Agenda

Presented by Michael A. Gallo, P.E.

Pump Station Overview
- Historic background of pump stations
- Why construct a pump station?
- Types of pumps and uses
- Pump station design standards, permits, governance
- Examples of pump applications
- Who pays for it?...and exactly what are we paying for?

Hydrology, Hydraulics, and Fundamentals of Fluid Flow
- Hydrologic balance, precipitation, hydrologic cycle, rational and NRCS curve number methods
- Hydraulics and open channel flow
- Closed channel/pressure flow/total dynamic head

Piping, Valves, Fittings, and Losses in Pumping Systems
- Minor losses
- Major losses
- Equivalent length

Arctic Utility Design and Construction
- Arctic and subarctic environments
- What exactly is permafrost?
- Arctic water sources
- Arctic structures

Pump Selection in Wastewater Pumping Stations
- Pump types
- Pump curves and pump selection
- Wet well/dry well pump station
- Pumping system scenarios

Wet Well Sizing for Sewer Pump Stations
- Variable vs. constant speed pumps
- Detention times
- Volume calculation

Bypass Pumping

Drinking Water Distribution and Treatment
- Water distribution systems
- Hardness
- Taste and odor
- Determination of flows
- Storage

Electrical Systems, Motors and Controls
- Power supply and electrical power system data sheets
- Motor types
- Emergency backup power
- Instrumentation and control systems

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Pump Station Design, Construction and Rehabilitation
Live, Interactive Webinar - Thursday, February 1, 2024

HalfMoon Education Inc.
PO Box 278
Altoona, WI 54720-0278

Learning Objectives

You'll be able to:

Explore types of pumps and pump applications.

Review hydrology, hydraulics and fundamentals of fluid flow.

Examine piping, valves, fittings and losses in pumping systems.

Select components for arctic applications, wastewater pumping stations, and drinking water distribution and treatment.

Consider wet well sizing for sewer pump stations.

Evaluate electrical systems, motors and controls.

HalfMoon Education Live Webinars

Pump Station Design, Construction and Rehabilitation

Live, Interactive Webinar - Thursday, February 1, 2024

Examine pump station design standards, permits and governance

Learn about hydrology, hydraulics and fundamentals of fluid flow

Study piping, valves, fittings and losses in pumping stations

Examine Arctic utility design and construction

Explore wet well sizing for sewer pump stations

Discuss pump selection in wastewater pumping stations

Examine electrical systems, motors and controls

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Architects
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6.0 AIA LU|HSW

International Code Council
.6 CEUs (Building)

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8:30 - 9:00 am CST

Break
12:00 - 12:30 pm CST

Morning Session
9:00 am - 12:00 pm CST

Afternoon Session
12:30 - 4:00 pm CST

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Faculty

Michael A. Gallo, P.E. *Consulting Engineer, Greeley and Hansen*
Mr. Gallo is a civil engineer with more than 20 years of experience in the areas of water, wastewater, and stormwater infrastructure design, rehabilitation, and construction. He has worked in both consulting and government and is currently a consulting engineer with Greeley and Hansen. He is skilled in the design of wastewater and storm water conveyance systems, USACE levee systems, combined sewer overflow design, water and sewer rehabilitation, construction, and contract management. He is a past NASSCO certified CIPP inspector, and he is a licensed professional engineer in the state of Virginia and in Washington, DC.

Credit Information

This webinar is open to the public and is designed to qualify for 6.0 PDHs for professional engineers and 6.0 HSW continuing education hours for licensed architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

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Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the quiz that follows the course (multiple attempts allowed).

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Additional Learning

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Carbon Credits and Carbon Markets Defined
- Friday, January 12, 2024 | 10:00 am - 12:00 pm CST

Design and Construction on Expansive Soils
- Tuesday, January 16, 2024 | 9:00 am - 4:00 pm CST

Residential Space Heating Options: Design and Installation
- Wednesday, January 17, 2024 | 9:00 am - 4:00 pm CST

2021 International Residential Code: Structural Construction
- Tuesday, January 23, 2024 | 12:00 - 4:30 pm CST

AIA Contract Document Workshop
- Tuesday, January 23, 2024 | 8:30 am - 4:30 pm CST

More Sustainable Asphalt Pavements
- Tuesday, January 23, 2024 | 10:00 am - 1:00 pm CST

Building Classification, Occupancy and Mixed Occupancies
- Wednesday, January 24, 2024 | 9:00 am - 4:00 pm CST

Cold-Climate Heat Pumps: Dos and Don'ts
- Wednesday, January 24, 2024 | 10:00 am - 12:00 pm CST

Tall Timber Frame Construction
- Wednesday, January 24, 2024 | 9:00 am - 5:30 pm CST

Adaptive Residential Use of Commercial Buildings
- Thursday, January 25, 2024 | 9:30 am - 4:25 pm CST

Cold-Formed Steel Frame Design for Small Commercial Buildings
- Thursday, January 25, 2024 | 8:30 am - 4:30 pm CST

Moisture Management and Protection Strategies for Mass Timber Buildings
- Thursday, January 25, 2024 | 12:00 - 2:00 pm CST

How to Design and Construct a Cantilever Retaining Wall
- Monday, January 29, 2024 | 1:00 - 3:00 pm CST

How to Analyze Common Construction Defects and Failures
- Wednesday, January 31, 2024 | 2:00 - 4:00 pm CST

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