Draft 4/15/05

FRENCHMAN VALLEY STUDY

Goal

To evaluate alternative program activities, structural measures or incentives that can assist in optimizing existing facilities, providing lake level benefits, and providing recharge facilities for Enders Reservoir and the irrigated area it serves.

Objectives

1. Describe the Study Area
2. Consult with stakeholder groups
3. Evaluate problems and opportunities
4. Evaluate alternative choices for optimizing existing facilities related to Enders Reservoir and the irrigated area it serves
    a) Structural options
    b) Program options and incentives
    c) Other
5. Evaluate alternative choices for providing lake level benefits from Enders Reservoir
    a) Structural options
    b) Program options and incentives
    c) Other
6. Evaluate alternative choices for providing recharge benefits through use of Enders Reservoir
    a) Structural options
    b) Program options and incentives
    c) Other
7. Formulate alternative plans
8. Evaluate overall effects of plans
9. Compare plans
10. Provide recommendations

Frenchman Valley – Appraisal Study - Plan of Study

Grouping interests identified in 5/4/05 meeting in alternatives

1. Future without Condition – Continue operations as is

   NRD – No "new" restrictions on groundwater pumping
   NRD – no additional controls or regulations
   NRD – no third party impacts from "new" restrictions
   Reclamation – meet authorized purpose of the project ?
   Reclamation, Neb DNR, FV-HRW – solvency of the Districts ?
   can the Districts continue with as is operations?
   Reclamation – existing contracts with the Irrigation Districts ?
   can the Districts continue with as is operations?
   Reclamation – storage and storage use rights are considerably higher than what is available
   FV-HRW – reliability of the reservoir supply and natural flow supply

2. Optimizing existing facilities related to Enders Reservoir and the irrigated area it serves

   Reclamation – protect federal investment in project, irrigation
   Reclamation – existing contracts with the Irrigation Districts
   Reclamation, Neb DNR, FV-HRW – solvency of the Irrigation Districts
   Reclamation – meet authorized purpose of the project
   Neb DNR – get most benefit of future water supply
   Neb DNR – compact implications
   NRD – stay in compliance with Compact?
   FV-HRW – reliability of reservoir supply and natural flow supply

3. Provide lake level benefits from Enders Reservoir

   NGPC – improved quality of life for the area
   NGPC – higher mimimum pool, El. 3089.0
   NGPC – preferred minimum pool, El. 3099.0
   NGPC – improved fisheries
   NGPC – reduced water temperature/algae bloom problems
   NGPC – reduced noxious weed problems
   NGPC – improved water access – boat ramps
   NGPC – improved non-resident economic benefit
   NGPC – protects state investment in facilities
   NGPC – reduced boating safety issues
   Neb. DNR – compact implications – additional evaporation losses
   Neb. DNR – compact implications – acres irrigated?
   Neb. DNR – improve water levels in lake

Neb. DNR – get the most benefit from the future water supply
Reclamation – protect federal investment in project - recreation

4. Provide recharge benefits through the use of Enders Reservoir

Could potentially provide increased reservoir levels
Which would provide benefits as listed in alternative 3. above
FV-HRW – non-district beneficiaries could pay for benefits of recharge
FV-HRW – Reliability of reservoir supply and natural flow supply
Neb. DNR – share benefits & burdens by all beneficiaries
Neb. DNR – examine legal/administrative changes to get greatest benefit
Neb. DNR – get the most benefit of future water supply
Neb. DNR – compact implications
Neb. DNR – intentional groundwater recharge in targeted areas
NRD – no new restrictions on groundwater pumping???
NRD – no additional controls or regulations???
NRD – stay in compliance with Compact?
NRD – who pays for benefits?
Reclamation – downstream irrigation districts' interests
Reclamation – protect federal investment

Frenchman River – Natural Flow Water Rights

Frenchman Valley Irrigation District	D-24R	130.86 cfs	05/16/1890	9160.4 ac
H & RW Irrigation District	A-3869AR	16.64 cfs	04/03/1946	1415.0 ac
H & RW Irrigation District	A-6214R	136.80 cfs	04/16/1954	9576.0 ac
H & RW Irrigation District	A-9697R	2.24 cfs	03/04/1959	157.0 ac
Frenchman Valley Irrigation District	A-9802R	1.89 cfs	03/17/1960	132.0 ac
H & RW Irrigation District	A-13016R	9.76 cfs	04/03/1946	683.0 ac
H & RW Irrigation District	A-14249R	.86 cfs	06/04/1976	60.0 ac
H & RW Irrigation District	A-15678R	.34 cfs	07/10/1980	24.0 ac
Riverside Irrigation Company, Inc.	D-10AR	.73 cfs	12/19/1893	51.1 ac
Riverside Irrigation Company, Inc.	D-18	4.16 cfs	07/28/1894	291.0 ac
Riverside Irrigation Company, Inc.	A-1674	2.71 cfs	07/03/1922	190.0 ac
Riverside Irrigation Company, Inc.	A-3477R	2.00 cfs	07/31/1941	140.0 ac

Frenchman River – Storage Water Right

Bureau of Reclamation	A-3899	44,079 AF	05/01/1946

Storage Use Water Rights

Enders, Strunk, Harlan County, and Swanson Reservoirs

Bureau of Reclamation A-6225HR 04/16/1954
Covers flow rights A-3869AR

Bureau of Reclamation A-6225HR 04/16/1954
Covers flow rights A-6214R

Enders, Strunk, Harlan County, Swanson, and Hugh Butler Lake Reservoirs

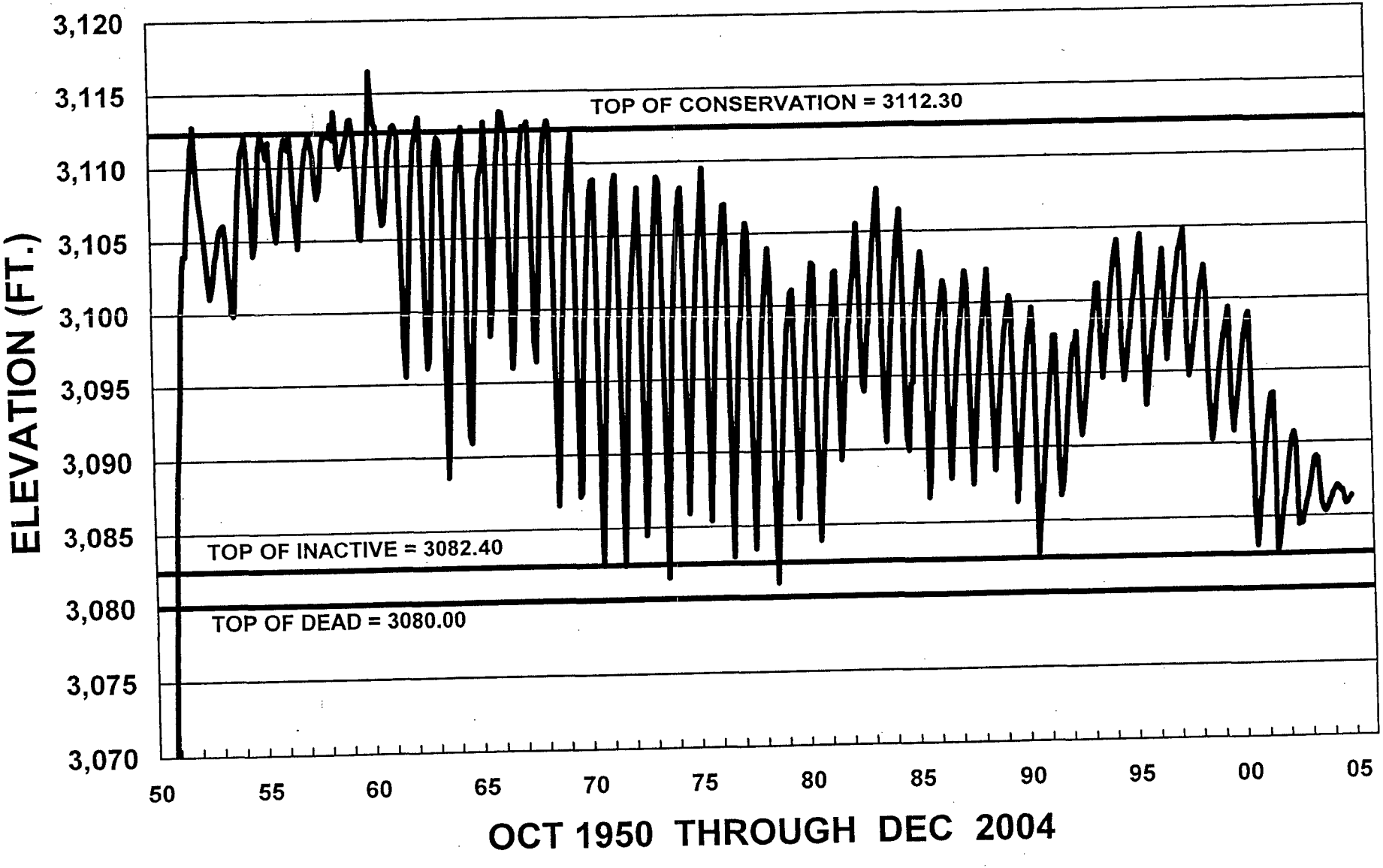
Bureau of Reclamation A-9782 12/16/1959
Covers flow rights D-24-30, A-6214, A-9697, A-9802

Bureau of Reclamation A-15839 04/18/1981
Covers flow rights A-13016R, A-14249R, A-15678R

Total Natural Flow Rights

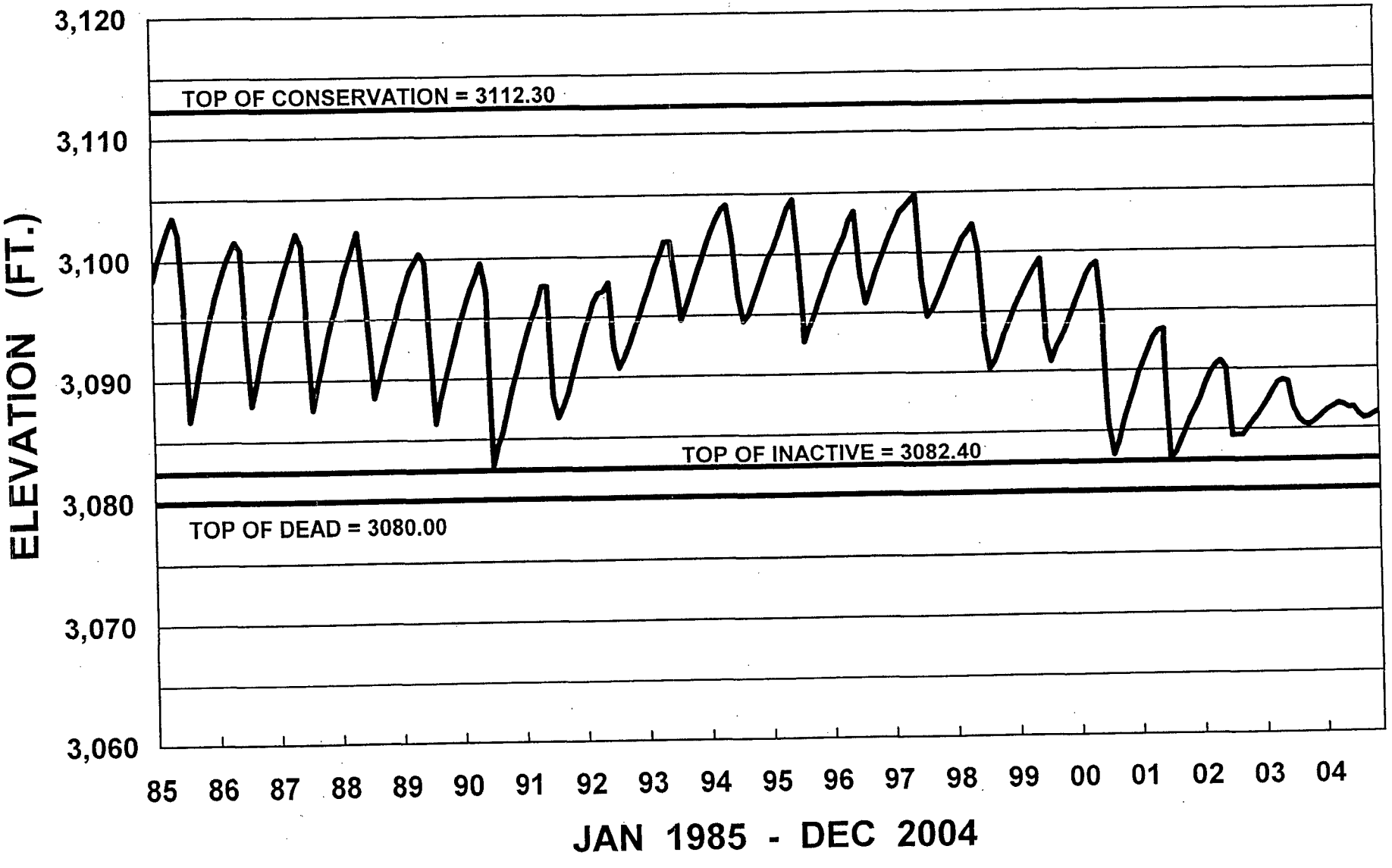
Frenchman Valley Irrigation District	132.75 cfs	9,292.4 acres
H & RW Irrigation District	164.40 cfs	11,915 acres
Riverside Irrigation Company	9.60 cfs	672.1 acres

ENDERS RESERVOIR
END OF MONTH ELEVATION

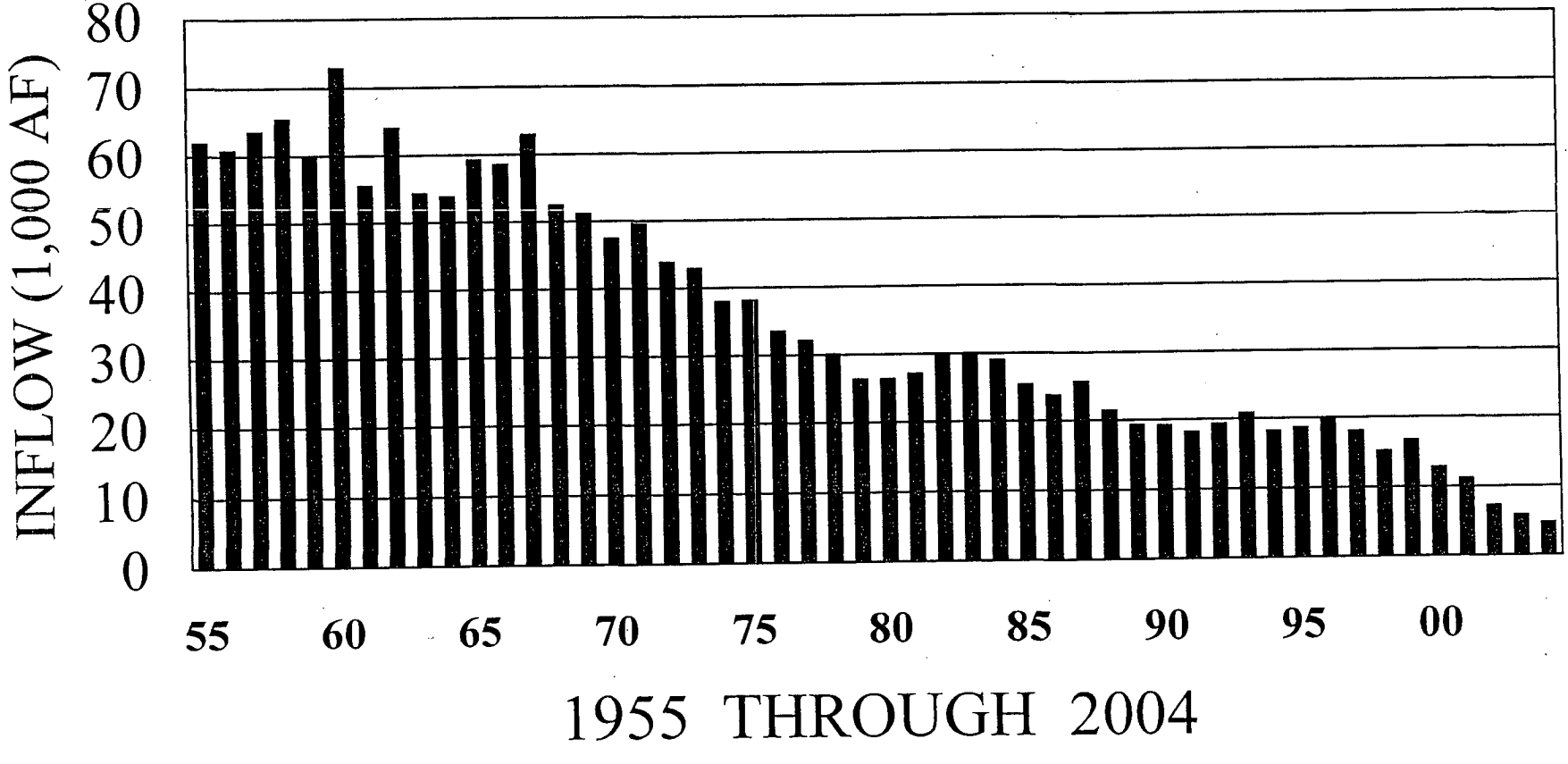


ENDERS RESERVOIR

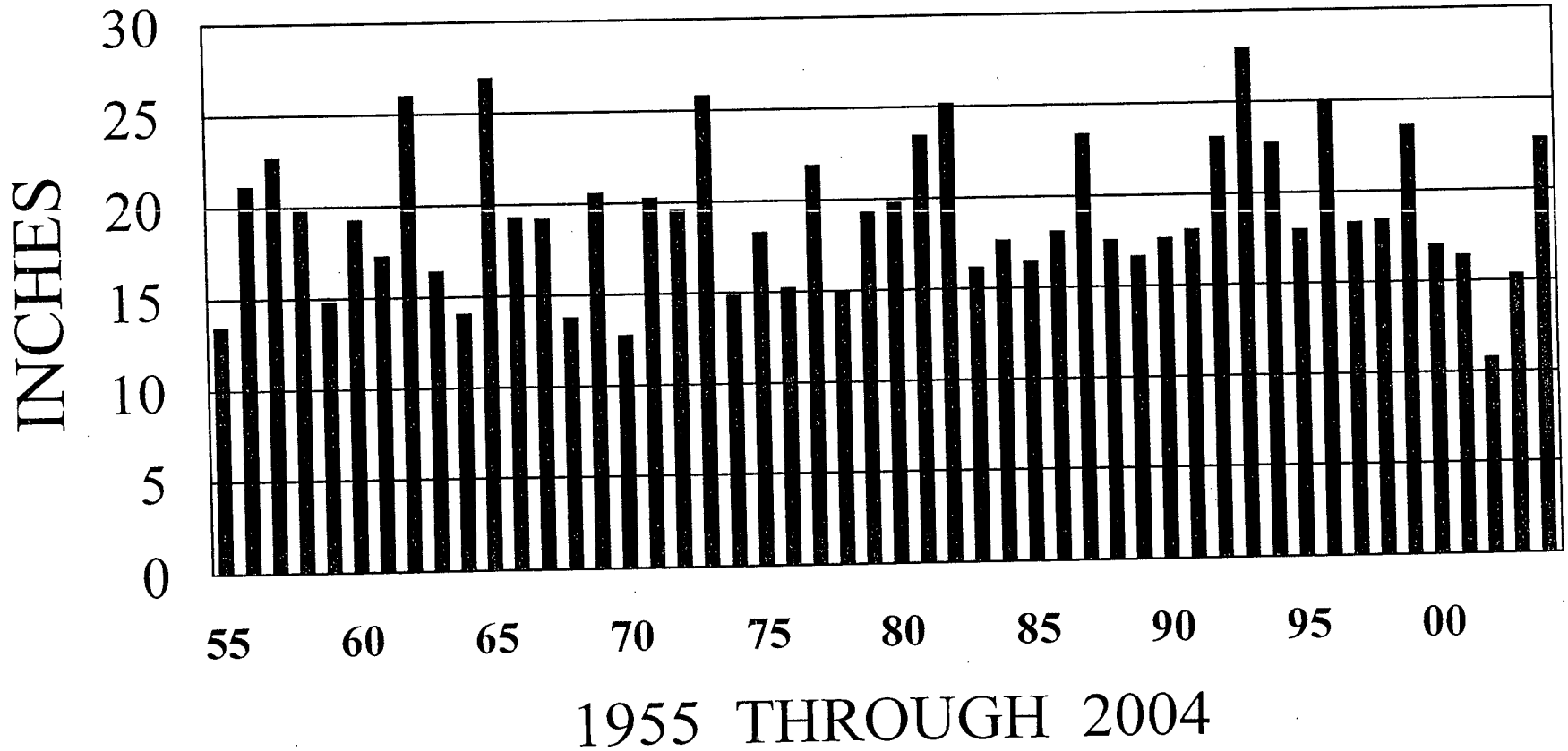
20 YEAR EOM LEVELS



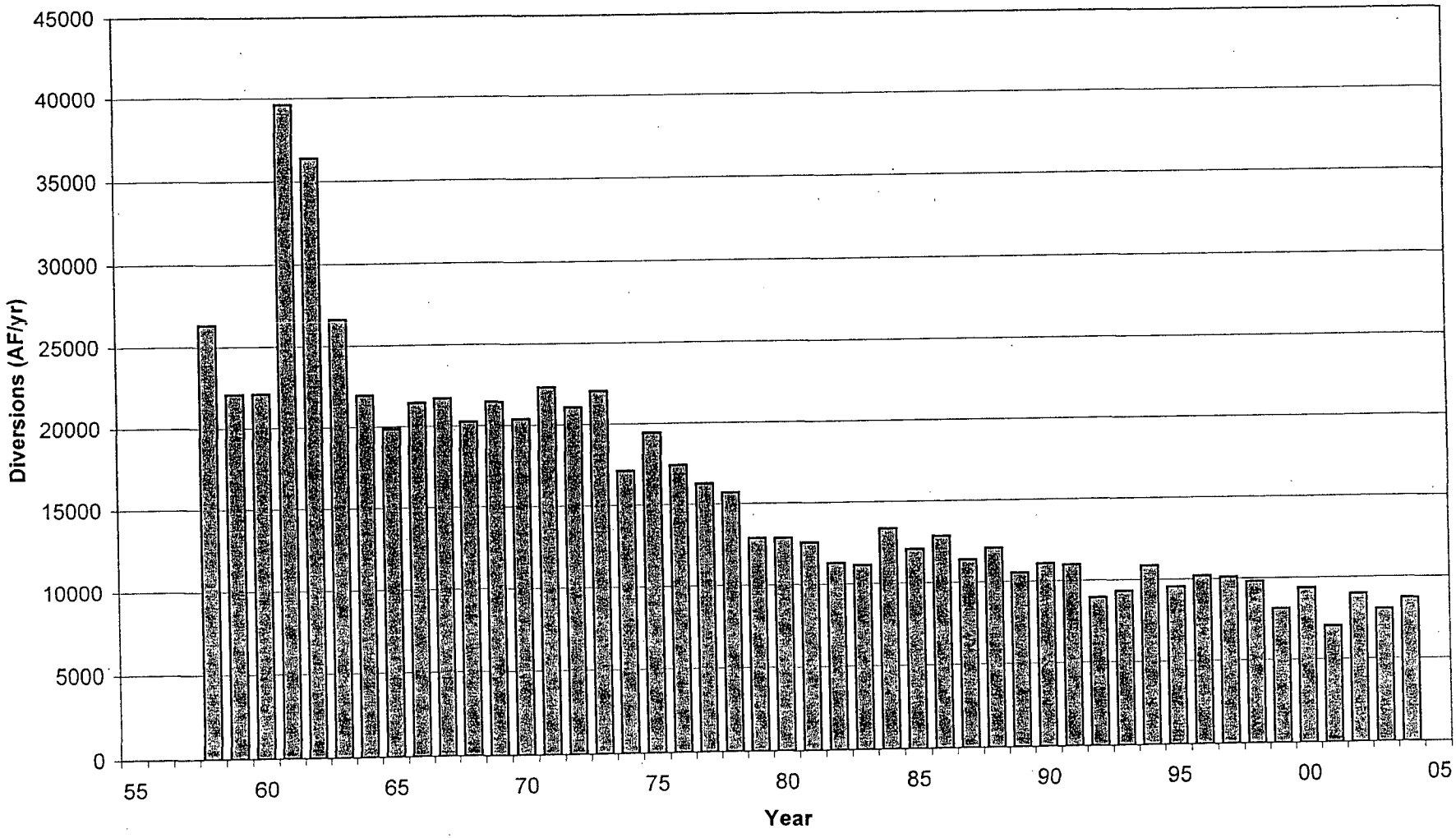
ENDERS RESERVOIR
YEARLY HISTORICAL INFLOW



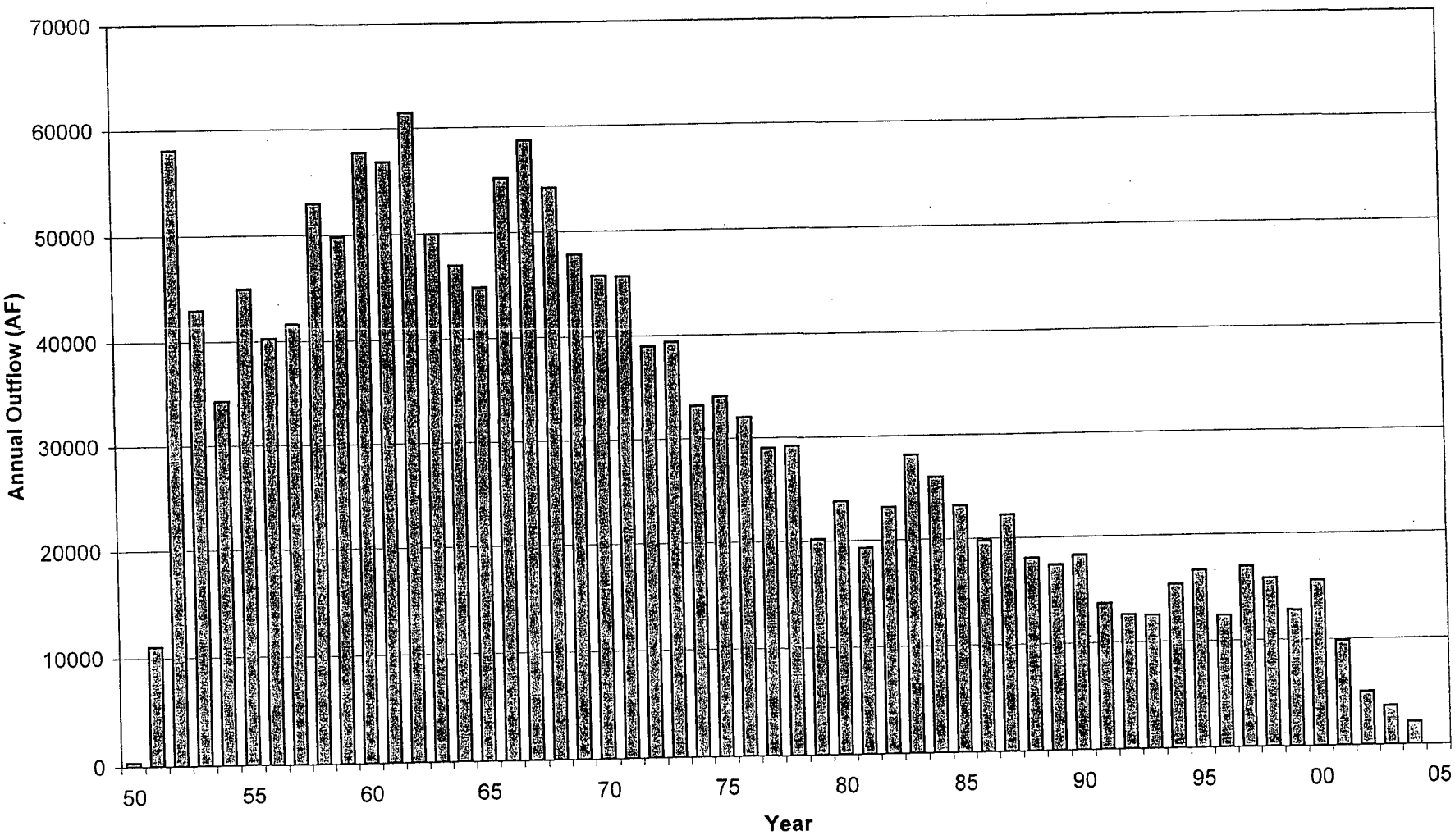
ENDERS DAM
YEARLY PRECIPITATION



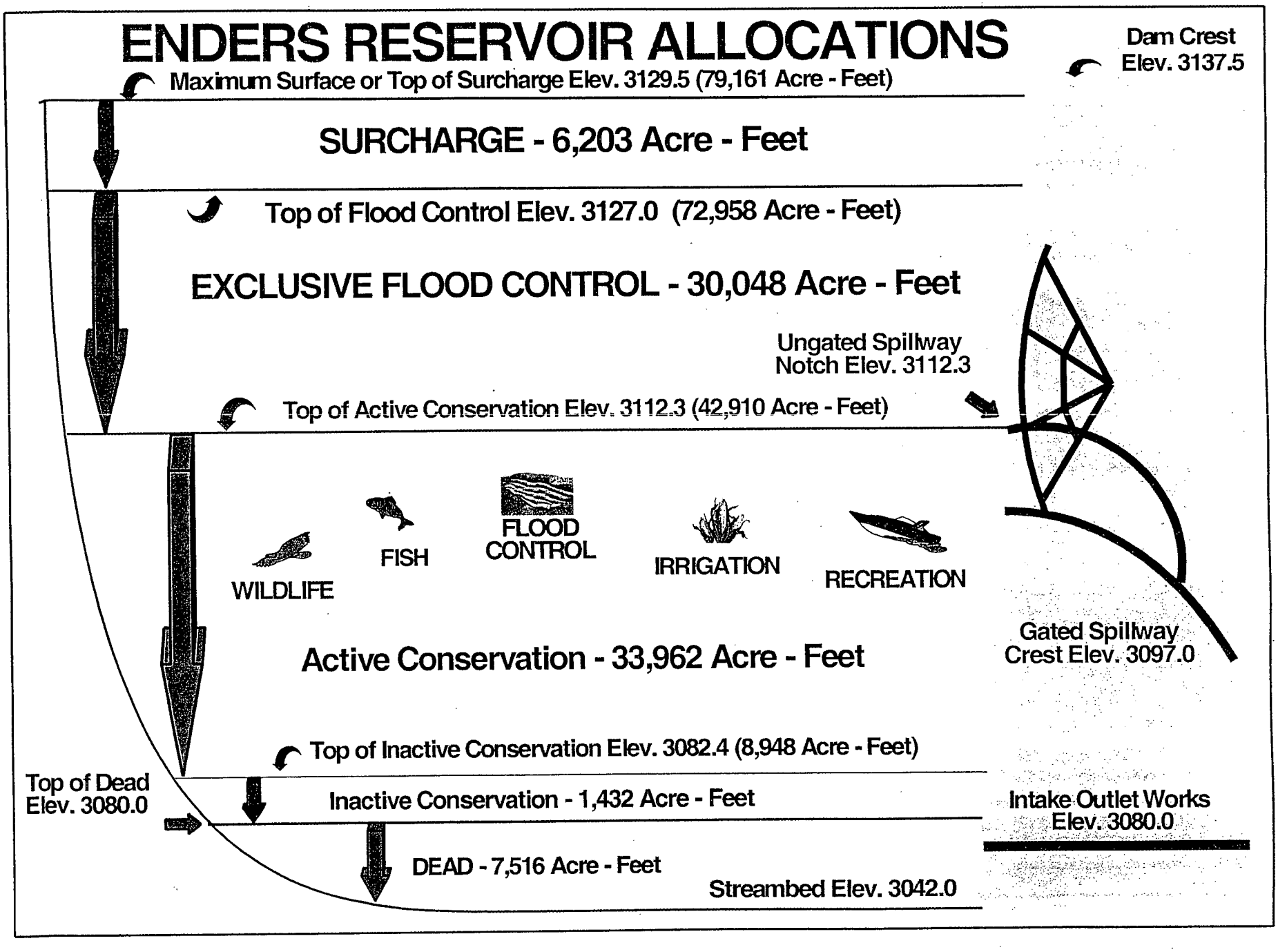
Culbertson Diversion Dam
Annual Diversions



Enders Reservoir
Annual Outflow



ENDERS RESERVOIR ALLOCATIONS



Steve Gaul

From: Jack Wergin [JWERGIN@gp.usbr.gov]
Sent: Tuesday, February 13, 2007 4:47 PM
To: ableed@dnr.ne.gov; bedgerton@dnr.ne.gov; dhallum@dnr.ne.gov; jbradley@dnr.ne.gov; jschneider@dnr.ne.gov; sgaul@dnr.ne.gov; dsmith@mrnrd.org; darrol.eichner@ngpc.ne.gov; enders@ngpc.ne.gov; larry.hutchinson@ngpc.ne.gov; jasperfanning@urnrd.org
Cc: Alice Johns; Jill Manring; Michael Kube; Mark A. Phillips; Marvin Swanda; Stephen Ronshaugen; William Peck
Subject: Frenchman Valley Meeting - Feb 15th - 9:30 - Cambridge

Attachments: FVAS-021507-DraftAgenda.doc; Ender_Draft_POS-021507.doc


FVAS-021507-Draft Agenda.doc (2...


Ender_Draft_POS-021507.doc (2 ...

The meeting to discuss the revised Draft Plan of Study and work schedule for the Frenchman Valley Appraisal Study has been rescheduled for 9:30 a.m. on Thursday, February 15th at the Cambridge Community Center,
722 Patterson, in Cambridge.

I've attached the latest draft Plan of Study and a draft agenda for the meeting.

If you are unable to attend, you can call into our conference line at

Phone: 877-686-3190
Passcode: 363511 #

If you have any questions, please email me or call me at jwergin@gp.usbr.gov or 308-389-5322.

Steve Gaul

From: Doug Hallum [dhallum@dnr.ne.gov]

Sent: Wednesday, February 14, 2007 11:07 AM

To: Mike Thompson; jschneider@dnr.ne.gov; pkoester@dnr.ne.gov; ableed@dnr.state.ne.us; SGaul@dnr.ne.gov

Cc: AWoods-Rodgers@dnr.ne.gov; Pam Andersen; JWilliams@dnr.ne.gov; Tina Kurtz; bdunnigan@dnr.ne.gov

Subject: Re: FW: Travel to Cambridge tomorrow

Hello 6am crew,

Please pick me up at the Seward exit (379) at the Shell station just south of the overpass.

Thank You,

Doug Hallum
Hydrogeologist
Ground Water Modeling

State of Nebraska
Department of Natural Resources
301 Centennial Mall South
4th Floor, State Office Building
P.O. Box 94676
Lincoln, NE 68509-4676

Office: 402-471-1114
Fax: 402-471-2900
E-MAIL: dhallum@dnr.ne.gov
WEBPAGE: http://dnr.ne.gov

-----Original Message-----
From: "Mike Thompson" <mthompson@dnr.ne.gov>
To: <jschneider@dnr.ne.gov>, <dhallum@dnr.ne.gov>, <pkoester@dnr.ne.gov>, <ableed@dnr.state.ne.us>, <SGaul@dnr.ne.gov>
Cc: <AWoods-Rodgers@dnr.ne.gov>, "Pam Andersen" <pandersen@dnr.ne.gov>, <JWilliams@dnr.ne.gov>, "Tina Kurtz" <tkurtz@dnr.ne.gov>, <bdunnigan@dnr.ne.gov>
Date: Wed, 14 Feb 2007 08:50:28 -0600
Subject: FW: Travel to Cambridge tomorrow

Hi All,

The folks on the "To" list will be leaving at 6 AM for the 9:30 AM F-V Appraisal meeting. Someone will need to remember to check out the van this afternoon. The folks on the cc list (except Amber) will be leaving at 9:15 AM for the 1:00 PM meeting in Cambridge .

Any changes to this schedule can be worked out today amongst ourselves.

Thanks,

Mike

-----Original Message-----
From: Cheryl Byler [mailto:cbyler@dnr.ne.gov]
Sent: Wednesday, February 14, 2007 8:25 AM
To: mthompson@dnr.ne.gov
Cc: sgaul@dnr.ne.gov; awoods-rodgers@dnr.ne.gov
Subject: Travel to Cambridge tomorrow

A mini van has been reserved under Mike Thompson's name for pick up today after 4:00 p.m.

403 442 7367

APPENDIX C

Irrigation Requirement Spreadsheet

Surface Irrigation (inches)	Irrigation District Requirements (acre feet)			TOTAL Irrigation Requirement (acre feet)			Frenchman Valley Irrigation Requirement			H&RW Irrigation Requirement		
	FVID	H&RWID	Total	Releases	Enders	Enders	Releases	Enders	Enders	Releases	Enders	Enders
	9295 acres	11695 acres	20990 acres	FVID & H&RW	Elev - 3089.4	Elev - 3099.0	FVID	Elev - 3089.4	Elev - 3099.0	H&RW	Elev - 3089.4	Elev - 3099.0
0	0	0	0	*****	*****	*****	*****	*****	*****	*****	*****	*****
1	775	975	1749	*****	*****	*****	*****	*****	*****	*****	*****	*****
2	1549	1949	3498	*****	*****	*****	*****	*****	*****	*****	*****	*****
3	2324	2924	5248	*****	*****	*****	*****	*****	*****	*****	*****	*****
4	3098	3898	6997	*****	*****	*****	*****	*****	*****	*****	*****	*****
5	3873	4873	8746	*****	*****	*****	*****	*****	*****	*****	*****	*****
6	4648	5848	10495	*****	*****	*****	*****	*****	*****	*****	*****	*****
7	5422	6822	12244	*****	*****	*****	*****	*****	*****	*****	*****	*****
8	6197	7797	13993	*****	*****	*****	*****	*****	*****	*****	*****	*****
9	6971	8771	15743	*****	*****	*****	*****	*****	*****	*****	*****	*****
10	7746	9746	17492	*****	*****	*****	*****	*****	*****	*****	*****	*****
11	8520	10720	19241	*****	*****	*****	*****	*****	*****	*****	*****	*****
12	9295	11695	20990	*****	*****	*****	*****	*****	*****	*****	*****	*****
13	10070	12670	22739	*****	*****	*****	*****	*****	*****	*****	*****	*****
14	10844	13644	24488	*****	*****	*****	*****	*****	*****	*****	*****	*****
15	11619	14619	26238	*****	*****	*****	*****	*****	*****	*****	*****	*****
16	12393	15593	27987	*****	*****	*****	*****	*****	*****	*****	*****	*****
17	13168	16568	29736	*****	*****	*****	*****	*****	*****	*****	*****	*****
18	13943	17543	31485	*****	*****	*****	*****	*****	*****	*****	*****	*****

***** Data to be developed by BOR

Steve Gaul

From: Jack Wergin [JWERGIN@gp.usbr.gov]
Sent: Wednesday, February 21, 2007 3:59 PM
To: dhallum@dnr.ne.gov; jschneider@dnr.ne.gov; pkoester@dnr.ne.gov; sgaul@dnr.ne.gov
Cc: Jill Manring; Michael Kube; Mark A. Phillips; William Peck
Subject: Frenchman Valley Modeling Meeting

Reclamation and Nebraska Department of Natural Resources will meet on Friday, February 23, 2007 at 10:30 a.m. at Reclamation's Grand Island Office conference room (203 West 2nd Street) to discuss the initial modeling for the Frenchman Valley Appraisal Study.

Those unable to attend can all in by phone at

877-686-3190
passcode: 363511 #

Please forward to others as you see fit.

if you have any quaestions, call me at 308-389-5322

Thanks and see you Friday - Jack

The Department of Natural Resources is excited to announce a series of presentations and workshops developed for ground water modeling and technical groups...

March 29th, 2007: Elkhorn-Loup Modeling Study, Overview, approach and preliminary results.

Presented by:
Mr. Steven M. Peterson P.G.
U.S. Geological Survey - Nebraska Water Science Center

Thursday, March 29th, 2007
From 3:00 pm to 4:00 pm
at the Nebraska Department of Natural Resources Large Conference Room
301 Centennial Mall South – 4th Floor
Lincoln, Nebraska

April 26th, 2007: Nebraska Department of Natural Resources - Fully Appropriated Basins Report Methodologies

Presented by:
Mr. Jesse Bradley
NEBRASKA Department of Natural Resources
Integrated Water Management Analyst

Thursday, April 26th, 2007
From 3:00 pm to 4:00 pm
at the Nebraska Department of Natural Resources Large Conference Room
301 Centennial Mall South
Lincoln, Nebraska

May 31st, 2007: The Lag and Residual Effects of Pumping in Nebraska

Presented by:
Mr. James C. Schneider
Nebraska Department of Natural Resources
Senior Groundwater Modeler

Thursday, May 31st, 2007
From 3:00 pm to 4:00 pm
at the Nebraska Department of Natural Resources Large Conference Room
301 Centennial Mall South
Lincoln, Nebraska

June 28th, 2007: Geophysical Investigation in Support of Nebraska Groundwater Modeling Efforts

Presented by:
Mr. James C. Cannia P.G.
U.S. Geological Survey - Nebraska Water Science Center

Thursday, June 28th, 2007
From 3:00 pm to 4:00 pm
at the Nebraska Department of Natural Resources Large Conference Room
301 Centennial Mall South
Lincoln, Nebraska

July 26th, 2007: US Bureau of Reclamation/Nebraska DNR - Frenchman Valley Appraisal Study

Presented by:
TBD
NEBRASKA Department of Natural Resources
US Bureau of Reclamation

Thursday, July 26th, 2007
From 3:00 pm to 4:00 pm
at the Nebraska Department of Natural Resources Large Conference Room
301 Centennial Mall South
Lincoln, Nebraska

The Nebraska Board of Engineers and Architects now requires all engineers licensed in Nebraska to obtain 30 hours of engineering related learning for each biennial renewal period. These presentations will provide ONE hour each toward this requirement.

Steve Gaul

From: Jack Wergin [JWERGIN@gp.usbr.gov]
Sent: Wednesday, February 21, 2007 10:17 AM
To: sgaul@dnr.ne.gov
Subject: Friday's meeting

Steve,

I've been tied up in staff meetings, but will get out an email later today about Friday's meeting.

I was hoping we could delay the start of the meeting until 10:30 (instead of 10:00)

We have another meeting scheduled for 9:30, in which I think Jill and I can be done with our part of this meeting by 10:30. This wouid also give Bill Peck some additional time to get over here from McCook. I believe he (or another water operations person) plans to attend. If they can't they will call in. Mark Phillips will plan on calling in.

Please let me know if this is okay on your end.