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DEPARTMENT OF
WATER RESOURCES

JUN 19 2006

Jim/Copy
RECEIVED

WD 130

Via Hand Delivery

June 19, 2006

Mr. Gary L. Spackman
Bureau Chief
Water Allocation Bureau
Idaho Department of Water Resources
322 East Front Street
P.O. Box 83720
Boise, ID 83720-0098

Re: North Snake and Magic Valley Ground Water Districts 2006 Replacement Water Plan – Response to IDWR Letter of June 9, 2006

Dear Gary:

This letter and enclosed information are being submitted on behalf of the North Snake and Magic Valley Ground Water Districts ("Districts") in response to your letter of June 9, 2006 requesting additional documentation of various components of the Districts' 2006 replacement water plan for WD 130. The enclosed compact disk contains files of supporting documentation and model inputs/outputs for all aspects of the replacement water plan. Included among these are files reflecting refined recharge projections for Wilson Lake, spills ponds and Sandy Pond deliveries, and for voluntary dry-up acres, which were not included in the Districts' May 30, 2006, submittal. The enclosed disk, therefore, completely replaces the one submitted on May 30th. The supporting documentation includes maps, GIS files, and spreadsheets with parcel and water right descriptions for dry-ups and conversions.

Your June 9 letter also requested the following information with respect to the Districts' proposed recharge program:

- timing of recharge deliveries;
- volume of water to be delivered for recharge;
- measurement methods;
- recharge capability of ponds and Wilson Lake;
- capability of NSCC to deliver recharge water;
- existence of carriage agreement with NSCC; and

Mr. Gary L. Spackman
June 19, 2006
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- documentation of DEQ approval

With respect to proposed timing and volume of recharge deliveries, these are described in the attached modeling assumption description. Because of operational constraints that have been identified through discussions with NSCC, the Districts intend that recharge activities will occur late in the irrigation season (after September 1) and after the irrigation season. With respect to measurements, the Districts intend that devices will be installed at any spill ponds used for recharge to measure water in. There should be no surface outflow and all water measured in, less nominal evaporative losses, is expected to become recharge. At Wilson Lake the Districts will use the existing hydroelectric facility operated by Ida-West at the head end of the lake to measure water in. Again, because these deliveries will occur after irrigation deliveries have ceased, no outflow from the lake other than recharge is expected, and so no measurements of surface outflow will be needed. If recharge deliveries to spill ponds extend beyond the end of the irrigation delivery season, these would be the only outflows from Wilson Lake. Measurements of inflow into the NSCC canal also can be made at the flume at the Milner headgate.

There currently is no data available indicating the physical capability of the various NSCC spill ponds to recharge. This data will begin to be generated in 2006. However, because the Districts intend to conduct recharge activities at the end of the irrigation season and post-irrigation season, they expect the NSCC facilities, including canals, Wilson Lake and spill ponds will have the physical capability to recharge the assumed amounts of water described in the attached modeling assumption description.

I understand that Lynn Tominaga has arranged to have your requested confirmations from North Side Canal Company and IDEQ delivered to you directly.

Also enclosed for you information are copies of checks submitted to FMC LLC by the American Falls-Aberdeen, the Bonneville-Jefferson and Bingham Ground Water Districts as payment for renewing the FMC contract for 2006.

Please let me know if you have any questions concerning the enclosed materials, or if the Department will require anything additional to complete its review.

Sincerely,



Michael C. Creamer

Mr. Gary L. Spackman
June 19, 2006
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Enclosures

cc: Magic Valley Ground Water District via email w/out CD
North Snake Ground Water District via email w/out CD
IGWA Board via email w/out CD
Attached Service List

MCC/LA: 3915\78\IGWA Letter to GSpackman re 6-19-06 Replacement Water Plan Submittal.DOC

Mr. Gary L. Spackman
June 19, 2006
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CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of June 2006, I served a true and correct copy of the foregoing by delivering the same to each of the following individuals by the method indicated below, addressed as follows:

Mr. Karl J. Dreher	<u> X </u>	U.S. Mail
Director	<u> </u>	Facsimile
Idaho Department of Water Resources	<u> </u>	Overnight Mail
322 East Front Street	<u> </u>	Hand Delivery
P.O. Box 83720	<u> </u>	E-mail
Boise, ID 83720-0098		

Gregory Kaslo	<u> X </u>	U.S. Mail
Blue Lakes Trout Farm	<u> </u>	Facsimile
P.O. Box 72	<u> </u>	Overnight Mail
Buhl, ID 83316-0072	<u> </u>	Hand Delivery
	<u> </u>	E-mail

Daniel V. Steenson, Esq.	<u> X </u>	U.S. Mail
Ringert Clark, Chartered	<u> </u>	Facsimile
455 S. Third Street	<u> </u>	Overnight Mail
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Michael S. Gilmore, Esq.	<u> X </u>	U.S. Mail
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Len B. Jordan Bldg., Lower Level	<u> </u>	E-mail
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Cindy Yenter	<u> X </u>	U.S. Mail
Watermaster – Water District 130	<u> </u>	Facsimile
Idaho Department of Water Resources	<u> </u>	Overnight Mail
Southern Regional Office	<u> </u>	Hand Delivery
1341 Fillmore Street, Suite 200	<u> </u>	E-mail
Twin Falls, ID 83301-3380		

Mr. Gary L. Spackman
June 19, 2006
Page 5

Frank Erwin
Watermaster – Water District 36
2628 South 975 East
Hagerman, ID 83332

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Scott L. Campbell, Esq.
Moffatt Thomas Barrett Rock & Fields,
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101 S. Capitol Blvd., 10th Floor
P.O. Box 829
Boise, ID 83701-0829

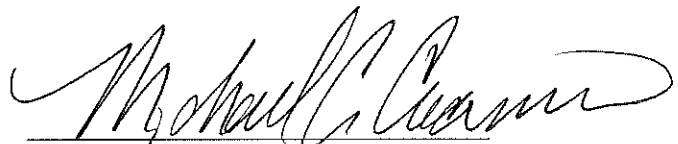
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☐ Hand Delivery
☐ E-mail

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Buhl, ID 83316-0712

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John K. Simpson, Esq.
Travis L. Thompson, Esq.
Barker, Rosholt & Simpson
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P.O. Box 2139
Boise, ID 83701-2139

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☐ Overnight Mail
☐ Hand Delivery
☐ E-mail


Michael C. Creamer

**Description of Modeling Assumptions and Guide to Files
2006 Mitigation Plan of North Snake and Magic Valley Ground Water Districts
in the matter of
Blue Lakes and Clear Springs (Snake River Farm) Delivery Calls**

June 19, 2006

Ground Water to Surface Water Conversions

Deliveries to conversion parcels were assumed to equal measured deliveries for 2005. One new conversion parcel was added in 2006; delivery to that parcel was estimated based on the average unit delivery (af/acre) to 2005 parcels. All delivery amounts were assumed to recharge the aquifer or offset ground water pumping at the point of delivery. The total volume of water so recharged is 20,671 af.

Conveyance losses from conversion deliveries were calculated as 30% of delivery, which is a conservative estimate of conveyance losses in the North Side Canal Company system. Losses were assumed to recharge the aquifer uniformly along the canal and laterals leading from the Milner diversion point to each point of delivery. The total volume of water so recharged is 6,201 af. The annual deliveries for conversions are assumed to occur over a 214 day (Apr, 1 - Oct, 31) irrigation season.

Measurement of deliveries to conversion parcels will be made by the North Side Canal Company, as in 2005.

Maps and listings of the conversion parcels are found on the accompanying CD in *Conversions\ConversionsSpreadsheet.xls* and *Conversions\Maps*. Model files reflecting these assumptions as input to the ESPA Model v1.1 are found on the accompanying CD in *Conversions\ModelFiles\Conversions - At-Site Recharge* and *Conversions\ModelFiles\Conversions - Conveyance Seepage*. ESRI Shapefiles containing polygons representing the model cells used to model the conversions are found in *Conversions\Shapefiles* (see readme.txt file in that directory for more information).

Sandy Pond Delivery Seepage

The Districts are delivering and intend to continue to deliver replacement water to the Sandy Pipeline in 2006 as was done in 2005. The total volume of water recharged from conveyance loss deliveries to the Sandy Ponds was assumed to be 30% of 2005 deliveries, or 3320 af. This total volume was distributed over 182 days.

A list of the model cells associated with the Sandy Pond analysis is found on the accompanying CD in *Conversions\SandyPondsModelInfo.xls*. A map of the Sandy Pond site and conveyance path is found in *Conversions\Maps*. Model files for this run can be found in the accompanying CD under the directory *Conversions\ModelFiles\Transit Seepage for Deliveries to Sandy Ponds*. ESRI Shapefiles containing polygons representing the model cells used to model the sandy ponds seepage are found in *Conversions\Shapefiles* (see readme.txt file in that directory for more information).

Voluntary Curtailments

Voluntary curtailments (dry-ups) will occur in both Ground Water Districts (GWDs) in 2006. Curtailments were assumed to increase the aquifer water budget at the Point of Diversion (POD) by an amount equal to ET minus Precipitation for the model cell containing the POD.

Magic Valley GWD curtailments occur under the District's water bank program. Pursuant to guidance from the District, enrollment in the 2006 water bank was assumed to be the same as the 2005 enrollment except where parcel owners have notified the District otherwise. Documentation of these enrollment adjustments is being provided separately by the District.

The total volume of aquifer water budget increase for North Snake GWD curtailments is 2,587 af and for Magic Valley GWD curtailments is 14,787 af.

The aquifer water budget increases from voluntary curtailments is assumed to occur over a 214 day (Apr, 1 - Oct, 31) irrigation season.

Listings of the curtailment acres are found on the accompanying CD in *VoluntaryCurtailments\2006Dryups.xls* and the accompanying description file *VoluntaryCurtailments\DescriptionOf[2006Dryups.xls].doc*. Maps and commitment forms for NSGWD are found in *VoluntaryCurtailments\MapsAndCommitmentForms*. Model files reflecting these assumptions as input to the ESPA Model v1.1 are found on the accompanying CD in *VoluntaryCurtailments\ModelFiles*. ESRI Shapefiles containing polygons representing the curtailed lands and their associated places of use are found in *VoluntaryCurtailments\Shapefiles* (see readme.txt file in that directory for more information).

Managed Recharge

Recharge of the aquifer are proposed to take place via two mechanisms, late season deliveries of storage water to Wilson Lake and late season deliveries of storage water to selected North Side Canal Company spill ponds. Managed recharge is proposed to be undertaken pursuant to agreement between the Districts and North Side Canal Company, the terms of which currently are the subject of discussion.

Wilson Lake

Wilson Lake recharge has two components, seepage from the lake itself and conveyance loss on deliveries to the lake. Deliveries of storage water to the lake were assumed to begin in the fall after the shutdown of irrigation deliveries by North Side Canal Company and to continue for up to 45 days. Delivery of storage water into the lake will be measured via the facilities at the Hazelton B power plant. Because it will occur after the irrigation season, there will be no outflow of this water from the lake other than recharge. Recharge at the lake was assumed to occur at a rate up to 250 cfs, based on historical inflow/outflow data. For the 45-day period this produces a total recharge volume of 22,500 af. Model files for this analysis in the accompanying CD is in directory *Recharge\ModelFiles\WilsonLake\At-site Wilson Lake Recharge*.

Conveyance losses from delivery of storage water to Wilson Lake were calculated as 30% of delivery, which is a conservative estimate of conveyance losses in the North Side Canal Company system. Losses were assumed to recharge the aquifer uniformly along the main canal between Milner and the lake. The total volume of recharge from conveyance loss is 6,750 af. This was modeled using IWRRI's steady-state managed recharge spreadsheet tool based on ESPA v1.1 Model, which can be found in the accompanying CD under directory *Recharge\ModelFiles\WilsonLake\Conveyance Seepage for Deliveries to Wilson Lake*.

Listings of the model cells associated with both Wilson Lake components are found on the accompanying CD in *Recharge\StorageSitesAndLaterals_ModelCells.xls*. A map for the Wilson Lake site is found in *Recharge\Maps\WilsonLakeMap.pdf*. ESRI Shapefiles of the polygons representing the model cells used to model Wilson Lake recharge are found in *\Recharge\Shapefiles* (see readme.txt file in that directory for more information).

Spill Ponds

Three spill ponds used by the North Side Canal Company have been identified for use as recharge facilities. These ponds are on the J8, S and W9 laterals south of Wendell. Additional spill pond sites may be identified during the summer. Deliveries to spill ponds were assumed to begin on September 1st when capacity in laterals becomes available. Delivery capacity was assumed to be 10 cfs to each pond on September 1st, increasing to 25 cfs by November 15th at which time deliveries would cease. So the recharge will occur over a period of 75 days.

Deliveries of storage water into the ponds will be measured using devices to be installed by North Side Canal Company and paid for by the GWDs. Deliveries will occur late in the irrigation season and there will be no outflow of this water from the ponds other than recharge. North Side Canal Company would measure and monitor these deliveries as they have deliveries to conversion parcels. The total volume of recharge at the ponds is 8,479 af.

Conveyance losses on spill pond deliveries were calculated as 30% of delivery, which is a conservative estimate of conveyance losses in the North Side Canal Company system. Losses were assumed to recharge the aquifer uniformly along the canal and laterals leading from the Milner diversion point to each point of delivery. The total volume of recharge from conveyance losses is 2,544 af.

Model files reflecting these assumptions as input to the ESPA Model v1.1 are found on the accompanying CD in *Recharge\ModelFiles\SpillPonds*. There are two sub-directories under this directory, (i) *At-site Spill Pond Recharge* – contains the analysis for at-site recharge from the ponds, and (ii) *Conveyance Seepage for Deliveries to Spill Ponds* – contains the analysis of recharge from conveyance losses. Both of these sub-directories contain model files for each of the individual ponds in directories *Pond5*, *Pond6*, and *Pond7*.

Listings of the model cells associated with the spill pond sites are found on the accompanying CD in *Recharge\StorageSitesAndLaterals_ModelCells.xls*. Maps for the spill pond sites are found in *Recharge\Maps\SpillPondSitesMaps.pdf*. ESRI Shapefiles of the polygons representing the model cells used to model the spill ponds are found in *\Recharge\Shapefiles* (see readme.txt file in that directory for more information).

Directory Structure of Accompanying CD

- [-]  Conversions
 -  Maps
- [-]  ModelFiles
 - [-]  Conversions - At-Site Recharge
 -  bud2smp
 - [-]  Conversions - Conveyance Seepage
 -  bud2smp
 - [-]  Conveyance Seepage for Deliveries to Sandy Ponds
 -  bud2smp
 -  Shapefiles
- [-]  Recharge
 -  Maps
- [-]  ModelFiles
 - [-]  SpillPonds
 - [-]  At-site Spill Pond Recharge
 - [-]  Pond5
 -  bud2smp
 - [-]  Pond6
 -  bud2smp
 - [-]  Pond7
 -  bud2smp
 - [-]  Conveyance Seepage for Deliveries to Spill Ponds
 - [-]  Pond5
 -  bud2smp
 - [-]  Pond6
 -  bud2smp
 - [-]  Pond7
 -  bud2smp
 - [-]  WilsonLake
 - [-]  At-site Wilson Lake Recharge
 -  bud2smp
 -  Conveyance Seepage for Deliveries to Wilson Lake
 -  Shapefiles
- [-]  VoluntaryCurtailments
 -  MapsAndCommitmentForms
- [-]  ModelFiles
 - [-]  Magic Valley dry-ups
 -  bud2smp
 - [-]  North Snake dry-ups
 -  bud2smp
- [-]  Shapefiles

Summary of 130 Mitigation Benefits (revised 6/19/06)
Steady-state sub-reach gain, in cfs

	Devils Washbowl – Buhl Blue Lakes	Buhl – Thousand Springs Clear Spgs
Magic Valley dry-ups	4.4	1.6
North Snake dry-ups	1.0	0.7
Sandy Pond seepage	1.6	0.8
Conversion Deliveries	9.5	6.3
Seepage to Conversions	3.3	1.3
Wilson Lake recharge	12.1	3.6
Seepage to Wilson Lake	3.5	1.1
Spill Pond Recharge	3.9	4.2
Seepage to Spill Ponds	<u>1.4</u>	<u>0.6</u>
Total	40.7	20.1
2006 Req'ts from Orders	20	16
Excess (Shortfall)	20.7	4.1

AMERICAN FALLS ABERDEEN
GROUND WATER DISTRICT
P.O. BOX 70
AMERICAN FALLS, ID 83211
(208) 226-5914

IRELAND BANK
POCATELLO, ID 83201
92-05/1241

3274

2/28/2006

PAY TO THE
ORDER OF FMC L.L.C.

\$ **14,175.11

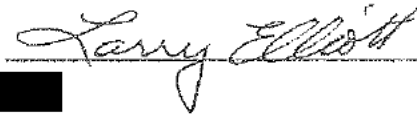
Fourteen Thousand One Hundred Seventy-Five and 11/100*****

DOLLARS

FMC Idaho, L.L.C.
P.O. Box 4111
Pocatello, ID 83202

2006 Lease

MEMO



NP

BONNEVILLE / JEFFERSON GROUND WATER DISTRICT P.O. BOX 51121 IDAHO FALLS, ID 83405		1274
PAY TO THE ORDER OF	FMC	DATE 4-05-06 92-367/1241 11722840
Seven thousand three hundred forty four and 52/100		\$ 7344.52
DOLLARS		
FOR Water Storage 2006		
BANK OF IDAHO 304 NORTH CARTER P.O. BOX 1447 IDAHO FALLS, ID 83402		

KeyBank National Association
Blackfoot, Idaho 83221

1213

92-155/1241
103

3/7/2006

BINGHAM GROUND WATER DISTRICT
MITIGATION FUND
P.O. BOX 42
PINGREE, ID 83262-0042

PAY TO THE
ORDER OF FMC IDAHO LLC

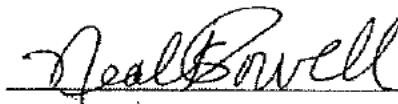
\$ **15,848.99

Fifteen Thousand Eight Hundred Forty-Eight and 99/100*****

DOLLARS

FMC IDAHO LLC

MEMO



1213