

Managed Ground Water Recharge Legislation

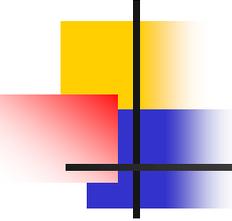
Comments to the Natural Resources Interim Committee



David R. Tuthill, Jr., Ph.D., P.E.

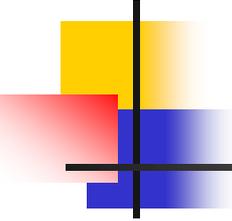
August 6, 2013





Outline

- Two Issues on Legislation
- Thoughts on agriculture
- Water availability in Idaho
- What entities will develop water storage projects in the future?
- Considerations



Two Issues on Legislation

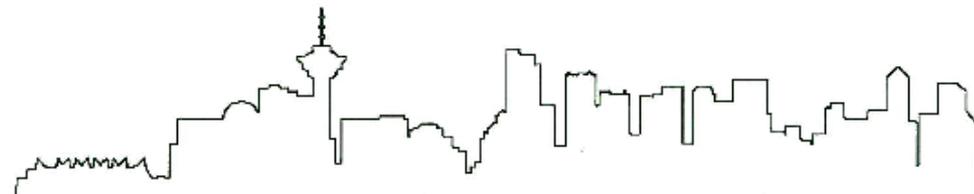
1. Provide an ongoing opportunity for agriculture in Idaho, by encouraging the addition of new development where water is available to replace the decline in acreage
2. Provide a structure that has checks and balances of good government between IWRB and IDWR

“The future of
north America
is to be the
breadbasket of
the world”

Dr. Paul Genho
President, Farmland Reserve, Inc.
Salt Lake City, UT

SARL

State Agriculture and Rural Leaders



Legislative Ag Chairs Summit XII | Vancouver, British Columbia | June 7-9, 2013

Agricultural Water:
Protecting the Future of Our Nation



A diverse group of concerned agricultural producers react to the lack of leadership on water supply issues and priorities

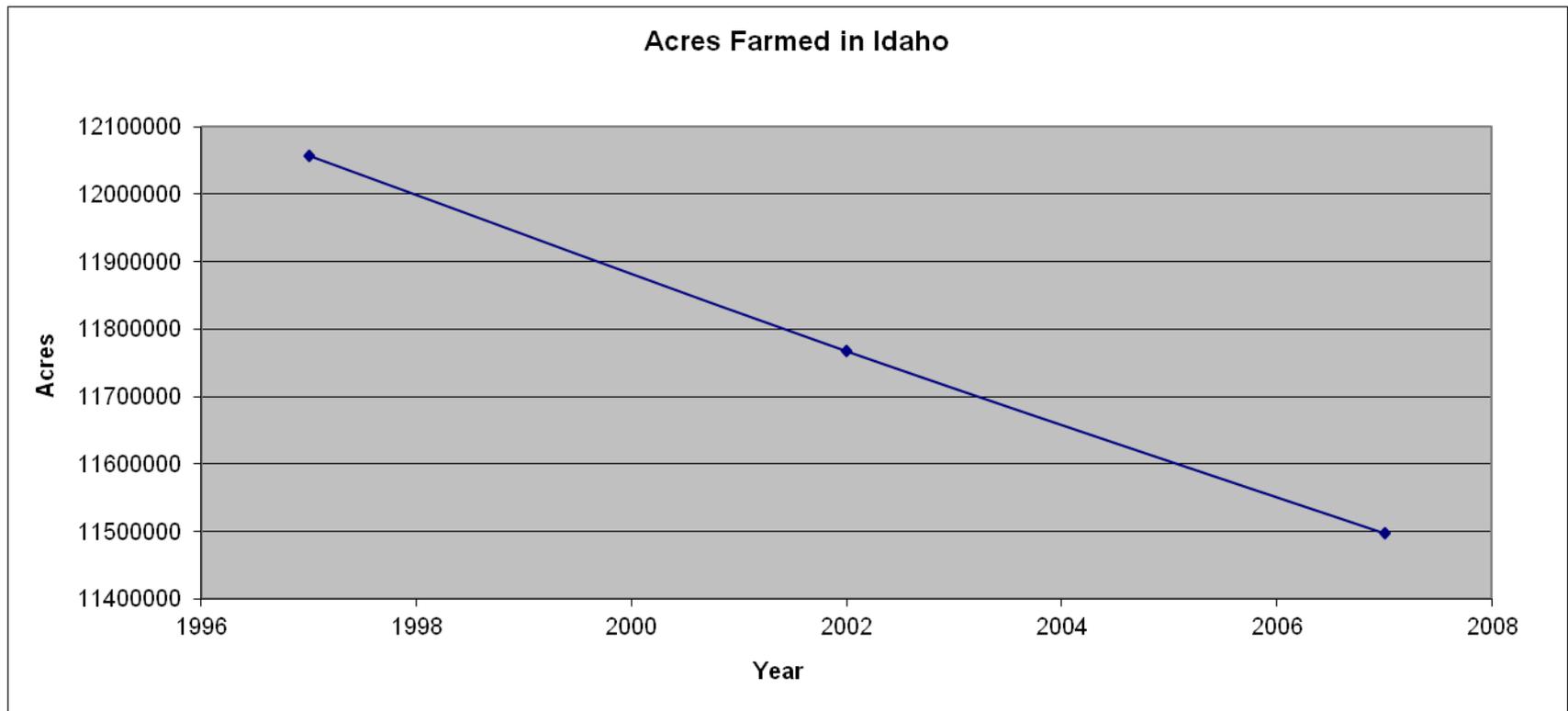
“Our nation needs agriculture and agriculture needs water”

11 Water Supply Recommendations, including:

- Increase the emphasis on water storage technologies, including underground storage when practical

Idaho's Declining Farmed Land

Source: USDA Census of Agriculture for Idaho



Losses from 1997 to 2007: - 559,618 acres of farmland (4.6 %)
234,916 acres of irrigated farmland (6.9%)

Capital Press Stories



**Water unlocks productivity
of Eastern Oregon farmland**

February 15, 2013

Capital Press The West's Ag Website

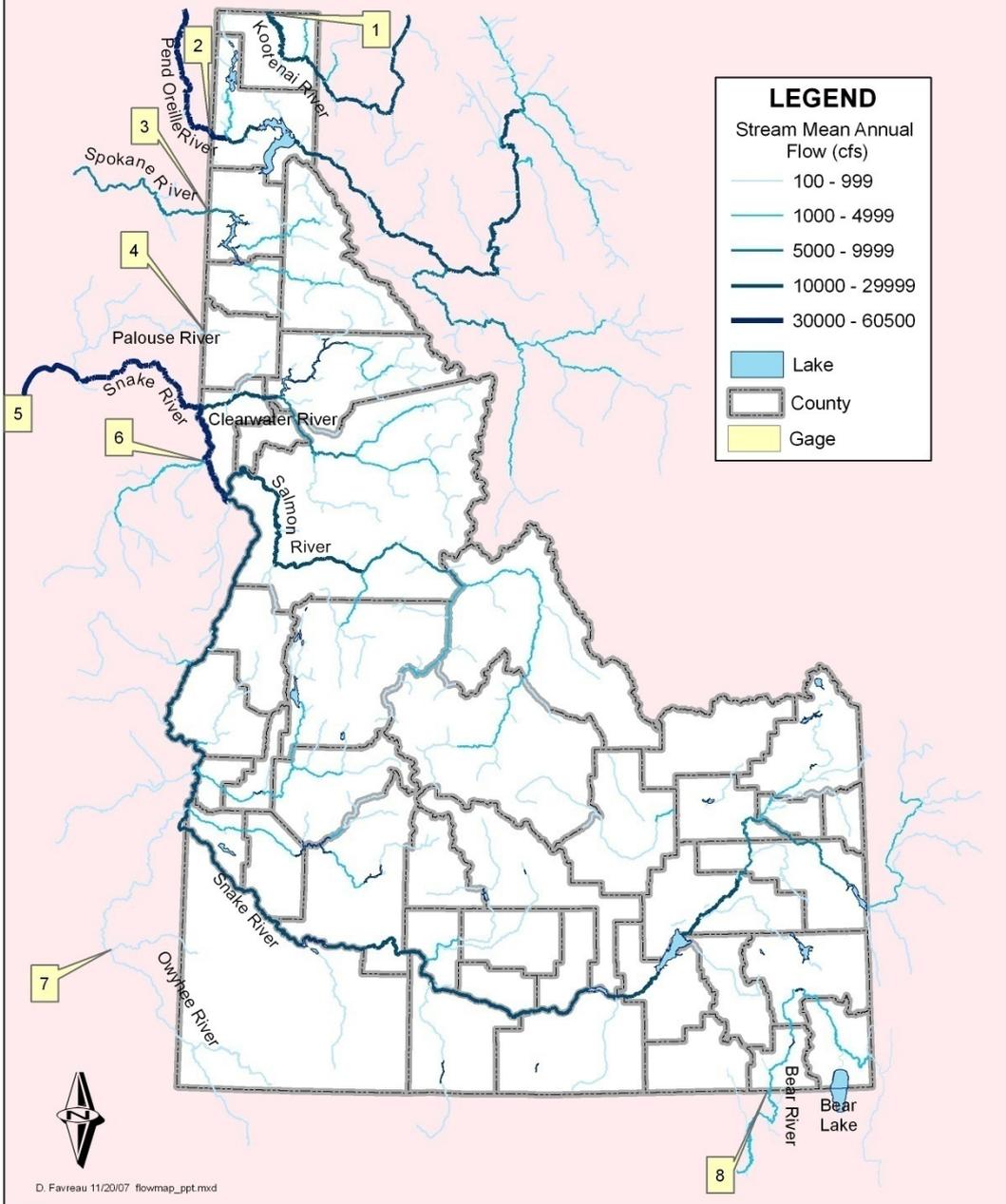
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Posted: Tuesday, October 26, 2010 4:25 PM

Proposals would water more Washington acres from Columbia River

...Four of the eight alternatives released Tuesday would supply surface water to about 57,000 acres currently irrigated by groundwater south of Interstate 90. The other four proposals would replace groundwater with surface water for 102,600 acres, both north and south of the interstate.

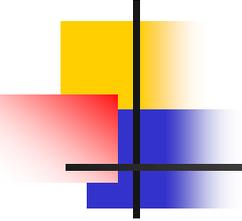
Ave. Water Year Vol. Flowing From ID



Gage

1. Near Porthill, ID
11,153,000 AF
2. Albeni Falls Dam
17,633,000 AF
3. Near Post Falls, ID
4,475,000 AF
4. Near Potlach, ID
190,000 AF
5. Lower Granite Dam
34,850,725 AF
6. Near Anatone, WA
25,281,000 AF
7. Near Rome, OR
686,000 AF
8. ID-UT State Line
770,000 AF

Total = over 95MAF!

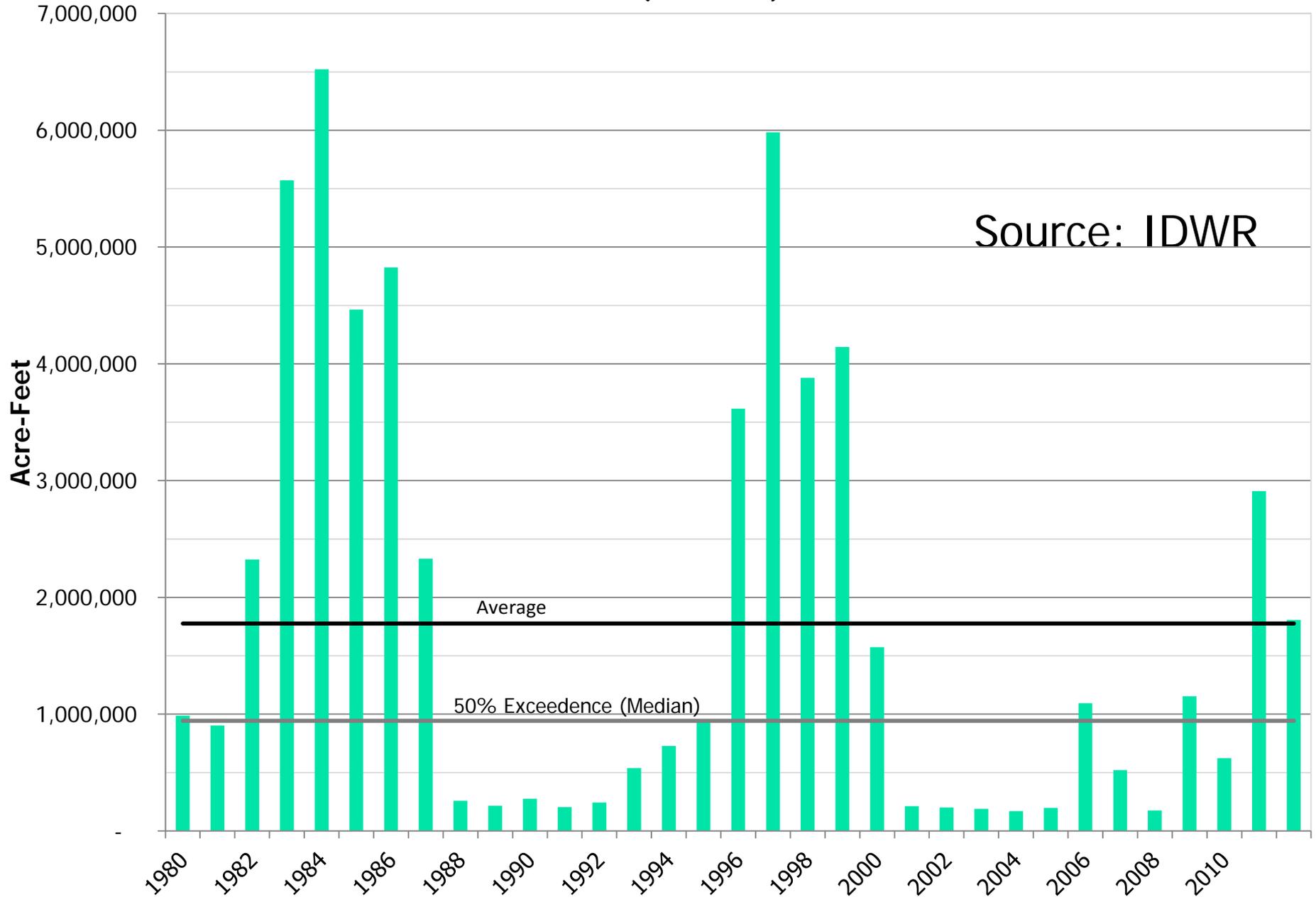


Are we down to the “last few drops” in the Upper Snake River Basin above Milner Dam?

Total Annual Volume of Natural Flow Passing Milner

(1980 - 2012)

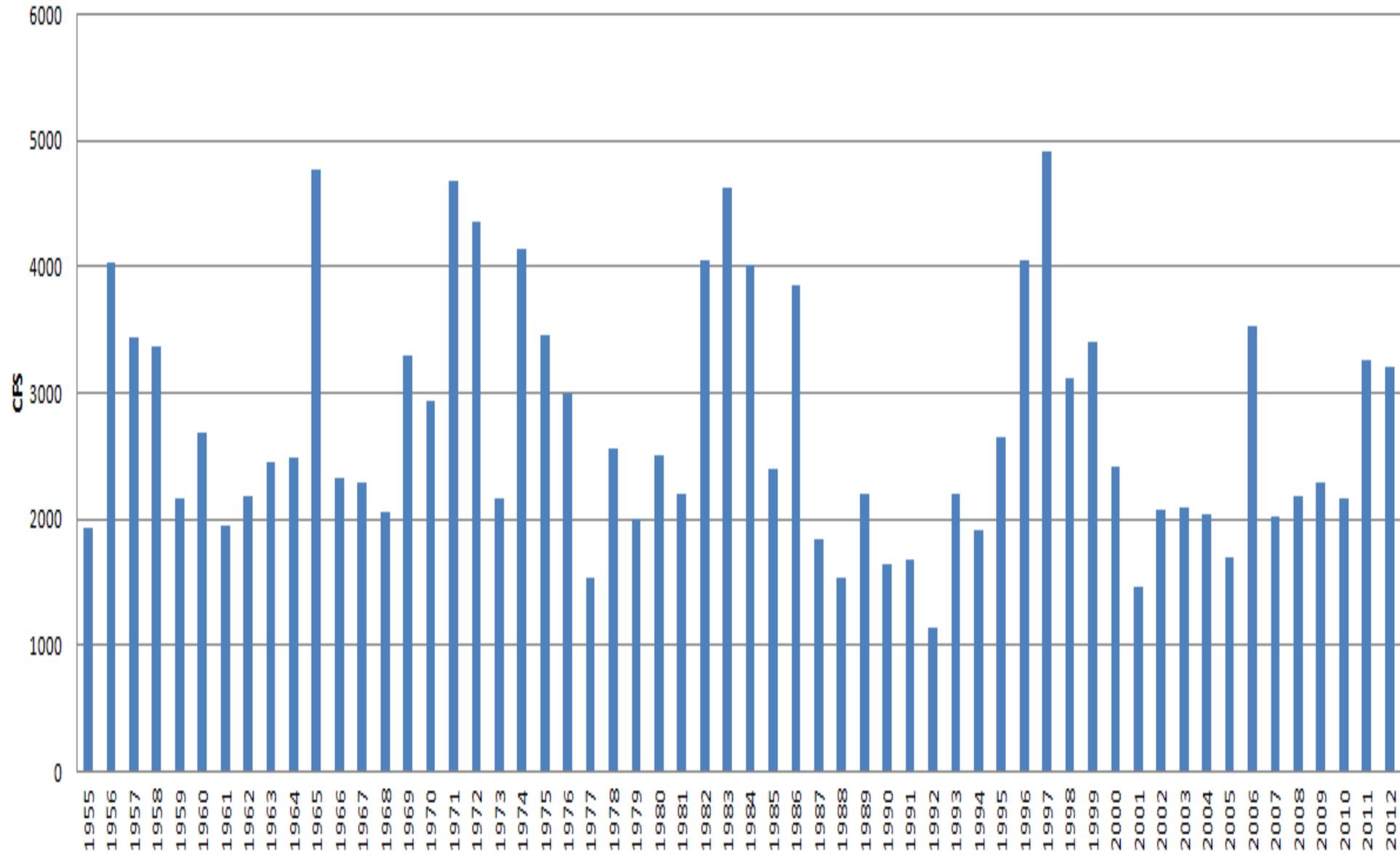
Source: IDWR



Average Annual Flows, Boise River Near Boise (Lucky Peak)

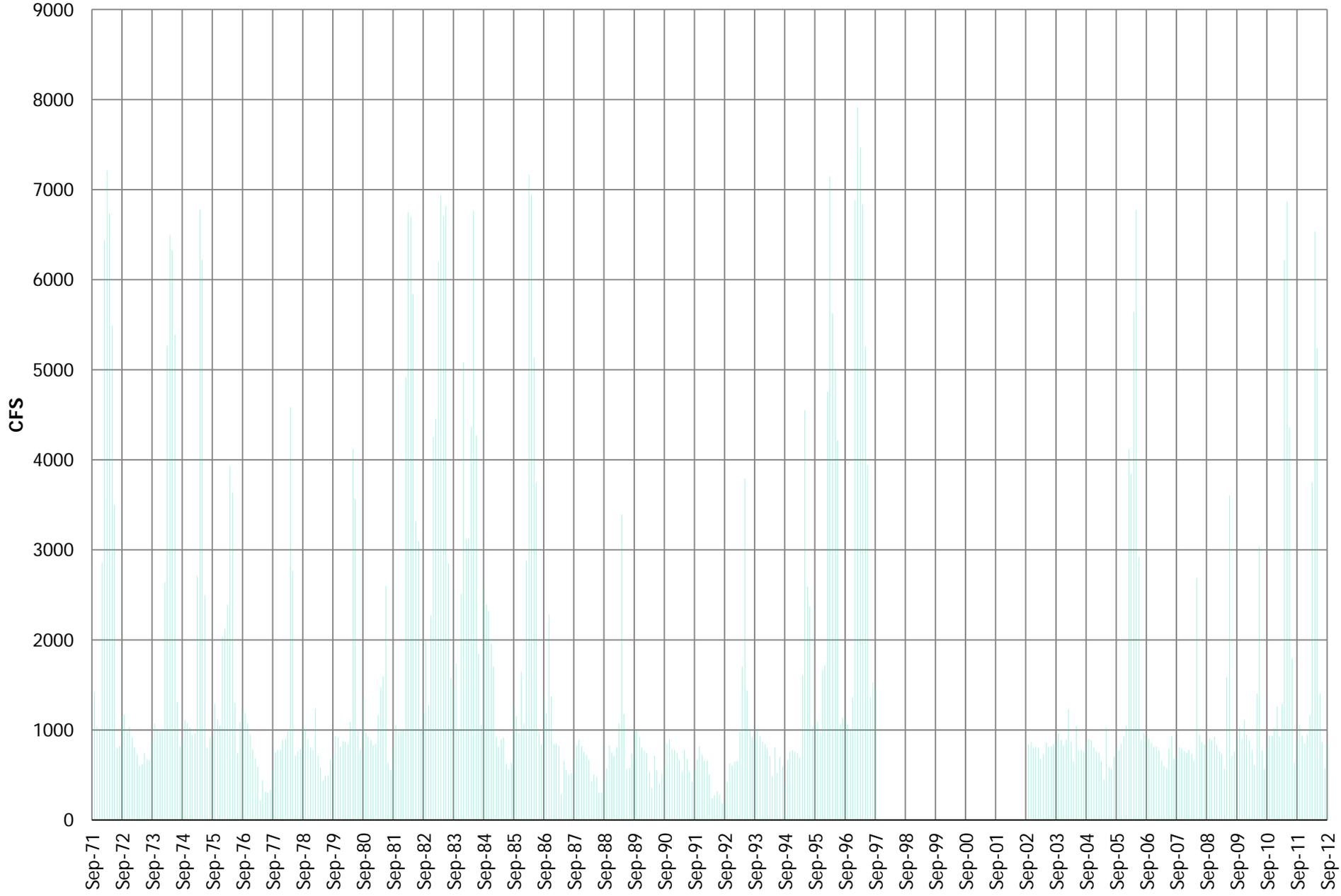
USGS Gage 1320200

Average = 2,735 cfs =
1.98 MAF



Boise River at Parma Average Monthly Flow

Average Annual Flow
= 1.16 MAF

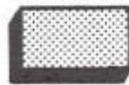




Boise River Basin

- Population: > 600,000
- Acres Irrigated > .3M
- Boise River Consumptive Use: .8MAF

PRINCIPAL AQUIFERS



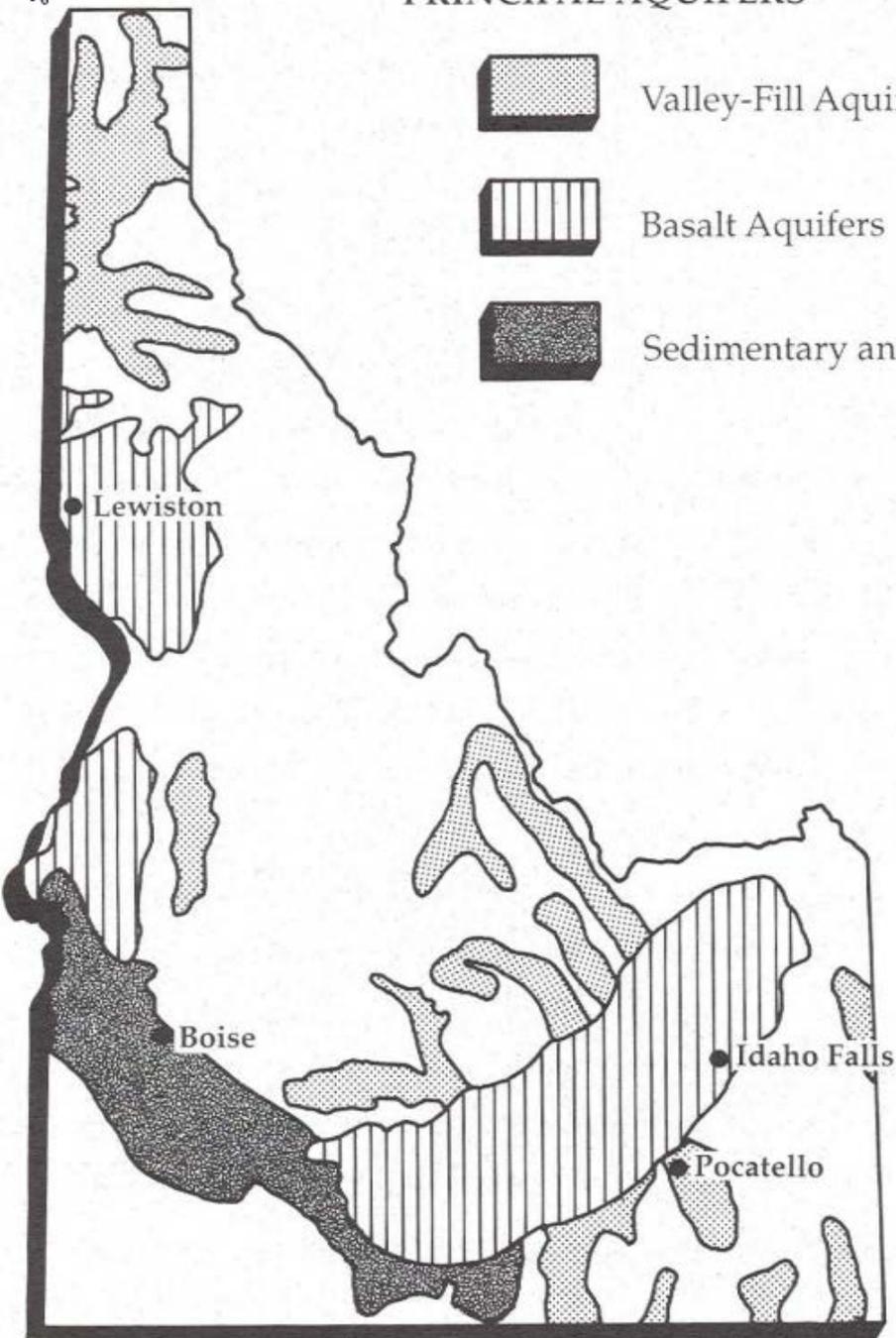
Valley-Fill Aquifers



Basalt Aquifers



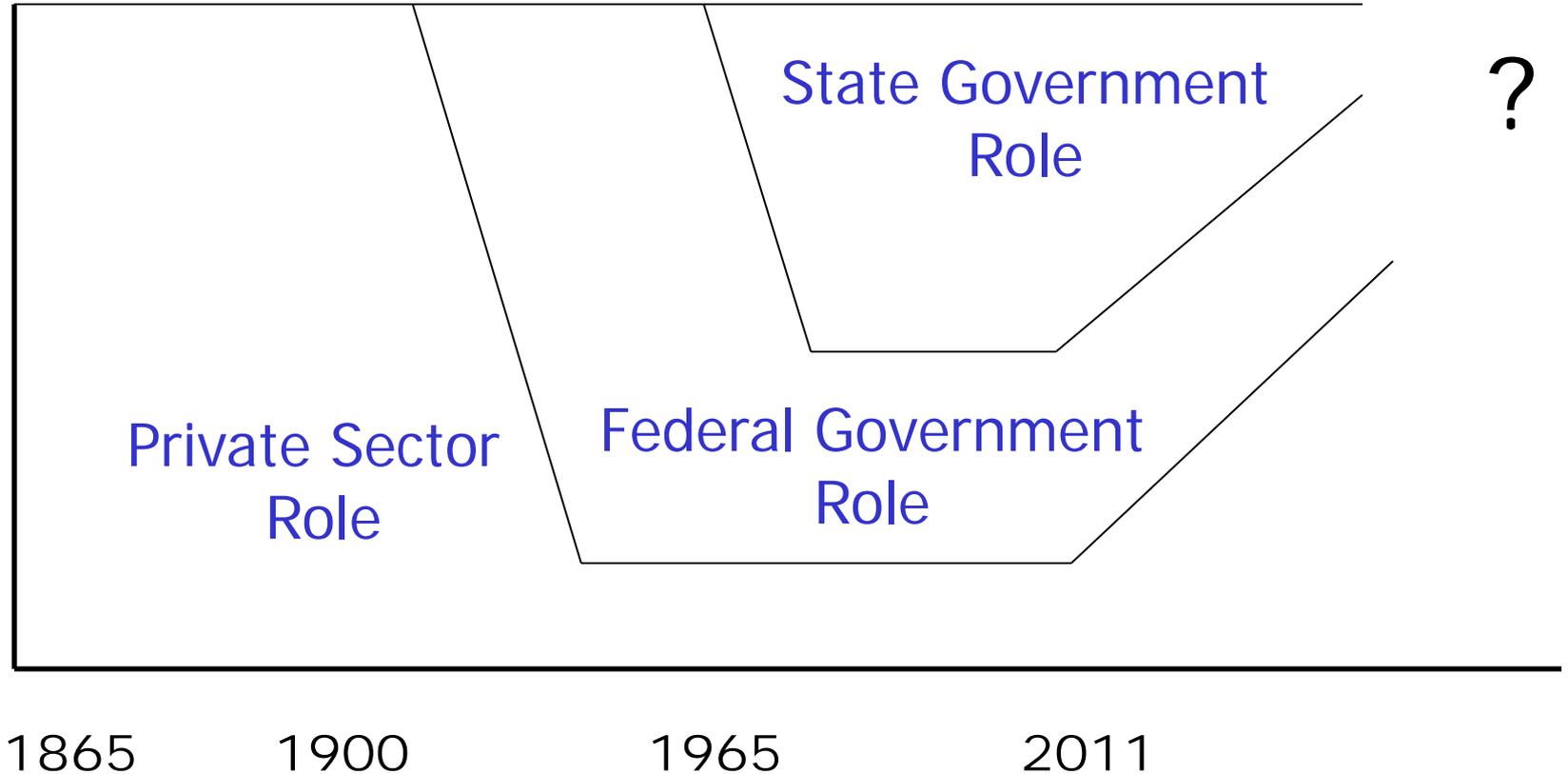
Sedimentary and Volcanic Aquifers



Where are Aquifer Storage Opportunities?

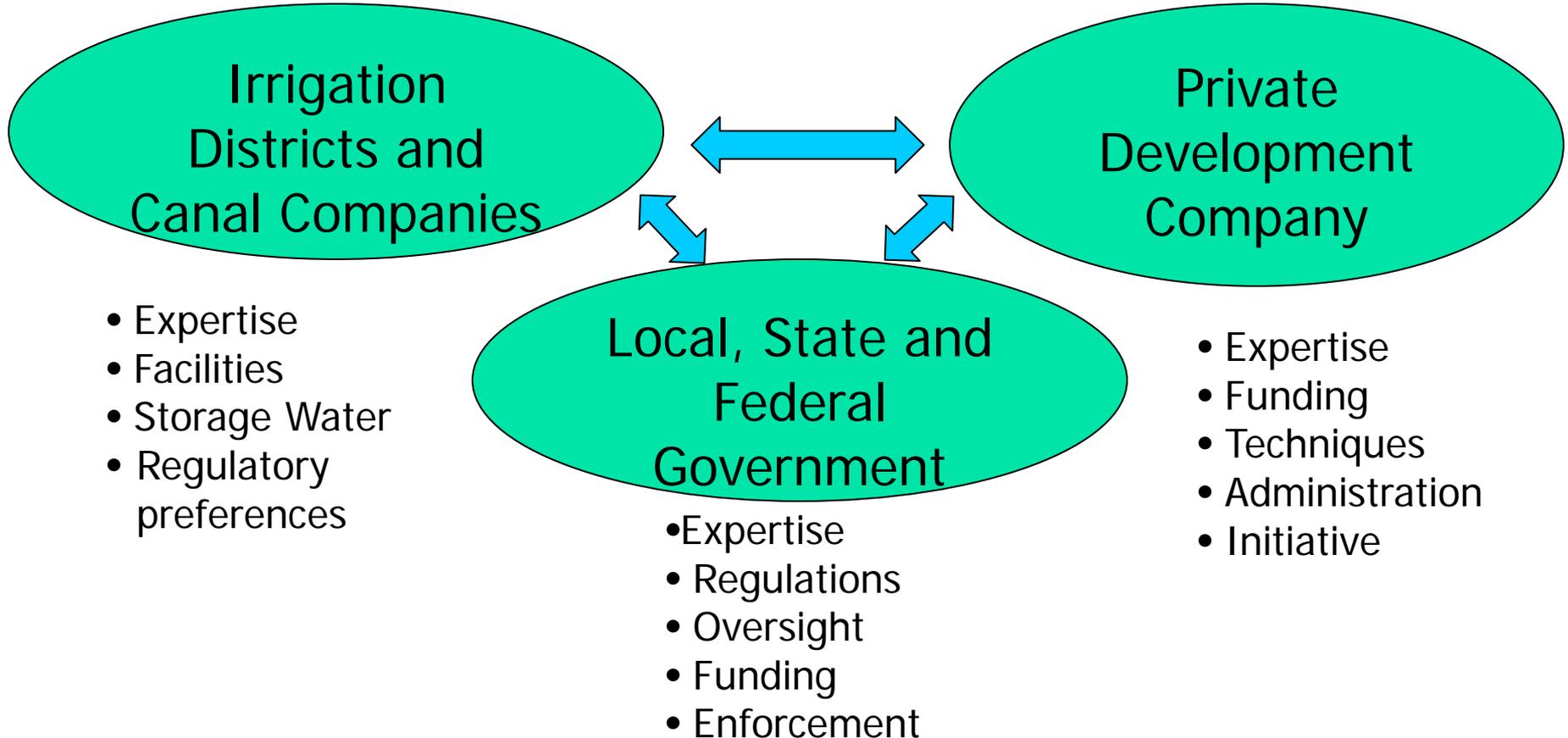
Map from IDEQ Website

Primary Drivers of Water Projects in Idaho

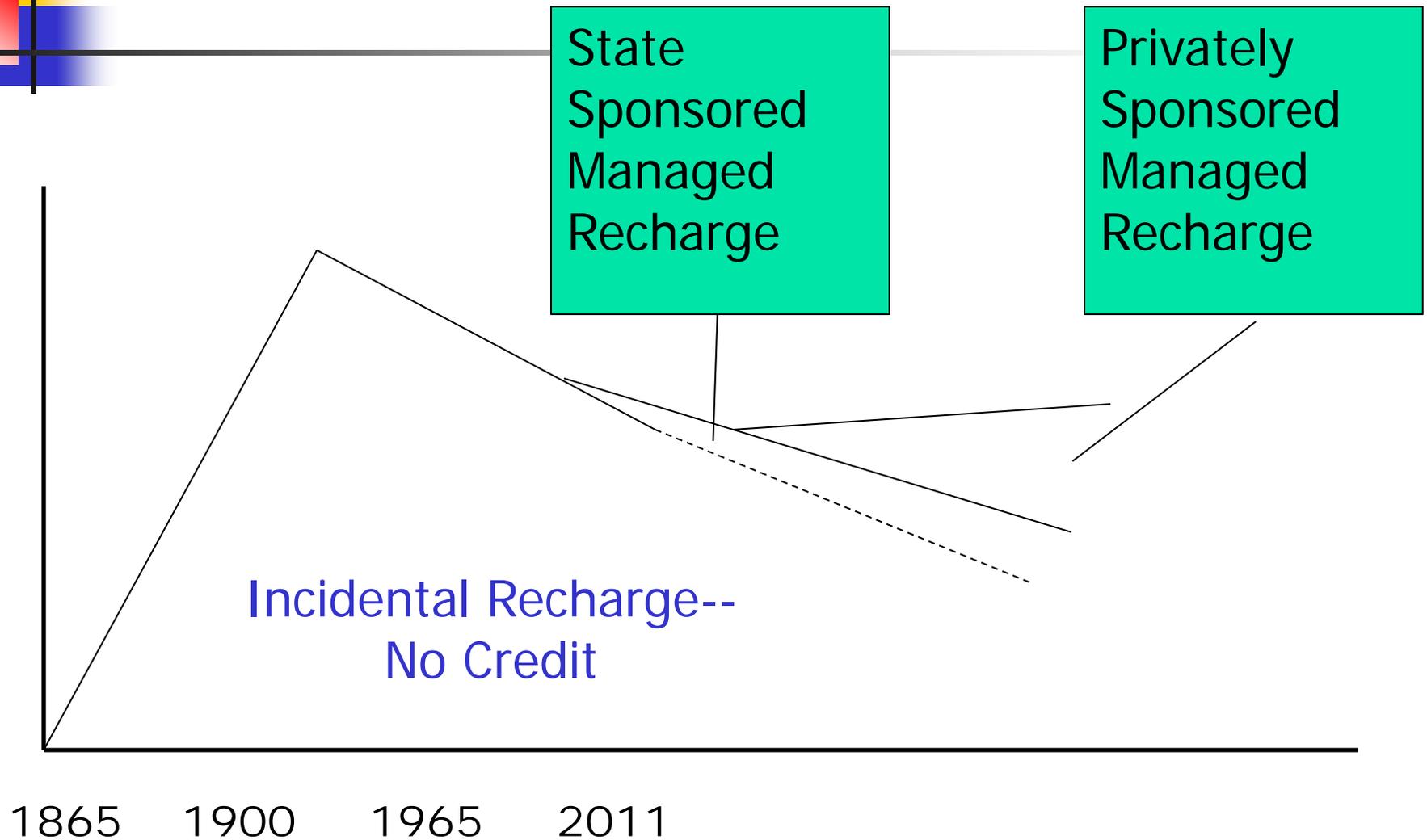


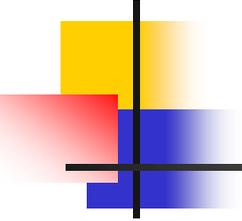
What entities will develop storage and recharge in the future?

Public and Private Partnerships



Role of Recharge





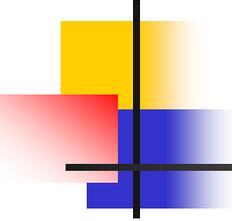
Which sector will benefit from Managed GW Recharge?

Alphabetical Order

- Agricultural
- Commercial
- Domestic
- Energy
- Industrial
- Municipal

Ability to Pay Order

- Domestic
- Municipal
- Commercial
- Industrial
- Energy
- Agricultural



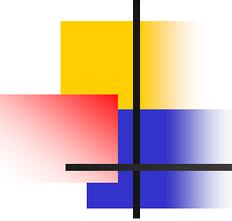
Which use of one acre-foot of water is more helpful to Idaho's economy?

Hydropower

- Runs through turbines on its way to be used for new irrigation in OR or WA (or through BPA turbines)
- Profit – power companies
- Reduced rates -- citizens
- Alternative power – plentiful natural gas

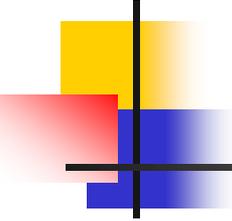
Irrigation

- e.g. ½ acre of hay
- \$700/year in the field
- Paid to farmer, who in turn pays for:
 - Labor
 - Implement dealer
 - Seed and fert. dealer
 - Property, state and fed taxes
 - School district
 - Stores on Main Street
- Economic multiplier effect



Consideration No. 1: Who should conduct Managed GW Recharge

Both the *public sector* and the *private sector*



Consideration No. 2: How should GW recharge be managed by the State?

- We should seek a balance between the Idaho Water Resource Board, as a policy maker, and the Idaho Department of Water Resources, as the administrator

The telling of the story belongs to the agriculturalist, those 2% of the American population who actually manage soil and water, whether as farmer or rancher.

The Idaho Legislature has the responsibility to provide opportunity for agriculture in Idaho

