Current groundwater water issues in the State of Washington
Effective & economic well design and operation
(Conference/workshop - 8:00am to 4:30pm)
Monday, Oct 23, 2017—Red Lion Hotel Seattle Airport
18220 International Boulevard, Seattle, WA 98188
An American Ground Water Trust education program

Who should be there?
Groundwater managers, utility supply professionals, well contractors, pump installers, water well equipment suppliers, water well owners, end-users and operators of high-yield water wells, groundwater specialists, water supply engineering & design consultants, water supply permitting and water quality regulatory officials

WATER RIGHTS TRANSFER
LEWIS MCCORD PRIVATIZATION
GROUNDWATER SOURCE RESILIENCE
INJECTION WELLS FOR STORM WATER
“HIRST DECISION” - BUILDING PERMITS
COLUMBIA BASIN AQUIFER STORAGE RECOVERY
WASHINGTON WELL CONSTRUCTION REGULATIONS
DEEP WELL DRILLING AND INSTALLATION CHALLENGES
WELL HYDRAULICS: PUMP SELECTION TO MAXIMIZE YIELD
MAINTAINING AND OPERATING 700 WELLS IN BERLIN, GERMANY
HOW TO SELECT INTELLIGENT PUMP VARIABLE FREQUENCY DRIVES

Morning Plenary Session Seattle/Tacoma Program

7:30am – 8:00am REGISTRATION (coffee & pastries)

8:00am - 8:15am
OPENING REMARKS – PROGRAM OBJECTIVES
Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

8:15am – 8:55
WELL CONSTRUCTION PROGRESS IN WASHINGTON
Scott Malone, State Well Construction and Licensing Coordinator, Dept of Ecology, Olympia, WA

8:55am - 9:35am
UNDERGROUND INJECTION WELLS FOR STORM WATER MANAGEMENT
Christopher Martin, Water Quality Program, WA Department of Ecology, Olympia, WA

9:35am - 10:15am
THE “HIRST DECISION” ON BUILDING PERMITS
Carl Einberger, Senior Hydrogeologist, Aspect Consulting, Seattle, WA

10:15am – 10:35am BREAK

10:35am – 11:15am
WHATCOM COUNTY V. HIRST, FUTUREWISE, et al. (WA Supreme No. 91475–3)
Jill Dvorkin, Attorney, Municipal Research and Services Center (MRSC), Seattle, WA
### Afternoon Session – Seattle/Tacoma Program Option 1

<table>
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<th>Time</th>
<th>Session</th>
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| 1:10pm – 1:50pm | PREPARING JOINT BASE LEWIS MCCHORD WATER SYSTEM FOR PRIVATIZATION  
Leah Anderson, Military Construction Project Manager, USACE Seattle District, Seattle, WA  
Jim Bailey, National Well Services Director, Shannon & Wilson, Seattle, WA |
| 1:50pm – 2:30pm | WATER RIGHTS TRANSFER PROCESS  
Stephen Thomas, Hydrogeologist, Shannon & Wilson, Seattle, WA |
| 2:30pm – 3:10pm | STATUS OF COLUMBIA BASIN ASR PILOT STUDY  
Joel Purdy, Associate Hydrogeologist, GeoEngineers, Tacoma, WA |
| 3:10pm – 3:25pm | BREAK |
| 3:25pm – 4:00pm | GROUNDWATER SOURCE RESILIENCE- PLANNING AND MONITORING FOR FUTURE UNCERTAINTY  
Steve Nelson, Senior Hydrogeologist, RH2 Engineers, Bothell, WA |
| 4:00pm – 4:30pm | DEEP WELL DRILLING AND INSTALLATION CHALLENGES  
Robert Stadlei, Rotary Division Manager, Holt Drilling Services, Edgewood, WA |

### Afternoon Session – Seattle/Tacoma Program Option 2

**What you will learn:**

- Practical, cost-effective solutions that work to maximize well yields
- Well design and construction criteria to optimize return on investment
- Matching pump selection to meet required water delivery expectations
- Yield /drawdown data that help to diagnose declining well performance
- Effects of biological growth and chemical deposition on well encrustation
- How to extend the asset value of wells by proactive maintenance programs
- Calculations to measure changes in well & pump efficiency and operation costs
- Latest technologies and equipment for pump controls and well-field operation software
- Selection of solution options (mechanical and chemical) to rehabilitate wells and restore yield
- Solutions to water quality in new well construction design and in modifications to existing wells

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| 1:10pm – 2:20pm | THE BASICS OF WELL HYDRAULICS (FROM AQUIFER TO WELL TO PUMP)  
SELECTION AND MAINTENANCE OF PUMPS FOR MAXIMIZING WELL YIELD/ COST BENEFITS  
David Kill, Training Consultant, Xylem Goulds Water Technology, St. Paul, MN |
| 2:20pm – 3:10pm | INTELLIGENT PUMP VARIABLE FREQUENCY DRIVES MAXIMIZE PRODUCTION AND EFFICIENCY  
Dan Peters, Applications Engineer, Yaskawa America, Inc., Cypress, CA |
| 3:10pm – 3:25pm | BREAK |
| 3:25pm – 4:25pm | METHODS FOR IMPROVING WELL PERFORMANCE  
Jim Bailey, National Well Services Director, Shannon & Wilson, Seattle, WA |
| 4:25pm – 4:30pm | WRAP UP – FINAL QUESTIONS AND CONTINUING EDUCATION SIGN-OUT |

SCROLL DOWN FOR REGISTRATION
**SEATTLE GROUNDWATER CONFERENCE/WORKSHOP (October 23, 2017)**
- or register on-line at [www.agwt.org](http://www.agwt.org)

**EARLY BIRD RATES MUST BE PAID IN FULL BY SEPTEMBER 28, 2017**

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<td>Early Bird Registration – Paid by 09/28/2017</td>
<td>$235</td>
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<td>Early Bird – AGWT Corp Member or Gov’t – Paid by 09/28/2017</td>
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<td>PDF of Presentations (Post Conference) – Attendee Pricing</td>
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**PAYMENT**
- ☐️ CHECK [payable: American Ground Water Trust] [Total $.............................]
- ☐️ AMEX  ☐️ Visa  ☐️ MasterCard  ☐️ PO

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**HOW TO REGISTER**

- **Mail:** American Ground Water Trust, 50 Pleasant Street, Concord, NH 03301
- **Phone:** (800) 423-7748 (9am-4pm eastern)
- **Fax:** (603) 228-6557
- **Register on line**
  - [http://www.agwt.org/events or click here](http://www.agwt.org/events) (if using online)

**Cancelation policy – see website**

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Credit Card or PO No. __________________________ Expiration ______

Cardholder Name ________________________________

Registration Name ________________________________

Title/Position ________________________________

Company/ Organization ________________________________

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City __________________ State ______________ Zip ________________

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