Groundwater Management Districts Association (GMDA)
2025 Summer Conference Notes
Idaho Falls, Idaho—July 21-23, 2025
Dick Ehrman

Monday, July 21

- Traveled from Omaha to Denver to Idaho Falls

Tuesday, July 22

States present: NE, CO, ID, MS, KS, TX, CA, NM, ND
NRDs present: LPS, LPN, UBB, LL, CP, LE

Keynote Speaker—Scott Bedke, Lieutenant Governor of Idaho: Challenges & Successes in Conjunctive Management

- Bedke was longest-tenured Speaker of the Idaho House and is now Lieutenant Governor
- 2/3 of Idaho land is federally managed
- Idaho's ground water is managed by prior appropriation but also conjunctively w/ surface water as many of Idaho's streams are fed by large springs
- Idaho is one of the fastest-growing states in the nation so land/water use issues are important
- Junior water users can 'jump the line' if they can get approval from or compensate/mitigate senior users
- 1/3 of irrigation is by surface water, 2/3 by ground water
- Idaho has experimented with 4-year management blocks (potatoes usually have a 4-year rotation—3 years small grains then potatoes every 4th year)
- Negotiations/discussions among surface and ground water users have allowed some progress to be made—i.e. surface water appropriators may have senior rights but ground water pumping supports most of Idaho's food processing industry
- Using managed recharge to re-time and capture high spring flows (several hundred thousand acre-feet leave the state each year)
- Volcanic geology makes managed recharge and evaluation of hydrologic connection very complex

TJ Budge, Racine Olsen, Mike McVay, Idaho DWR: Managing Idaho's Ground Water Part 1

- Eastern Snake Plain Aquifer (ESPA)—11,000 square miles
- Parts of stream flow in Snake River are 80-90% ground water
- ESPA aquifer primarily basalt; over 6,000' thick in center
- Water in storage change estimated 1980-2001: -2,000,000 AF; 1980-2023: -9,300,000 AF
- Through managed recharge, some years have enabled 800,000 AF recharge
- IDWR uses "irrigation precision" because "efficiency" implies it's beneficial; i.e. less water applied (precision) means less water recharged to the aquifer
- Idaho Groundwater Users Association (IGUA) represents nine ground water districts in the ESPA
- In addition to irrigated ag, there are a lot of fish farms along the river, mostly raising trout; about 80% of the commercial trout in US comes from this area
- Although Idaho operates under prior appropriations, this isn't absolute without exception, ensuring that it is used for the public benefit, and secure the maximum benefit and least wasteful use, and no person can claim or hold more water than is necessary

- Ground Water Management legislation aimed at using ground water sustainably—i.e. senior right holders may not be able to stop junior uses if, say, the senior well is shallow or inefficient
- The IDWR Director makes determinations on these issues—mostly discretionary which can cause problems
- If a junior holder will be curtailed by senior water use, the junior can develop a mitigation plan to keep senior water user whole
- Conjunctive management rules were developed in 1994; nothing much happened until about 2005 when litigation began and helped define the rules
- Great overview of the many court cases involved in the past 30-ish years
- Mitigation strategies: ground water use reductions, managed aquifer recharge, conversions, storage water, moving water, paying damages, purchasing fish hatcheries, subordinations
- Mitigation plan passed in 2024, runs through 2027; automatic renewal for successive 4 year ; terms; ground water users required to reduce use by 205,000 AF (about 11%)

Jaxon Higgs, Brian Patton, Alan Jackson, Roger Warner: Managing Idaho's Ground Water Part 2

- 2024 Stipulated Management Plan—specifies 205,000 AF reduction (1st draft 2015)
- Basic process for District ground water conservation allocations:
    - Determine baseline pumping
    - Determine allowable allocation (i.e. 11.4% of baseline)
    - Break down district water rights (acreage & priority
    - Determine allocation methods (some use priority tiers according to priority dates/events)
- Districts use allocation blocks, but their annual allocation is in the neighborhood of 2 AF (compare to 7-9 acre-inches in DVB SMA)
- Example from Bingham GWD—148,000 irrigated acres south of Idaho Falls
- State funded managed aquifer recharge program—originally set at 250,000 AF/year; recent successes have led the legislature to increase that to 350,000 AF
- State, power companies, and water users within Snake River basin are cooperating in a cloud seeding program; results estimated at 5-10% increase with about 1.1 million AF additional over several decades

Panel Discussion: Ground Water Challenges & Opportunities
Paul Ortega, CA; Randy Ray, CO; Jason Norquest, KS; Will Nichols/Henk Van Riessen, MS; Dick Ehrman, NE; Aron Balok, NM; Jay Anderson, ND, Steve Walthour, TX

- Lots of interesting issues, and highly variable
- CA: Tourism, vegetable & traditional farming, large urban areas; recharge; retiming of high flows, earthquake concerns
- CO: Urban development and drying up of ag acres, expansion/development of new reservoirs, Perkins County canal
- KS: Declines in western portion but limitations are generally being accepted,
- MS: Most wells in MS River delta for variety of crops but especially rice; description of field operations
- NE: NRD history, geology, nitrates, urban/rural split
- NM: "Leap Ahead" analysis spearheaded by Governor projects up to 25% reduction in available water supply over few decades, negotiations between Las Cruces, TX, and courts
- ND: Missouri River is about 95% of total water availability but doesn't reach eastern portion of the state where most people live, review of federal legislation establishing dams/reservoirs, nearly 100% of population is served by rural/regional water supply

- TX: Exceptional drought in central TX affected by 7/4/2025 flood, by 2070 water supply shortfalls of 6.86 M AF annually, could lose 785,000 jobs, and cost $160 B lost GDP, February 2025 emergency item dedicating $1B annually for water investment, issues dealing with contamination from abandoned oil & gas wells

GMDA Board of Directors Meeting

- Main business was transfer of Secretary-Treasurer office to Tylr Naprstek, LLNRD, and decision to retain independent bookkeeping services for GMDA

Wednesday, July 23—Field Trips

Injection Well Facility

- Injection of surface water is critical to ground water management in the Snake River Plain
- The facility is owned by the Idaho DWR and operated by the local ground water district
- Amazing capacity:
    - 16" diameter wells
    - Wells are drilled about 450' deep into highly fractured basalt bedrock
    - The last 30-50' are uncased so injection water can flow into fractures
    - Typical rates are **10,000 gallons per minute!!!** (yes, you read that right!)
    - There is no need for surface pressurization; i.e. water flows into the fractured basalt under the effect of gravity!

Anheuser-Busch Malting Facility

- Overview of AB products and facilities around the world
- Tour of malting facilities—largest in North America (supposedly largest one in the world is in Russia but they're not producing much right now)
- AB contracts with/owns several thousand acres of barley in the immediate vicinity then arranges for purchase of additional necessary grain
- Idaho is largest producer of barley in the USA
- AB also owns the largest hops farm in the world in northern Idaho

Idahoan Potato Processing Facility

- Overview of Idahoan products
- Tour of processing facilities
    - Unloading (can be up to several railroad cars/many truckloads per day)
    - Sorting/cleaning
    - Peeling—mainly through boiling to let the peels fall off
    - Cutting—use of a machine called a "water knife" which is just what it sounds like!
    - Mashing
    - Dehydration of mashed potatoes into flakes
    - Packaging and preparation for shipping—VERY impressive robotics!

Idaho National Laboratories

- Overview of all national labs (if I remember right, there are 17 of them across the country)
- History of INL, especially in regard to development of nuclear power
- INL is focused on power, not weaponry (which are specialties of other labs)
- An extremely fascinating presentation by the lead geologist on the critical minerals industry and how China is dominating that market
    - These minerals are available in the US, but mining has been deemphasized since the 1990s

- Tour of the energy lab, dealing with such activities as batteries and fast charging stations for electric vehicles, harvesting of heat energy from nuclear facilities, and development of portable solar and nuclear generation
- Tour of the geosciences facility, dealing with such activities as atomic deconstruction of mineral ores, electron microscopy capable of imaging individual atoms, etc.

This will likely be my last GMDA conference as a representative of LPSNRD. I want to thank the Board and the District for allowing me to be part of what I consider to be a great organization!

NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

DISTRICT CONSERVATIONIST'S MONLTY REPORT

8/13/2025

PERSONNEL/OFFICE

- The Lancaster and Cass County Service Centers are under normal operations.
- Lincoln NRCS Resource Conservationist - VACANT
- Lincoln NRCS Soil Conservation Technician – VACANT
- Weeping Water NRCS Soil Conservationist - VACANT

LPSNRD LAND TREATMENT

- LPSNRD currently has the following active or completed land treatment cost-share program applications:
    - Lancaster County Field Office
        - 2 Summer 2025 Structural Applications
        - 3 Fall 2025 Structural Applications
    - Cass County Field Office
        - 5 Summer 2025 Structural Applications
        - 13 Fall 2025 Structural Applications

USDA PROGRAMS

- Technicians are checking completed projects and preparing for fall projects.
- Staff are conducting CRP site visits/status reviews and completing new CRP contracts.
- Staff are developing farm conservation plans

UPCOMING EVENTS

- 9/1/25 – Office closed for Labor Day Holiday
- 11/21/25 – EQIP/CSP Application Deadline

Tom Cowan – District Conservationist