



State of Idaho

DEPARTMENT OF WATER RESOURCES

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C. L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Interim Director

October 29, 2009

Re: Order Requiring Measuring Devices in Water District No. 130

Dear Water User,

The Idaho Department of Water Resources (Department or IDWR) has issued the enclosed preliminary order requiring installation of measuring devices for certain ground water diversions in Water District No. 130, Thousand Springs Area. Pursuant to Section 67-5243, Idaho Code, the preliminary order will become a final order without further action of the Department unless a party petitions for reconsideration or files an exception and/or brief as explained in the enclosed information sheet.

This order requires users to install measuring devices on irrigation wells that do not meet IDWR minimum acceptable water measurement standards, including minimum criteria for using the Power Consumption Coefficient (PCC) method. Flow meters must be installed prior to diverting water in the 2010 irrigation season. Diversions subject to the attached order were identified by IDWR and the Water District No. 130 watermaster based on a review of reported field measurements and annual water use estimates. IDWR staff also visited many of the diversions during 2009.

Measuring devices for closed conduit systems must be magnetic flow meters meeting Department criteria unless a variance has been provided by the Water District 130 watermaster or IDWR. Devices must be installed prior to diversion of water in 2010. Please refer to the enclosed document "*Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices*" for information on types of measuring devices acceptable to IDWR and the requirements for using the PCC method for measurement. This document and other related information is available on the Department's web site as follows: http://www.idwr.idaho.gov/water/districts/water_measurement.htm

Please note that water users are required to provide measuring device plans to IDWR by December 31, 2009. Users are directed to submit plans by completing the form attached to this order and found on the Department's web site at:
http://www.idwr.idaho.gov/WaterManagement/WaterMeasurement/PDFs/MeasPlanForm_09.pdf

If you have questions concerning this order, please contact the watermaster for Water District 130, Cindy Yenter, IDWR's southern region office (208-736-3033), or either Corbin Knowles, or Tim Luke, IDWR Water Distribution Section, Boise (208-287-4800).

Respectfully,

Tim Luke
Water Distribution Section Manager

Enclosures: *Preliminary Order Requiring Measuring Devices in Water District 130, October 16, 2009*
Explanatory Information to Accompany a Preliminary Order (2 pages)
IDWR Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices
Water District 130 Measurement Plan Submittal Form for Irrigation Well

Cc: Cindy Yenter, Watermaster, Water District 130
North Snake Ground Water District
Magic Valley Ground Water District

Corbin Knowles, IDWR
Brian Higgs, Water Well Consultants

BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE
STATE OF IDAHO

IN THE MATTER OF REQUIRING MEASURING)	
)	
DEVICES FOR GROUNDWATER DIVERSIONS)	PRELIMINARY
)	ORDER
IN WATER DISTRICT NO. 130, THOUSAND)	
)	
SPRINGS AREA)	
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Staff from the Idaho Department of Water Resources (Department or IDWR), working in coordination with the Water District No. 130 watermaster, have determined that a number of ground water irrigation diversions or wells in Water District No. 130 are measured or estimated using methods or measuring devices that are not acceptable to the Department. Water use for most of the diversions in question is currently estimated using the Power Consumption Coefficient (PCC) method but do not meet the Department's minimum PCC method standards and requirements.

The current method used to determine annual ground water withdrawals from nearly all irrigation wells within Water District No. 130 that are currently required to be measured and reported is the PCC method. IDWR's *Water Measurement and Reporting Guidelines (February, 1999)* specify that "the PCC method will not be approved as a substitute for a meter for complex systems where flow rate or total dynamic head at the pump varies due to multiple valve adjustments; multiple discharge locations in a pipeline; the method of delivery varies between open discharge, low pressure or high pressure sprinkler systems during an irrigation season; multiple wells/pumps are tied together with common mainline(s); or the ground water level changes significantly during the year." A number of ground water pumping systems in Water District 130 receive supplemental surface water, are fitted with booster pumps typically powered from the same kilowatt hour meter as the deep well, and are tied into the same mainline. Many ground water pumping systems are complex, operating at more than three (3) distinct flow and demand conditions. Any one or more of these circumstances causes use of the PCC method to be invalid. Measurements of diversions in Water District No. 130 based on invalid PCC methods do not meet the Department's minimum standards for measurement of ground water.

Section 42-701, Idaho Code, provides in pertinent part:

42-701. INSTALLATION AND MAINTENANCE OF CONTROLLING WORKS AND MEASURING DEVICES BY WATER APPROPRIATORS – PROCEDURE UPON FAILURE TO INSTALL AND MAINTAIN – MEASURING AND REPORTING OF DIVERSIONS – PENALTY FOR FAILURE TO COMPLY – REPORT FILING FEE.

1. Each such appropriator shall construct and maintain, when required by the director of the department of water resources, a rating flume or other measuring device at such point as is most practical in such canal, ditch, wellhead or pipeline for the purpose of assisting the watermaster or department in determining the amount of water that may be diverted into said canal, ditch, wellhead or pipeline from the stream, well or other source of public water. Plans for such headgates, rating flumes or other measuring devices shall be approved by the department of water resources.

2. If an appropriator determines that installation and maintenance of a measuring device required by the director would be burdensome for his diversion, the appropriator may, upon approval of the director, execute an agreement with the director and submit to the director such information and technical data concerning the diversion and pumping facilities as the director determines necessary to establish the relationship of power usage to water withdrawal by any pump use to divert public water.

3. Any appropriator or user of the public waters of the state of Idaho that neglects or refuses to construct or maintain such headgates, controlling works, or measuring devices..., upon receiving ten (10) days' notice from the director of the department of water resources within which to begin and diligently pursue to completion the construction or installation of the required device or devices or to begin and diligently pursue to completion a remedy to such defects as exist in accordance with said notice, then the director of the department of water resources may order the duly qualified and acting watermaster of the water district to shut off and refuse to deliver at the point of diversion, the water owned by such appropriator or user until the user does construct and maintain such headgates, controlling works or measuring devices or remedy the defects which exist or the director may take action pursuant to section 42-1701B, Idaho Code, to enforce the requirement to construct, install or maintain such devices.

4. The appropriators or users of the public waters of the state of Idaho shall be given a reasonable time within which to complete construction of such headgates, controlling works or measuring devices, depending upon the size and extent thereof, when due diligence has been used in the prosecution of such work.

ORDER

IT IS HEREBY ORDERED AS FOLLOWS:

1. The water right holders or owners of each ground water well identified in Attachment A of this order shall install measuring devices of a type acceptable to the Department prior to diverting water during the 2010 irrigation season.

2. Measuring devices that are acceptable to the Department for wells that are required to be measured shall be magnetic flow meters meeting the specifications listed in the Department's *Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices (copy attached)*. These specifications apply to both irrigation and non-irrigation water uses.

3. Well owners must submit measuring device plans for each well listed in Attachment A of this order to the Department no later than December 31, 2009. Well owners are required to use the IDWR approved form attached to this order and available on the department's web page at: http://www.idwr.idaho.gov/WaterManagement/WaterMeasurement/water_measurement.htm Plans will be reviewed to determine whether proposed measuring devices and installation are of a type acceptable to the Department.

4. A variance of the magnetic flow meter requirement may be considered upon completion and submittal of the IDWR form referenced above and attached to this order. Acceptable variances may include the following methods or devices:

- Development of a Power Consumption Coefficient (PCC), which is a ratio of power usage to water withdrawal *for qualifying diversions only*;
- Use of an hour meter (time clock) *for qualifying diversions only*;
- Use of an acceptable non-magnetic flow meter that was installed *prior to the date of this order*;
- Use of an acceptable non-magnetic flow meter where it can be shown that installation of the standard magnetic flow meter would be burdensome.

Requests for variance of the measurement method must be received no later than the applicable Plan Due Date of December 31, 2009 and will be considered by the Department and Water District No. 130 watermaster on a case-by-case basis. Variances proposing use of an existing flow meter must meet Department criteria and accuracy

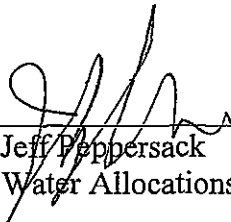
tests. Existing meters which do not meet standards, or which fail, will be required to be replaced with a magnetic flow meter unless another variance is obtained. The suitability of any pumping plant for approval of an hour meter or the PCC method of measurement will be based on criteria found in the *IDWR Water Measurement and Reporting Guidelines* (available online using the same web address referenced in item 3 above).

5. The Department may waive the measuring device requirement for any well identified in Attachment A of this order if the well is not used provided the well owner submits power utility account information to the Department to verify non-use of the well. The Department will not provide a waiver for any unused well that may be connected to a diesel or other non-electrical powered pump, but may consider a request for variance as outlined in item 4 above.

6. The watermaster is authorized to shut off and refuse to deliver water to any water right holder or water user with a diversion in Water District No. 130 and identified in Attachment A of this order that does not have an adequate measuring device installed and maintained at any and all times, or an approved variance, during the 2010 or subsequent irrigation seasons.

7. Diversions not on Attachment A and found to have an inadequate or invalid method of measurement by the watermaster and/or department staff will be subject to a separate order and notice.

Dated this 28th day of October, 2009.



Jeff Peppersack
Water Allocations Bureau Chief

Attachment A

Water District 130 Measuring Device Order, October 29, 2009

Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
	ALLEN	REX	09S 24E S24 NENWNE		A0005363	MVG
	ASTORQUIA	FRANK & JOSEPHINE	06S 14E S2 NWNW L2	Irrigation Well	A0013507	NSG
	BAGNALL	NORMAN & CAROL	08S 24E S16 SESWSE		A0004158	MVG
	BAKER	JAMES DARRELL	08S 25E 31 SWSWSE	BELL	A0003447	MVG
	BEEM	STEVEN	08S 19E S27 SWSESE		A0003764	NSG
	BOGUE	BRIAN	08S 22E S21 SWNWSE		A0003354	MVG
	BOGUE	BRIAN	08S 22E S21 SWNWSE		A0003354	MVG
	BORGES	MARIE E	08S 14E S35 NENENW	MARIE BORGES	A0003432	NSG
	COLEMAN	GARY R	06S 14E S35 NESW		A0005551	NSG
	COMMONS	RAY L	08S 22E S1 NESESE	S1D	A0004035	MVG
	COMMONS	RAY L	07S 22E S24 NWNWSE	S24	A0003364	MVG
	COMMONS	RAY L	07S 22E S25 SESWNE	Pivot 2, 6&5	A0003362	MVG
	COMMONS	RAY L	07S 24E S19 SWNWNE	NORTH FARM	A0005428	MVG
	CRANE	WARREN & ROGER	08S 24E S26 SWSESW	EAST WELL	A0005330	MVG
	CRANE	WARREN & ROGER	08S 24E S26 SESWSW	WEST WELL	A0005390	MVG
	DEWOLFE	HARRY & LORI	07S 14E S29 NENWNE	VADER FARM	A0003666	NSG
	DIMOND	GARY B & RUTH P	08S 15E S20 NWNW		A0001221	NSG
	GILLETTE	LARRY	06S 14E S11 SESESE	upper pond	A0005563	NSG
	HARMAN	BOB & KENT M	07S 25E S7 SWNESW	PUMP #7D	A0004148	MVG
	HARMAN	BOB & KENT M	07S 24E S14 SWNWSE		A0002559	MVG
	HARMAN	JACK M	07S 25E S7 SWNESW	PUMP #7D	A0004148	MVG
	HARMAN	JACK M	07S 24E S14 SWNWSE		A0002559	MVG
	HITE	CLIFTON	08S 22E S1 NWNWSW	S1C	A0004036	MVG
	HITE	CLIFTON	08S 22E S2 SWSWSE	S2D	A0004037	MVG
	HITE	CLIFTON	08S 22E S9 NWNWSW	S9C	A0001249	MVG
	HUNSAKER	BRUCE	08S 26E S11 NWNESW	M11C	A0005405	MVG
	JESSE	ROBERT LEE	09S 24E S24 NENWNE		A0005363	MVG
	KECHTER	RICHARD L	08S 21E S16 NENENE	Wolters #2	A0004169	MVG
	KECHTER	RICHARD L	07S 21E S16 NWNENE	Godfrey	A0005371	MVG
	KECHTER	RICHARD L	08S 21E S10 SESWSW	Wolters #1	A0005381	MVG
	KECHTER	RICHARD L	08S 21E S10 SWSENE	H&S East #1	A0005322	MVG
	KECHTER	RICHARD L	08S 21E S11 SENWSW	H&S East #3	A0010010	MVG
	KECHTER	RICHARD L	08S 21E S11 SWSENE	H&S East #2	A0004173	MVG
	KLEVMOEN	OLE & HELEN M	08S 15E S29 NENWSW		A0003730	NSG
	LARGE	SAMUEL C	06S 23E S26 SWNESW	D26	A0005319	MVG
	LARGE	SAMUEL C	06S 23E S33 NESESW	K102	A0002505	MVG
	LARGE	SAMUEL C	06S 23E S33 NWNWNE	K133A	A0003715	MVG
	MONSON	LEO DEAN	08S 22E S24 NWNWNW	Monson	A0003386	MVG

* MVG = Magic Valley Ground Water District
NSG = North Snake Ground Water District

Attachment A

Water District 130 Measuring Device Order, October 29, 2009

Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
	MORGAN	DREW	09S 22E S5 SESWSE		A0003355	MVG
	MORGAN	DREW	09S 22E S5 NESES L3	SOUTH WELL	A0003391	MVG
	MORGAN	DREW	09S 22E S5 SENENW L3	NORTH WELL	A0003472	MVG
	PALACIO	TOM R	05S 15E S17 SWNW	Irrigation well	A0006752	NSG
	PATTERSON	ARNOLD	09S 22E S3 SENWSE	NEW WELL	D0023998	MVG
	SCHENK	ROBERT W	07S 21E S22 NENENE	(WAS WELL #1)	A0004089	MVG
	STEWART	REID S	07S 21E S22 NENENE	(WAS WELL #1)	A0004089	MVG
	SUHR	FRANKLIN	09S 23E S4 NWSESW		A0003479	MVG
	TOONE	MARK S SALLY J	05S 15E S1 NWSW	FREDDIES	A0004179	NSG
	VAN DELDEN	RONALD	06S 21E S25 SWNENE	VD 6S21E2510	A0001250	MVG
	VERBREE JR	JACK	06S 21E S26 NESWNE	#2	A0004054	MVG
	VERBREE JR	JACK	06S 21E S26 SESWSW	#3	A0004055	MVG
	VERBREE JR	JACK	06S 21E S34 SWNWNE	#5	A0004057	MVG
	WICKEL	ARDEL W	08S 21E S16 NENENE	Wolters #2	A0004169	MVG
	WICKEL	ARDEL W	07S 21E S16 NWNENE	Godfrey	A0005371	MVG
	WICKEL	ARDEL W	08S 21E S10 SESWSW	Wolters #1	A0005381	MVG
	WICKEL	ARDEL W	08S 21E S10 SWSENE	H&S East #1	A0005322	MVG
	WICKEL	ARDEL W	08S 21E S11 SENWSW	H&S East #3	A0010010	MVG
	WICKEL	ARDEL W	08S 21E S11 SWSENW	H&S East #2	A0004173	MVG
	WIERSMA	JOHN	08S 15E S33 SESWNE	EAST END MAIN DAIRY	A0005530	NSG
	YOUNG	STEVEN D & MARIA	09S 22E S4 SENENW	S4	A0003387	MVG
	YOUNG	STEVEN D & MARIA	07S 22E S24 NWNWSE	S24	A0003364	MVG
	YOUNG	STEVEN D & MARIA	07S 26E S28 SWNWSE	M28	A0001252	MVG
	YOUNG	STEVEN D & MARIA	07S 26E S29 SWNWSE	M29	A0003458	MVG
	YOUNG	STEVEN D & MARIA	08S 22E S1 NESESE	S1D	A0004035	MVG
	YOUNG	STEVEN D & MARIA	08S 22E S1 NWNWSW	S1C	A0004036	MVG
	YOUNG	STEVEN D & MARIA	08S 22E S2 SWSWSE	S2D	A0004037	MVG
	YOUNG	STEVEN D & MARIA	08S 26E S11 NENWNE	M11BC	A0005438	MVG
	YOUNG	STEVEN D & MARIA	08S 26E S11 NWNESW	M11C	A0005405	MVG
	YOUNG	STEVEN D & MARIA	08S 26E S14 NWNWNE	M11	A0005406	MVG
	YOUNG	STEVEN D & MARIA	08S 26E S7 NENENW	M7B	A0005401	MVG
	YOUNG	STEVEN D	07S 22E S25 SESWNE	Pivot 2, 6&5	A0003362	MVG
	ZOLLINGER	C S	07S 21E S22 NENENE	(WAS WELL #1)	A0004089	MVG
	YOUNG	STEVEN D & MARIA	08S 26E S9 NENENW	M9	A0001251	MVG
B&H FARMING			07S 24E S29 NENWNE		A0004160	MVG
B&H FARMING			08S 22E S24 NWNWNW	Monson	A0003386	MVG
BMS FARMS	BAGNALL	N BRUCE	08S 24E S16 SWNWNW		A0004159	MVG

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Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
CITY OF HAZELTON			09S 20E S32 NWNWSW		a0004913	NSG
DALLEY INC	DALLEY	RICHARD B	07S 25E S28 NWNWNW	NO. 3	A0004050	MVG
DALLEY INC	DALLEY	RICHARD B	07S 25E S29 NWSWNW		A0004052	MVG
DALLEY INC	DALLEY	RICHARD B	07S 25E S29 SESWNE	NO. 2	A0004051	MVG
DONLEY FARMS INC	TABER	DON	05S 18E S33 NENWNE	Little Wood Well	A0004991	NSG
FARMLAND RESERVE INC			10S 20E S27 NESENW	#2	A0005590	NSG
G&H DAIRY LLC			08S 15E S7 NWSENE	GOMEZ FARM N. PIVOT	A0003623	NSG
G&H DAIRY LLC	GOMEZ	JOHN	08S 15E S18 NWNWNE	EXTRA WELL - W.LAGOON	A005527	NSG
H & P FARMS	HUNT	JEFF	09S 20E S13 NWSWNW	pump #1	A0003492	MVG
HANSEN QUALITY JERSEYS LLC	HALBERT	GILBERT L	08S 25E S6 NENESE		A0005493	MVG
HORIZON ORGANIC DAIRY	KULESA	JAMIE	08S 20E S36 SWSENE	STAR LAKE "A"- West Well	A0005321	MVG
HORIZON ORGANIC DAIRY	KULESA	JAMIE	08S 20E S36 SWSESE	STAR LAKE "B"	A0005303	MVG
IDAHO AG INC			07S 24E S8 NWSWSE	#3 1425N 50W	A0005417	MVG
IDAHO AG INC			07S 24E S5 NESWSW	#1	A0005418	MVG
IDAHO YOUTH RANCH INC	TALKINGTON	CHRIS	07S 24E S24 NENE	IRRIGATION WELL	A0005345	MVG
IDA-WOOD FARMS LTD PARTNERSHIP	WOODWARD	BOYD	08S 21E S36 SENESE	WOODWARD	A0005320	MVG
K L BLACK TRUST	BLACK	KARL & BONNIE	09S 20E S7 NWNENW		A0003489	NSG
MAINLINE RANCHES INC			07S 25E S27 SWSENE		A0001253	MVG
MC CLELLAN FARMS INC	VANDERVEGT GIBSON	IRENE	09S 22E S6 SESENE		A0003473	MVG
MCCORD FAMILY PARTNERSHIP	MCCORD	HARRIET	08S 16E S30 NENENE	NEW WELL	D0024000	NSG
MCCORD FAMILY PARTNERSHIP	MCCORD	HARRIET	08S 16E S29 NENWNW	NEW WELL	D0023999	NSG
MINIDOKA CO SCHOOLS DIST 331	MAINTENANCE DEPARTMENT		09S 23E S32 NESE	EAST MINICO	A0000445	MVG
MINIDOKA CO SCHOOLS DIST 331	MAINTENANCE DEPARTMENT		09S 24E S20 SENENW	WEST MINICO JR. HIGH	A0000447	MVG
MOSS LAND COMPANY LLC	ROGERS	BRAD	09S 23E S3 NENWSW	ZOHNER PLACE	A0003478	MVG
MOUNTAIN VIEW LAND LP			07S 25E S27 SWSENE		A0001253	MVG
NORTHRIDGE LLC			06S 23E S26 SWNESW	D26	A0005319	MVG
NORTHRIDGE LLC			06S 23E S33 NESESW	K102	A0002505	MVG

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Attachment A

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Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
NORTHRIDGE LLC			06S 23E S33 NWNWNE	K133A	A0003715	MVG
OKELBERRY FARMS INC	OKELBERRY	ALLEN	10S 20E S16 SENENW		A0005599	NSG
OWYHEE RANCHES INC	YOUNG	STEVEN D & MARIA	08S 26E S11 NWNESW	M11C	A0005405	MVG
OWYHEE RANCHES INC	YOUNG	STEVEN D & MARIA	08S 26E S9 NENENW	M9	A0001251	MVG
P & B ROBERTSON FARM INC	ROBERTSON	PAUL	06S 21E S29 SESESW	500 HP	A0003724	MVG
P & B ROBERTSON FARM INC	ROBERTSON	PAUL	06S 21E S29 SWNW	400 HP	A0003641	MVG
PATTERSON FARMS OF IDAHO INC			09S 23E S7 SESENE		A0005337	MVG
POTEET FARMS INC	POTEET	RICHARD F & HERBERT W	08S 25E S12 SWNWSE		A0003770	MVG
POTEET FARMS INC	POTEET	RICHARD F & HERBERT W	08S 25E S12 SWNWSE		A0003770	MVG
POTEET FARMS INC	POTEET	RICHARD F & HERBERT W	08S 26E S16 SWNESW		A0004139	MVG
RODNEY HANSEN FARMS INC	HANSEN	BRUCE	08S 21E S36 SENENE	NF	A0005491	MVG
ROTH FAMILY LLC	ROTH	SIMON & JAMES	09S 18E S17 NWSENE	IRRIGATION WELL	A0003760	NSG
SAND SPRINGS RANCH LLC	GROOM	MICHAEL P	08S 14E S21 NENWNE	SAND SPRINGS #1 (250-hp)	A0003562	NSG
SCHAEFFER FARMS INC	SCHAEFFER	DAN	08S 22E S29 NESENW	#2 BENNETS	A0003357	MVG
SCHAEFFER FARMS INC	SCHAEFFER	JAMES & DIANNE	08S 22E S29 NESESW	#1	A0003353	MVG
SCHAEFFER FARMS INC	SCHAEFFER	JAMES & DIANNE	08S 21E S27 NESWNE	DAN'S DEEP WELL	A0002733	MVG
SETER LAKE FARM	VERBREE JR	JACK	06S 21E S34 NENENE	#4	A0004056	MVG
SETER LAKE FARM			06S 21E S28 SWSENW	DEEP WELL, 350 HP	A0005409	MVG
SHOSHONE JOINT SCHOOL DISTRICT 312			06S 17E S2 NESW	IRRIGATION WELL	A0004951	NSG
SOUTHFIELD DAIRY PARTNERSHIP	ROELOFFS	ED SOUTHFIELD & ARIE	06S 14E S18 NENE	GRAVES SOUTH DOUBLE WELL	A0002810	NSG
SOUTHFIELD DAIRY PARTNERSHIP	ROELOFFS	ED SOUTHFIELD & ARIE	06S 14E S18 NENENE	GRAVES NORTH DOUBLE WELL	A0002811	NSG
SOUTHFIELD DAIRY PARTNERSHIP	ROELOFFS	ED SOUTHFIELD & ARIE	08S 14E S13 NWSESW	SOUTHFIELD 3	A0003798	NSG
STANDLEE HAY CO INC	STANDLEE	MIKE	10S 20E S9 NESESE	Bollingbroke Well	A0003665	NSG
TAYLOR FARMS LLC			07S 24E S22 NWSENW		A0005427	MVG

* MVG = Magic Valley Ground Water District
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Attachment A

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Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
TRIPLE T FARMS			06S 21E S22 SENWSE	STATION 428	A0005407	MVG
TRIPLE T FARMS			06S 21E S23 SWSWSW	STATION 427	A0005408	MVG
TRIPPLE T FARMS			06S 21E S22 SESWSW	TAYLOR, 400 HP WELL	A0005395	MVG
TRIPPLE T FARMS			06S 21E S28 SWSENW	DEEP WELL, 350 HP	A0005409	MVG
UNITED STATES OF AMERICA			08S 26E S14 NWNWNE	M11	A0005406	MVG
UNITED STATES OF AMERICA			07S 22E S25 SESWNE	Pivot 2, 6&5	A0003362	MVG
UNITED STATES OF AMERICA			06S 23E S33 NESESW	K102	A0002505	MVG
UNITED STATES OF AMERICA			06S 23E S33 NWNWNE	K133A	A0003715	MVG
UNITED STATES OF AMERICA			07S 22E S24 NWNWSE	S24	A0003364	MVG
UNITED STATES OF AMERICA			07S 26E S28 SWNWSE	M28	A0001252	MVG
UNITED STATES OF AMERICA			07S 26E S29 SWNWSE	M29	A0003458	MVG
UNITED STATES OF AMERICA			08S 26E S11 NENWNE	M11BC	A0005438	MVG
UNITED STATES OF AMERICA			08S 26E S11 NWNESW	M11C	A0005405	MVG
UNITED STATES OF AMERICA			08S 26E S7 NENENW	M7B	A0005401	MVG
UNITED STATES OF AMERICA			08S 26E S9 NENENW	M9	A0001251	MVG
VAN DYK AND SONS	VAN DYK	GARY	09S 14E S2 NWNENW	IRRIGATION WELL	A0003642	NSG
VERBREE DAIRY	VERBREE	JACK & MARGARET	07S 14E S23 SENWSE	BRANCHFLOWER #20	A0001636	NSG
VERBREE DAIRY	VERBREE	JACK & MARGARET	07S 14E S26 SESENE	# 3	A0003668	NSG
W4 DAIRY	WHITESIDE	BRENT	07S 25E S27 SWSENE		A0001253	MVG
WALDO & RUTH MARTENS TRUST	MARTENS	GERALD	09S 16E S13 NENENE		A0003749	NSG
WESTERN MORTGAGE & REALTY CO	YOUNG	STEVEN D & MARIA	06S 23E S33 NESESW	K102	A0002505	MVG

* MVG = Magic Valley Ground Water District
NSG = North Snake Ground Water District

Attachment A

Water District 130 Measuring Device Order, October 29, 2009

Owner Organization Name	Owner/Contact Last Name	Owner/Contact First Name	PLS Legal Description	Diversion Name	Metal Tag Number	Reporting District*
WESTERN MORTGAGE & REALTY CO	YOUNG	STEVEN D & MARIA	08S 22E S2 SWSWSE	S2D	A0004037	MVG
WESTERN MORTGAGE & REALTY CO	YOUNG	STEVEN D & MARIA	08S 22E S9 NWNWSW	S9C	A0001249	MVG
WESTERN MORTGAGE & REALTY CO	YOUNG	STEVEN D & MARIA	08S 26E S11 NWNESW	M11C	A0005405	MVG
WESTERN MORTGAGE & REALTY CO			06S 23E S33 NWNWNE	K133A	A0003715	MVG
WESTERN MORTGAGE & REALTY CO			07S 22E S24 NWNWSE	S24	A0003364	MVG
WESTERN MORTGAGE & REALTY CO			07S 26E S28 SWNWSE	M28	A0001252	MVG
WESTERN MORTGAGE & REALTY CO			07S 26E S29 SWNWSE	M29	A0003458	MVG
WESTERN MORTGAGE & REALTY CO			08S 22E S1 NESESE	S1D	A0004035	MVG
WESTERN MORTGAGE & REALTY CO			08S 22E S1 NWNWSW	S1C	A0004036	MVG
WESTERN MORTGAGE & REALTY CO			08S 26E S11 NENWNE	M11BC	A0005438	MVG
WESTERN MORTGAGE & REALTY CO			08S 26E S14 NWNWNE	M11	A0005406	MVG
WESTERN MORTGAGE & REALTY CO			08S 26E S7 NENENW	M7B	A0005401	MVG
WESTERN MORTGAGE & REALTY CO			08S 26E S9 NENENW	M9	A0001251	MVG
WG FARMS LLC			07S 24E S14 SWNWSE		A0002559	MVG
WG FARMS LLC			07S 25E S7 SWNESW	PUMP #7D	A0004148	MVG
WLR LC			07S 22E S25 SESWNE	Pivot 2, 6&5	A0003362	MVG
YOUNG & YOUNG PARTNERSHIP			06S 23E S26 SWNESW	D26	A0005319	MVG
YOUNG & YOUNG PARTNERSHIP			06S 23E S33 NESESW	K102	A0002505	MVG
YOUNG & YOUNG PARTNERSHIP			06S 23E S33 NWNWNE	K133A	A0003715	MVG

* MVG = Magic Valley Ground Water District
NSG = North Snake Ground Water District

Statement of Available Procedures and Applicable Time Limits

RESPONDING TO PRELIMINARY ORDERS ISSUED BY THE IDAHO DEPARTMENT OF WATER RESOURCES (To be used in connection with actions when a hearing was not held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "**Preliminary Order**" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) the petition for reconsideration is disposed of; or
- (b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

**STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES (IDWR)**

**MINIMUM ACCEPTABLE STANDARDS FOR
OPEN CHANNEL AND CLOSED CONDUIT
MEASURING DEVICES**

The source and means of diversion of water, whether surface or ground water, generally affects the selection of a measuring device. Surface water sources such as streams, springs and waste channels are normally diverted into open channels (ditches or canals), but closed conduits (pipes or culverts) are also used. Ground water is usually diverted into pipes (which may also discharge into open channels).

Measuring devices when required by IDWR are to be installed at or near the point of diversion from the public water source.

Open Channel

I. SURFACE WATER DIVERSIONS

The following discussion is applicable only to diversions from surface water sources. Measurement of a ground water diversion with an open channel measuring device must be pre-approved by the IDWR.

A. Standard Open Channel Measuring Devices

All open channel surface water diversions should be measured using one of the following standard open channel flow measuring devices commonly used in Idaho:

- contracted rectangular weir
- suppressed rectangular weir
- Cipolletti weir
- 90 degree V-notch weir
- Parshall flume
- trapezoidal flume
- submerged rectangular orifice
- constant head orifice
- ramped broad crested weir (or ramped flume)
- acoustic Doppler flow meter (ADFM)

Construction and installation of these devices should follow published guidelines. References are available upon request.

B. Non-standard open channel devices: Rated Structures or Rated Sections

IDWR may authorize the use of non-standard devices and rated sections provided the device or section is rated or calibrated against a set of flow measurements using an acceptable open channel current meter or a standard portable measuring device. Further restrictions and requirements are available from IDWR upon request.

II. CLOSED CONDUIT MEASURING DEVICES

New installations for closed conduit or pipe line diversions require installation of a magnetic type flow meter. There are many flow meters on the market, with costs ranging from several hundred dollars to several thousand dollars. In general, the higher priced meters are more accurate and require less maintenance. Most meters on the market have an acceptable accuracy rating for IDWR's guidelines. For existing mechanical type flow meters IDWR will allow for a variance if the existing flow meter is shown to meet the minimum requirements in section B of the Flow meter specifications in this document.

A. Flow Meter Specifications

Currently there are two types of magnetic flow meters available. Full profile magnetic type flow meters are flanged into the piping system and measures across the velocity profile. Insertion type magnetic meters are installed through a small diameter hole in the piping system and attempt to measure the average velocity (determined by pipe diameter and insertion depth of sensor) in the flow profile. Small diameter (< 12" in diameter) pipes should be fitted with a full profile magnetic type meter due to higher accuracy and less straight pipe requirements for installation. Larger pipe diameters may use insertion type meters but must meet the standards for accuracy listed below. Insertion type magnetic meters will require larger straight distances of pipe to minimize turbulence above and below the measurement point.

Listed below are the flow meter requirements and specifications for full-flowing closed conduits or pipes. These specifications apply to all irrigation and non-irrigation water uses except domestic systems as defined in Section 42-111, Idaho Code. Water users may apply to IDWR for a variance to these specifications in accordance with Criteria for Request for Variance of measuring Device Requirements of Section II C. of this document

Meters shall be magnetic flow meters meeting the following minimum specifications:

- 1) Flow range of 0.1 to 33 feet per second (fps).
- 2) Listed manufacturer accuracy of $\pm 2\%$ of flow rate from 0.1 to 33 feet per second (fps), with a repeatability of $\pm 0.5\%$ of reading.
- 3) The register or display unit shall:
 - a) Have a waterproof and tamperproof seal.
 - b) Have an LCD backlit display showing instantaneous flow rate and totalized volume.
 - c) Have a minimum of six (6) digits for flow rate.
 - d) Have a minimum of eight (8) digits for totalized volume display or a sufficient number of digits so that "rolling over" will not occur within two years operation, based on the maximum rate of flow and annual volume elements of the authorizing water rights. For totalizing data, IDWR recommends using the attached guidelines (see Table 1) for proper meter (totalizing units) selection for the intended use.
 - e) Have password or similar protection of all settings and data to protect against unauthorized change or accidental loss of data.
 - f) Contain a back up battery (according to manufacturers specifications) to prevent loss of data in the case of primary power failure.
 - g) The display unit must contain user programmable features that allow the selection of flow units. Available flow units must include, but are not limited to, gallons per minute (gpm) or cubic feet per second (cfs). The meter flow rate display must also

allow decimal display formatting of up to three (3) places when using cubic feet per second units.

- h) The volume totalizer display must contain user programmable features that allow the selection of volumetric units that must include but are not limited to, total gallons or acre feet. The meter must also allow decimal display formatting of up to four (4) places, and the application of unit multipliers ranging from .0001 to 10,000. See Table 1 below for examples of appropriate meter multipliers based on expected annual volume use.

4) Signal Output when Data Logger is Required

Data loggers are required only for magnetic flow meters installed as per conditions of approval for water right transfers in the Eastern Snake Plain Aquifer, or as may be required by specific water right conditions of approval in other locations.

Scaled pulse frequency output (or pulse counting) is required for continuous recording of totaled volume data on data loggers. Output signals must be compatible with data logger inputs. Analog output signal for flow rate (usually 4-20mA) is also optional (most magnetic flow meters provide both analog and pulse frequency as standard output signals).

B. Meter Installation and Diversion System Requirements

Meters required under Section II A. above shall meet the following installation requirements:

- 1) The minimum and maximum system operating flows and pressures must be fully within the range of measurable flows and pressures identified in the meter specifications.
- 2) Pipes must be full flowing.
- 3) The installed flow rate accuracy of the installed magnetic flow meter must be $\pm 5.0\%$ as compared to a second, standard flow meter. The installed flow rate accuracy for mechanical flow meters is $\pm 10\%$ of rate of as compared to a second, standard flow meter.
- 4) Meters must be installed according to manufacturer's specifications. Most manufacturers' recommend that meters be installed a certain distance from turbulence-causing bends and fittings such as discharge heads, single elbows, and valves. Industry standards for such distances are listed below, but larger distances may be required if the turbulence is severe.
 - a. Full profile magnetic flow meters require three (3) pipe diameters upstream of the meter and two (2) downstream.
 - b. Insertion magnetic flow meters require (10) pipe diameters upstream of the meter and five (5) pipe diameters downstream.
- 5) Meter Certification: IDWR will certify the installed flow meter for accuracy using a second, standard flow meter. A location for measuring flow with a second standard meter must be provided as close to the installed meter as possible. A section of straight pipe with a minimum of 24 inches in length (for pipe diameters 16 inches and smaller) of unobstructed exposed pipe shall be provided for calibration purposes. The calibration section must be free of elbows, valves and other fittings, and must contain the same flows that are passing through the meter. The 24-inch certification section may be incorporated into the manufacturer's pipe requirements above or below the flow meter.

Table 1: Use for proper meter selection based on water right volume.

Volume Acre Feet (AF)	Multiplier X gallons (gal)	Multiplier X Acre Feet (AF)
0-150	1, 10, 100	.0001, .001
150-1000	10, 100, 1000	.001, .01
>1000	100, 1000	.001, .01

C. Requests for Variance of Closed Conduit Measuring Device Requirements

Owners of closed conduit diversions may request a variance of the standard magnetic flow meter requirements of section II A. above for the following reasons:

- a) An operable flow meter is already installed
- b) Installation and maintenance of the standard meter would be burdensome

If a meter is already installed, that meter may be used if the meter is field-tested by IDWR staff and/or the water district watermaster using a portable certified standard flow meter and upon a determination that the meter is installed properly and accurate to within $\pm 10\%$ of actual rate of flow and volume. *IDWR or the water district watermaster should apply a calibration factor to flow meters whenever the calibration measurement is greater than $\pm 1.0\%$.*

If a user demonstrates that installation and maintenance of the standard meter would be burdensome, then IDWR may consider alternate measurement options including:

- a) Development of Power Consumption Coefficient to estimate water use volumes (generally acceptable for simple ground water irrigation diversion systems only)
- b) Installation of one or more time clocks or hour meters (requires periodic flow measurements and recording of hours of water use from meter or clock).
- c) Installation of an alternative flow meter as shown in Table 2 below. Alternative flow meters may vary with respect to straight pipe length requirements. Mechanical flow meters require ten (10) pipe diameters upstream of the meter and five (5) pipe diameters downstream.

Users considering making a variance request may contact IDWR or the local water master for further information.

1. Use of Power Records as an Alternative Measurement Method

An alternative to installing flow meters is the use of power records and other information to estimate the annual diversion from a pump. Estimating total water diversion from power records requires the derivation of a relationship between power demand and flow under normal operating conditions. This relationship, called a power consumption coefficient (PCC), is a ratio of the number of kilowatt hours needed to pump an acre-foot of water. This number is unique to each well or pumping plant due to the physical attributes of the system and can be applied to the year end power records to determine the total acre-feet pumped.

Total power consumption at individual irrigation pumping plants is supplied to the Department by electric utilities. To determine the rate of flow, a portable measuring device, such as a non-invasive ultrasonic flow meter can be used. Simultaneous with the flow measurement, power is measured using the utility's kilowatt-hour meter. A qualified individual with the necessary equipment will be required to perform these measurements.

Some complex systems cannot use this method due to the potential for large errors. See the discussion in the following section to see if this method can be used.

Because systems wear and water levels change, it is necessary to occasionally verify the flow to power ratio. Therefore, the power consumption coefficient must be re-calibrated at least once every three years.

2. Can Power Records be used to Estimate My Diversion?

Only irrigation water users may use power records to estimate their diversion because the utilities will only provide consumption information for irrigation uses. If you are not an irrigation user, but want to use power records, you must propose a method of reporting your power consumption data.

Owners of **surface water diversions** must have a flow measuring device in most cases. The alternate method of estimating water withdrawals with power records cannot be used unless you pump from a public water source and can show the Department that it will yield reliable results (case by case determination).

Owners of **ground water diversions** can either install a totalizing flow meter or ask the Department to use power records to estimate withdrawals. If the pump discharges to an open channel, an open channel measuring device can be employed to measure the water diverted if the device and a method of tracking hours of operation are pre-approved by the Department. Flow meters which register only instantaneous flow rate are not acceptable unless the water user can demonstrate a reliable method of tracking the number of hours the pump operates through the season (the flow measuring device must then be read and flow rate recorded at least once per week).

The total water diverted can be accurately estimated from the PCC method if the system configuration or operation is not complex. Unfortunately, the PCC or power records will not always yield acceptable results, and it will be necessary to install a flow meter. **Flow meters must be installed if any of the following conditions exist:**

- The well flows (artesian) so that water can be diverted when the pump is off.
- The energy consumption meter that records power used by the pump also records power used by other devices not integral to the irrigation system. For example, if the meter also records power used by a home, shop, cellar, re-lift pumps from surface water sources etc., a flow meter must be installed because power used by the pump cannot be isolated from the other devices. However, if the meter also records power used by center pivots, booster pumps, or other devices which operate as part of the well pumping system, the alternate method may be acceptable.

- The electrical meter records the power used by more than one well pump. If a deep well pump which discharges to an open pond or ditch and a re-lift pump are both connected to the same electrical meter, the discharge from the well pump can be measured, and a time clock can be installed to record the total number of hours of pump operation which can be multiplied by the flow rate to determine the total volume of water diverted.
- Variable frequency drives (VFD) operate the pumping plant. This includes both drives for the well motor and the booster system. Variable frequency drives generally indicate that multiple operating conditions exist in the system where large kilowatt and pressure changes are present.
- The energy supplied to the pump cannot be accurately and reliably measured. For example, most diesel and propane driven pumps do not have provisions to measure the fuel used by the engine.
- The flow rate from the pump varies significantly due to changes in demand or operation. For example, pumps that discharge into a pressurized system some times and then open discharge at other times, or pumps that supply multiple pivots and/or other discharge points, would likely have flow rates that change considerably. These changes generally alter the flow to power ratio, causing inaccurate estimates of diversions. The alternate method of estimating water withdrawals with power records may only be used if the water user can propose an acceptable method of tracking these changes in operation.
- Changing water levels that cause the flow to vary more than 25% (or pressures to vary more than 15%) over the irrigation season.

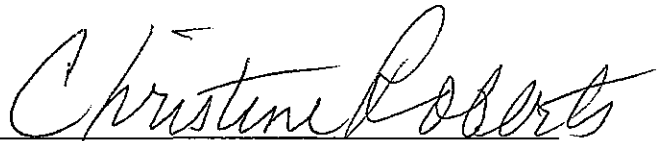
Table 2: Types of Alternative Measuring Devices for Closed Conduits

Types	Pipe Sizes	Maintenance Required	Relative Purchase Price
Differential Head <ul style="list-style-type: none"> • Orifice • Venturi • Annubar 	small to large	Low to high. Sand wears on sharp edges, and particles can plug small orifices and tubes.	low to medium
Force Velocity <ul style="list-style-type: none"> • Turbine • Propeller • Impeller 	small to large	Typically moderate to high. Often problematic when exposed to sand or moss. Some cannot measure low velocities	low to medium
Ultrasonic or Acoustic Doppler	small to large	Low. Typically non-invasive with no moving parts to wear	high
Vortex	small to medium (about 12 to 14 inch maximum pipe diameter)	Low. Few or no moving parts to wear.	High

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 29th day of October, 2009, a true and correct copy of the above and foregoing documents were served on each individual or entity on the service list for this matter on file at the Idaho Department of Water Resources, 322 East Front Street, Boise, Idaho. Each individual or entity on the service list was served by placing a copy of the above and foregoing document in the in the United States mail, postage prepaid and properly addressed.

Document(s) Served: Preliminary Order in the matter of requiring measuring devices for groundwater diversions in Water District No. 130, Thousand Springs Area

A handwritten signature in cursive script, reading "Christine Roberts", written in black ink.

Christine Roberts
Technical Records Specialist
Idaho Department of Water Resources