



State of Idaho

DEPARTMENT OF WATER RESOURCES

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C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

September 23, 2016

Re: Preliminary Order Requiring Measuring Devices for Ground Water Diversions in Water District No. 161, Mountain Home Area

Dear Water User,

The Idaho Department of Water Resources ("IDWR") has issued the enclosed Preliminary Order ("Order") requiring installation of measuring devices for ground water rights and diversions within Water District 161, the Mountain Home area. The enclosed Order is a preliminary order pursuant to Section 67-5243, Idaho Code. Any party may file a petition for reconsideration of a preliminary order as explained in the enclosed information sheet.

Please note that flow meters must be installed on ground water irrigation diversions by the start of the 2019 irrigation season and on non-irrigation diversions by January 1, 2019. The Order excludes the following ground water uses and diversions unless further notified by IDWR:

- a. Domestic and stockwater uses as defined by Section 42-111, Idaho Code;
- b. Diversions for irrigation uses less than or equal to five (5) acres; and
- c. Non-irrigation uses with a total rate of diversion less than or equal to 0.24 cubic feet per second (approximately 108 gallons per minute).

Please refer to the enclosed documents "*Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices*" and "*List of Approved Closed Conduit Measuring Devices*" for information on types of IDWR acceptable measuring devices. These documents and other information on the topic are available on IDWR's website: www.idwr.idaho.gov → Water Data → Water Measurement → Guidelines.

If you have questions concerning this Preliminary Order or IDWR's water measurement standards, please contact the IDWR State office (208-287-4800) or Western Regional office (208-334-2190).

Respectfully,

Tim Luke
Water Compliance Bureau

Encl: *Preliminary Order; Explanatory Information to Accompany a Preliminary Order; Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices; List of Approved Closed Conduit Measuring Devices*

C. Nick Miller, IDWR Western Region & WD161 Watermaster

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF REQUIRING MEASURING)
DEVICES FOR GROUND WATER DIVERSIONS IN)
WATER DISTRICT NO. 161 (MTN. HOME AREA))
_____)

**PRELIMINARY ORDER
REQUIRING MEASURING
DEVICES**

On February 29, 2016, the Idaho Department of Water Resources (“Department”) issued a *Preliminary Order Creating Water District No. 161* (“Preliminary Order”) for the purpose of administering ground water rights in the Department’s Administrative Basin No. 61 and a portion of Administrative Basin No. 63. The Preliminary Order excluded ground water rights used for domestic and stock water purposes as defined by Idaho Code §§ 42-111 and 42-1401A(11).

A primary purpose of a water district is the administration of water rights and distribution of water within the water district by a watermaster. Idaho Code § 42-602. The watermaster delivers the flow rate and/or volume authorized by the water right to the water right holder by measuring diversions and adjusting controlling works. Idaho Code § 42-607. To ensure accuracy of the distribution of water, the Director of the Department can require installation of a measuring device by a water right holder to assist a watermaster in the administration and distribution of water in a water district. Idaho Code § 42-701.

To assist the watermaster of Water District No. 161 (“WD161”) in the administration of ground water rights, ground water right holders must install measuring devices on ground water diversions within WD161.

FINDINGS OF FACT

1. On May 7, 1981, the Department created the Cinder Cone Butte Critical Ground Water Area (“CCBCGWA”) recognizing that “the available resource is limited” and that “localized water level declines are occurring within the aquifer system.” The boundary of the CCBCGWA covers an area of ground water development located northwest of Mountain Home.

2. On November 9, 1982, the Department created the Mountain Home Ground Water Management Area (“MHGWMA”) based on the conclusion of a water study conducted by the Department “that the anticipated recharge of ground water to the area is exceeded by anticipated ground water discharge.” The MHGWMA boundary covers a fairly large area around Mountain Home and also surrounds the CCBCGWA.

3. On February 29, 2016, the Department issued the Preliminary Order creating WD161, which includes ground water rights in the Department’s Administrative Basin No. 61 and a portion of Administration Basin No. 63 near Mountain Home, except ground water rights used for domestic and stock water purposes as defined by Idaho Code §§ 42-111 and 42-1401A-(11).

4. Paragraph four of the Preliminary Order creating WD161 states “[t]he Department shall issue a separate order requiring the installation of measuring devices and controlling works for water right diversions within [WD161].”

5. The first annual meeting of the water users of WD161 was held on June 28, 2016. At the meeting, the water users elected a watermaster and selected an advisory committee in accordance with Idaho Code § 42-605.

6. The advisory committee of WD161 met on July 26, 2016. Department representatives and the watermaster were present during the meeting and discussed with the advisory committee the issuance and implementation of a measuring device order for diversions in the water district. Based on discussion with Department representatives, the committee recommended that measuring devices be installed over an approximate three year period so that meters are installed on all qualifying irrigation wells by the start of the 2019 irrigation season. The committee further recommended exempting measuring device requirements for wells used for irrigation of ten acres or less, and wells used for non-irrigation uses where the well diversion rate is less than or equal to 0.24 cubic feet per second ("cfs").

7. The Department typically excludes the following types of water right diversions from water district wide water measurement orders:

- a. Domestic and stock water uses as defined by Idaho Code §§ 42-111 and 42-1401A(11);
- b. Diversions of ground water or water systems with multiple diversions irrigating less than or equal to five acres; and
- c. Diversions of ground water or water systems with multiple diversions delivering ground water for any purpose other than irrigation that divert less than or equal to 0.24 cfs (approximately 108 gallons per minute).

8. Domestic and stock water uses defined by Idaho Code §§ 42-111 and 42-1401A(11) are not included in WD161, or other water districts in Idaho that administer ground water rights.

9. The Department typically excludes from measurement orders ground water diversions used for irrigation of five acres or less because inclusion of such uses normally adds a large number of diversions to measure and results in additional workload and budget for the water district. Although the number of diversions irrigating five acres or less is typically significant, the total amount of water use is relatively small compared to the remaining water uses and water rights in water districts. To illustrate, according to water rights records on file with the Department, there are approximately 460 ground water rights included in WD161 that authorize use of ground water from approximately the same number of ground water diversions or wells. The 460 water rights have a combined diversion rate of about 585 cfs. Approximately 140 (30%) of the 460 ground water rights in the district authorize irrigation of five acres or less, however, those same 140 ground water rights represent less than 2% of the collective rate of diversion of all 460 ground water rights with a combined rate of diversion of approximately 10.7 cfs.

10. The Department also typically excludes from measurement orders non-irrigation ground water diversions that divert 0.24 cfs or less because many non-irrigation ground water rights that technically meet the domestic exemption criteria of Idaho Code §§ 42-111 and 42-1401A(11) have diversion rates up to 0.24 cfs. In other words, many non-irrigation ground water rights with diversion rates less than 0.24 cfs could legally divert ground water even without a water right. Additionally, the number of diversions for such rights can be significant while total water use is small.

11. As stated above, the WD161 advisory committee recommended the Department exempt measuring device requirements for wells used for irrigation of ten acres or less instead of five acres or less. There are forty-three ground water rights in WD161 authorizing irrigation of more than five acres and less than or equal to ten acres. Thirteen of the forty-three rights already have water right conditions requiring water measurement and annual reporting for which the Department has no data and/or evidence of compliance. An additional eleven of the forty-three rights are diverted from wells described as points of diversion by other water rights where the total rate of diversion exceeds 0.24 cfs and/or the total number of irrigated acres is greater than the ten acre limit recommended by the WD161 advisory committee. Moreover, all but two of the forty-three rights are located within the MHGWMA and the CCBCGWA.

12. The Department's *Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices* ("Minimum Measurement Standards") require installation of a certified flow meter on closed conduit or pipe line diversions. *Minimum Measurement Standards* at 2. Many ground water delivery systems pressurize closed conduits to convey and apply the water. The Minimum Measurement Standards allow alternative meters or methods to be employed if such meters or methods "will produce similarly accurate results." *Id.* The power consumption coefficient ("PCC") measurement method is an alternative method that the Department may consider and approve for "qualifying irrigation diversions only." *Id.* The PCC is a ratio of power usage to water withdrawal, whereby power usage recorded by an electrical meter is used to approximate water usage in lieu of installing a water meter.

CONCLUSIONS OF LAW

1. Idaho Code § 42-233a, provides in pertinent part:

The director may require all water right holders within a critical ground water area to report withdrawals of ground water and other necessary information for the purpose of assisting him in determining available ground water supplies and their usage.

2. Idaho Code § 42-233b, provides in pertinent part:

The director may require all water right holders within a designated [ground] water management area to report withdrawals of ground water and other necessary information for the purpose of assisting him in determining available ground water supplies and their usage.

3. Idaho Code § 42-701 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) The appropriators or users of any public waters of the state of Idaho shall maintain to the satisfaction of the director of the department of water resources suitable headgates and controlling works at the point where the water is diverted.

Each device shall be of such construction that it can be locked and kept closed by the watermaster or other officer in charge, and shall also be of such construction as to regulate the flow of water at the diversion point. 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 used 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.

4. Measurement of diversions is necessary in WD161 for the proper distribution of water and administration of water rights. Measurement of diversions has the following administrative benefits:

- i. Collective quantification of ground water withdrawals assists the Director of the Department, the water district, and local ground water right holders in determining the available ground water supplies and usage;
- ii. Quantification of individual ground water withdrawals creates the necessary evidence to ensure ground water rights are used within their authorized diversion limits and that withdrawals can be regulated to the authorized diversion limits of the water rights when such limits are exceeded; and

- iii. Collective and individual quantification of ground water withdrawals establishes an equitable, defensible and legal basis for determining water user assessments since Idaho law requires that expenses of the water district be based on water delivery.

5. The Director should require installation of measuring devices for diversions of ground water within WD161. As explained in Finding of Fact 11, a majority (56%) of the forty-three ground water rights in WD161 authorizing irrigation of more than five acres and less than or equal to ten acres either already have water right conditions requiring water measurement or are diverted from wells described as points of diversion by other water rights where the total rate of diversion exceeds 0.24 cfs and/or the ten acre irrigation limit recommended by the WD161 advisory committee. Further, all but two of the forty-three rights are located within the MHGWMA and the CCBCGWA where measurement and determination of ground water withdrawals is especially necessary. Accordingly, the Director should require measurement of all ground water rights in the water district used for irrigation of more than five acres and all non-irrigation ground water rights having a diversion rate greater than 0.24 cfs.

ORDER

IT IS HEREBY ORDERED that:

1. The holders of water rights in WD161, except those ground water rights, uses and diversions identified below, shall install and maintain on each point of diversion or well, a measuring device of a type acceptable to the Department. **Owners of irrigation wells or diversions that are required to be measured shall install acceptable measuring devices by the start of the 2019 irrigation season. Owners of non-irrigation diversions that are required to be measured shall install acceptable measuring devices by January 1, 2019.**

2. The measuring and reporting required by this order is waived until further notification by the Department for the following ground water uses and diversions:

- a. Domestic and stockwater uses as defined by Idaho Code §§ 42-111 and 42-1401A(11);
- b. Diversions of ground water or water systems with multiple diversions irrigating less than or equal to five acres; and
- c. Diversions of ground water or water systems with multiple diversions delivering ground water for any purpose other than irrigation that divert less than or equal to 0.24 cfs (approximately 108 gallons per minute).

3. Measuring devices acceptable to the Department for wells required to be measured shall be flow meters identified in the Department's *List of Approved Closed Conduit Flow Meters* (Version 2.9 updated 8-22-2016) (copy attached). These specifications apply to wells used for both irrigation and non-irrigation water uses.

4. The Department will consider a request for variance of the Department approved flow meter requirement upon submittal of a written plan to the Department. Acceptable variances may include the following methods or devices:

- Development of a PCC to approximate water withdrawals. A PCC-based variance will only be considered *for irrigation diversions that consist of one (1) well and one irrigation discharge point or one distinct flow and demand condition, and water levels do not change significantly during the irrigation season (example: a well diverting water to one center pivot only with no end gun, a well diverting water to one wheel line, or multiple wheel lines as long as the same multiple wheel lines are always on at the same time);*
- Timing diversion with an hour meter (time clock) *for one well that discharges to an open ditch or pond where a) discharge is constant and not controlled by valves, b) ground water levels do not change significantly during the annual season of use, and c) the rate of flow is measured annually by the water district watermaster or an examiner or hydrographer approved by the Department;*
- Measurement with a properly functioning flow meter that was installed *prior to the date of this order, and determined as acceptable by the Department* (meters installed prior to the date of this order and included in the Department's *List of Approved Closed Conduit Flow Meters version 2.9* are deemed acceptable while others will require approval); and
- Measurement with a standard open channel measuring device installed in an open channel or ditch for measuring multiple wells in a well field and the measuring device is read daily, or daily flows are recorded by use of a continuous recorder or data logger.

5. Requests for variance must be submitted to the Department and will be considered by the Water District watermaster and the Department on a case-by-case basis. Variances proposing measurement with an existing flow meter or measuring device must satisfy Department criteria and accuracy tests. Existing meters or measuring devices that do not satisfy standards, or that fail, must be replaced with an approved flow meter unless another variance is obtained. Requests for variance must be made using the Department's form "*Request for Variance of IDWR Approved Flow Meter Requirement*" available on the Department's website or upon request.

6. If a user cannot comply with the deadlines in item 1 above, the Department may grant an extension of time. The Department will consider requests for extensions on a case-by-case basis. Requests for extension must be made to the Department in writing. A water right holder may request an extension because of non-use. Non-use may be required by a federal land set aside program, or the water user may be temporarily not diverting as authorized by the water right.

7. In some situations, the Department may exempt a diversion from the measurement requirements of this order. Conditions that may result in an exemption include, but may not be limited to, the following:

- Abandonment, non-use, or consolidation of diversions that results in a diversion being unused and expected to remain unused for the foreseeable future; or
- A reduction or change to the water right that results in an authorized diversion rate less than or equal to 0.24 cfs and/or reduces the authorized irrigation use to five acres or less; or
- A demonstration by the holder of a ground water right authorizing irrigation of more than five acres and less than or equal to ten acres that the actual number of irrigated acres is five acres or less.

8. The requirements of this order apply to new ground water diversions authorized after the date of this order, except those ground water uses or diversions identified in items 1a. through 1c. of this section. This order does not require the installation of lockable controlling works, although nothing in this order shall preclude the Director and/or the watermaster from mandating the installation of lockable controlling works on any diversion if such works are determined to be necessary for adequate administration and control of the diversion.

9. The watermaster shall shut off and refuse to deliver water to any ground water user who does not have, or who fails to maintain, an adequate measuring device on a diversion after the start of the 2019 irrigation season (irrigation diversions) or after January 1, 2019 (non-irrigation diversions), unless an extension or exemption has been granted by the Department.

10. The watermaster shall be responsible for the collection and annual reporting of all measurement data for the diversions within water district boundaries subject to this order. All diversions shall be reported to the Department using the Department's WMIS online database application.


Dated this 23 day of September 2016


 MAT WEAVER
 Deputy Director

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 23rd day of September 2016, the above and foregoing document was 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 and www.idwr.idaho.gov. Each individual or entity on the service list was served by placing a copy of the above and foregoing document in the United States mail, postage prepaid and properly addressed.

Documents served: **Preliminary Order in the Matter of Requiring Measuring Devices for Ground Water Diversions in Water District No. 161 (Mountain Home Area)**

A handwritten signature in cursive script, reading "Sarah Shaul", is written over a solid horizontal line.

Sarah Shaul
Technical Records Specialist
Idaho Department of Water Resources

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(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 service date 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 closed conduits which convey water from the well to system discharge points such as irrigation sprinkler systems. Ground water may also discharge from a well and short section of pipe to open channels or ditches.

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

I. MEASUREMENTS IN OPEN CHANNELS

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 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:

- **Weirs:** contracted or suppressed rectangular weirs, Cipolletti weir, 90 degree V-notch weir
- **Flumes:** Parshall flume, trapezoidal flume, ramped flume (ramped, broad-crested weir)
- **Submerged Orifices:** submerged rectangular orifice, constant head orifice
- **Acoustic:** acoustic Doppler flow meter (ADFM), acoustic Doppler current profiler

The installed flow rate accuracy of open channel measurement devices must be +/- 10.0% as compared to an acceptable open channel current meter or other standard portable measuring devices such as an acoustic Doppler flow meter or acoustic Doppler current profiler.

Construction, installation and operation of these devices should follow published guidelines, such as those published by the United States Bureau of Reclamation¹

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

Any weir, flume, or other measuring device that has not been constructed, installed, or maintained correctly and therefore does not measure flow in the standard manner consistent with standard rating tables or curves is considered to be a non-standard device. 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 standard portable open channel measuring device. Examples of standard portable open channel measuring devices include the acoustic Doppler flow meter, the acoustic Doppler current profiler, or a portable flume. These devices are acceptable provided they are installed and operated according to all relevant manufacturer recommendations.

Further information and requirements are available from IDWR upon request.

¹ The Bureau of Reclamation measurement guidelines can be found at:
<https://idwr.idaho.gov/files/water-measurement/2001-Bureau-of-Reclamation-Water-Measurement-Manual.pdf>

II. CLOSED CONDUIT MEASURING DEVICES

The following discussion is applicable to measurement of diversions from any water source that diverts via a full-flowing, closed conduit.

A. Standard Closed Conduit Measuring Devices

Standard closed conduit measuring devices are flow meters that have been “certified” or approved for use by IDWR based on independent third party testing. IDWR has published a list of meters that have passed testing and are certified for use². Tests were conducted for both accuracy and repeatability on all submitted models, and a pass/fail rating awarded. The *IDWR List of Approved Closed Conduit Flow Meters* (“Approved Flow Meters List”) may be found at:

<https://idwr.idaho.gov/files/water-measurement/approved-flow-meter-list.pdf>

Certified meters must be installed with minimum straight pipe length requirements as specified in the Approved Flow Meters List. Owners or operators who install a certified meter without the minimum straight length spacing requirements, or otherwise inconsistent with manufacturer’s specifications, may need to provide an adequate testing section of straight pipe located somewhere on the diversion system either upstream or downstream of the installed flow meter. This testing section can be excavated pipeline as long as the section of pipe carries all water being measured through the installed flow meter. Water users choosing to expose pipe will be required to excavate the pipe at their expense at the request of the district hydrographer, watermaster and/or IDWR staff.

B. Non-standard Closed Conduit Measuring Devices: Requests for Variance

In some cases, site conditions preclude use of a certified meter, and another meter or method of measurement may produce similarly accurate results. In cases where the user can show that a proposed alternative meter or method would be as accurate as, or otherwise is better suited to an application than any of the meters on the approved list, a user can propose using an alternative meter or method by submitting a Request for Variance Form, available from IDWR. If a request is submitted and granted, the water user bears the risk that the alternative meter or method will perform as expected.

The following alternate measurement methods may be considered:

- Development of a Power Consumption Coefficient (PCC), which is a ratio of power usage to water withdrawal. Acceptance of the PCC method may be provided *for qualifying irrigation diversions only*;
- Use of an hour meter (time clock) *for qualifying diversions only*;
- Use of an acceptable flow meter that was installed *prior to the date of the measurement order*;

If a meter is already installed, that meter may be used if the meter is field-tested by IDWR staff, the water district watermaster, or a district hydrographer using a portable standard flow meter and upon a determination that the meter is installed properly and accurate to within $\pm 10\%$ of the rate of flow and volume as measured with a portable standard flow meter. If a non-certified meter is approved and installed but does not pass a field check, IDWR may require the water user to replace the meter with a certified meter at the water user’s expense.

If an alternative method is approved and that method is later found to be insufficient, the variance will be withdrawn and a certified meter will be required to be installed. The suitability of any pumping station for an hour meter or the PCC method of measurement will be based on criteria found in this document, an applicable IDWR water measurement order, and criteria found in the document entitled *IDWR ESPA Water Measurement and Reporting Guidelines*³.

² Testing was conducted at the Utah Water Research Laboratory (UWRL), a National Institute of Standards and Technology (NIST) traceable lab in Logan, Utah.

³ This document can be found at:

<https://idwr.idaho.gov/files/water-measurement/IDWR-Water-Measurement-Reporting-Guidelines.pdf>

Idaho Department of Water Resources List of Approved Closed Conduit Flow Meters

The tables below list flow meters that have been independently tested and subsequently approved by the Idaho Department of Water Resources (IDWR) for use in closed conduit measurement applications. The approved flow meters were tested by the Utah Water Research Laboratory at Utah State University using NIST¹ traceable instrumentation and subject to IDWR testing standards. Meters on this list performed at or above the IDWR minimum acceptable standards for accuracy when installed in long-run and short-coupled pipe configurations specified by IDWR. Please note that the approved meter list is **model** specific, not manufacturer specific. Prior to selecting and purchasing a meter, consult the manufacturer's installation requirements to ensure that all installation specifications for the specific model can be achieved. The list below is subject to change as additional meters are added or removed. This is the most current list and can be found on the IDWR website at the following URL:

<http://idwr.idaho.gov/files/water-measurement/approved-flow-meter-list.pdf>

Straight Pipe Length - The minimum length of unobstructed pipe free of flow disturbers, immediately above and below the meter sensors, spool, or flow tube.

Flow Disturber - Any fitting or irregularity in the piping above or below the measuring device sensor location that affects flow patterns through the device or sensor location. Disturbers may include but are not limited to: pump discharges, elbows, check or chemigation valves, butterfly or gate valves, pipe reducers.

IDWR Installation Requirements:

Approved full profile magnetic flow meters and spooled ultrasonic flow meters must be installed with a minimum straight pipe length equivalent of three (3) pipe diameters upstream and two (2) pipe diameters downstream from the center of the meter spool.

Approved clamp-on and wetted ultrasonic flow meter transducers must be located with a minimum straight pipe equivalent of ten (10) pipe diameters upstream and five (5) pipe diameters downstream of the nearest transducer. Manufacturer specifications for upstream and downstream straight pipe requirements may be greater or less than the IDWR requirements. All other manufacturer installation specifications must be met.

¹ NIST - National Institute of Standards and Technology.

Approved Full Profile Magnetic Flow Meters*			
Manufacturer	Model/Specifications	Power Supply	IDWR-accepted Pipe Applications (Nominal Pipe Size)
Endress+Hauser	ProMag L400 (L sensor with 400 transmitter)	AC	1" - 90"
Endress+Hauser	ProMag W400 (W sensor with 400 transmitter)	AC	2" - 78"
Siemens	SITRANS FM MAGFLO MAG 5100W w/ 5000 converter	AC	1" to 78"
Siemens	SITRANS FM, MAGFLO 8000, model 7ME6880	DC	1" to 48"
McCrometer	Ultra Mag w/ M-Series Converter	AC	2" to 48"
Badger	M2000 Amplifier w/ M2000 Detector	AC	1/4" to 54"
Khrone	Enviromag 2000 w/ Optiflux 2000 F/G	AC	3/8" to 80"
Khrone	Waterflux 3100C/F	AC	1" to 24"
Rosemount	8705 w/ 8732E transmitter	AC	1/2" to 36"
Burkert	8054/8055 w/ Magflow transmitter	AC	1" to 80"
Seametrics†	AG 2000†	DC†	4" to 10"
Seametrics†	AG 3000†	DC†	4" to 12"
Seametrics†	iMag 4700†	DC†	4" to 12"
Sparling	Tiger Mag W/FM6561051110 Converter	AC	3/8" to 48"
Sensus	IPerl	DC	5/8"-1"
Growsmart by Lindsay	IM3000	DC	2"-12"
ABB	WaterMaster	AC	3/8" to 96"
ABB	AquaMaster 3 with FER series transmitter	DC	½" to 24"
<p>*Installations of all approved full profile magnetic flow meters require a <u>minimum</u> straight pipe length of 3 pipe diameters upstream and 2 pipe diameters downstream from the center of the meter spool. † Seametrics AG2000, AG3000 and iMag must be installed with AC power supply and a working battery must remain in the unit</p>			

Approved Spooled Ultrasonic Flow Meters*

Manufacturer	Model/Specifications	Power Supply	IDWR-accepted Pipe Applications (Nominal Pipe Size)
Master Meter	Octave	DC	2"-10"
Badger	E-Series	DC	3/4"-2"
Netafim	Octave	DC	2"-12"

*Installation of approved spooled ultrasonic flow meters require a minimum straight pipe length of 3 pipe diameters upstream and 2 pipe diameters downstream from the center of the meter spool.

Approved Clamp-on and Wetted Transducer Ultrasonic Flow Meters*

Manufacturer	Model/Specifications	Power Supply	IDWR-accepted Pipe Applications (Nominal Pipe Size)
Siemens	CLAMP-ON ULTRASONIC -SITRANS FUS 1010 w/ HIGH PRECISION TRANSDUCERS	AC	14"+
Fuji	Time Delta C w/ 1MHz transducers	AC	14"+
GE Panametrics	AT868 w/ 1MHz transducers	AC	14"+

* Ultrasonic flow meter transducers must be located with a minimum straight pipe equivalent of ten (10) pipe diameters upstream and five (5) pipe diameters downstream of the nearest transducer.

**The meters on the table above may not be used on pipe smaller than 14 inches unless a variance is approved by IDWR.

ADAMS, ALLAN L; ADAMS, CARMEN E
29 E 200 S
BURLEY ID 83318-5435

AGENBROAD, CARL S; AGENBROAD, JUDITH A
3615 PORTLAND AVE
NAMPA ID 83686

AGUIRRE, JOHN M
RT 1 BOX 838H
MOUNTAIN HOME ID 83647

ALBERT, JOE
910 S 3RD W
MOUNTAIN HOME ID 83647

ALEXANDER, BETH A; ALEXANDER, JAMES A
5235 N E 18TH
MOUNTAIN HOME ID 83647

ALSIP, JOHN; BRANDT, DONALD K
203 11TH AVE S
NAMPA ID 83651

ANDERTON, BETTY L; ANDERTON, REUBEN BUDD
575 NW FOSTER DR
MOUNTAIN HOME ID 83647-5793

APPLETON, RICHARD L
3280 SW OLD GRANDVIEW HWY
MOUNTAIN HOME ID 83647

ARENDTS, CHARLES
RT 1 BOX 858D
MOUNTAIN HOME ID 83647

ARK PROPERTIES LLC
MAYFIELD TOWNSITE LLC
C/O JOHN MC CALLUM
11204 N BAR 21 DR
GLENN'S FERRY ID 83623-5033

ASCUENA, GEORGE
ASCUENA FARMS LLC
4020 S MAIN ST
MOUNTAIN HOME ID 83647

ASHBY, HENRY E; ASHBY, LINDA L
PO BOX 748
MOUNTAIN HOME ID 83647-0748

ATWOOD, CINDI
2290 VERBENA DR
MERIDIAN ID 83642

BAKER, MARIANNE A; BAKER, ROBERT C
1230 N 18TH E
MOUNTAIN HOME ID 83647

BAKER, DEBORAH M
193 AULBACH AVE
MOUNTAIN HOME ID 83647

BARNETT, JAY; BARNETT, JONNA
4550 N 18TH E
MOUNTAIN HOME ID 83647

BATES, ROBERT L; BATES, SHERRY J
3860 CANYON CREEK
MOUNTAIN HOME ID 83647

BATRUEL, MARY N; BATRUEL, PAUL V
BATRUELS DAIRY
3315 N MORROW RD
GLENN'S FERRY ID 83623-5018

BATRUEL, MARY N; BATRUEL, PAUL V
BATRUELS DAIRY
3335 N MORROW RD
GLENN'S FERRY ID 83623-5018

BEAN, ANNABETH N
11972 W PECONIC DR
BOISE ID 83709

BEAUCHAMP, CHRISTIAN; BEAUCHAMP, STEPHANIE
5393 NE WATERDOG WAY
MOUNTAIN HOME ID 83647

BELL, JESSIE
2950 N 24TH E
MOUNTAIN HOME ID 83647

BEN FATTO LTD PARTNERSHIP; CARDON HIATT
INVESTMENTS LLC; FAR MAREL LLC; SMT INVESTORS
LTD PARTNERSHIP; VIEL GLUCK LLP
1223 S CLEARVIEW AVE STE 103
MESA AZ 85209

BERANNA DAIRY
9166 PERCH RD
CALDWELL ID 83607

BLACK, PENNY
325 SW HAMILTON RD
MOUNTAIN HOME ID 83647

BOWEN, BRADLEY; BOWEN, TIFFANY
6117 S 18TH EAST
MOUNTAIN HOME ID 83647

BRIGGS, BECKY A; BRIGGS, JAMES L
PO BOX 46
MOUNTAIN HOME ID 83647

BROCK, PATRICIA A; BROCK, TERRY N
435 NW FOSTER DR
MOUNTAIN HOME ID 83647-5792

BROWN, ROBERT C; BROWN, SHERYL A
2062 NE RODGERS LN
MOUNTAIN HOME ID 83647

BUTTERFIELD, CHARLES; BUTTERFIELD, HELEN
860 S 32 W
MOUNTAIN HOME ID 83641

BECKER, LEONARD E; BECKER, MERLA L
825 AGUIRRE RD
RT 1 BOX 825
MOUNTAIN HOME ID 83467-9722

DONNA L BELL TRUST
RALPH ROBERT TOWLE TRUSTEE
2405 WYOMING
BOISE ID 83706

BENNETT MOUNTAIN NO 1 WATER USERS
1020 SCHMOLL RD
MOUNTAIN HOME ID 83647

BERMENSOLO, JOHN D
1510 N 3RD E ST
MOUNTAIN HOME ID 83647

BOWEN, BLAINE E
1170 NE CATTLE DR
MOUNTAIN HOME ID 83647

BRAGGA, CHARLES E; BRAGGA, SUZANN
7014 ROSEWOOD DR
MOUNTAIN HOME ID 83647

BRLETIC, MICHAEL; BRLETIC, NANCY
4985 N 18TH E
MOUNTAIN HOME ID 83647

BROOKS, PAUL T
350 N MILWAUKEE #2084
BOISE ID 83704

BROWN FARMS LLC
764 N TROUTNER WAY
BOISE ID 83712

CALDWELL, JOHN W
PO BOX 51
MOUNTAIN HOME ID 83647

CAMAS ESTATES WATER USERS ASSN INC
C/O LAURA KOESTER
190 E 23RD N
MOUNTAIN HOME ID 83647

CAMPBELL, FRED R; CAMPBELL, MARILYN D
2590 N 18TH E
MOUNTAIN HOME ID 83647

CANTRELL, DONNA; CANTRELL, JONATHAN
4270 E RIVER ST
KING HILL ID 83633

CANYON CREEK RANCH LLC
10185 CANYON CREEK RD
MOUNTAIN HOME ID 83647

CARL F REYNOLDS & SONS
PO BOX 99
MOUNTAIN HOME ID 83647

CARVALHO, CLAUDIA M ; CARVALHO, PATRICK W
1950 W 18TH S #15
MOUNTAIN HOME ID 83647

CAVANAGH, RICHARD; CAVANAGH, SHIRLEY A
2210 ONA
BOISE ID 83705-3525

CHARTER MOUNTAIN RANCH INC
C/O JOHN MC CULLOM
18196 SE WILSON RD
GLENNS FERRY ID 83623-5033

CHILDS, IRA; CHILDS, VIRGINIA
2683 NE BEAMAN RD
MOUNTAIN HOME ID 83647-3996

CHURCH OF THE NAZARENE MOUNTAIN HOME
950 N 7TH E ST
MOUNTAIN HOME ID 83647

CINDER CONE BUTTE FARM LLC
5001 FIFESHIRE PL N
BOISE ID 83713

CITY OF GLENNS FERRY
PO BOX 910
GLENNS FERRY ID 83623-0910

CITY OF MOUNTAIN HOME
PO BOX 10
MOUNTAIN HOME ID 83647

CLARK, CONNIE Y; CLARK, JOHN W
PO BOX 711
MOUNTAIN HOME ID 83647

CLEAR SPRINGS RANCH LLC
22620 SE 216TH PL #A
MAPLE VALLEY WA 98038-6446

CLOVER HOLLOW CO LLC
PO BOX 606
MOUNTAIN HOME ID 83647

COLD SPRINGS FARM
PO BOX 105
HAMMETT ID 83627

COLTHORP, MARY S; COLTHORP, STEVEN C
5743 N 18TH E
MOUNTAIN HOME ID 83647

COMMUNITY COUNCIL OF IDAHO INC
317 HAPPY DAY BLVD STE 250
CALDWELL ID 83607

CORBUS, ADELIA E; CORBUS, JAMES L
490 S 18TH E
MOUNTAIN HOME ID 83647

CORBUS, BUD; CORBUS, EDIE
PO BOX 234
MOUNTAIN HOME ID 83647

CORBUS, WANDA L
RR 2 BOX 459
MOUNTAIN HOME ID 83647

CORBUS, BUD; CORBUS, EDIE
RT 2 BOX 460
MOUNTAIN HOME ID 83647

COX, MARGARET J; HICE, HAROLD R
3980 W HARBOR POINT DR
MERIDIAN ID 83646

CRAIN, DARYEL D; CRAIN, JUDY M
PO BOX 745
MOUNTAIN HOME ID 83647

CRATER HOLDING TRUST
PLEASANT ACRES TRAILER COURT
PO BOX 333
EAGLE ID 83616

CRINER, CLYDEAN F; CRINER, PORTER W
DANIELS RD
RT 1 BOX 879
MOUNTAIN HOME ID 83647

CROMAR, J ROBERT; CROMAR, MARILYN D
PO BOX 939
MOUNTAIN HOME ID 83647

CROSSLEY, DENNIS DAN; CROSSLEY, KAREN M
2170 N E BELL COUNTRY CT
MOUNTAIN HOME ID 83647

CRUSER, PATRICK; CRUSER, SALLY
1370 OWYHEE DR
MOUNTAIN HOME ID 83647

CRUSER, MICHAEL F; CRUSER, NICHOLE C
2185 NE BELL COUNTRY CT
MOUNTAIN HOME ID 83647

CURRY, TRACI M
1635 S 18TH W
MOUNTAIN HOME ID 83647

DANSKIN PROPERTIES ASSN INC
C/O BARBARA WAITE - PRES
315 E DANSKIN DR
BOISE ID 83716

DECRESCENZO, GREGORY; SHAKOORI, ASFAR A;
SHAKOORI, MIRAZIM; SHAKOORI, SHADI
4313 MANSFIELD DR
DANVILLE CA 94506

DENNING, LADEAN F
8240 W MARTHA AVE
MOUNTAIN HOME ID 83647

DESBIEEN, RICH
810 NE BEAMAN ST
MOUNTAIN HOME ID 83647-5299

DILLINGHAM, LINA J
PO BOX 961
GLENN'S FERRY ID 83623

DODGE, MARY; DODGE, RON
170 S 13TH E
MOUNTAIN HOME ID 83647

DOHERTY, JACK R; DOHERTY, JOHN R
228 MARGARITA DR
SAN RAFAEL CA 94901

DOMINGUEZ, ALICIA; DOMINGUEZ, MOISES
5554 SE HARVEST CIR
MOUNTAIN HOME ID 83647

DOMKE, RUEBEN
4420 N 24TH E ST
MOUNTAIN HOME ID 83647

DRAPER, MARK R; DRAPER, SHAWNA L
1411 SE HAMILTON RD
MOUNTAIN HOME ID 83647

DURRANT, ANN; DURRANT, DAVID
BOX 194
HAMMETT ID 83627

ECKERT, GARTH G
5506 PLYMOUTH ST
BOISE ID 83704

EDMISTON, DONNA C; EDMISTON, JERRY F
576 NE MASHBURN RD
MOUNTAIN HOME ID 83647-5289

EISENMAN FAMILY TRUST
2988 S OWYHEE ST
BOISE ID 83706

GARY & FRANCES ELLIS LIVING TRUST
HC 63
HAMMETT ID 83627

ENGELHARDT, BEVERLY D; ENGELHARDT, PATRICK L
4760 NE LOTT RD
MOUNTAIN HOME ID 83647

FAMILY TRAILER PARK
C/O CUTLER BROTHERS
421 THREE RIVERS WAY
FRUITLAND ID 83619-5005

FARMS LLC
C/O BRAD HALL
PO BOX 50620
IDAHO FALLS ID 83405-0620

FARRIS CATTLE CO LLC
2800 S SWAN FALLS RD
KUNA ID 83634

FERBRACHE, MARY F; FERBRACHE, ORVILLE F
RFD 1 BOX 822
MOUNTAIN HOME ID 83647

FISHER, ESTHER Z
PO BOX 36
MOUNTAIN HOME ID 83647

FLYING H FARMS PARTNERSHIP
518 OLD HIGHWAY 30
MOUNTAIN HOME ID 83647-6289

FRANK TIEGS LLC
PO BOX 3350
PASCO WA 99302

FREER, FORREST
2690 S 10TH E
MOUNTAIN HOME ID 83647

FRENCH, ROBERT L
1308 W ROBINHOOD DR STE 14
STOCKTON CA 95207

FRISBEE JR, TED R; FRISBEE, CHRISTINE
19270 NW HARPER RD
MAYFIELD ID 83716

GALBREATH, RITA; GALBREATH, ROY
PO BOX 1642
BOISE ID 83701

GARCIA, HUMBERTO; GARCIA, SANDRA
425 WEST 9TH S
MOUNTAIN HOME ID 83647

GRAY, MONICA D; GRAY, RICHARD W
4445 NE RANCHO WAY
MOUNTAIN HOME ID 83647

GREENE, INGE H; GREENE, JOHN H
1289 NW BEAMAN ST
MOUNTAIN HOME ID 83647-5190

GRIMMETT, GORDON M; GRIMMETT, MARSA
2645 E 18TH S
MOUNTAIN HOME ID 83647

GRIMMETT, MIKE; GRIMMETT, SONDR
5563 N 18TH E
MOUNTAIN HOME ID 83647

GUISASOLA, ELVA; GUISASOLA, JOHN
PO BOX 712
MOUNTAIN HOME ID 83647

H W & K LLC
PO BOX 7943
BOISE ID 83707

HACKER, MARTHA; HACKER, TOM
4495 NE MYSTIC SADDLE RD
MOUNTAIN HOME ID 83647-5325

HALL, G LAURENCE
2251 S 10TH E
MOUNTAIN HOME ID 83647-3998

HAMILTON, JAMES R; HAMILTON, SHARON E
2204 TUMBLEWEED DRAW
ALAMOGORDO NM 88310

HAMILTON, CARL F; HAMILTON, MARJORIE L
RT 1 BOX 819
MOUNTAIN HOME ID 83647

HANSEN, JULIANNA; HANSEN, KENNETH
2525 AIR BASE RD
MOUNTAIN HOME ID 83647

HARDEN, GLORIA A; HARDEN, HUGH
4215 SW HARDEN DR
MOUNTAIN HOME ID 83647-6373

HARDEN, GLORIA A; HARDEN, HUGH
7425 W 36TH S
MOUNTAIN HOME ID 83647

HELMICK, KEITH ONEIL; HELMICK, SANDRA R
16 E INDIAN CREEK RD
MAYFIELD ID 83716

HERMERDING, DENNIS C; HERMERDING, JULIE H
4160 NE RANCHO WAY
MOUNTAIN HOME ID 83647

HETTENBAUGH, RENEE A
PO BOX 4114
POCATELLO ID 83205

HEUETT JR, ROBERT L
4677 NE MYSTIC SADDLE RD
MOUNTAIN HOME ID 83647

COX, MARGARET J; HICE, HAROLD R
RT 1 BOX 644
MOUNTAIN HOME ID 83647

HIDDLESTON, MARK S; HIDDLESTON, MARNIE M
1685 CASTLE WAY
MOUNTAIN HOME ID 83647

HIDDLESTON, MARK S; HIDDLESTON, MARNIE M
4850 N 18 E
MOUNTAIN HOME ID 83647

HILL, KEVIN; KELL, BROCK; MC CASLIN, JAMES
2450 SUNSET STRIP
MOUNTAIN HOME ID 83647

HOER, ALBERT JOHN; HOER, VICTOR ALBERT
1155 S 5TH W
MOUNTAIN HOME ID 83647

HOGAN, WILLIAM P
1640 S 5TH W
MOUNTAIN HOME ID 83647

HOPSON & HOPSON
305 NE MASHBURN RD
MOUNTAIN HOME ID 83647-5287

HUNT, CAROLYN E; HUNT, RAY
9698 E HWY 20
MOUNTAIN HOME ID 83647-5314

IDAHO FARMWAY INC
C/O DAN WEITZ
PO BOX 854
BAKER CITY OR 97814

IDAHO WASTE SYSTEMS INC
PO BOX 1386
MOUNTAIN HOME ID 83647

INTERMOUNTAIN SEWER & WATER CORP
PO BOX 344
MERIDIAN ID 83680

J R SIMPLOT CO
C/O DAVID SPURLING
999 MAIN ST STE 1300
BOISE ID 83707

J R SIMPLOT SELF DECLARATION REVOCABLE TRUST
PO BOX 27
BOISE ID 83707-0027

HODGE, DAVID L; HODGE, JANE L
RT 1 BOX 672
MOUNTAIN HOME ID 83647

HOER, ALBERT JOHN; HOER, VICTOR ALBERT;
HOGER, JULIE A
51 SW SUNSET DR
MOUNTAIN HOME ID 83647

HOLDEN, RICKI
C/O BRAD BOWEN
6117 S 18TH E
MOUNTAIN HOME ID 85647

HUFF, CYNTHIA L
5369 NW TENNANT AVE
MOUNTAIN HOME ID 83647

HUNT, CAROLYN E; HUNT, RAY
ROCKY BAR STAGE
MOUNTAIN HOME ID 83647

IDAHO POWER CO
C/O JON BOWLING
PO BOX 70
BOISE ID 83707

IDAHO WATER CO LLC
C/O DEL KOHTZ
1135 VALLEY RD S
EDEN ID 83325

IRELAND RANCHES
153 NE AKE DR
MOUNTAIN HOME ID 83647

J R SIMPLOT CO
PO BOX 27
BOISE ID 83707

JAUSORO, GOISALDE O; JAUSORO, JEFF S
3637 N 18 E
MOUNTAIN HOME ID 83647

JEFFREY, LOUIS D
2050 E MEDICINE WHEEL LN
KING HILL ID 83633

JEROME PUMP ADDITION
C/O LITTON D THOMAS
120 W 17TH N
MOUNTAIN HOME ID 83647

JEWETT, LARRY W; JEWETT, M DOLORES
5670 N 18TH E ST
MOUNTAIN HOME ID 83647

JOHNSON, MELVIN H
1635-1 S 18 W
MOUNTAIN HOME ID 83647

JOHNSON, RODGER
ORCHARD RANCH LLC
PO BOX 1260
MARICOPA AZ 85139

JOHNSON, GREGORY B
PO BOX 344
MERIDIAN ID 83680

JOHNSTON, JAMES R
4175 S 130 W
MOUNTAIN HOME ID 83647

JUNIPER STATION PROPERTIES LLC
16011 194TH AVE SE
RENTON WA 98058-0901

HILL, KEVIN; KELL, BROCK; MC CASLIN, JAMES
2430 SUNSET STRIP
MOUNTAIN HOME ID 83647

KELLERMAN, DAVID H
6050 NE 18TH AVE
MOUNTAIN HOME ID 83647

KELLERMAN, DAVID H
RT 3 BOX 566B
MOUNTAIN HOME ID 83647

KELLY, NICKI L; KELLY, WILLIAM J
8500 W MARTHA AVE
MOUNTAIN HOME ID 83647

KIEFFER, JOHN F
PO BOX 743
MOUNTAIN HOME ID 83647

KING, CELIA C; KING, RICHARD C
PO BOX 280
GLENN'S FERRY ID 83623

KING HILL DOMESTIC WATER USERS ASSN INC
ATTN KNIGHT C DUERIG CHAIR
PO BOX 396
KING HILL ID 83633

KNOX II, HARRY W; KNOX, PAMELA S
RIVER RANCH
PO BOX 16
KING HILL ID 83633

KNOX II, HARRY W; KNOX, PAMELA S
3420 N KNOX DR
KING HILL ID 83633

KNUDSON, RAYMOND G
7617 E HWY 20
MOUNTAIN HOME ID 83647-5312

LABBE, MODESTY J; LABBE, ROBERT S
4770 NE LOTT RD
MOUNTAIN HOME ID 83647

LAMBERT, EDWARD; LAMBERT, HELEN J
4223 NE LOTT RD
MOUNTAIN HOME ID 83647-5295

LEE, DEBBIE; LEE, TROY S; THE LEE FAMILY TRUST
C/O MAURICE D & SONYA E LEE
4135 SW LEE LN
MOUNTAIN HOME ID 83647

LEWIS, KATHRYN J; LEWIS, RANDALL J
3655 N 18TH E
MOUNTAIN HOME ID 83647

LIERCKE, KRISTY J; LIERCKE, RONALD R
1345 E 5TH NORTH ST
MOUNTAIN HOME ID 83647

LIGGETT, HERBERT
RT 3 BOX 652C
MOUNTAIN HOME ID 83647

LISH, ALENE
4630 122ND PL NE
MARYSVILLE WA 98271-8545

LOOSLI, RICHARD; LOOSLI, TAMMY
3605 TICONDEROGA WAY
BOISE ID 83706

LORD, LINDA D; LORD, PRESTON E
9320 HWY 20
MOUNTAIN HOME ID 83647

LORD RANCH LLP
1171 MAYFIELD RD
BOISE ID 83716-3401

LOTT, HELEN
RT 1 BOX 654
MOUNTAIN HOME ID 83647

LUND, DON
577 NW DATE AVE
MOUNTAIN HOME ID 83647-5805

MACK, DIANE R; MACK, EDWARD P
445 S 10TH E ST
MOUNTAIN HOME ID 83647

MARTIN, MICHAEL D; MARTIN, SUSAN L
5595 N 18TH E
MOUNTAIN HOME ID 83647

MARY PARKER WATER ASSN
C/O GEORGE WILDER
13485 PARKER LN
MOUNTAIN HOME ID 83647

MAYNE, DOUGLAS B; MAYNE, JUDITH C
1520 W 42ND S
MOUNTAIN HOME ID 83647

MC CALL, DONALD E; MC CALL, REBECCA A
376 NW BEAMAN RD
MOUNTAIN HOME ID 83647

HILL, KEVIN; KELL, BROCK; MC CASLIN, JAMES
1678 SUNSET STRIP ST
MOUNTAIN HOME ID 83647-5680

MC EACHREN, JANET
1430 S 3RD W A ST
MOUNTAIN HOME ID 83647

MC MAHON JR, RICHARD T; MC MAHON, CHARLOTTE
RT 2 BOX 703
MOUNTAIN HOME ID 83647

MC MAHON JR, RICHARD T; MC MAHON, CHARLOTTE
40 NE AULBACH DR
MOUNTAIN HOME ID 83647

MCFARLAND, DON; MCFARLAND, CAROL
PO BOX 5178
TWIN FALLS ID 83303

MCG CO LLC
PO BOX 727
GLENN'S FERRY ID 83623

MEADOWS MOBILE HOME PARK
C/O CHESTER KERSTEIN
2100 ARTESIAN RD
EAGLE ID 83616-5645

MELLEN SUBDIVISION WATER DISTRICT
PO BOX 1086
MOUNTAIN HOME ID 83647

MENDES, JOHN R; MENDES, JUDITH A
2689 SW OLD GRANDVIEW HWY
MOUNTAIN HOME ID 83647-6173

MONTIERTH, RAY; MONTIERTH, SUSAN
825 HEARTLAND DR
NAMPA ID 83686

MOOSO, LYONAL DWAIN
1505 S 3RD W
MOUNTAIN HOME ID 83647

MORRIS JR, JOE C; MORRIS, DIANE
878 S DANIELS RD
MOUNTAIN HOME ID 83647

MOUNTAIN HOME HIGHWAY DISTRICT
1208 NW MASHBURN
PO BOX 756
MOUNTAIN HOME ID 83647

MOUNTAIN HOME SCHOOL DISTRICT #193
PO BOX 1390
MOUNTAIN HOME ID 83647

NATION, MIKEL
4750 NE LOTT RD
MOUNTAIN HOME ID 83647

NEMETH, STEVE F
RT 1 BOX 817
MOUNTAIN HOME ID 83647

NEVID LLC
1349 GALLERIA DR STE 200
HENDERSON NV 89014

NEW HORIZON SUBDIVISION
3115 SUNNY ST
MOUNTAIN HOME ID 83647

NIELSEN, CONNIE S; NIELSEN, M PETER
3955 S 136 W
MOUNTAIN HOME ID 83647

NIELSEN, CONNIE S; NIELSEN, M PETER
4303 SW EASY ST
MOUNTAIN HOME ID 83647

NORSTEBON, MILDRED M; NORSTEBON, STANLEY G
14158 NE MEMORY LN
MOUNTAIN HOME ID 83647

NORSTEBON, MILDRED M; NORSTEBON, STANLEY G
1458 MAYFIELD RD
MOUNTAIN HOME ID 83647

CINDER CONE BUTTE FARM LLC
5001 FIFESHIRE PL N
BOISE ID 83713

NORTHWEST PIPELINE CORP
RIGHT OF WAY MAIL STOP 10362
PO BOX 58900
SALT LAKE CITY UT 84158-0900

OAKLEAF HOME OWNERS ASSN
840 NW BLUEGRASS CIRCLE
MOUNTAIN HOME ID 83647

OBLINSKY, BOBBIE JO; OBLINSKY, THOMAS
5491 NE WATERDOG WAY
MOUNTAIN HOME ID 83647

HAGEN, HEATHER M; OLSON, KARL H
1030 E 13TH N
MOUNTAIN HOME ID 83647

HAGEN, HEATHER M; OLSON, KARL H
12285 E HWY 20
MOUNTAIN HOME ID 83647-5317

OLSON, CHARLES J; OLSON, DAVID A; OLSON, DORIS J
2945 SE OLSON FARMS LN
MOUNTAIN HOME ID 83647

OLSON, CHARLES J; OLSON, DAVID A; OLSON, DORIS J
8813 OLD HWY 30
MOUNTAIN HOME ID 83647

EDWARD & DRUSILLA OPPEDYK FAMILY TRUST
C/O EDWARD & DRUSILLA OPPEDYK
PO BOX 399
MOUNTAIN HOME ID 83647

ORR, CHRISTA K; ORR, ERIC J
1355 S 10TH E ST
MOUNTAIN HOME ID 83647

OSTBERG, CHRISTINE; OSTBERG, RANDY
PO BOX 702
HELENDALÉ CA 92342-0702

PACIFIC HIDE & FUR DEPOT
1401 THIRD ST NW
GREAT FALLS MT 59404

PAGE, DARYL L; PAGE, TAUNYA L
4891 N 18TH E
MOUNTAIN HOME ID 83647

PAYNE, JACKIE; PAYNE, ROBERT
2883 NW PAYNE DR
MOUNTAIN HOME ID 83647-5751

PEHRSON, TRAVIS; PEHRSON, MICHELLE
3535 N 18TH EAST ST
MOUNTAIN HOME ID 83647

PENTICO, PAO-CHU
120 CARRIE DR
MOUNTAIN HOME ID 83647

PERCY, HELEN S; PERCY, STEPHEN H
PO BOX 248
MOUNTAIN HOME ID 83647-0248

PEREZ, JAMIE R; PEREZ, TIMMERY L
1901 S TEN MILE RD
KUNA ID 83634

PETERMAN, JEROME E; PETERMAN, RUTH;
PETERMAN, TERRELL K; PETERMAN, TRESA C
HC 85 BOX 19K
MOUNTAIN HOME ID 83647

PETERSON, BARRY J; PETERSON, PHYLLIS M
A TO Z LUMBER & HARDWARE INC
999 AIRBASE RD
MOUNTAIN HOME ID 83647

PITCHFORK RANCH LLC
C/O GREGORY VIK
PO BOX 1607
BELLEVUE WA 98009

MARTIN, ANTONY B; POBST-MARTIN, THERESA L
4675 S 18 E
MOUNTAIN HOME ID 83647

PRINDLE, CHERYL; PRINDLE, ROB
PRINDLE AND REID HOA
11650 NW TOUCH N GO AVE
BOISE ID 83716

RAINEY, GRACE E; RAINEY, NED E
1465 E 8TH N
MOUNTAIN HOME ID 83647

RAMSEY, LINDA M; RAMSEY, RANDY M
PO BOX 206
MOUNTAIN HOME ID 83647

READE, JENNIFER; READE, KEVIN
PO BOX 170123
BOISE ID 83717

REDFORD, GWEN E; REDFORD, HENRY J
4550 N 24TH E
MOUNTAIN HOME ID 83647

REYNOLDS, JASON M; REYNOLDS, RACHEL L
PO BOX 1444
MOUNTAIN HOME ID 83647

REYNOLDS, JASON M; REYNOLDS, RACHEL L
PO BOX 613
MOUNTAIN HOME ID 83647

RHEUBY, DOUGLAS E; RHEUBY, GAIL B
1860 S 18TH E
MOUNTAIN HOME ID 83647

ROBERSON, FORREST J
4558 NE LOTT RD
MOUNTAIN HOME ID 83647-5294

ROBERTS, ALAN D; ROBERTS, SUE L
205 S 14TH E
MOUNTAIN HOME ID 83647

ROBERTSON, WILLIAM C; THOMAS JR, CONRAD E;
THOMAS, JEREMY A; T R INVESTMENTS
PO BOX 5
HAMMETT ID 83627

MORISSETTE, JOSEPH; ROOSEVELT, TAMMY S;
ROOSEVELT, THEODORE S; ROSE, WILLA
8894 W MARTHA AVE
MOUNTAIN HOME ID 83647

ROSE GARDEN MOBILE PARK
C/O MC CLELLAND CAPITOL LLC
15906 N E 13TH CIRCLE
VANCOUVER WA 98684

ROSSOW, CLEO; ROSSOW, MELVIN L
RT 2 BOX 708
MOUNTAIN HOME ID 83647

RUEGER, SUSAN LYNNE; RUEGER, WALTER EUGENE
905 N 14TH E
MOUNTAIN HOME ID 83647

RUFFING, JOHN L; RUFFING, RACHELLE O
5850 S 18TH E
MOUNTAIN HOME ID 83647

RYMAN, CYNTHIA S
PO BOX 83
MOUNTAIN HOME ID 83647-0083

SAGEBRUSH SHUFFLERS
PO BOX 56
MOUNTAIN HOME ID 83647

SARINAS, BERNARD
4088 BIG BUCK TRAIL
CRESTVIEW FL 32539

SAWTOOTH ESTATES WATER USERS ASSN
PO BOX 832
MOUNTAIN HOME ID 83647

SCHAEFER, TODD
4720 EMERALD STE 116
BOISE ID 83706

SCHLENDER, E LEE; SCHLENDER, JUDITH L
300 2ND AVE S
HAILEY ID 83333

SCHWEIKERT, KAREN ANN; SCHWEIKERT, WILLIAM H
5590 CANYON CR RD
MOUNTAIN HOME ID 83647

SCOTT, BETTY A; SCOTT, STANLEY
4555 N 24 E
MOUNTAIN HOME ID 83647

SCOTT, BRUCE WYATT
520 E LAKE HAZEL RD
MERIDIAN ID 83642

SESSIONS, SCOTT W; SESSIONS, STEPHANIE L
1509 SE HAMILTON RD
MOUNTAIN HOME ID 83647

SHERFICK, CHARLES M; SHERFICK, JOAN
915 S 14TH E
MOUNTAIN HOME ID 83647

ARELLANO, COREY K; ARELLANO, JENNIFER DIANE;
ARELLANO, JUANITA R; ARELLANO, KIMBERLY DANIELLE;
ARELLANO, RYAN E; SHERMAN, JEREMY RUSSELL
PO BOX 93
HAMMETT ID 83627-0093

SILVER SAGE WATER CORP
C/O W HAL FRANCK TREASURER
3730 S 132 W BRADBURY RD SPACE F
MOUNTAIN HOME ID 83647

SIMPLOT LIVESTOCK CO
PO BOX 27
BOISE ID 83707

SIPES, KENT JC; SIPES, SUSAN A
5295 NE WATERDOG WAY
MOUNTAIN HOME ID 83647

SLADE, CONNIE M; SLADE, LARRY W
2300 E 42ND S
MOUNTAIN HOME ID 83647

SMITH, WILLIAM R
6898 SE VALLEY VIEW
MOUNTAIN HOME ID 83647

SMITH, CANDACE; SMITH, GENE E
RT 2 BOX 482
MOUNTAIN HOME ID 83647

SPLENDID ACRES WATER & SEWER ASSN
205 1/2 SUNRISE DR
MOUNTAIN HOME ID 83647

ST JEAN, CAROLYN LEE; ST JEAN, RALPH I
1110 S 3RD W A
MOUNTAIN HOME ID 83647

STAN SCOTT & SONS
2325 AMERICAN LEGION BLVD
MOUNTAIN HOME ID 83647

STATE OF IDAHO
DEPT OF TRANSPORTATION DISTRICT 3
ATTN LANA SERVATIUS
PO BOX 8028
BOISE ID 83707-2028
STATE OF IDAHO
MILITARY DIVISION
ATTN MAJ E P GUSSENHOVEN
4040 GUARD ST BLDG 600
BOISE ID 83705-5004

STATE OF IDAHO
MILITARY DIVISION
ATTN LTC DAVID DAHLE
4040 GUARD ST BLDG 600
BOISE ID 83705-5004

STATHOS, TONY; STROTH, DENNIS
4172 HENSLEY CIRCLE
EL DORADO HILLS CA 95762

STEELSMITH, CAROL S; STEELSMITH, JAMES K
625 BEAMAN RD
MOUNTAIN HOME ID 83647

STEPHENS, MONTE P; STEPHENS, TRACY J
12005 AIRBASE RD
MOUNTAIN HOME ID 83647

STEPHENS, SHANE; STEPHENS, KRISTIN
4409 N 18TH E
MOUNTAIN HOME ID 83647

STEVENS, DONALD D
1630 NE BEAMAN ST
MOUNTAIN HOME ID 83647-5469

STONE, EARL R; STONE, MARY A
275 S 5TH E
MOUNTAIN HOME ID 83647

SUKUP, MARK
5790 N 18TH E ST
MOUNTAIN HOME ID 83647

DAVIS, NARDA P; SULLIVAN, JOHN
3211 N 18TH E
MOUNTAIN HOME ID 83647

SUMMERWIND ESTATES WATER USERS ASSN INC
1659 NE SUMMERWIND DR
MOUNTAIN HOME ID 83647-5476

SUNCREST PROPERTIES LLC
5295 HIDDEN SPRINGS DR
BOISE ID 83714

SUNRISE PARK INC
5 COUNTRY PL W
BRENHAM TX 77833

SUNVIEW DAIRY LLC
6600 SW BLANKSMA RD
MOUNTAIN HOME ID 83647

SWAILS, JOSEPH
RT 1 BOX 839
MOUNTAIN HOME ID 83647

TAYLOR, ELIZABETH G; TAYLOR, JOHN A; TAYLOR, JOHN
TAYLOR, PATRICIA C
2115 DEBORA KAY LN
HACIENDA HEIGHTS CA 91745

TAYLOR, ELIZABETH G; TAYLOR, JOHN A; TAYLOR, JOHN
TAYLOR, PATRICIA C
915 S 3RD W ST
MOUNTAIN HOME ID 83647

TFCR WATER USERS ASSOC
LE OLIVER
RT 2 BOX 494
MOUNTAIN HOME ID 83647

TINDALL, JAMES D; TINDALL, JESSIE MAY
875 S 3RD W B ST
MOUNTAIN HOME ID 83647

TINGLE, EVANGELIINE; TINGLE, WALTER B
5458 NW TENNANT AVE
MOUNTAIN HOME ID 83647-5185

NORTHWEST FARM CREDIT SERVICES FLCA
TLK PROPERTIES LLLP
650 N 2ND EAST ST
MOUNTAIN HOME ID 83647

TODD, PATRICIA A; TODD, WARREN M
1015 HWY 51
MOUNTAIN HOME ID 83647

JAMES J BLANTON
TOWN & COUNTRY WATER USERS ASSN
3836 NW DUTTON WAY
MOUNTAIN HOME ID 83647-5678

TRINITY ESTATES WATER USERS ASSN
C/O KAREN WARNLOF
240 NW WILSON CIR
MOUNTAIN HOME ID 83647-5667

TUCKER, ERNEST H; TUCKER, MARY L
700 E HWY 30
MOUNTAIN HOME ID 83647

US AIR FORCE
C/O COMMANDER US ARMY CORPS OF ENGINEERS
ATTN: CENPS-RE
PO BOX 3755
SEATTLE WA 98124-2255

VAN GROUW SR, EDWARD G; VAN GROUW, JEANETTE
5089 S DEBONAIR LN
MERIDIAN ID 83642

VAN MEER, CHARLES; VAN MEER, TAMMY
4545 NE VARMIT LN
MOUNTAIN HOME ID 83647

WEGNER, BERND; WEGNER, CARON M
820 GREGORY LN
MOUNTAIN HOME ID 83647

WEST, DANIEL L; WEST, KIMBERLEE JO
10294 SW MINT FARM RD
MOUNTAIN HOME ID 83647

WILLEY, LAURA; WILLEY, RICHARD
1475 S 18TH W
MOUNTAIN HOME ID 83647

WILSON & DODGE INC
PO BOX 93
MOUNTAIN HOME ID 83647

WOLFORD, THEODORE S
RT 2 BOX 498
MOUNTAIN HOME ID 83647

TUCKER, KAREN
2701 NE RANCHO WAY
MOUNTAIN HOME ID 83647

UNION PACIFIC RAILROAD CO
REAL ESTATE DEPT
1800 FARNAM ST
OMAHA NE 68102

UNITED STATES OF AMERICA ACTING THROUGH
USDI BUREAU OF LAND MANAGEMENT
1387 S VINNELL WAY
BOISE ID 83709-1657

VAN HANDEL, WILLIAM
PO BOX 231
MOUNTAIN HOME ID 83647

VANDER STELT EXEMPT TRUST; VANDER STELT
MARITAL TRUST; VANDER STELT SURVIVORS TRUST
C/O DRY LAKE DAIRY LLC
12492 BIG FOOT RD
NAMPA ID 83686

WERTEL, CARL R; WERTEL, SYBILLE M
1480 S 18 W
MOUNTAIN HOME ID 83647

WICKMARK, DAVID K
5255 N 24TH E
MOUNTAIN HOME ID 83647

WILSON, BARBARA
679 NE MASHBURN RD
MOUNTAIN HOME ID 83647

JOHN & ANN WIND TRUST
12306 WHITECHAPEL WAY
NAMPA ID 83686

WOOD, ARLENE; WOOD, WALTER H
568 NW DATE AVE
MOUNTAIN HOME ID 83647-5805

WORTHAM, LINDA I; WORTHAM, ROBERT E
PO BOX 511
MOUNTAIN HOME ID 83647

ZACHRY, GLORIA G; ZACHRY, WILLIAM H
125 BRADFORD ST
MOUNTAIN HOME ID 83647