Storing the Future:

MANAGED AQUIFER RECHARGE SEEPS IN

A webinar that will keep you up to date on the state of practice and emerging issues

Webinar – Wednesday, October 12, 2022 - 10:30pm – 4:40pm (USA - Eastern time zone)

An information-exchange webinar program from the American Ground Water Trust

Drought and changing weather patterns are causing water managers and groundwater end-users to take increasing notice of the potential for Managed Aquifer Recharge (MAR) to increase their water management options. This webinar is an excellent one-stop-shop opportunity for a rapid update of how MAR and Aquifer Storage Recovery (ASR) technology is being applied to solve problems.

BACKGROUND:

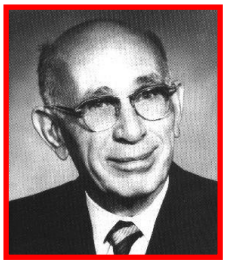
Managed Aquifer Recharge (MAR) is a broad topic that includes surface spreading recharge, Aquifer Storage and Recovery (ASR), Riverbed Filtration (RBF) and several other related strategies. Supplementing aquifers with MAR has been used in areas of high-water demand and limited aquifer recharge for over 50 years. Interest in MAR has been slowly building for decades but extended drought, and the resulting increased pressure on groundwater resources have created a surge in interest on methods to store excess water and extend groundwater resources. This webinar is intended to offer an overview of the major methods of MAR and give a snapshot of its use in selected markets in the US. The goal is to provide participants with a broad overview of the state of the practice and a clear indication of future trends. While the focus is on the US, the concepts and case histories presented will be relevant around the world and international participation is encouraged.

PARTICIPATION:

This webinar will inform hydrogeologists, engineers, agency staff and regulators and groundwater end-users (municipal, agricultural, and commercial) about the latest in MAR and its growth as a water management tool. Examples from areas with long histories in the use of MAR and areas that are expanding the boundaries of its use will provide clear examples of the use of MAR as a water management tool. The virtual format is intended to reduce the cost and time requirements for participants to make it easier to catch up on MAR and learn if it might be a useful tool to address groundwater concerns. While the content will be appropriate for those new to the subject, experienced professionals will find useful content and ideas.

FORMAT:

The webinar has been separated into a methods section, that focuses on the broad areas of MAR, and a case histories section that focuses on the history and current trends of application in selected regions. This structure is intended to make it easier for participants to focus on their primary area of interest, either from the technical “how to” perspective or to get an overview of what is being done and where. Presenters will make live presentations via Zoom with Q&A opportunity after each speaker and at the conclusion of the webinar. All presenters will share technical expertise and provide information, advice, guidance, and insight in an inclusive, generic, and non-commercial information-exchange format.



“…… previous to development by wells, aquifers are in dynamic equilibrium. Discharge by wells is a new discharge superimposed upon a previously stable system and it must be balanced by an increase in recharge or by a decrease in discharge or by loss of storage in the aquifer, or by a combination.”

C.V. Theis, 1940

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CONTINUING EDUCATION:

The American Ground Water Trust will issue a certificate of participation to registered attendees who are logged-in for the duration of the webinar and complete a Continuing Education Form.

RECOGNITION:

The American Ground Water Trust thanks Collier Geophysics for help in organizing this webinar.

WEBINAR PRESENTERS:

A summary of the professional background of webinar presenters is listed at www.agwt.org/events

AMERICAN GROUND WATER TRUST (Non-profit education organization)

Ground Water Information, Awareness & Education Since 1986…… This is what we do:

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

♦ The American Ground Water Trust - Aquifer Storage Recovery and Related Programs ♦

Since 1999, the American Ground Water Trust has convened over 40 conference programs that have featured aquifer storage. The AGWT"s mission-focus on resource sustainability and effective groundwater management is the rationale for our promotion of information exchange programs on groundwater management issues and our showcasing of MAR and aquifer storage technologies.

There is a strong ongoing need to **<u>educate the public</u>** and **<u>capture the imagination of water managers</u>** about the economic and environmental benefits of creative use of sub-surface water resources. Ongoing drought conditions and predictions of the hydrologic implications of climate change more than justify increased attention by water planners and resource managers and their scientific, engineering, and legal advisors to the benefits of managed aquifer recharge.

WEBINAR SCHEDULE WEDNESDAY, OCTOBER 12, 2022

USA, 10:30am (Eastern) 9:30am (Central) 8:30am (Mountain) 7:30am (Pacific)
Program schedule times below are Eastern Standard Time

10:30 START OF WEBINAR – ZOOM ACCESS CODE PROVIDED TO REGISTRANTS

10:30 – 10:40 (Eastern time zone)
- WEBINAR INTRODUCTION: PRE-HISTORY AND HISTORICAL ANTHROPOGENIC RECHARGE OF AQUIFERS
  Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

10:40 11:10
- THE MANY FORMS AND SCALE OF MAR: AN INTRODUCTION TO MAR AND WATER RECYCLING
  Bill Alley, PhD, Science and Technology Director, National Ground Water Association, Westerville, OH

11:10 – 11:40
- OVERVIEW OF APPLICATIONS OF MAR/ASR TECHNOLOGY AND A SUMMARY OF ISSUES OF CONCERN
  June Mirecki, PhD, PG, Senior Hydrogeologist, US Army Corps of Engineers, Jacksonville, FL

11:40 – 12:10
- A REVIEW OF SURFACE SPREADING AND FLOOD MAR APPLICATIONS
  Mike Milczarek, President, Geosystems Analysis, Inc. Tucson, AZ

12:10 – 12:40
- EXAMPLES OF RIVERBANK FILTRATION IN THE US AS A METHOD OF MANAGED AQUIFER RECHARGE
  Henry C. Hunt, PG, Regional Director, Roscoe Moss Company, Charleston, SC

12:40 – 1:10
- PFAS PRESENCE IN SOIL AND LEACHING POTENTIAL TO GROUNDWATER, WITH A FOCUS ON MAR
  Mark L. Brusseau, PhD, Professor, University of Arizona, Tucson, AZ

1:10 – 1:40
- GEOPHYSICS FOR MAR: SITE CHARACTERIZATION IS A CRITICAL FIRST STEP IN ASSESSING RECHARGE FEASIBILITY
  John Jansen, PG, PGp, PhD, Collier Geophysics, West Bend, WI

1:40 – 2:00 BREAK

2:00 – 4:30
UPDATE ON CURRENT PROJECTS AND FUTURE HYDROLOGIC, PERMITTING, AND OPERATIONAL CHALLENGES FOR MAR IN CALIFORNIA, FLORIDA, TEXAS, COASTAL VIRGINIA, AND THE PACIFIC NORTHWEST

- MAR IN CALIFORNIA
  Timothy K. Parker, PG, ChG, Consultant, Ramboll, Sacramento, CA
- MAR IN FLORIDA
  Robert Maliva, PhD, PG, Principal Hydrogeologist, WSP USA, Fort Myers, FL
- MAR IN THE ATLANTIC COASTAL PLAIN, VIRGINIA
  Dan Holloway, PG, Hampton Roads Sanitation District, Virginia Beach, VA
- MAR IN TEXAS
  Robert Mace, PhD, PG, Chief Water Policy Officer, Meadows Center, Texas State University, San Marcos, TX
- ASR IN THE PACIFIC NORTHWEST
  Walt Burt, RG, LHG, Principal Hydrogeologist, GSI Water Solutions, Inc., Portland, OR

4:30 – 4:40
CLOSING COMMENTS
Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH

"MAR is a proven strategy for integrated water management and will become of increasing importance throughout our drier, hotter world. Wake-up decision-makers! Check MAR feasibility for your small or large-scale water storage solutions, with low capital costs, and no evaporation losses."

4:40 ADJOURN

WEBINAR REGISTRATION FORM

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Registration total $ _____

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