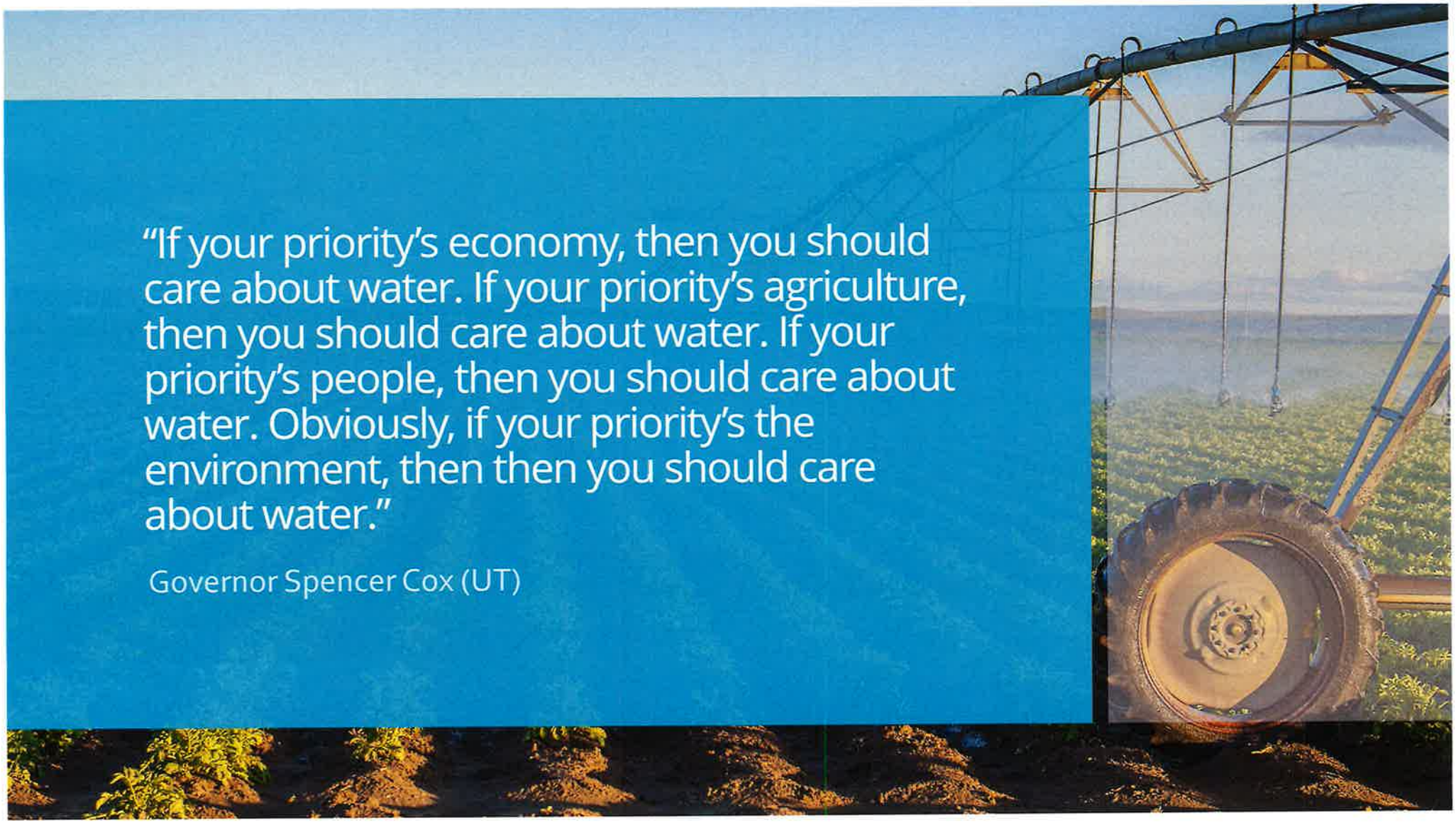
Water: Idaho's Most Precious Resource

Senate Agricultural Affairs Committee

March 2, 2022

SENATE AGRICULTURAL
AFFAIRS COMMITTEE
March 3, 2022
Attachment 1


"If your priority's economy, then you should care about water. If your priority's agriculture, then you should care about water. If your priority's people, then you should care about water. Obviously, if your priority's the environment, then then you should care about water."
Governor Spencer Cox (UT)

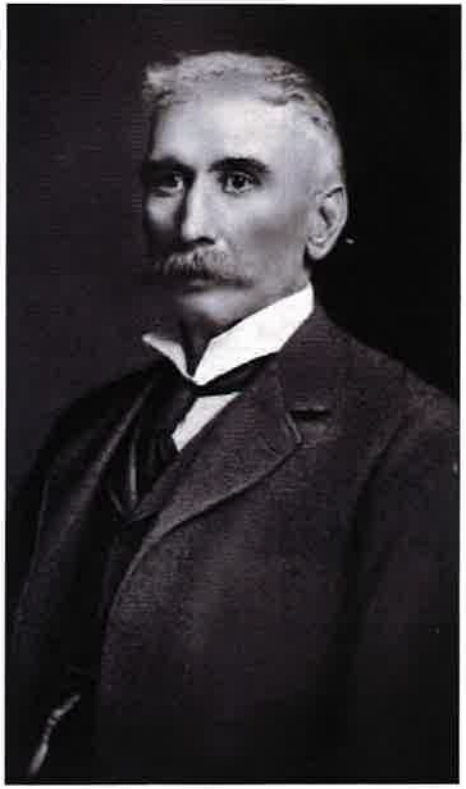
Early Development

1862-63: Tom Davis is the first to irrigate from the Boise River.

Development of the New York, Phyllis and Ridenbaugh canal systems begins.

By 1900:

- 1,650 farms & 113,205 irrigated acres
- The river water at its maximum capacity given the extreme dryness of late summer – **storage solutions would be needed**.



1880's

- Mormon settlers came into Eastern Idaho area.
  - By 1900 there were 200,000 acres irrigated using small canals.
- Henry Schodde homesteaded about nine miles north of Milner Dam.
  - In 1883 he built eleven large wooden water wheels, each were 24 to 36 feet tall.

Henry Shodde Water Wheel at Starrs Ferry near Burley (Circa 1890)

1881

Prior appropriation adopted as law.

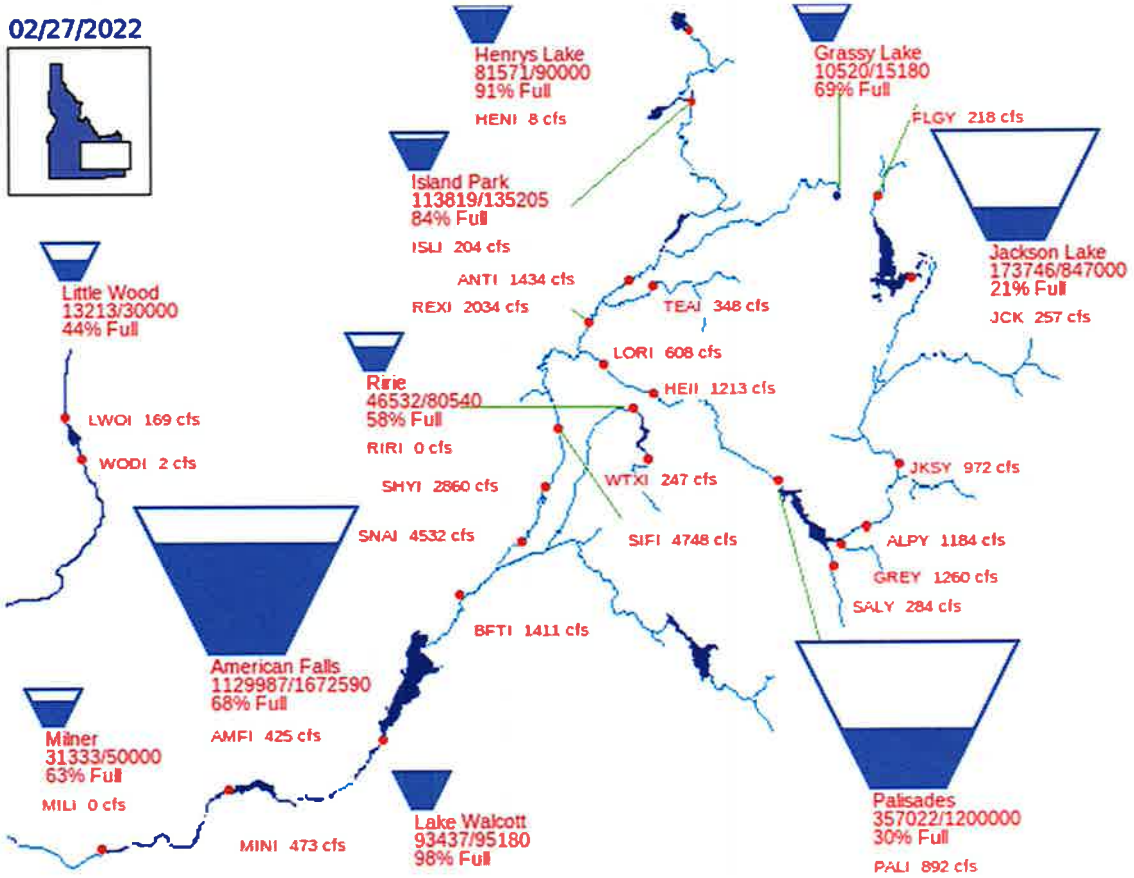
- Allows investment in expensive facilities.
- Provides continuity in irrigation systems.
- Put in place to keep minimize conflict among water users.

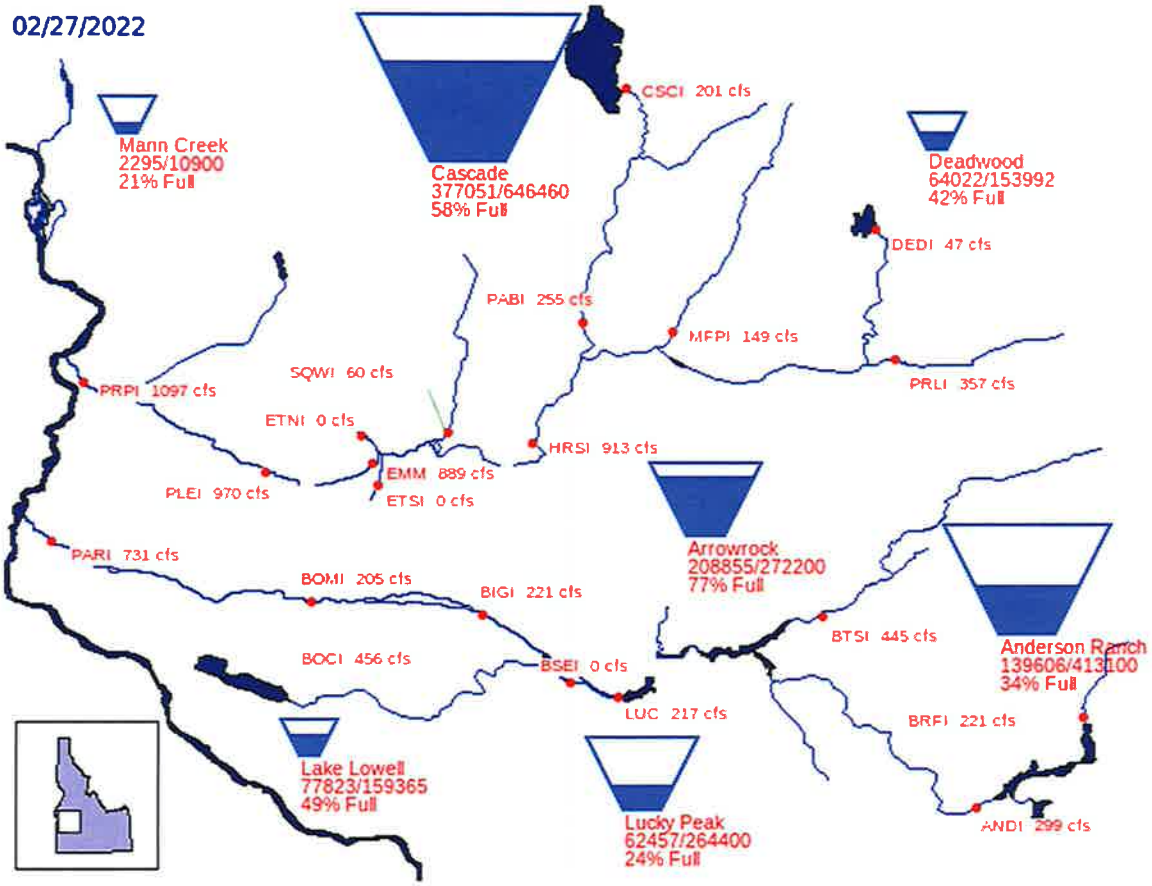
Priorities set by date water right was established.

- Most early water rights were established simply by putting the water to use.
- Earlier development has the highest priority.

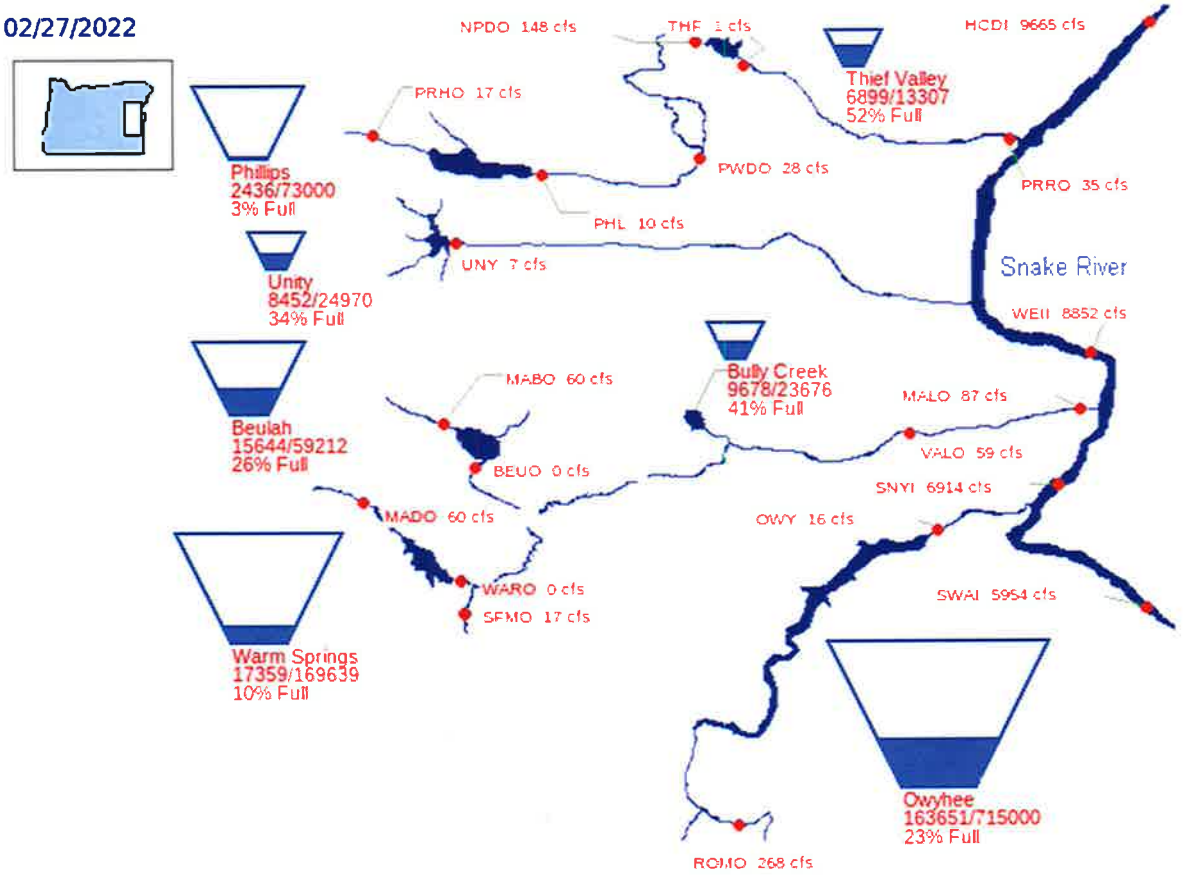
Reclamation in Idaho

- 1902: Reclamation Act
  - Created Bureau of Reclamation
- Program for "reclaiming" the arid West by storing floodwaters and building canal systems
- Constructed dams and systems throughout Idaho
  - Water Users repay their proportional share of the costs
  - One of the first Reclamation Projects was Idaho's Minidoka Project (1903)
- Made Idaho's thriving agricultural economy possible

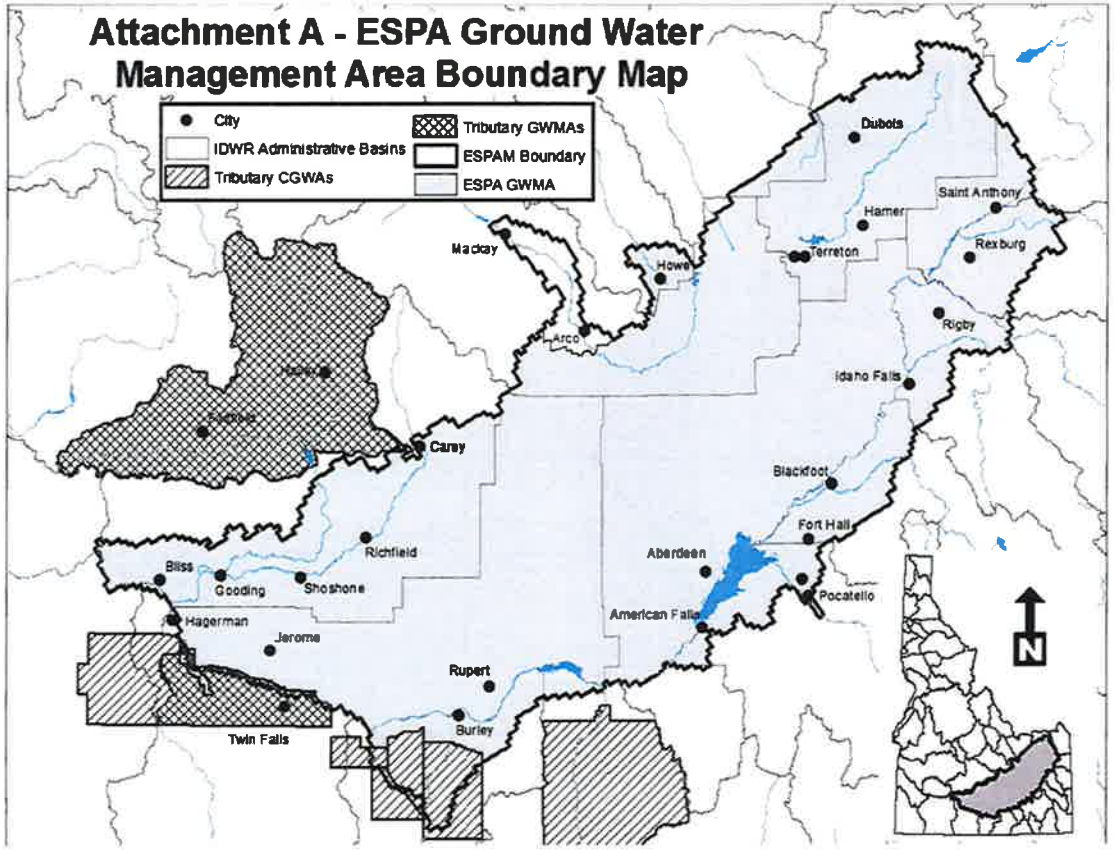

02/27/2022
Henrys Lake
81571/90000
91% Full
HENI 8 cfs
Grassy Lake
10520/15180
69% Full
FLGY 218 cfs
Island Park
113819/135205
84% Full
ISLI 204 cfs
ANTI 1434 cfs
REXI 2034 cfs
TEAI 348 cfs
Jackson Lake
173746/847000
21% Full
JCK 257 cfs
LORI 608 cfs
HEII 1213 cfs
Little Wood
13213/30000
44% Full
LWOI 169 cfs
WODI 2 cfs
Ririe
46532/80540
58% Full
RIRI 0 cfs
SHYI 2860 cfs
WTXI 247 cfs
JKSY 972 cfs
SNAI 4532 cfs
SIFI 4748 cfs
ALPY 1184 cfs
GREY 1260 cfs
SALY 284 cfs
BFTI 1411 cfs
American Falls
1129987/1672590
68% Full
AMFI 425 cfs
Milner
31333/50000
63% Full
MILI 0 cfs
MINI 473 cfs
Lake Walcott
93437/95180
98% Full
Palisades
357022/1200000
30% Full
PALI 892 cfs


02/27/2022
Mann Creek
2295/10900
21% Full
Cascade
377051/646460
58% Full
Deadwood
64022/153992
42% Full
CSCI 201 cfs
DEDI 47 cfs
PABI 255 cfs
MFPI 149 cfs
PRLI 357 cfs
SQWI 60 cfs
PRPI 1097 cfs
ETNI 0 cfs
HRSI 913 cfs
EMM 889 cfs
ETSI 0 cfs
PLEI 970 cfs
Arrowrock
208855/272200
77% Full
PARI 731 cfs
BOMI 205 cfs
BIGI 221 cfs
BTSI 445 cfs
Anderson Ranch
139606/413100
34% Full
BOCI 456 cfs
BSEI 0 cfs
LUC 217 cfs
BRFI 221 cfs
Lake Lowell
77823/159365
49% Full
Lucky Peak
62457/264400
24% Full
ANDI 299 cfs

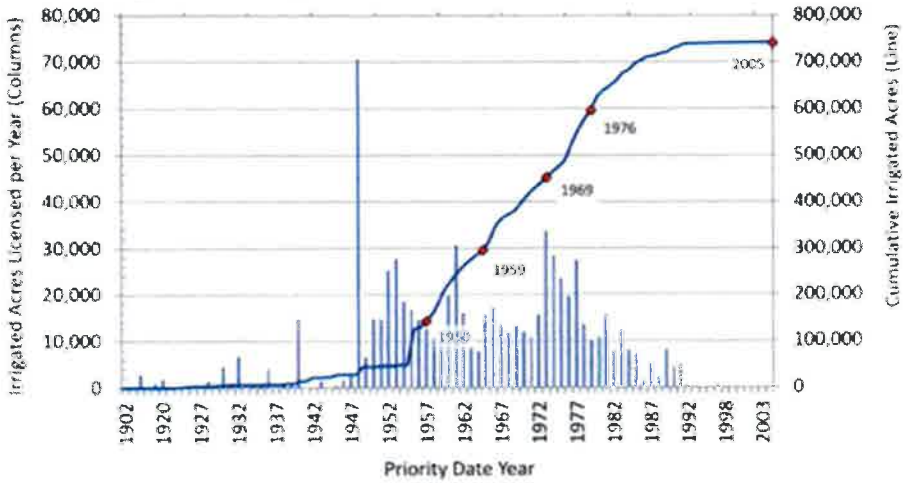
02/27/2022


NPDO 148 cfs
THF 1 cfs
HCDI 9665 cfs
Thief Valley
6899/13307
52% Full
PRHO 17 cfs
PWDO 28 cfs
PRRO 35 cfs
Phillips
2436/73000
3% Full
PHL 10 cfs
UNY 7 cfs
Unity
8452/24970
34% Full
Snake River
WEII 8852 cfs
Bully Creek
9678/23676
41% Full
MABO 60 cfs
MALO 87 cfs
Beulah
15644/59212
26% Full
VALO 59 cfs
BEUO 0 cfs
SNYI 6914 cfs
MADO 60 cfs
OWY 16 cfs
WARO 0 cfs
SEMO 17 cfs
SWAI 5954 cfs
Warm Springs
17359/169639
10% Full
Owyhee
163651/715000
23% Full
ROMO 268 cfs

Attachment A - ESPA Ground Water Management Area Boundary Map



Irrigated Acreage Development by Priority Date Year



Cumulative Groundwater Irr. Acres within GWD from 1902 to Present = 741,343 Acres

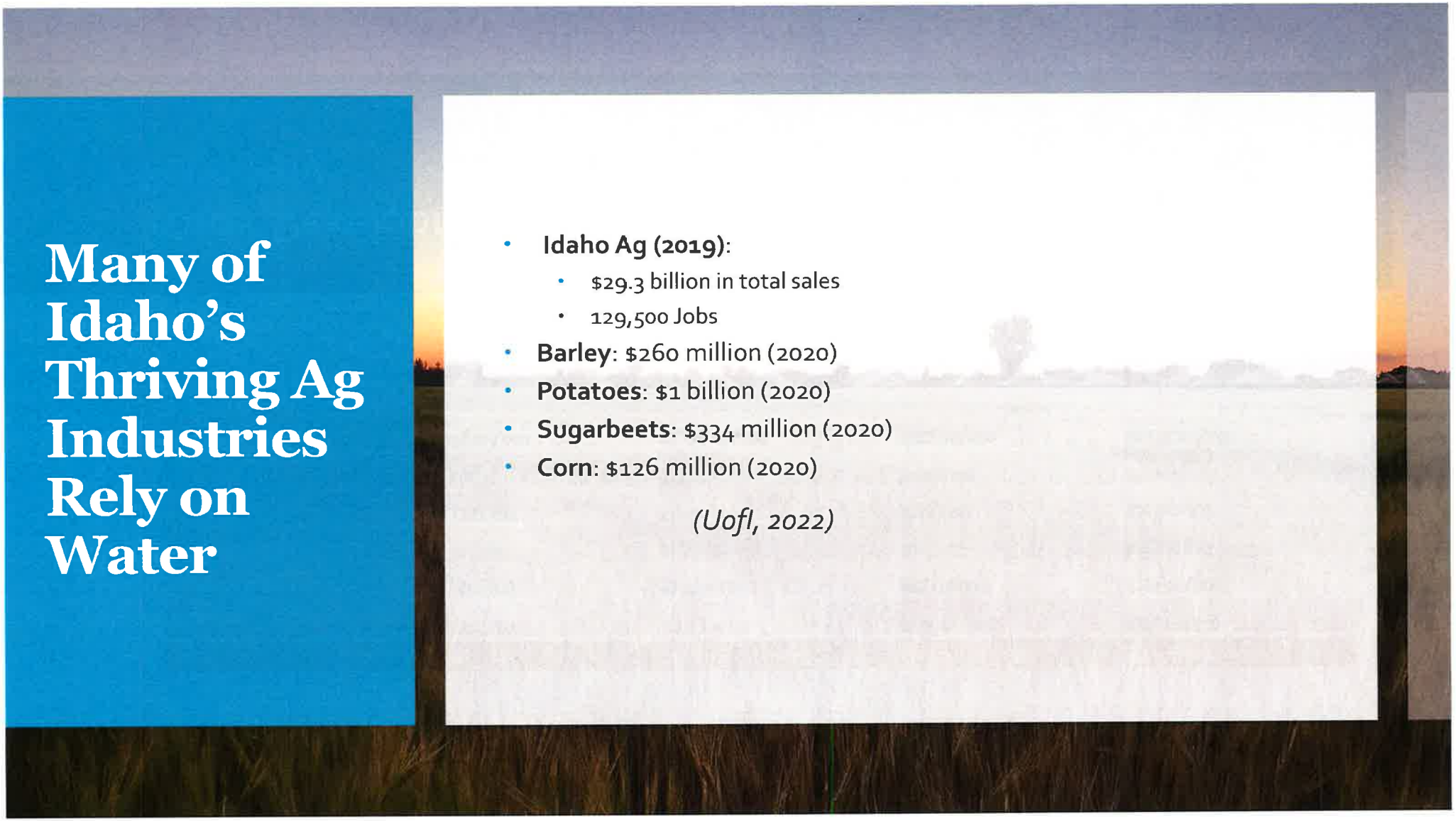
IDAHO Department of Water Resources

*Irrigated acreage is estimated by summing total WR diversion rates developed in a single year and assuming a standard duty of water of 0.02 CFS per acre.

	Boise Project	Minidoka Project	Owyhee Project	Palisades Project
Crops	$624,575,000	$704,104,000	$155,250,000	$650,900,000
Livestock	$645,000,000	$387,144,000	$93,150,000	$355,448,000
Power Generation	$13,975,000	$6,339,200	$0	$31,413,000
Flood Prevention	$183,287,500	$9,961,600	$755,550	$20,942,000
Recreation	$33,002,500	$28,300,000	$4,830,000	$16,640,400
TOTAL	$1,499,840,000	$1,135,848,800	$253,985,550	$1,075,343,400

Bureau of Reclamation (2017)

Water Development Provides Significant Value to Idaho's Economy



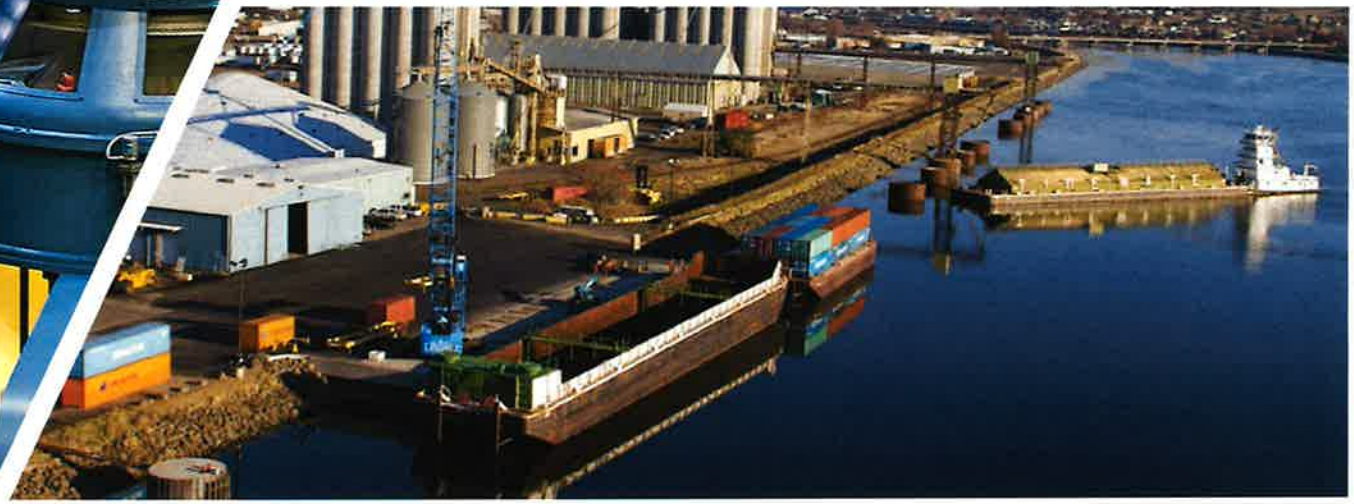
Many of Idaho's Thriving Ag Industries Rely on Water

- **Idaho Ag (2019)**:
  - $29.3 billion in total sales
  - 129,500 Jobs
- **Barley**: $260 million (2020)
- **Potatoes**: $1 billion (2020)
- **Sugarbeets**: $334 million (2020)
- **Corn**: $126 million (2020)

(Uofl, 2022)

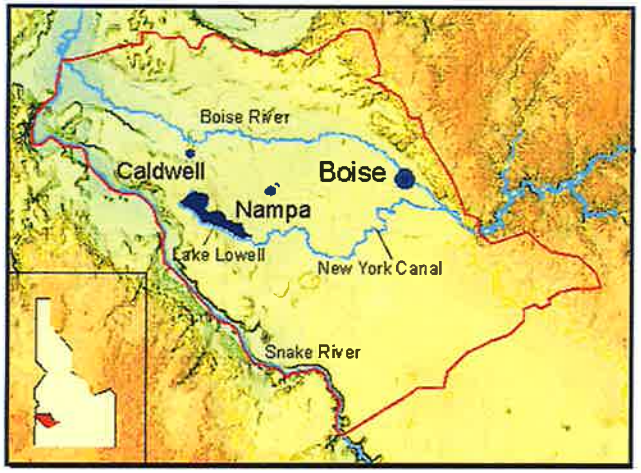


Water: Idaho's Lifeblood



Challenges

- Growing Populations
- Infrastructure Impacts
- Water Use Conflicts
- Declining Aquifers
- Climate Change / Drought
- Water Quality
- External Pressures (I.e. out of state)



The Treasure Valley

Population expected to increase from 625k in 2015 to 1.57 million in 2065

Households expected to increase by 280% - from 226,600 to 638,700

Average temperatures could increase by 1.9 to 6.1 degrees (increasing evapotranspiration by 5-20%

Increase of 109,000 to 188,000 AF/year by 2065

Elmore County

Water-level declines of 100-200 feet since the 1960's

Current decline of 5-feet per year in areas

Annual pumping deficits of 43,000 AF/year

Palouse Aquifer (Idaho)

- 4,874 af/year increase in demand by 2065
- 2,256 af/year required to stabilize the aquifer

Meridian (2002 v. 2021)

Idaho Falls (2003 v. 2021)

Post Falls (2003 v. 2021)

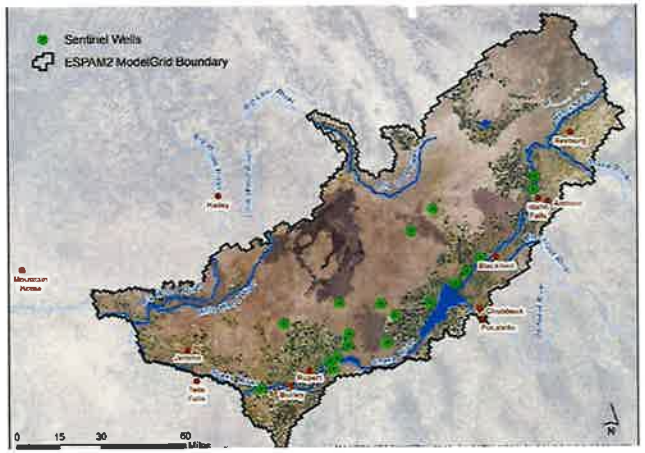

Snake River
Boise River
EAGLE
GREENLEAF
Boise River
CALDWELL
Phyllis Canal
Ridenbaugh Canal
BOISE
Lucky Peak Reservoir
Snake River
NAMPA
Lake Lowell
New York Canal
Snake River

External Pressures

- CRSO Litigation
- Columbia Basin Collaborative
- Flow Augmentation
- Columbia River Treaty

How will Idaho meet these challenges?

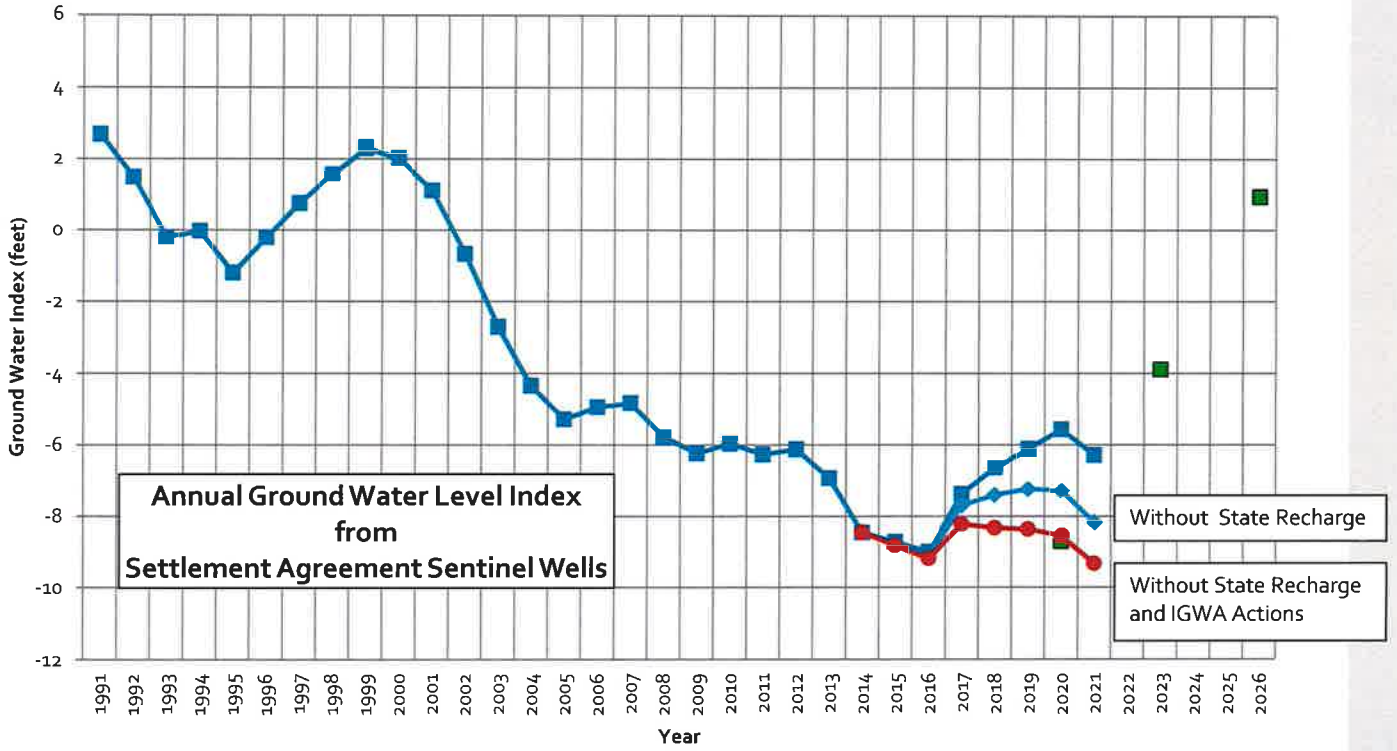
- Cloud Seeding
- System Updates
- Recharge
- New / Enhanced Infrastructure
- Grant / Loan Programs
- Stay involved!



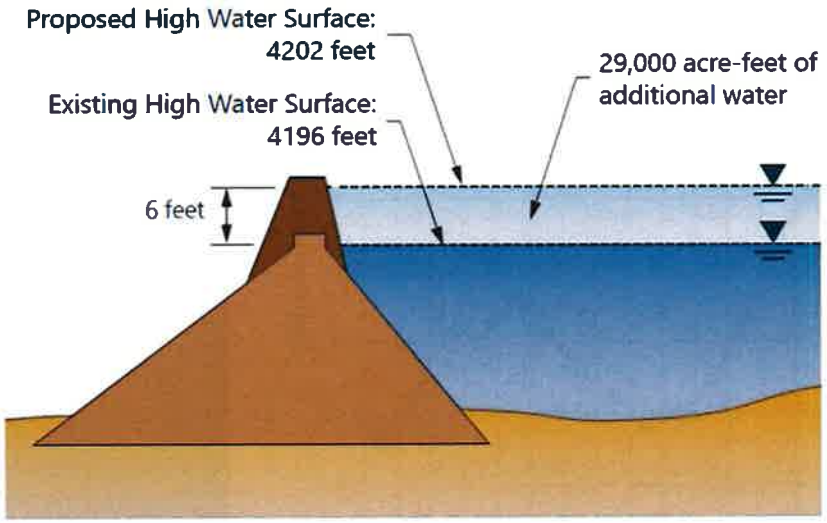
ESPA Management Strategy

- 250,000 AF annual average natural flow managed recharge program by state (IWRB)
- 240,000 AF annual use reductions by ground water pumpers under Settlement Agreement (may be offset or enhanced by their own recharge efforts)
- 50,000 AF storage water provided annually by ground water pumpers
- Food processors provide 8,500 AF of storage water
- 7,650 AF annual average storage water contributed by ESPA Cities

Efforts are working!



Proposed Plan – 6-foot Dam Raise



Anderson Ranch Reservoir Enlargement Project

Grant / Loan Programs

- Flood Management Grant Program
- Ag BMP / WQPA Programs
- Large Project Fund
- Aging Infrastructure Account
- Broadband / Modernization


Questions?