

RUSSIAN RIVER ESTUARY STUDY 1992-1993



Sonoma County

Russian River Estuary Study 1992-1993

prepared for

Department of Planning
Sonoma County
Melanie Heckel, Project Manager

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

Peter Goodwin, Ph.D., P.E. and C. Kelly Cuffe, M.S.

Philip Williams and Associates, Ltd.
Consultants in Hydrology
Pier 35, The Embarcadero
San Francisco, CA 94133

Limnological and Biological Aspects
of an Estuary Management Plan

prepared by

Jennifer L. Nielsen** and Theo Light

** Research Fisheries Scientist
USDA U.S. Forest Services
Pacific Southwest Research Station
800 Buchanan St.
Albany, CA 94710

Social Impacts of an Estuary
Management Plan

prepared by

Melanie Heckel
Planner IV
Sonoma County Planning Department
with assistance from the
Russian River Estuary County Task Force***

* Russian River Estuary Interagency Task Force Members

Bill Cox, California Dept. of Fish and Game
Valerie Gizinski, State Dept. of Parks and Recreation
Bob Merrill, California Coastal Commission
Jennifer Vick, U.S. Army Corps of Engineers
Chris Mobley, National Marine Fisheries Service
Mike Long, U.S. Fish and Wildlife Service
Diana Jacobs, State Lands Commission
Julia Mclver, California Coastal Conservancy
Melanie Heckel, Sonoma County Planning Department

*** Russian River Estuary County Task Force Members

John Schrad, Public Works
Eric Mays, Building Department
Ed Rogers, County Assessor
Doug Gow, Risk Management
Mike Treinen, Environmental Health
Randy Poole/Bob Morrison, Water Agency
Melanie Heckel, Planning Department

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GLOSSARY OF TERMS

GLOSSARY OF TERMS

Actual Tidal Prism	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)
Barrier Beach	the sand bar which is formed at the entrance of an estuary, preventing tidal exchange
Diurnal Tidal Prism	the volume of water stored in a lagoon or estuary between MHHW and MLLW
Estuary	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)
Inlet Channel	the channel which crosses the barrier beach and connects the ocean to the Russian River Estuary
Lagoon	an enclosed coastal body of water with no or periodic connection to the open ocean which is recharged by fresh water from land drainage
Mean Tidal Prism	the volume of water stored in a lagoon or estuary between MHW and MLW
MHHW	Mean Higher High Water
MHW	Mean High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
NGVD	National Geodetic Vertical Datum
Potential Tidal Prism	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

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CONTACTED DURING THIS STUDY

R. Morrison Sonoma County Water Agency

J. Mortenson Bodega Bay Resident

Eric Mayes Department of Public Works, Sonoma County

Jim Johnson Department of Public Works, Sonoma County

Bill Cox Department of Fish & Game

National Marine Fisheries

Patricia Kirk National Oceanographic Data Center

NOAA

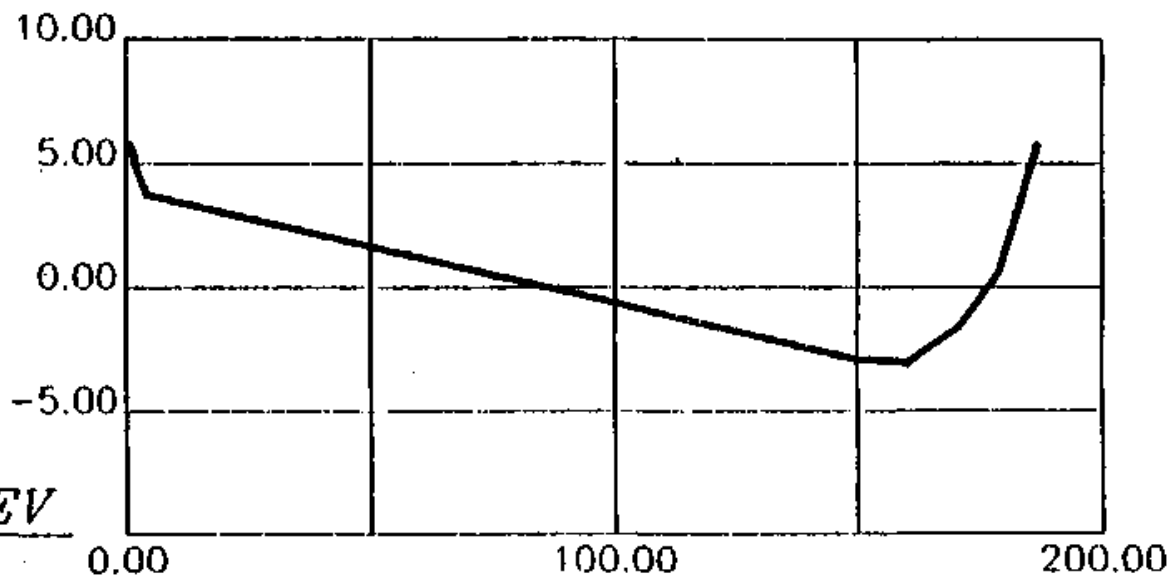
John Shrad Department of Public Works, Road Maintenance Division,
Sonoma County

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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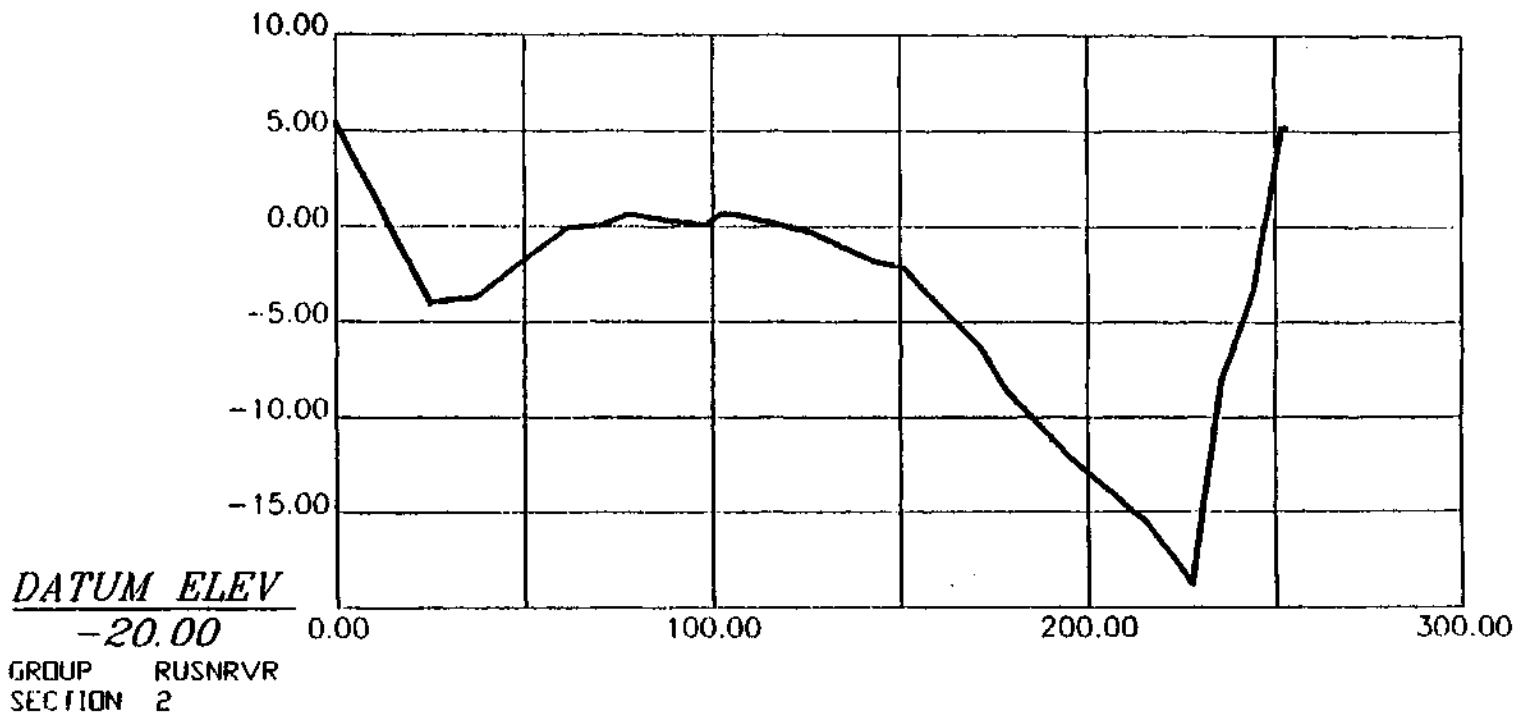


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Pier 35, The Embarcadero
San Francisco, CA 94133
(415) 981-8383

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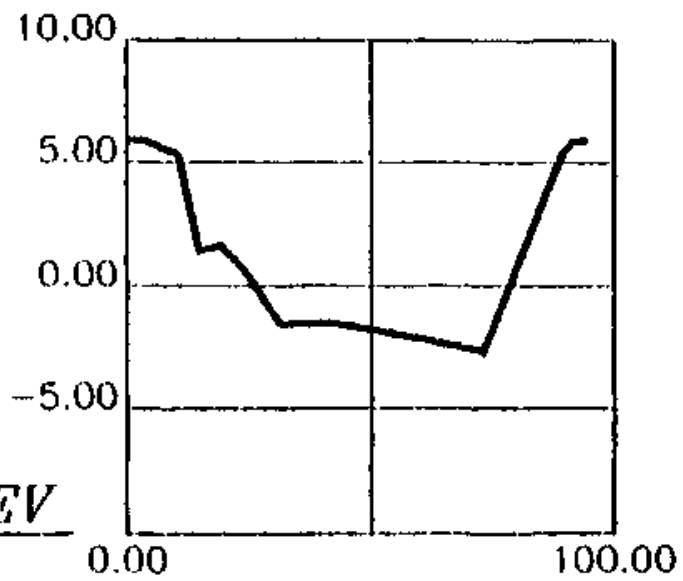


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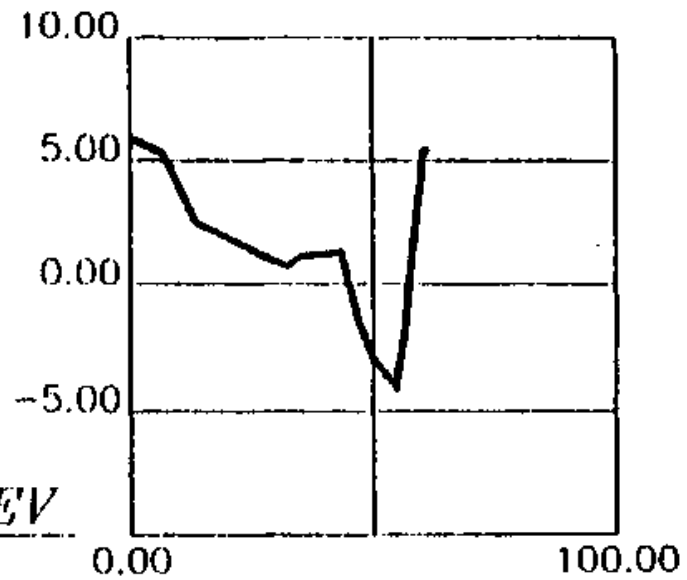


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P.O. Box 35, The Embarcadero
San Francisco, CA 94133
(415) 981-8363

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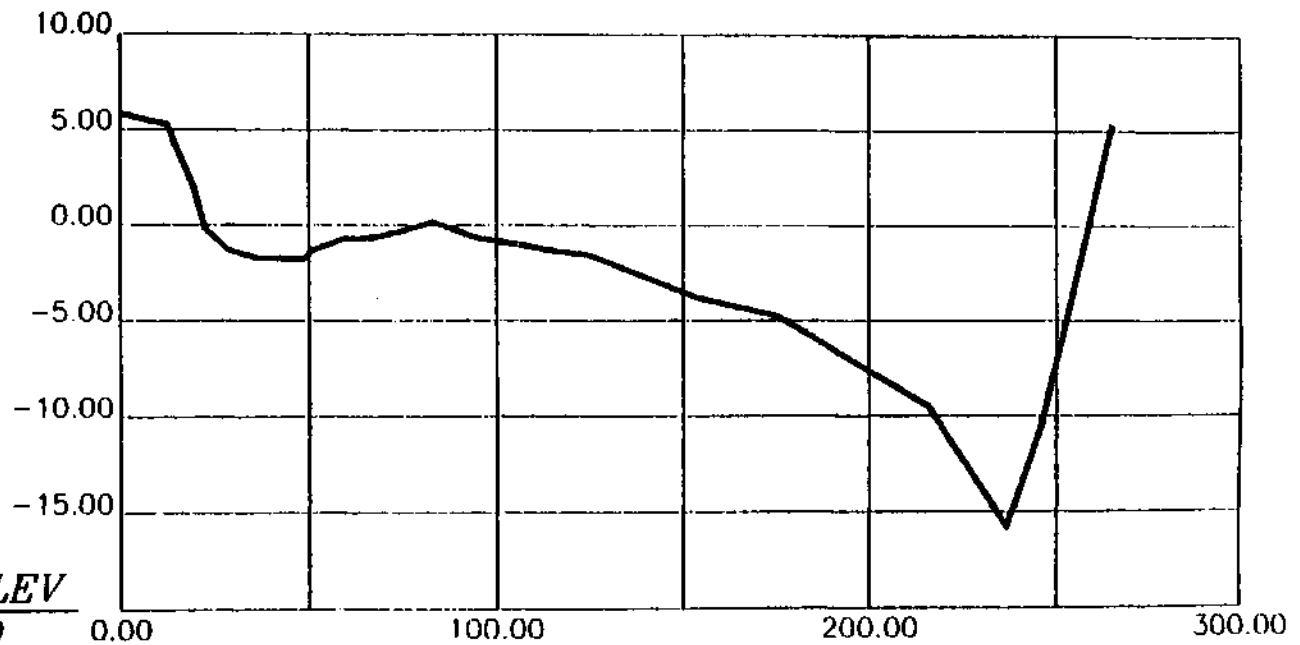


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 Pier 35, The Embarcadero
 San Francisco, CA 94133
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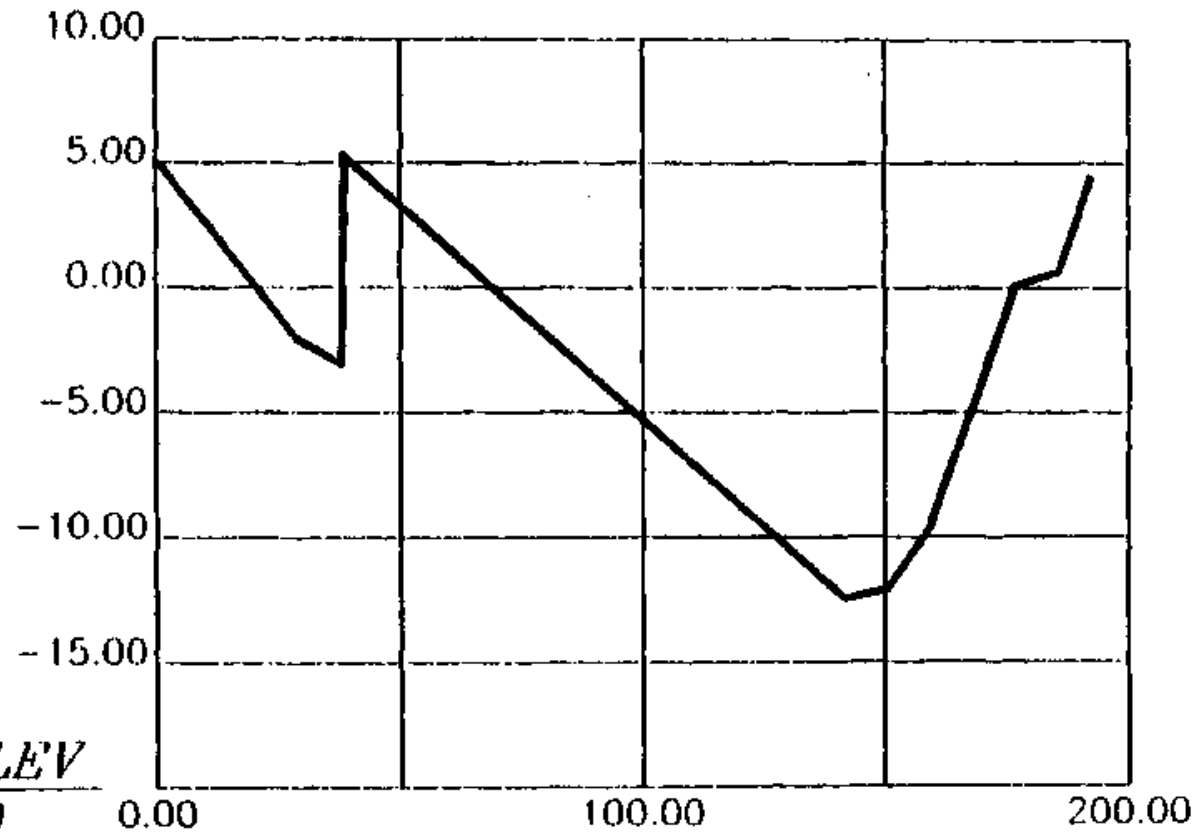


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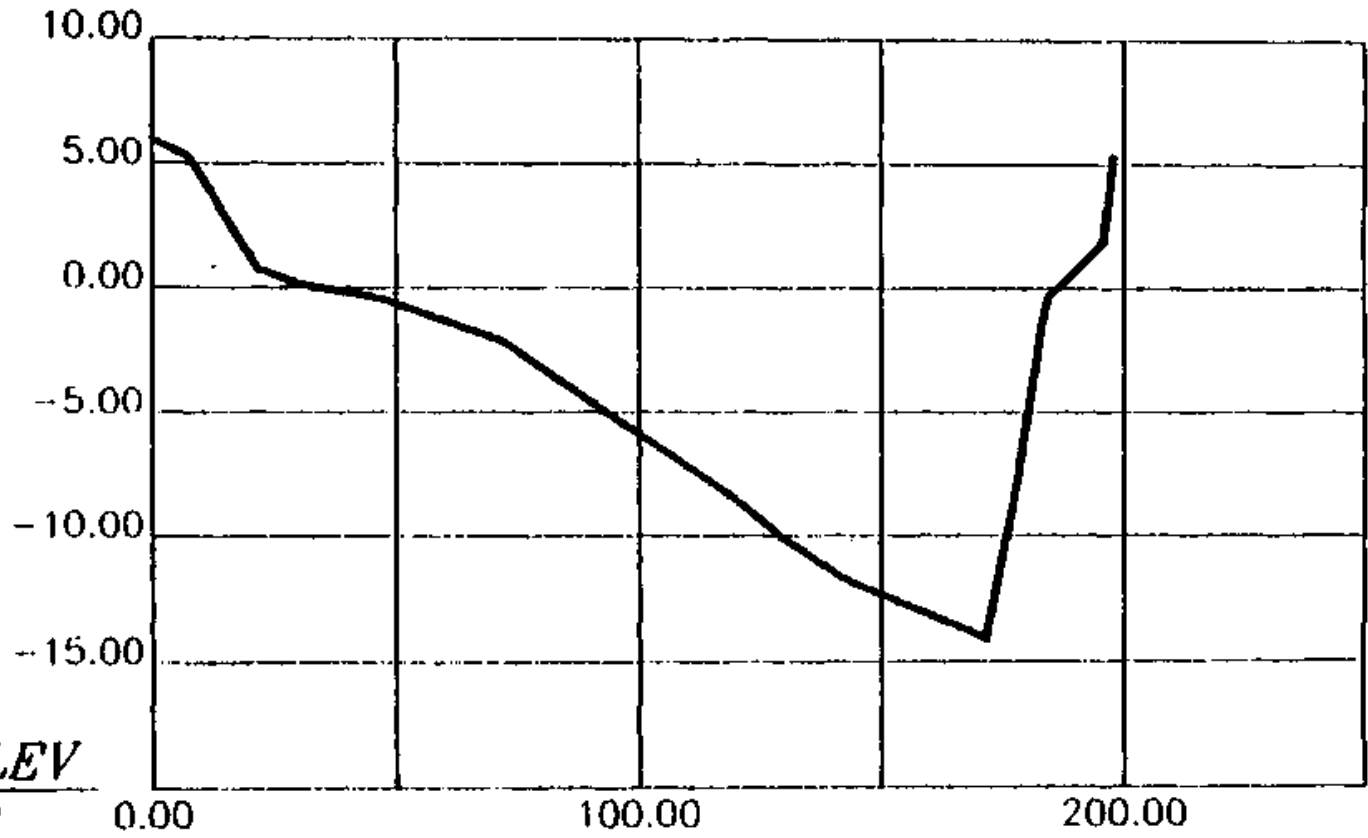


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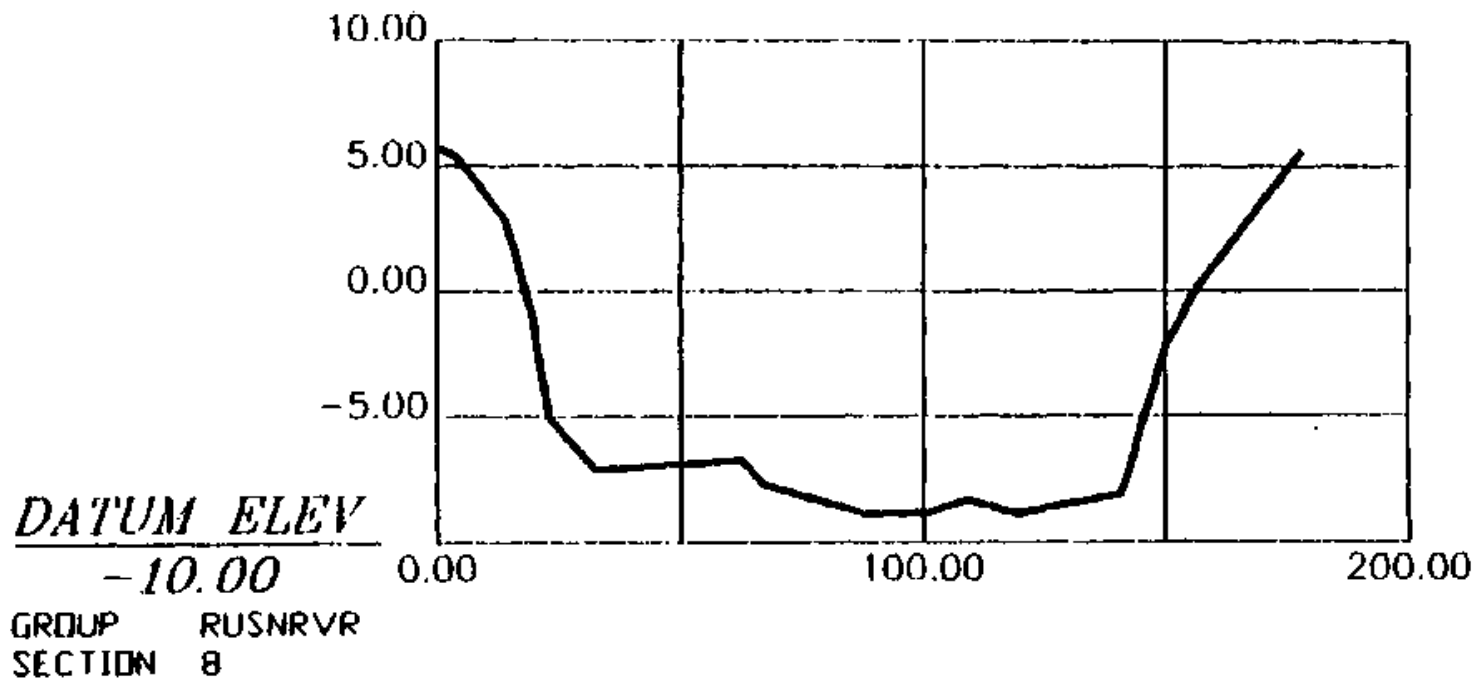


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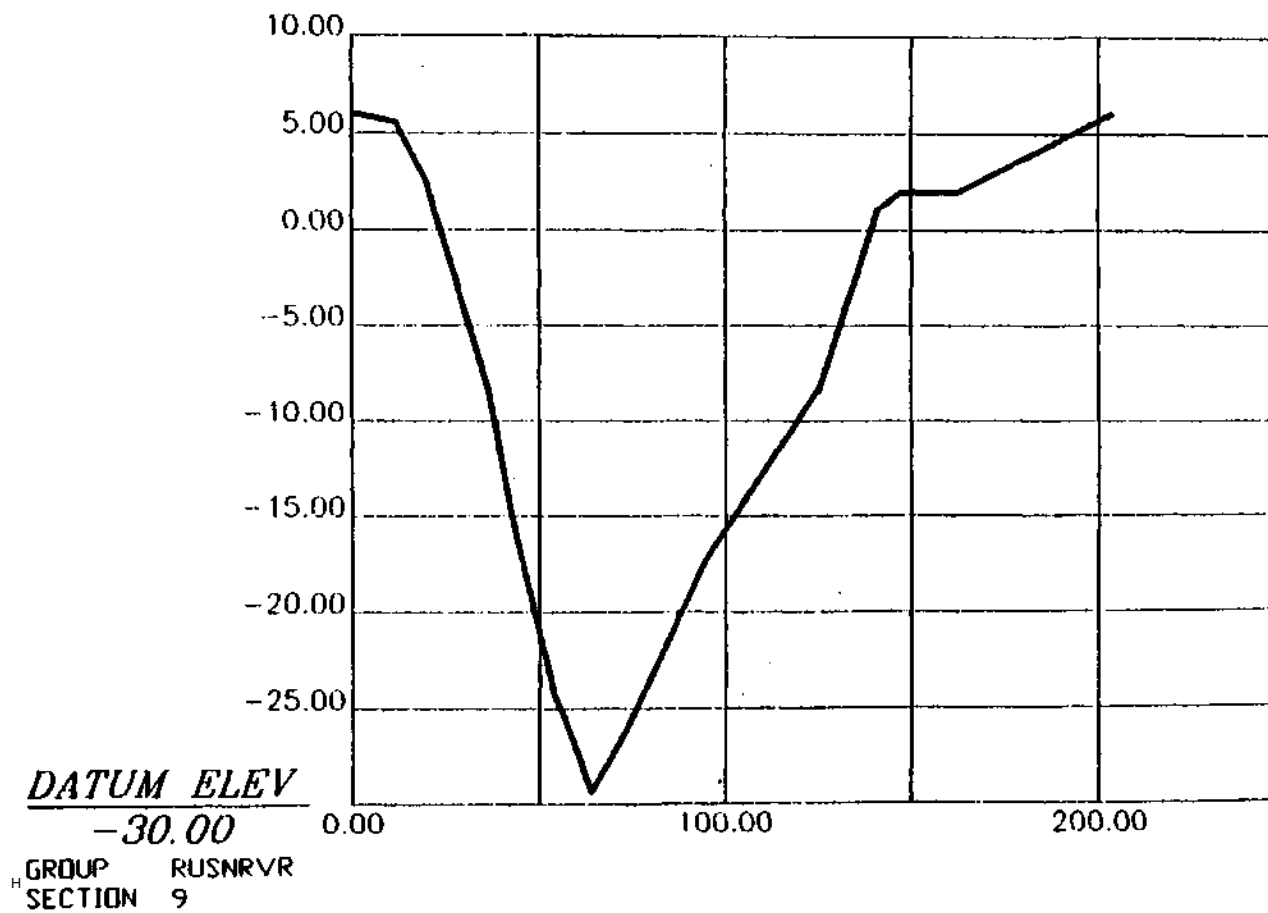
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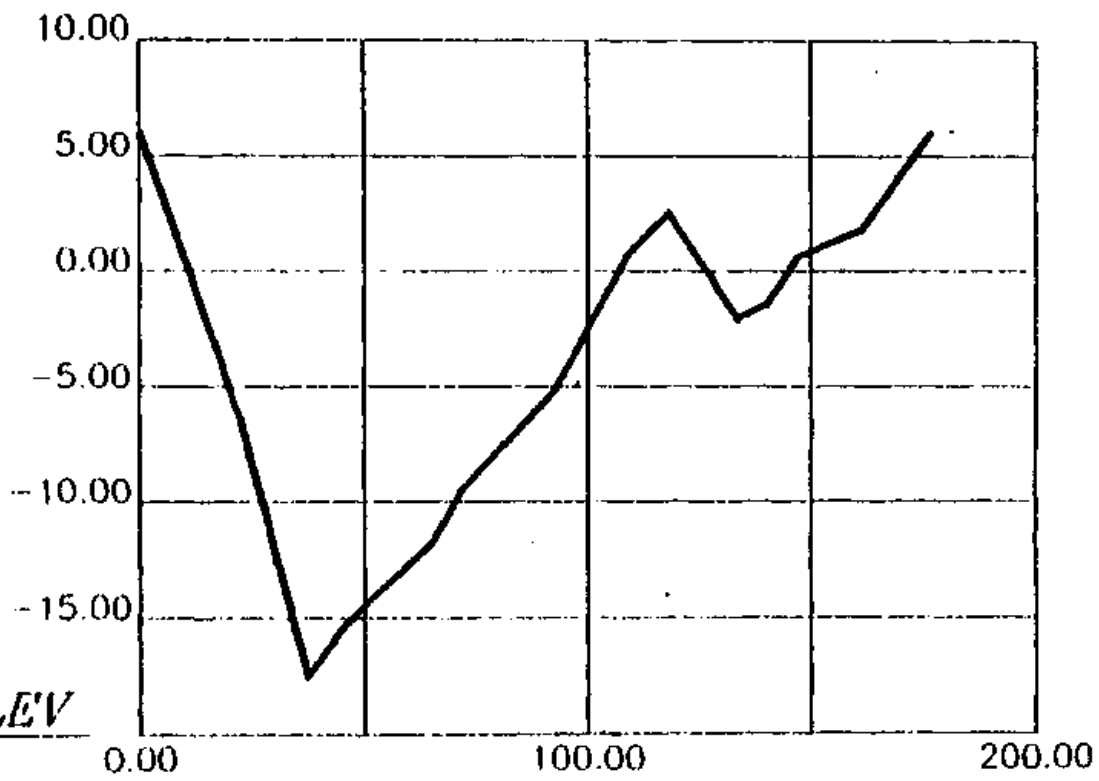


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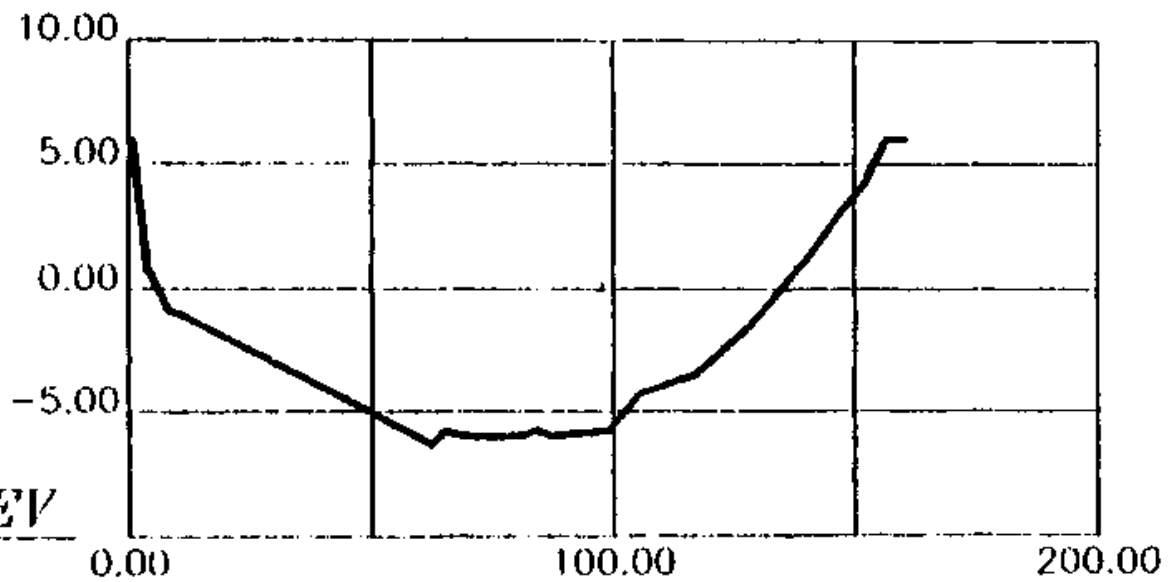
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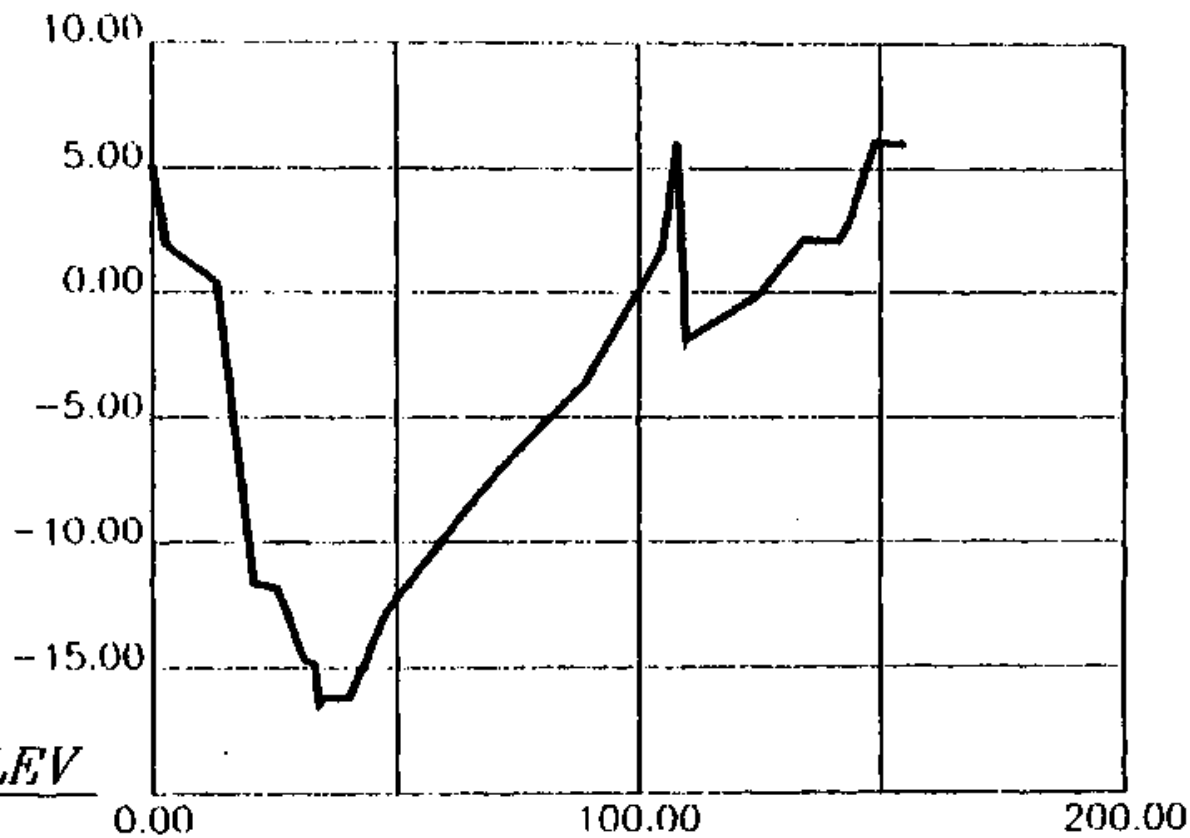


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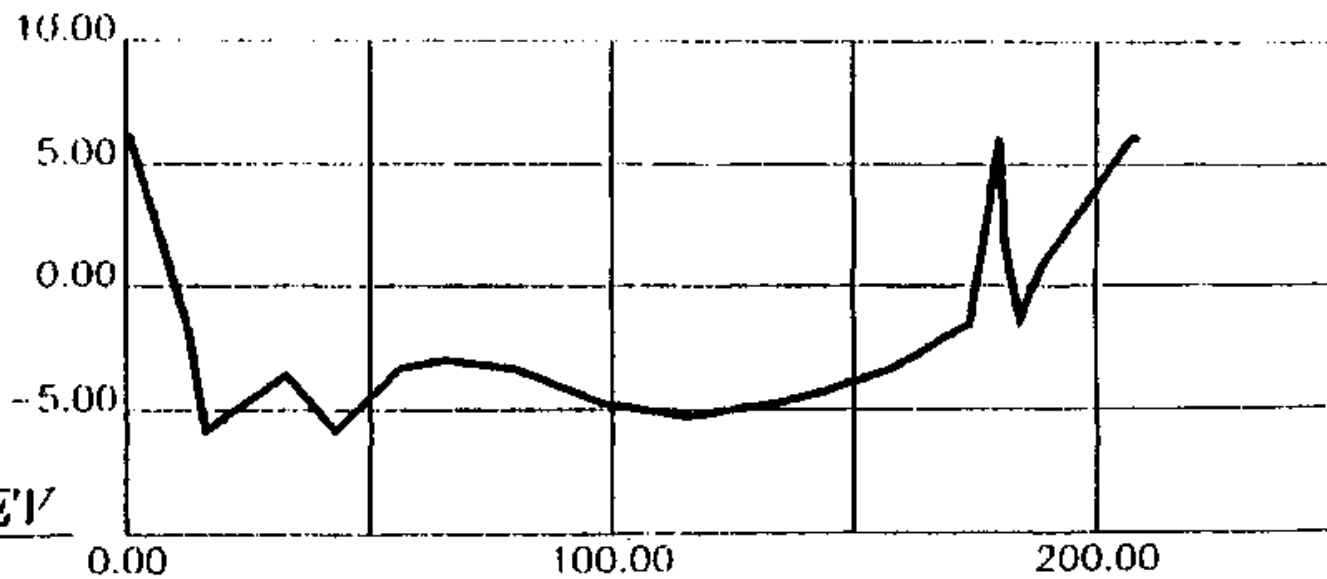


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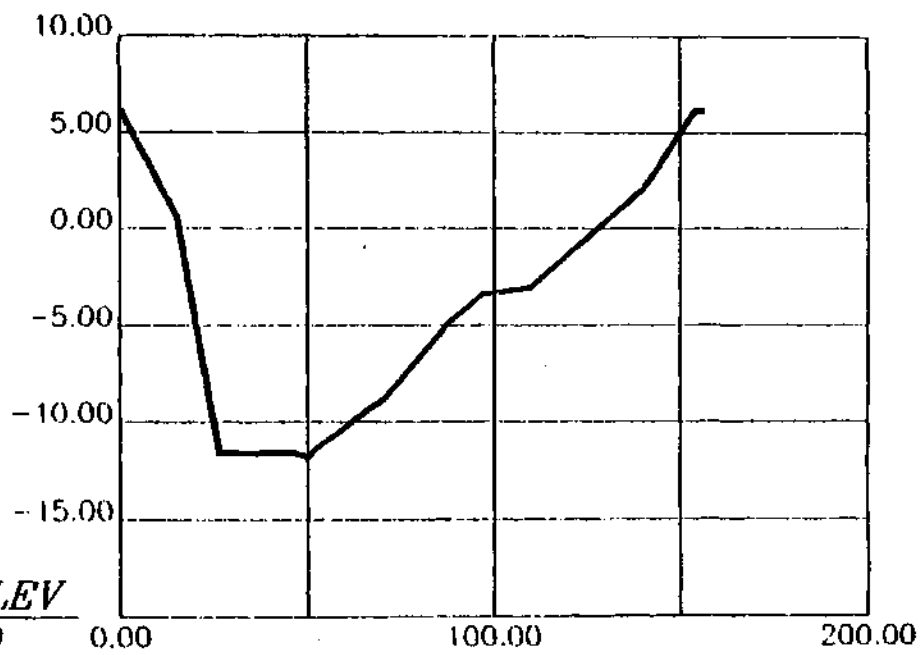


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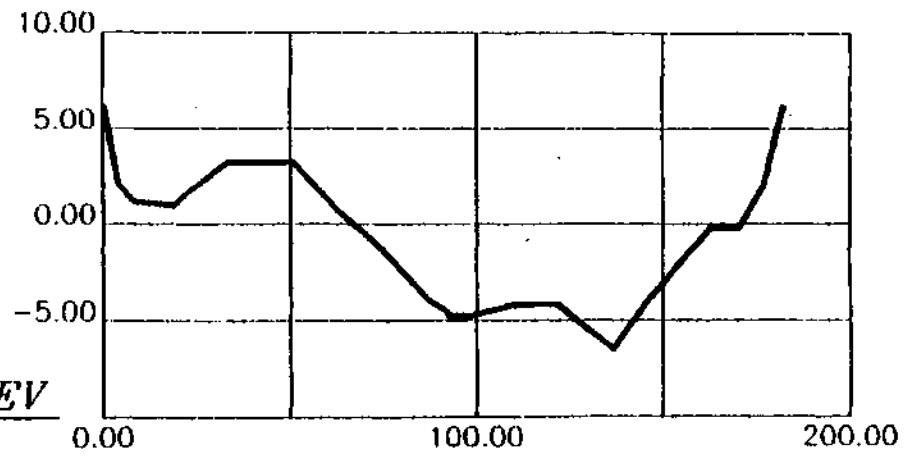
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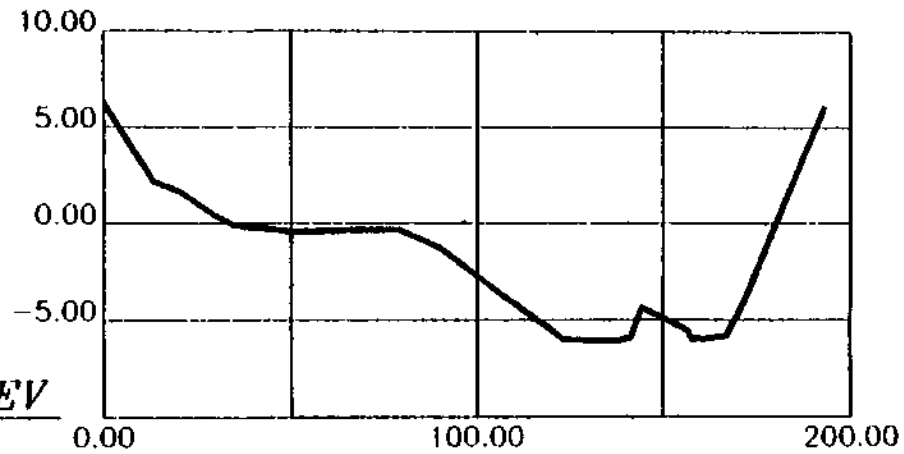
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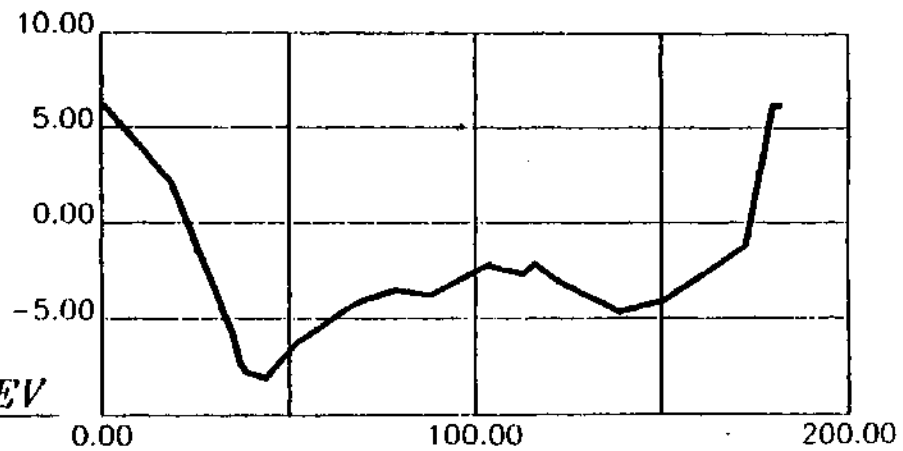
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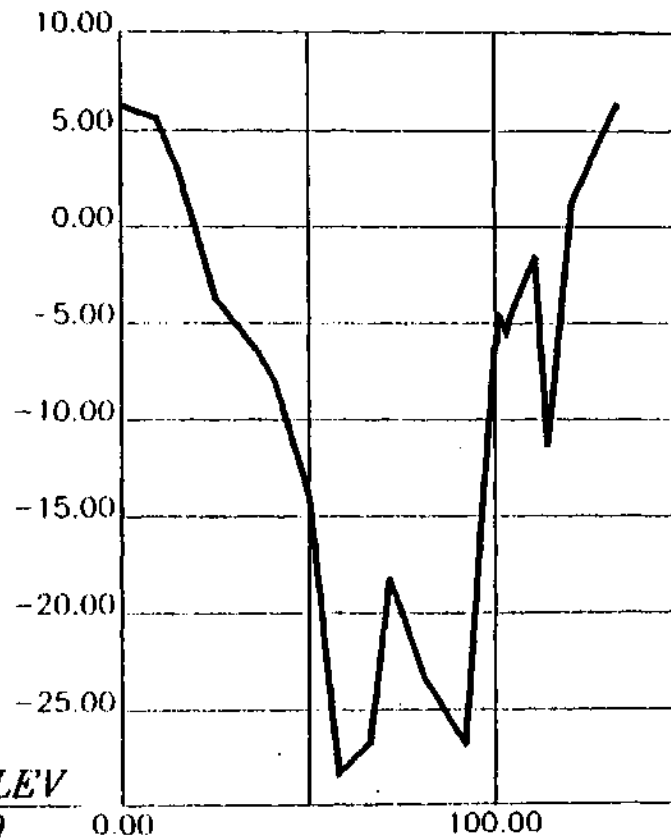


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P.O. Box 35, The Embarcadero
San Francisco, CA 94133
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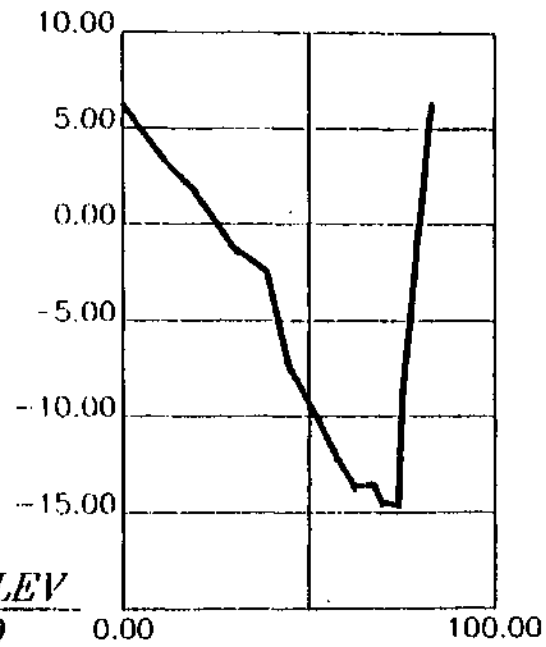


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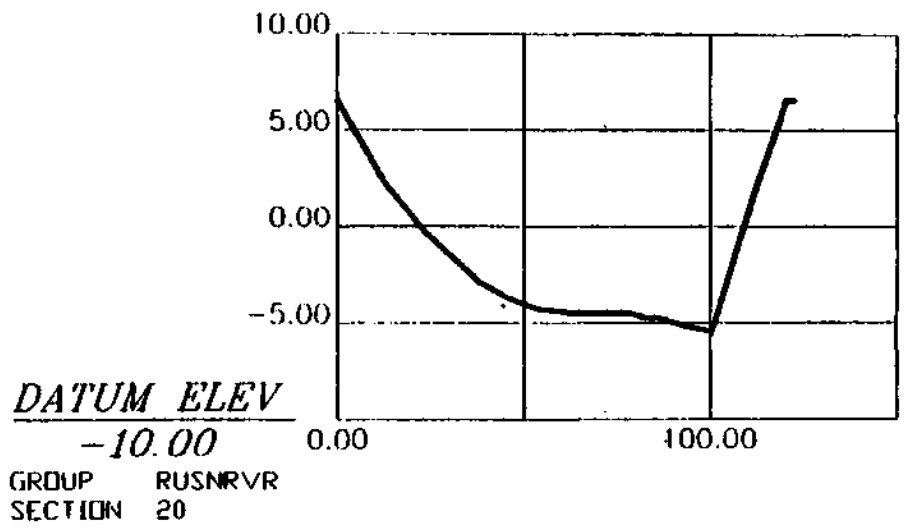


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Figure



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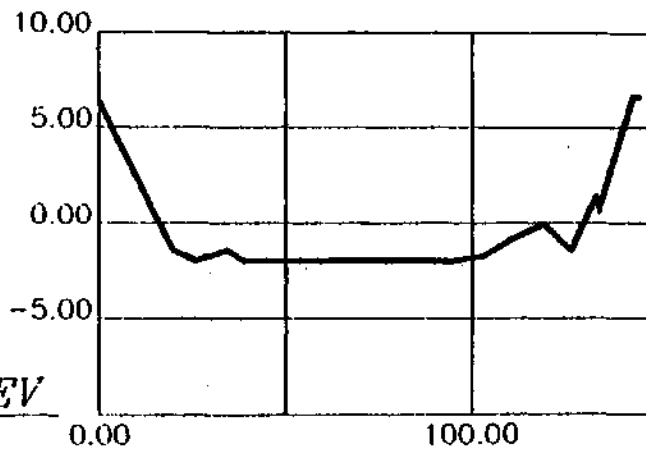
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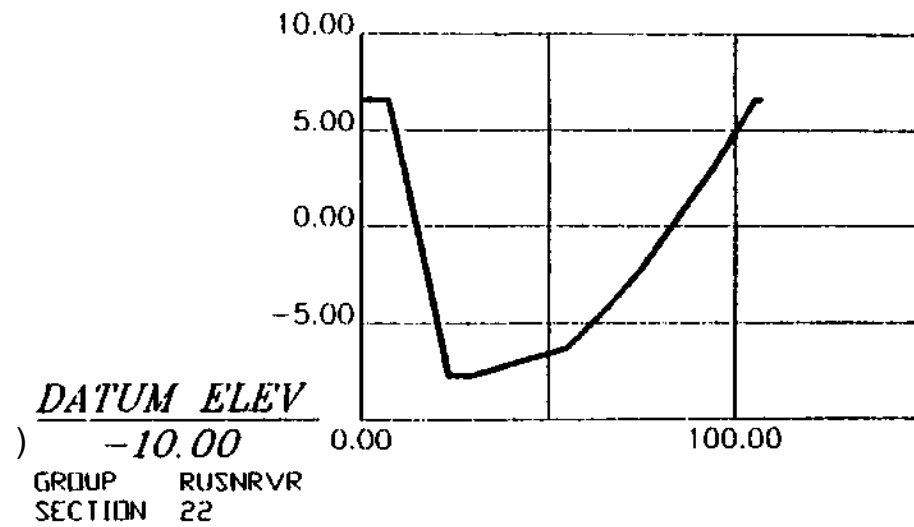


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08/04/83	1" = 100'	RUSNRVR	1

Figure

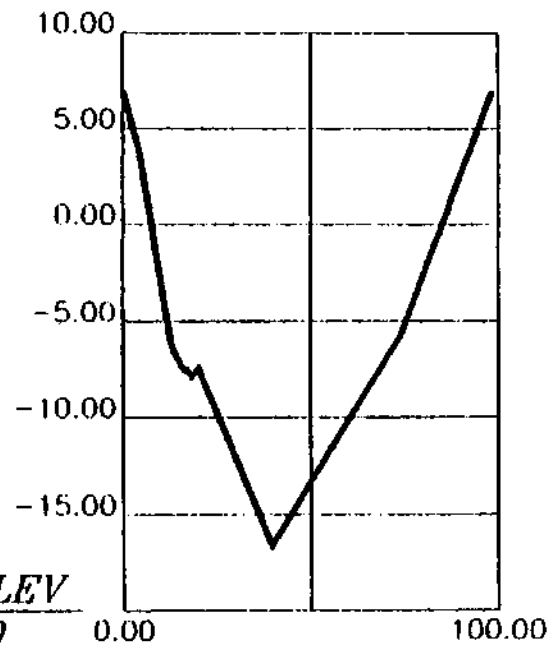


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 (415) 981-8383

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	By	Revised
5/16/93		
10/12/93		
11/11/93		
1/14/94		
1/14/94		
1/14/94		

Figure



DATUM ELEV

-20.00

GROUP RUSNRVR
SECTION 23



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(415) 398-0100

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

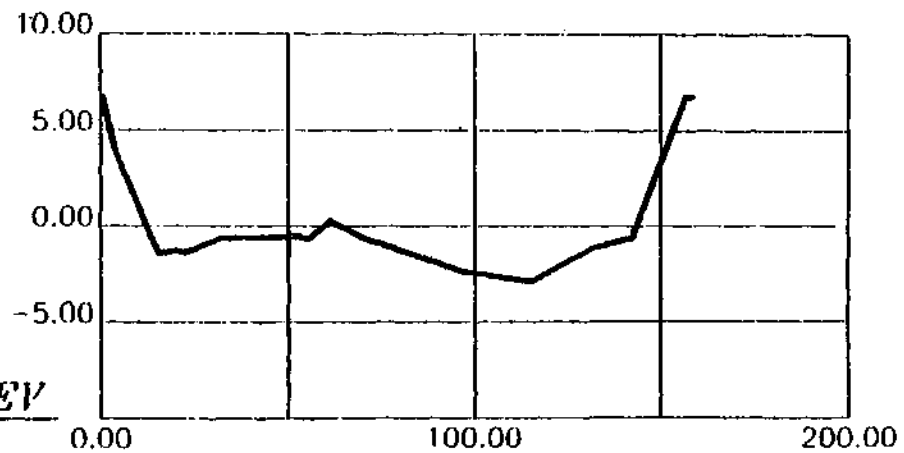
Date	Scale	Revisions
10/15/83	1" = 100'	
11/15/83		
12/15/83		
01/15/84		
02/15/84		
03/15/84		

Figure

DATUM ELEV

-10.00

GROUP RUSNRVR
SECTION 24

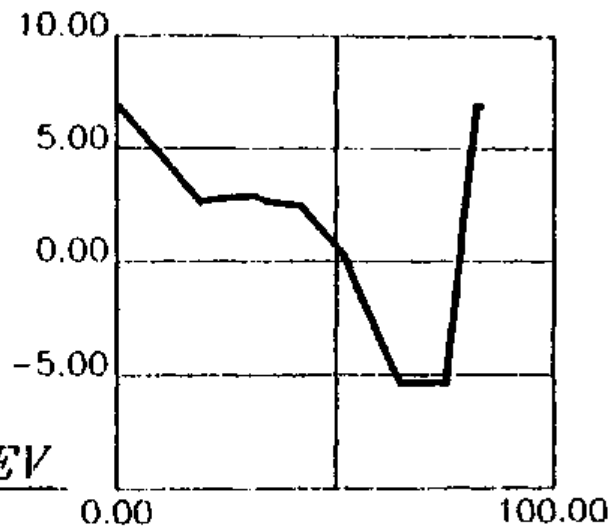


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San Francisco, CA 94133
(415) 901-0303

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	Scale	Sheet
8-14-83	1:1	1
8-15-83	1:1	2
8-16-83	1:1	3
8-17-83	1:1	4
8-18-83	1:1	5
8-19-83	1:1	6
8-20-83	1:1	7
8-21-83	1:1	8
8-22-83	1:1	9
8-23-83	1:1	10
8-24-83	1:1	11
8-25-83	1:1	12
8-26-83	1:1	13
8-27-83	1:1	14
8-28-83	1:1	15
8-29-83	1:1	16
8-30-83	1:1	17
8-31-83	1:1	18
9-1-83	1:1	19
9-2-83	1:1	20
9-3-83	1:1	21
9-4-83	1:1	22
9-5-83	1:1	23
9-6-83	1:1	24
9-7-83	1:1	25
9-8-83	1:1	26
9-9-83	1:1	27
9-10-83	1:1	28
9-11-83	1:1	29
9-12-83	1:1	30
9-13-83	1:1	31
9-14-83	1:1	32
9-15-83	1:1	33
9-16-83	1:1	34
9-17-83	1:1	35
9-18-83	1:1	36
9-19-83	1:1	37
9-20-83	1:1	38
9-21-83	1:1	39
9-22-83	1:1	40
9-23-83	1:1	41
9-24-83	1:1	42
9-25-83	1:1	43
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9-27-83	1:1	45
9-28-83	1:1	46
9-29-83	1:1	47
9-30-83	1:1	48
10-1-83	1:1	49
10-2-83	1:1	50
10-3-83	1:1	51
10-4-83	1:1	52
10-5-83	1:1	53
10-6-83	1:1	54
10-7-83	1:1	55
10-8-83	1:1	56
10-9-83	1:1	57
10-10-83	1:1	58
10-11-83	1:1	59
10-12-83	1:1	60
10-13-83	1:1	61
10-14-83	1:1	62
10-15-83	1:1	63
10-16-83	1:1	64
10-17-83	1:1	65
10-18-83	1:1	66
10-19-83	1:1	67
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10-21-83	1:1	69
10-22-83	1:1	70
10-23-83	1:1	71
10-24-83	1:1	72
10-25-83	1:1	73
10-26-83	1:1	74
10-27-83	1:1	75
10-28-83	1:1	76
10-29-83	1:1	77
10-30-83	1:1	78
10-31-83	1:1	79
11-1-83	1:1	80
11-2-83	1:1	81
11-3-83	1:1	82
11-4-83	1:1	83
11-5-83	1:1	84
11-6-83	1:1	85
11-7-83	1:1	86
11-8-83	1:1	87
11-9-83	1:1	88
11-10-83	1:1	89
11-11-83	1:1	90
11-12-83	1:1	91
11-13-83	1:1	92
11-14-83	1:1	93
11-15-83	1:1	94
11-16-83	1:1	95
11-17-83	1:1	96
11-18-83	1:1	97
11-19-83	1:1	98
11-20-83	1:1	99
11-21-83	1:1	100

Figure



DATUM ELEV
-10.00
) GROUP RUSNRVR
 SECTION 25

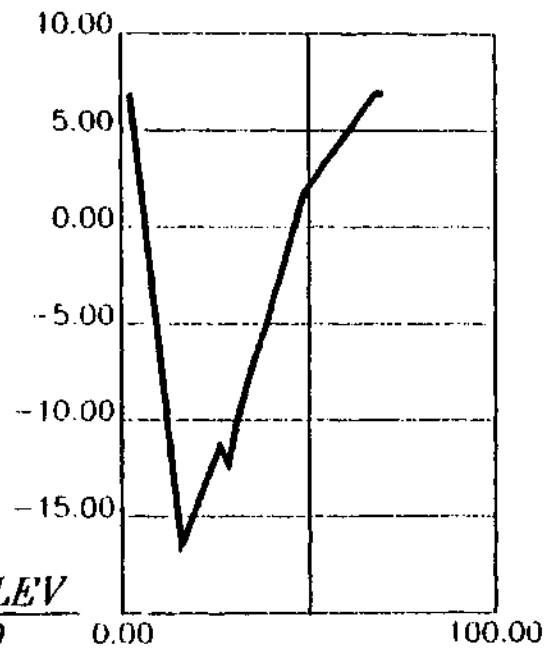


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 (415) 981-8361

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

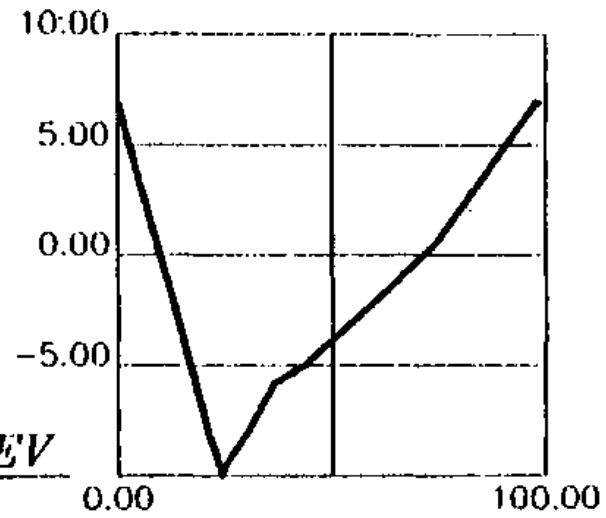


FNAip Whittier & Associates, Ltd.
P.O. Box 35, The Embarcadero
San Francisco, CA 94133
(415) 401 8363

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date	Scale	Sheet	Page
5/18/92	1" = 100'	1	1
5/18/92	1" = 100'	1	1
5/18/92	1" = 100'	1	1
5/18/92	1" = 100'	1	1
5/18/92	1" = 100'	1	1

Figure



DATUM ELEV
-10.00

GROUP RUSNRVR
 SECTION 27

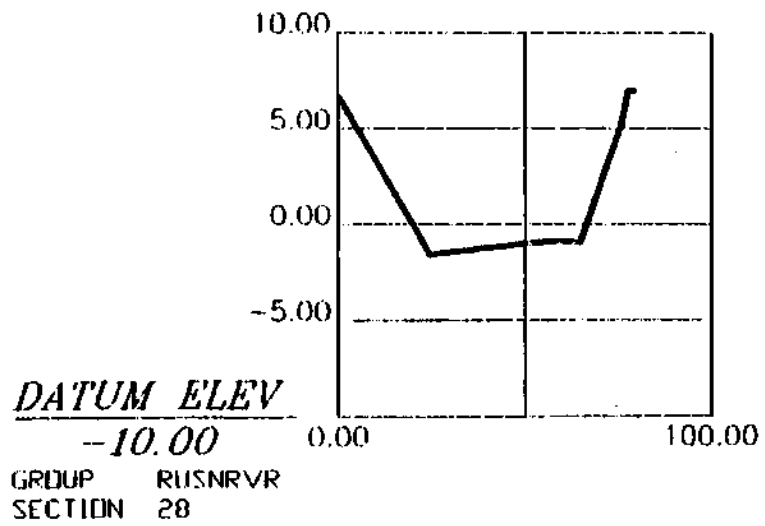


Philip Wilton & Associates, Ltd.
 P.O. Box 9800
 San Francisco, CA 94133
 (415) 961-0300

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

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

Figure

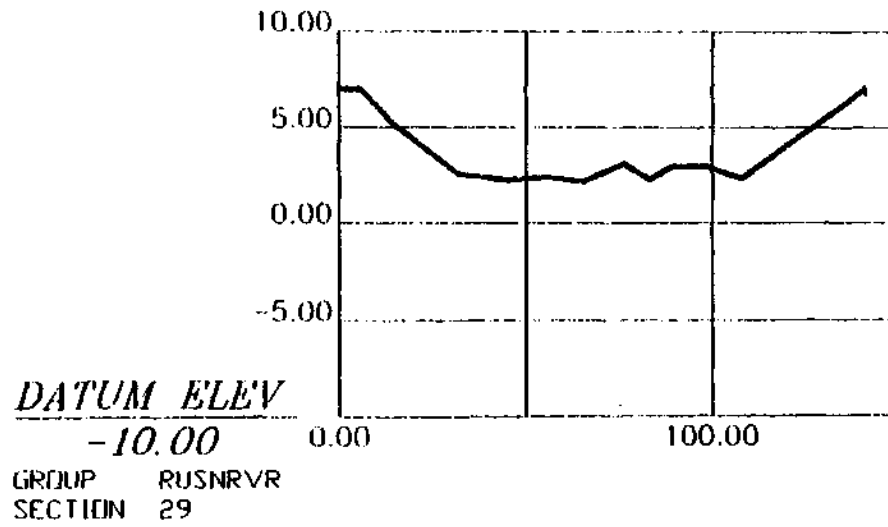


Philip Williams & Associates, Ltd
 201 35, The Embarcadero
 San Francisco, CA 94133
 (415) 981-0163

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS SECTIONS

Date	Drawn by	Checked by	Approved by
10/15/93	J. Williams	J. Williams	J. Williams
10/15/93	J. Williams	J. Williams	J. Williams
10/15/93	J. Williams	J. Williams	J. Williams
10/15/93	J. Williams	J. Williams	J. Williams

Figure

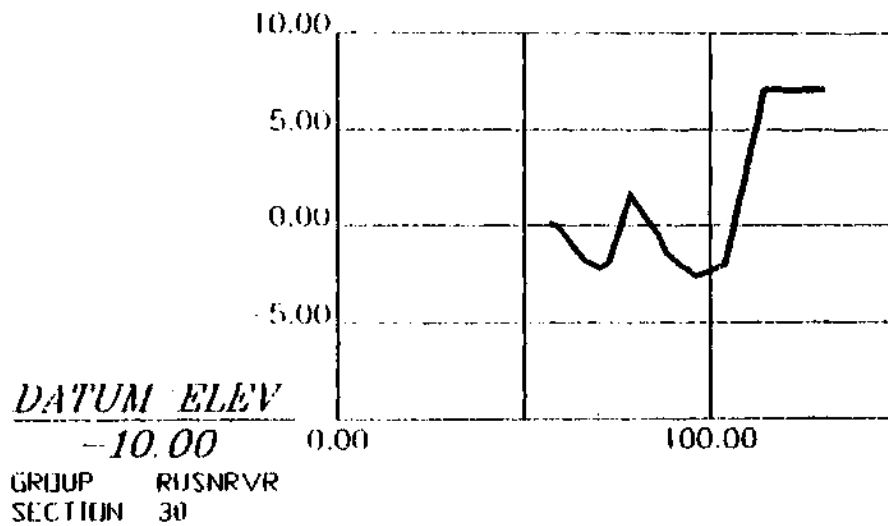


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 San Francisco, CA 94111
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RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

Date: 5-18-93	Sheet: 1 of 1
Scale: 1:1000	Project: RRE
Drawn: J. J. ...	Checked: ...
Plot: 5/20/93	Job #: 930

Figure



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 Co., Texas, TX 77380
 (409) 866-8800

RUSSIAN RIVER ESTUARY STUDY BATHYMETRIC CROSS-SECTIONS

DATE	BY	REVISION
08/19/02
08/20/02
08/21/02
08/22/02
08/23/02
08/24/02
08/25/02
08/26/02
08/27/02
08/28/02
08/29/02
08/30/02
08/31/02

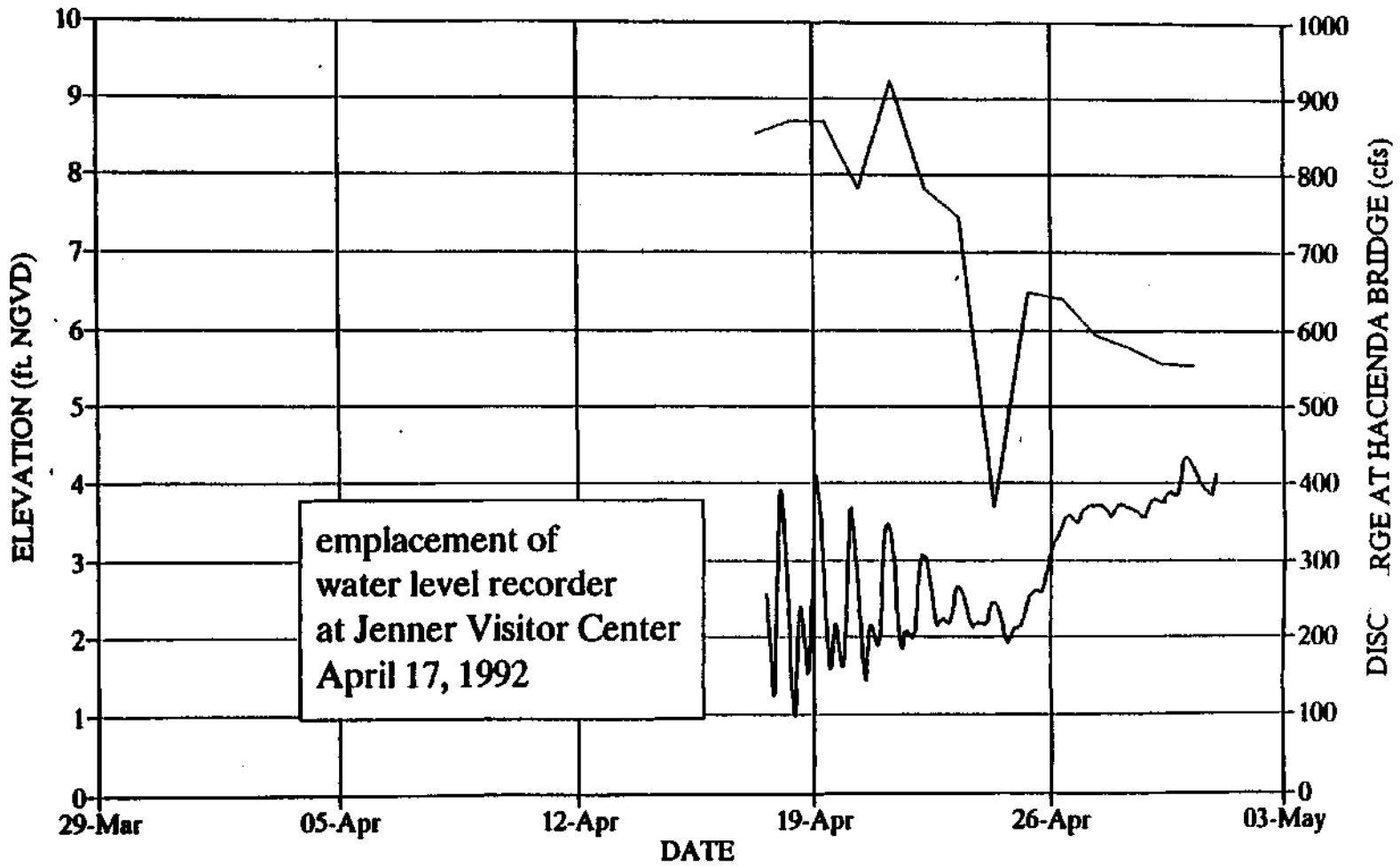
Figure

APPENDIX IV

WATER SURFACE ELEVATIONS AND RIVER INFLOWS TO THE ESTUARY

April 1992-March 1993

APRIL, 1992



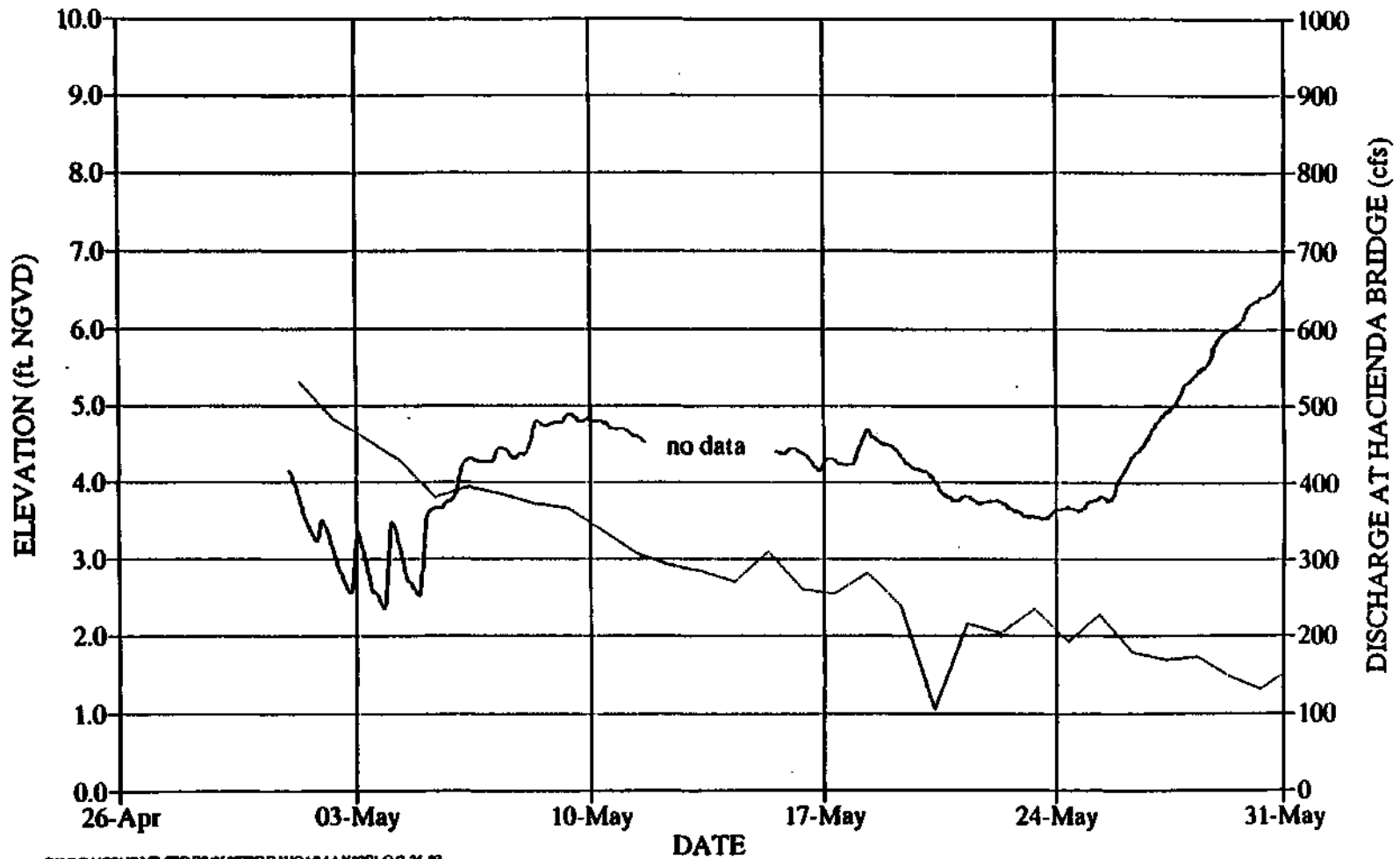
CKCRUSSNVR/TIDES/4/2TIDE.WQ1/APR92/LO2-25-93

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Consultants in Hydrology

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

Figure

MAY, 1992



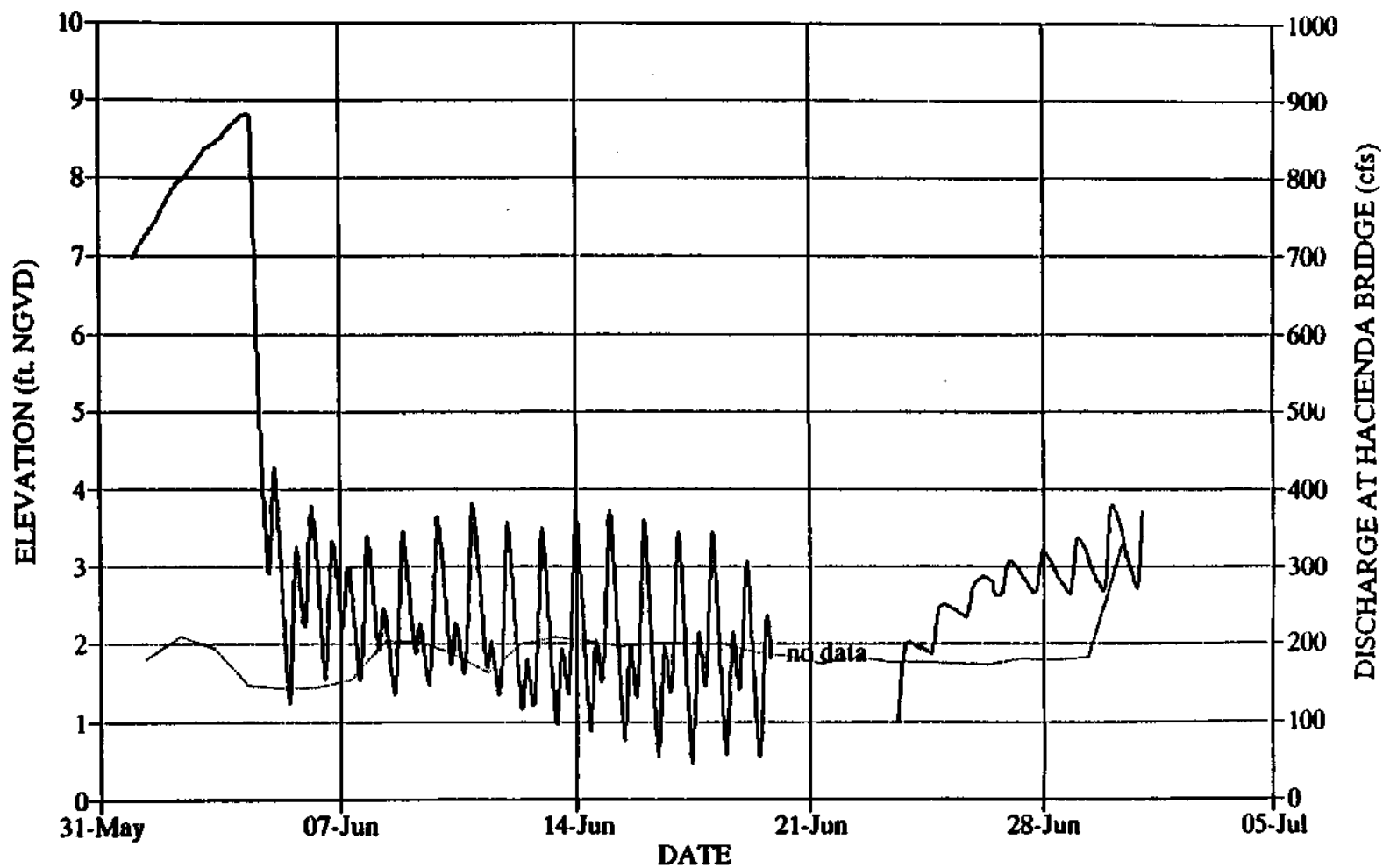
CKC/RUSSNRVR/TIDES/05/2TIDE.WQ1/MAY92P1.Q2-25-92

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

Figure

JUNE, 1992



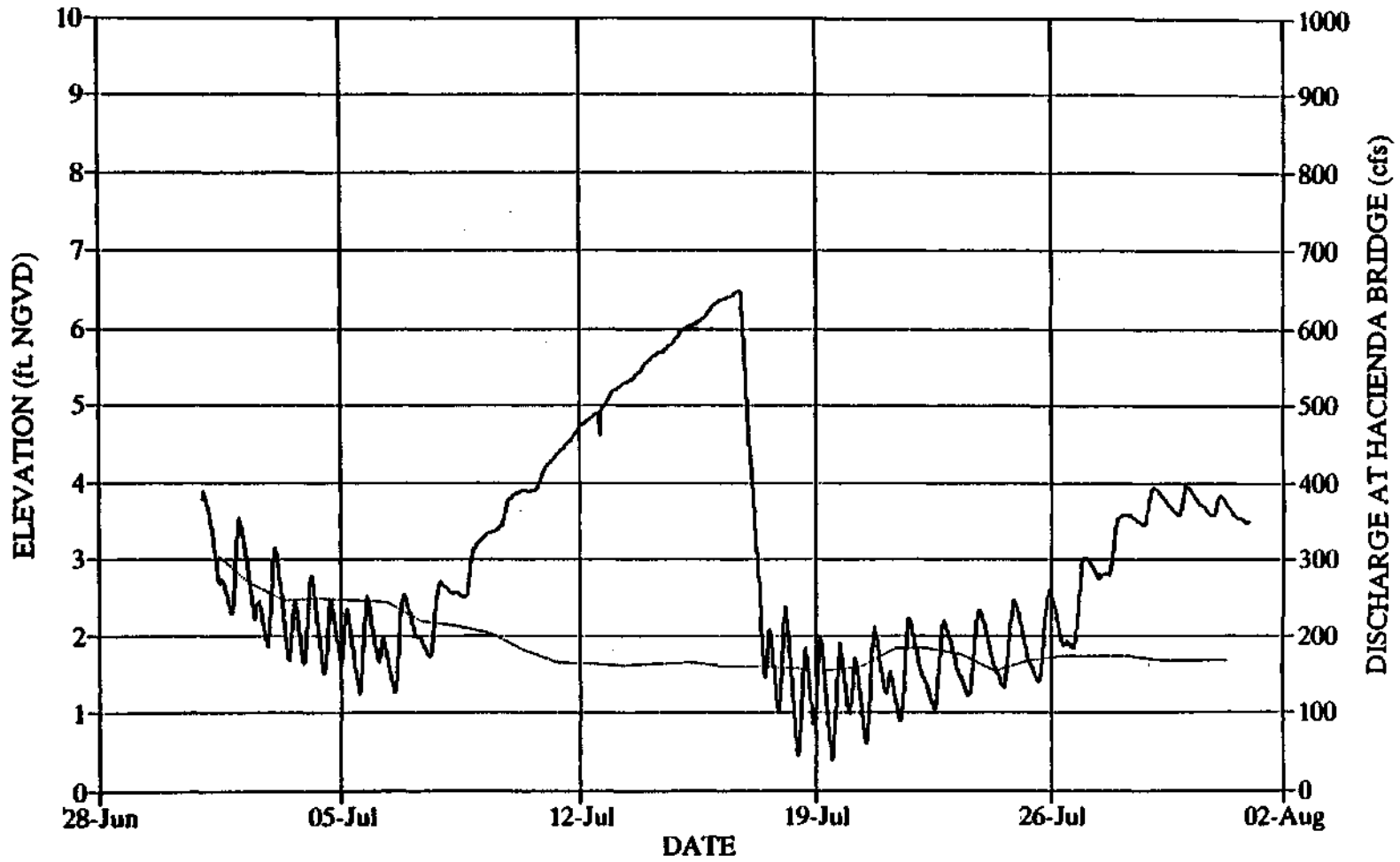
C:\CRUSSNR\VR\TIDES\0002\TIDE.WQ1\JUN92\PL042-25-93

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

Figure

JULY, 1992



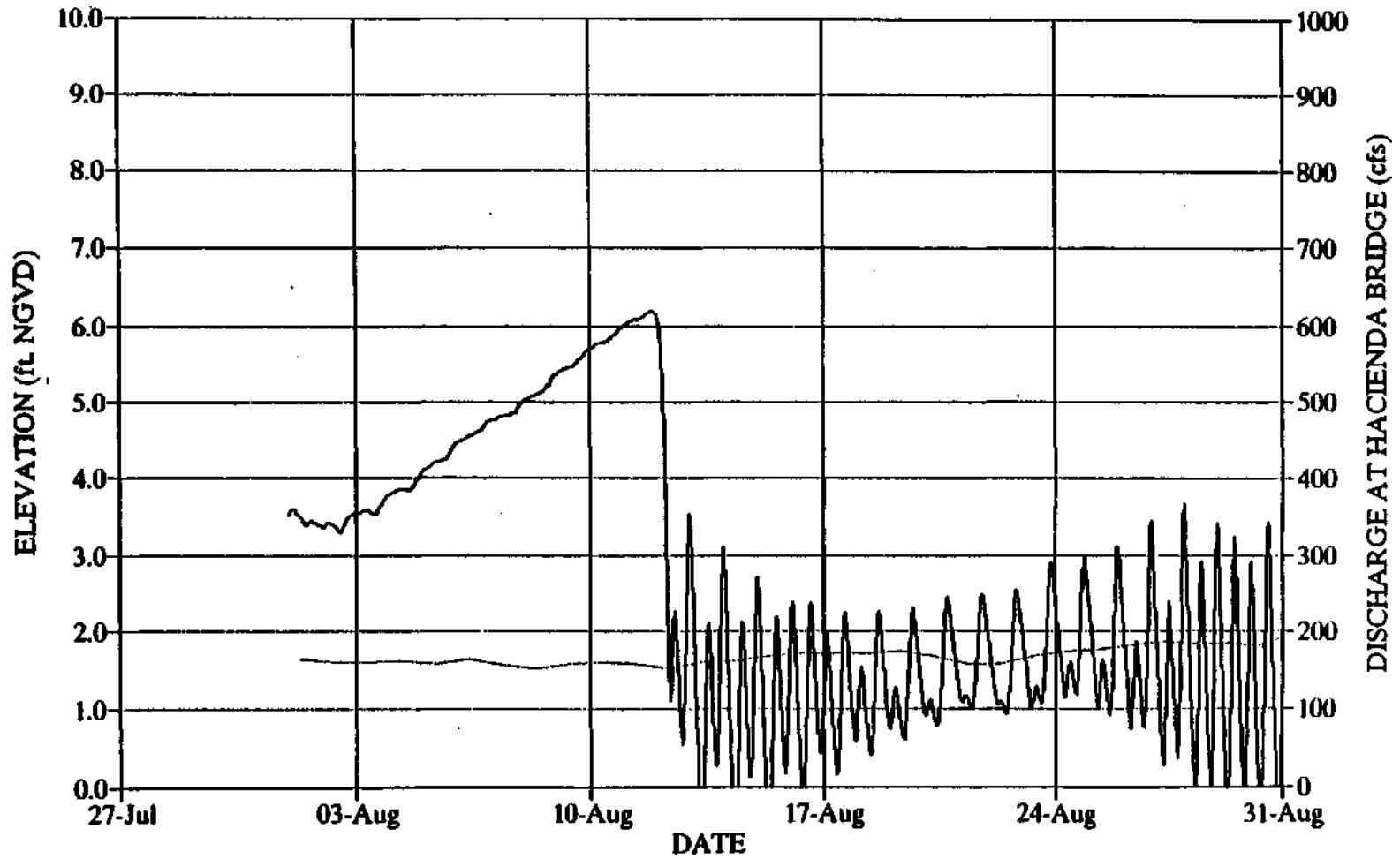
CKC/RUSSIAN RIVER/TIDES/07/TIDE.WQ1/JUL/2FLO/2-25-93

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

Figure

AUGUST, 1992



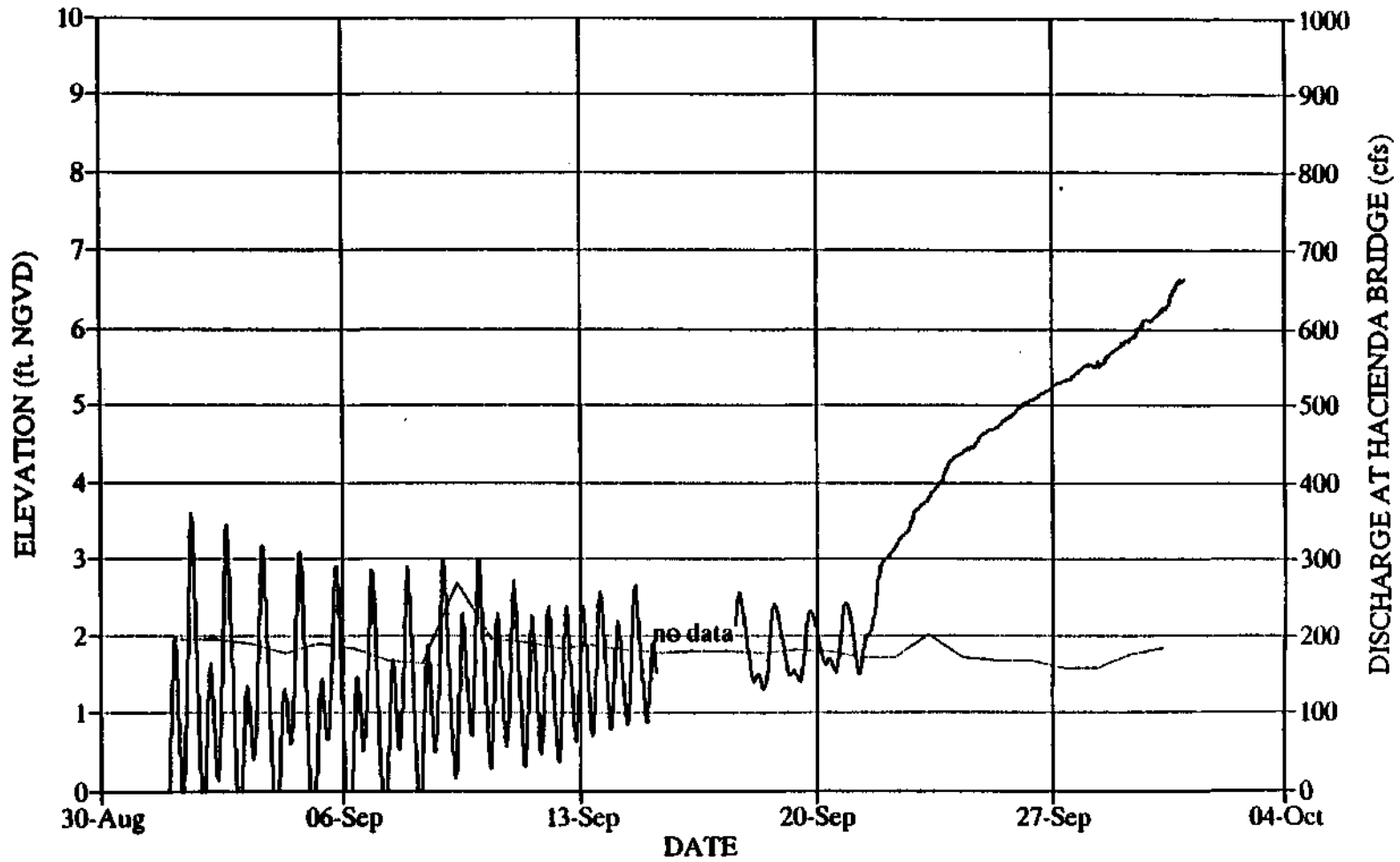
CKC/RUSSNR/VR/TIDES/08/2TIDE.WQ1/AUG92/PLQ2-25-93

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

Figure

SEPTEMBER, 1992



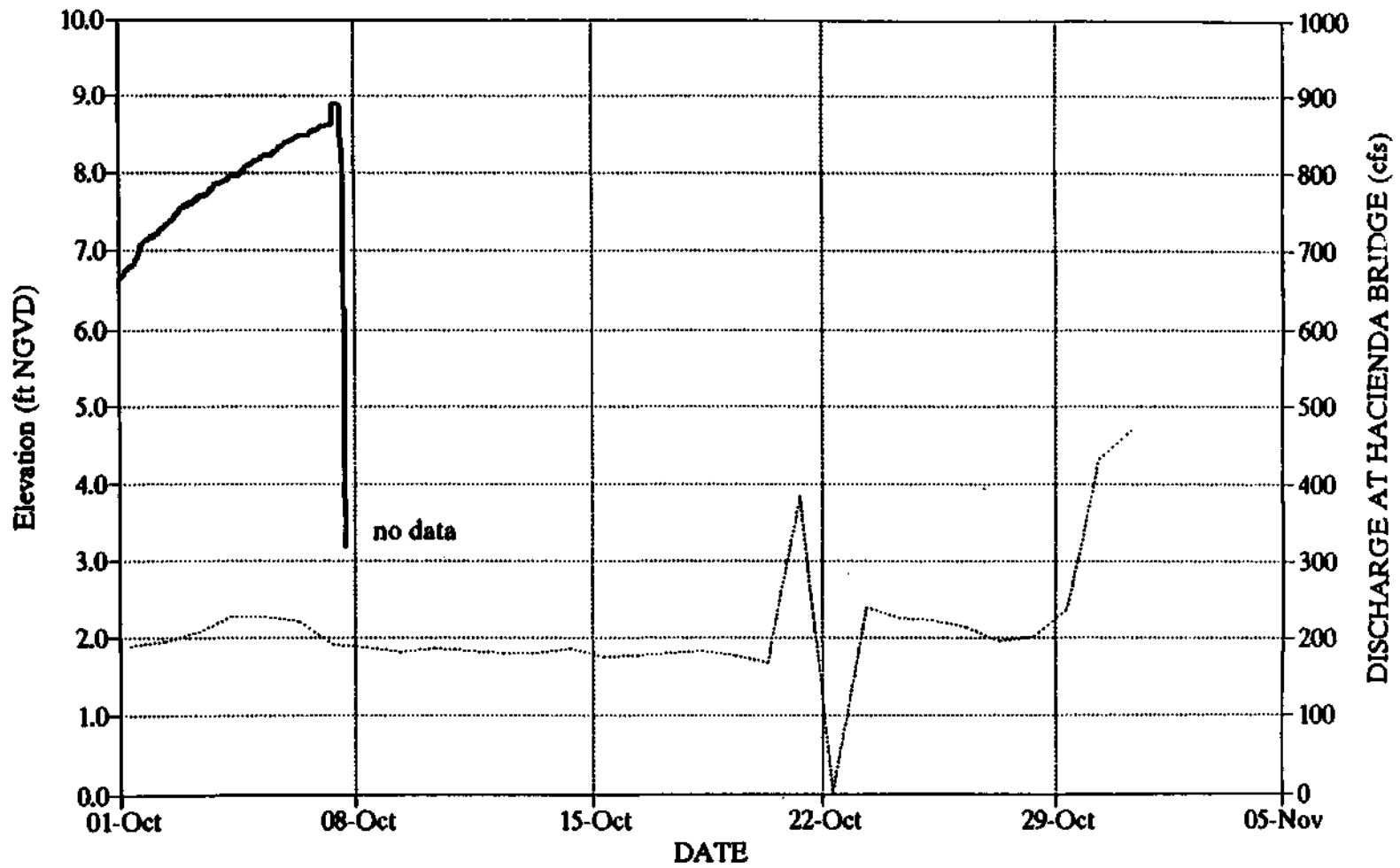
CKC/RUSSNRVR/TIDES/0992TIDE.WQ1/SEP92/PL02-5-93

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

Figure

OCTOBER, 1992



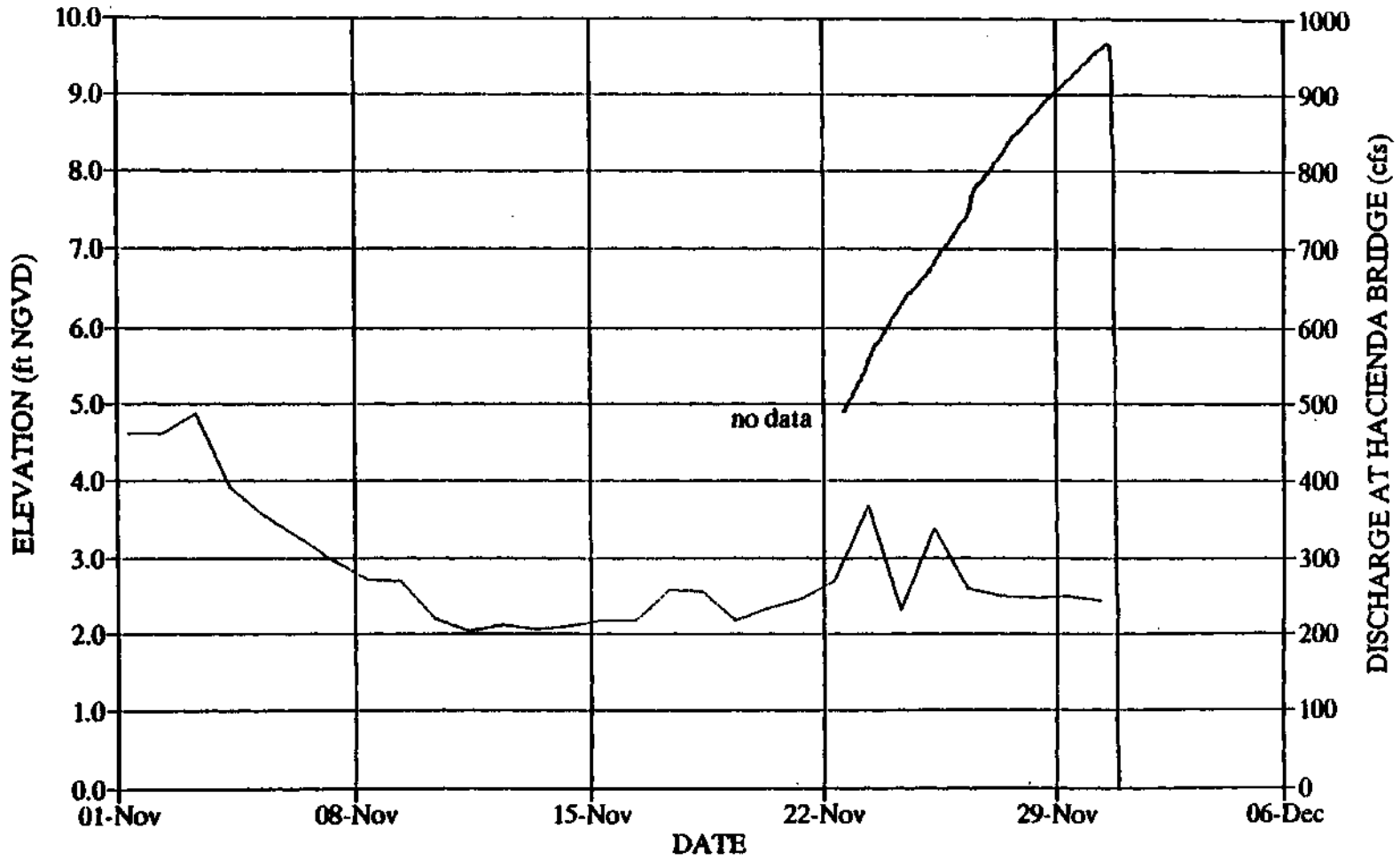
C:\C\RUSSE\VA\1002TIDE.WQI\NOV92PLOT2-25-92

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

Figure

NOVEMBER, 1992



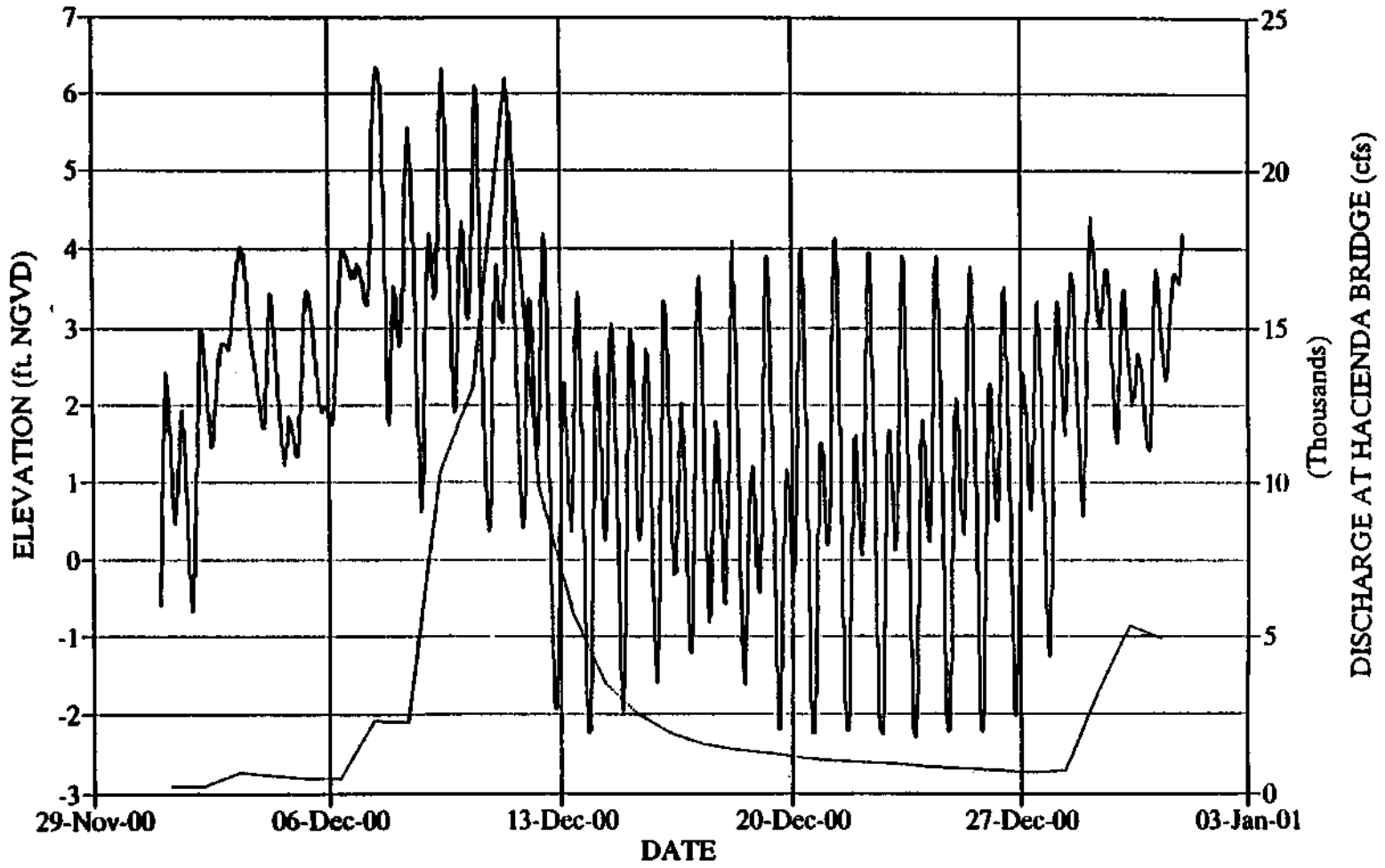
CKC/RUSSNLRV/11/2TIDE.WQ/NOV92/FLO/2-25-92

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

Figure

DECEMBER, 1992



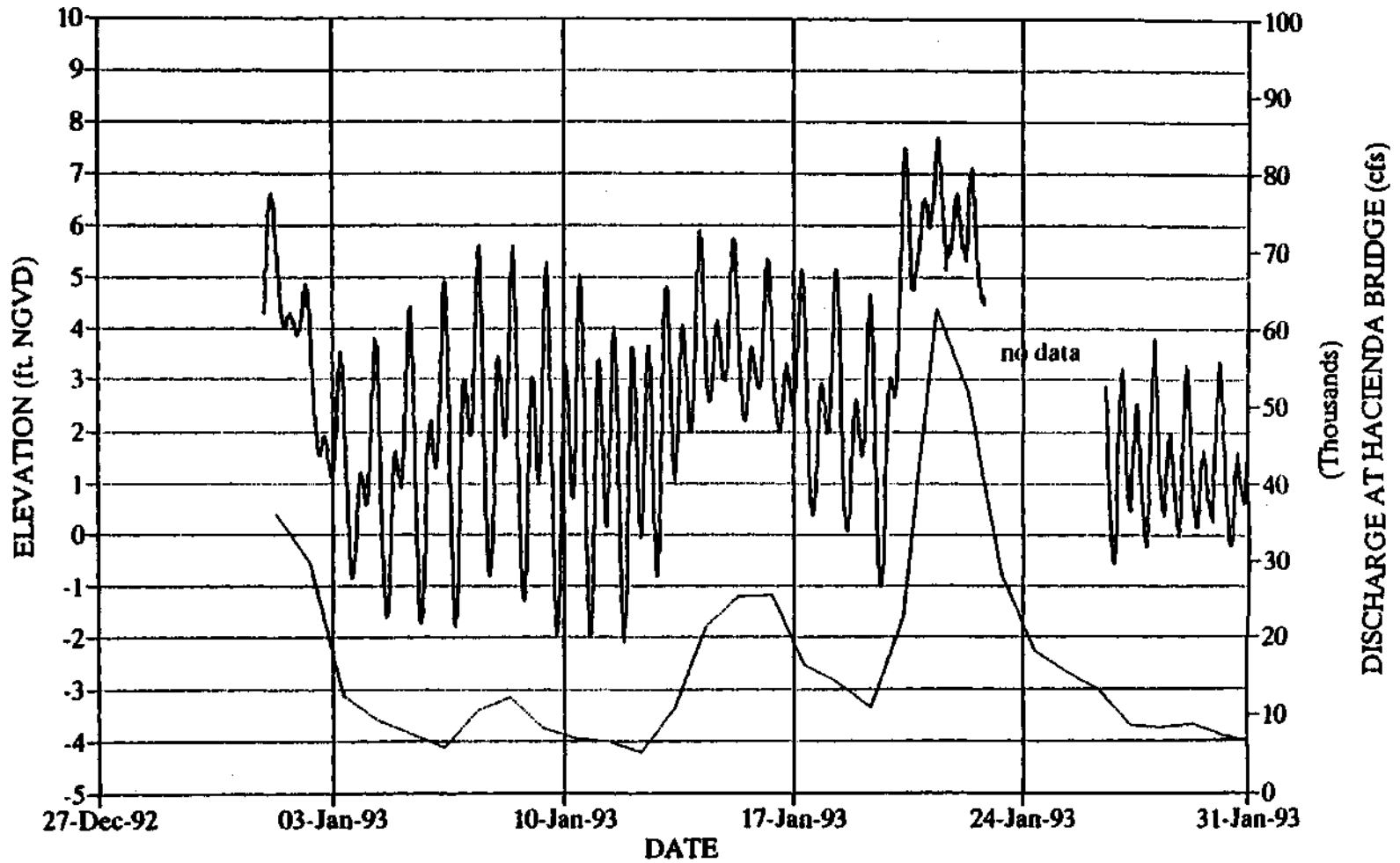
CKC/RUSSNR/VR/129/TIDE.WQ1/DBC/2FLO/2-35-93

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

Figure

JANUARY, 1993



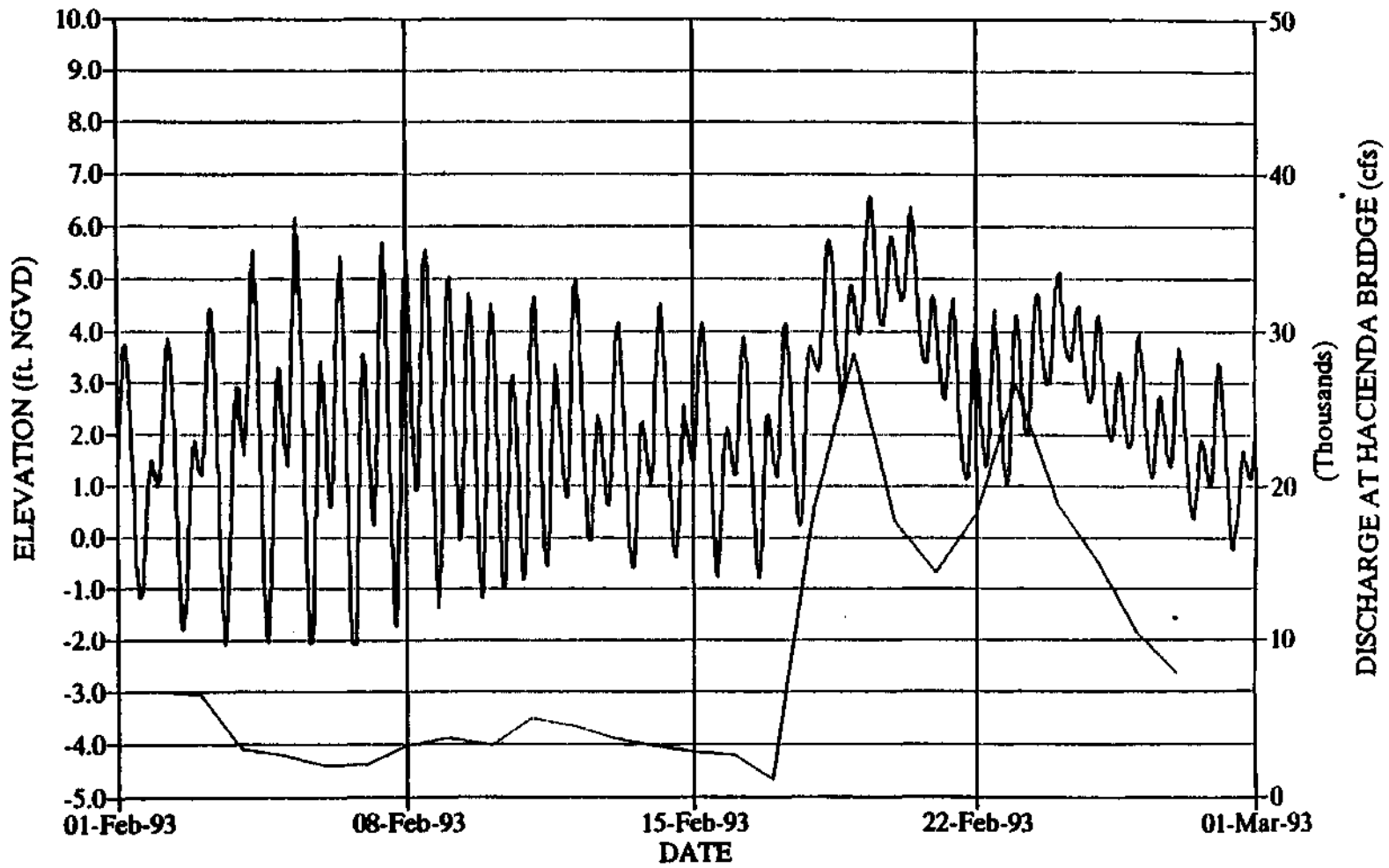
CKC/BUSSNRV/R/TIDES/0195TIDE.WQ1/JAN93/PL05-11-93

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

Figure

FEBRUARY, 1993



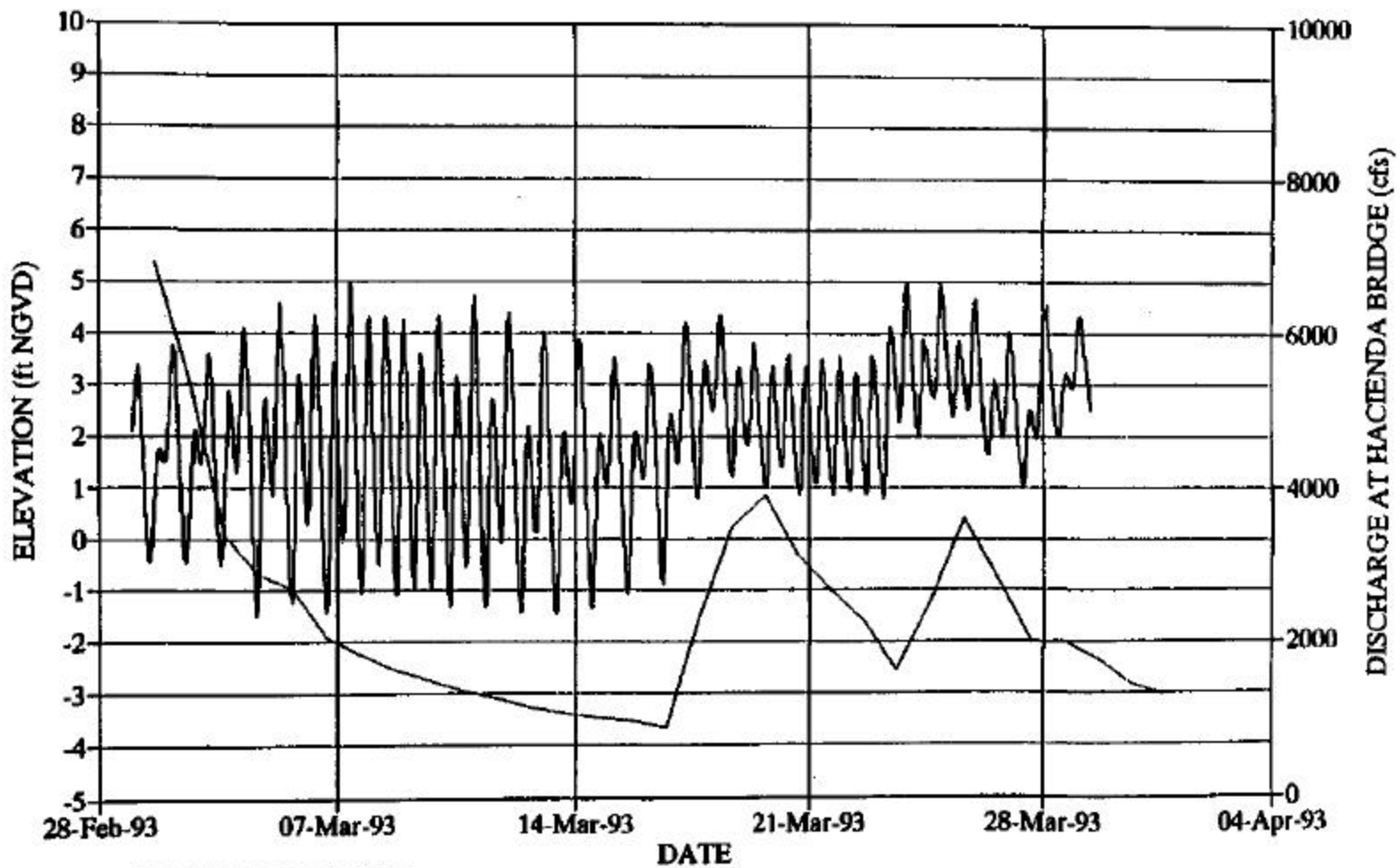
CKCRUSSNRVIR/TIDES/025TIDE.WOLFEB93FLO/5-11-93

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

Figure

MARCH, 1993



CKC8USSNRV/TIDRS4397IDE.WQ/MAR93/FLO/5-14-93

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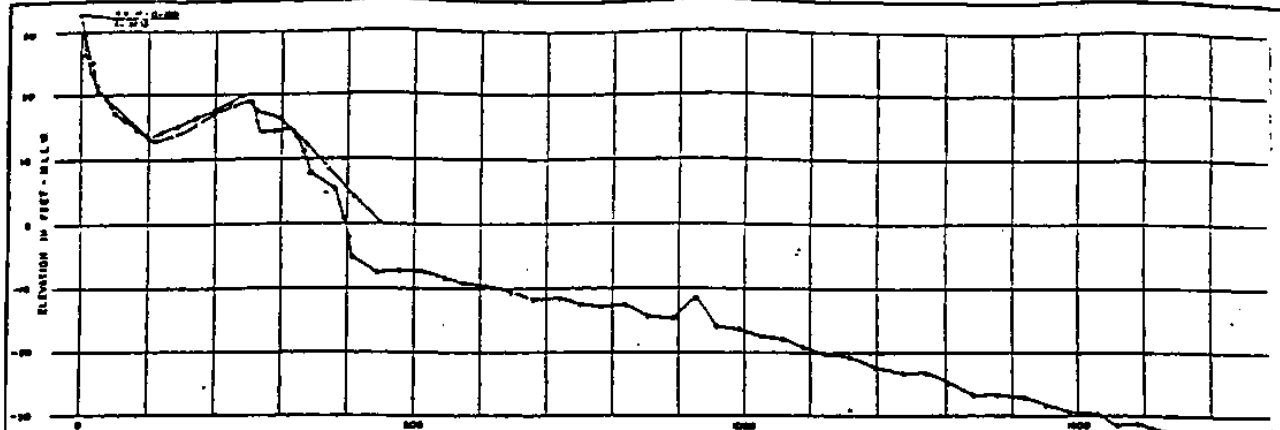
**WATER LEVELS - RUSSIAN RIVER ESTUARY
JENNER VISITOR CENTER (MARCH, 1993)**

Figure

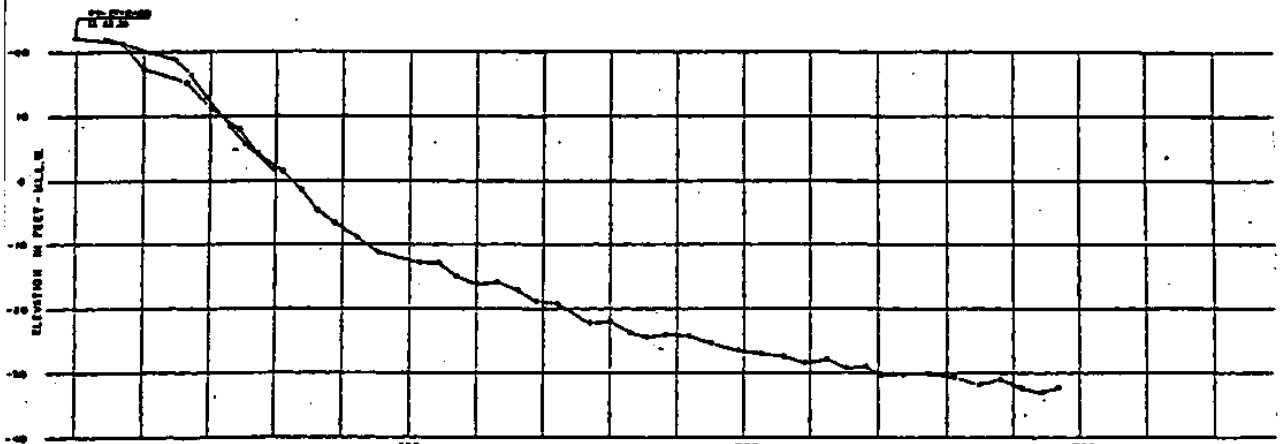
APPENDIX V

HISTORIC BEACH PROFILES AT THE RUSSIAN RIVER ESTUARY

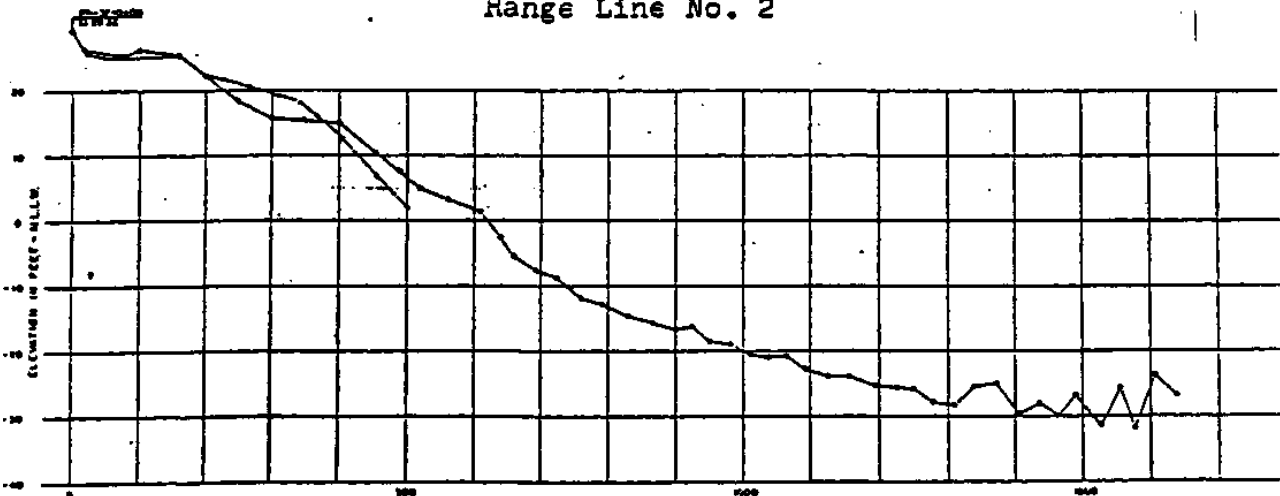
Source: U.S. Army Engineer District, San Francisco Corps of Engineers, 1965, Technical Report on Cooperative Beach Erosion Study of Coastal of Northern California, Point Delgada to Point Año Nuevo.



Range Line No. 1



Range Line No. 2



Range Line No. 3

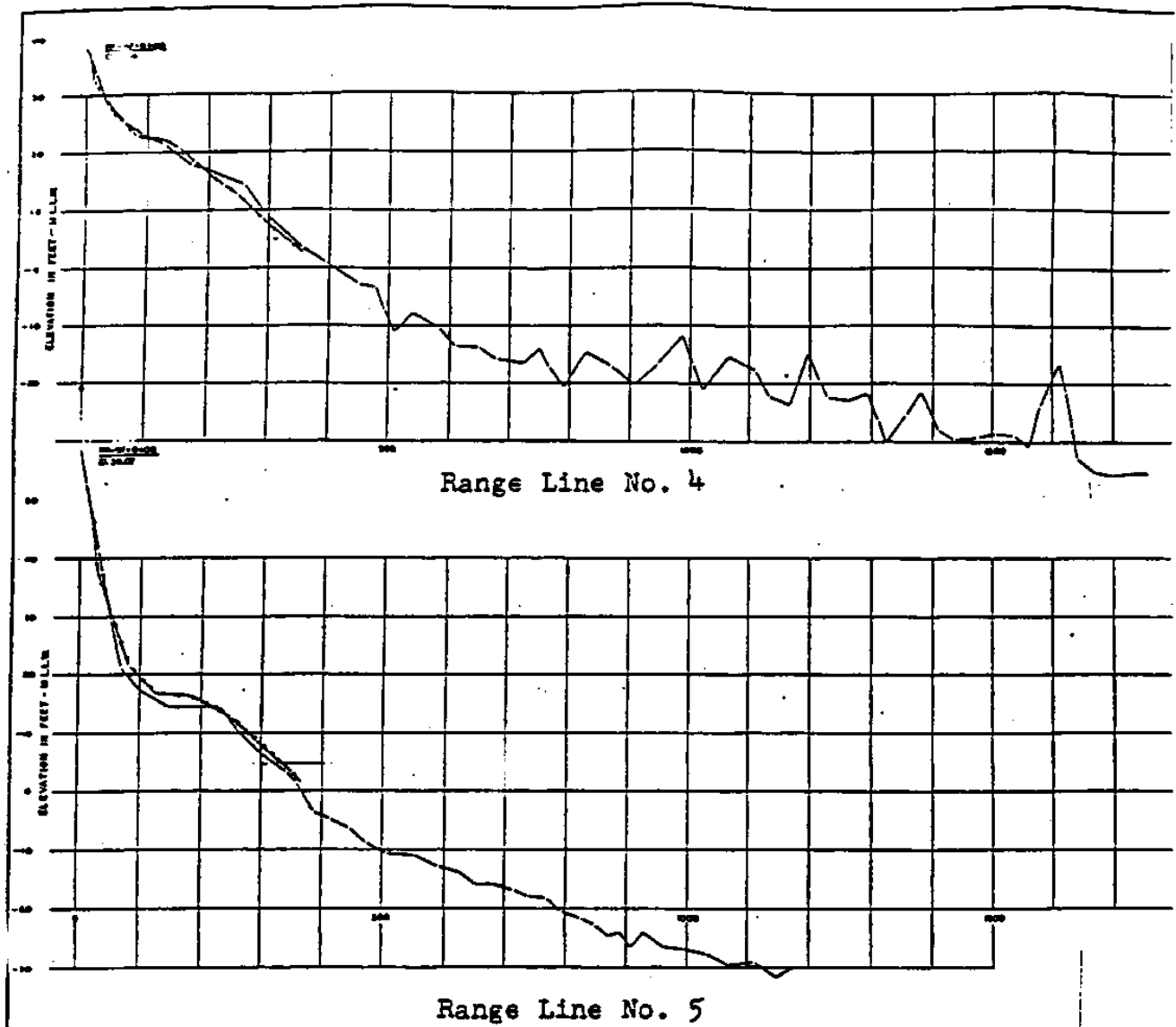
SCALE - 1" = 400' HORIZ.
 1" = 10' VERT.

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

LEGEND
 ———— DATA
 - - - - - RECONSTRUCTION

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
-----

```



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



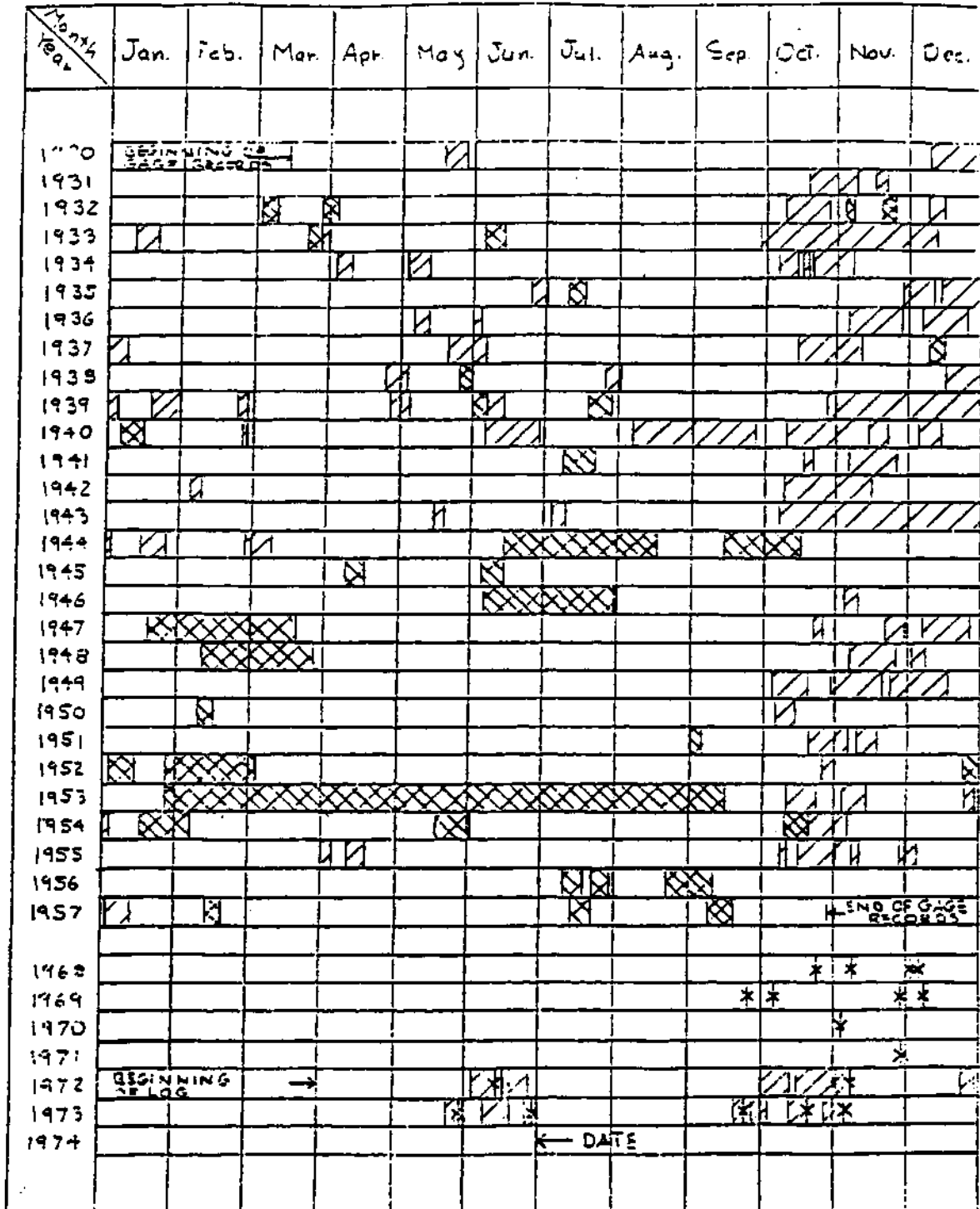
CLOSURE PERIODS



MODERATELY INCORPORATED RECORDS



ARTIFICIAL DATA (1968-1971)

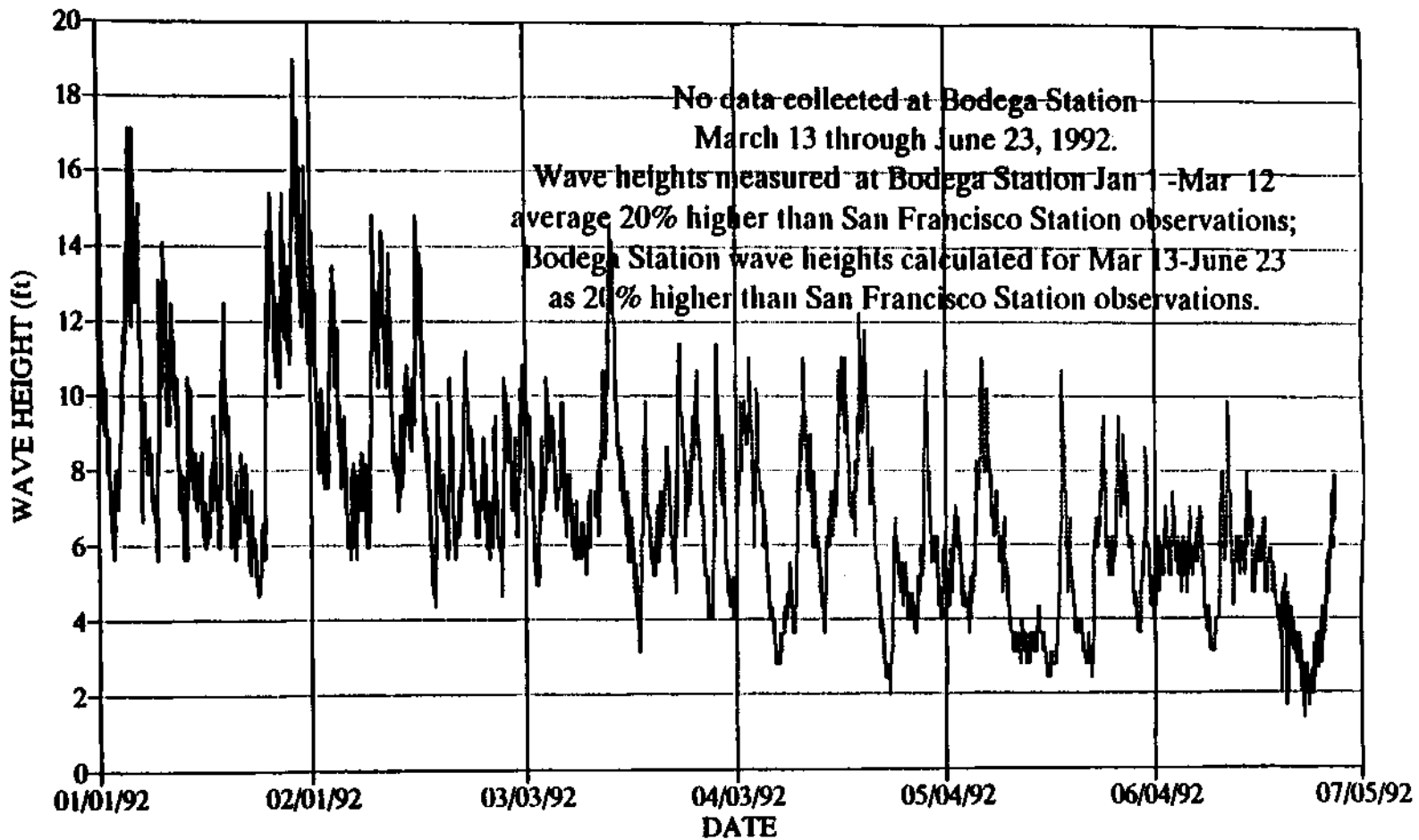


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Figure

APPENDIX VII

SIGNIFICANT WAVE HEIGHTS AT BODEGA STATION
JANUARY 1992 - MAY 1993

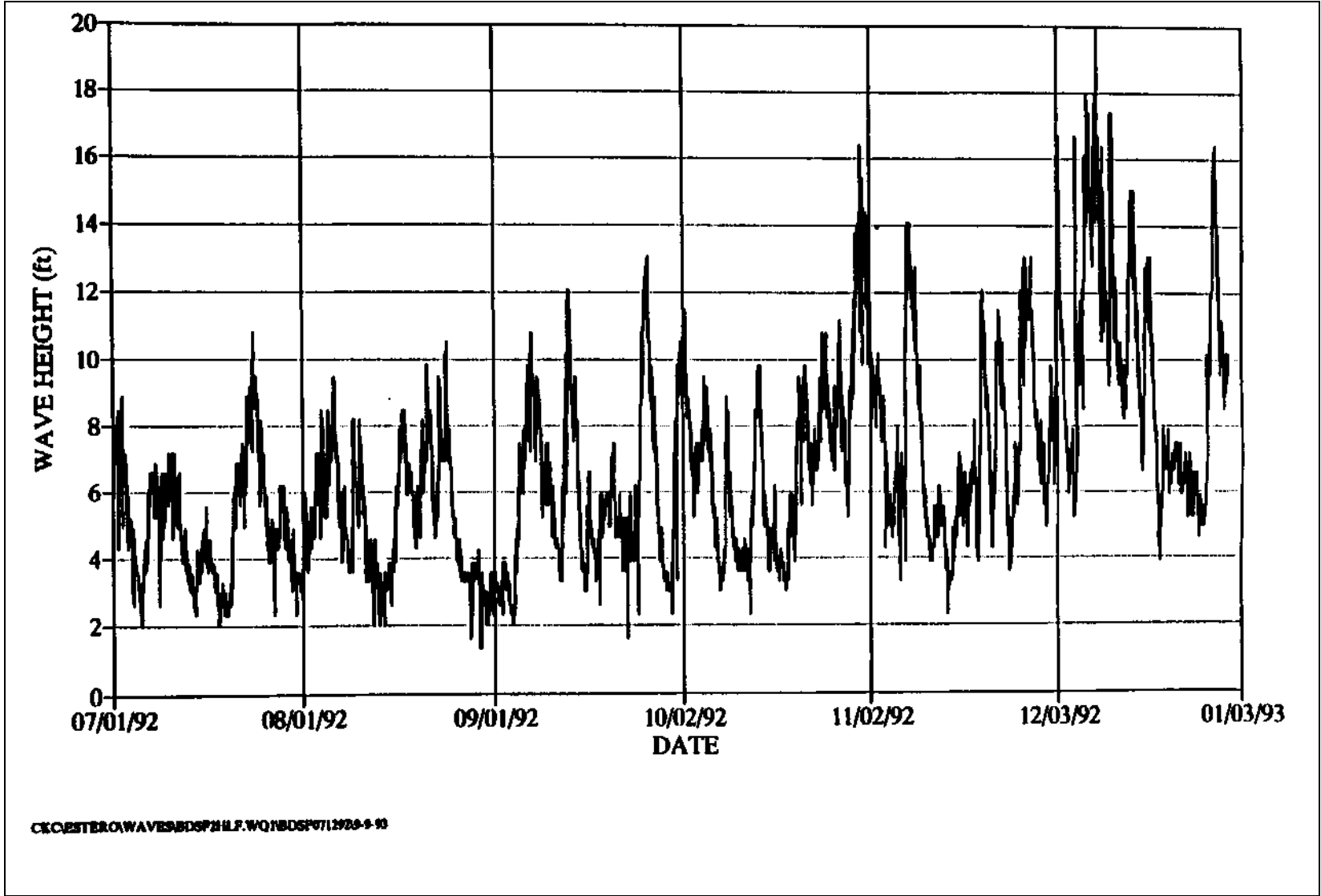


CKC\ESTER\WAVES\BDDGAS\F2.WQ\BDDGAS\1992-9-93

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

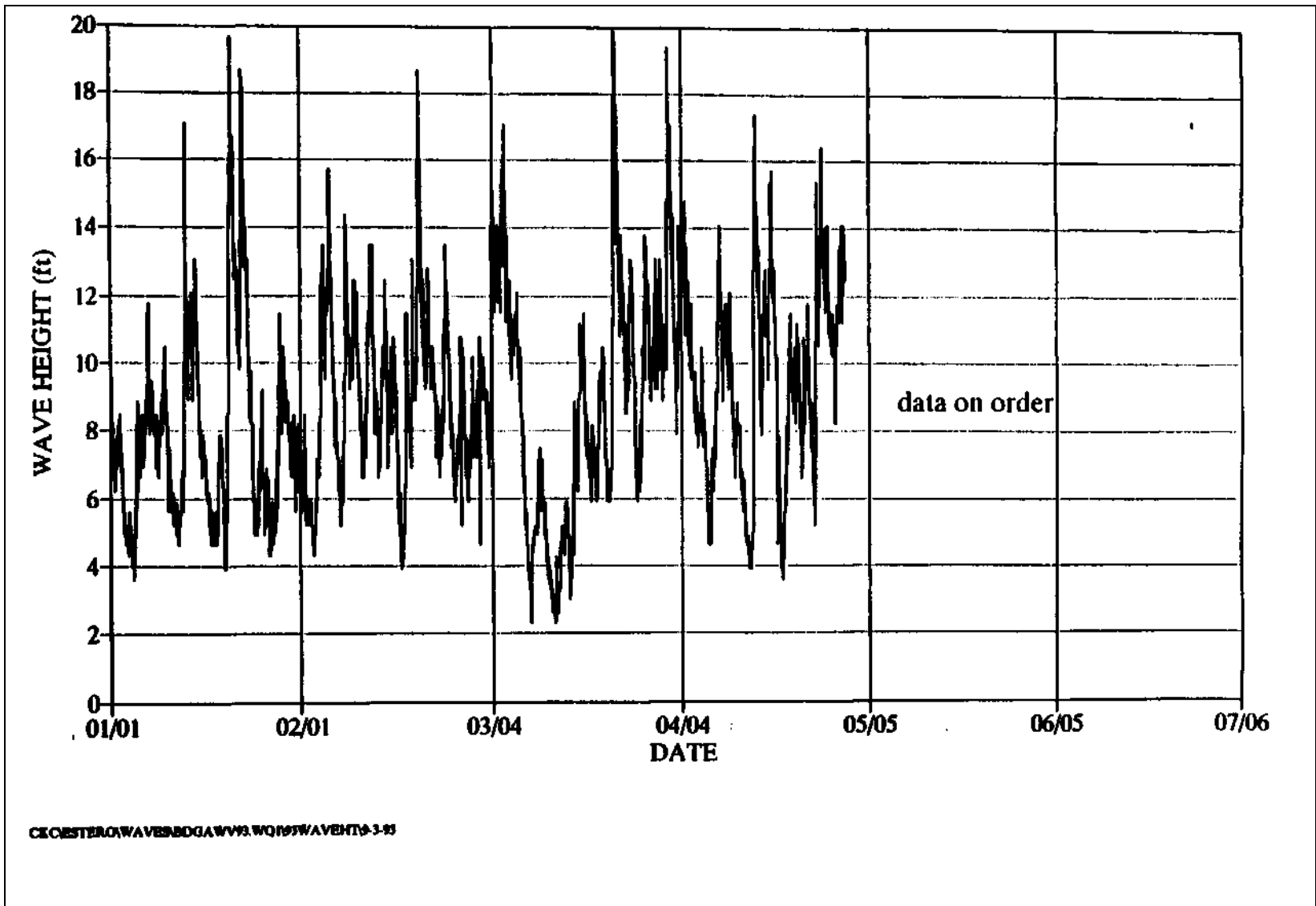
Figure



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

Figure



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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?

5. COMMERCIAL

a. What is the commercial use of your property? _____

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

- Parking Lot
- Landscaping
- Other, describe: _____

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? _____

6. Other Comments: _____
