

# Planning, Organizing and Implementing New Irrigation Projects

Treasure Valley Irrigation Conference  
December 14, 2017



**SPF WATER**  
ENGINEERING

**University of Idaho**  
Extension



**Oregon State**  
University

# What is a water right?

- The citizens of the State own the water resources within the State.
- A water right is created and maintained by controlling water and placing it to a 'beneficial use'.
- Most water use is recognized as beneficial use, as long as it is not wasteful.
- A new water right is established through an administrative process overseen by the Idaho Department of Water Resources (IDWR) or Oregon Water Resources Department (OWRD)

# The elements of a water right

- Source
  - Ground water
  - Surface water
- Priority date
  - Usually the date of application or first use
- Quantity
  - Rate of flow, and/or
  - Volume
- Period of Use
  - Limited (e.g. irrigation season)
  - Year-round
- Purpose of Use
  - This is the beneficial use
- Point of Diversion
- Place of Use

# The appropriation process - Idaho

How is a new water right created?

1. An **Application for Permit** is filed with IDWR.
2. Public notice is given in local newspapers.
3. Protests can be filed in the ten days following the date of final publication.
4. After resolution of any protests, IDWR issues a **Permit to Appropriate Water**.
5. *Proof of Beneficial Use* is submitted when development is complete.
6. A field exam is conducted to determine the extent of beneficial use developed under the *Permit*.
7. IDWR issues the **Water Right License** and the process is complete.

# New Water Rights: Are They Available?

## Boise River Basin

- Above Star Bridge: Groundwater below 200 feet
- Below Star Bridge
  - Groundwater
  - Boise River
  - Most Drains

# New Water Rights: Are They Available?

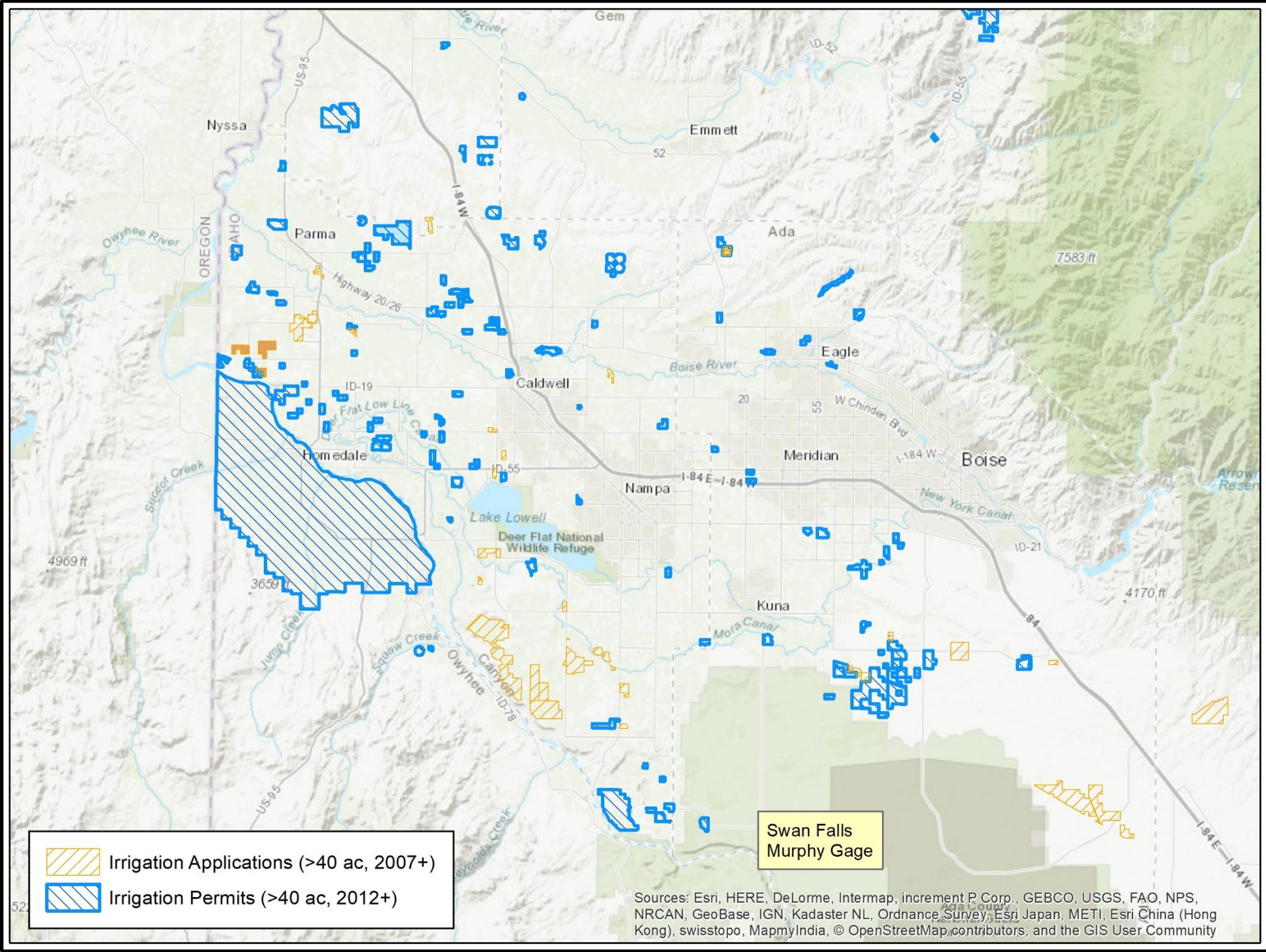
## Payette River Basin

- Groundwater generally available
  - May need to rent storage if hydraulically connected to river
- Payette River Below Letha
- Storage Available

# New Water Rights: Are They Available? Snake River

- New Snake River water rights are available downstream of the Murphy Gage at Swan Falls Dam.







# New Water Rights: Are They Available? Eastern Oregon

- Groundwater is generally available, preferably at least  $\frac{1}{2}$  mile from surface water
- Surface water is generally unavailable (Snake River may have some availability)

# Oregon: Allocation of Conserved Water

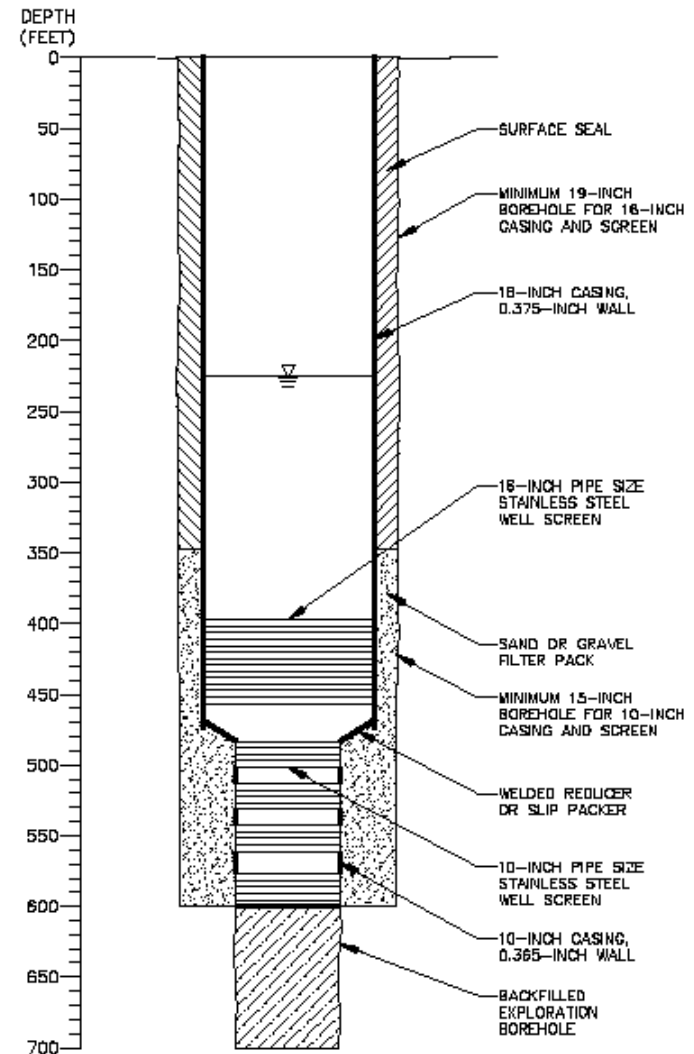
- New acres can be developed with efficiency improvements.
- Goals: address water supply and improve streamflow.
- Up to 75% of conserved water can be allocated for new irrigation, 25% left in stream and allocated to state.
- Water can be sold, transferred, left instream.
- Priority date same or advanced by one minute.
- The amount of non-repayable public funding can increase 25% allocation to state up to 75%

# SPF's Role in Your Irrigation Project

- Water Rights Applications
  - New Permits
  - Ownership Changes
  - Transfers (changes in use, location, source, etc.)
  - Mitigation / Monitoring Plans
  - Water Bank
- Licensing Exams
- Water Right Investigations
- Expert Witness Testimony
- Master Plans

# Well Design

- Conceptual design
- Specifications
- Bidding
- Construction oversight
- Cuttings analysis
- Geophysical logging
- Zone testing
- Final design
- Development
- Monitoring and Maintenance



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JOHNSON RESEARCH  
CONCEPTUAL WELL DESIGN

SCALE: NTS  
DRAWN BY: SCB

FIGURE 2

PROJ. #341.0070




## Path: \\projecctivity\lms\l\_projects\l\_projects\admission, Ed of JEFF\_347\OUTGO\_Culture\_Property\PROJECT\CAD\B-E Flame C-1d1 Pls send Jun 30, 2016-08:08:05AM CAD User: R2000000.



**OSBURN FARM**  
**JEFF JOHNSON**  
**FULL BUILD OUT**

PRELIMINARY  
DRAFT NOT FOR  
CONSTRUCTION

ITEM	DESCRIPTION	DATE
A	COLLETT FARM PLAN	8/25/78

VERIFY SCALE  ONE INCHES = ONE-FOUR ON FULL SIZE DRAWING.	
PROJECT:	341 D070
DESIGNED:	PCG
DRAWN:	PCG
CHECKED:	TS
EX-FB	



# Related Services

- Geographic Information Systems (GIS)
- Hydrogeologic Investigations
  - Well Siting, Design and Development
  - Aquifer Studies
- Ground and Surface Water Monitoring and Modeling
- Irrigation System Supply and Engineering
- WaterCAD System Modeling
- Energy Efficiency Testing

# Questions?



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