

# **RUSSIAN RIVER ESTUARY STUDY 1992-1993**



Sonoma County

Russian River Estuary Study 1992-1993

prepared for

Department of Planning  
Sonoma County  
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and

California State Coastal Conservancy  
Julia McIver, Grant Manager

Under the direction of the Russian River  
Estuary Interagency Task Force\*

Hydrological Aspects of an Estuary  
Management Plan

prepared by

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Limnological and Biological Aspects  
of an Estuary Management Plan

prepared by

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Management Plan

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**APPENDIX I**  
GLOSSARY OF TERMS

## GLOSSARY OF TERMS

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<b>Actual Tidal Prism</b>	as potential tidal prism, but based on tide levels in the lagoon or estuary (i.e. accounts for the damping effects of the tidal inlet channel)
<b>Barrier Beach</b>	the sand bar which is formed at the entrance of an estuary, preventing tidal exchange
<b>Diurnal Tidal Prism</b>	the volume of water stored in a lagoon or estuary between MHHW and MLLW
<b>Estuary</b>	a semienclosed coastal body of water which has a free connection with the open ocean and within which ocean water is measurably diluted with fresh water derived from land drainage (Pritchard, 1967)
<b>Inlet Channel</b>	the channel which crosses the barrier beach and connects the ocean to the Russian River Estuary
<b>Lagoon</b>	an enclosed coastal body of water with no or periodic connection to the open ocean which is recharged by fresh water from land drainage
<b>Mean Tidal Prism</b>	the volume of water stored in a lagoon or estuary between MHW and MLW
<b>MHHW</b>	Mean Higher High Water
<b>MHW</b>	Mean High Water
<b>MLLW</b>	Mean Lower Low Water
<b>MLW</b>	Mean Low Water
<b>NGVD</b>	National Geodetic Vertical Datum
<b>Potential Tidal Prism</b>	the volume of water stored in a lagoon (estuary) between MHW and MLW (Mean potential tidal prism) or MHHW and MLLW (potential diurnal tidal prism) based on tide elevations in the ocean.

## **APPENDIX II**

### **LIST OF AGENCIES / ORGANIZATIONS CONTACTED DURING THIS STUDY**



LIST OF AGENCIES/ORGANIZATIONS  
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---

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**Eric Mayes** Department of Public Works, Sonoma County

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**Patricia Kirk** National Oceanographic Data Center

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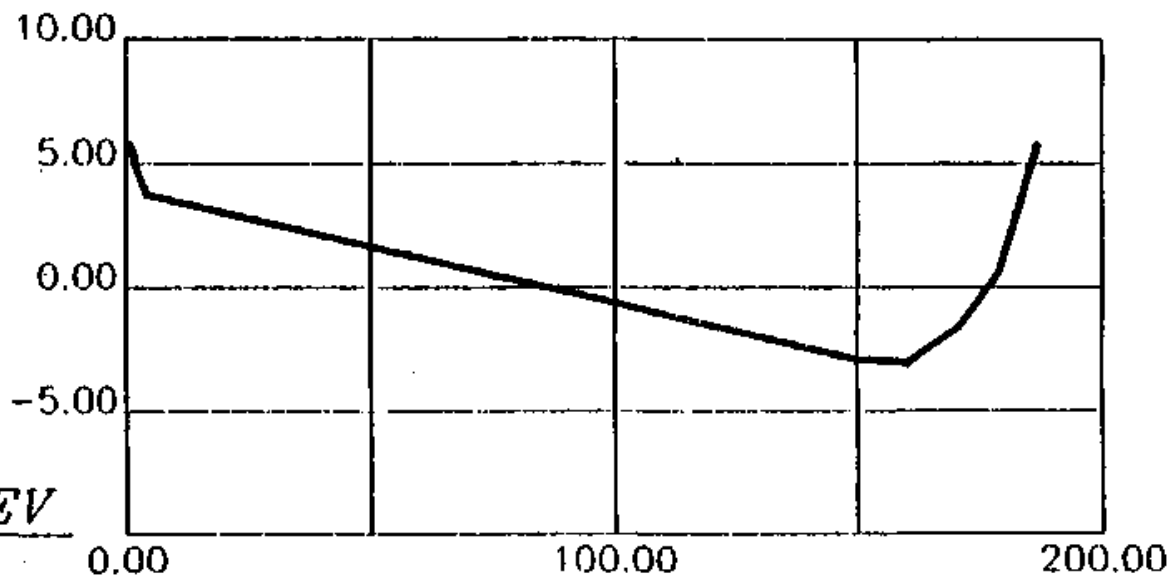
**John Shrad** Department of Public Works, Road Maintenance Division,  
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**Jim Flugum** Sonoma County Water Agency

## **APPENDIX III**

### **CROSS-SECTIONS OF THE RUSSIAN RIVER ESTUARY**

Note: all elevations shown in Appendix III are to NGVD



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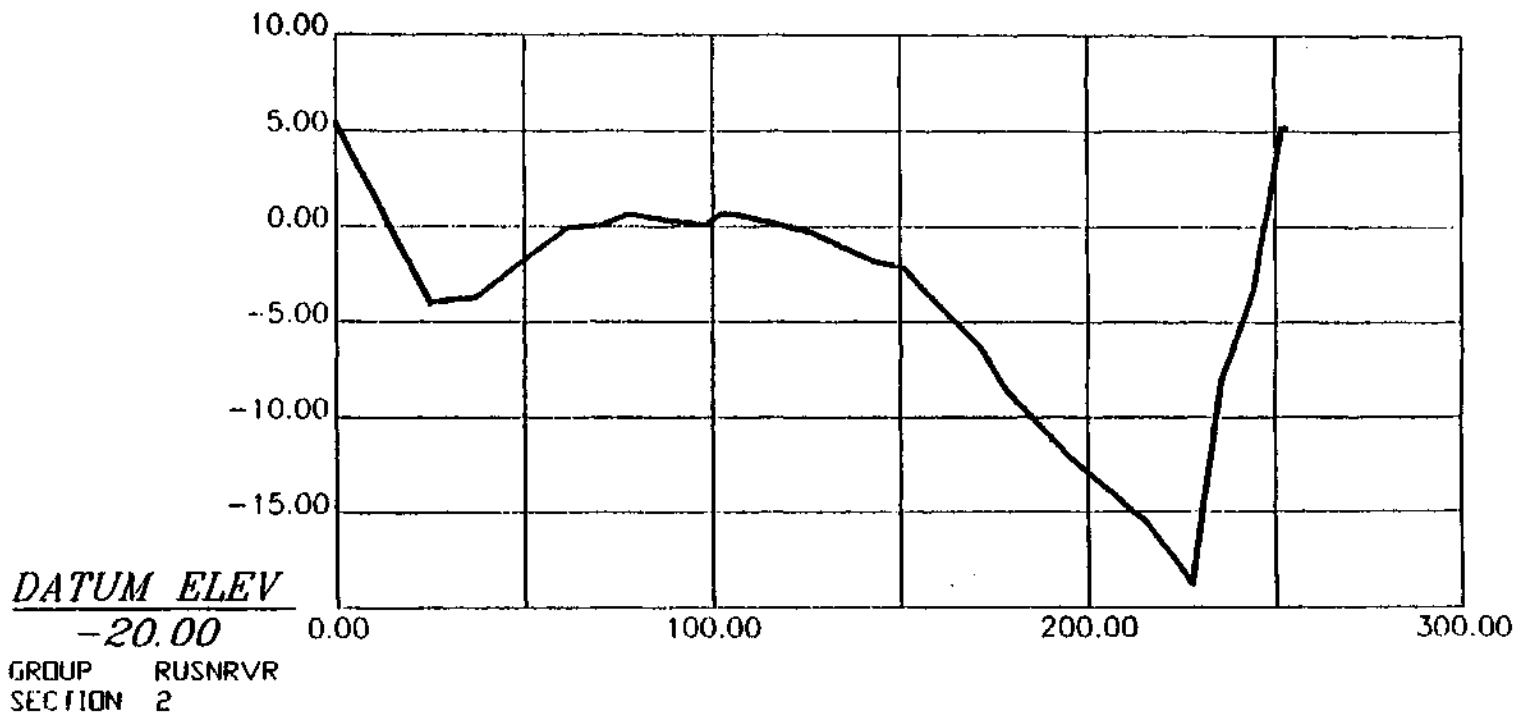


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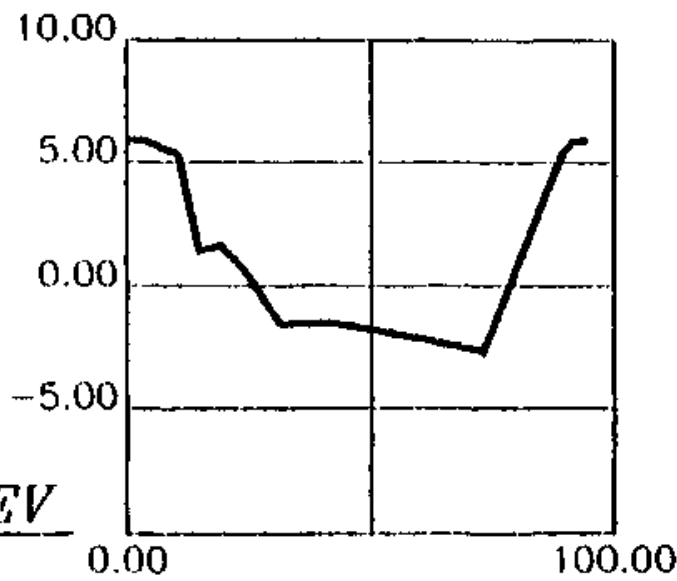


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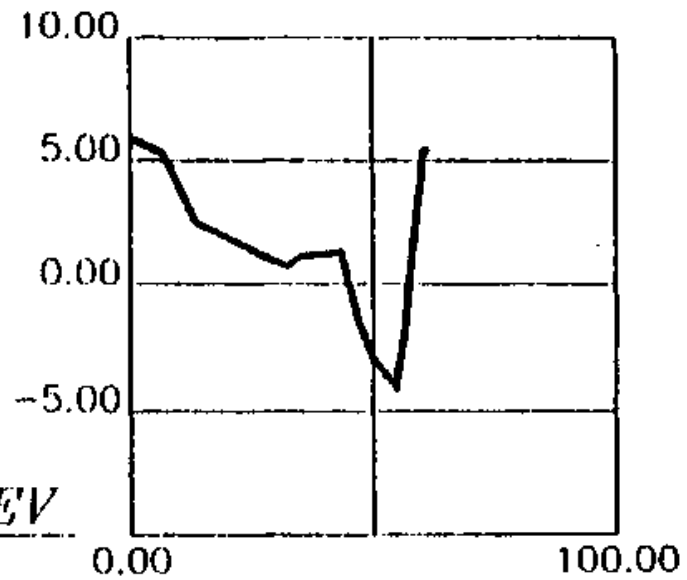


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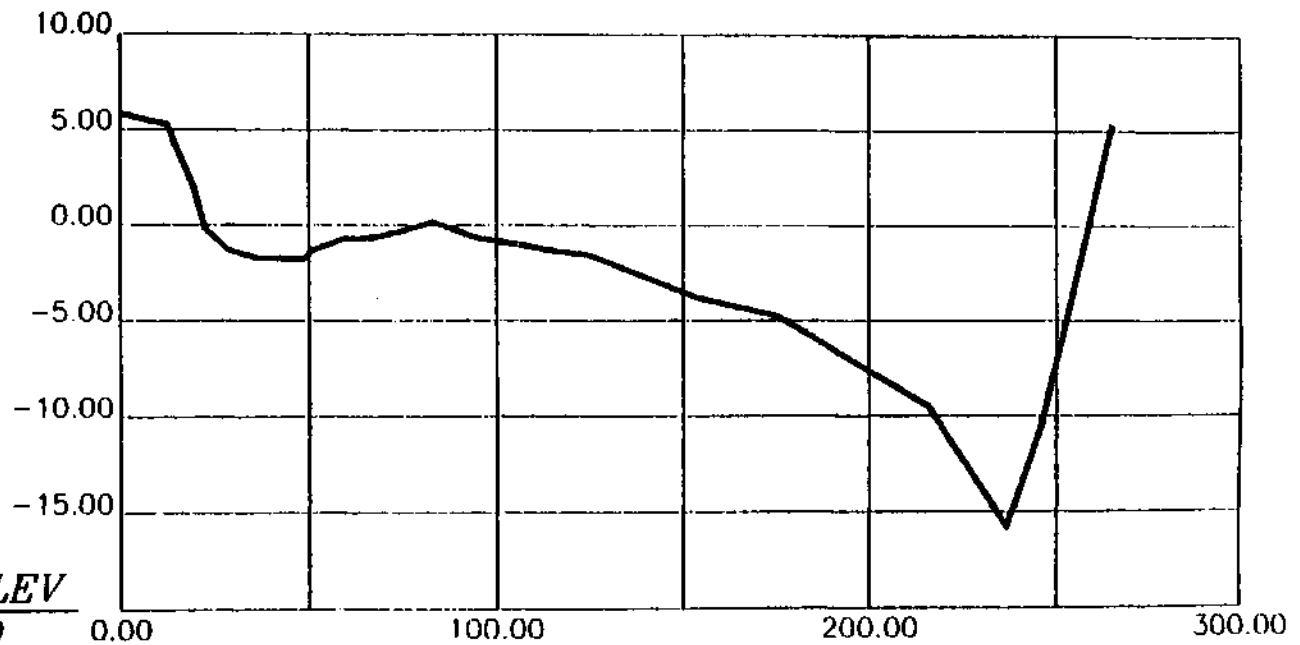


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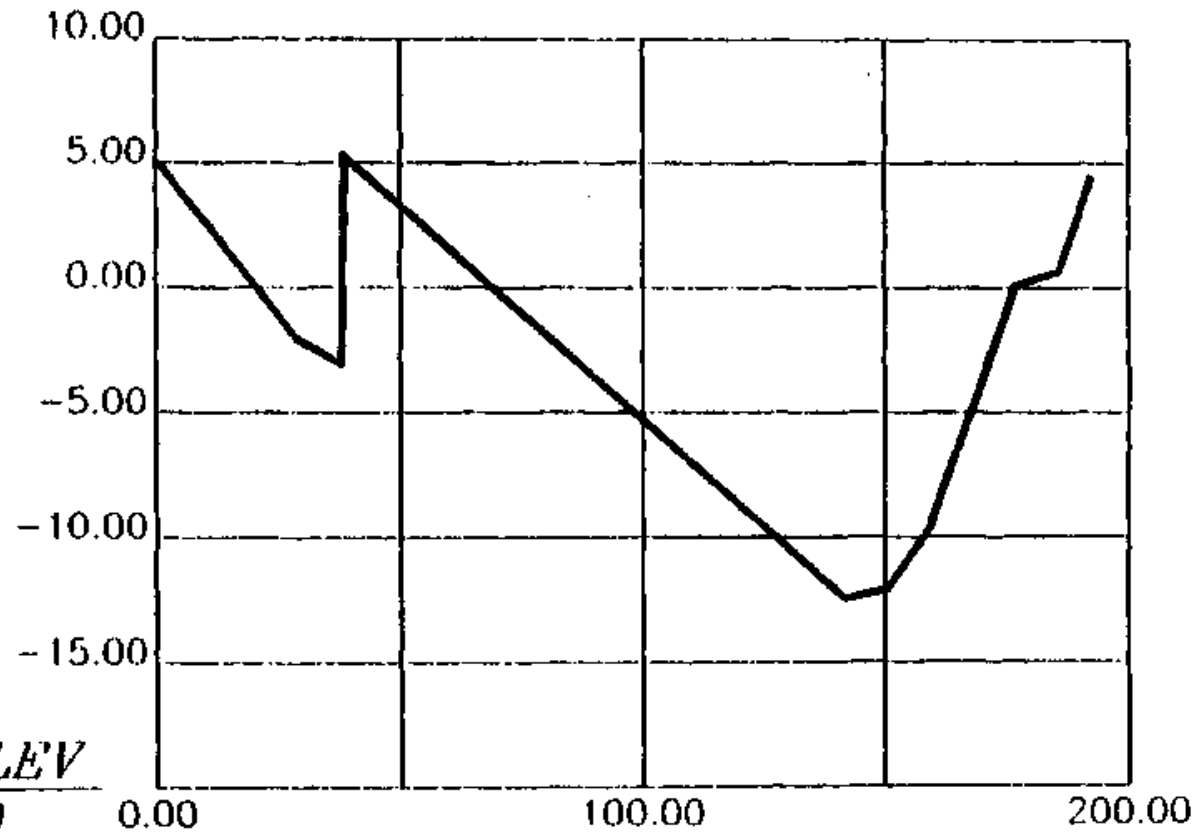


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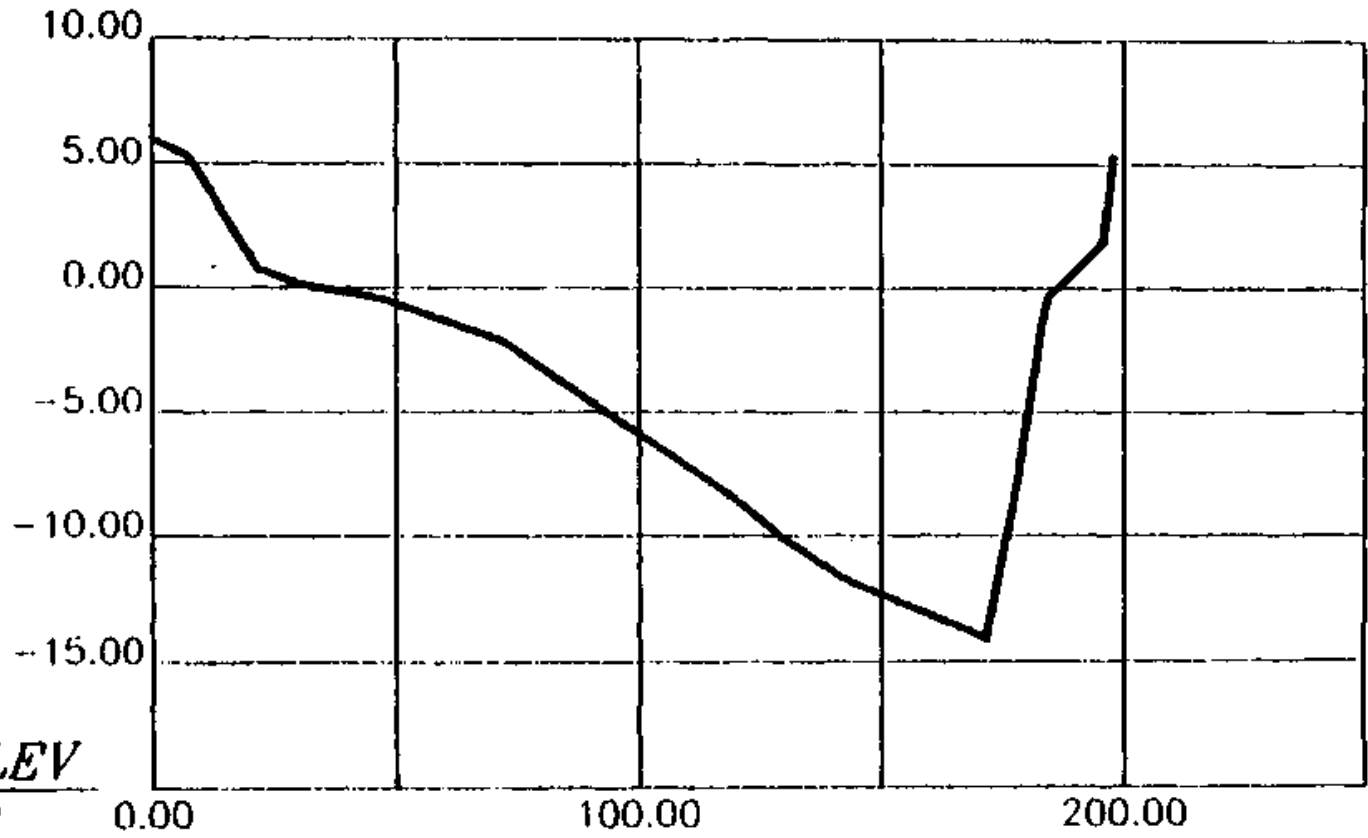
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08/15/84	J. Williams	J. Williams	J. Williams

Figure





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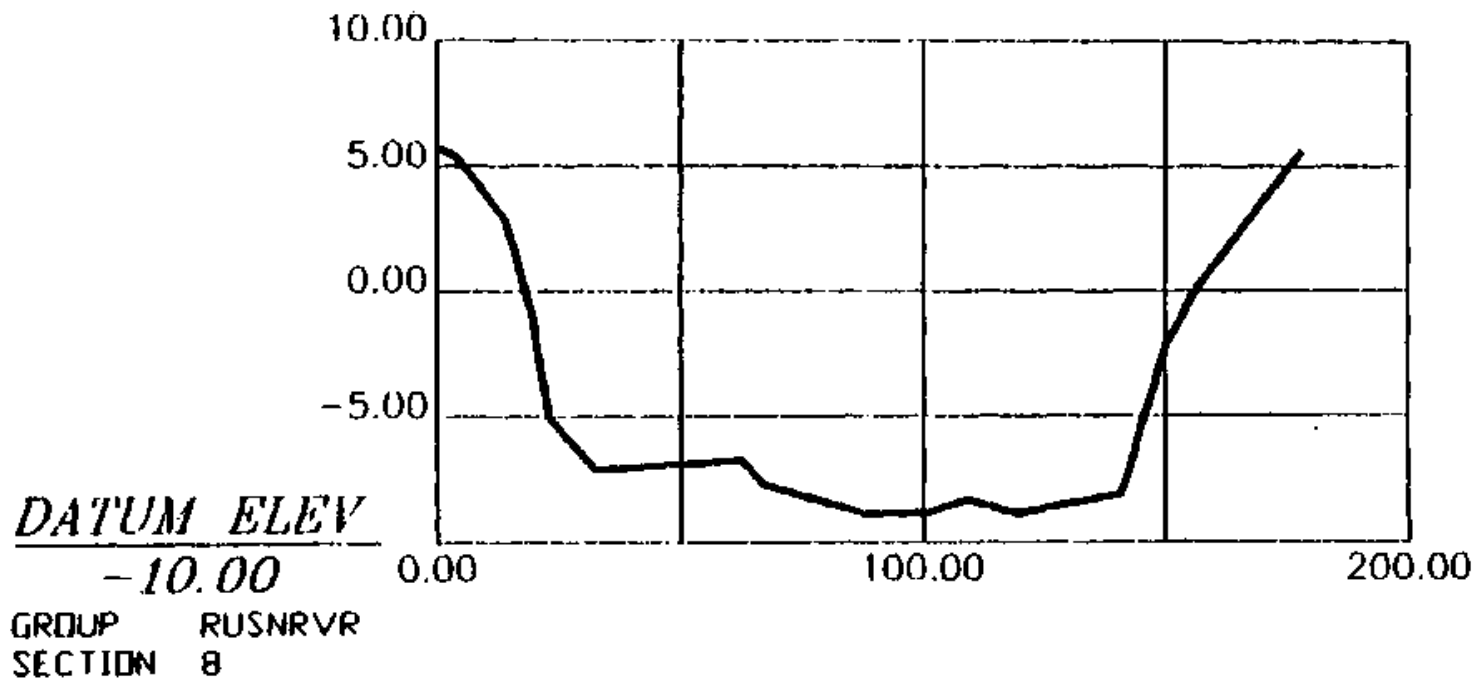


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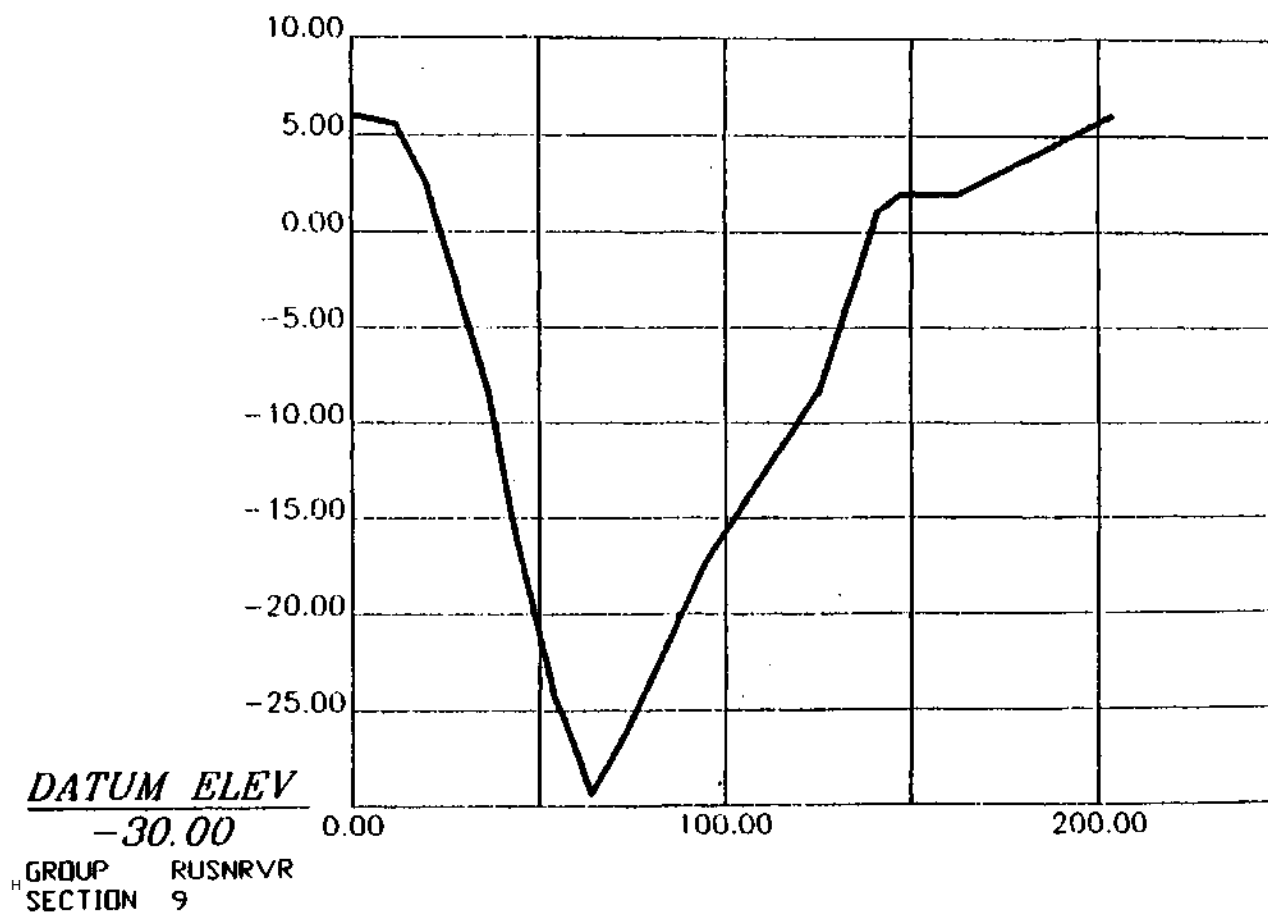
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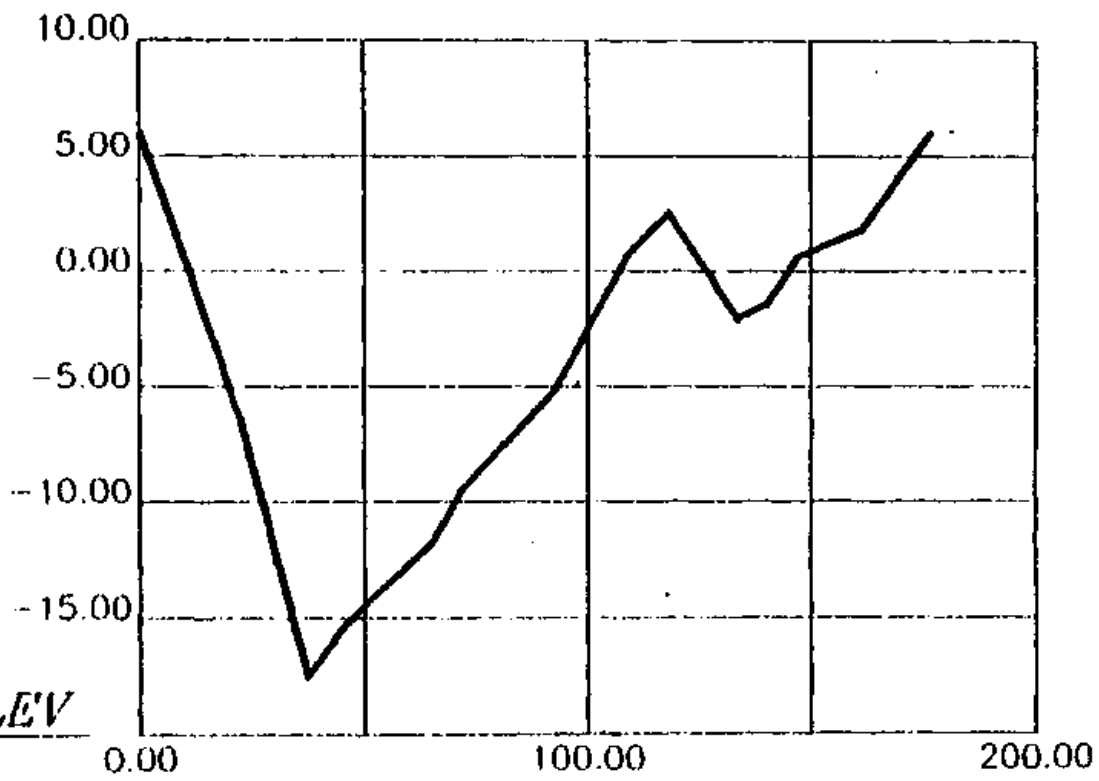


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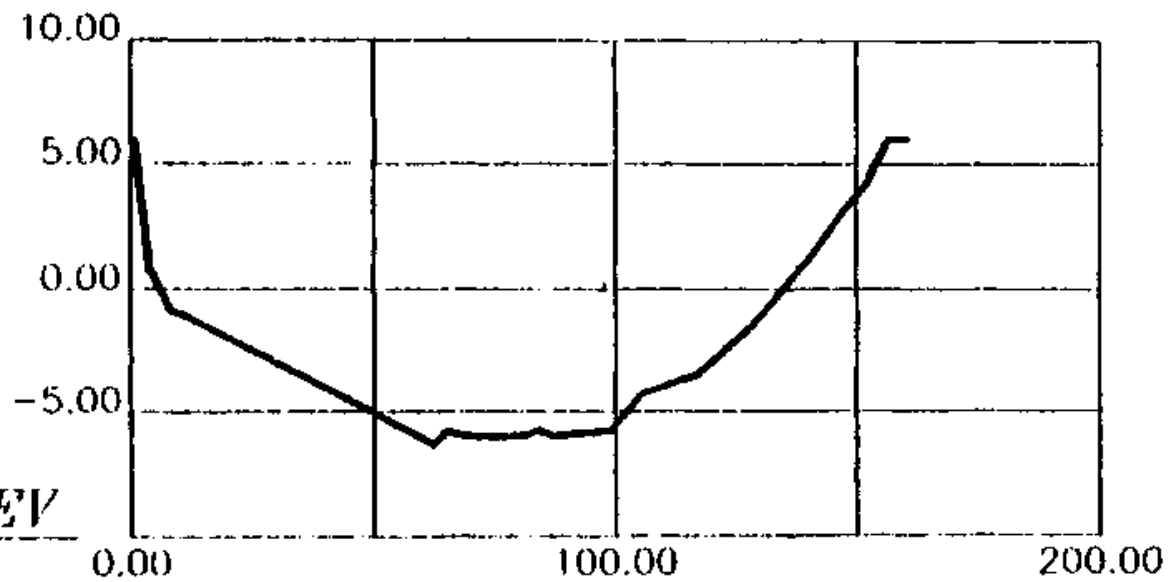
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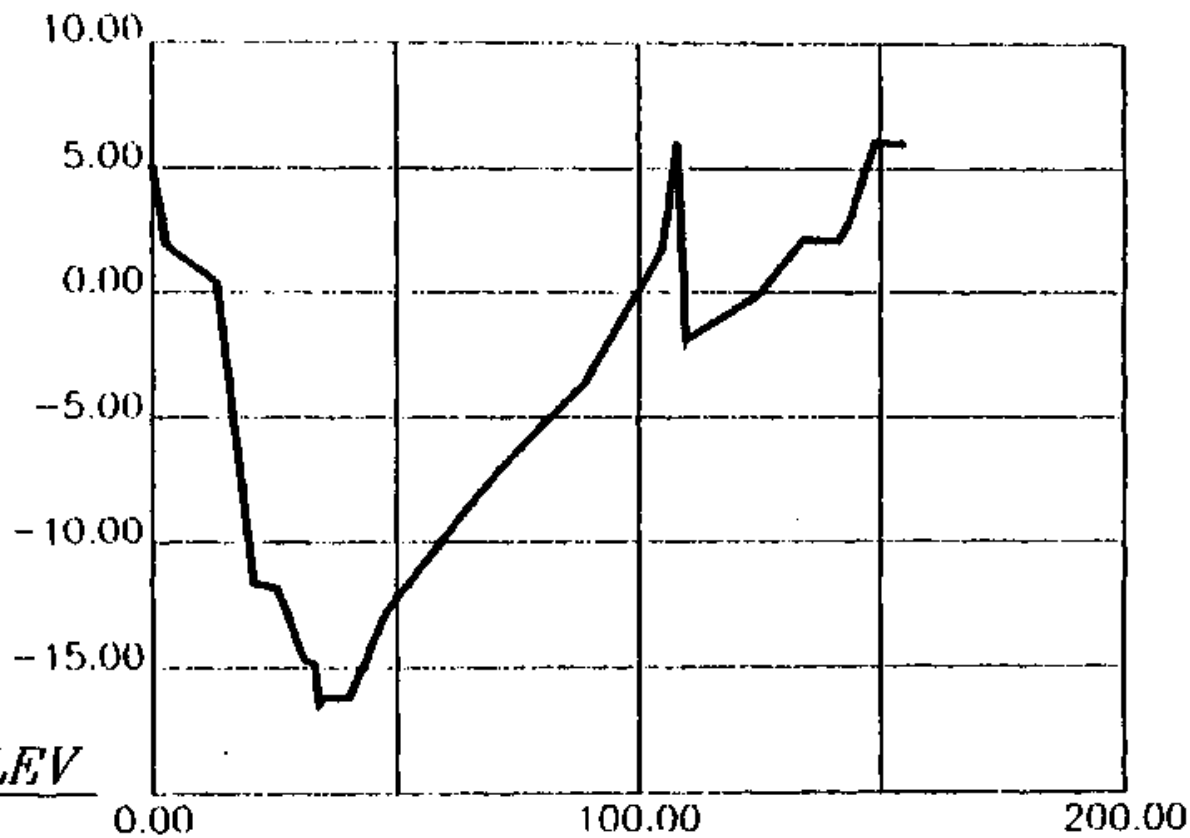


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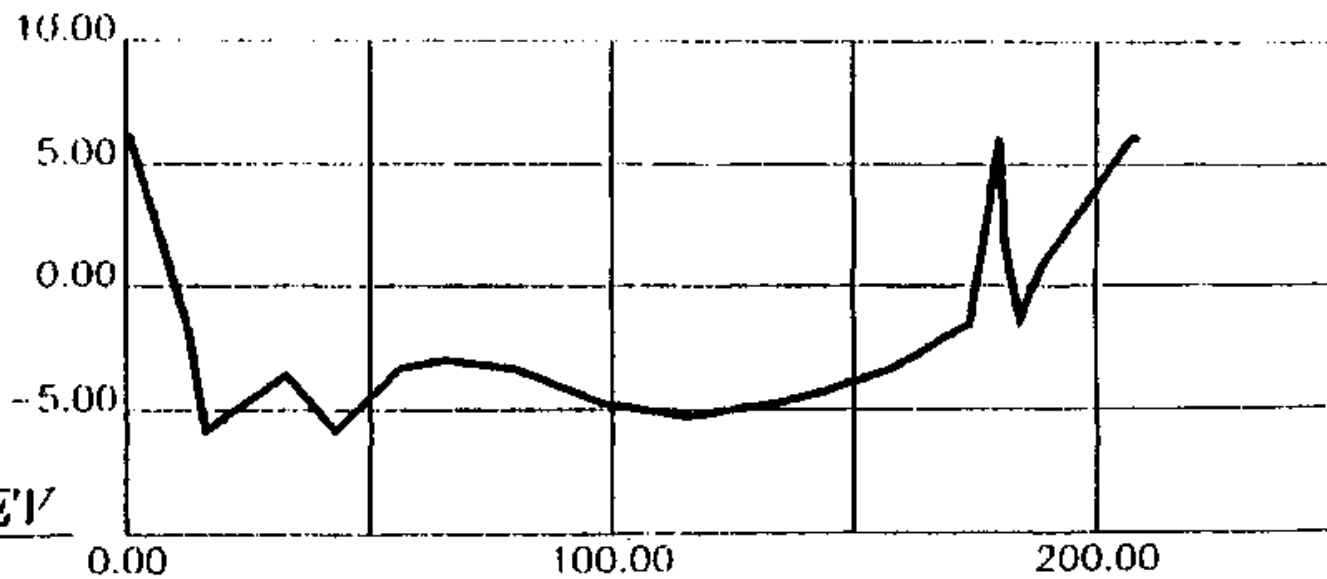


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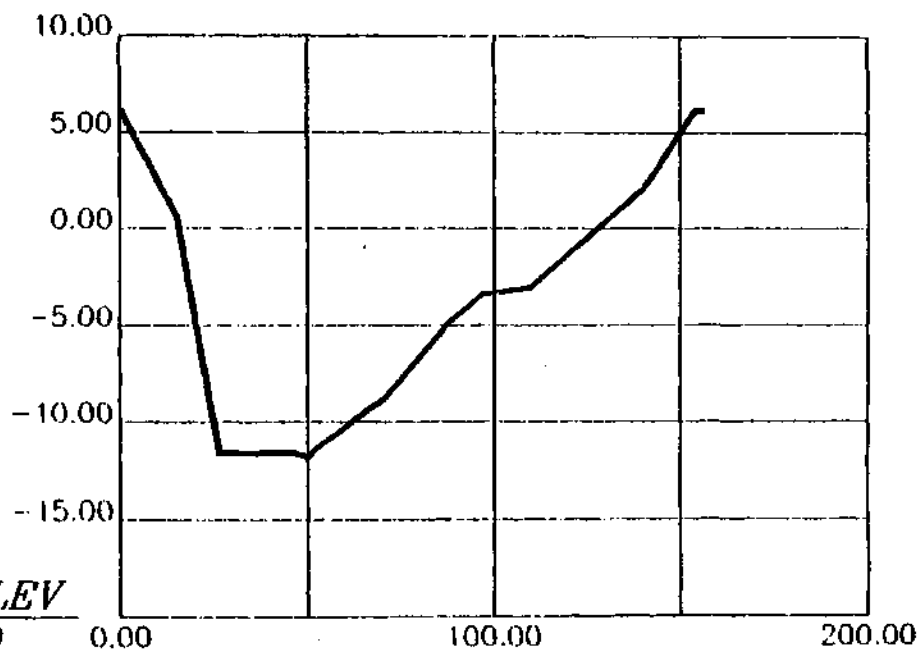


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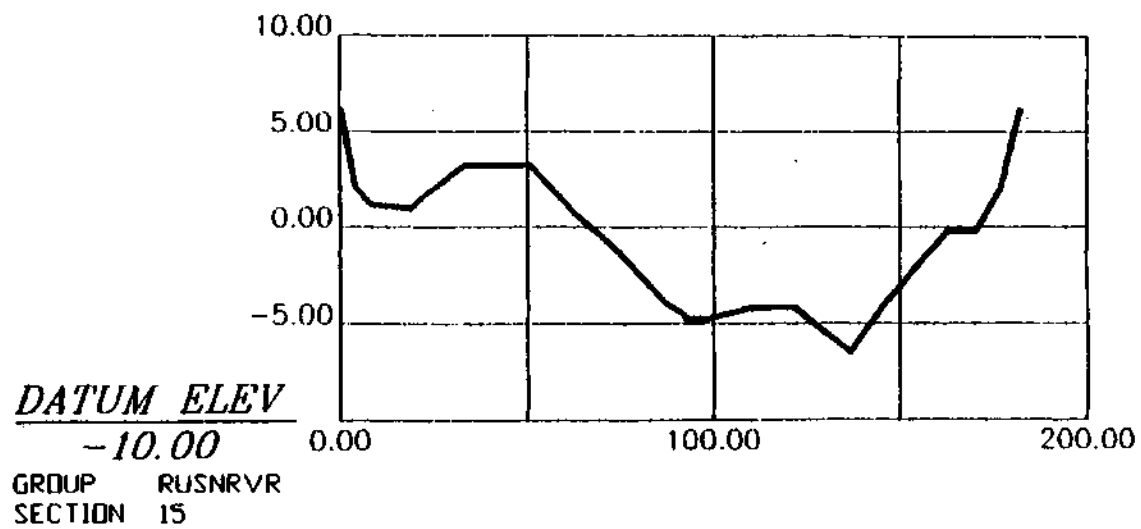
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Figure





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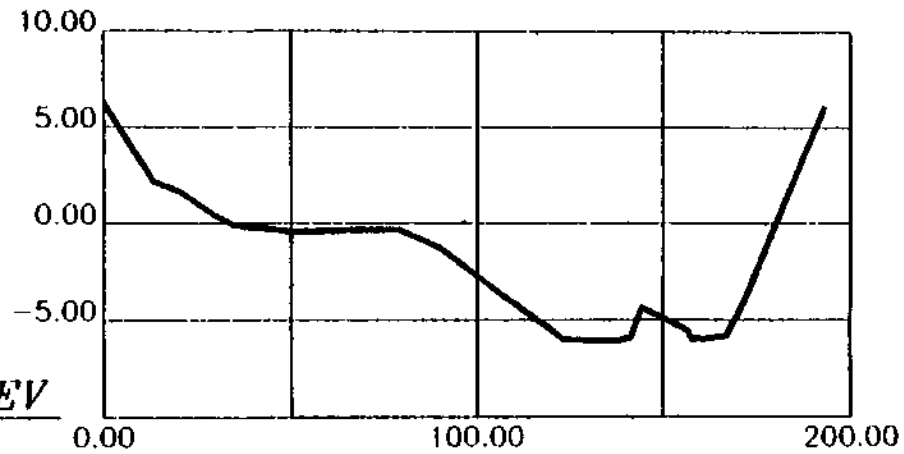
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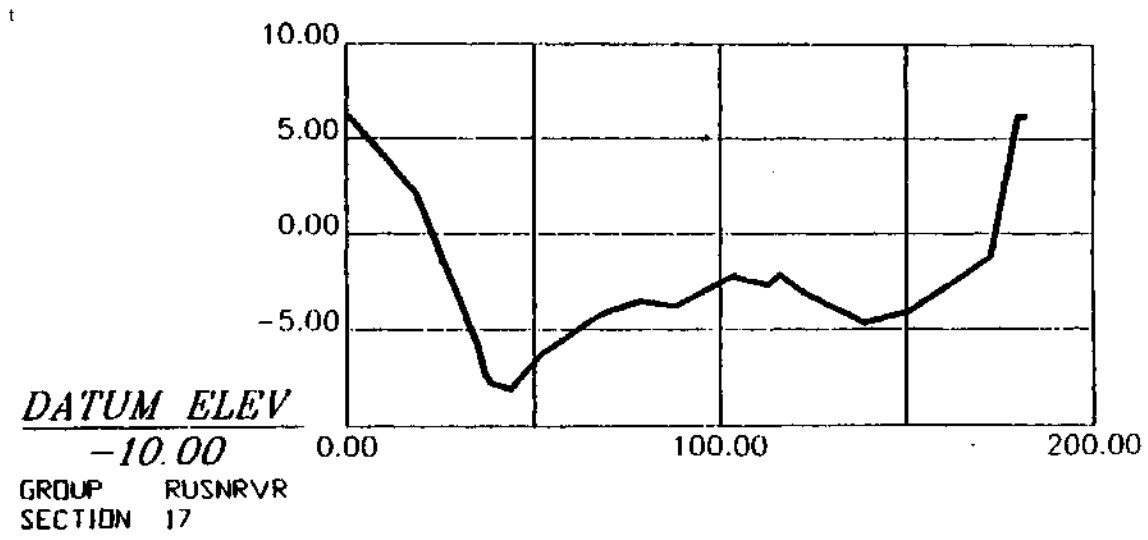


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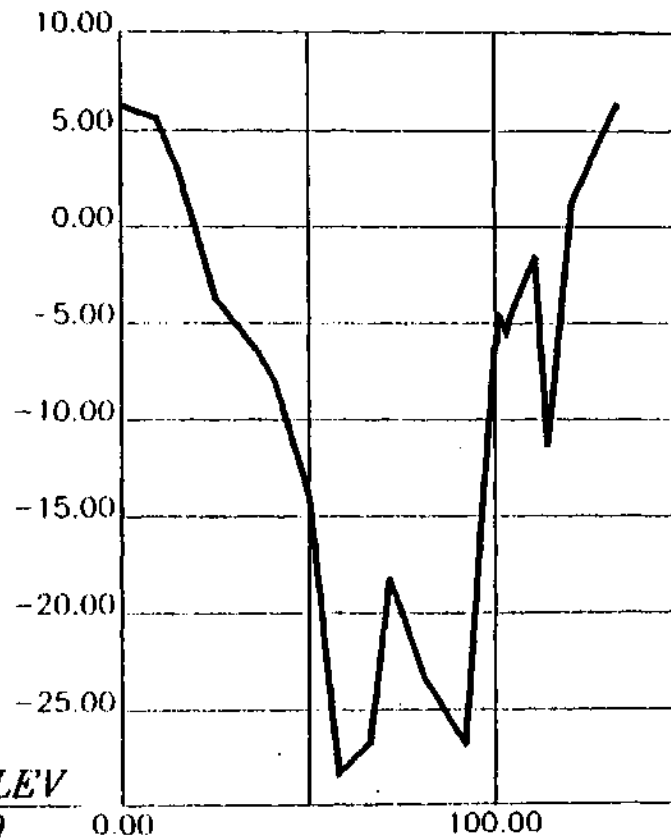


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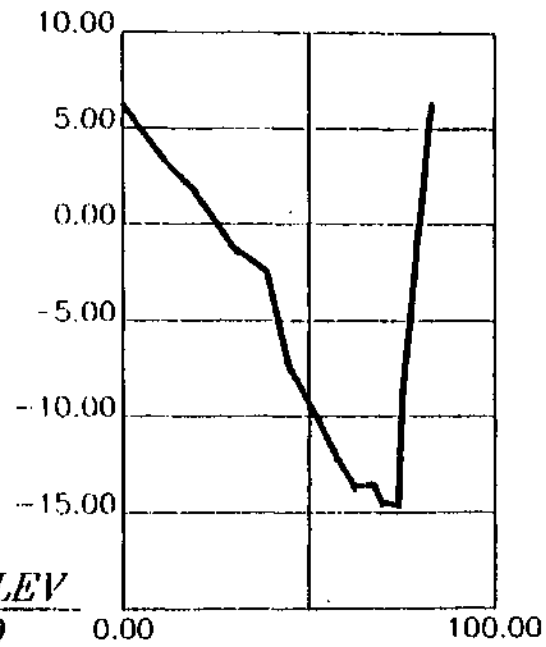


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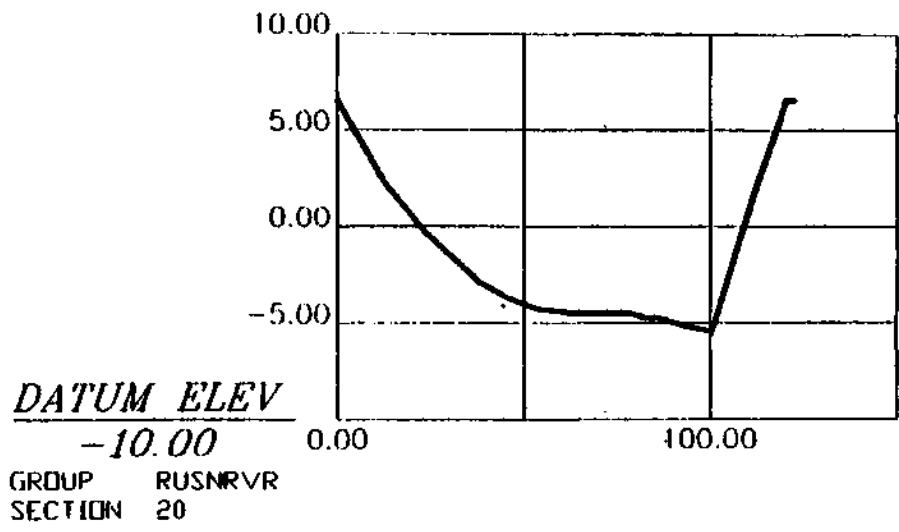


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Figure



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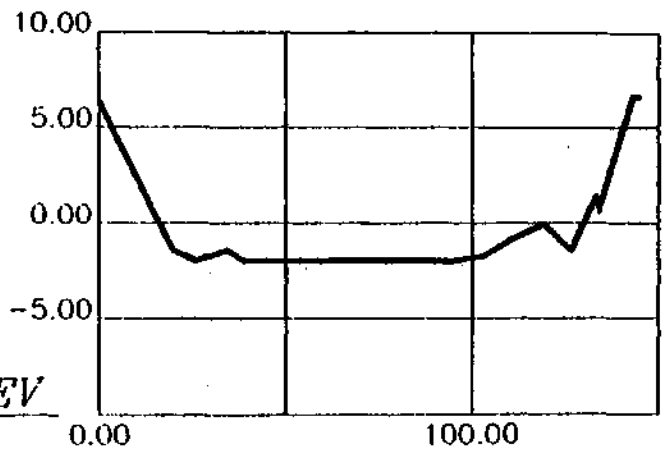
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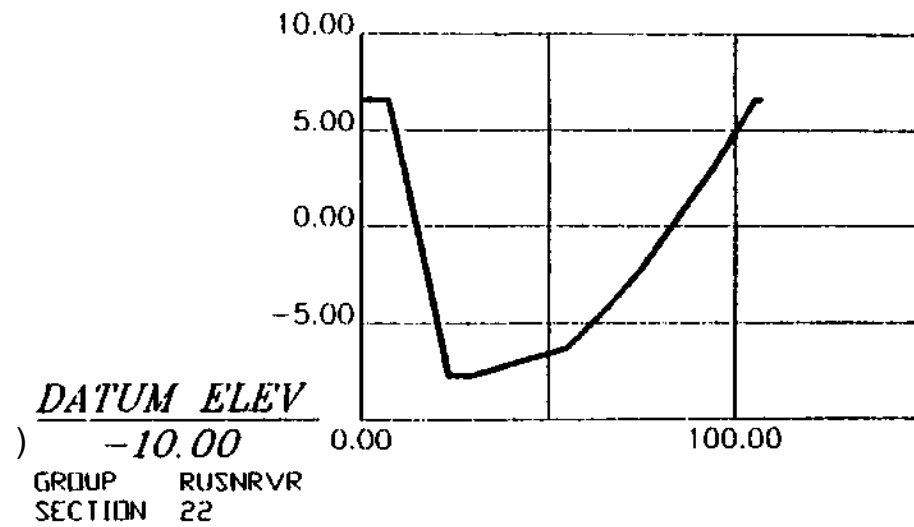


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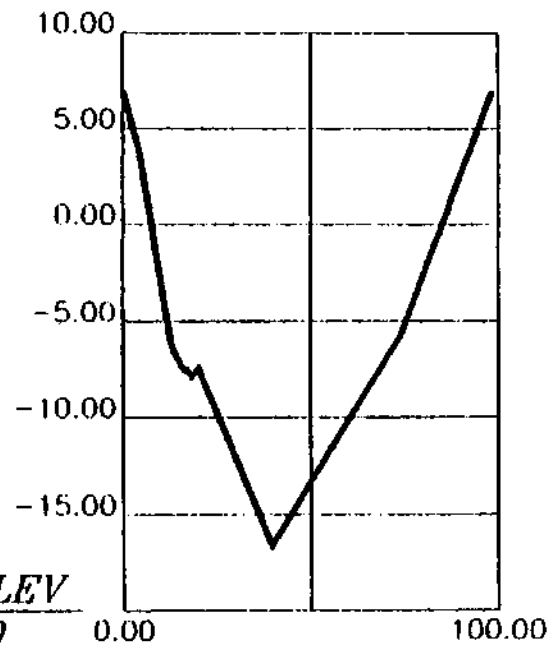
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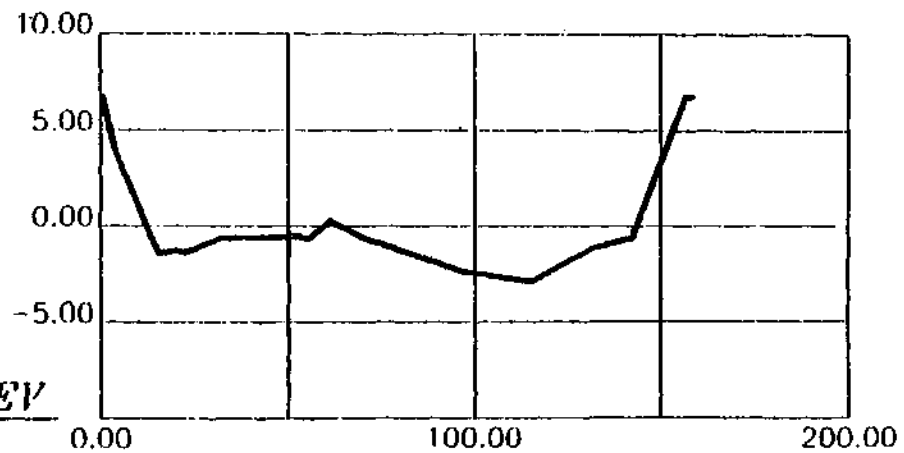
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10/11/00	J. Williams	J. Williams	

Figure

*DATUM ELEV*

*-10.00*

GROUP RUSNRVR  
SECTION 24

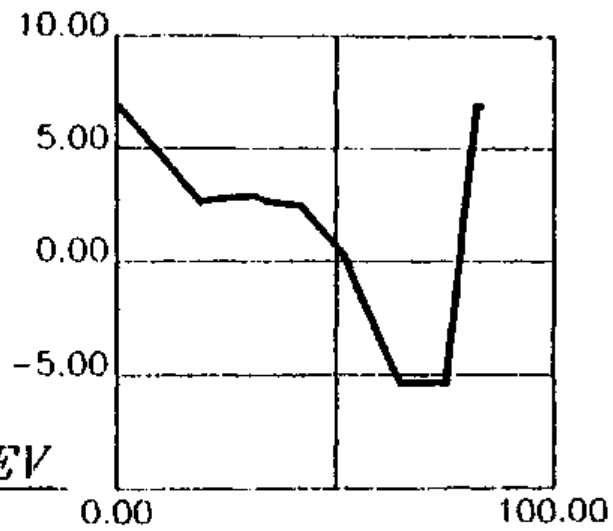


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P.O. Box 35, The Embarcadero  
San Francisco, CA 94133  
(415) 901-0303

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	Scale	Author
8-14-83	1:1	
10-10-83	1:1	
11-10-83	1:1	
12-10-83	1:1	
1-10-84	1:1	

Figure



*DATUM ELEV*  
-10.00  
 ) GROUP RUSNRVR  
 SECTION 25

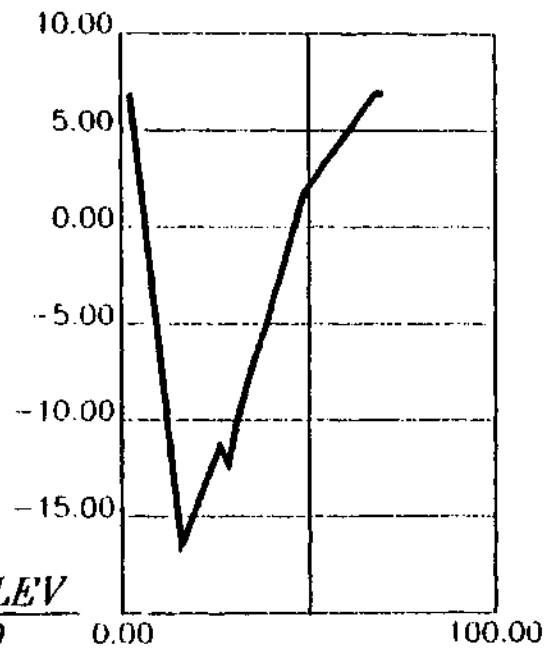


Philip Williams & Associates, Ltd.  
 P.O. Box 35, The Embarcadero  
 San Francisco, CA 94133  
 (415) 981-8361

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	No.	Revised
2/16/02	1	
Scale as shown		
Drawn		
Checked by C.S.C.		
Approved		
Job No. 007		

Figure



*DATUM ELEV*

-20.00

GROUP RUSNRVR  
SECTION 26

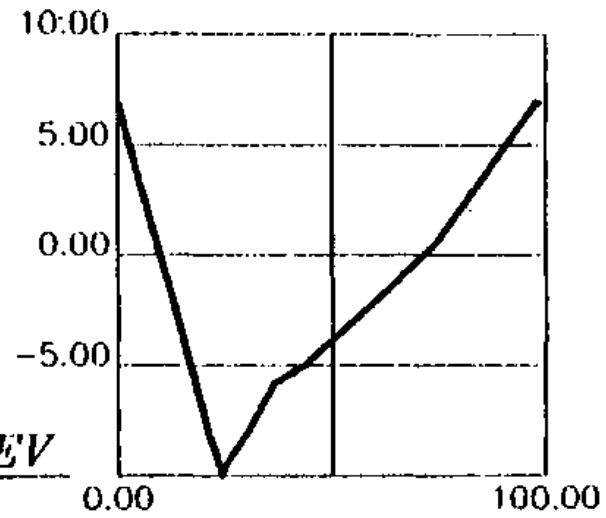


F.N. Williams & Associates, Ltd.  
P.O. Box 35, The Embarcadero  
San Francisco, CA 94133  
(415) 401-8363

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	Scale	Sheet	Project
5/18/82	1" = 100'	1	Russian River Estuary
5/18/82	1" = 100'		
5/18/82	1" = 100'		
5/18/82	1" = 100'		
5/18/82	1" = 100'		

Figure



*DATUM ELEV*  
-10.00

GROUP RUSNRVR  
 SECTION 27

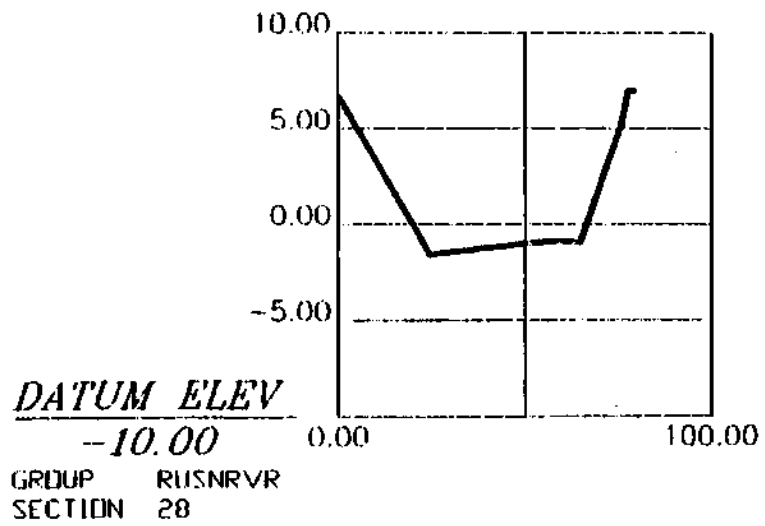


Philip Williams & Associates, Ltd.  
 P.O. Box 968  
 San Francisco, CA 94133  
 (415) 961-0300

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date: 5/26/93	By: [Signature]
Scale: as shown	Revisions:
Drawn: [Signature]	
Checked: [Signature]	
Plot: [Signature]	
Job No: 930	

Figure

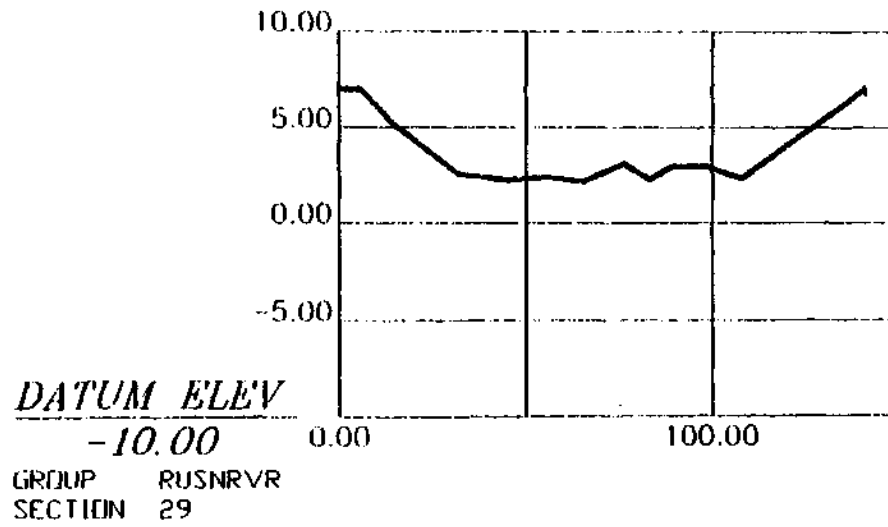


Philip Williams & Associates, Ltd  
 Pier 35, The Embarcadero  
 San Francisco, CA 94133  
 (415) 981-8763

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS SECTIONS

Date	Drawn by	Checked by	Approved by
10/15/99	...	...	...
10/15/99	...	...	...
10/15/99	...	...	...

Figure

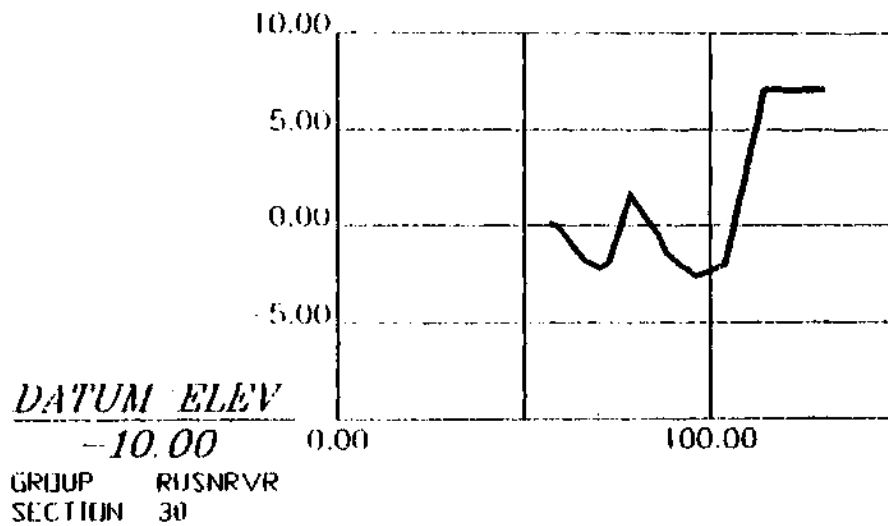


Philip Williams & Associates, Ltd  
 One 35, The Embarcadero  
 San Francisco, CA 94111  
 (415) 981-8361

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date: 5-18-93	Sheet: 1 of 1
Scale: 1:1000	Project: Russian River Estuary Study
Drawn: J. Williams	Checked: J. Williams
Plot: J. Williams	Job #: 93-01

Figure



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 P.O. Box 100, Emerald Isle  
 S.W. Florida, FL 34111  
 (407) 999-8800

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

DATE	BY	REVISION
10/19/00		
11/14/00		
12/14/00		
01/14/01		
02/14/01		
03/14/01		
04/14/01		
05/14/01		
06/14/01		
07/14/01		
08/14/01		
09/14/01		
10/14/01		
11/14/01		
12/14/01		

Figure

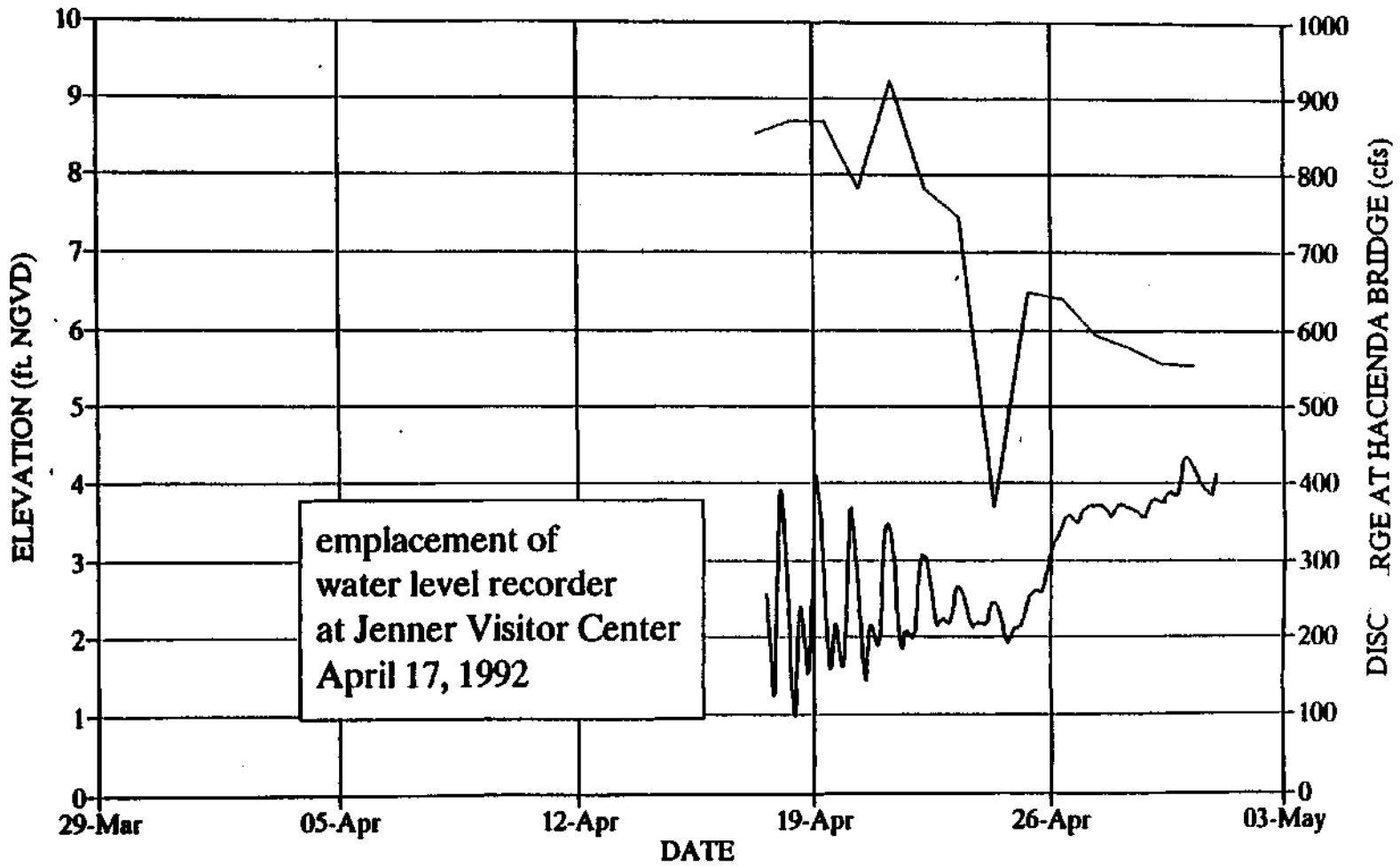


## **APPENDIX IV**

### **WATER SURFACE ELEVATIONS AND RIVER INFLOWS TO THE ESTUARY**

April 1992-March 1993

APRIL, 1992



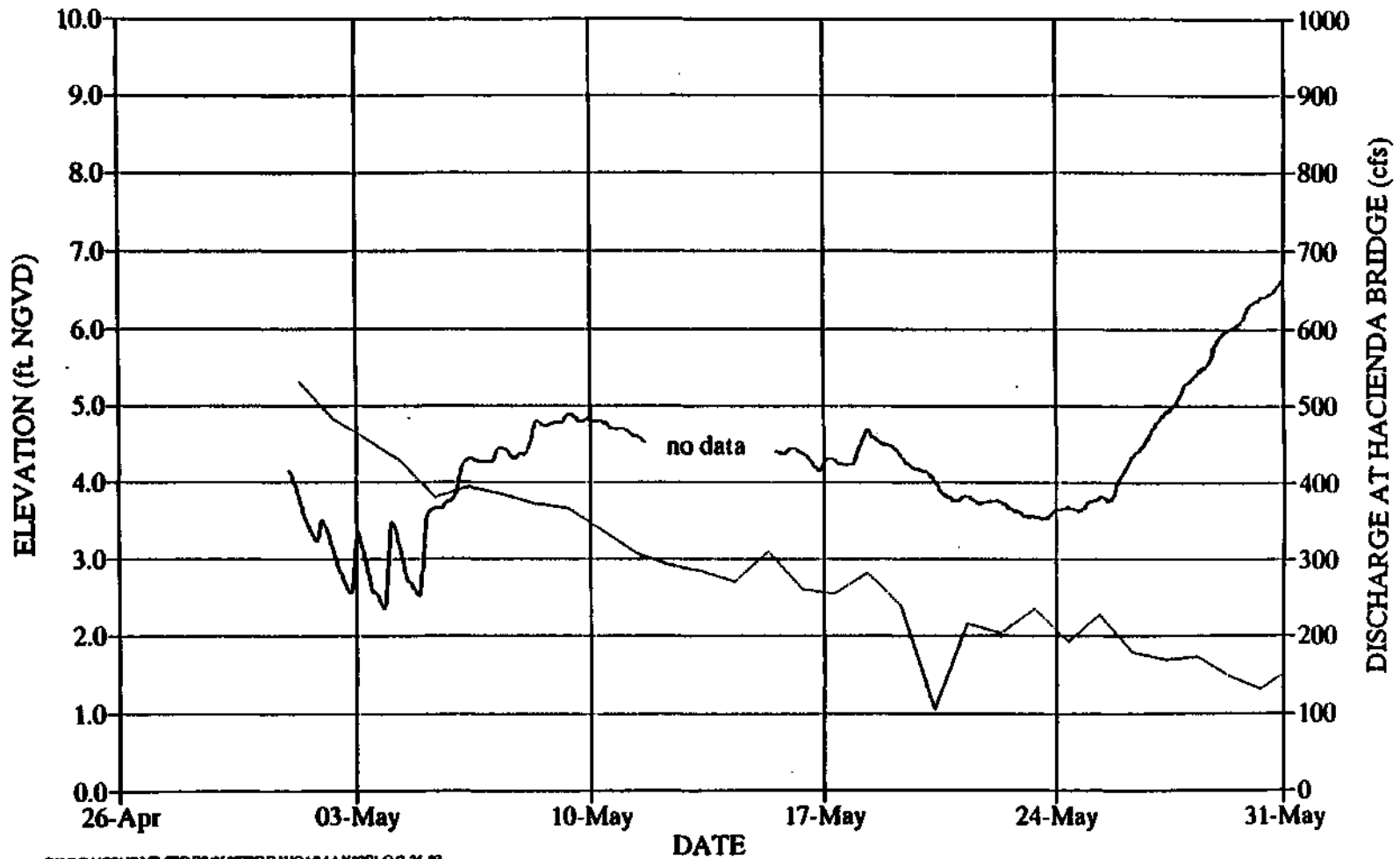
CKCRUSSNVR/TIDES/4/2TIDE.WQ1/APR92/LO2-25-93

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Consultants in Hydrology

**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (APRIL, 1992)**

Figure

MAY, 1992



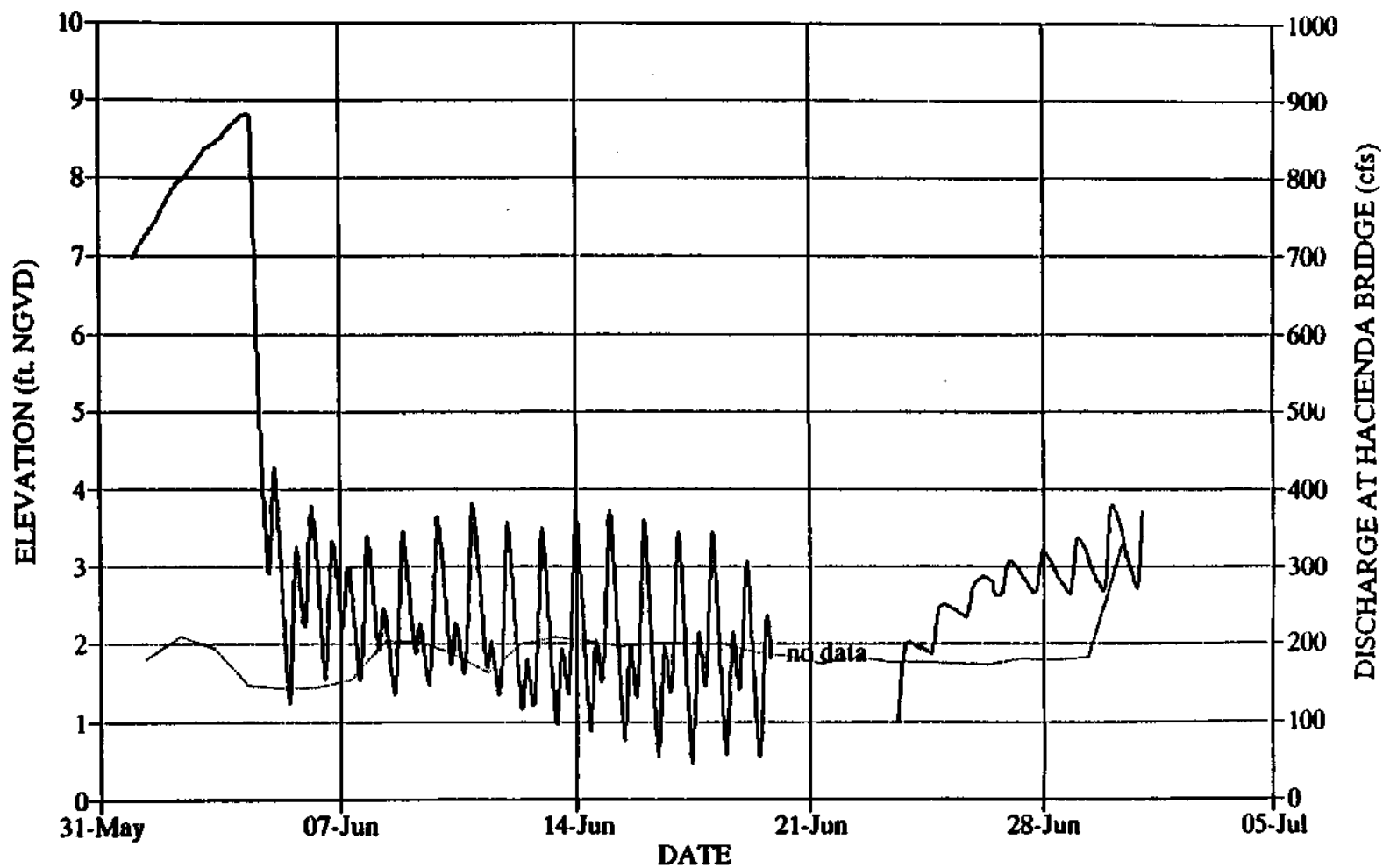
CKC/RUSSNRVR/TIDES/05/2TIDE.WQ1/MAY92P1.Q2-25-92

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Consultants in Hydrology

**WATER LEVELS - RUSSIAN RIVER ESTUARY JENNER VISITOR  
CENTER (MAY, 1992)**

Figure

JUNE, 1992



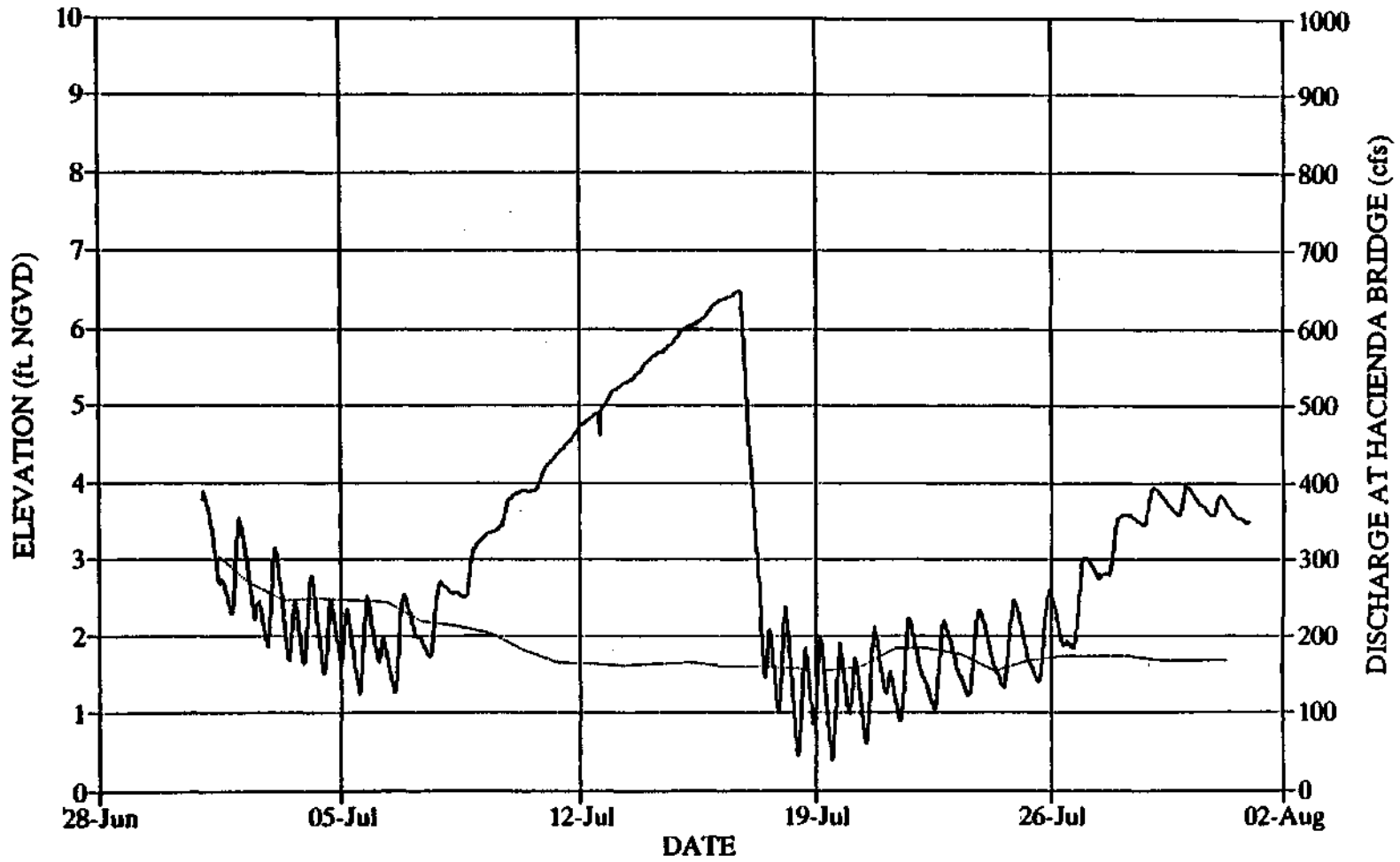
C:\CRUSSNR\VR\TIDES\0002\TIDE.WQ1\JUN92\PL042-25-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (JUNE, 1992)**

Figure

JULY, 1992



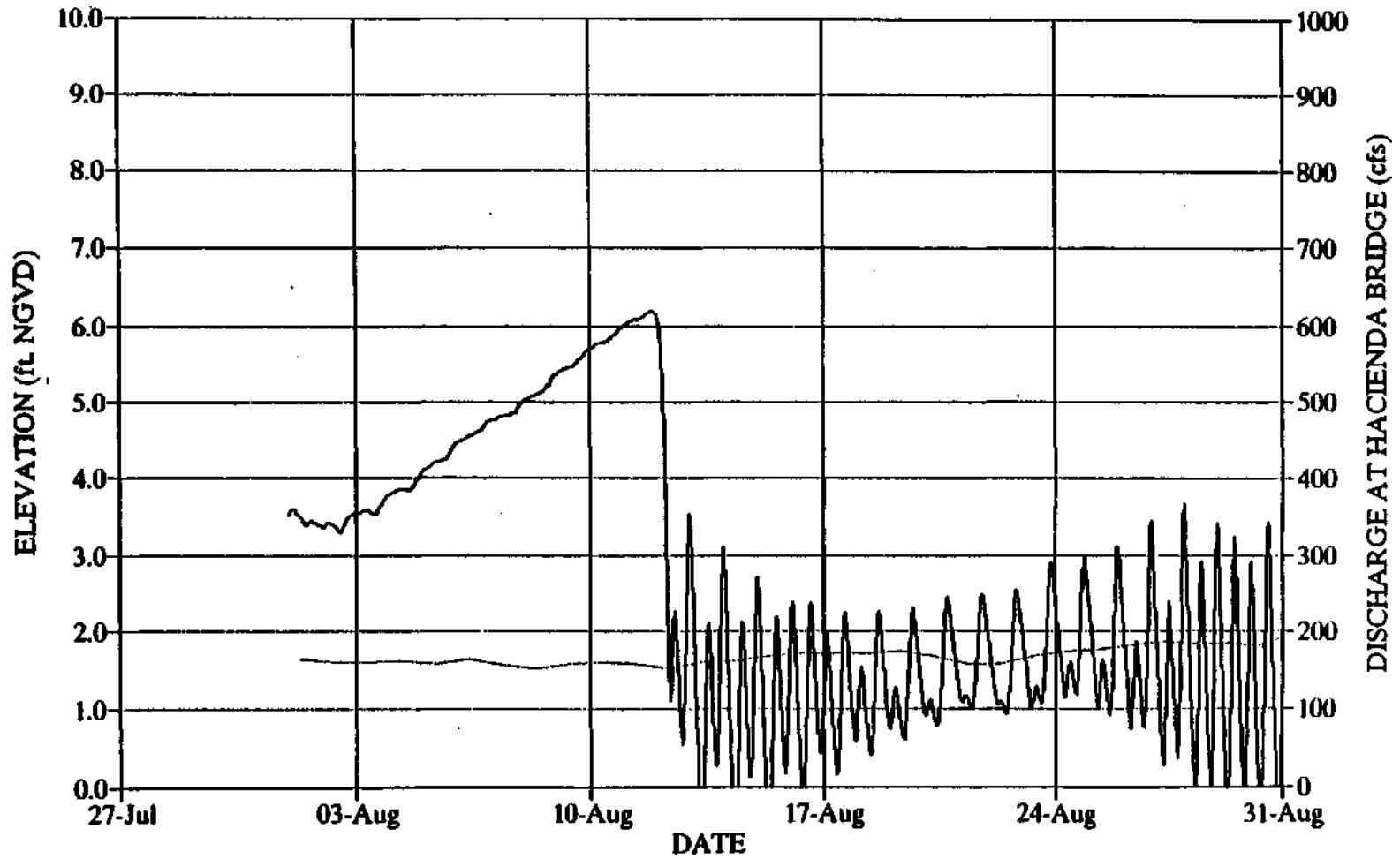
CKC/RUSSIAN RIVER/TIDES/07/TIDE.WQ1/JUL/2FLO/2-25-93

Philip Williams & Associates, Ltd.  
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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (JULY, 1992)**

Figure

AUGUST, 1992



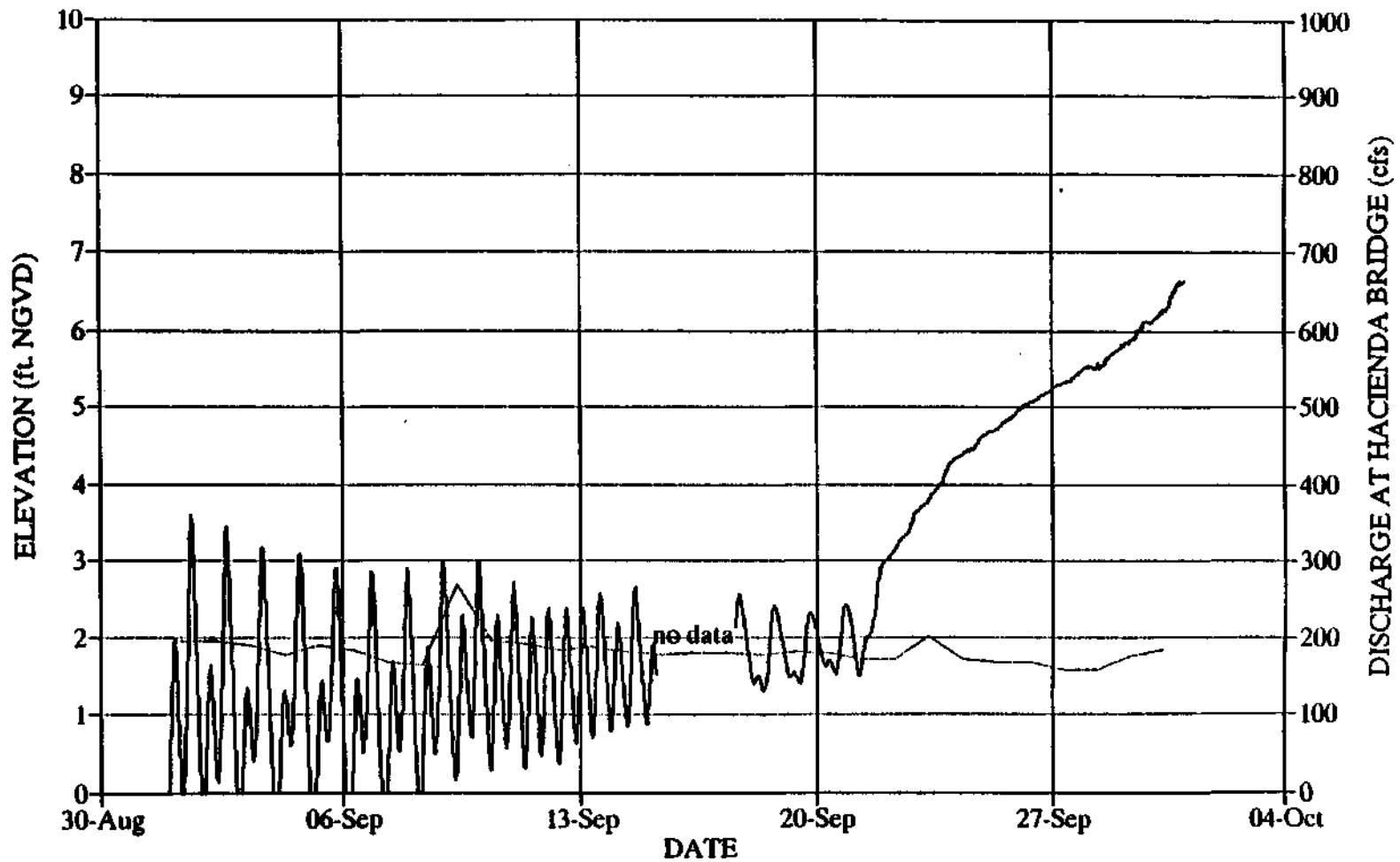
CKC/RUSSNR/VIR/TIDES/08/2TIDE.WQ1/AUG92/PLQ2-25-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (AUGUST, 1992)**

Figure

SEPTEMBER, 1992



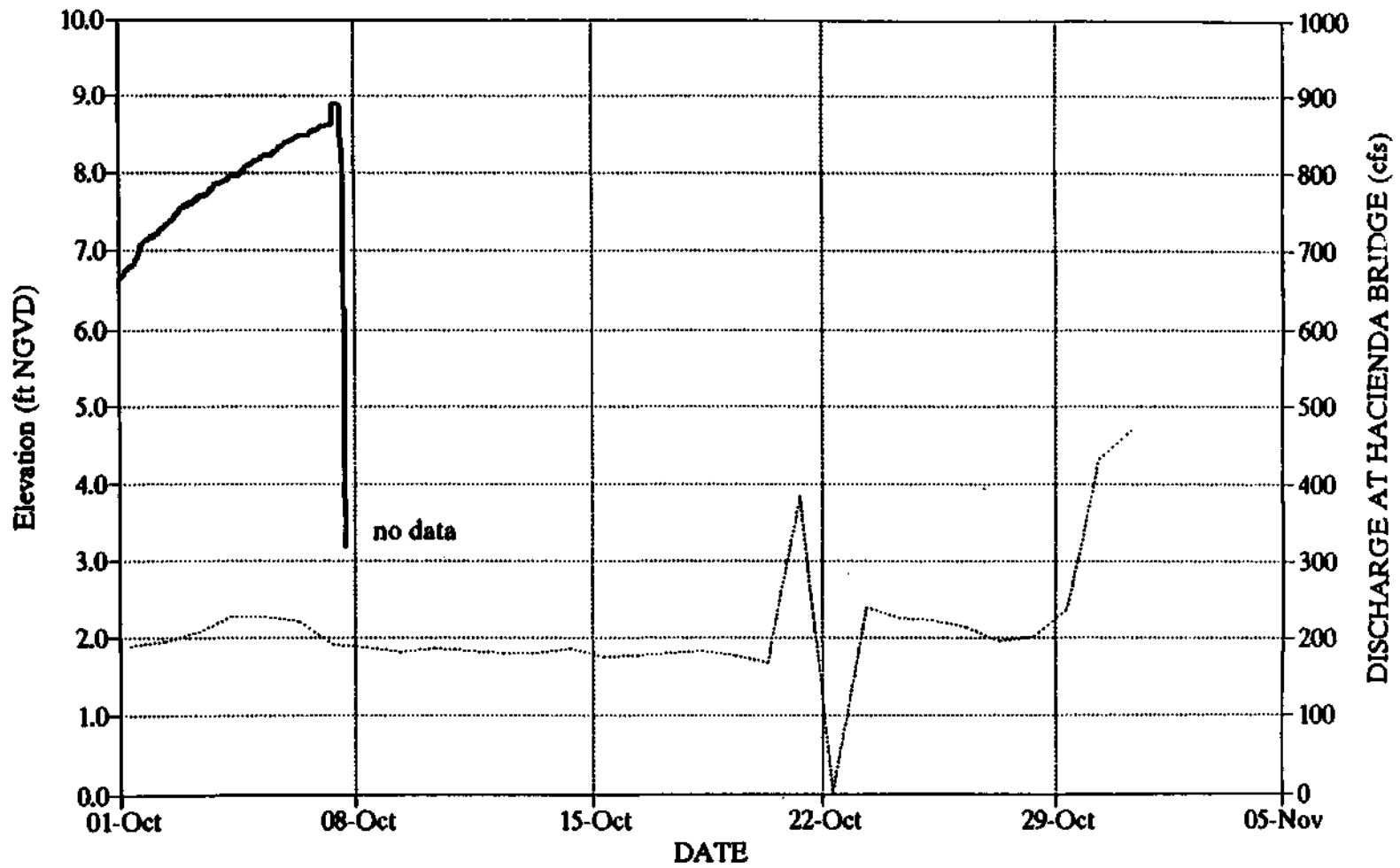
CKC/RUSSNRVR/TIDES/0992TIDE.WQ1/SEP92/PL02-B-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (SEPTEMBER, 1992)**

Figure

OCTOBER, 1992



C:\C\RUSSE\VA\1002TIDE.WQI\NOV92PLOT2-25-92

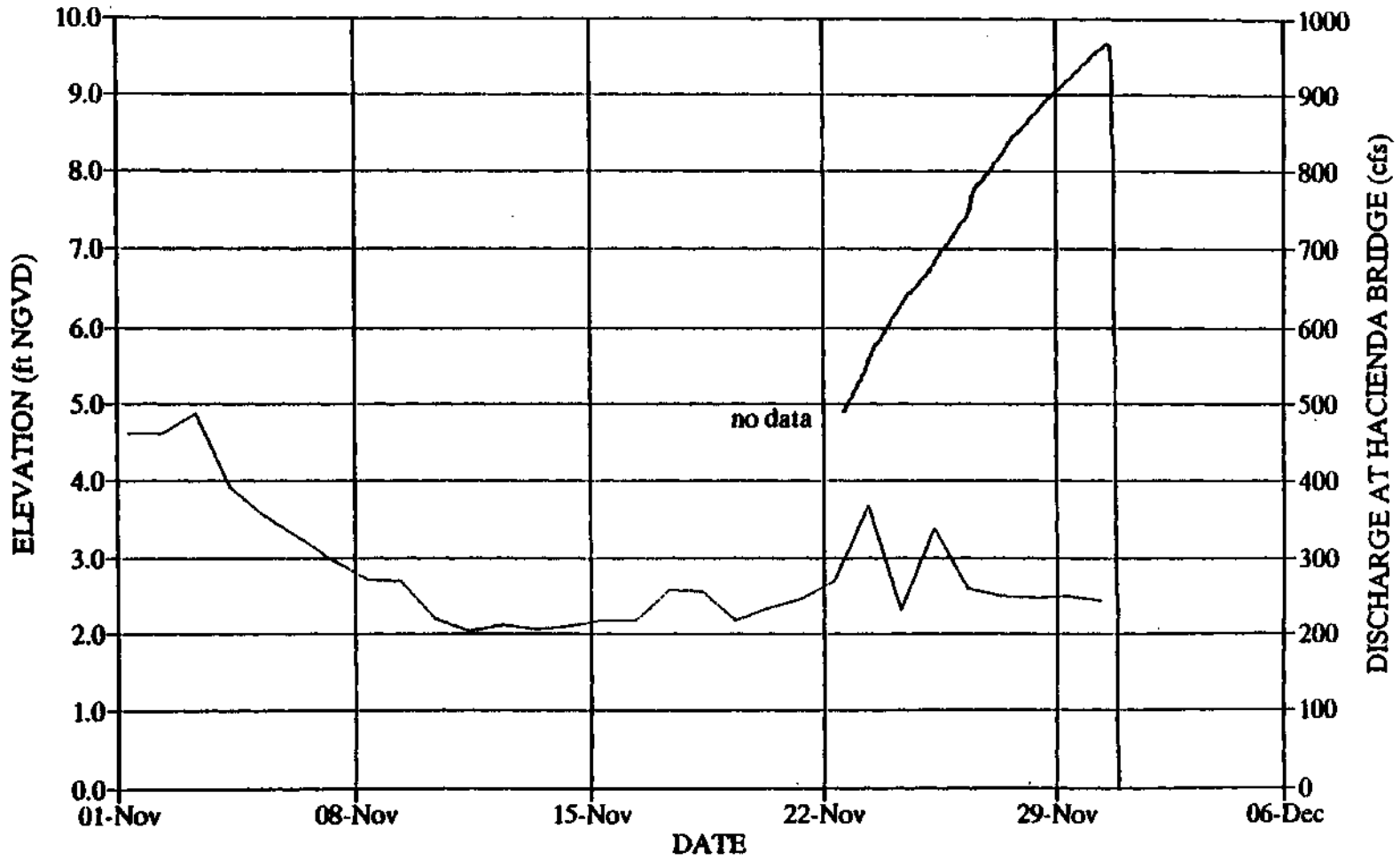
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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (OCTOBER, 1992)**

Figure



NOVEMBER, 1992



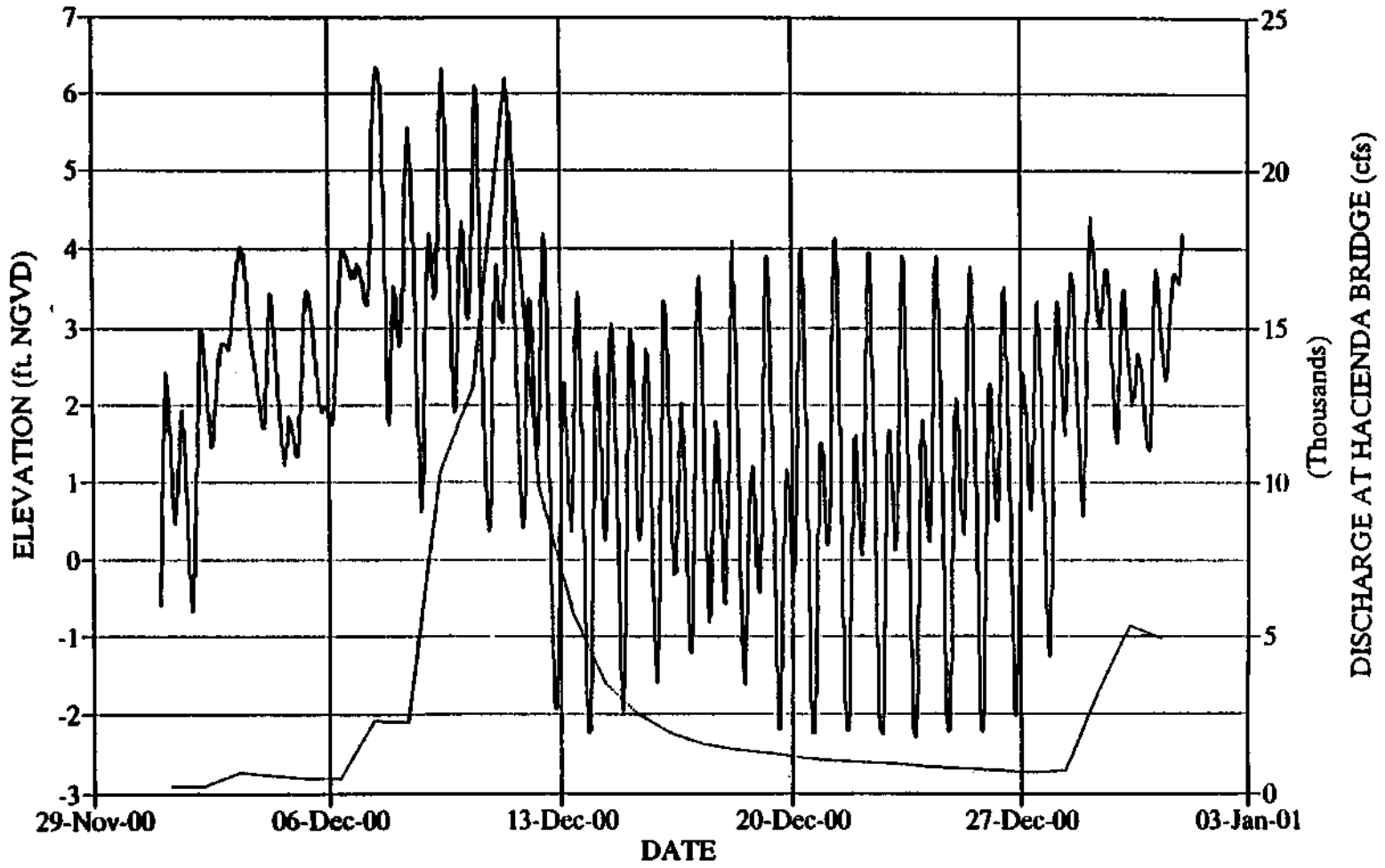
CKC/RUSSNLRV/11/2TIDE.WQ/NOV92/FLO/2-25-92

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (NOVEMBER, 1992)**

Figure

DECEMBER, 1992



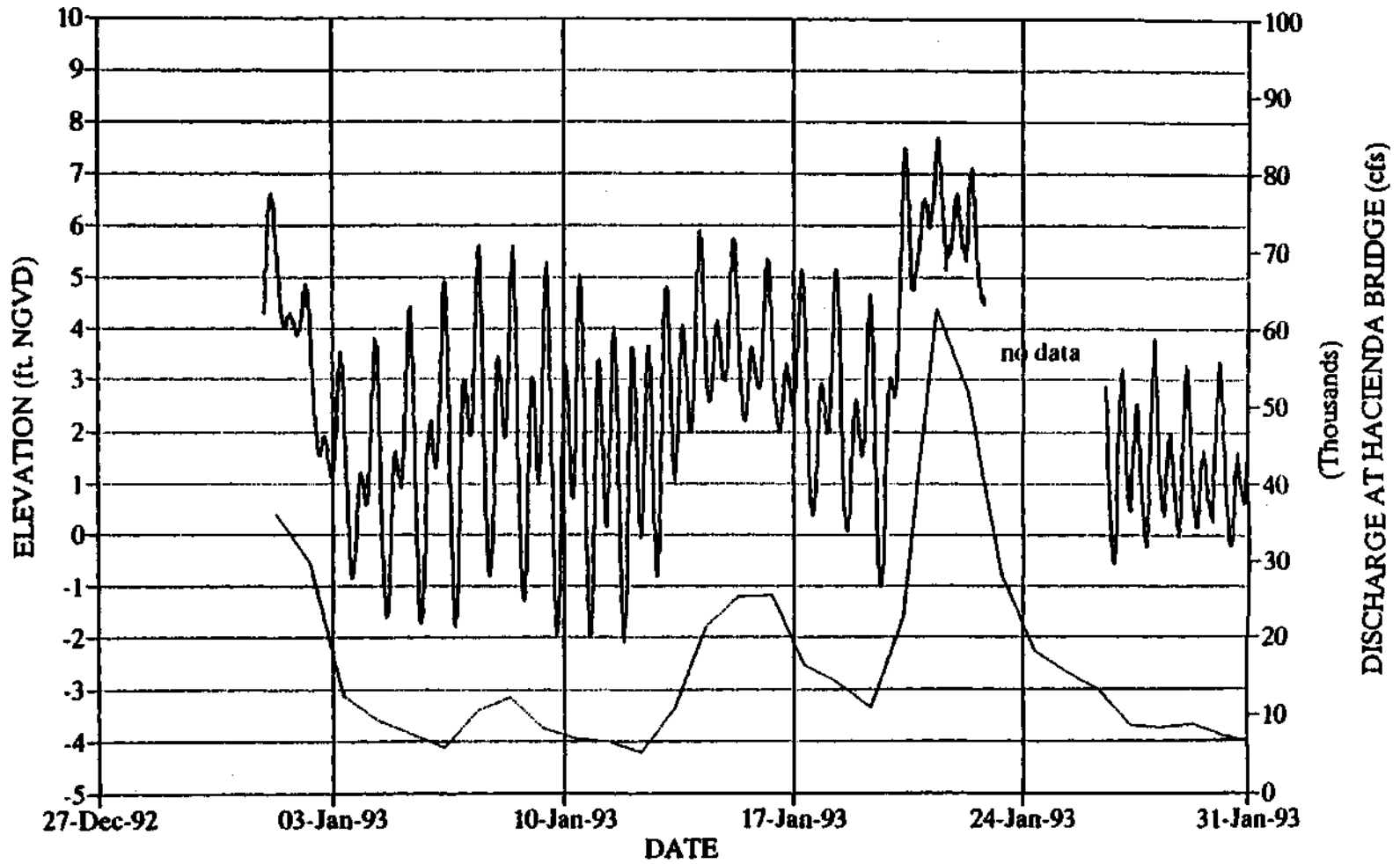
CKC/RUSSNR/VR/129/TIDE.WQ1/DBC/2FLO/2-35-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (DECEMBER, 1992)**

Figure

JANUARY, 1993



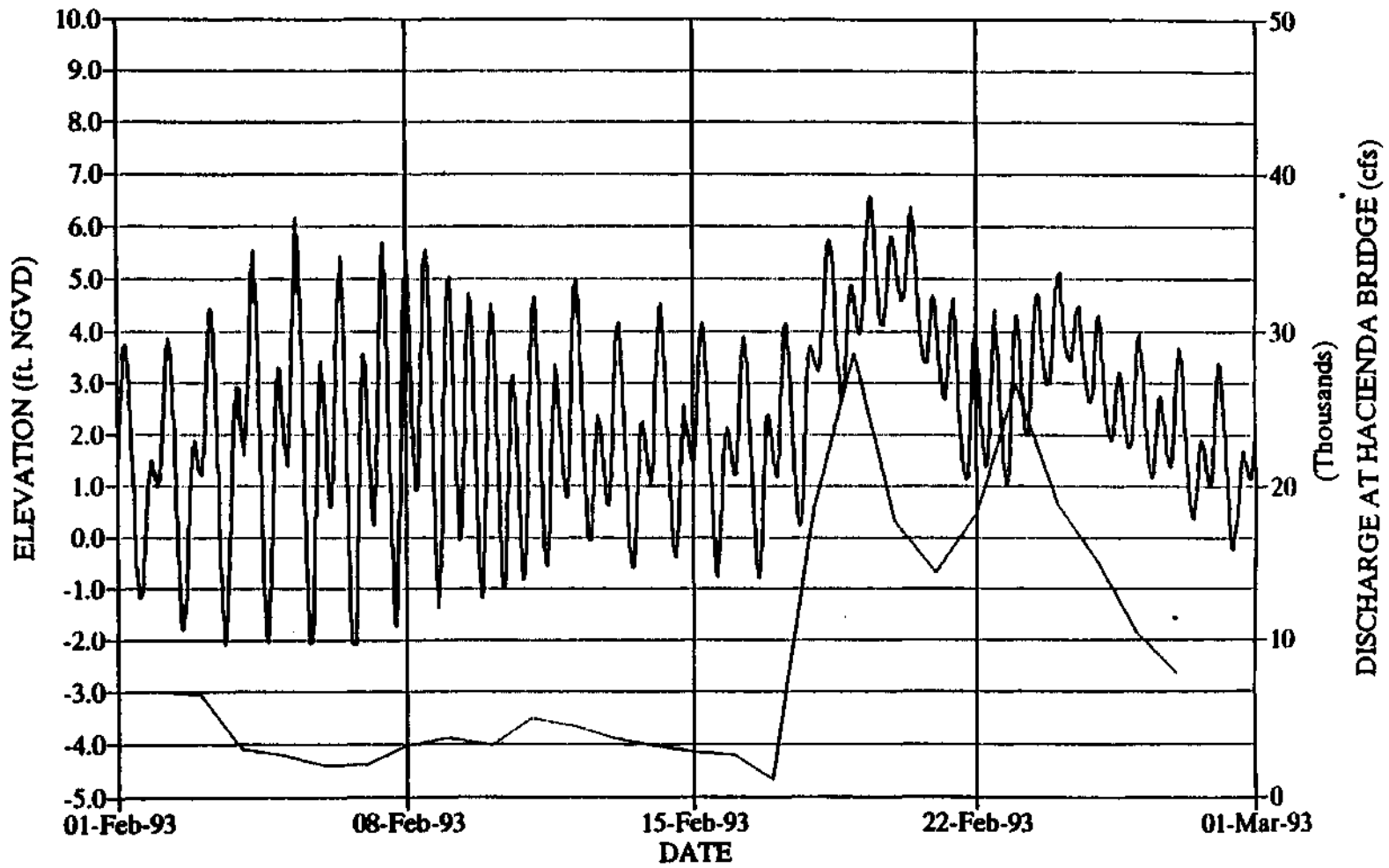
CKC/BUSSNRV/R/TIDES/0195TIDE.WQ1/JAN93/PL05-11-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (JANUARY, 1993)**

Figure

FEBRUARY, 1993



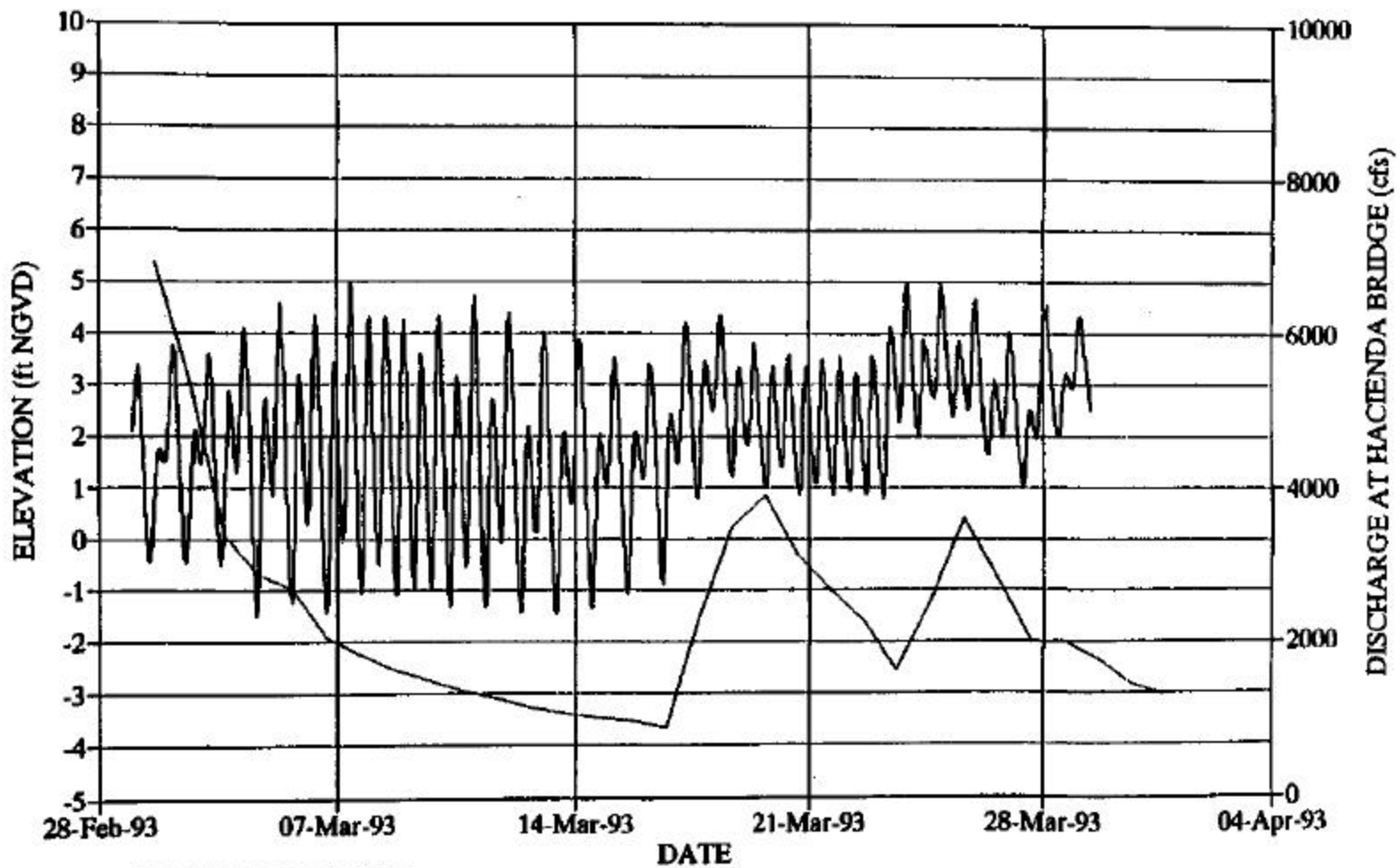
CKCRUSSNRVIR/TIDES/025TIDE.WOLFEB93FLO/5-11-93

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**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (FEBRUARY, 1993)**

Figure

MARCH, 1993



CKC8USSNRV/TIDRS4397TIDE.WQMARS93FLOW-14-93

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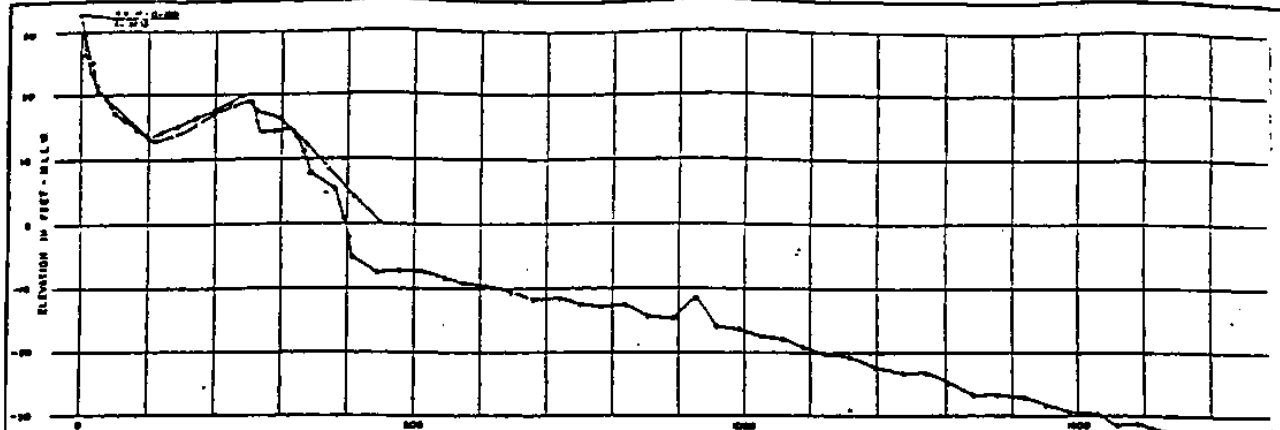
**WATER LEVELS - RUSSIAN RIVER ESTUARY  
JENNER VISITOR CENTER (MARCH, 1993)**

Figure

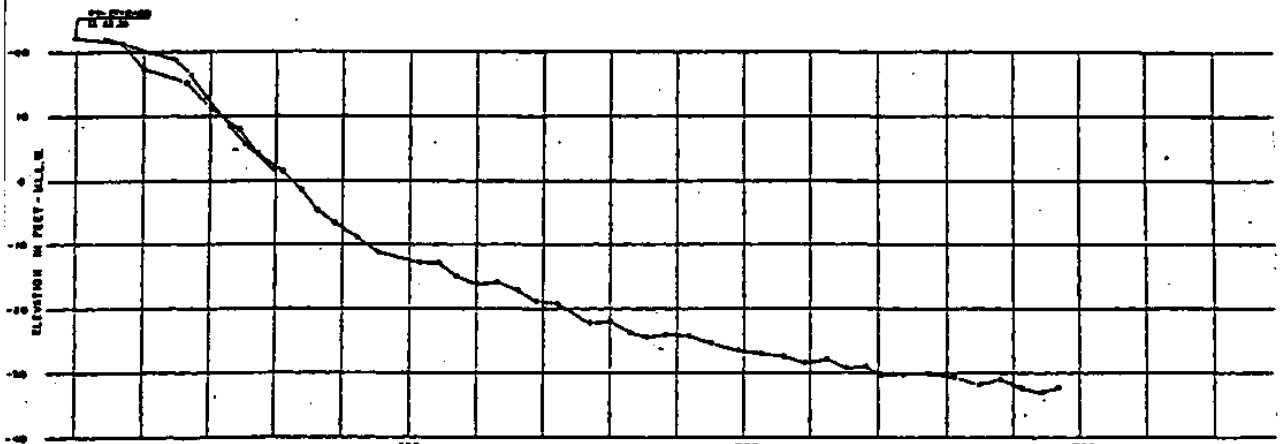
## **APPENDIX V**

### **HISTORIC BEACH PROFILES AT THE RUSSIAN RIVER ESTUARY**

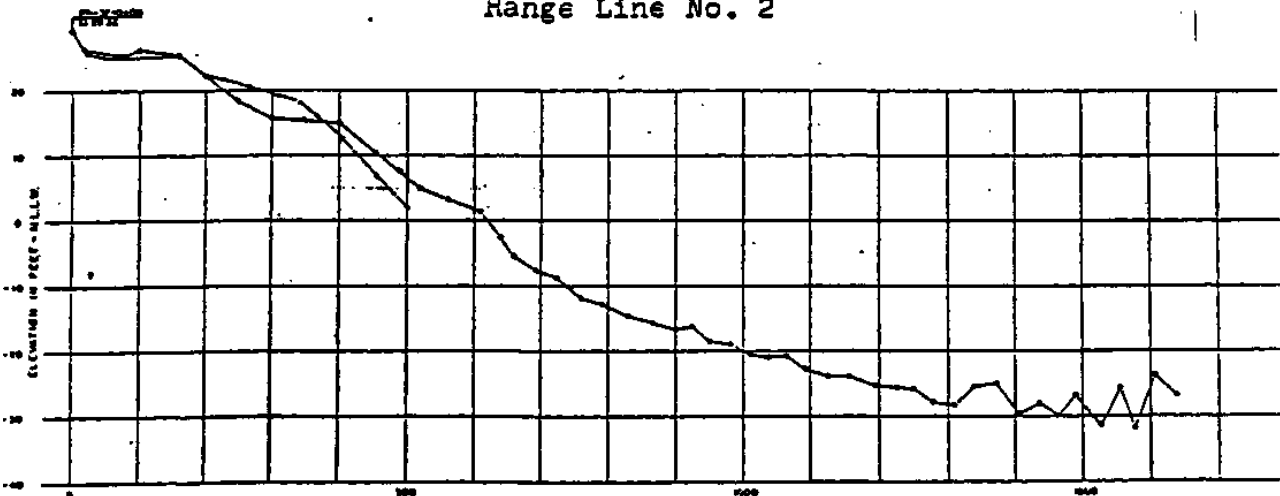
Source: U.S. Army Engineer District, San Francisco Corps of Engineers, 1965, Technical Report on Cooperative Beach Erosion Study of Coastal of Northern California, Point Delgada to Point Año Nuevo.



Range Line No. 1



Range Line No. 2



Range Line No. 3

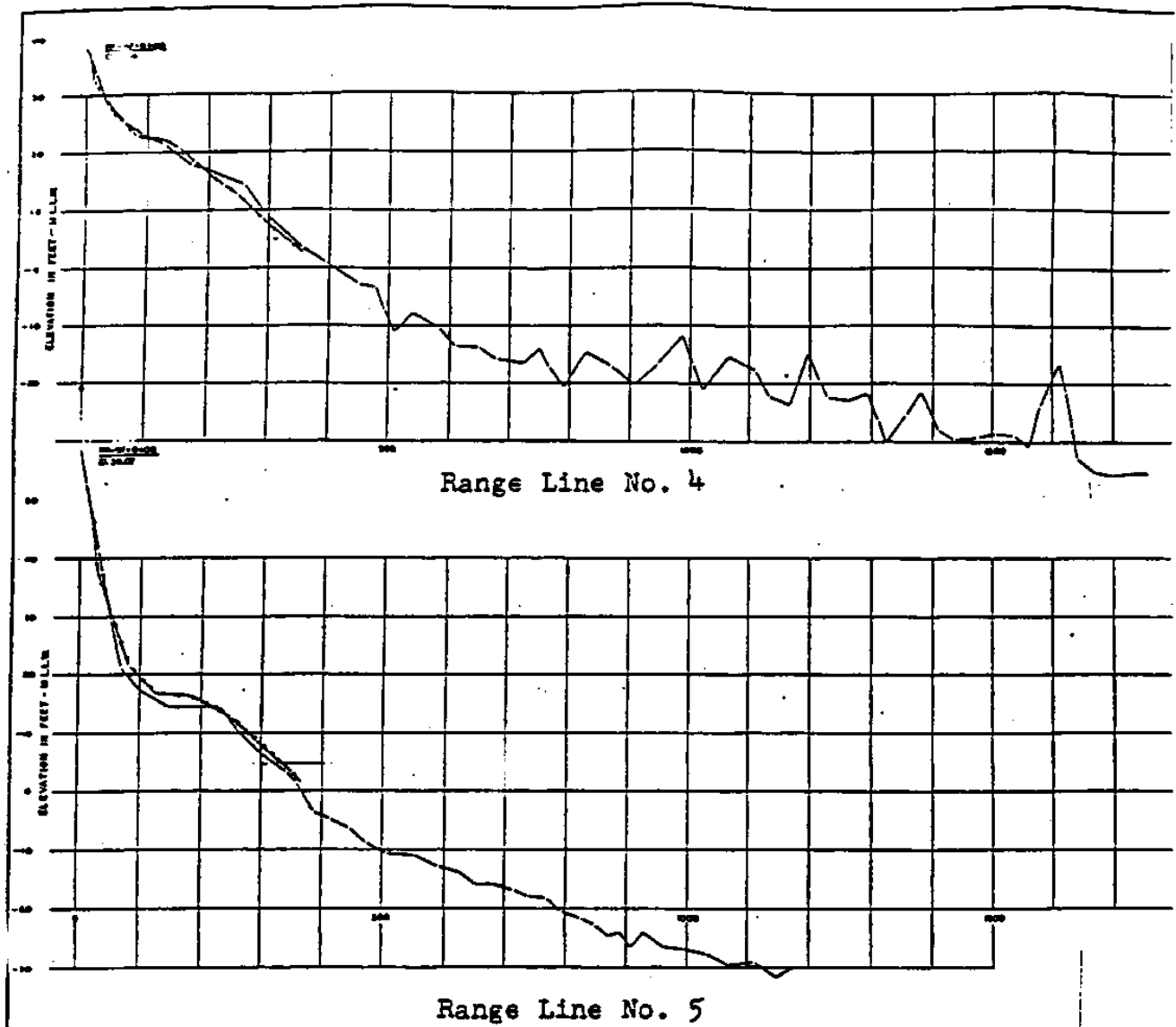
SCALE - 1" = 400' HORIZ.  
 1" = 10' VERT.

Figure 21

WATER

Range Lines Nos. 1, 2, and 3 of Beach Profiles Near the Mouth of the Russian River

(34, Fig. A-23)



SCALE: 1" = 100' HORIZ.  
1" = 10' VERT.

LEGEND  
 --- BEACH PROFILE  
 --- BEACH PROFILE

Figure 22

Range Lines Nos. 4 and 5 of Beach Profiles  
 Near the Mouth of the Russian River

(34, Fig. A-24)



## **APPENDIX VI**

### HISTORY OF ESTUARY OPENINGS RUSSIAN RIVER

## **APPENDIX VI-A**

### **ESTUARY OPENINGS MARCH 1988 to FEBRUARY 1992**

Source: Schrad, 1992

*Note:* Elevations shown in Appendix VI-A are relative to the County Gage mounted near the Visitor's Center. 0.0 feet on this County Gage is approximately +0.16 feet NGVD.

. 1988 RIVER MOUTH OPENINGS

DATE	DEPTH	TIME	EMPLOYEES INVOLVED	AUTHORITY	NOTIFICATION
03/24/88	7'+/-	?	ALBRITTON, DON-F001 T JOHNSON, JIM-J013/G227	RD. MAINT. RD. MAINT.	NO
03/25/88	7'+/-	?	ALBRITTON, GARY-E254	RD. MAINT.	NO
04/06/88	7'+/-	?	ALBRITTON, DON-F001 T PETERS, DAVE-J001/G226	RD. MAINT. RD. MAINT.	NO
04/15/88	7'+/-	?	ALBRITTON, DON-F001/J001 JOHNSON, JIM-J001 PETERS, DAVE-E368	RD. MAINT. RD. MAINT. RD. MAINT.	NO
04/17/88	7'+/-	?	ALBRITTON, DON-F001 T JOHNSON, JIM-E402 PETERS, DAVE-J001/G226	RD. MAINT. RD. MAINT. RD. MAINT.	NO
05/17/88	7'+	8:00 A.M 8:00 A.M	ALBRITTON, DON-F001 T PETERS, DAVE-G226	H. LAMBERT H. LAMBERT	05/16/88 - F&G
06/29/88	7'+	8:30 A.M 8:30 A.M 8:30 A.M	ALBRITTON, DON-F001 T PETERS, DAVE-J001/G226 JOHNSON, JIM-E402	RD. MAINT. RD. MAINT. RD. MAINT.	06/28/88 - F&G-YOUNT. F&G-COX COASTAL COMM STATE PARKS
09/10/88	9'4"	8:00 A.M	PETERS, DAVE-F001 T JOHNSON, JIM-J001/E402 DERRICK, RON-E254	DON HEAD	NO
11/12/88	7'1"	8:00 A.M	ALBRITTON, DON-F001 T PETERS, DAVE-J001/G226 JOHNSON, JIM-E402	DON HEAD	CALLS MADE BY TIM MAYER
12/13/88	7'+"	8:30 A.M	ALBRITTON, DON-F001 T PETERS, DAVE-J001/G226 JOHNSON, JIM-E402	DON HEAD	CALLS MADE BY TIM MAYER 12/12/88



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1989 RIVER MOUTH OPENINGS

DATE	DEPTH	TIME	EMPLOYEES INVOLVED	AUTHORITY	NOTIFICATION
06/06/89	8'	8:00 A.M	ALBRITTON, DON-F020 T JOHNSON, JIM-E402 PETERS. DAVE-J001	RD. MAINT.	LIST CALLED BY VELLUTINI
10/19/89	7'	9:30 A.M	ALBRITTON, DON-F001 T PETERS. DAVE-J001/G226 OSBORNE, MIKE - PHOTOS	RD. MAINT.	LIST CALLED BY SCHRAD
11/09/89	9'	2:00 P.M	ALBRITTON, DON-F001 T JOHNSON, JIM-E402/J001	RD. MAINT.	LIST CALLED BY SCHRAD
12/12/89	9'	1:30 P.M	ALBRITTON, DON-F001 T JOHNSON, JIM-E402 PETERS, DAVE G226/J001	RD. MAINT	LIST CALLED BY SCHRAD

1990 RIVER MOUTH OPENINGS

DATE	DEPTH	TIME	EMPLOYEES INVOLVED	AUTHORITY	NOTIFICATION
04/14/90	8.5'	9:00 AM	DON ALBBITTON-F001 T DAVE PETERS- J001/E323 JIM JOHNSON-E402 JAY ELDRIDGE- E395	RD. MAINT	LIST CALLED BY SCHRAD
05/04/90	7.5'	1:00 PM	DON ALBRITTON-F001 T DAVE PETERS-J001/E332 JIM JOHNSON-E402	RD. MAINT	LIST CALLED BY SCHRAD
05/25/90	9.2'	8:00 AM	DON ALBRITTON-F001 T DAVE PETERS-J001/E322 JIM JOHNSON-E402	RD. MAINT	LIST CALLED BY SCHRAD
10/11/90	7'	8:30 AM -1:00 PM	DON ALBRITTON-F001 T JIM JOHNSON-J001/E402	RD. MAINT	LIST CALLED BY SCHRAD
11/02/90	8'	11:00 AM	DON ALBRITTON ERIC BOSS-F001 T JIM JOHNSON-J001/E402	RD. MAINT	LIST CALLED BY RUSSELL -



1991 RIVER MOUTH OPENINGS

```

-----
DATE      DEPTH  TIME      EMPLOYEES INVOLVED      AUTHORITY  NOTIFICATION
-----
01/18/91  6'2"   11:30 AM  JOHNSON, JIM-J001/E402  RD. MAINT  LIST CALLED
          TO      ESPOSTI, JOHN-F020      BY SCHRAD
          3:30 PM  ELDRIDGE, JAY
01/18/91  ***** ***** ATTEMPT      UNSUCCESSFUL- TRY AGAIN  ON 01/23/91*
01/23/91  7'2"   11:30 AM  JOHNSON, JIM-J001/E402  RD. MAINT. RE-CALLED
          ESPOSTI, JOHN-F020      COASTAL
          ELDRIDGE. JAY          COMM. ONLY
02/15/91  7'2"   1:30 PM   JOHNSON, JIM-E402      ED WALKER  LIST CALLED
          ESPOSTI, JOHN-F020      BY ESPOSTI
          ELDRIDGE, JAY-J001
03/01/91  8'      2:30 PM   JOHNSON, JIM-E402/J001  RD. MAINT  LIST CALLED
          ESPOSTI, JOHN-F020
06/07/91  7'      4:00 PM   JOHNSON, JIM-E402/J001  RD. MAINT  LIST CALLED
          ELDRIDGE, JAY-F001      BY SCHRAD
07/03/91  6'      10:30 AM  JOHNSON, JIM-E402/J013  RD. MAINT  LIST CALLED
          ELDRIDGE, JAY-F001/L086  BY SCHRAD
09/30/91  7.2'    12:20 PM  JOHNSON, JIM-J001      RD. MAINT  LIST CALLED
          ELDRIDGE, JAY-F001/L086  BY SCHRAD
10/29/91  8.5'    9:00 AM   JOHNSON, JIM-J013      RD. MAINT  LIST CALLED
          ELDRIDGE, JAY-F020/L147  BY SCHRAD
11/18/91  8.8'    2:30 PM   JOHNSON, JIM-E402      RD. MAINT  LIST CALLED
          ELDRIDGE, JAY- J001      BY SCHRAD
          ESPOSTI, JOHN-F020/L147
12/12/91          ***** ATTEMPT UNSUCCESSFUL***** ***** *****
12/13/91          ***** ATTEMPT UNSUCCESSFUL***** ***** *****
12/16/91  8.5'    10:00 AM  JOHNSON. JIM-J013      RD. MAINT  LIST CALLED
          ELDRIDGE. JAY-E402      BY SCHRAD
          ESPOSTI. JOHN-F020/L147
-----

```



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1992 RIVER MOUTH OPENINGS

DATE	DEPTH	TIME	EMPLOYEES INVOLVED	AUTHORITY	NOTIFICATION
01/19/92	10'	1:00 PM	ELDRIDGE, JAY-F001/J001 JOHNSON, JIM-E402	ROAD MAINT	LIST CALLED BY SCHRAD
01/31/92	9.5'	1:00 PM	ELDRIDGE, JAY-F001/J001 JOHNSON, JIM-E402	ROAD MAINT	LIST CALLED BY SCHRAD
02/10/92	10.6'	12 NOON	ELDRIDGE, JAY-F001/J001 JOHNSON, JIM-E402	ROAD MAINT	LIST CALLED BY SCHRAD



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## **APPENDIX VI-B**

ESTUARY OPENINGS: 1930 - 1974 Source: Rice, 1974



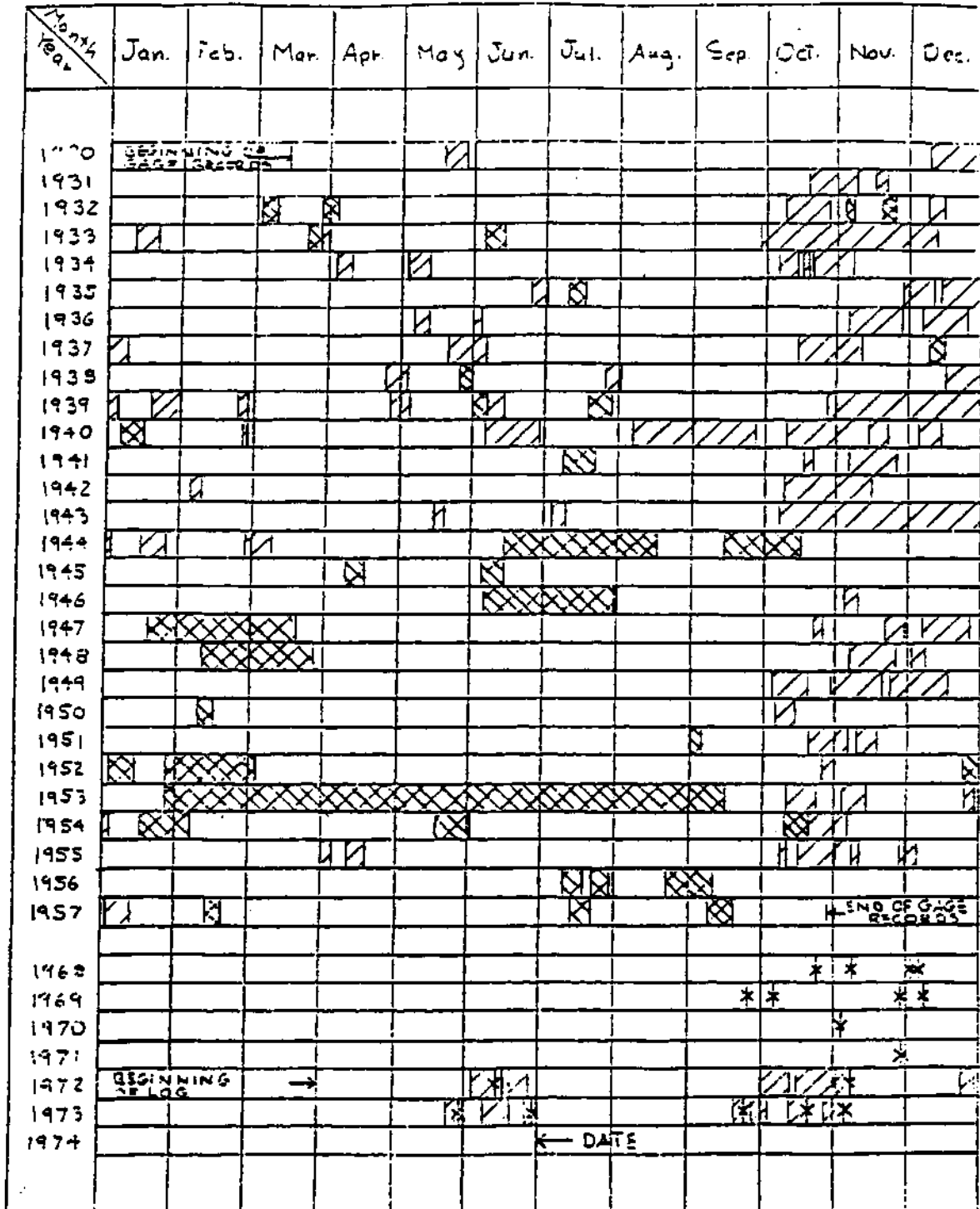
CLOSURE PERIODS



MODERATELY INCORPORATED RECORDS



ARTIFICIAL DATA (1968 → 1971)



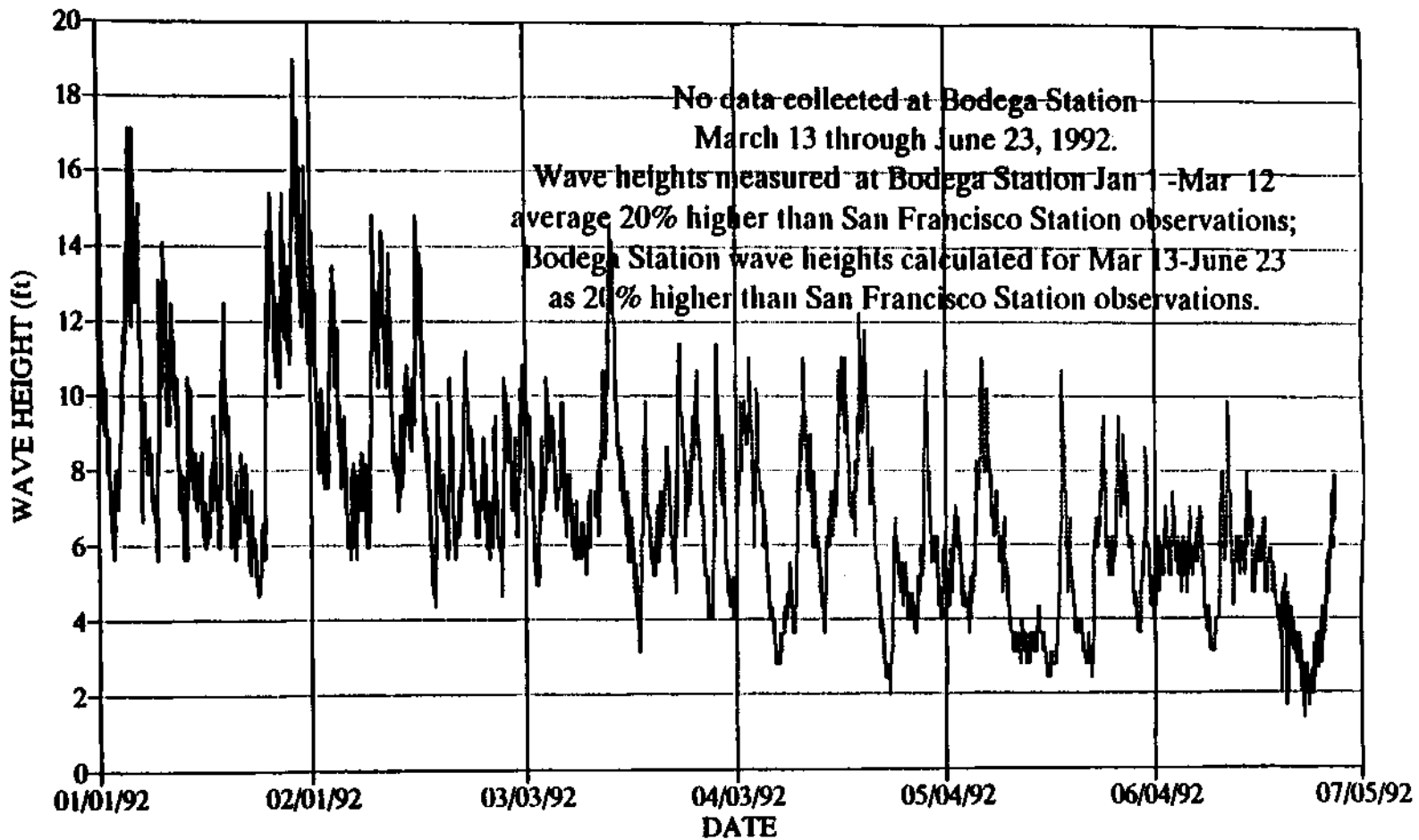
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Consultants in Hydrology

Figure



**APPENDIX VII**

SIGNIFICANT WAVE HEIGHTS AT BODEGA STATION  
JANUARY 1992 - MAY 1993

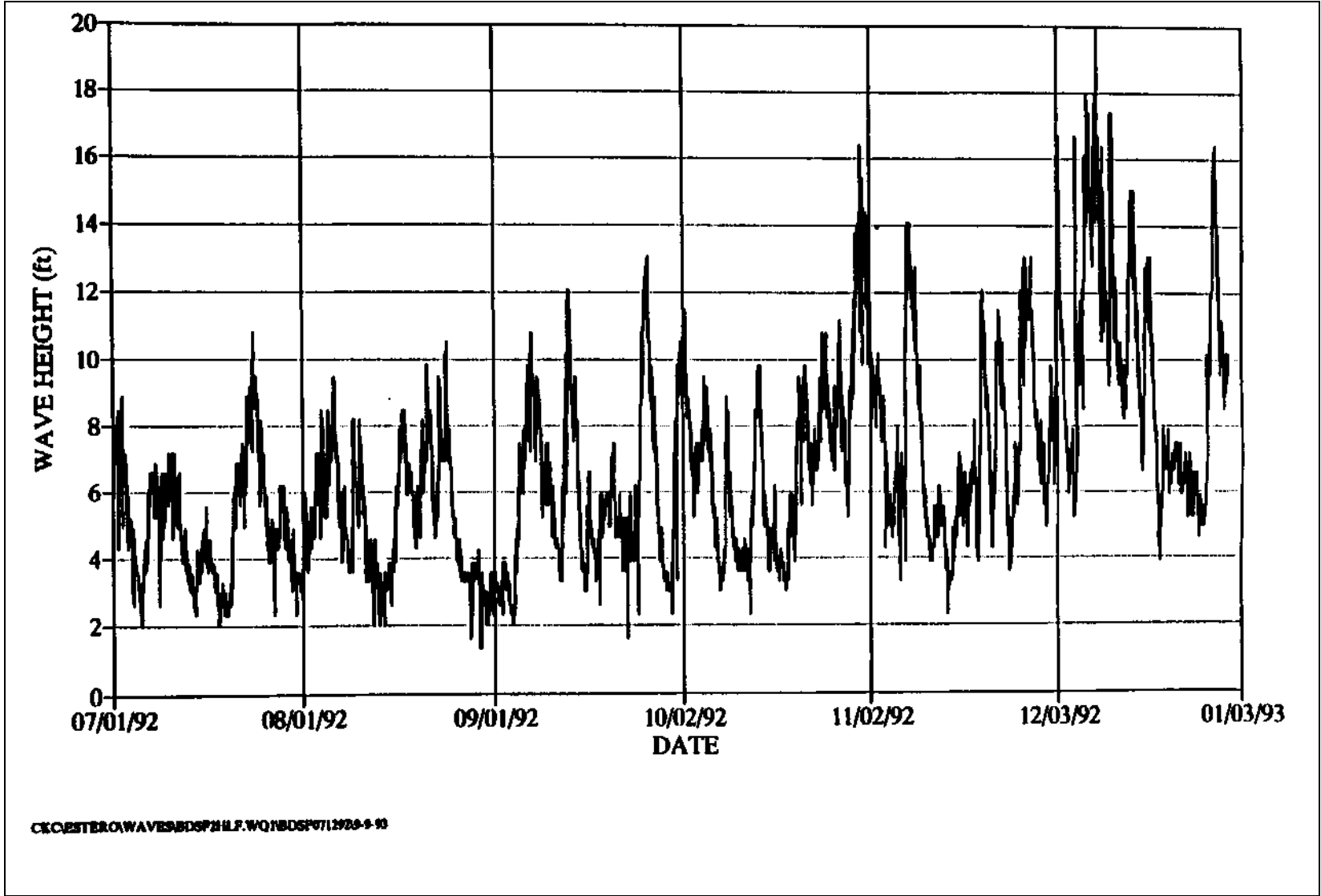


CKC\ESTER\WAVES\BDDGAS\F2.WQ\BDDG\#1992-9-93

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 Consultants in Hydrology

**1992 SIGNIFICANT WAVE HEIGHTS MEASURED AT  
 BODEGA STATION (NBDC # 46013; 38.2N/124.0W). MAR12-JUNE23  
 CALCULATED FROM SAN FRANCISCO STATION OBSERVATIONS.**

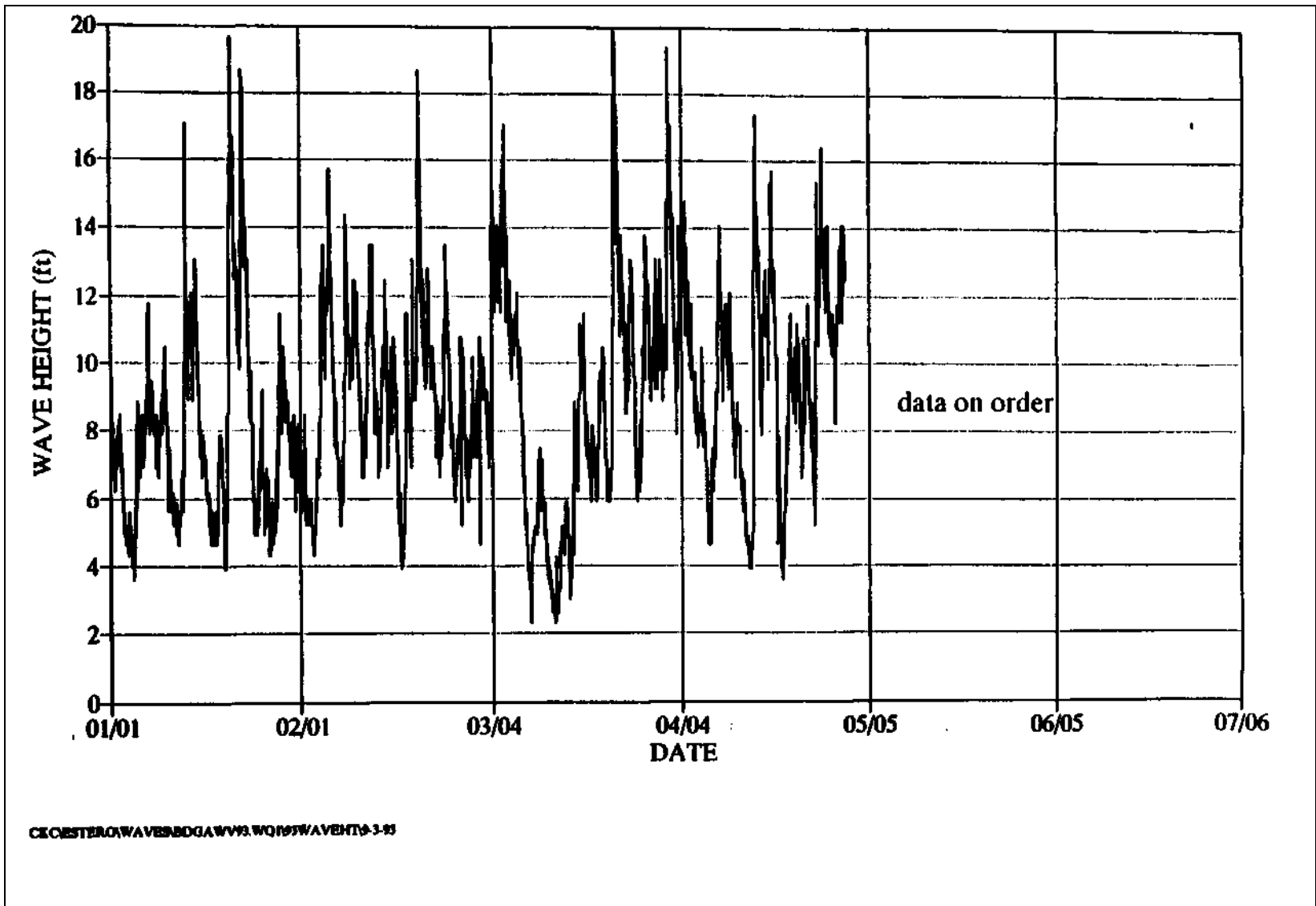
Figure



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 Consultants in Hydrology

**1992 SIGNIFICANT WAVE HEIGHTS MEASURED AT  
 BODEGA STATION (NBDC # 46013; 38.2N/124.0W)**

Figure



CECESTERC\WAVE\BODGA\WV93.WQ\93\WAVEHTA-3-93

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**1993 SIGNIFICANT WAVE HEIGHTS MEASURED AT BODEGA  
STATION (NBDC # 46013; 38.2N/J24.0W)**

Figure

## **APPENDIX VIII**

### **MINIMUM STREAMFLOW REQUIREMENTS IN THE RUSSIAN RIVER**

Source: State Water Resources Control Board Decision 1610, April 1986

# STREAMFLOW REQUIREMENTS

PER STATE WATER RESOURCES CONTROL BOARD DECISION 1810, APRIL 1985

ALWAYS- 25 CFS IN EAST FORK COYOTE DAM TO  
CONFLUENCE OF EAST FORK WITH RUSSIAN RIVER

- \* CRITICAL YEAR - SEE SCHEDULE IA
- \* DRY YEAR - SEE SCHEDULE IB
- \* NORMAL YEAR - SEE SCHEDULE IC

**SCHEDULE IA CRITICAL YEAR FLOW REQUIREMENTS OF VARIOUS RUSSIAN RIVER REACHES AND TRIBUTARIES**

1. DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER CONFLUENCE - SEE IAa
2. RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH - SEE IA b
3. RUSSIAN RIVER BETWEEN EAST FORK CONFLUENCE AND DRY CREEK - SEE IA c
4. POINTS OF SCWA WATER DIVERSION ON RUSSIAN RIVER ( WOHLER & MIRABEL ) TO MOUTH - SEE IA d

**SCHEDULE IB DRY YEAR FLOW REQUIREMENTS OF VARIOUS RUSSIAN RIVER REACHES AND TRIBUTARIES**

1. DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER CONFLUENCE - SEE IBa
2. RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH - SEE IB b
3. RUSSIAN RIVER BETWEEN EAST FORK CONFLUENCE AND DRY CREEK - SEE IB c
4. POINTS OF SCWA WATER DIVERSIONS ON RUSSIAN RIVER ( WOHLER & MIRABEL ) TO MOUTH - SEE IB d

**SCHEDULE IC NORMAL YEAR FLOW REQUIREMENTS OF VARIOUS RUSSIAN RIVER REACHES AND TRIBUTARIES**

1. DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER CONFLUENCE - SEE ICa
2. RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH - SEE IC b
3. RUSSIAN RIVER BETWEEN EAST FORK CONFLUENCE AND DRY CREEK - SEE IC c
4. POINTS OF SCWA WATER DIVERSION ON RUSSIAN RIVER ( WOHLER & MIRABEL ) TO MOUTH - SEE IC d

**IAa DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER**  
4/1 - 10/31 25 cfs  
11/1 - 3/31 75 cfs

**IA b RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH**  
MINIMUM 35 cfs †

**IA c RUSSIAN RIVER BETWEEN EAST FORK AND DRY CREEK**  
25 cfs

**IA d POINTS OF SCWA DIVERSION ON RUSSIAN RIVER TO MOUTH**  
35 cfs

**IBa DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER**  
4/1 - 10/31 25 cfs  
11/1 - 3/31 75 cfs

**IB b RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH**  
MINIMUM 85 cfs †

**IB c RUSSIAN RIVER BETWEEN EAST FORK AND DRY CREEK**  
75 cfs

**IB d POINTS OF SCWA DIVERSION ON RUSSIAN RIVER TO MOUTH**  
85 cfs

**ICa DRY CREEK, WARM SPRINGS DAM TO RUSSIAN RIVER**  
1/1 - 4/30 75 cfs  
5/1 - 10/31 80 cfs  
11/1 - 12/30 105 cfs

**IC b RUSSIAN RIVER BETWEEN DRY CREEK AND MOUTH**  
MINIMUM 125cfs

**IC c RUSSIAN RIVER BETWEEN EAST FORK & DRY CREEK**

FROM 1/1 - 3/31 150cfs  
FROM 4/1 - 5/31 185cfs

**A. IF COMBINED STORAGE\*\* OF LAKE PILLSBURY & LAKE MENDOCINO ON MAY 31 IS > 150,000 A.F. OR 90% OF WATER SUPPLY STORAGE, WHICHEVER IS LESS, THEN:** 6/1 - 8/31 185cfs  
9/1 - 12/31 150cfs

**OR**

**B. IF COMBINED STORAGE\*\* OF LAKE PILLSBURY & LAKE MENDOCINO ON MAY 31 IS BETWEEN 130,000 A.F. OR 80% OF STORAGE, WHICHEVER IS LESS AND 150,000 A.F. OR 90% OF STORAGE, WHICHEVER IS LESS, THEN:** 6/1 - 12/31 150cfs  
AND IF FROM 10/1 - 12/31 STORAGE IN LAKE MENDOCINO < 30,000 A.F. 75cfs

**OR**

**C. IF COMBINED STORAGE \*\* OF LAKE PILLSBURY & LAKE MENDOCINO ON MAY 31 IS 130,000 A.F. OR 80% OF COMBINED STORAGE, WHICHEVER IS LESS, THEN:** 6/1 - 12/31 75cfs

**IC d POINTS OF SCWA DIVERSION ON RUSSIAN RIVER TO MOUTH**  
125 cfs

† WHEN SUCH FLOWS CANNOT BE MET BY RELEASE FROM LAKE SONOMA UNLESS LAKE ELEVATION < 292.0  
\* FOR DEFINITION SEE OPPOSITE SIDE

\*\* WATER SUPPLY STORAGE IS DEFINED AS STORAGE VOLUME BELOW 1828.3 FEET IN LAKE PILLSBURY & BELOW ELEVATION 749.0 FEET IN LAKE MENDOCINO.

**APPENDIX IX**

SURVEY FORM SENT TO  
POTENTIALLY AFFECTED  
PROPERTY OWNERS

NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
AP #: \_\_\_\_\_

Return to: Sonoma County Planning Department  
Melanie Perry  
575 Administration Drive, Room 105A  
Santa Rosa CA 95403

Re: Opening of the Mouth of the Russian River

1. Is your property affected by flooding when the River mouth is closed? \_\_\_\_\_ Yes \_\_\_\_\_ No

2. What type of property is affected?

- \_\_\_\_\_ Residential
- \_\_\_\_\_ Agricultural
- \_\_\_\_\_ Commercial

3. RESIDENTIAL

a. Is your yard flooded? \_\_\_\_\_ Yes \_\_\_\_\_ No

b. What is the use of this land and percentage of parcel affected?

\_\_\_\_\_  
\_\_\_\_\_

c. Do you have a boat dock that would be damaged by flooding? \_\_\_\_\_ Yes \_\_\_\_\_ No

d. Are any accessory buildings flooded? \_\_\_\_\_ Yes \_\_\_\_\_ No If so, what is the accessory building square footage affected?

e. Would your residence flood if the River mouth is closed? \_\_\_\_\_ Yes \_\_\_\_\_ No Do you know at what height of the River (measured at the Jenner gauge) that your residence floods?

- \_\_\_\_\_ 8 feet
- \_\_\_\_\_ 9 feet
- \_\_\_\_\_ 10 feet
- \_\_\_\_\_ Other

f. What is the use of the area of your residence that would be flooded?

- \_\_\_\_\_ Foundation / sq. ft. \_\_\_\_\_
- \_\_\_\_\_ Basement / sq. ft. \_\_\_\_\_
- \_\_\_\_\_ Living Area / sq. ft. \_\_\_\_\_

g. What is the use of the living area affected and square footage? \_\_\_\_\_

\_\_\_\_\_

4. AGRICULTURAL

a. How much land in terms of acreage is affected by flooding when the mouth is closed?

\_\_\_\_\_  
\_\_\_\_\_

b. What is the use of the land affected?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



c. At what height of the river is your agricultural land substantially affected? (measured at the Jenner gauge.)

- 7 1/2 feet
- 8 feet
- 9 feet
- 10 feet
- Other

d. How does the flooding affect your agricultural operation?

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5. COMMERCIAL

a. What is the commercial use of your property? \_\_\_\_\_

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b. What is the use of any outdoor area affected?

- Parking Lot
- Landscaping
- Other, describe: \_\_\_\_\_

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c. At what River height (measured at the Jenner gauge), is your property substantially affected by flooding?

- 8 feet
- 9 feet
- 10 feet
- Other

d. What is the use of the structure that would be affected?

- Foundation / sq. ft. \_\_\_\_\_
- Basement / sq. ft. \_\_\_\_\_
- Storage / sq. ft. \_\_\_\_\_
- Office/sq. ft. \_\_\_\_\_
- Public Area / sq. ft. \_\_\_\_\_
- Other / sq. ft. \_\_\_\_\_

e. Describe how your commercial operation would be affected if the River mouth remained closed and flooding occurred? \_\_\_\_\_

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6. Other Comments: \_\_\_\_\_

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