



# WELL & PUMP TECHNOLOGY WEBINAR FOR DESIGNERS, OPERATORS AND OWNERS OF WATER WELLS



An American Ground Water Trust Webinar  
American Ground Water Trust is a 501(c)(3) non-profit education organization

Tuesday, December 22, 2020

**Program for municipal, agricultural, and industrial end-users of high-yield wells**

MAKE SURE YOU MAXIMIZE YIELD FROM YOUR WATER WELLS

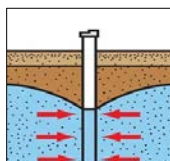
Morning session 8:00-10:45am (MST)

Climate change, economic growth and new water use regulations are increasing competition among municipal, agricultural and industrial users for groundwater resources. Maintaining well efficiency to maximize yield and secure long-term supply sustainability is a key objective for all groundwater-based supplies. To minimize O & M pumping costs and achieve maximum water yield, pump owners must follow state of the art technology in well design, construction and operation. This webinar provides a great learning opportunity for water well owners, water supply operators, utility managers, water management consultants, hydrogeologists, water supply engineers, irrigators and well and pump contractors. The webinar will explain how to maximize the economic return on pumped groundwater by correct pump selection, well operation and the use of real-time data to effectively match well pumping to aquifer conditions and water demands.

## Continuing Education

Approved for Colorado Water Well Construction & Pump Installation Contractors – Course #2020-01-053-A, 2.5 Hrs  
Certificate of Attendance available for all attendees upon completion of CE Form

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## ~~ Webinar Details ~~

7:55 – Log-in available for morning session – code provided via email to registered participants

8:00am–10:45am - Webinar morning session

### TECHNICAL AND ECONOMIC ISSUES RELATED TO WATER WELL PERFORMANCE

Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

[The combined effects of well design & construction, pumping efficiency and aquifer characteristics influence the data used to decide on management strategies for sustainability. There is no one-size-fits-all when it comes to water wells and pumping operations. In the US, 80 billion gallons of water a day is withdrawn from aquifers via pumps from 16 million active water wells at a daily cost in excess of ten million dollars.]

### WELL HYDRAULICS – ESSENTIAL BACKGROUND TO OPTIMIZE WELL AND PUMP EFFICIENCY

David Kill, P.E. Training Consultant, Xylem Goulds Water Technology, St. Paul, MN

[Because water pumping is a major cost for irrigators and municipalities, maintaining efficiency in water systems is key to profitability and cost reduction. The presentation will explain and define the key hydraulic terms that are used in well efficiency calculations. The flow dynamics through rock fractures or screens into well bores and into pump intakes is an important basis for well design.]

9:15-9:20 5-minute break

### DECLINING WELL YIELD PROBLEMS – CAUSES, DIAGNOSIS AND REHABILITATION SOLUTIONS

Neil Mansuy, Vice President, Technical Services, Subsurface Technologies Inc., Kansas City, MO

[Well rehabilitation and maintenance guidelines for maintaining water quantity and quality. Biological growth combined with mineral build-up combine to restrict flow from aquifer to well. Why, when and where does encrustation restrict flow from aquifer to well? How are problems best diagnosed and remediated? What are the economic benefits of routing preventive maintenance to maximize yield and longevity of high yield wells?]

10:45 - End of Webinar – Complete Continuing Education Documents & Evaluation Form

## ~ PRESENTER PROFESSIONAL BACKGROUND ~

### Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

Andrew Stone is a hydrogeology graduate from University College, London. He has over thirty-five years of groundwater experience in Africa and the U.S. as a university professor, groundwater consultant and groundwater advocate & educator. From 1990 to 2003, he taught an annual course on Groundwater Protection Policy at Antioch New England University. In recognition of his work in promoting groundwater resource education in the US, he received the 1998 National Ground Water Association “Oliver Award” for outstanding contributions to the groundwater industry.

### David Kill, P.E., Training Consultant, Xylem Goulds Water Technology, St. Paul MN

Mr. Kill is a Registered Professional Engineer and has a BS in Agricultural Engineering from the Univ. of Minnesota. He joined Johnson Screens in 1969 and became Regional Manager in 1974. In 1979 he joined the Fluid Systems Division UOP in the reverse osmosis water treatment business in San Diego, CA as Director of Marketing. He rejoined Johnson Screens in 1981 as Environmental Products Manager. In 1988, he founded Recovery Equipment Supply, a supplier of products for ground water monitoring and remediation. In 1996, he joined Goulds Pumps ITT and was promoted to Regional Commercial Business Manager in and Regional Market Development Manager in 2004. He was the 2005 NGWA McElhiney Distinguished Lecturer and presented “Well Efficiency Is Not a Myth” to over 20 water well contractor conventions.

### Neil Mansuy, Vice President, Technical Services, Subsurface Technologies Inc, Kansas City, MO

Neil has over 34 years of extensive, worldwide well problems and rehabilitation experience. He has served as the Vice President – Technical Services at Subsurface Technologies Inc. since 1999. Prior to that, he was employed with Layne Geosciences Inc. for nine years as an aquifer and well rehabilitation specialist. His professional experience includes the assessment of well problems and recommending cost-effective solutions for thousands of wells across the U.S. and around the world. Neil has provided solutions to hundreds of wells, aquifers and water systems with “unsafe” bacterial results. He has the unique combination of extensive multidisciplinary understanding of well problems and the experience to recommend the most cost-effective solutions. Neil’s workshop presentations cover all aspects of well problems and solutions related to lost capacity and water quality problems. He authored the book, “Water Well Rehabilitation,” Lewis/CRC Press. Neil earned a MSc degree in Microbiology from the University of Regina, specializing in iron-related bacteria and causes of well plugging.



# Well & Pump Technology Webinar

Tuesday, December 22, 2020 ~ 8:00-10:45am MST

## Registration Form



Registration and payment can be made on-line at [www.agwt.org/events](http://www.agwt.org/events)

Registration \$40 ☐

Continuing Education Units (Check if applying for credit) ☐

**For organizations with more than one attendee, call for group discount prices – (800)-423-7748.**

**Please send in separate registrations for each person participating in the webinar.  
Instructions for webinar log-in will be sent on receipt of registration.**

All registrants will be emailed pdf copies of the presenter PowerPoint slides a few days after the webinar.  
These pdf files contain detailed information about the presentation topics and are for the personal use of webinar registrants.

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Concord, NH 03301-4073

**FAX:** (603) 228-6557

**TEL:** (603) 228-5444

### **? QUESTIONS:**

Call: (800) 423-7748

9:00-4:00pm (Eastern Time)

Email: [trustinfo@agwt.org](mailto:trustinfo@agwt.org)

### **AMERICAN GROUND WATER TRUST**

The AGWT was formed in 1986 as a non-profit education organization with the mission of promoting interest and awareness in groundwater issues. The AGWT's conference, workshop and webinar programs and educational materials:



- ◆ Communicate the environmental and economic value of groundwater
- ◆ Showcase groundwater science and technology solutions
- ◆ Increase citizen, community and decision-maker awareness
- ◆ Facilitate stakeholder participation in water resource decisions
- ◆ Promote efficient and effective groundwater management