

# Hydrology & Water Storage Hurdles in Eastern Oregon

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OWRC

Developed and presented by Peggy S Browne  
Owner, Browne Consulting, LLC



# Typical Eastern Oregon Landscape

- Semi-arid environment; dominated by winter precipitation
- Photograph taken 6/16/2010 after a high snowfall winter





# Water Is Most Limiting Environmental Factor

- Photograph taken 4/25/13





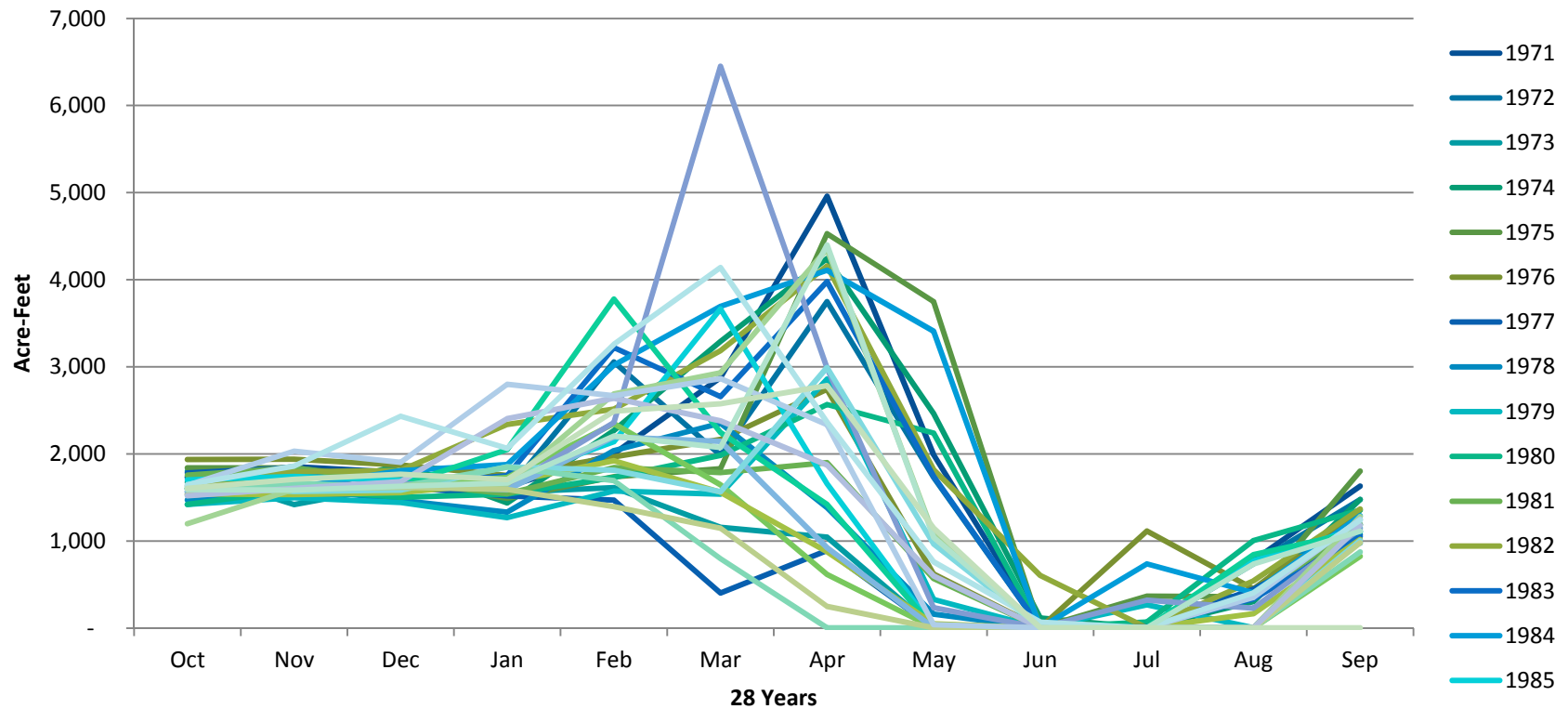
# Where Is The Water?

- Just out of reach
- No control or management when or how it leaves the basin



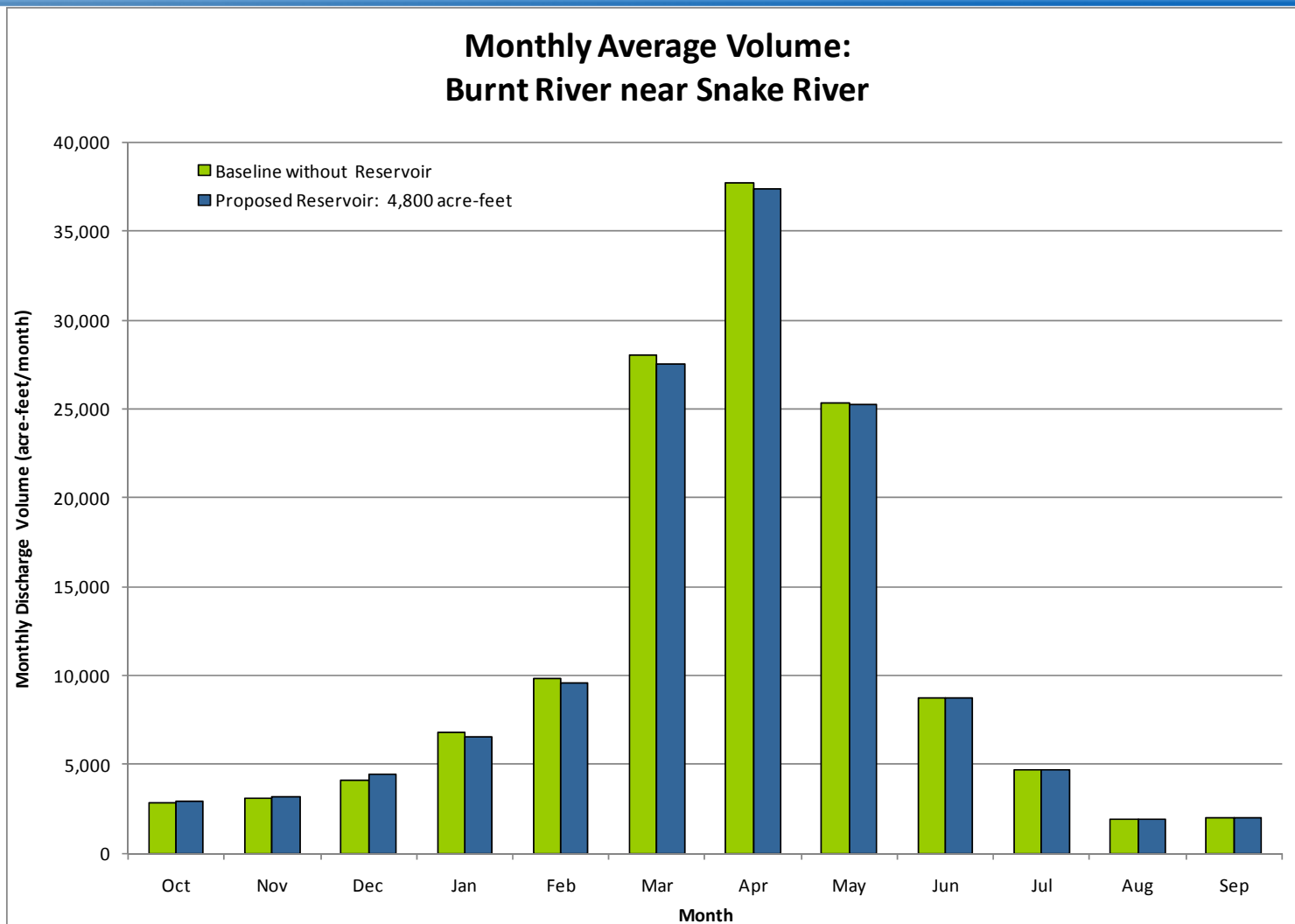
# Hydrograph In Upper Basin

**Hardman Reservoir Site  
Simulated Reservoir Inflow & Outflow - Existing Conditions**



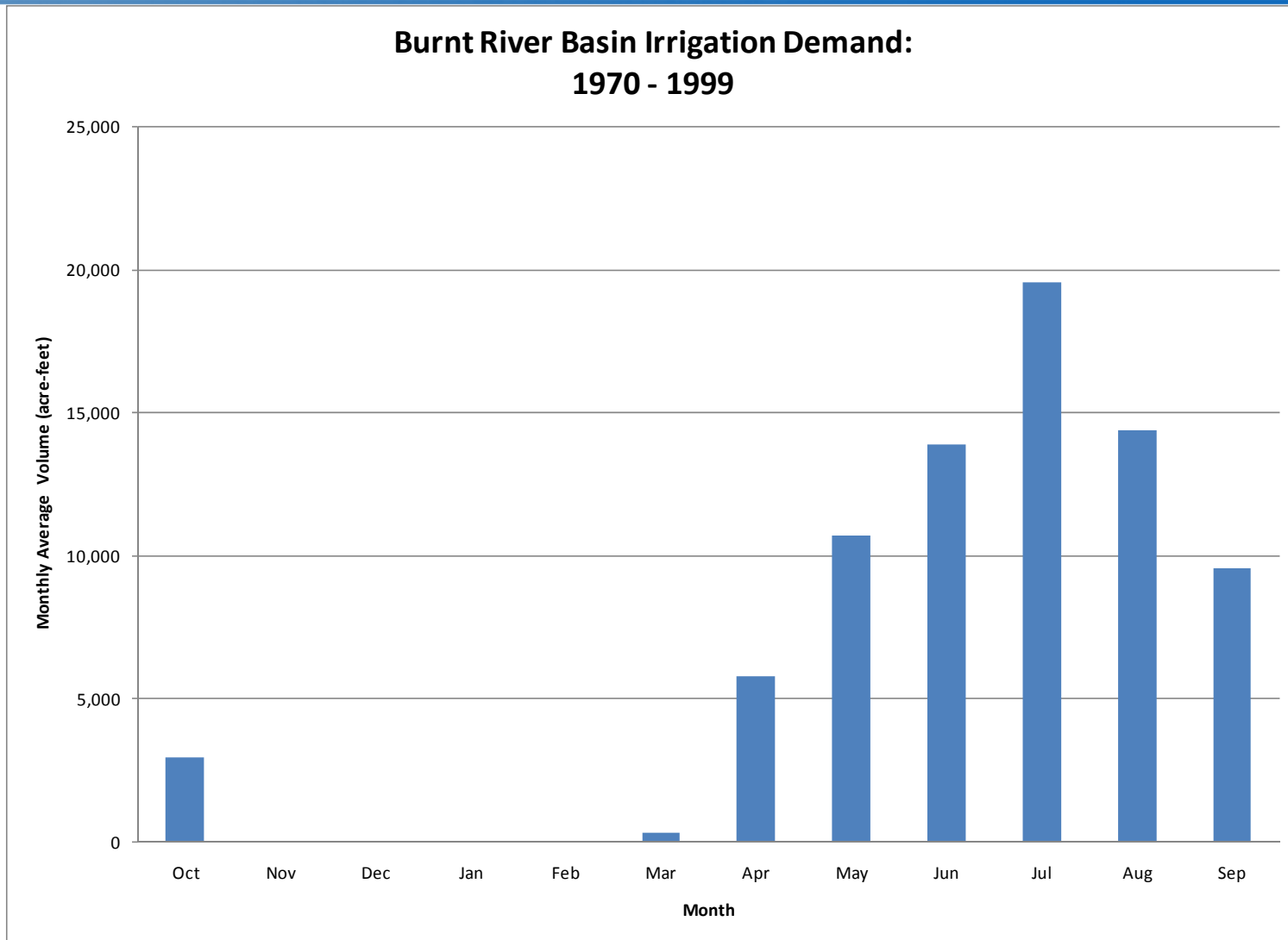


# Hydrograph Lower Basin





# Water Demand Mirrors Short Water Months

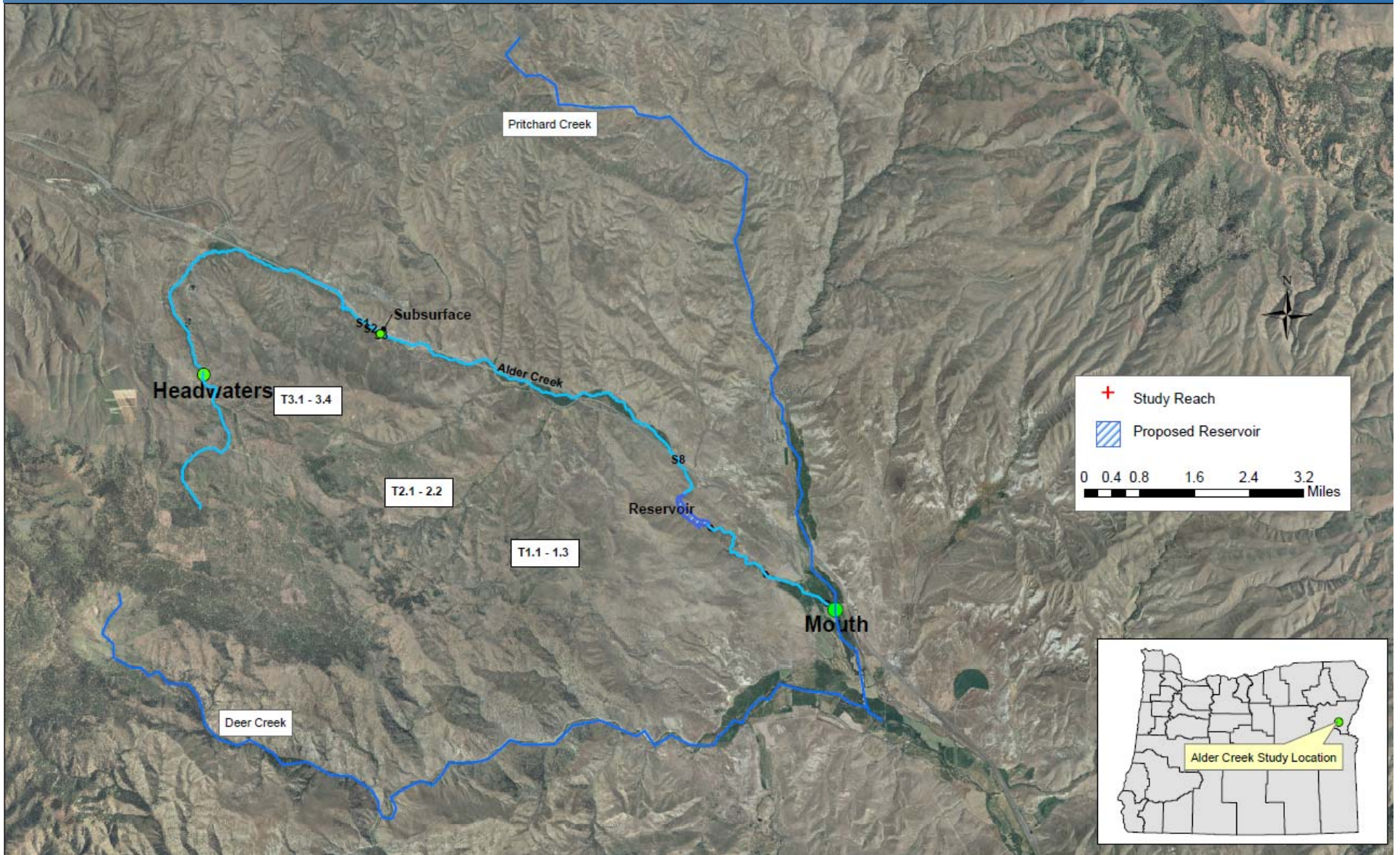




# Water Storage is a Viable Solution



# Alder Creek Reservoir





# Alder Creek Reservoir Background

- Dam located within 3 miles of confluence with Pritchard Creek
- Reservoir would inundate 26.5 acres
- Water storage capacity 721 acre-feet
- Multiple water use, predominantly irrigation
- Valued for redband trout habitat (passage)
- Alder Creek is typically dry in August



# Alder Creek





# Fish Passage Barriers

- ¼ Mile long cement culvert near river mile 9



# Fish Passage Barrier

- Stream Goes Subsurface for  $\frac{1}{4}$  mile





# 2007 Water Rights Applications Filed

Division 33 Comments were made...

5.5 years later still addressing  
comments

# Each Agency Has Individual Policies and Timelines

- ODFW
  - Streamflow
  - Fish Passage
- DSL
  - Removal Permit
- OWRD
  - Water Storage Permit
  - Water Use Permit
  - Dam Safety Requirements
- SHPO
  - Archeology Clearance
- ACOE
  - Federal Jurisdiction Permit
- ODEQ
  - 401 Permit
  - 404 Permit



# Water Storage Oregon

No Lack of Hurdles

No Roadmap