

NORTHWEST GROUNDWATER CONFERENCE

Application of Science and Technology to Ground Water Management

Presented by: **American Ground Water Trust**

(A 501(c)(3) non-profit education organization)



Holiday Inn Express Hotel & Suites Pasco-Tri Cities, WA*
4525 Convention Place, Pasco, WA 99301

Conference: Monday, March 6 & Tuesday, March 7, 2023 (details on page 3 & 4)

Optional ASR field trip: Sunday, March 5th (details on page 2)

A conference for all professions and end-users involved with groundwater resources in the Northwest

The American Ground Water Trust's Northwest Groundwater conference is a great information-exchange and networking opportunity. Attendance is anticipated from water agencies, utilities and water districts, water professionals (scientific, engineering, managerial, legal, environmental, and regulatory), water operators, industrial and irrigation end-users of water, local and state elected officials and university and college academics with an interest in water supply, water policy and regulatory issues in Idaho, Oregon, and Washington.

Conference Program organized in cooperation with:



Program Overview

The two-day conference will address key regional water resources issues involving policy, science, and technology. The topics that will be covered by invited presentations from experts and specialists include:

- The current and likely future impacts of climate changes on the region's hydrology and aquifers
- Increasing the adoption of aquifer recharge technology as a management strategy to achieve resource sustainability
- Legal aspects and water rights related to private well issues involving policies and agency authority for managing/regulating "exempt wells"
- Achieving collaboration for managing aquifers which are "transboundary" – where different jurisdictions have authority to regulate the same aquifer
- Water treatment technology and costs for remediating legacy groundwater contamination to comply with increasing levels of regulatory stringency
- State initiatives and programs to help domestic well owners (who are mostly below the regulatory radar) navigate water sampling and testing to determine if a treatment system is required

CONTINUING EDUCATION



Approved for **WA Waterworks Operators** – 10 CEUs, Course ID#A3237
Approved for **ID Drinking Water Professionals** - 1.1 CEUs, Course #WWP230112233
Approved for **ID Wastewater Professionals** - .3 CEUs, Course #WWP230112232
Approved for **OR Water and Wastewater Operators** – 1.3 CEUs, Course ID#5853
Approved for **WA Wastewater Operators** – 1.3 CEUs, Course ID ECY23-3321
Certificate of attendance available for all attendees upon completion of CE Form



Thank you to our corporate supporters and conference sponsors:

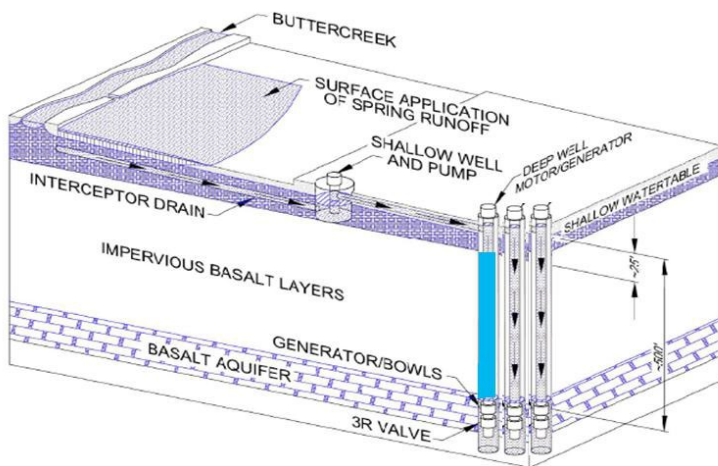


FIELD TOUR – LEADING EDGE ON-FARM WATER MANAGEMENT

Sunday, March 5th - 1:00pm – 4:30pm - lunch provided

Madison Ranches, 29299 Madison Road, Echo, Oregon

A unique opportunity to view first-hand, the integration of managed aquifer recharge, aquifer storage recovery and ASR electricity generation. Field tour leader is Kent Madison.



Spring runoff from Buttercreek is diverted for surface spreading and infiltration to the shallow water table. With turbidity removed, the “new” groundwater is then captured by interceptor drains and pumped to irrigation circles and/or recharged to the deep basalt aquifer (generating electricity during the recharge process). The stored water in the deep aquifer can be recovered for late season irrigation. Down well valve design is a critical element of the ASR and ASR electricity generation process

Field tour is only available for people registered for the March 6-7 conference. The meeting location is at Madison Ranches, 29299 Madison Road, Echo, OR 97828. The office building is located at the Madison Road turnoff and there is ample parking. Lunch will be served from 1:00-1:45 and tour begins at 1:45. Tour is outside, please dress appropriately. Pasco, WA to Echo, OR is 45 minutes, Portland to Echo is 3¼ hours, and Seattle to Echo is 3¾ hours.



Monday March 6th Northwest Groundwater Conference

7:30 – 8:30	Registration (Coffee, pastries and visit exhibitors)
8:30 - 8:40	<p>OPENING REMARKS FROM AMERICAN GROUND WATER TRUST Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH</p>
8:40 -9:15	<p>EXEMPT WELLS IN OREGON: CURRENT RULES AND IMPLICATIONS FOR THE FUTURE Chris Kowitz, North Central Region Manager, Oregon Department of Water Resources, Salem, OR</p>
9:15 – 9:50	<p>EXEMPT WELLS – FROM LITIGATION TO WATER BANKING Dan Haller, PE, CWRE, Principal Water Resources Engineer, Aspect Consulting LLC, Yakima, WA</p>
9:50 – 10:25	<p>WHAT IS THE DOMESTIC EXEMPTION, AND IS IT TIME FOR CHANGE? Angela Hansen, PG, Water Rights Section Manager, Idaho Department of Water Resources, Boise, ID</p>
10:25 – 10:50	BREAK – Exhibitor introduction
10:50 - 11:25	<p>CONFLICT AND CONTEXT: AN ANALYSIS OF WATER CONFLICT AND COLLABORATION IN IDAHO BETWEEN 1950 AND 2019 Colt Dickman, Natural Resource Conflict Resolution Professional, Oregon State University, Corvallis, OR</p>
11:25 – 12:00	<p>IDAHO GEOLOGICAL SURVEY – RECENT HYDROGEOLOGIC INVESTIGATIONS IN BIG LOST RIVER BASIN AND RAFT RIVER BASIN, SOUTH-CENTRAL IDAHO Alexis Clark, PG, Hydrogeologist, Idaho Geological Survey, Boise, ID</p>
12:00 – 1:00	LUNCH (provided)
1:00 - 1:35	<p>FOSSIL GROUNDWATER, MODERN GROUNDWATER, AND EVERYTHING IN BETWEEN; GROUNDWATER AROUND THE COLUMBIA BASIN Kevin Lindsey, Ph.D., Principal Hydrogeologist, and Alicia Candelaria, Environmental Scientist, GeoEngineers, Inc., Kennewick, WA</p>
1:35 - 2:10	<p>ENGAGED GROUNDWATER MANAGEMENT – LEVERAGING LOCAL RESIDENTIAL WELLS AS LOW COST, HIGH VALUE MONITORING POINTS TO INCREASE SHARED UNDERSTANDING, IMPROVE MANAGEMENT AND REDUCE RISK Charles Dunning, PhD, VP Hydrology, WellIntel, Milwaukee, WI</p>
2:10 - 2:45	<p>CURRENT AND FUTURE GROUNDWATER VULNERABILITY IN EASTERN WASHINGTON Sasha McLartey, PhD, Assistant Professor, Washington State University, Pullman, WA</p>
2:45 – 3:00	BREAK
3:00 – 4:30	<p>TRANSBOUNDARY GROUNDWATER BASIN MANAGEMENT: LESSONS LEARNED IN THE WALLA WALLA BASIN</p> <ul style="list-style-type: none"> • Salini Sasidharan, Ph.D., Assistant Professor, Department of Biological & Ecological Engineering, OSU, Corvallis, OR • Troy Baker, Executive Director, Walla Walla Basin Watershed Council, Milton-Freewater, OR • Renee Hadley, PG, District Manager, Walla Walla County Conservation District, Walla Walla, WA • Steven Patten, Public Works Engineering Technician, City of Milton-Freewater, Milton-Freewater, OR • Tara Patten, Project Manager, Walla Walla Basin Watershed Council, Milton-Freewater, OR
4:30- -4:40	<p>VALIDATION OF GRACE-DERIVED GROUNDWATER IN A COMPLEX AQUIFER SYSTEM Collins Asante-Sasu, PhD candidate Dept. of Civil and Environmental Engineering, Washington State University</p>
4:40 – 4:50	<p>EXPLORING GROUNDWATER RESOURCE VULNERABILITY AND WATER SECURITY IN QUINTANA ROO, MEXICO Maria Iglesias-Thome, Graduate Student, Oregon State University Dept. of Water Resources Science, Corvallis, OR</p>
4:50 – 5:00	<p>PRELIMINARY GROUNDWATER MODELING OF THE WEST PLAINS, SPOKANE COUNTY, WA TO IDENTIFY ERRATIC PFAS CONTAMINATION Erin Toulou, Student, Eastern Washington University Department of Geosciences, Cheney, WA</p>
5:00 – 6:30	NETWORKING RECEPTION (Cash bar) Exhibits – Meet the presenters



Tuesday, March 7th Northwest Groundwater Conference

7:30 – 8:30	Registration	(Coffee, pastries and visit exhibitors)
8:30 - 8:40	REVIEW OF DAY ONE	
8:40 - 9:15	INNOVATIONS IN ASR FOR AGRICULTURAL AND ENVIRONMENTAL BENEFITS Jason Melady, RG, LG, Principal Hydrogeologist, Summit Water Resources, LLC, Portland, OR	
9:15 – 9:50	IMPLEMENTING INCENTIVIZED MAR WITH THE ARU SOLUTION David Tuthill, PhD, PE, Founder, Idaho Water Engineering, LLC, Boise, ID	
9:50 – 10:25	AQUIFER RECHARGE AND ASR ELECTRICAL POWER REGENERATION: THE WILLOW SPRINGS WATER BANK DEMONSTRATION PROJECT Kent Madison, President, 3RValve LLC, Echo, OR	
10:25 – 10:45	BREAK	
10:45 - 11:20	GEOPHYSICS FOR MANAGED AQUIFER RECHARGE INVESTIGATIONS John Jansen, PG, PGp, PhD, Senior Geophysicist/Hydrogeologist, Collier Geophysics, West Bend, WI	
11:20 – 11:55	WORKING TOGETHER ONSITE: PARTNERSHIPS AND COOPERATION MAKE FOR BETTER PROJECTS Mike Piechowski, LHG, Principal Hydrogeologist, Robinson Noble, Inc., Tacoma, WA	
11:55- 12:10	<p align="center">CAN INCREASED COLLABORATIVE EFFORTS AMONG NORTHWEST STATES AND AGENCIES HELP ADDRESS REGIONAL GROUNDWATER ISSUES?</p> <p align="center">Explanation of objectives for “talking points” at lunch-time table discussion Sara Chudnoff, PG, Hydrogeologist, American Ground Water Trust, Pinetop, AZ Salini Sasidharan, Ph.D., Assistant Professor, Dept. of Biological & Ecological Engineering, OSU, Corvallis, OR</p> <p align="center">Each lunch table will have a scribe to record the table’s opinions about the regional importance of these issues.</p> <ul style="list-style-type: none"> • Water rights conflicts • Private well water quality • MAR for streamflow enhancement • Tranboundary groundwater management • Water efficiency and stewardship in agriculture and industry <p align="center">The results of the lunchtime conversations will be presented at the end of the conference.</p>	
12:10 – 1:20	LUNCH	To include “Talking Points” opportunity
1:20 – 1:55	CONTAMINANT FLOW THROUGH A FRACTURED BASALT AQUIFER, AN OVERVIEW OF MORE THAN 70 YEARS OF MONITORING AT THE IDAHO NATIONAL LABORATORY, IDAHO Roy Bartholomay, Center Director, USGS-Idaho, Idaho Falls, ID	
1:55 – 2:30	INFLUENCE OF BASALT AND MEGAFLOOD-DERIVED AQUIFERS ON MIGRATION OF PFAS CONTAMINATION AND STORMWATER DISPOSAL Chad Pritchard, Chair and Professor, Department of Geosciences, Eastern Washington University, Cheney, WA	
2:30 – 3:05	MINING GROUNDWATER CONTAMINANT DATASETS: ISSUES AND OPPORTUNITIES Alan Kolok, PhD, Professor, College of Natural Resources, University of Idaho, and Director Emeritus, Idaho Water Resources Research Institute, Moscow, ID	
3:05 - 3:40	ADDRESSING WATER INSECURITY AND HIGH NITRATES IN DOMESTIC WELLS IN THE LOWER UMATILLA GROUNDWATER MANAGEMENT AREA Curtis Cude, Healthy Waters Program Coordinator, Oregon Health Authority, Portland, OR	
3:40 –4:15	WASHINGTON STATE DEPARTMENT OF HEALTH’S ROLE IN ADDRESSING NITRATE CONTAMINATION IN THE LOWER YAKIMA VALLEY Mallory Little, Toxicologist, Office of Environmental Public Health, Washington State Dept. of Health, Tumwater, WA	
4:15 – 4:50	PRIVATE WELL WATER EDUCATION AND OUTREACH IN IDAHO Carolee Cooper, REHS, RS, Environmental Health Program Specialist, Idaho Dept of Health and Welfare, Boise, ID	
4:50 – 5:00	WHAT HAPPENED AT LUNCH TIME? Sara Chudnoff, PG, Hydrogeologist, American Ground Water Trust, Pinetop, AZ Salini Sasidharan, Ph.D., Assistant Professor, Department of Biological & Ecological Engineering, OSU, Corvallis, OR	
5:00	RAFFLE PRIZES (must be present to win), COMPLETE CE FORM, CONFERENCE ADJOURN	

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Registration Form

Northwest Groundwater Conference

Holiday Inn Express Hotel & Suites Pasco-Tri Cities, WA - 4525 Convention Place, Pasco, WA 99301

Monday, March 6th & Tuesday, March 7th On-line registration www.agwt.org/events

	Both days	Day 1 only	Day 2 only
General Registration	<input type="checkbox"/> \$425	<input type="checkbox"/> \$250	<input type="checkbox"/> \$250
Employees of AGWT Corporate Members (\$250+Level)	<input type="checkbox"/> \$400	<input type="checkbox"/> \$225	<input type="checkbox"/> \$225
Full-Time Students(ID required at registration)	<input type="checkbox"/> \$120	<input type="checkbox"/> \$80	<input type="checkbox"/> \$80
Exhibit Table (6-foot table)(Personal registration <u>not</u> included)	<input type="checkbox"/> \$300		
Download of presentations (in PDF format)	<input type="checkbox"/> \$ 30		
Sunday March 5 th Aquifer recharge & ASR Field Tour	<input type="checkbox"/> \$ 50	Student tour fee	<input type="checkbox"/> \$ 0

(Field Tour only available with conference registration)

SPONSOR:

Sponsor Levels: \$3,000 \$2,000 \$ 1,000 \$ 500

\$1,000 and above sponsors have the option of a complimentary registration or exhibit table.

Please choose: complimentary registration **OR** exhibit table

EXHIBITOR: Exhibit Table (personal registration below also required) \$ 300

Please call the AGWT (800) 423-7748 if you have questions, need an invoice, or if you would like to discuss providing financial assistance for this event in some other way, such as sponsoring lunch or the reception.

(Conference registration includes 2 lunches, breaks, and reception)

Total

Sponsorship & exhibit opportunities listed on the Trust's website – www.agwt.org/events

PAYMENT: **Check** *[Make checks payable to: American Ground Water Trust]*

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