Malad Valley Water Measurement District

Measurement District/Public Meeting

November 4, 2019

Tim Luke, IDWR

Meeting Purpose & Agenda

- 1st Annual Water Meas. Dist. Meeting
  - WMD business postponed to later date TBD
  - Tonight is public information only
- Background Presentation/Information
  - Review recent actions
  - What is a Water Measurement District (WMD)
  - Reasons for WMD in Malad Valley
  - WMD operations
  - Review of timelines/expectations/requirements
- Questions/Answers?

Background:

- **Oneida County requests ground water right moratorium in Malad Valley – Jan. 2015**
  - Local concerns regarding declining gw levels
- **IDWR designates GWMA & two-year moratorium Nov. 4, 2015**
  - Preceded by IDWR public meeting Oct. 8, 2015
  - Public support for moratorium & GWMA

Background:

- **GWMA Management Plan adopted Nov. 2017 & moratorium extended to Nov. 2022**
  - Draft plan presented at public mtg. July 18, 2017
  - IDWR met with local water user advisory committee several times in 2016-2017 to help draft plan

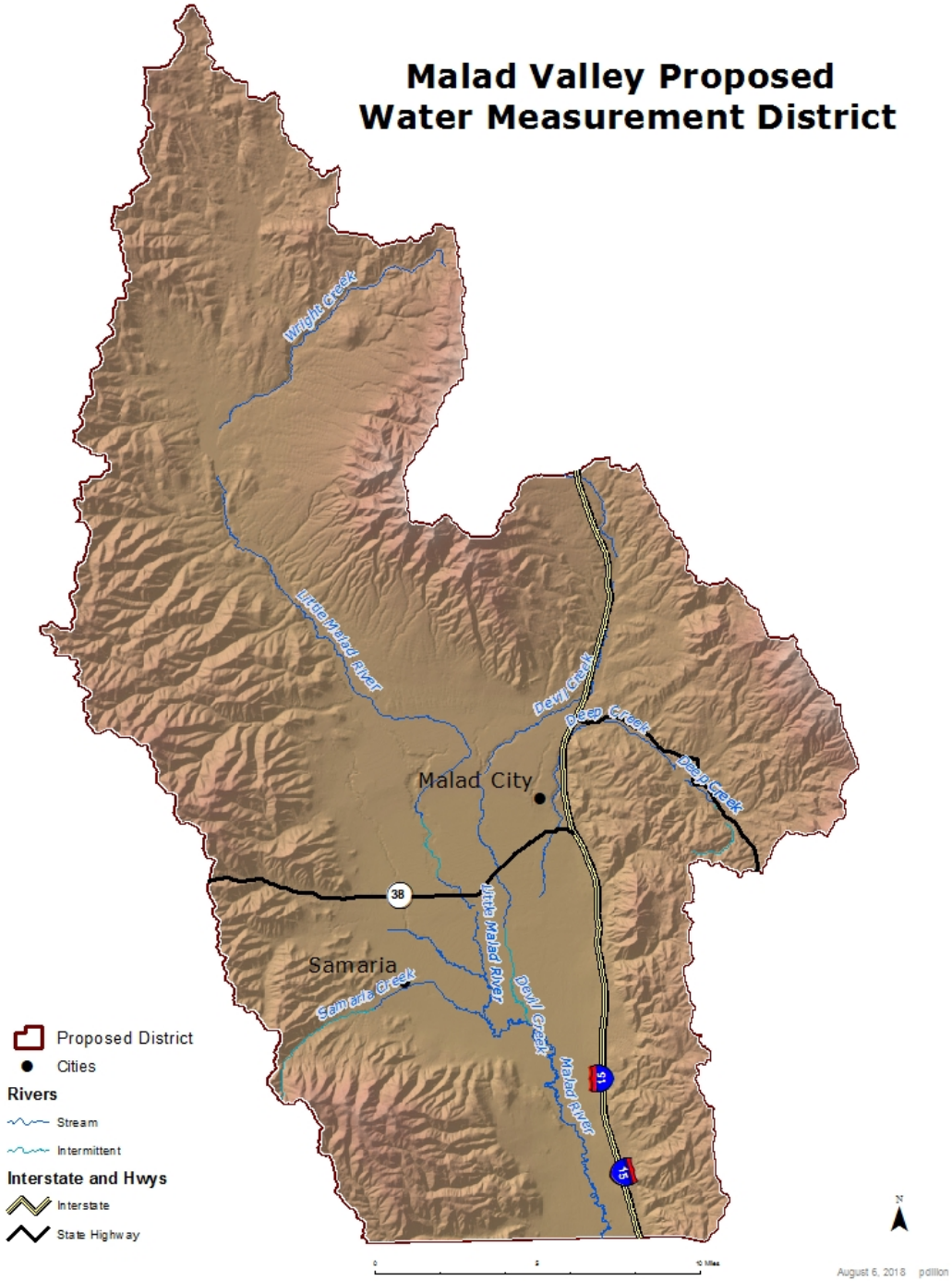
Background:

- GWMA Mgmt. Plan Components
  - Create water measurement district to measure & report both surface & gw diversions
  - Expand gw level monitoring network
  - Establish stream gages
  - Continue Moratorium

Background:

- **Water Meas. District created Nov. 2018**
  - Hearing held August 9, 2018
  - Limited to ground water rights only
  - Effective start date = Nov. 4, 2019 (scheduled date of first annual meeting)

Malad Valley Proposed Water Measurement District



Reasons for Measurement District

- Value of measurement:
  - Assist with hydrologic budget & quantification of aquifer balance (water use vs. aquifer recharge)
    - Both ground water & surface water use should be measured
      - IDWR will collect surface water use from canal companies
  - Document right holder's use; may help protect user's water rights
    - Benefit to filing & documenting claims if area is included in a general water rights adjudication
  - Assure use is within limits of rights
  - Other: benefit to end user for farm management

What are Water Measurement Districts

Chapter 7, Title 42, Idaho Code

Created by order of Director of IDWR for purposes of measurement and reporting water use only.

(Legislation effective 1995, four districts created since 1995 which have since transitioned to water districts)

What are Water Measurement Districts

Features

- Created in areas where measurement is required by Director but where water rights are not yet adjudicated. Eventually replaced by water districts.
- Similar to Water Districts in method of creation and organization

What are Water Measurement Districts

Features

- Hydrographers elected annually to provide measurement and reporting services
  - compensated by users via assessments
  - receive guidance/direction from Director
  - have no regulatory authority
  - measure and report water use
  - may measure ground water levels
  - unauthorized use reported to IDWR

What are Water Measurement Districts

Features

- Annual meetings to elect hydrographer and advisory committee, adopt budget and resolutions
  - committee comprised of water users in district
  - committee serves in advisory capacity to hydrographer and director; recommend resolutions & budget
- Annual measurement & budget reports required
- Assessments
  - $25/diversion[1] and pro-rata charge against water right diversion rate

[1] charge can be up to $50/diversion by resolution of users

Ground Water Rights Included in Malad Valley WMD

- All irrigation ground water rights > 5 acres
- All non-irrigation rights > 0.24 cfs

Result:

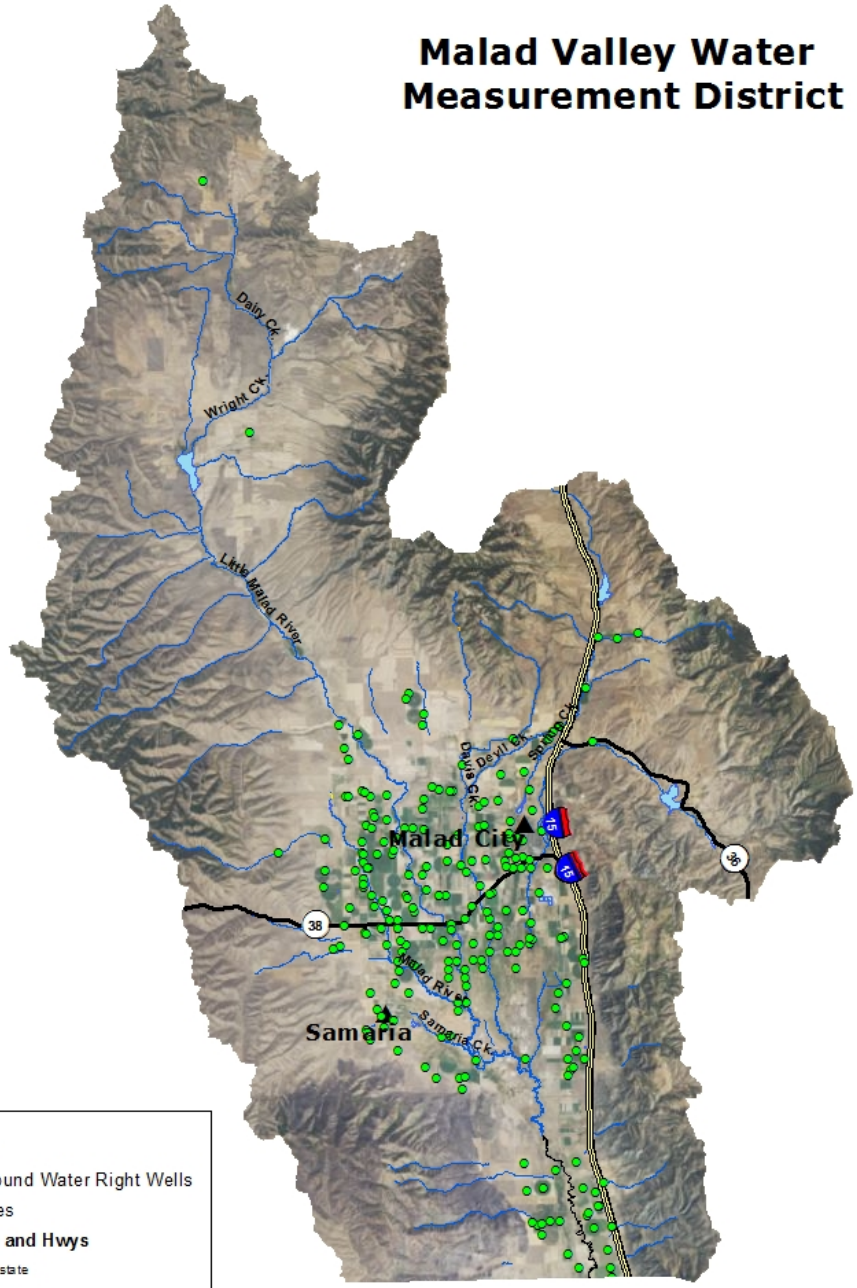
All ground water rights are included except irrigation rights for 5 acres or less, domestic uses as defined by Idaho Code § 42-111, and non-irrigation uses < 0.24 cfs

Ground water uses defined per I.C. § 42-111 are exempt from water right permit requirements

Number of Ground Water Rights & Wells Included in Malad Valley WMD

- About 265 ground water rights total
  - 262 rights = irrigation; 3 rights = non-irrigation
- About 236 unique well locations total
  - Total water rights cfs (gross) ≈ 364 cfs

Malad Valley Water Measurement District



Measuring Devices & Timelines

Current Deadlines as per Order

- 7/1/2020: Deadline for variance & extension requests
- 1/1/2021: Install devices for non-irrigation wells
- Spring 2021: Install devices for irrig. wells > 5 ac

Measuring Devices & Timelines
IDWR considering Amending Order

- One-year delay for measuring device installation deadlines
  - Spring 2022 for irrigation and January 2022 for non-irrigation uses/wells
    - Allow time to establish/organize WMD
    - Allow time to seek cost-share grant for measuring devices

Operation Timeline

- **November 2019 – January 2020**
  - Amend measuring device compliance dates?
  - Send notice of any amendment with measurement requirements/information?
  - Send notice to continue WMD first annual meeting
- **January – March 2020**
  - Continue WMD annual meeting
    - Adopt Budget & Elect Hydrographer
  - Hold flow meter workshop with IDWR
  - Prepare/send assessments

Operation Timeline

- **April – October 2020**
  - Work with users on requests, site visits & inventory
  - Other: ownership/assessment updates, apply for cost-share grants?

- **October – November 2020**
  - Prepare for & hold next annual meeting

Operation Timeline

December 2019 – January 2020
Prepare for continuation of annual meeting

- **Hydrographer Candidates**
- **Treasurer Candidates (financial bookkeeping)**
- **Budget Considerations**
- **Advisory Committee Considerations**
- **Resolutions**

Hydrographer Duties

- First Year
  - Collect Assessments
  - Assist with gw. right ownership & WMD assessment issues
  - Inventory of wells (IDWR will assist)
  - Review variance/extension requests & provide recommendations
  - Assist IDWR with review of water right-water use discrepancies
  - Begin meter readings for wells with installed meters & report to IDWR
  - Provide reports/budgets/assessments per law
- Second Year
  - Collect assessments
  - Review variance/extension requests & provide recommendations
  - Flow meter or measurement compliance checks
  - Read flow meters (at least 2x/yr) & report to IDWR
  - Provide reports: measurement/budgets/assessments per law

Hydrographer Qualifications

- Elect hydrographer with some qualifications or experience in:
  - Water measurement
  - Water rights
  - Project management
  - Minimum Computer proficiency
  - Good interpersonal skills

District/Hydrographer Requirements

- Office & Field Equipment
  - PC or Laptop with broadband Internet access
  - Cell phone with data plan, voice messaging, camera and GPS
    - Cell phone with camera/GPS
      - adding tablet/iPad is recommended
  - Vehicle (4 x 4 truck/SUV or similar)

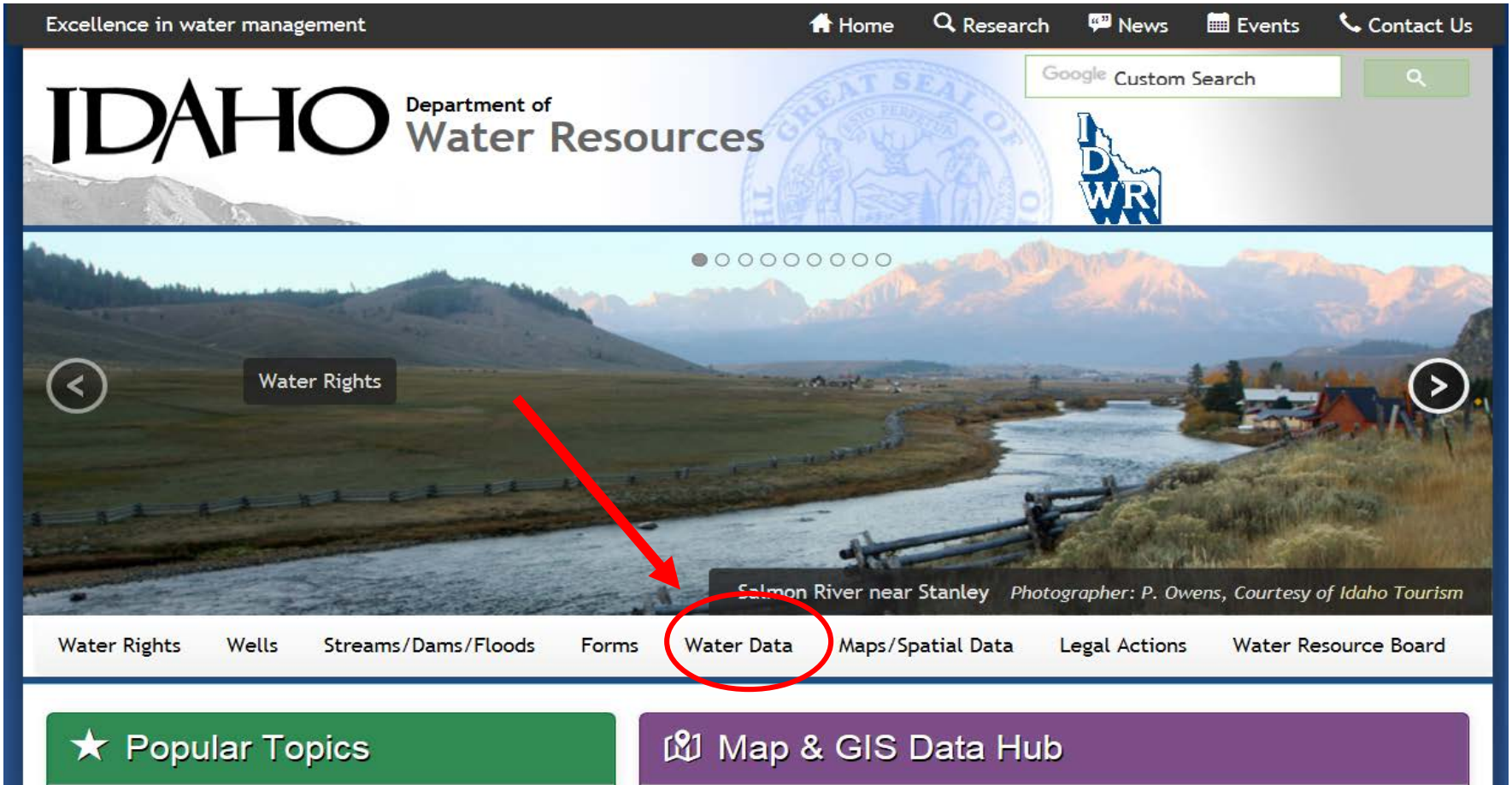
Other?

- Portable Flow meter (closed conduit)?
- Ground water level probe(s)?

IDWR Measurement Standards

Minimum Standards can be found on the Department's web page at http://www.idwr.idaho.gov

At the main web page, go to the Water Data menu and click on Water Measurement



Water Measurement

Overview Forms Resources Research & Maps Contacts Water Measurement Districts

OVERVIEW

Originally created to support the measurement of groundwater on the Eastern Snake Plain Aquifer (ESPA), the Water Measurement program now functions statewide to establish, maintain, and implement state water measurement and reporting standards. IDWR works directly with water districts and water measurement districts to implement measurement requirements and programs within the state. Examples of these efforts include:

- closed conduit and open channel measurement methods
- diversion and control works for surface water and groundwater diversions
- automation, data logging, and telemetry of water diversion and measurement systems
- development and maintenance of reporting systems for water diversion measurements

Guidelines

Use the following guidelines and procedures to collect water measurement data and report that information to IDWR. Using these procedures provides a uniform measuring and reporting method within the State of Idaho, including within water districts. The information below also assists in measuring and reporting diversions pursuant to various water measurement orders issued by IDWR.

Minimum Acceptable Standards for Open Channel and Closed Conduit Measuring Devices

List of Approved Closed Conduit Flow Meters

IDWR Water Measurement and Reporting Guidelines

ESPA Measurement Order

Final Order on Reconsideration Requiring Measuring Devises for Groundwater in Water Districts 31, 34, 100, 110, 120, 130, and 140 - July 22, 2016

Administrative Actions

Helpful Links

Water Districts

Water Measurement Districts

Water Rights Accounting

Eastern Snake Plain Aquifer Model

Idaho Code § 42-701 - General statutory requirement for water measurement and reporting in Idaho

Water Measurement Methods
Closed Conduit

- Standard Meters: Magnetic and Ultrasonic
  - Mag Meters ≈ $2,150 - $3,400 for 10” diam. + install

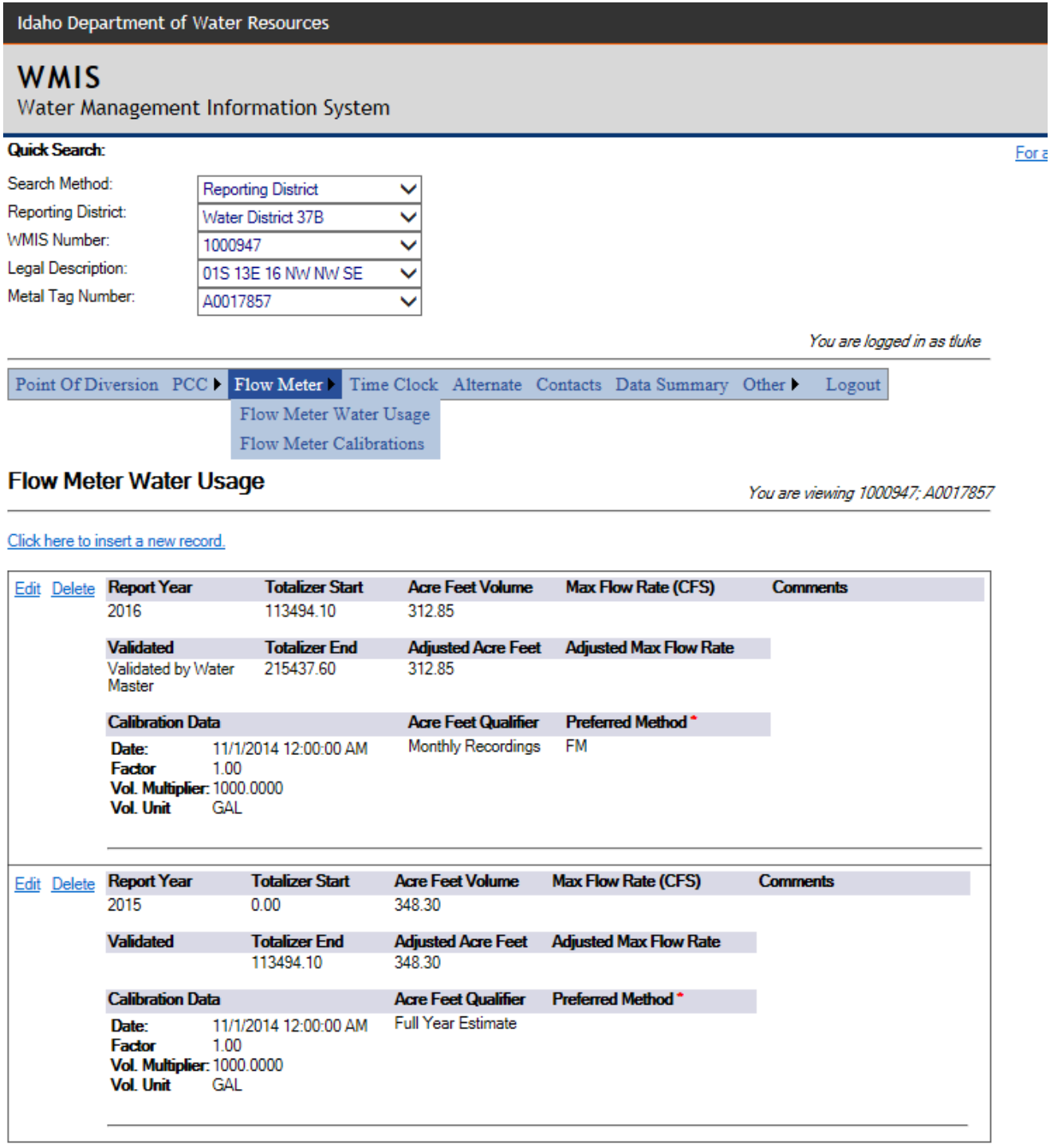
- Design and installation considerations

- **Full pipe flow**
- **Straight length of pipe up & downstream of meter**
  (minimum 3 x pipe diameter upstream, 2 x pipe diameter downstream for magnetic or spooled ultrasonic flow meters)
- **Install to manufacturer’s specifications**
- **Select from IDWR’s** *List of Approved Closed Conduit Meters*

Sample of Approved Mag Models


Good installation

IDWR Ground Water Measurement Database (WMIS)



Idaho Department of Water Resources

WMIS

Water Management Information System

Quick Search:

For a

Search Method:	Reporting District
Reporting District:	Water District 37B
WMIS Number:	1000947
Legal Description:	01S 13E 16 NW NW SE
Metal Tag Number:	A0017857

You are logged in as tluke

Point Of Diversion | PCC | Flow Meter | Time Clock | Alternate | Contacts | Data Summary | Other | Logout

- Flow Meter Water Usage
- Flow Meter Calibrations

Flow Meter Water Usage

You are viewing 1000947; A0017857

Click here to insert a new record.

Edit Delete

Report Year	Totalizer Start	Acre Feet Volume	Max Flow Rate (CFS)	Comments
2016	113494.10	312.85		

Validated	Totalizer End	Adjusted Acre Feet	Adjusted Max Flow Rate
Validated by Water Master	215437.60	312.85	

Calibration Data		Acre Feet Qualifier	Preferred Method *
Date:	11/1/2014 12:00:00 AM	Monthly Recordings	FM
Factor	1.00		
Vol. Multiplier:	1000.0000		
Vol. Unit	GAL		

Edit Delete

Report Year	Totalizer Start	Acre Feet Volume	Max Flow Rate (CFS)	Comments
2015	0.00	348.30		

Validated	Totalizer End	Adjusted Acre Feet	Adjusted Max Flow Rate
	113494.10	348.30	

Calibration Data		Acre Feet Qualifier	Preferred Method *
Date:	11/1/2014 12:00:00 AM	Full Year Estimate	
Factor	1.00		
Vol. Multiplier:	1000.0000		
Vol. Unit	GAL		

WMD Budget Examples

Questions and Discussion?

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