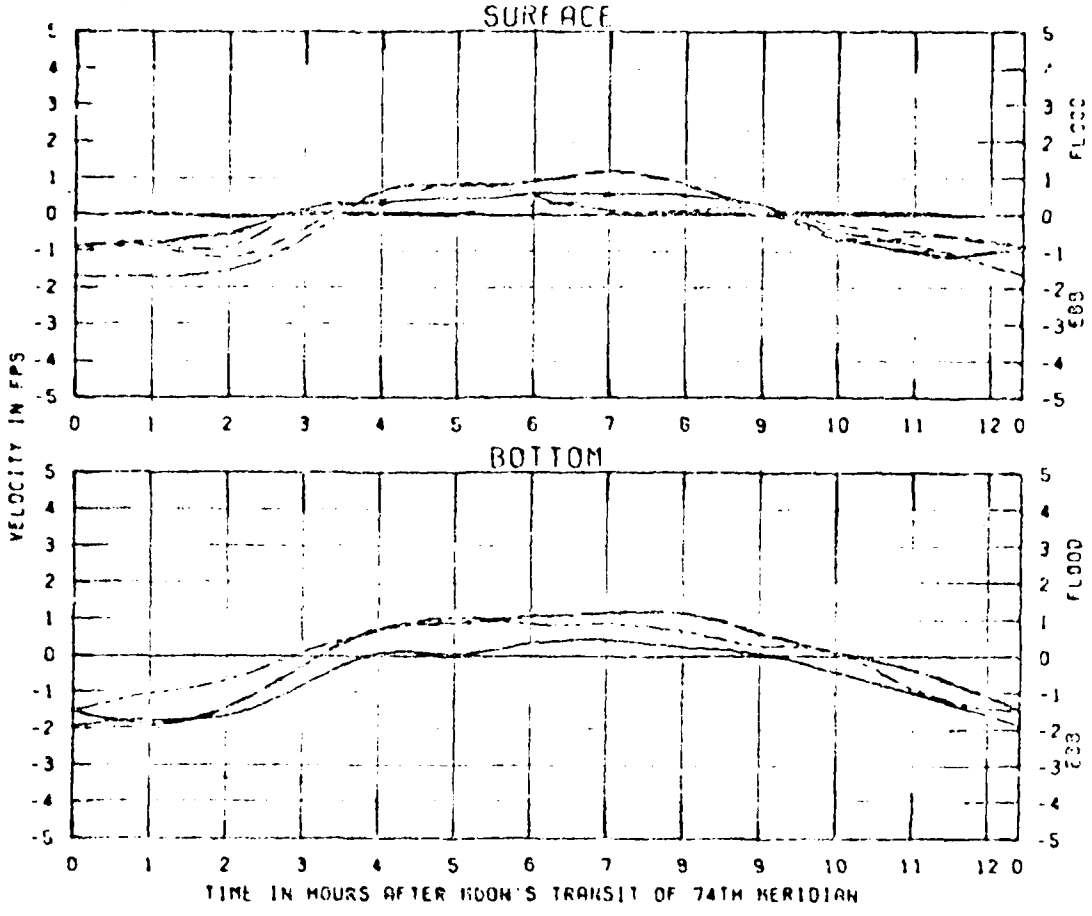
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 24

PLATE 58



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS HANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————————

Sch. B - - - - -

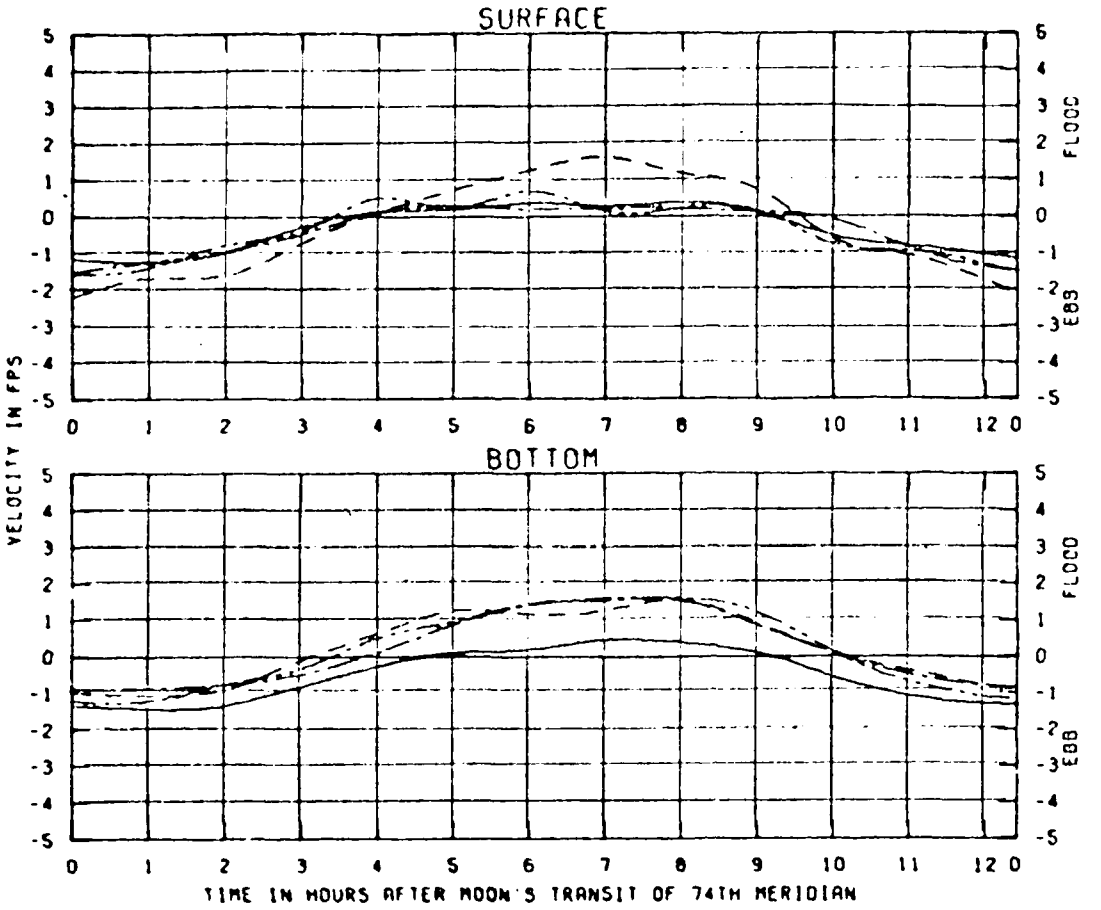
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 26

PLATE 59



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

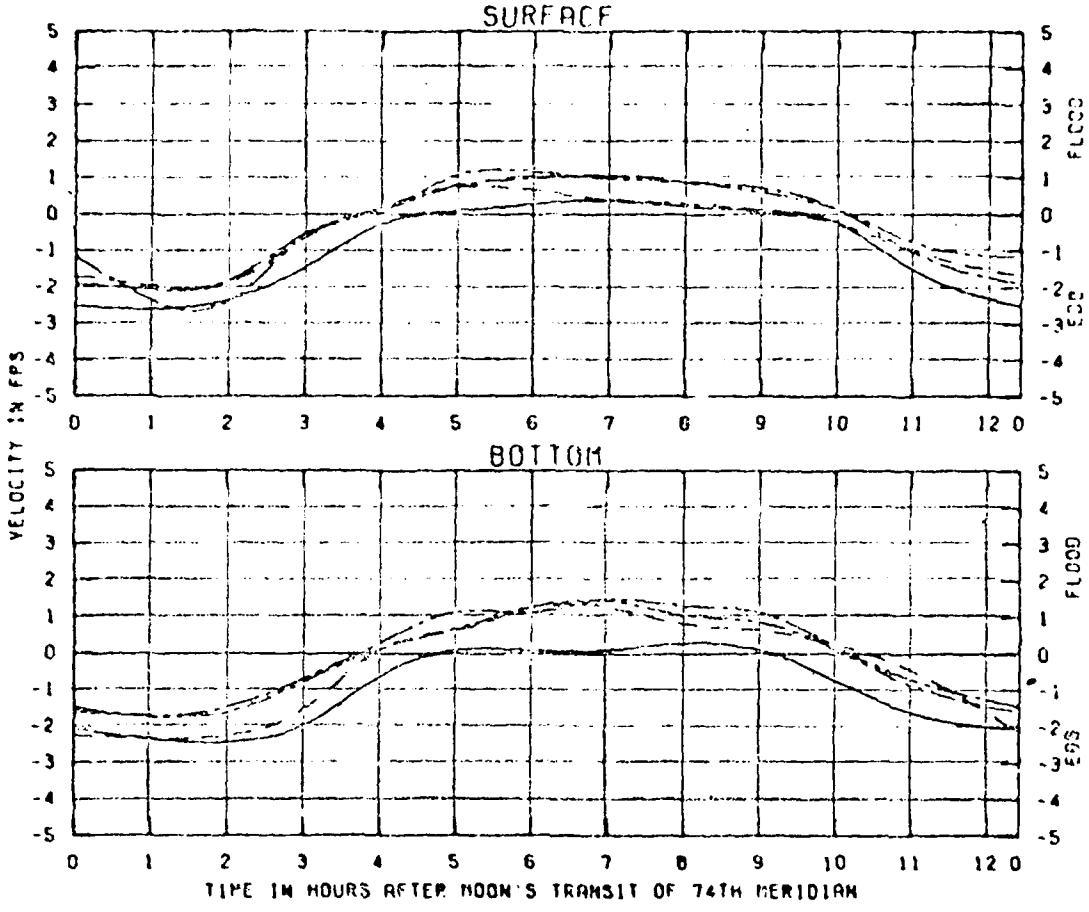
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 28

PLATE 60



TEST CONDITIONS

OCEAN TIDE RANGE		6.4 FT
OCEAN SALINITY (TOTAL SALT)		30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS		1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER	82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - -

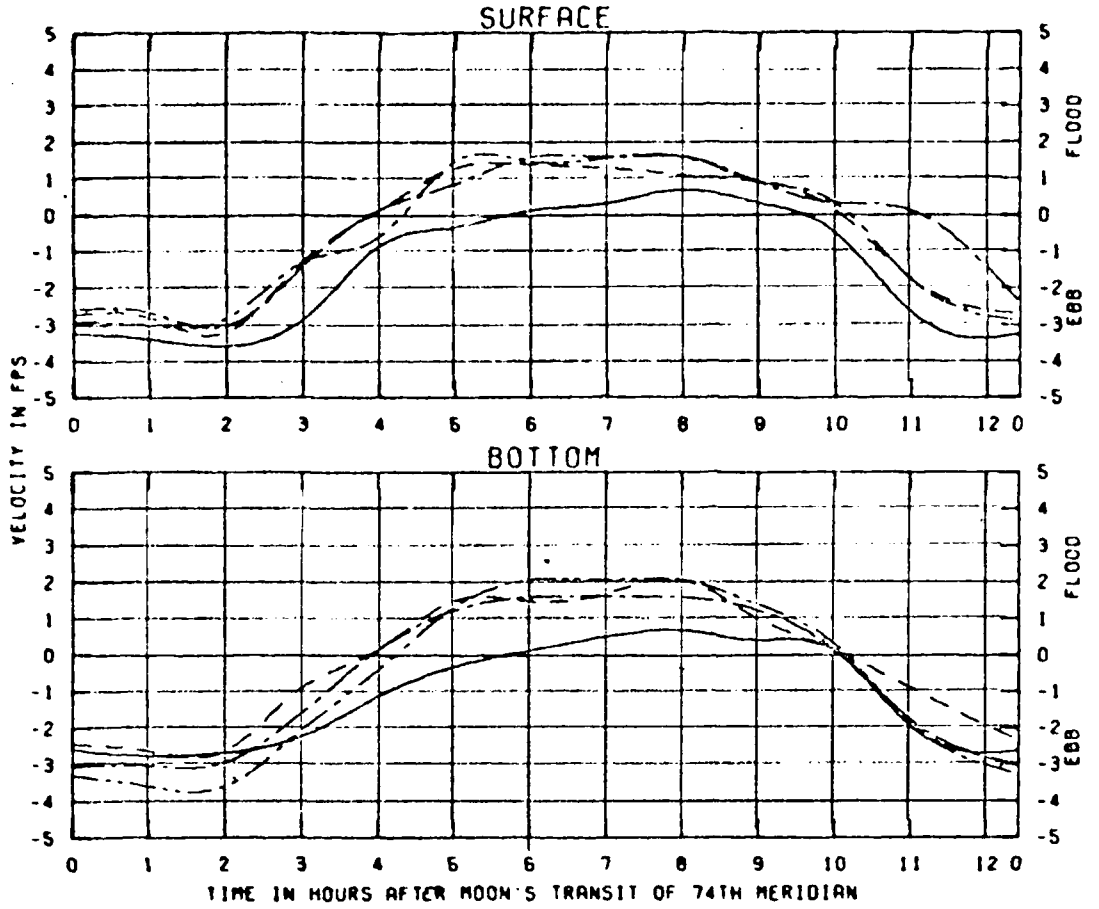
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 30

PLATE 61



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

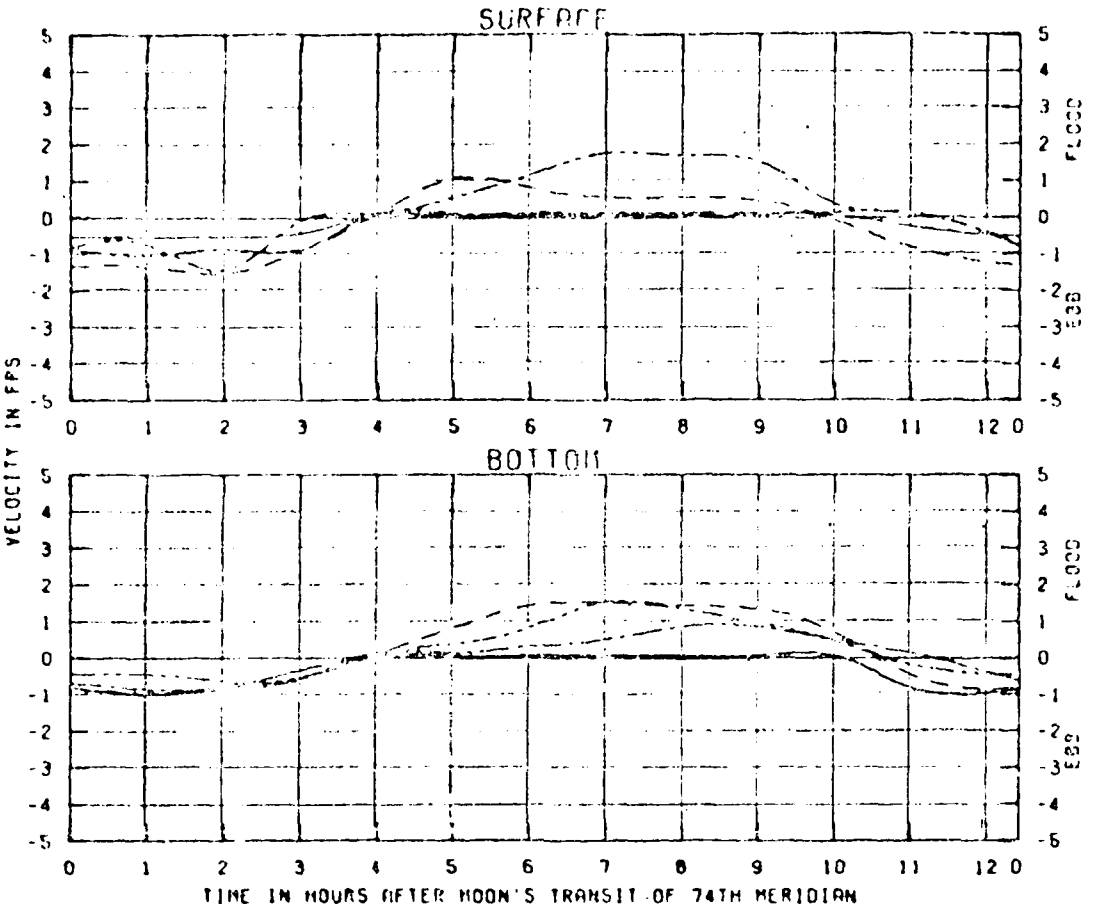
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 32

PLATE 62



TEST CONDITIONS

OCEAN TIDE RANGE			5.4 FT
OCEAN SALINITY (TOTAL SALT)			30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS			1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER	82 CFS	
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS		

LEGEND

Sch. A ————————

Sch. B - - - - -

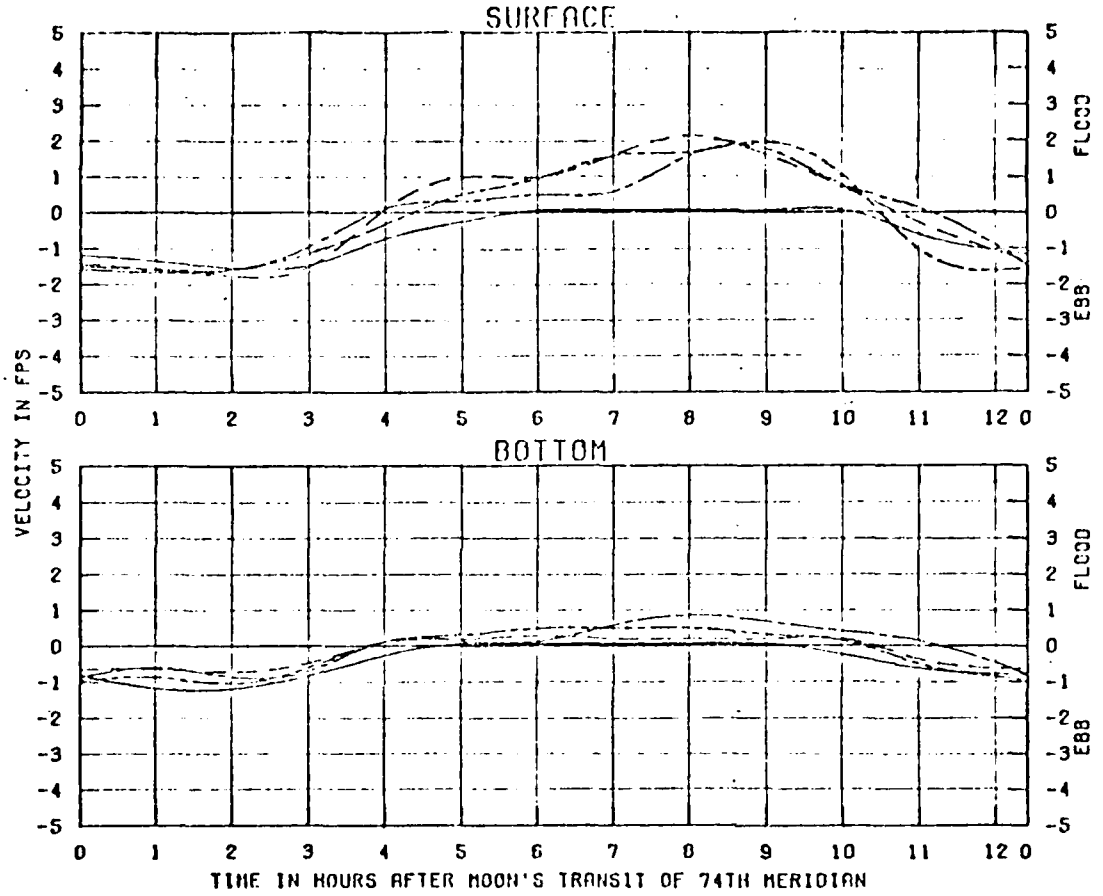
Sch. E — · — · —

Sch. BM — · · —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 34

PLATE 63



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS HANOO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

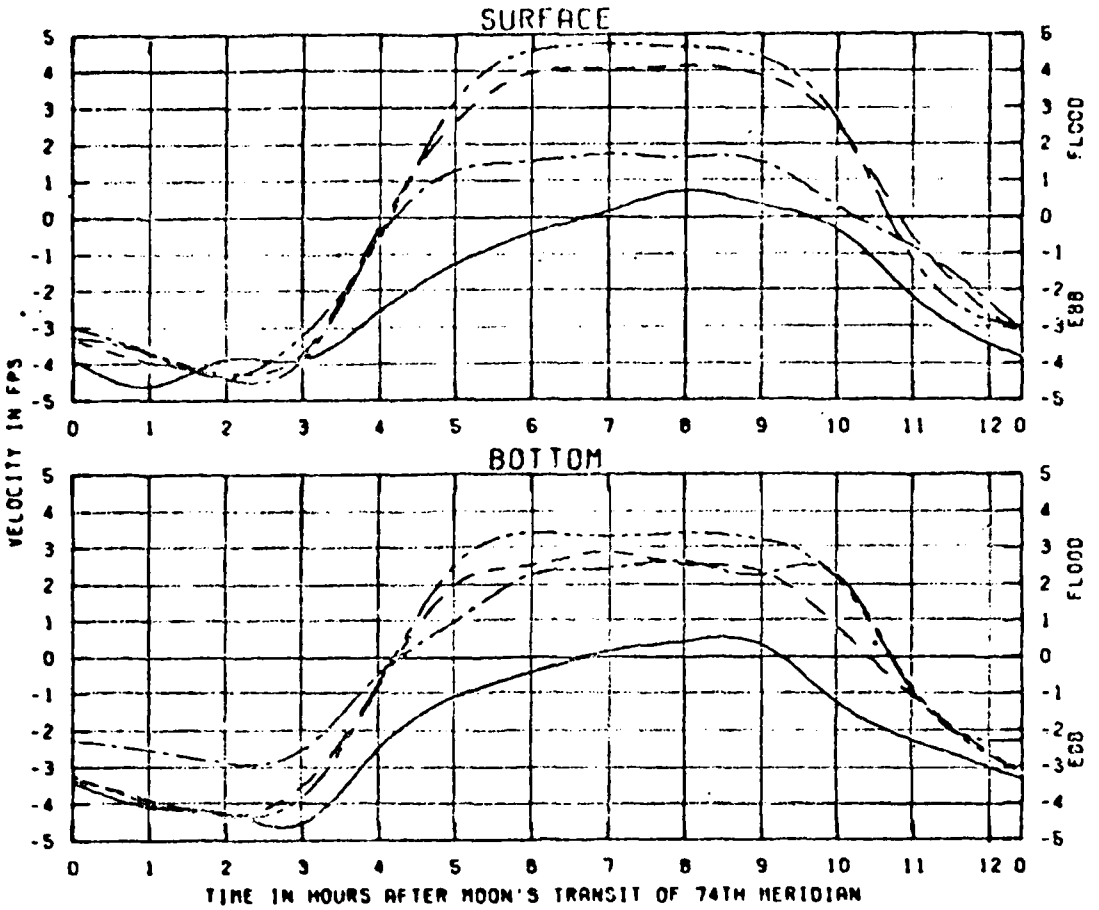
LEGEND

Sch. A ————————
Sch. B — — — — —
Sch. E — · —
Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 36

PLATE 64



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

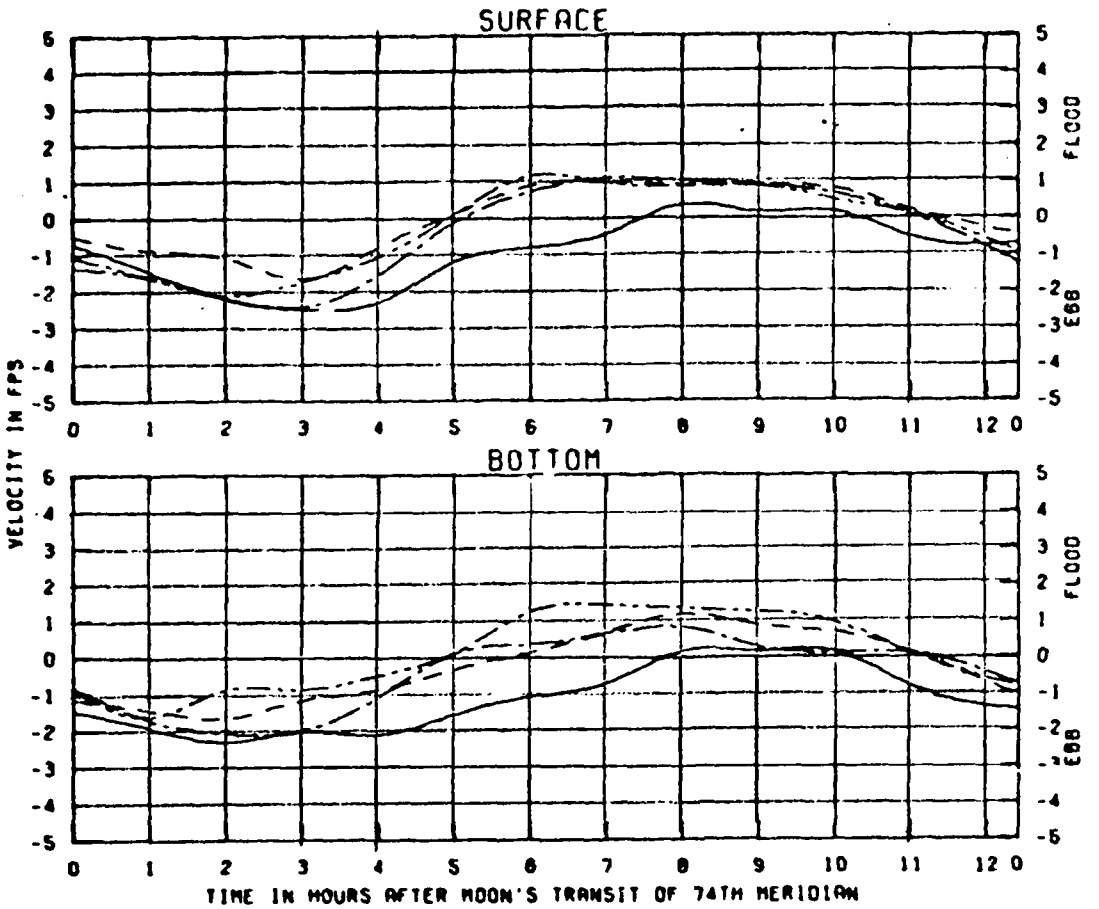
LEGEND

Sch. A ——— ——
Sch. B - - - - -
Sch. E — · —
Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 38

PLATE 65



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

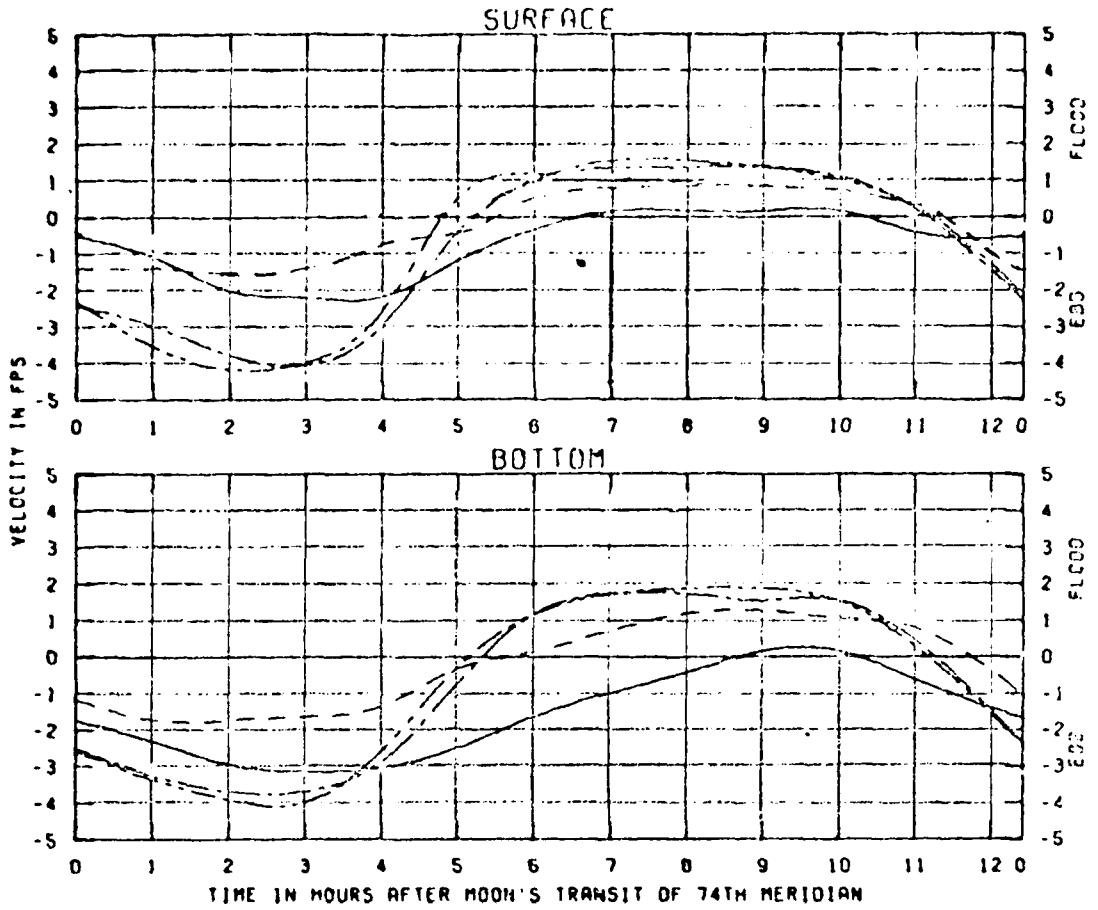
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 40

PLATE 66



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	MARGO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

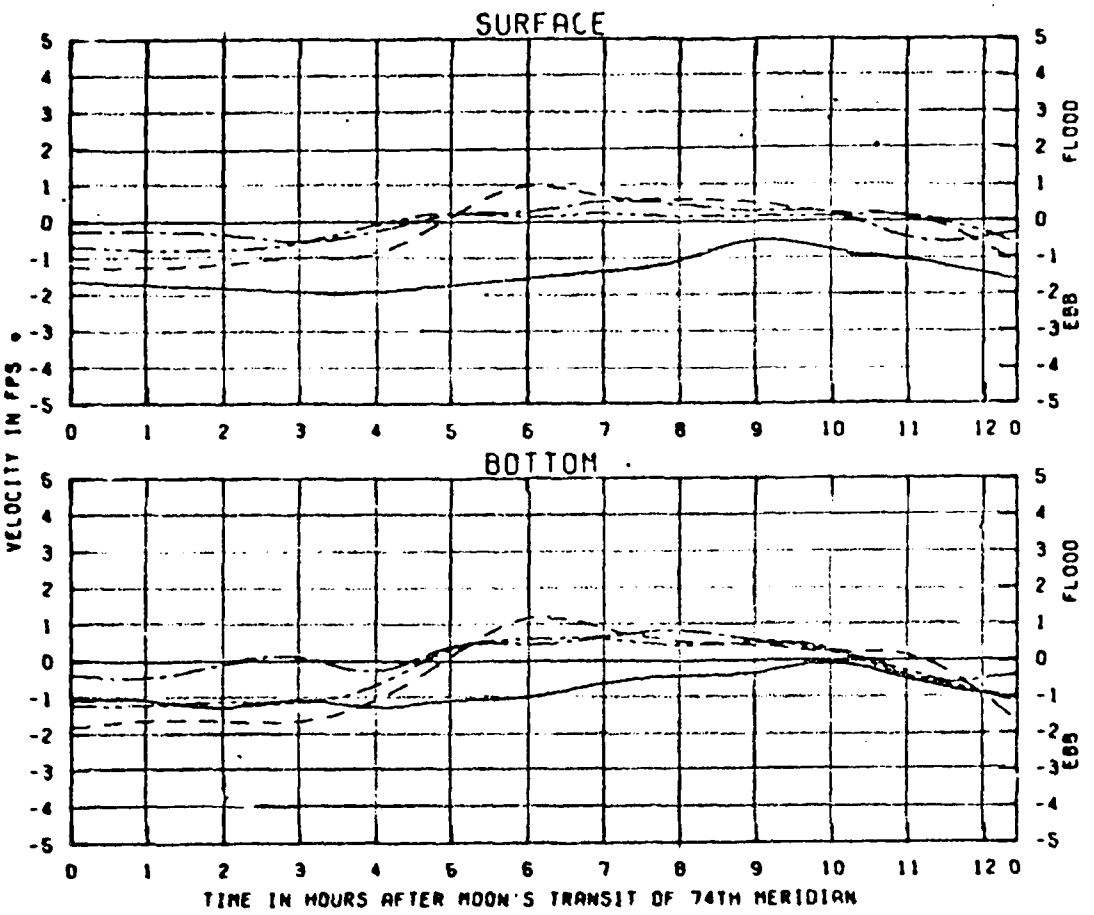
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM COOPER RIVER MILE 42

PLATE 67



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

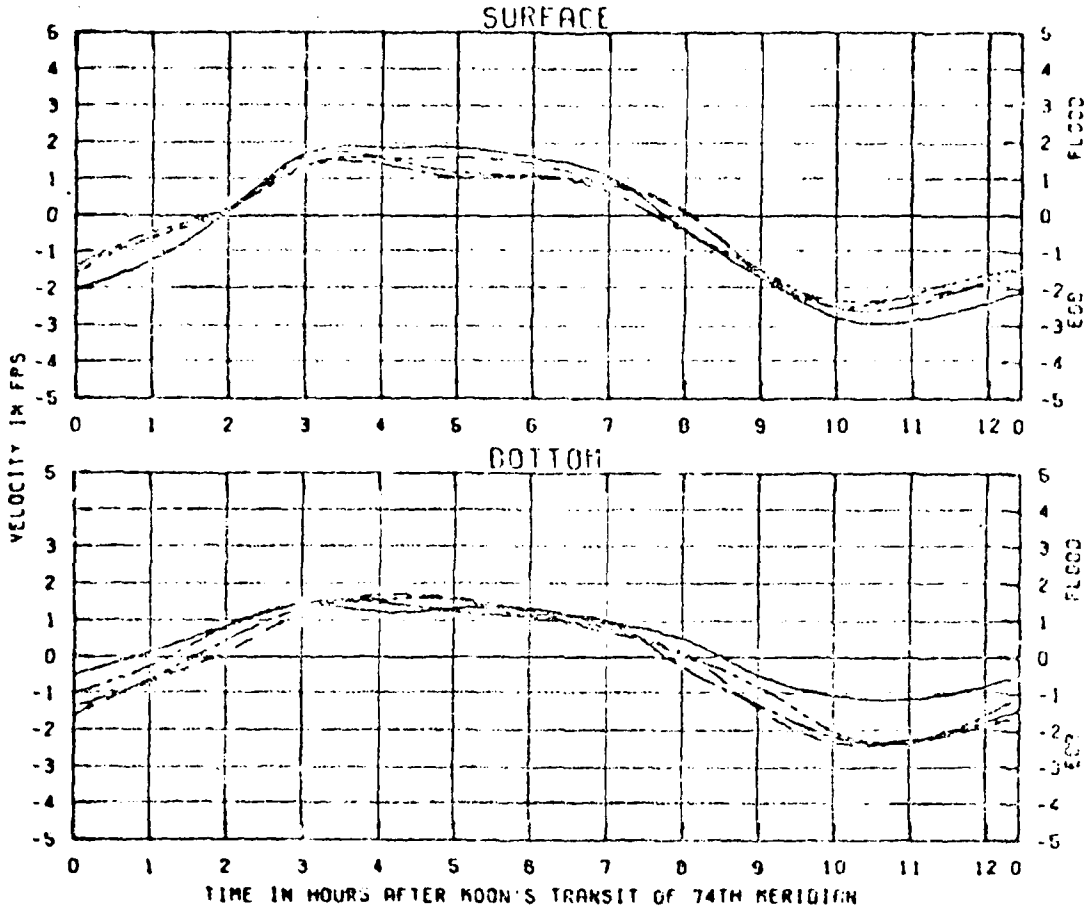
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
COOPER RIVER MILE 44

PLATE 68



TEST CONDITIONS

OCEAN TIDE RANGE			5.4 FT
OCEAN SALINITY (TOTAL SALT)			30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS			1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER		82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS		

LEGEND

Sch. A ————

Sch. B - - - -

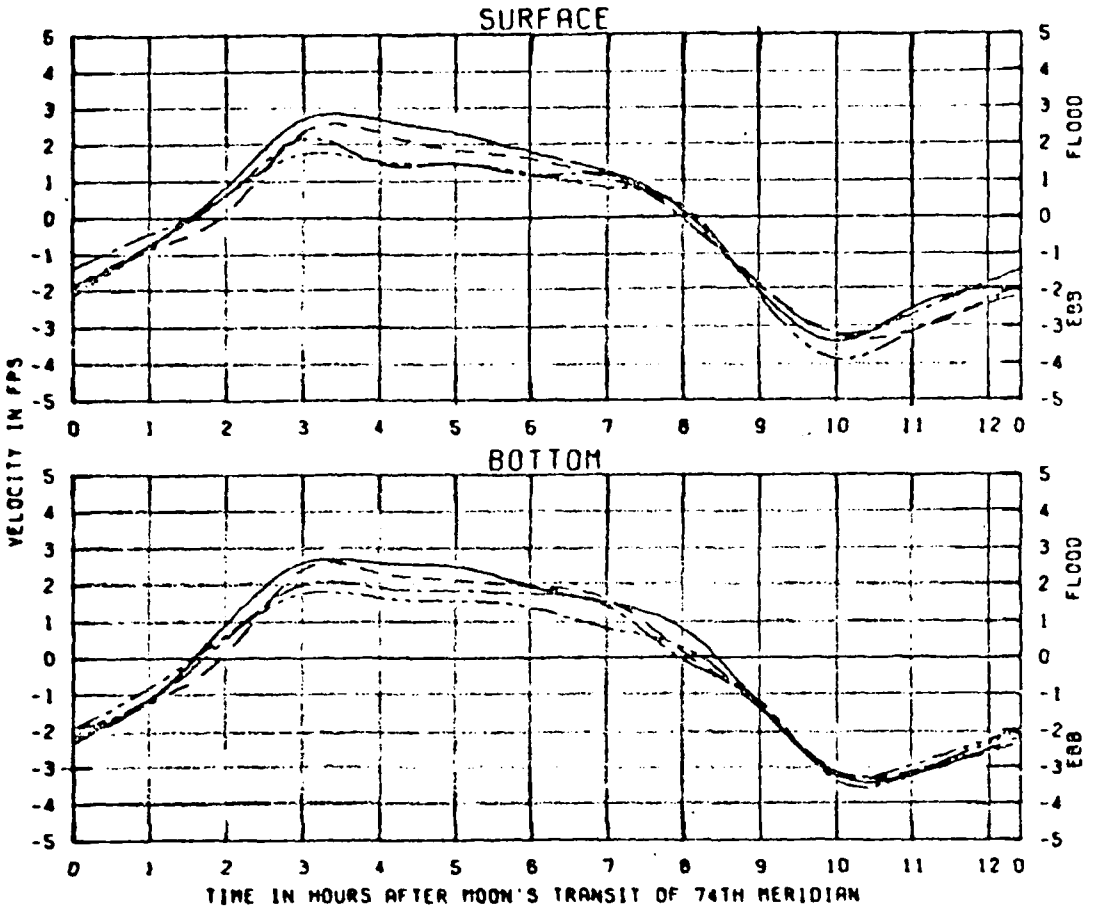
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM WANDO RIVER MILE 1

PLATE 69



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - - -

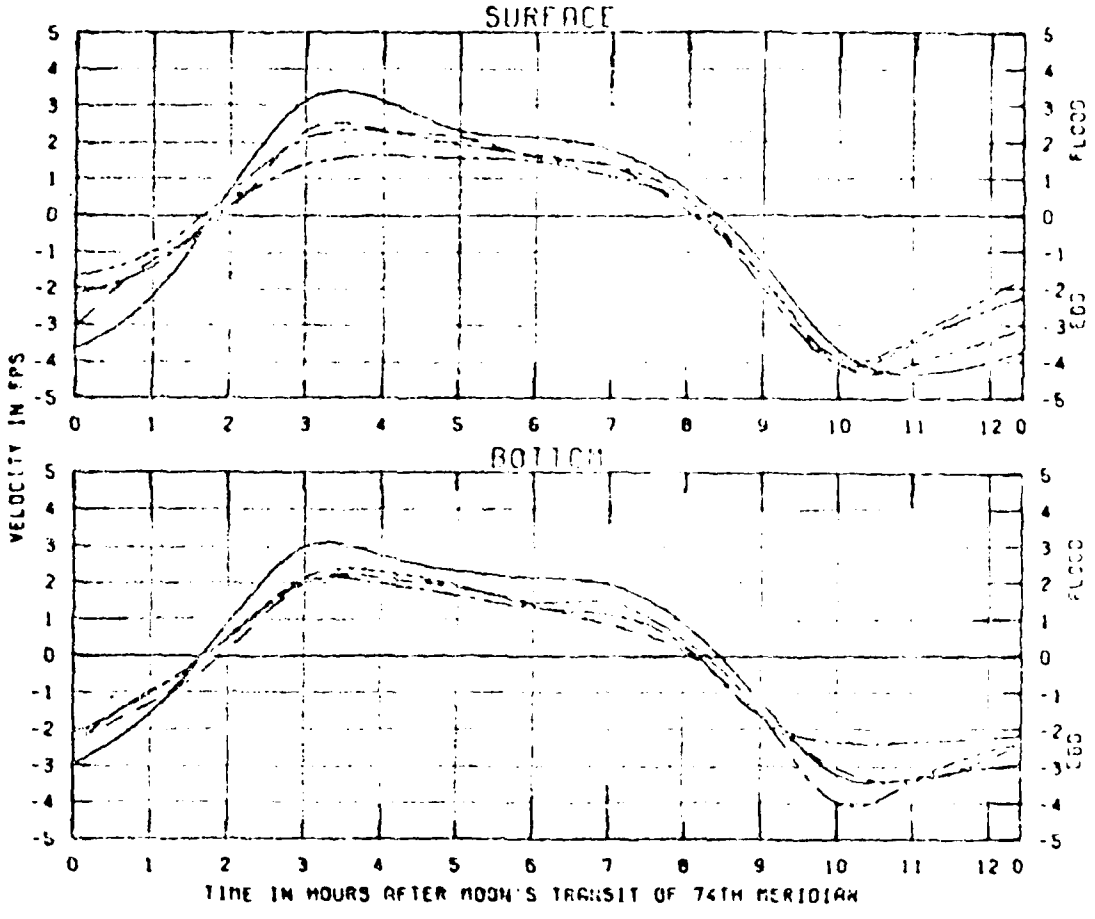
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 3

PLATE 70



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ———

Sch. B - - - -

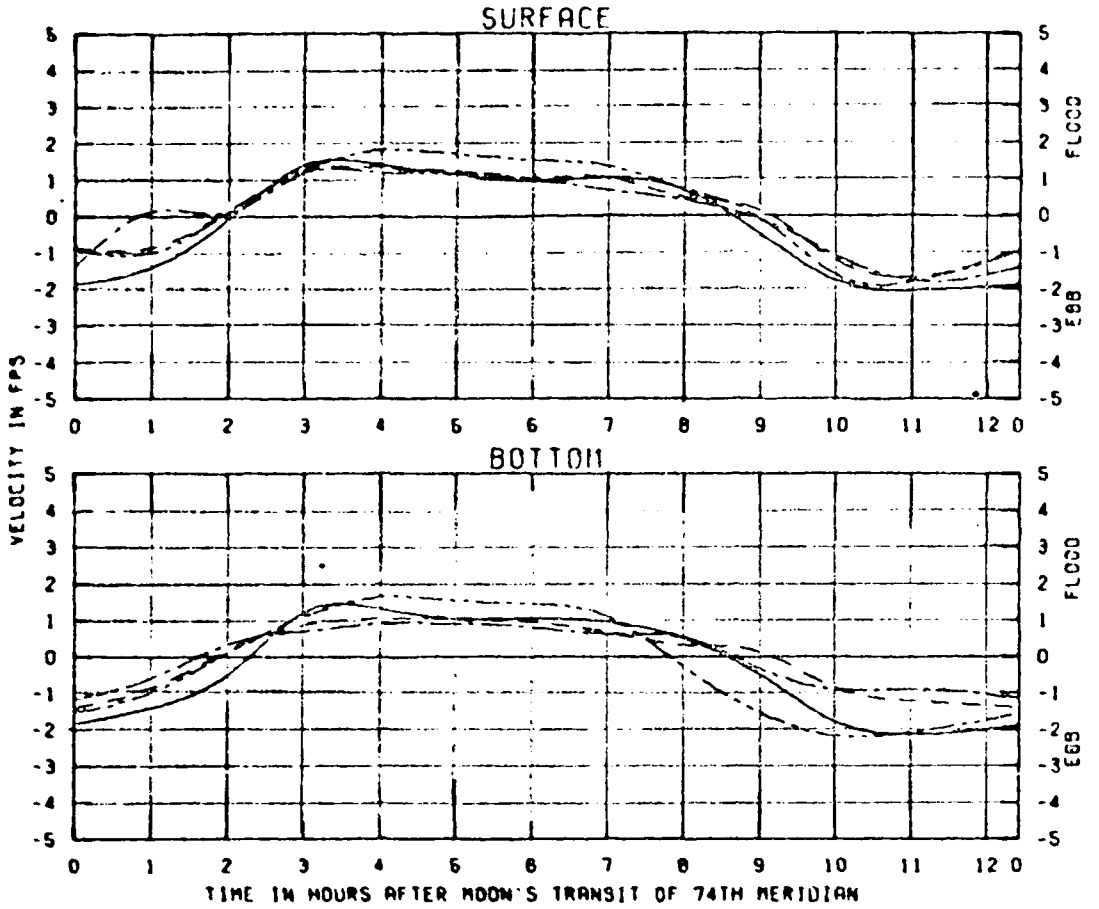
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 5

PLATE 71



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————————

Sch. B - - - - -

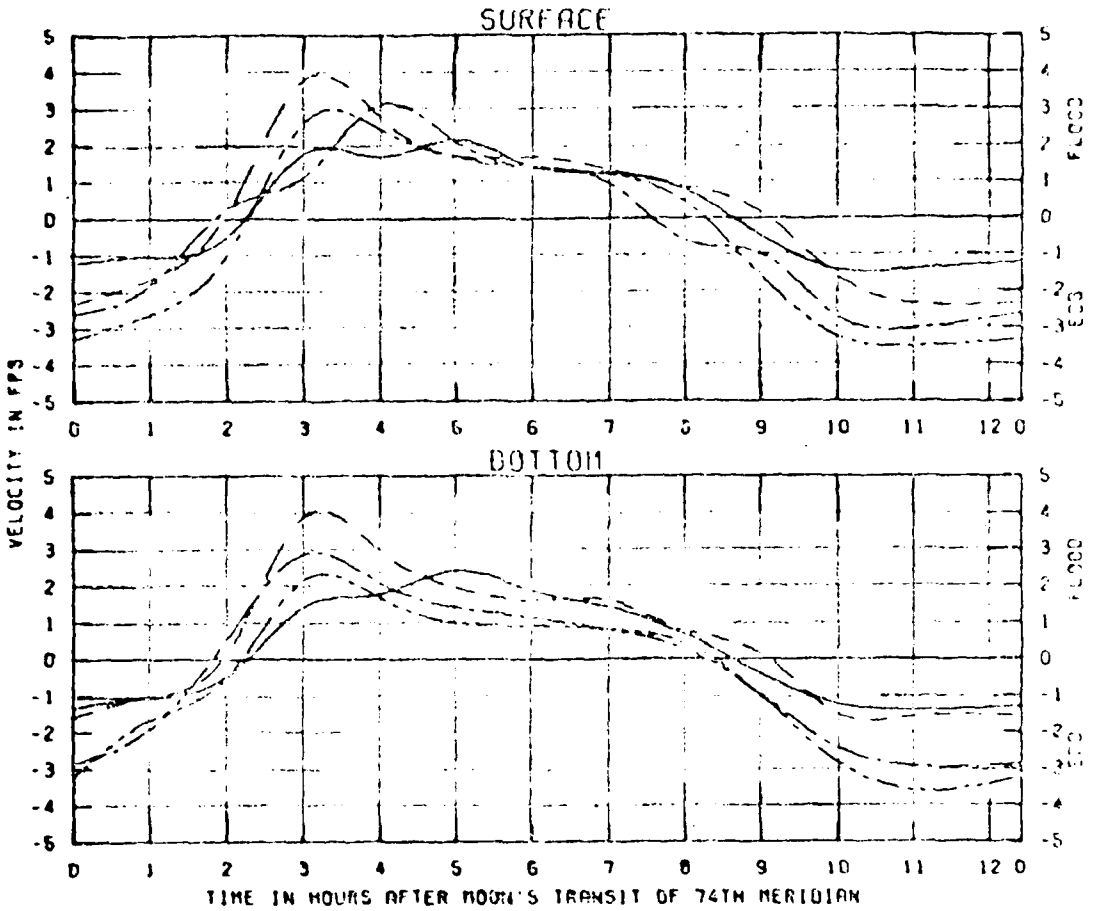
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 7

PLATE 72



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSH PARK COMBINED WITHDRAWALS	1150 CFS
ASH Y RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————————

Sch. B - - - - -

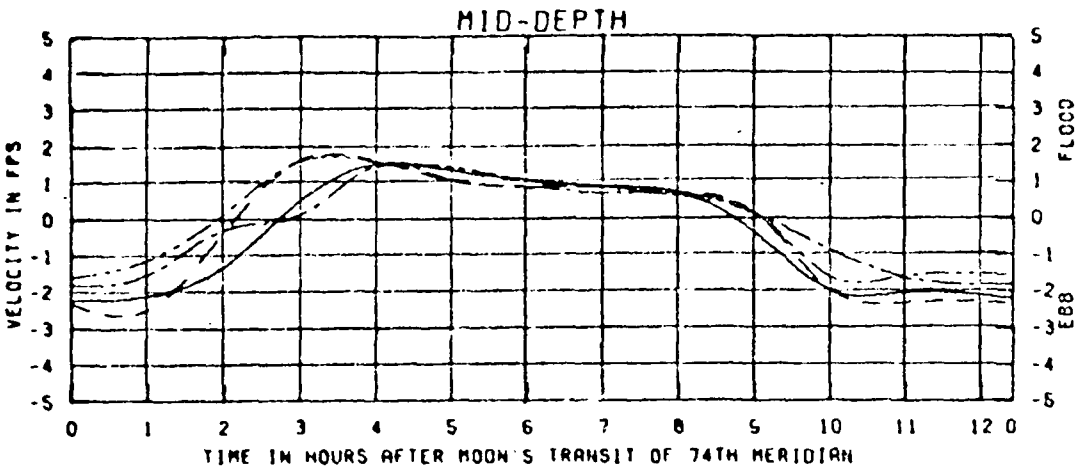
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM WANDO RIVER MILE 9

PLATE 73



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

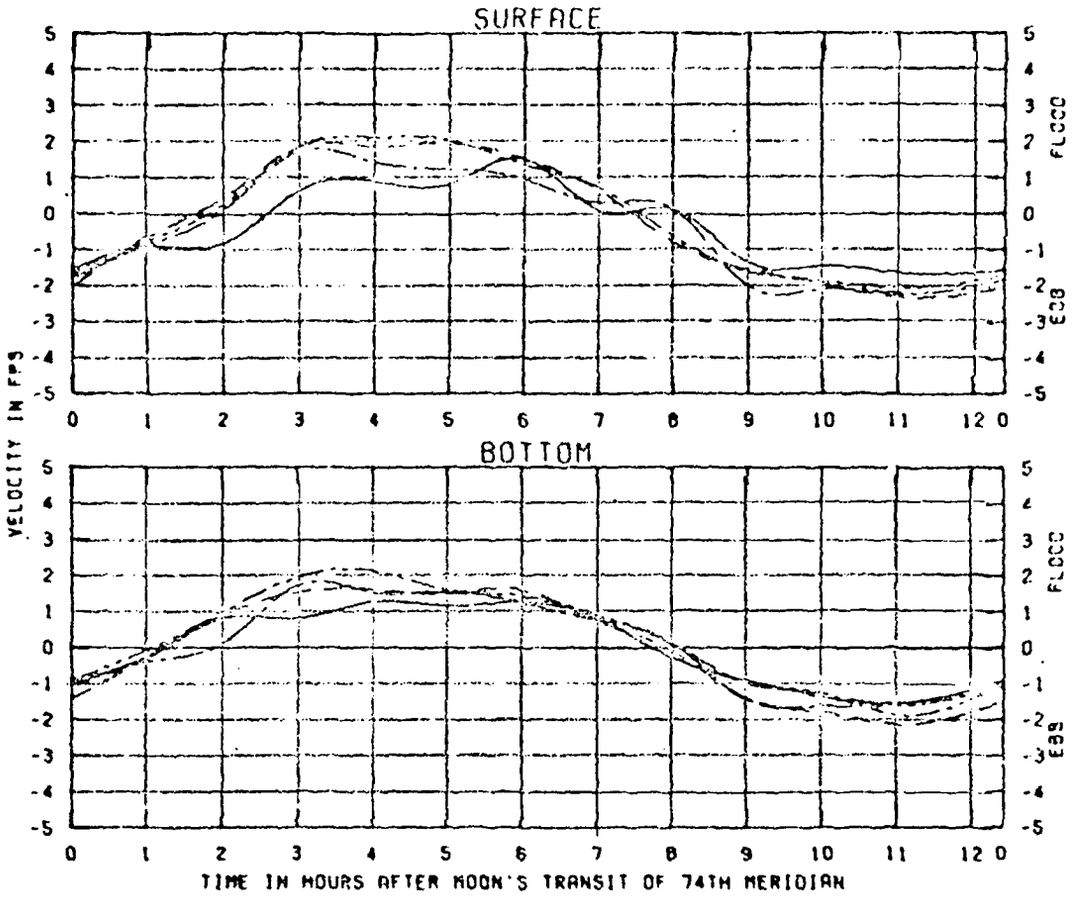
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
WANDO RIVER MILE 13

PLATE 74



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	HANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - - -

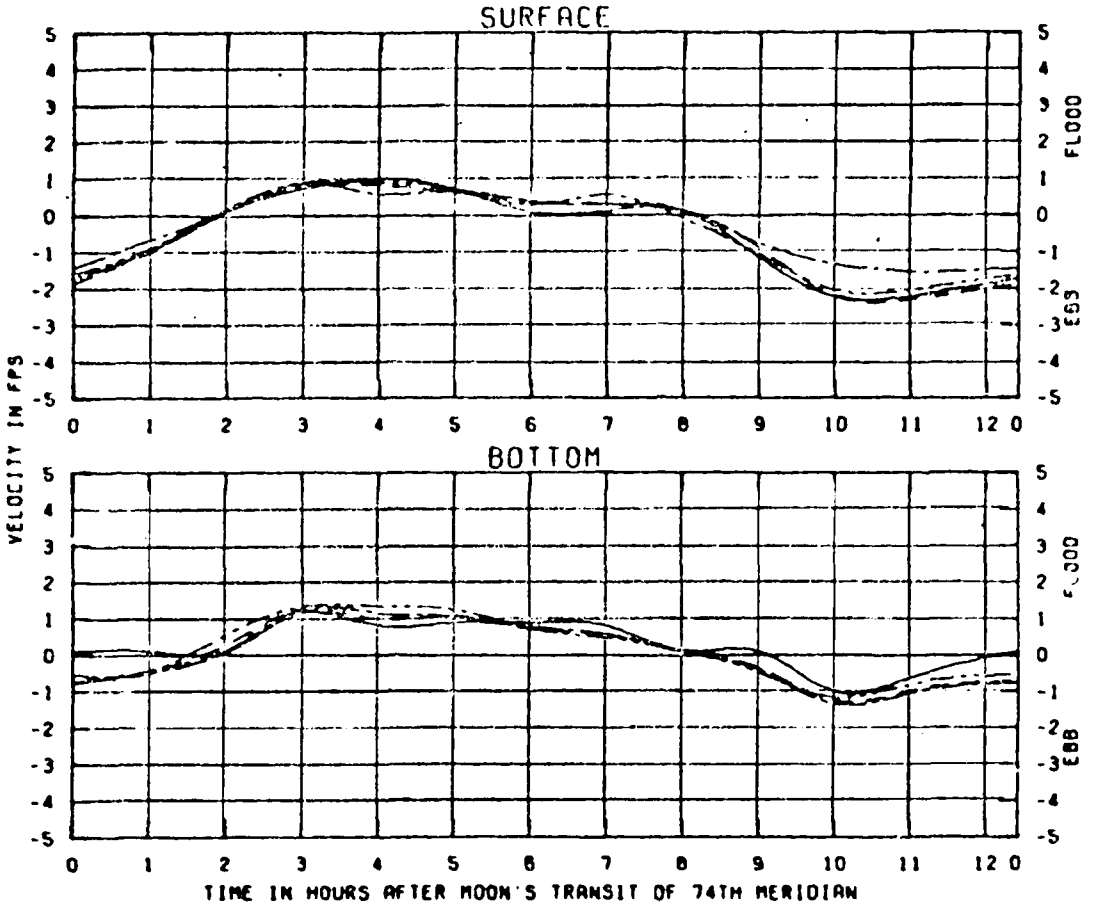
Sch. E — · — · —

Sch. BM — · · · —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM ASHLEY RIVER MILE 1

PLATE 75



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	MANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - - -

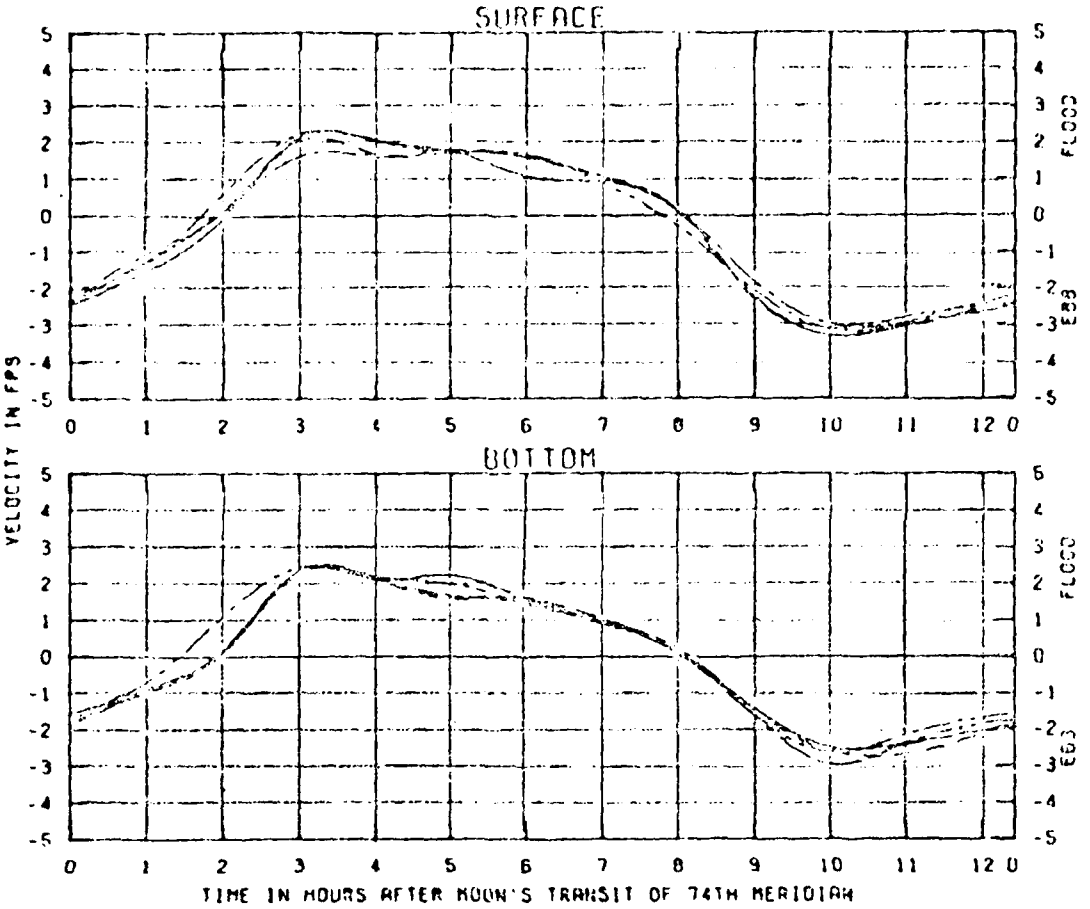
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, E, AND BM
ASHLEY RIVER MILE 3

PLATE 76



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	HANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

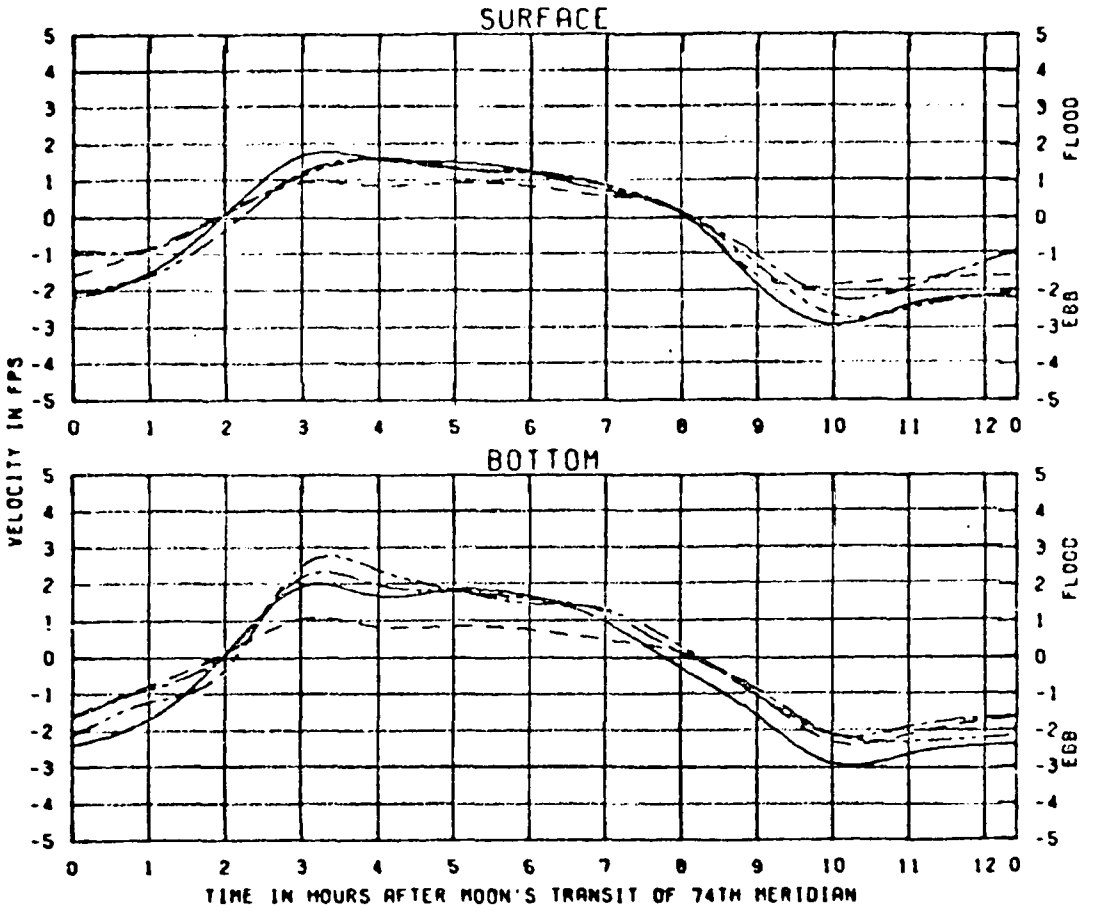
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM ASHLEY RIVER MILE 5

PLATE 77



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

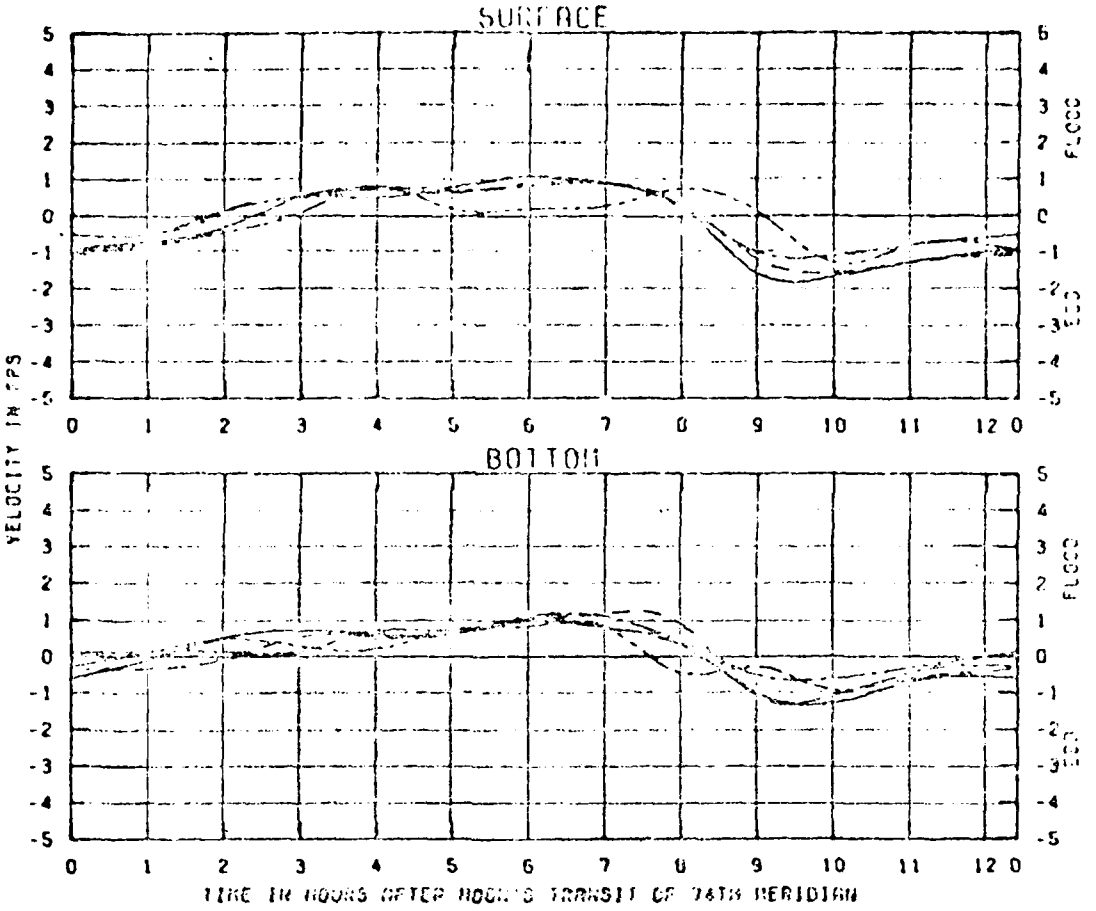
Sch. E — · —

Sch. BM — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM ASHLEY RIVER MILE 9

PLATE 78



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1150 CFS
ASHLEY RIVER 261 CFS	HANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————————

Sch. B - - - - -

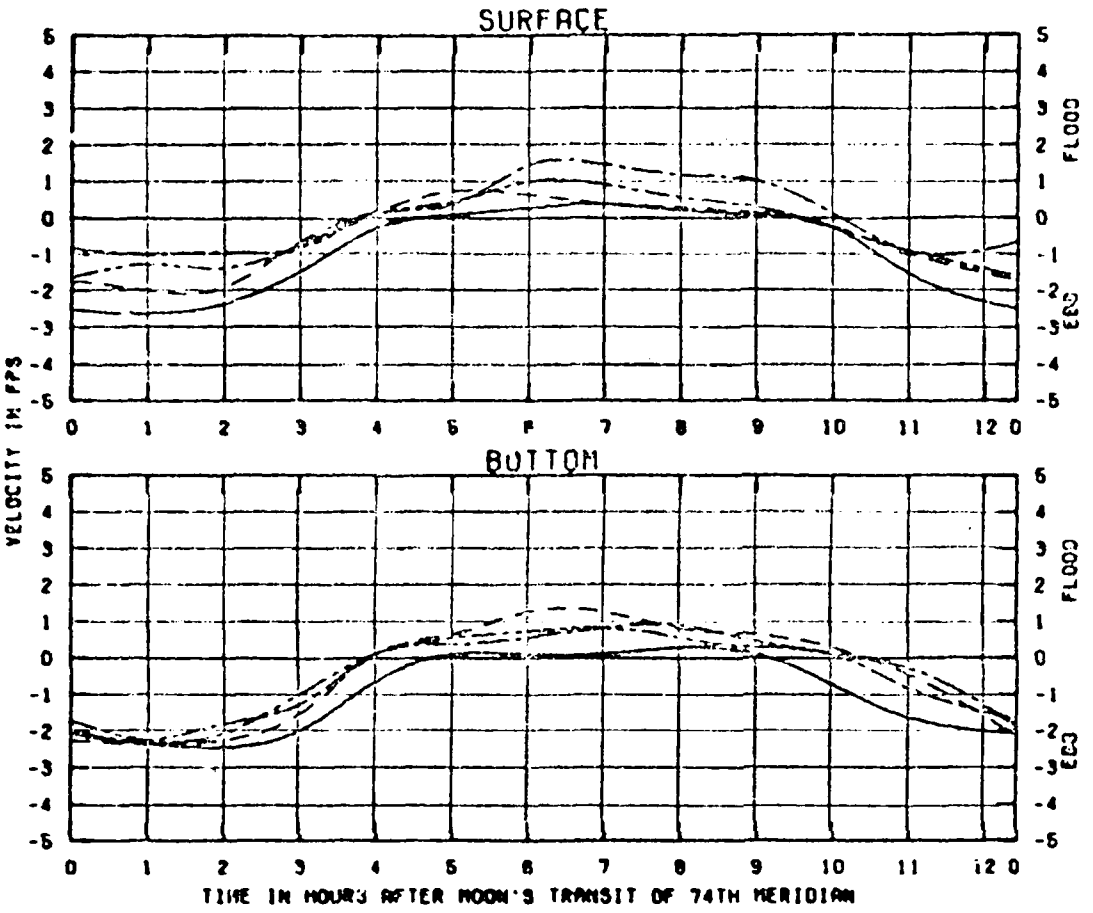
Sch. E —— · ——

Sch. BM —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, E, AND BM CLOUTER CREEK MILE 1

PLATE 79



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 261 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ————

Sch. B - - - -

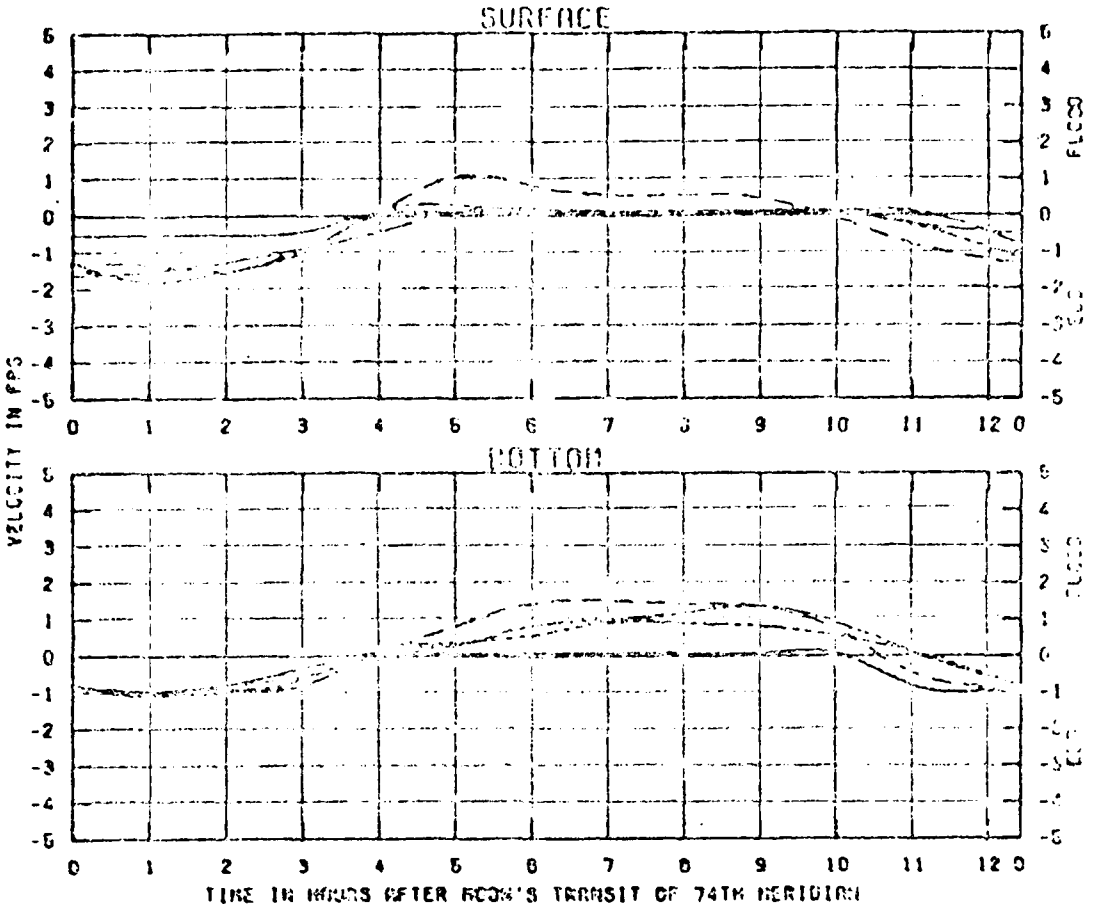
Sch. C — . —

Sch. D — .. —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D COOPER RIVER MILE 30

PLATE 80



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITH BOOSTERS	1150 CFS
ASHLEY RIVER 261 CFS	COOPER RIVER 62 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ———

Sch. B - - - -

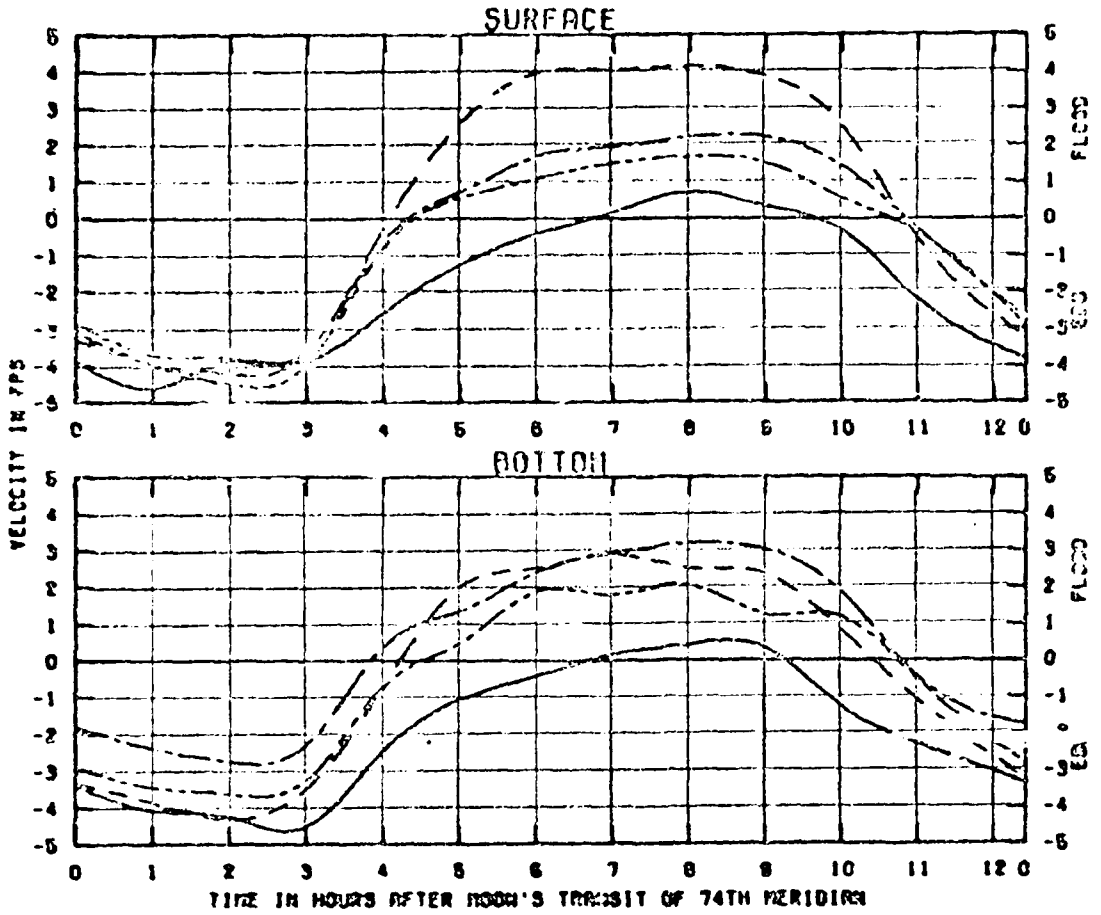
Sch. C — · —

Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D COOPER RIVER MILE 34

PLATE 81



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 281 CFS	HOOD RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ———

Sch. B - - - -

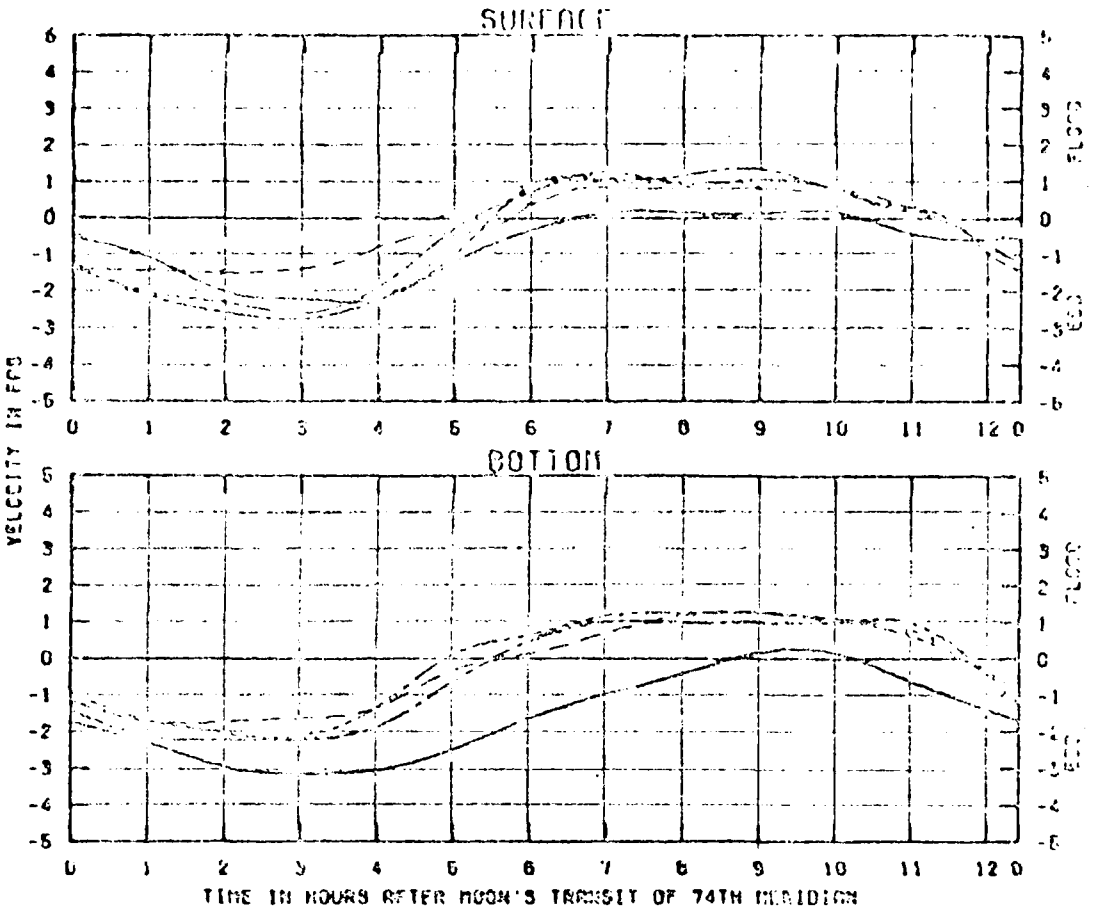
Sch. C — · —

Sch. D — · · —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, C, AND D
COOPER RIVER MILE 38

PLATE 82



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK CONSUMED HYDROGRAPHS	1160 CFS
ASHLEY RIVER 201 CFS	GOOSE CREEK 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

Sch. A ———————

Sch. B - - - - -

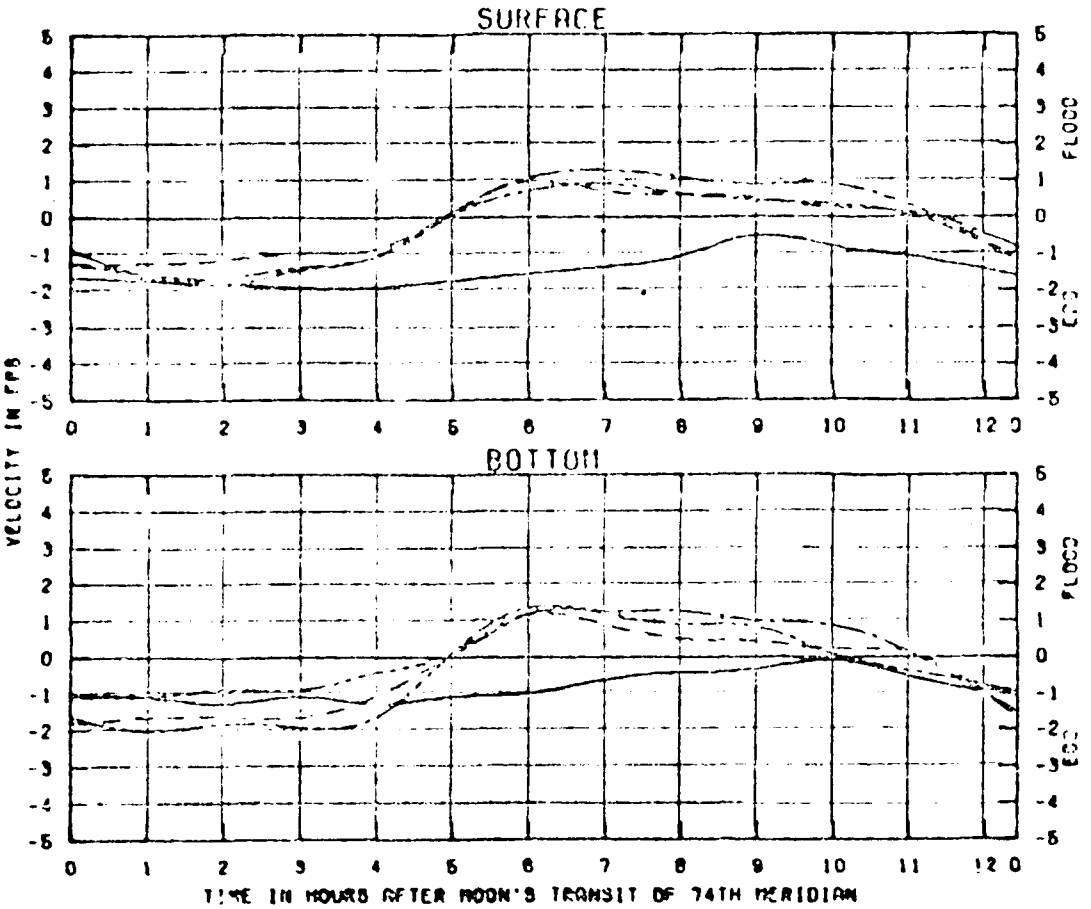
Sch. C —— · ——

Sch. D —— ·· ——

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D COOPER RIVER MILE 42

PLATE 83



TEST CONDITIONS

OCEAN TIDE RANGE	5.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1160 CFS
ASHLEY RIVER 261 CFS WANDO RIVER	82 CFS
COOPER RIVER - VARIOUS WEEKLY HYDROGRAPHS	

LEGEND

Sch. A ————

Sch. B - - - - -

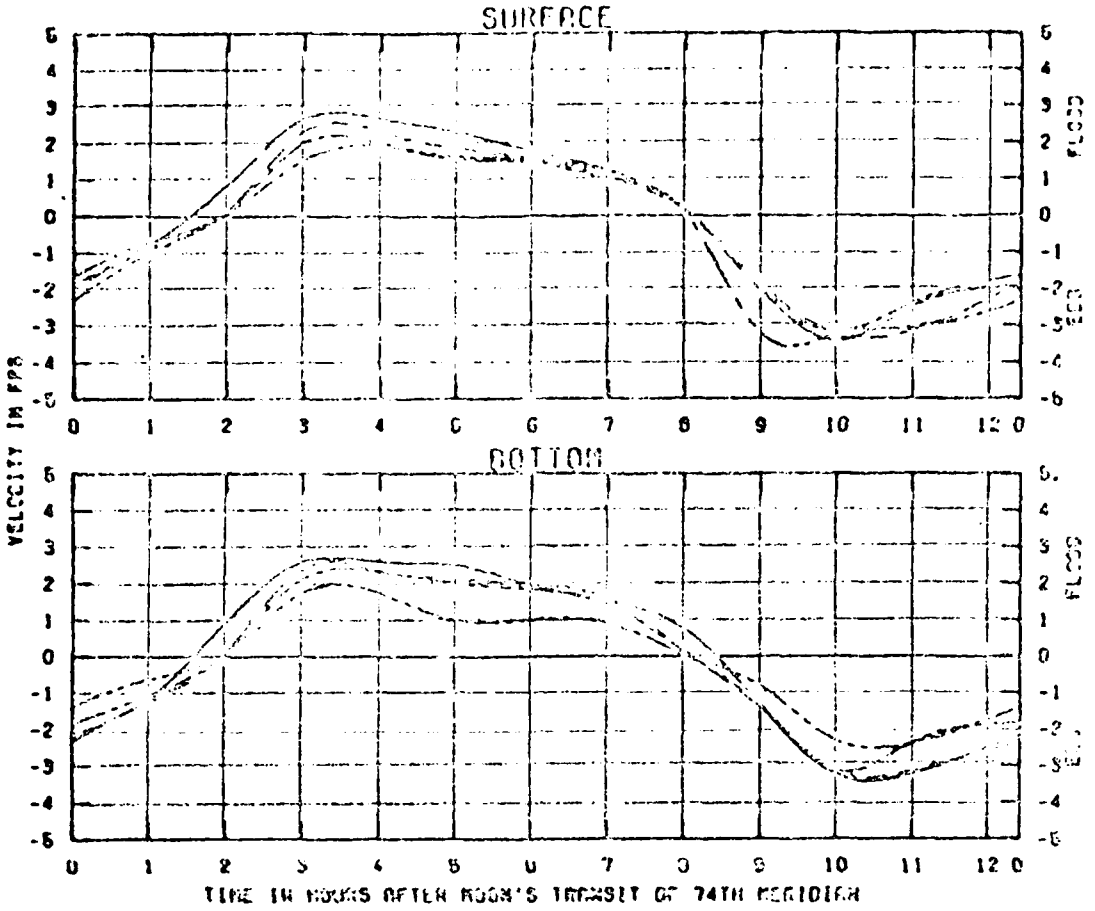
Sch. C — · — · —

Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR
WEEKLY HYDROGRAPH
SCHEDULES A, B, C, AND D
COOPER RIVER MILE 44

PLATE 84



TEST CONDITIONS

OCEAN TIDE RANGE	6.4 FT
OCEAN SALINITY (TOTAL SALT)	30.0 PPT
BUSHY PARK COMBINED WITHDRAWALS	1100 CFS
ASHLEY RIVER 281 CFS	WANDO RIVER 82 CFS
COOPER RIVER -	VARIOUS WEEKLY HYDROGRAPHS

LEGEND

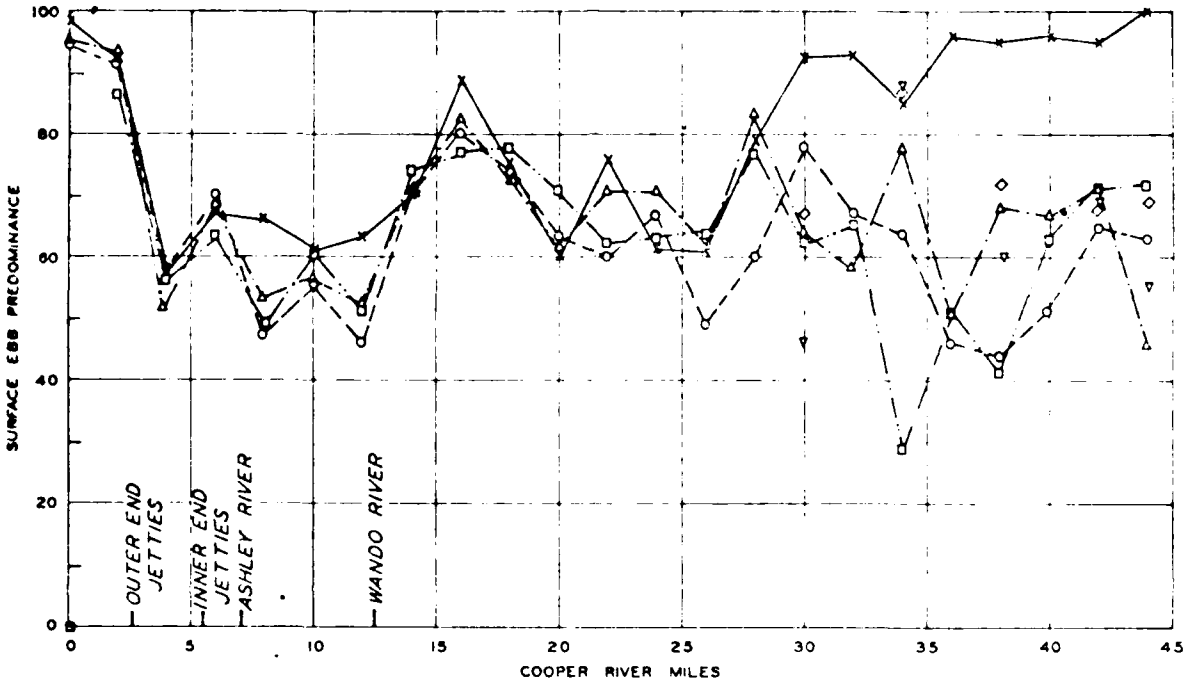
Sch. A ————
Sch. B - - - -
Sch. C — · —
Sch. D — ·· —

CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

CURRENT VELOCITIES FOR WEEKLY HYDROGRAPH SCHEDULES A, B, C, AND D WANDO RIVER MILE 3

PLATE 85

PLATE 86



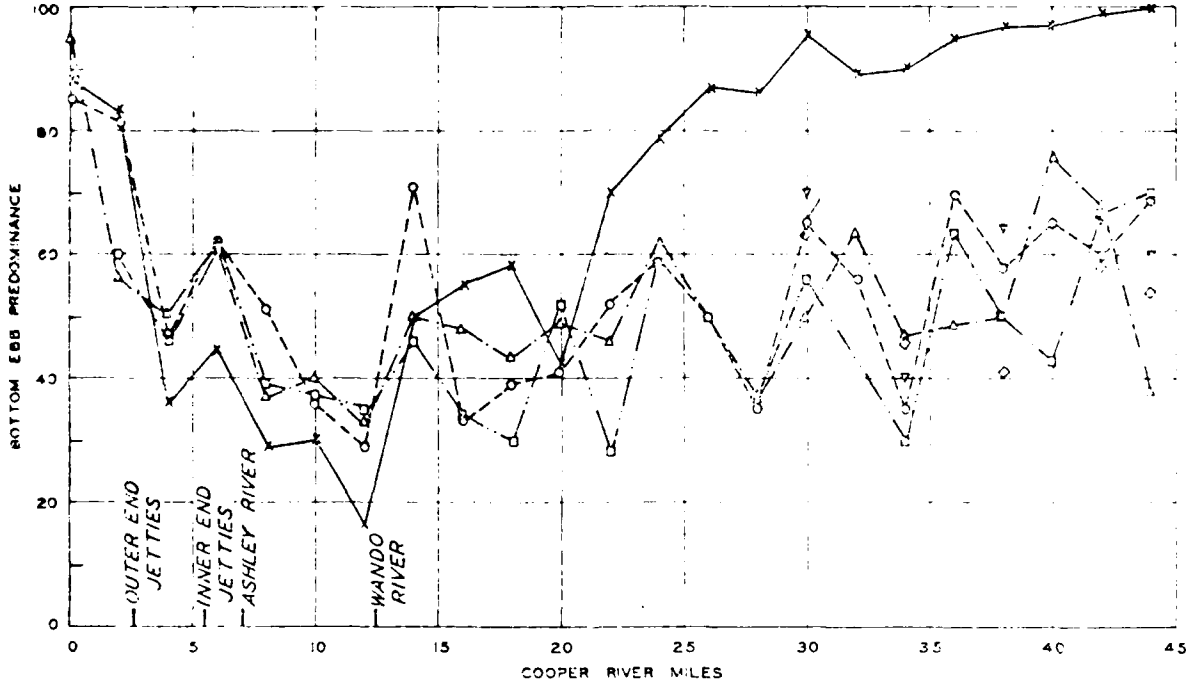
LEGEND

SCHEDULE	A
"	B
"	E
"	BM
"	C
"	D

CHARLESTON HARBOR MODEL

EFFECTS OF COOPER RIVER REDIVERSION PROJECT ON FLOW PREDOMINANCE

SURFACE



LEGEND

SCHEDULE	A
"	B
"	E
"	BM
"	C
"	D

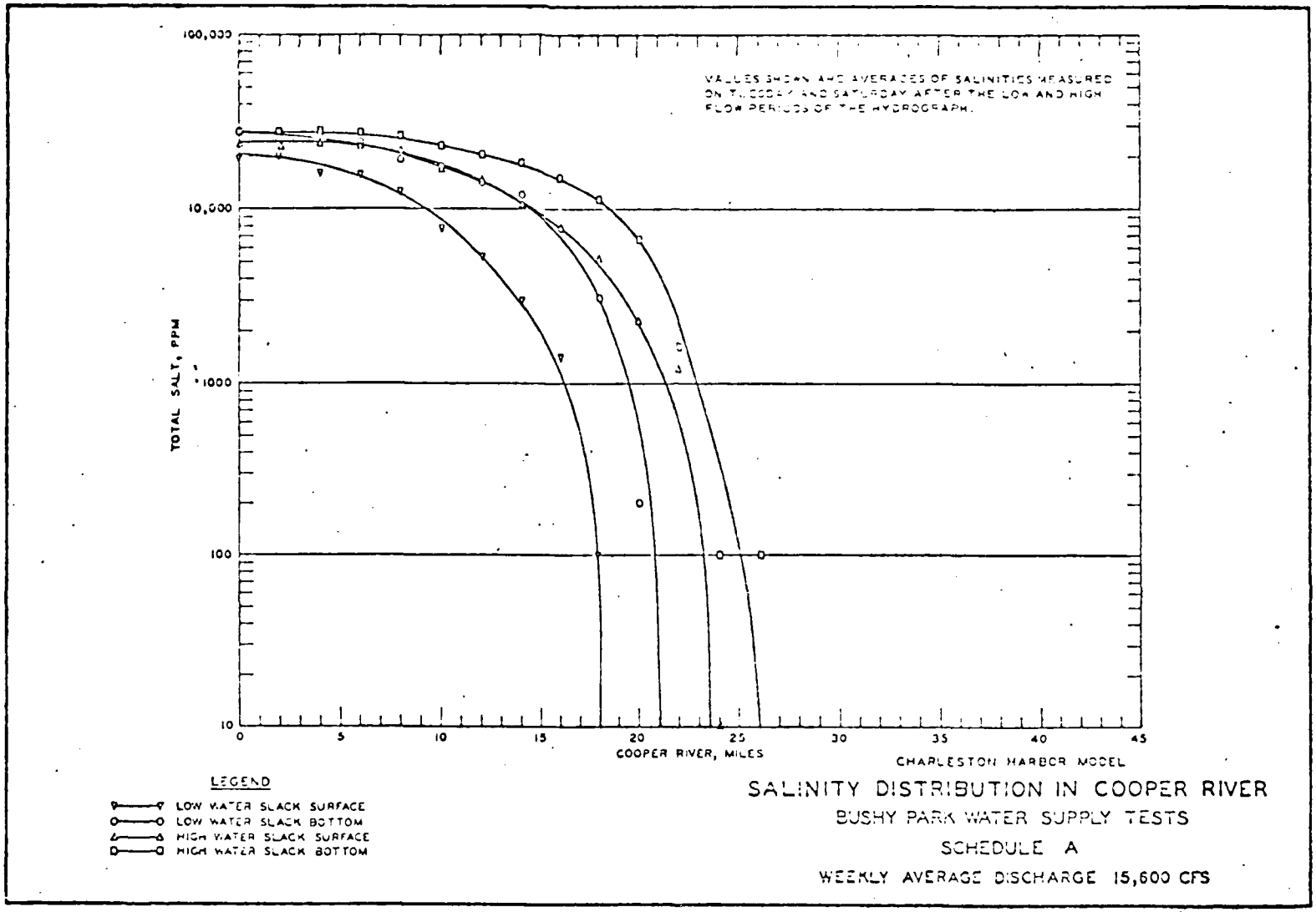
CHARLESTON HARBOR MODEL

EFFECTS OF COOPER RIVER REDIVERSION PROJECT ON FLOW PREDOMINANCE

BOTTOM

PLATE 87

PLATE 88

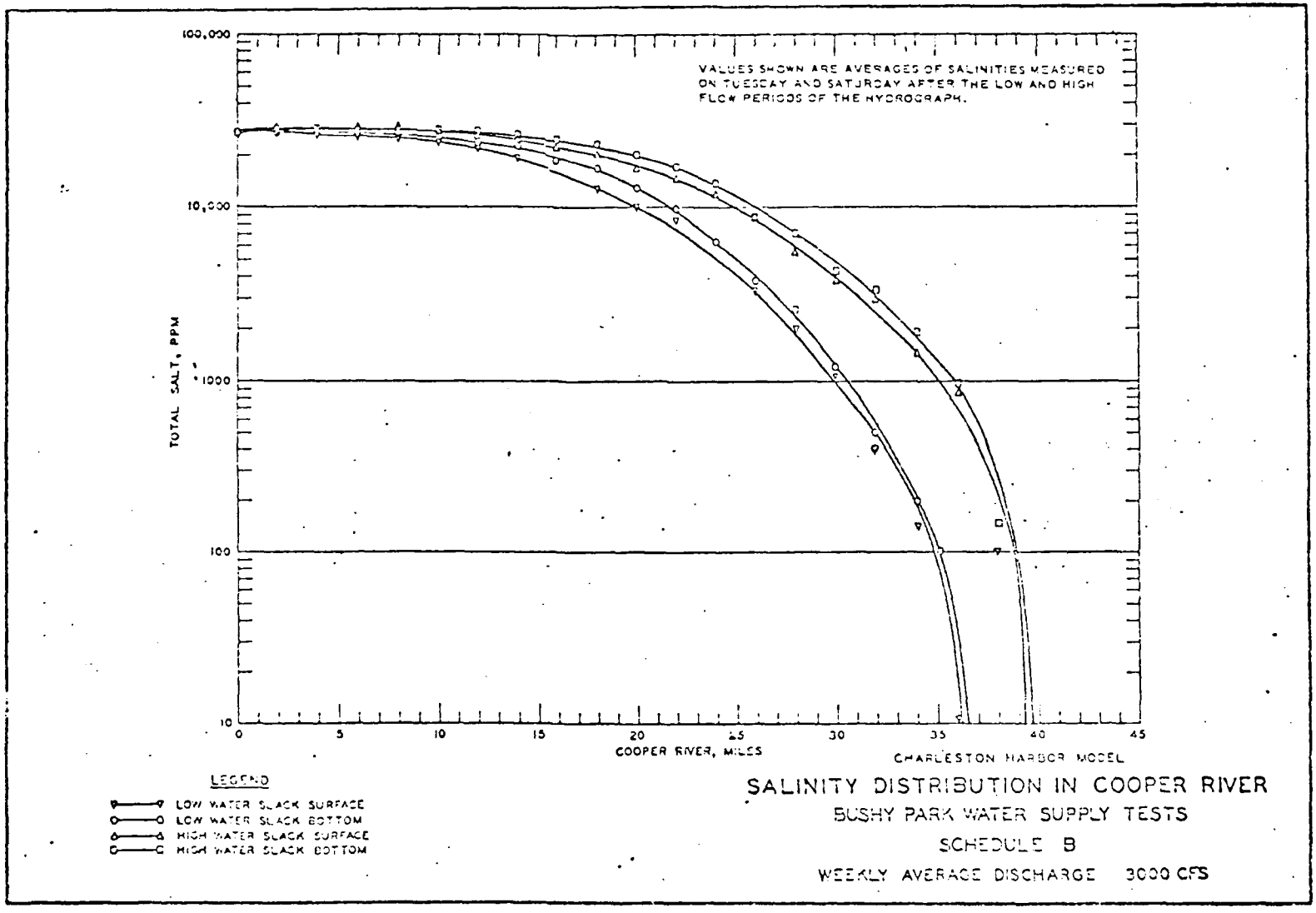


SALINITY DISTRIBUTION IN COOPER RIVER

BUSHY PARK WATER SUPPLY TESTS

SCHEDULE A

WEEKLY AVERAGE DISCHARGE 15,600 CFS



SALINITY DISTRIBUTION IN COOPER RIVER

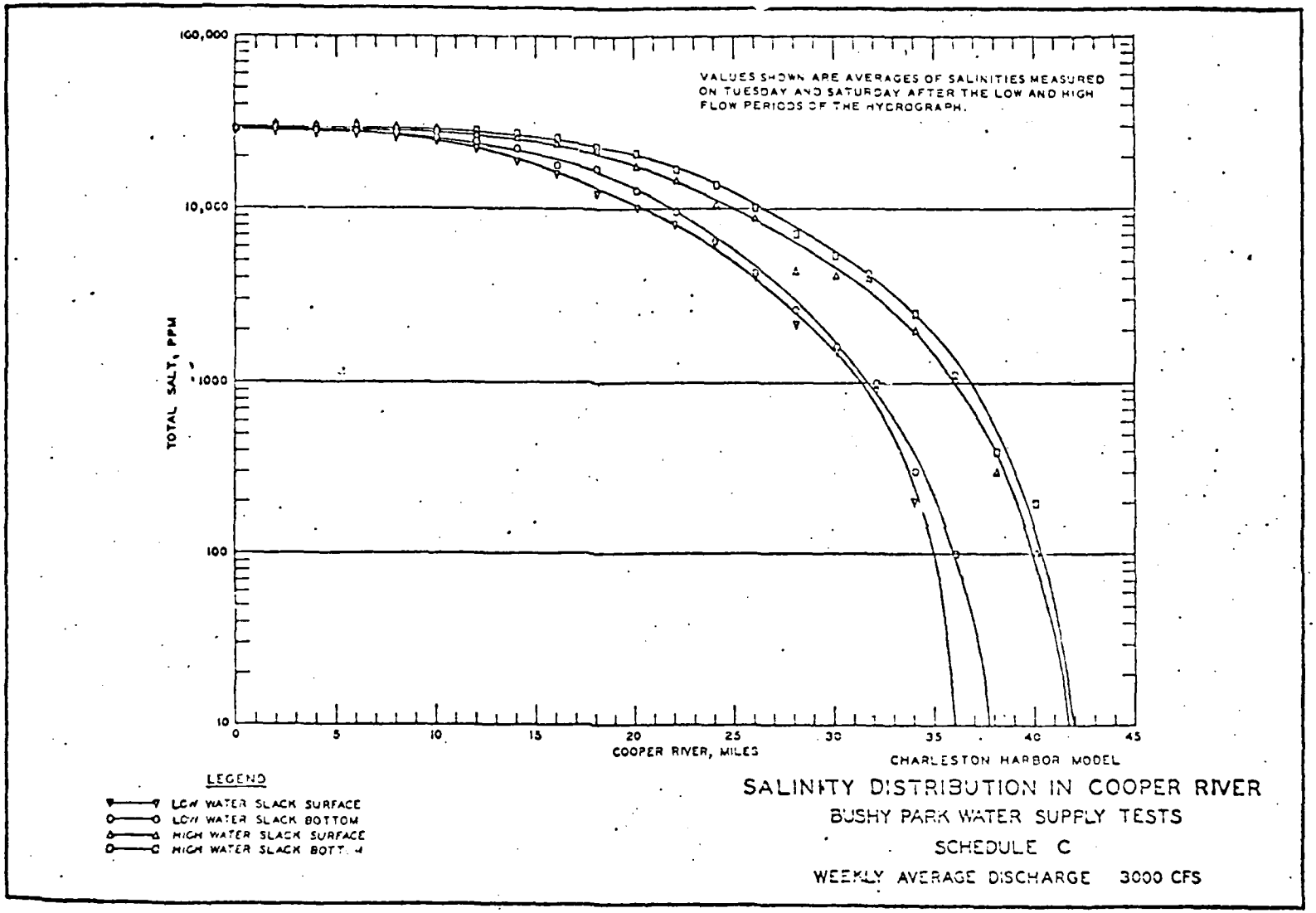
BUSHY PARK WATER SUPPLY TESTS

SCHEDULE B

WEEKLY AVERAGE DISCHARGE 3000 CFS

PLATE 89

PLATE 90



SALINITY DISTRIBUTION IN COOPER RIVER

BUSHY PARK WATER SUPPLY TESTS

SCHEDULE C

WEEKLY AVERAGE DISCHARGE 3000 CFS

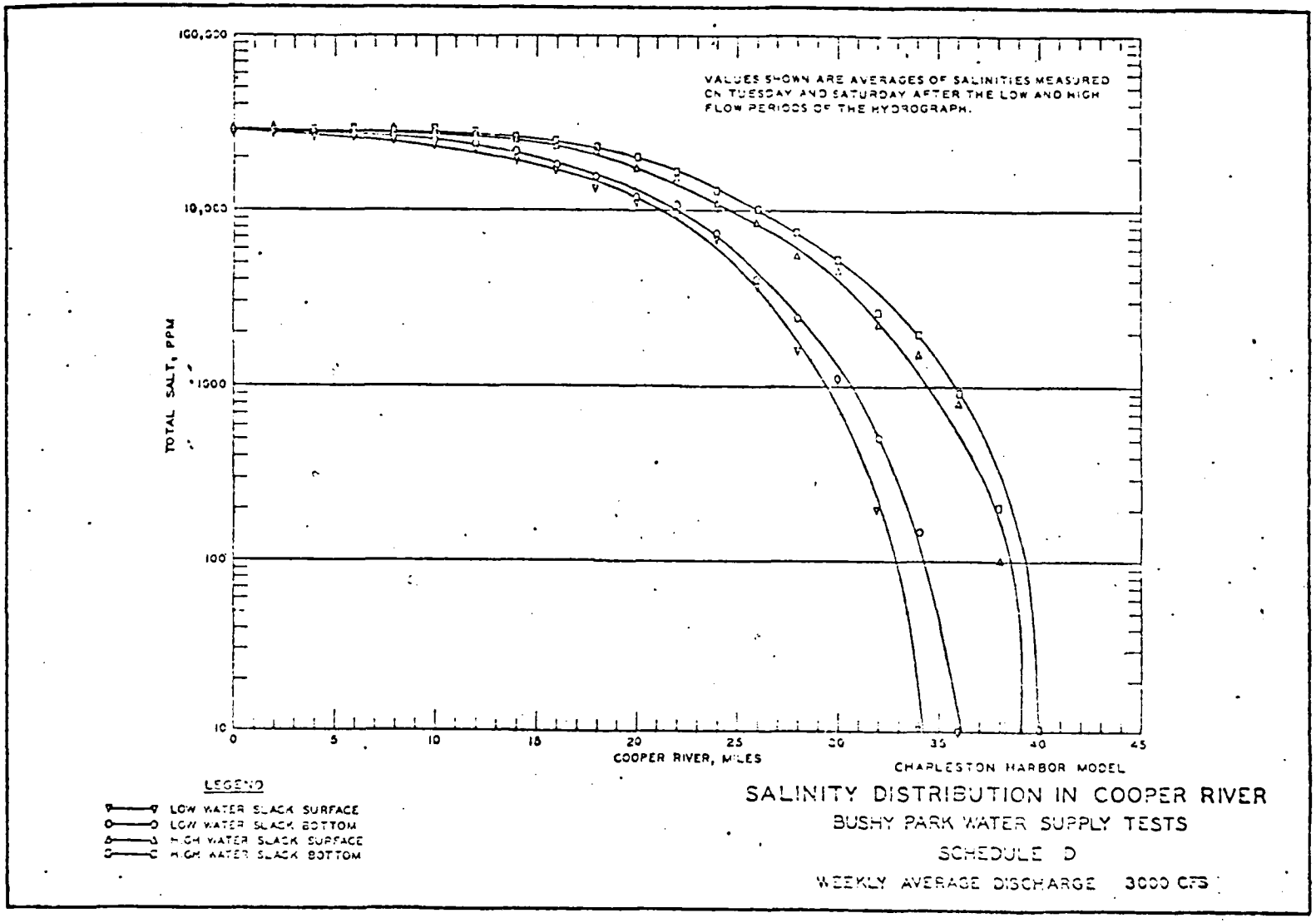
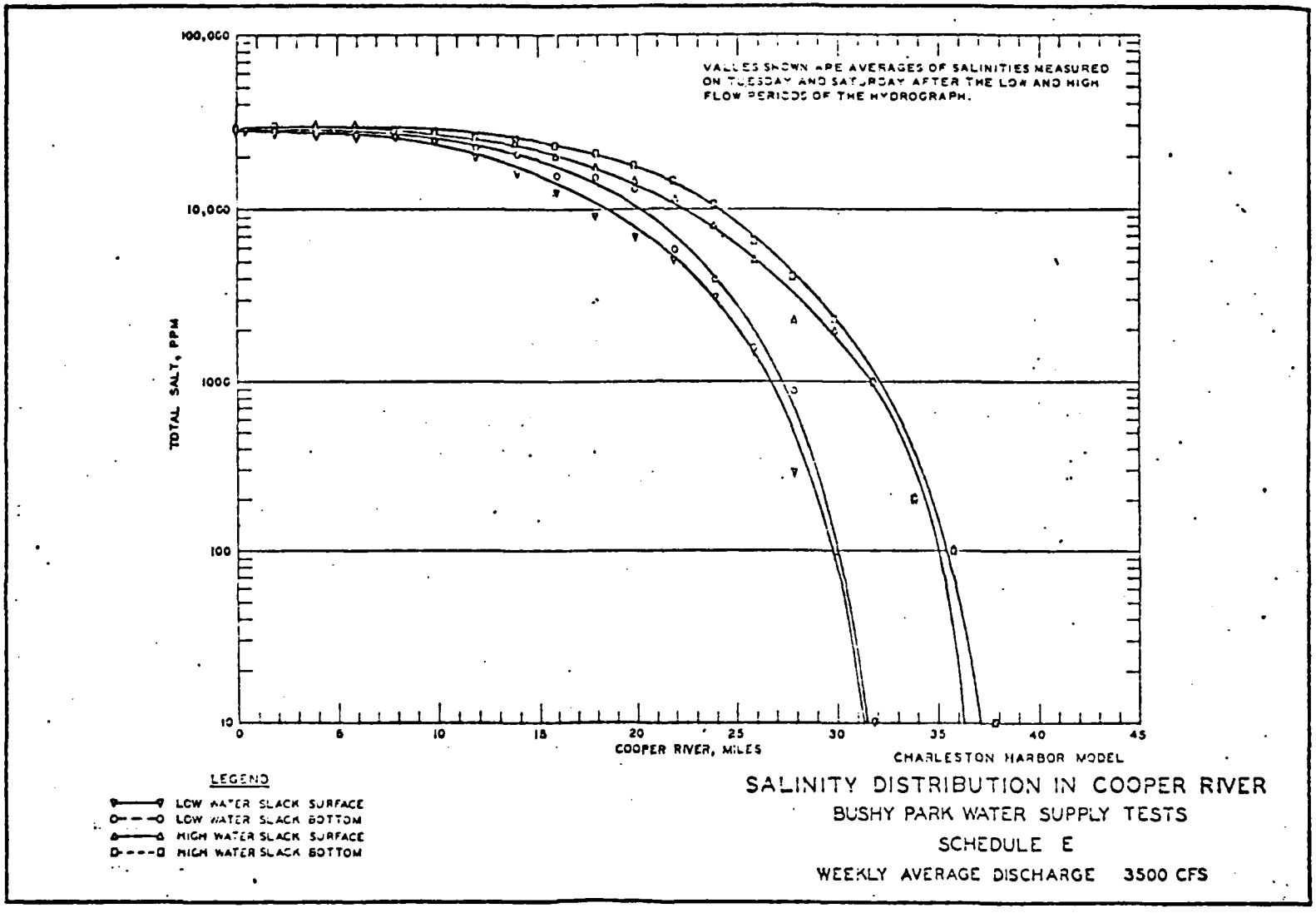

VALUES SHOWN ARE AVERAGES OF SALINITIES MEASURED ON TUESDAY AND SATURDAY AFTER THE LOW AND HIGH FLOW PERIODS OF THE HYDROGRAPH.
TOTAL SALT, PPM
160,000
10,000
1000
100
10
0
5
10
15
20
25
30
35
40
45
COOPER RIVER, MILES
CHARLESTON HARBOR MODEL
LEGEND
LOW WATER SLACK SURFACE
LOW WATER SLACK BOTTOM
HIGH WATER SLACK SURFACE
HIGH WATER SLACK BOTTOM
SALINITY DISTRIBUTION IN COOPER RIVER
BUSHY PARK WATER SUPPLY TESTS
SCHEDULE D
WEEKLY AVERAGE DISCHARGE 3000 CFS

PLATE 91

PLATE 92

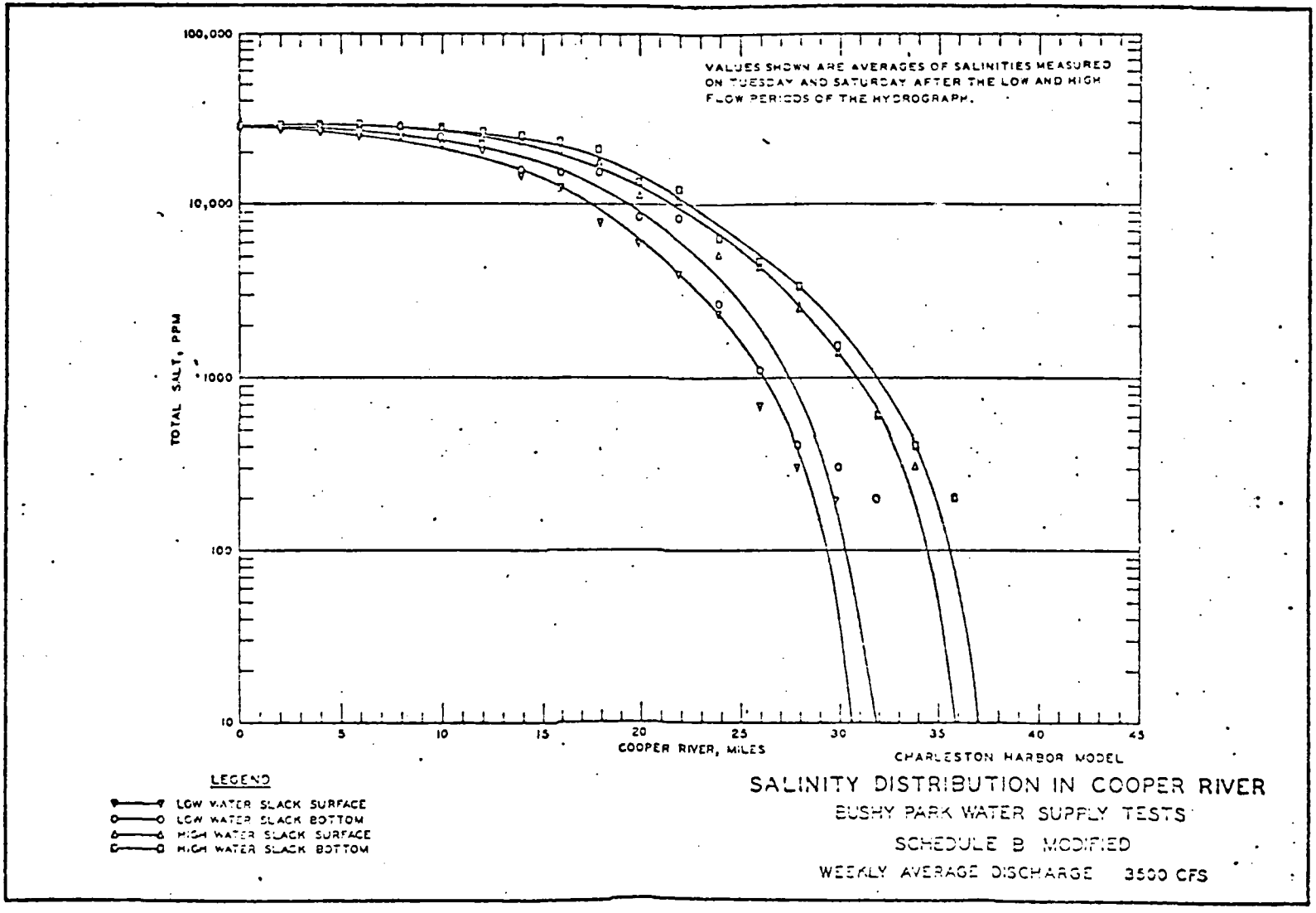


SALINITY DISTRIBUTION IN COOPER RIVER

BUSHY PARK WATER SUPPLY TESTS

SCHEDULE E

WEEKLY AVERAGE DISCHARGE 3500 CFS



SALINITY DISTRIBUTION IN COOPER RIVER

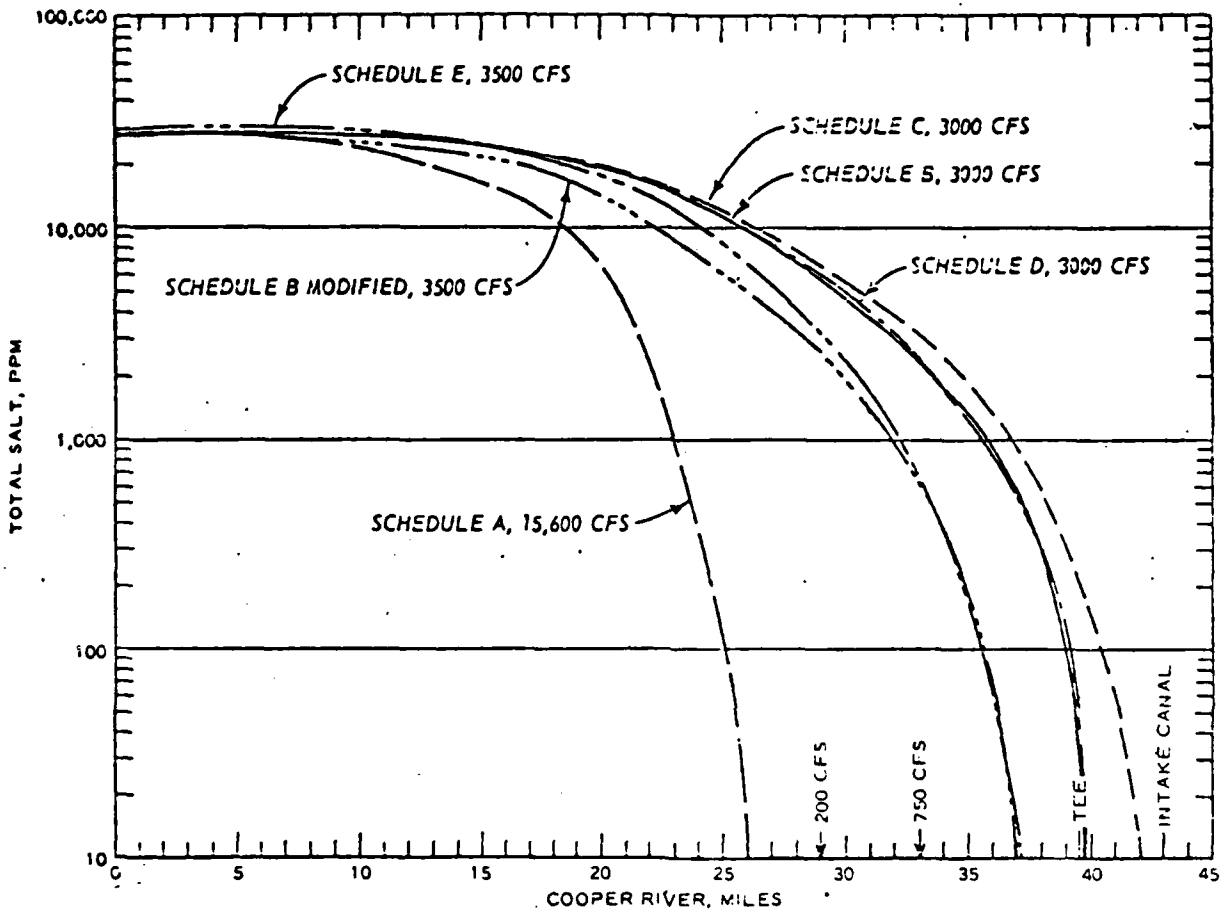
BUSHY PARK WATER SUPPLY TESTS

SCHEDULE B MODIFIED

WEEKLY AVERAGE DISCHARGE 3500 CFS

PLATE 93

PLATE 94



CHARLESTON HARBOR MODEL
BUSHY PARK WATER SUPPLY TESTS

SALINITY DISTRIBUTION IN COOPER RIVER
FOR VARIOUS PINOPLOIS RELEASE SCHEDULES
HIGH-WATER SLACK – BOTTOM DEPTH

In accordance with ER 70-2-3, paragraph 6c(1)(b), dated 15 February 1973, a facsimile catalog card in Library of Congress format is reproduced below.

Benson, Howard A

Cooper River rediversion project, Bushy Park water supply tests; hydraulic model investigation, by Howard A. Benson [and] William H. Bobb. Vicksburg, U. S. Army Engineer Waterways Experiment Station, 1976.

1 v. (various pagings) illus. 27 cm. (U. S. Waterways Experiment Station. Miscellaneous paper H-76-5)

Prepared for U. S. Army Engineer District, Charleston, Charleston, South Carolina.

1. Bushy Park Area, S. C. 2. Charleston Harbor, S. C. 3. Cooper River. 4. Hydraulic models. 5. River diversion. 6. Salt water intrusion. 7. Santee River. 8. Water quality. 9. Water supply. I. Bobb, William H., joint author. II. U. S. Army Engineer District, Charleston. (Series: U. S. Waterways Experiment Station, Vicksburg, Miss. Miscellaneous paper H-76-5)

TA7.W34m no.H-76-5

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