



The
Dewatering
Institute

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The Dewatering Institute in collaboration with Griffin Dewatering Present:

TDI Training Webinar Series

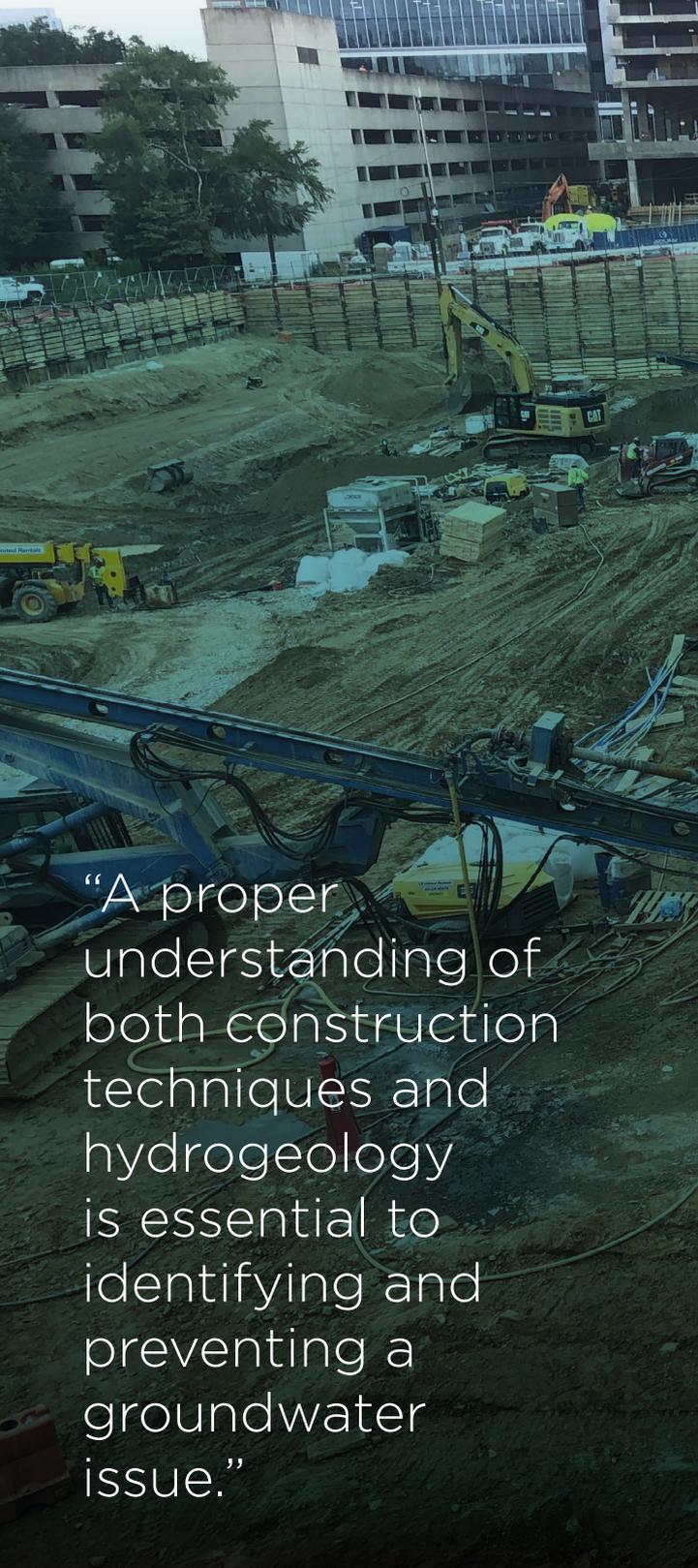
Construction dewatering: Theory & practice.

A six week webinar training course
presented by Griffin Dewatering

July & August 2021

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“A proper understanding of both construction techniques and hydrogeology is essential to identifying and preventing a groundwater issue.”



Course Description

In the world of construction, there are many factors and risks to consider, some of them having the potential to quickly stop a project in its tracks. One such risk is groundwater.

Encountering groundwater on a project site can be incredibly challenging, especially when it is not anticipated. In the right (or wrong) geology, high groundwater can lead to excavation instability, project delays, and ultimately increased project costs both for the General Contractor and the Owner of a project. A proper understanding of both construction techniques and hydrogeology is essential to identifying and preventing a groundwater issue.

This course is designed to help participants identify if they have a groundwater problem and will provide some basic tools for estimating how much water may need to be pumped and what types of systems can be utilized to remove groundwater before it becomes an issue. The course will also discuss several techniques for properly sizing pumps used in dewatering applications and will touch on how discharge water from dewatering is treated to meet local compliance regulations.

Course format

The course will be presented in webinar format online via Zoom. Each weekly webinar will consist of a 90 minute session including a presentation, training part as well as ample time for Q&A to discuss items in more detail with the presenter. In order to receive the certificate of completion at the end of the course, each participant will need to complete at least 5 out of 6 sessions.

Session 1: Introduction session: Free Taster Session

23rd June

- > So, You Think You Have a Groundwater Problem? Key Steps to identifying if dewatering is required.
- > Information required to assess and design a proper dewatering system.
- > Typical types of systems utilized.
- > Case study

Session 2: Theory: Aquifer Hydrology & Dewatering Analysis

7th July

- > Covers various aquifer types, soil conditions, and key aquifer parameters.
- > Permeability estimation methods.
- > Most common dewatering analytical techniques (Thies, Thiem and Jacob Assumptions)
 - Radius of influence, flow and drawdown estimation.
- > Brief overview of groundwater modeling (numerical solutions)
- > Example calculation and case study

Session 3: Construction Dewatering Techniques

14th July

- > Wells - review of dewatering wells, typical construction methods and applications
- > Wellpoints
- > Eductors
- > Open pumping / sumping
- > Typical dewatering scenarios and solutions
- > Case studies

Session 4: Dewatering Field Testing

21st July

- > Review of geotechnical borings and comparing field observations
- > Soil Identification in the field
 - Overview of grain size/soil type, USCS Classification, soil types
- > Pump Testing Techniques and Analysis
 - Types of aquifer tests, distance drawdown vs. Time drawdown
- > Case studies

Session 5: Temporary Water Treatment

28th July

- > Groundwater Contaminants
 - Identified contaminants and nuisance contaminants
- > System Design
 - 4 Key Pieces of Information
- > Typical Systems & Design Considerations
- > Project experiences

Session 6: Pump Design and Selection

4th August

- Pump Design and Selection
- > Types of Pumps
 - Displacement and dynamic
 - > Pump Priming
 - Submersible, standard Centrifugal, self Priming, dry Priming
 - > Pumps for Different Types of Construction Dewatering
 - Deepwells, wellpoints, eductors, open Pumping/Sumping
 - > Pump Curves
 - Flow/Head

Presenters

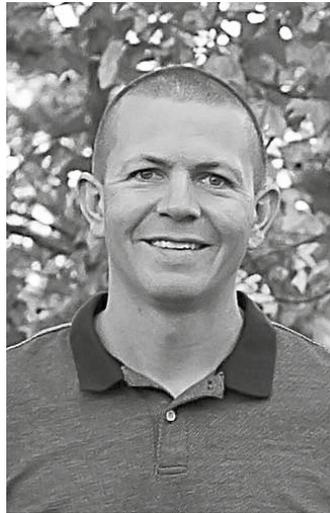


**Bronson Gerken -
Technical Director
Griffin Dewatering:**

Bronson Gerken, P.G. has been in the dewatering industry for over 9 years and is the Technical Director of the dewatering design department at Griffin Dewatering. He obtained his Bachelor's in Geology from the University of Nebraska at Omaha and is a licensed geologist in the States of Kansas, Nebraska, California, and Washington.

Bronson has been involved in numerous groundwater control projects across the United States and currently leads a team of geologists and engineers in designing groundwater control systems to meet each of their clients needs. Being in the dewatering industry, Bronson has had the opportunity to be

involved with multiple aquifer pumping tests, has become proficient at creating and understanding groundwater modeling, and has come to understand proper water well construction and design.



**Chris Peschang -
Vice President Griffin
Dewatering**

Chris has been in the groundwater and water treatment industry for over 17 years and is the Vice President of Business Development for Griffin Dewatering. Chris has been involved in numerous groundwater supply, groundwater control, and water treatment projects throughout the continental United States. Chris is a licensed Professional Engineer, Well Driller & Pump Installer.



**Jerry Soto -
Vice President Griffin**

Jerry Soto has been in the dewatering industry for over 35 years and is the Vice President of Purchasing for Griffin Dewatering.

Jerry has been involved in numerous ground water control projects across the United States and Mexico. Growing up in the Dewatering Industry, Jerry has been involved in not only Purchasing and Management but was also active in the manufacturing of pumps and equipment as well as the installation and troubleshooting of all types of pumping and dewatering projects.



**Christoffel Botha -
Executive advisory
council member (TDI)
- Course facilitator:**

Christoffel has specialised in Construction Dewatering and Groundwater Control for over 17 years. During this time, he has designed, installed and operated more than 350 dewatering systems in Africa, Asia, Europe, North America and the Middle East. He has held key executive level positions working for client, consultant, main contractor and specialised sub-contractors. His project experience extends through small dewatering projects to leading design and construction teams of some of the world's largest dewatering contactors and consultancies. He has a passion for training and knowledge sharing in his field of expertise. He also serves as an Executive Advisory Council member for The Dewatering Institute.

Session dates & Timings

Course timings: 4PM - 5:30PM (SAST) - 9AM - 10:30AM (GMT -5)

- Free Intro session – 23rd June
- 5 sessions 7th July, 14th July, 21st July, 28th July and 4th August

Cost: \$ 500 for 6 sessions (including a certificate of completion)

- 20% discount to TDI Members
- 10% discount for groups of 3 or more delegates from the same company and early bird rate (registered and paid before the 25th of June)

Contact details:

To register and for more information on the course please contact us

Registration link:

 dewateringinst.com/event/tdi-griffin-training-course

 www.dewateringinst.com

 admin@dewateringinst.com



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About Griffin Dewatering

The course is presented by TDI founding member Griffin Dewatering. Griffin Dewatering is a specialised dewatering contractor based in the United States. They have been manufacturing equipment and designing dewatering systems for complex groundwater problems in the construction industry for over 85 years. They are experts in pre-construction analysis, construction dewatering, groundwater treatment and the operation and maintenance of dewatering system.

For more information visit www.griffindewatering.com

About The Dewatering Institute



The Dewatering Institute (TDI) was founded as a way for stakeholders in the industry to come together and develop the dewatering industry across the entire project life cycle, from concept designs right through to successful project completion. TDI's purpose is to serve all its members and collaborators including project owners, government bodies, engineers, contractors, manufacturers and suppliers. As the institute develops, its aim is to provide a platform for members that will promote best practices in dewatering.