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DEPARTMENT OF
WATER RESOURCES

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Attorneys for Idaho Ground Water Appropriators, Inc.

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF DISTRIBUTION OF WATER TO VARIOUS WATER RIGHTS HELD BY OR FOR THE BENEFIT OF A & B IRRIGATION DISTRICT, AMERICAN FALLS RESERVOIR DISTRICT #2, BURLEY IRRIGATION DISTRICT, MILNER IRRIGATION DISTRICT, MINIDOKA IRRIGATION DISTRICT, NORTH SIDE CANAL COMPANY, and TWIN FALLS CANAL COMPANY	**AFFIDAVIT OF CHARLES M. BRENDECKE IN SUPPORT OF IGWA'S PETITION FOR RECONSIDERATION OF SECOND SUPPLEMENTAL ORDER**

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

Charles M. Brendecke, being first duly sworn on oath, deposes and hereby states as follows:

1. I am President of Hydrosphere Resource Consultants, 1002 Walnut, Suite 200, Boulder, Colorado 80302. I am a licensed professional engineer in Idaho, Colorado, Wyoming and Oklahoma. I have a Bachelor of Science degree in civil engineering from the University of Colorado and Master of Science and Doctor of Philosophy degrees in civil engineering from Stanford University.

2. My educational and professional experience is set forth in the *Affidavit of Charles M. Brendecke* filed with the Department in this matter on March 23, 2005, and in Exhibit A thereof, and incorporated herein by this reference.

3. I have reviewed the historical diversions of the Twin Falls Canal Company as contained in the annual reports of Water District 01 and their predecessor reports for District 36. Based on these documents, the Twin Falls Canal Company first reported an irrigated area of 202,650 acres in 1930, and in that year diverted more than one million acre-feet for the first time. The average diversion of the Twin Falls Canal Company for the period 1930-2004 is 1,055,163 acre-feet. The minimum full supply criterion adopted in the Director's Order of May 2 for Twin Falls is 1,075,900 acre-feet.

4. The Director's Order of May 2 determined that the 1995 diversion of the Twin Falls Canal Company met the criterion of "minimum supply recently diverted for full head-gate deliveries" and used that criterion to predict the extent of material injury in 2005. Based on information submitted in this matter by the Twin Falls Canal Company, a head-gate delivery of 5/8 inch per acre represents a full water supply for Company shareholders. The delivery information submitted by Twin Falls reveals that head-gate deliveries of 5/8 inch occurred in 1994, 2002 and 2003. Thus the Director's criterion is not met by their 1995 diversion but by their 2002 diversion of 1,009,100 acre-feet. This is 66,800 acre-feet less than the injury threshold used by the Director in his May 2 Order.

5. I have reviewed monthly evapo-transpiration (ET) and precipitation data reflecting the 2005 irrigation requirements of the Surface Water Coalition entities (SWC entities). The ET data were obtained from the U.S. Bureau of Reclamation's on-line AgriMet system. The precipitation data were obtained from the Natural Resources Conservation Service

(NRCS) on-line National Water and Climate Center (NWCC). These data are reflective of climatic conditions in the vicinity of Twin Falls, Idaho and are summarized in Exhibit A.

6. The NWCC data show that April precipitation near Twin Falls was 328% of average, that May precipitation was 270% of average, and that June precipitation was 126% of average. The AgriMet data show that reference ET for each of those three months was below average. Because of the large amounts of precipitation available to satisfy below-average crop water needs, irrigation requirements in the first three months of the 2005 irrigation season were substantially below average. It is likely that crops in some locations served by the SWC entities did not require irrigation at all in April and most of May.

7. I have reviewed the daily 2005 diversions of the SWC entities. These diversions were obtained from the preliminary Water District 01 accounting of natural flow and storage water use prepared by the Idaho Department of Water Resources for the period from November 1, 2004, through September 1, 2005. Exhibits B through G show graphically the natural flow and storage diversions of the SWC entities over this time period. Note that the diversions of the Minidoka and Burley Irrigation Districts have been combined in Exhibit B because the precise division of natural flow and storage supplies between the two is not known until the end of the irrigation season.

8. The preliminary accounting shows that many of the SWC entities did not begin diversions until late April or May. Although the Minidoka and Burley Irrigation Districts began diverting in mid-April, their diversion rate until late May was very low. Most of the SWC entities were able to operate on a natural-flow-only basis for the first several months. Storage water use for most of the SWC entities did not begin until late June or July.

9. The Second Supplemental Order found the 2005 diversions of the SWC members to be 2,837,000 acre-feet. This is essentially equal to the dry-year delivery to the SWC members predicted by planning studies done in 1946 for the Palisades Project. (see March 23, 2005, Affidavit at 47.) Thus the 2005 water supply of the SWC members is comparable to that which they anticipated under similar climatic conditions well before any substantial ground water development on the eastern Snake River Plain.

10. I have obtained spatial data from the IDWR reflecting the current SRBA claims and permitted places-of-use for ground water irrigation rights within the service area boundary of the Twin Falls Canal Company. An analysis of this data shows that 12,838 acres of land claimed as surface water irrigated by the Company in the SRBA also have associated with them ground water irrigation rights.

DATED this 10th day of January, 2006.

Charles M. Brendecke

SUBSCRIBED AND SWORN TO before me this 10th day of January, 2006.

CAROL McAMIS [seal] NOTARY PUBLIC STATE OF COLORADO

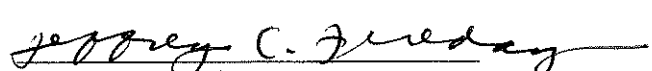
Carol McAmis
Notary Public for Colorado
Residing at 7988 Marshall St., Arvada, CO 80003
My commission expires 12/2/08

CERTIFICATE OF SERVICE

I hereby certify that on this 10th day of January 2006, I served a true and correct copy of the foregoing by delivering it to the following individuals by the method indicated below, addressed as stated.

Mr. Karl J. Dreher, Director Idaho Department of Water Resources 322 East Front Street P.O. Box 83720 Boise, ID 83720-0098	_____ _____ _____ __X__ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
C. Tom Arkoosh, Esq. Arkoosh Law Offices, Chtd. 301 Main Street P.O Box 32 Gooding, ID 83330	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
W. Kent Fletcher, Esq. Fletcher Law Office P.O. Box 248 Burley, ID 83318-0248	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Roger D. Ling, Esq. Ling, Robinson & Walker 615 H St. P.O. Box 396 Rupert, ID 83350-0396	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
John A. Rosholt, Esq. John K. Simpson, Esq. Travis L. Thompson, Esq. Barker, Rosholt & Simpson 113 Main Avenue West, Ste. 303 Twin Falls, ID 83301-6167	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Kathleen Marion Carr, Esq. Office of the Field Solicitor U.S. Department of the Interior 550 West Fort Street, MSC 020 Boise, ID 83724-0020	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Matt J. Howard, Esq. U.S. Bureau of Reclamation Pacific Northwest Region 1150 N. Curtis Road Boise, ID 83706-1234	__X__ _____ _____ _____ _____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail

Scott L. Campbell, Esq. Moffatt Thomas Barrett Rock & Fields, Chtd. 101 S. Capitol Blvd., 10th Floor P.O. Box 829 Boise, ID 83701-0829	X ____ ____ ____ ____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Michael S. Gilmore, Esq. Deputy Attorney General Civil Litigation Division Office of the Attorney General P.O. Box 83720 Boise, ID 83720-0010	X ____ ____ ____ ____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Josephine P. Beeman, Esq. Beeman & Associates PC 409 West Jefferson Boise, ID 83702-6049	X ____ ____ ____	U.S. Mail Facsimile Hand Delivery E-mail
Sarah A. Klahn, Esq. White & Jankowski, LLP 511 16th Street, Suite 500 Denver, CO 80202	X ____ ____ ____	U.S. Mail Facsimile Overnight Mail E-mail
Terry T. Uhling, Esq. J.R. Simplot Company 999 Main Street P.O. Box 27 Boise, ID 83707	X ____ ____ ____ ____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Mr. Ron Carlson Mr. Lewis Rounds Idaho Department of Water Resources Eastern Regional Office 900 North Skyline Dr. Idaho Falls, ID 83402-6105	X ____ ____ ____ ____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail
Mr. Allen Merritt Ms. Cindy Yenter Idaho Department of Water Resources Southern Regional Office 1341 Fillmore St., Ste. 200 Twin Falls, ID 83301-3033	X ____ ____ ____ ____	U.S. Mail Facsimile Overnight Mail Hand Delivery E-mail



Jeffrey C. Fereday

	2005 Precipitation near Twin Falls			2005 Reference ET near Twin Falls		
	2005 Precip (in)	71-00 Average	% of Average	2005 Etr	Average Etr	% of Average
Apr-05	3.12	0.95	328%	4.44	4.62	96%
May-05	3.78	1.4	270%	6.34	6.91	92%
Jun-05	1.06	0.84	126%	7.83	8.65	91%
Jul-05	0.03	0.27	11%	10.54	9.96	106%
Aug-05	0.3	0.38	79%	8.95	8.52	105%
Sep-05	0.15	0.65	23%	5.9	5.97	99%

Exhibit A

Exhibit B

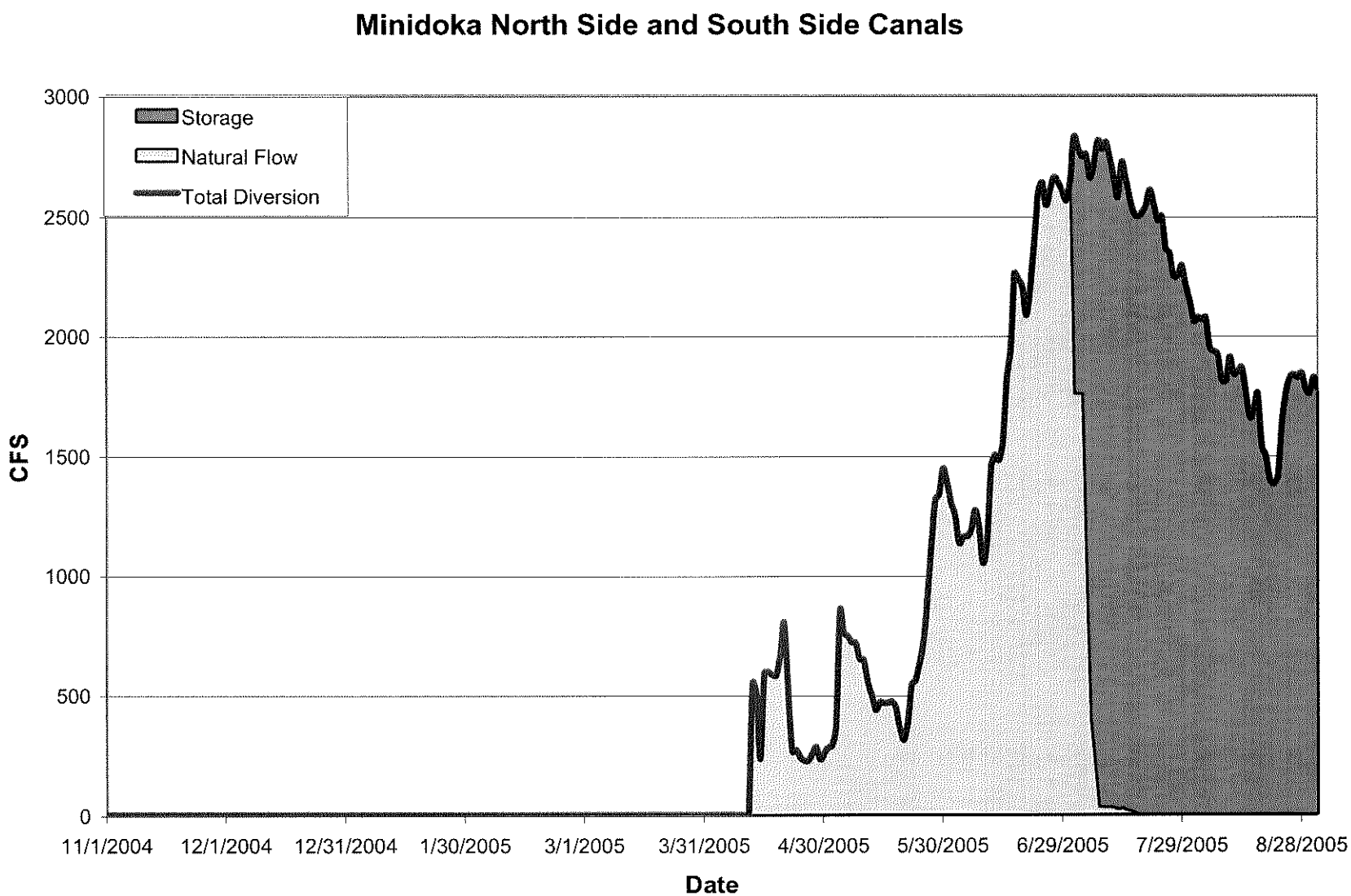

Minidoka North Side and South Side Canals
Storage
Natural Flow
Total Diversion
CFS
3000
2500
2000
1500
1000
500
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date

Exhibit C

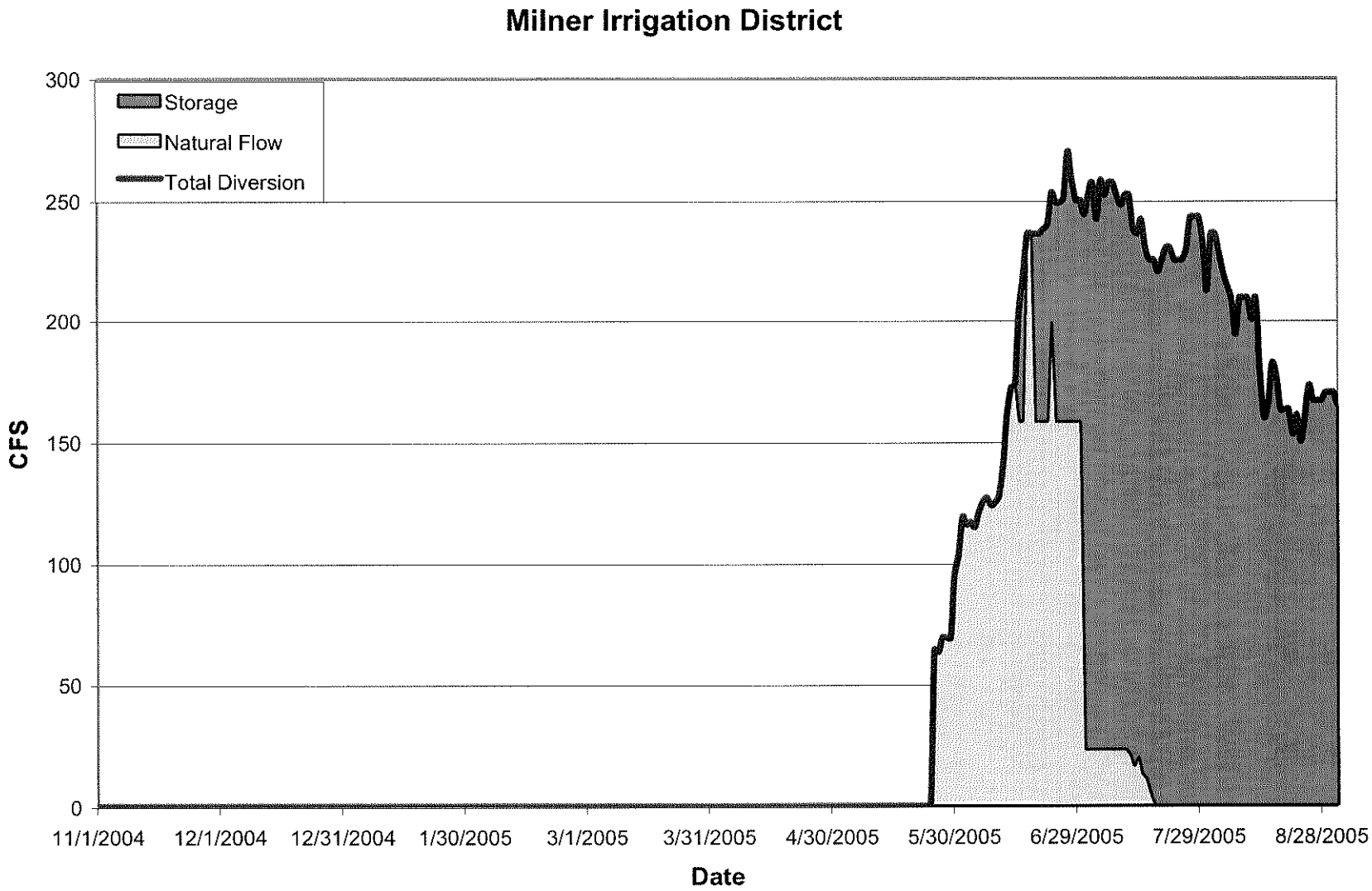

Milner Irrigation District
Storage
Natural Flow
Total Diversion
CFS
300
250
200
150
100
50
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date

Exhibit D

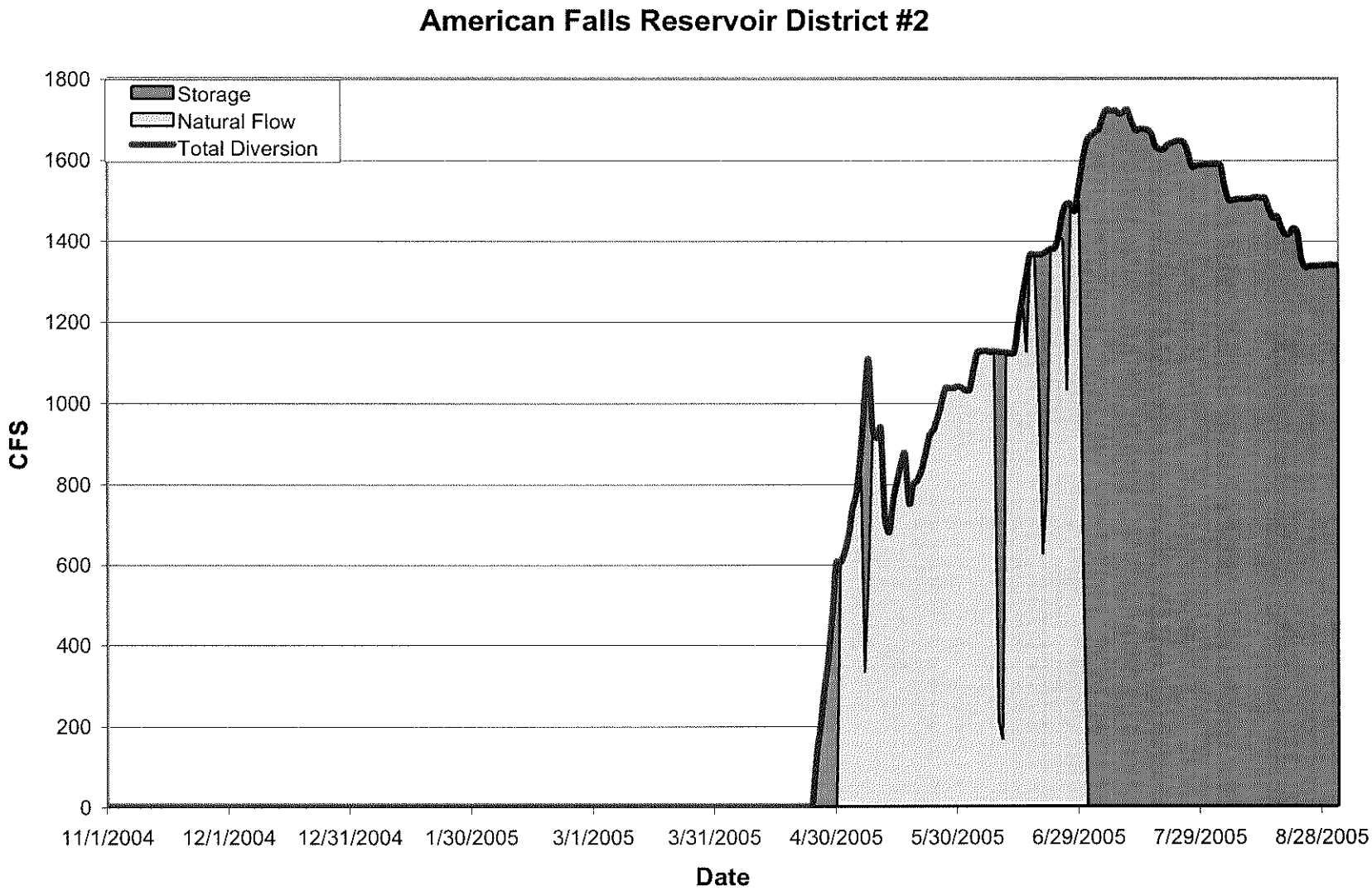

American Falls Reservoir District #2
Storage
Natural Flow
Total Diversion
CFS
1800
1600
1400
1200
1000
800
600
400
200
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date

Exhibit E

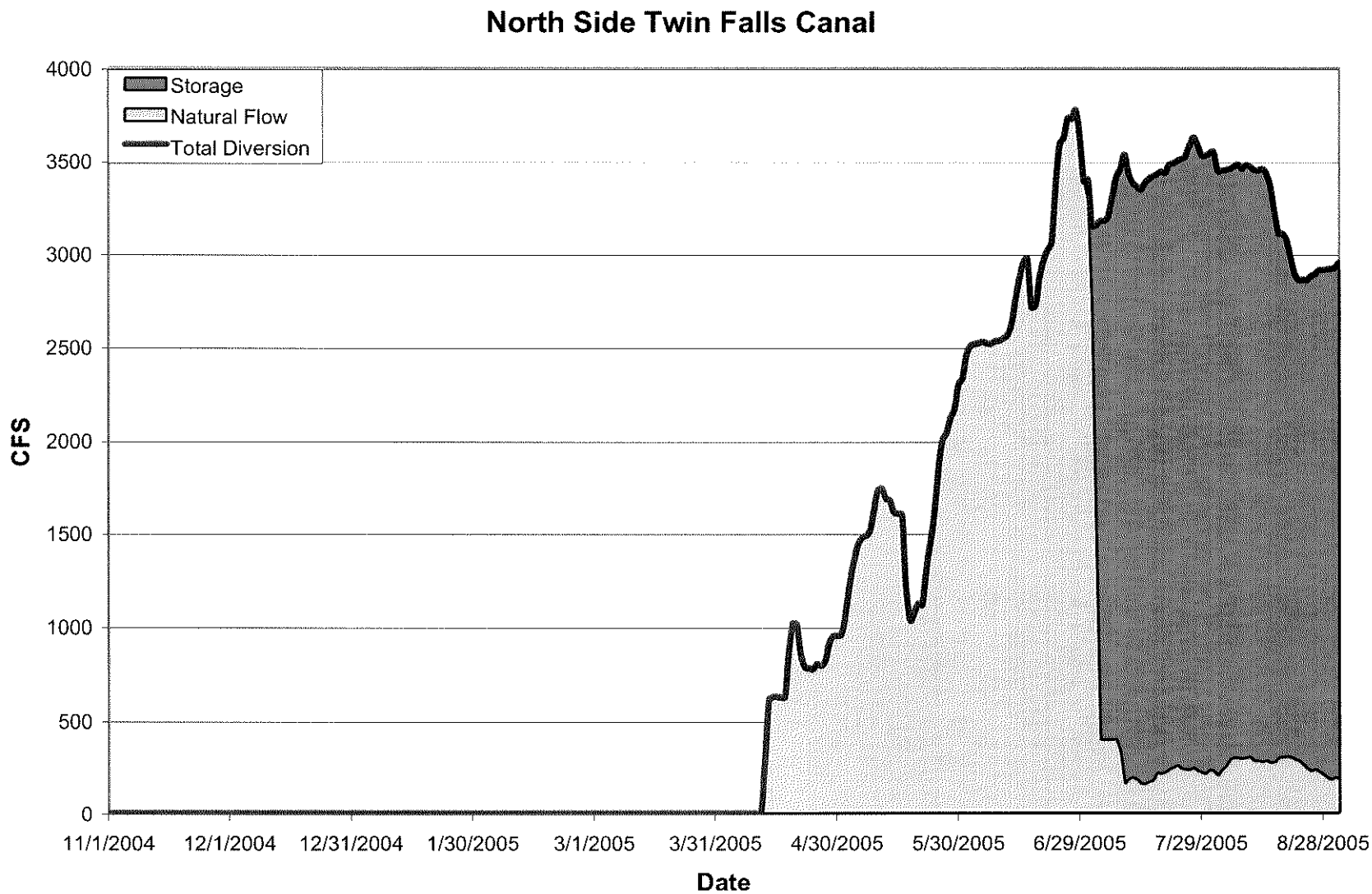

North Side Twin Falls Canal
Storage
Natural Flow
Total Diversion
CFS
4000
3500
3000
2500
2000
1500
1000
500
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date

Exhibit F

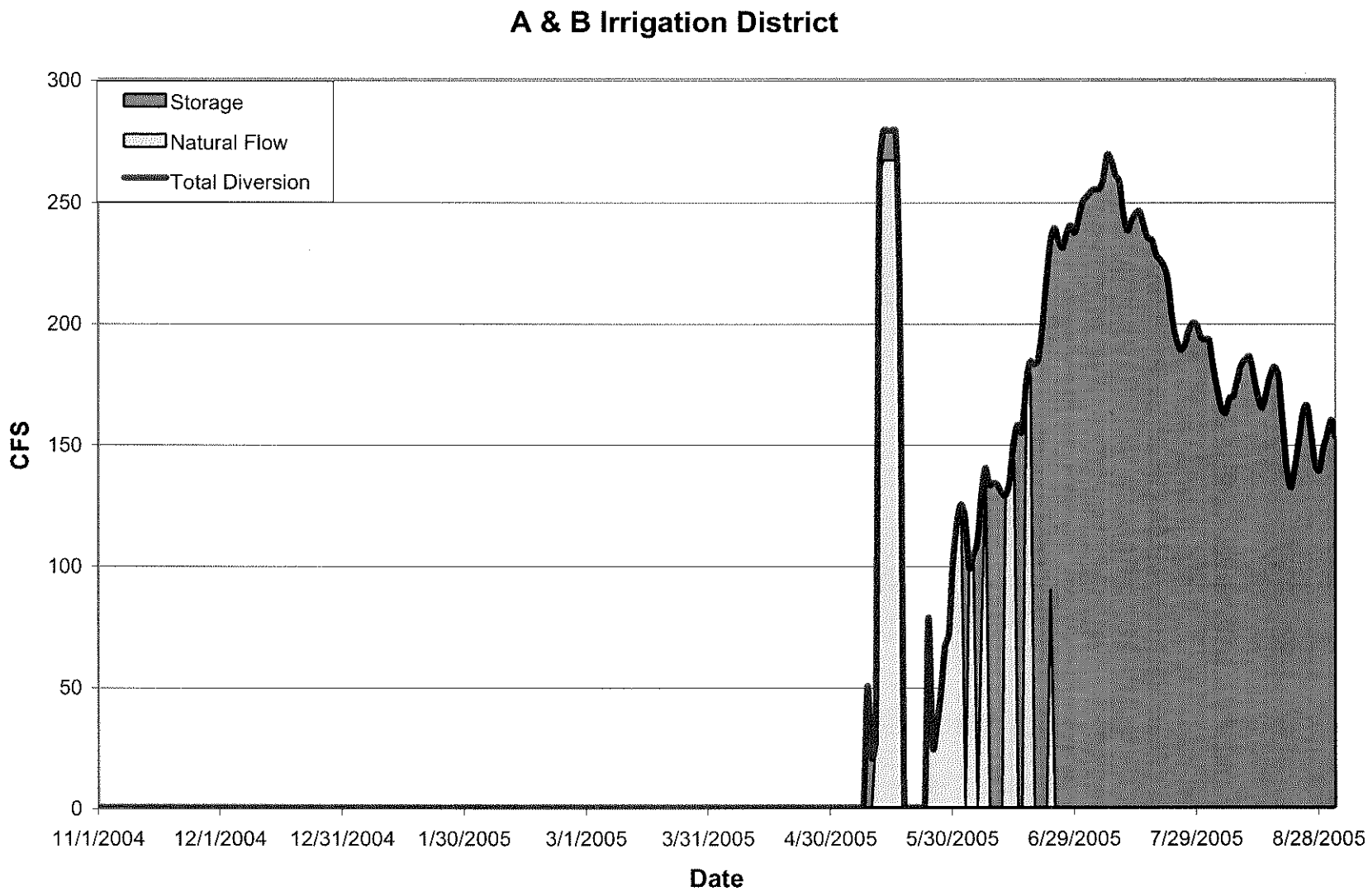
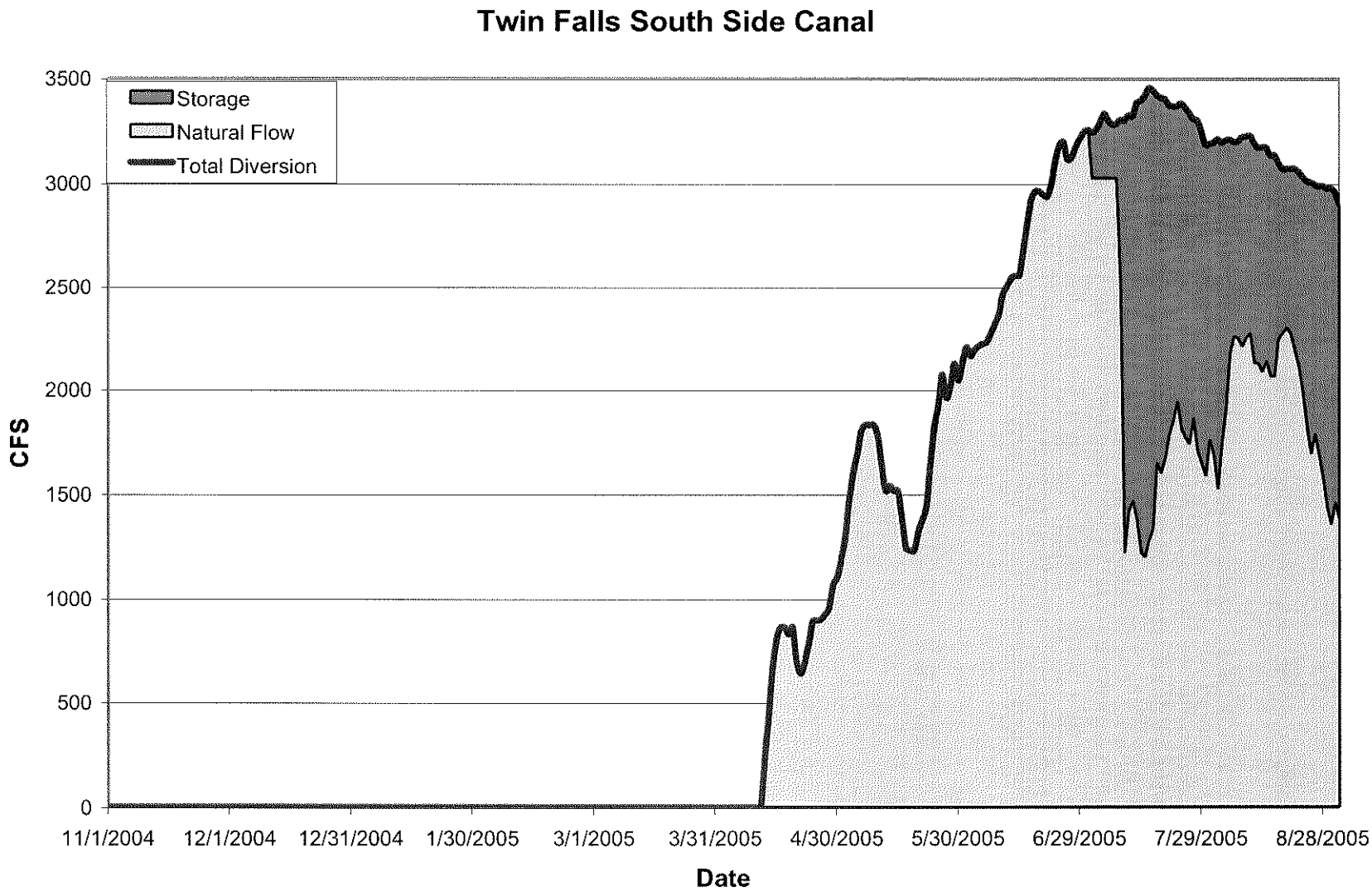

A & B Irrigation District
Storage
Natural Flow
Total Diversion
CFS
300
250
200
150
100
50
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date

Exhibit G


Twin Falls South Side Canal
Storage
Natural Flow
Total Diversion
CFS
3500
3000
2500
2000
1500
1000
500
0
11/1/2004
12/1/2004
12/31/2004
1/30/2005
3/1/2005
3/31/2005
4/30/2005
5/30/2005
6/29/2005
7/29/2005
8/28/2005
Date