

RIVERBANK WATER SUPPLY SYSTEMS MAXIMIZING AMERICA'S ALLUVIAL AQUIFERS

DESIGN, CONSTRUCTION, OPERATION AND MAINTENANCE OF UNCONVENTIONAL WATER
SUPPLY SYSTEMS, NON-TRADITIONAL WELLS AND RIVERBANK WATER SUPPLY SYSTEMS

AN INFORMATION EXCHANGE CONFERENCE

Thursday November 2nd 2017, Louisville, Kentucky

Louisville Water Tower Park
3005 River Road, Louisville, KY 40207



Hosted by Louisville Water Company
Convened by: American Ground Water Trust
[A (501)(c)(3) education non-profit organization]
www.agwt.org

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DESCRIPTION:

An intense one-day information-exchange program about science, engineering and economic issues related to extracting groundwater from unconsolidated alluvial aquifers. The program will showcase case studies from experts in design, construction and operation of vertical wells, slant wells, collector wells and galleries. Discussion will include the characteristics of alluvial aquifer hydrogeology that influence design options, how site conditions influence construction and installation costs and how operation costs of water treatment and system maintenance compare with direct surface water supply options.

BACKGROUND

Unconsolidated sand and gravel aquifers are typically developed utilizing conventional vertical water wells. But what if the aquifer is relatively thin or large quantities of water are required and available space is limited? Many engineers and planners have turned to more unconventional means to develop the water supply necessary for their cities and customers. This one-day program focuses on alternative water supply strategies designed to tap these precious resources. This program is for well owners, irrigators, consultants, engineers and designers, planners, well operators, government officials and decision makers involved in all aspects of water supply.

The fish that were in the Nile died and the Nile became foul, so that the Egyptians could not drink water from the Nile So all the Egyptians dug around the Nile for water to drink Exodus 7, 21-24)

7:30 – 8:15 REGISTRATION (coffee & pastries)

8:15 – 8:30 BACKGROUND TO THE PROGRAM

Andrew Stone, American Ground Water Trust, Concord, NH

John Zalla, President and CEO, Building Crafts, Inc., Wilder, KY - Principal Event Sponsor

8:30 – 9:05 WELCOME TO LOUISVILLE

THE DESIGN, CONSTRUCTION AND OPERATION OF THE LOUISVILLE RIVERBANK WATER SUPPLY SYSTEM

Kay Ball, Engineer, Manager – Advanced Treatment Technology Program, Louisville Water Company, Louisville, KY

9:05 – 9:40

APPLICATION OF DIFFERENT TYPES OF WATER SUPPLY STRATEGIES: VERTICAL WELLS, SLANT WELLS, COLLECTOR WELLS, INFILTRATION GALLERIES ETC.

Doug Hunter, PG, Senior Scientist, Cox-Colvin & Associates, Inc., Plain City, OH

9:40 – 10:15

SELECTING THE APPROPRIATE WATER SUPPLY STRATEGY WHEN THE “EASY WATER” HAS BEEN TAPPED

Martha Silks, PG, Associate/Hydrogeologist, Leggette, Brashears & Graham, Inc., North Kansas City, MO , and

Frank Getchell, PG, Senior Vice President, Leggette, Brashears & Graham, Inc., Upper Saddle River, NJ

10:15 – 10:35 BREAK

10:35 – 11:10

FACTORS INFLUENCING CONSTRUCTABILITY AND COST OF COLLECTOR WELL SYSTEMS

Greg Slone, CPG, Collector Well Services Manager, Building Crafts, Inc., Wilder, KY

11:10 – 11: 45

ANGLED/SLANT WELL DESIGN AND CONSTRUCTION FOR ALLUVIAL AQUIFERS

Dave Traut, Vice-President/Master Well Contractor, Traut Companies, Waite Park, MN

11:45 – 12:20

GROUNDWATER MODELING APPLICATIONS IN DESIGNING AND ESTIMATING YIELDS OF WELL SYSTEMS IN ALLUVIAL AQUIFERS

David J. Dahlstrom, LPG, PG, Senior Hydrogeologist, Barr Engineering, Minneapolis, MN

12:20 – 1:20 LUNCH (Included) Sponsored by Building Crafts, Inc.

1:20 – 1:55

A GLOBAL PERSPECTIVE ON RIVERBANK/ALLUVIAL AQUIFER GROUNDWATER SYSTEMS

Sam Stowe, General Manager, Ranney Collector Wells, Layne Christensen Company, Columbus, OH

1:55 – 2:30

EVALUATING CAPACITY AND YIELD OF ALLUVIAL WATER SUPPLY SYSTEMS (vertical wells, slant wells, collector wells, infiltration galleries)

D. Douglas Haney, Sr., PE, PG, Hydrogeologist/Project Manager, HDR, Olathe, KS

2:30 – 2:45 BREAK

2:45 – 3:20

RELIEF WELL FAILURE AND REPLACEMENT, CANNELTON, INDIANA LEVEE SYSTEM

Rick Hockett, PG, Geologist, Louisville District, US Army Corps of Engineers, Louisville, KY

3:20 – 3:55

BENEFITS OF RIVERBANK FILTRATION SYSTEMS ON WATER QUALITY

Vic Kelson, PhD, Kelson Engineering, Bloomington, IN

3:55 – 4:00 WRAP-UP Q & A