



**UNIVERSITY**

POWERED BY **OSU**

FOCUSED ON THE FUTURE

# DRILLING BASICS FUNDRAISING PACKET



## NGWA University Powered By OSU

### Executive Summary

A collaboration between the National Groundwater Association (NGWA) and Oklahoma State University (OSU) aims to address a projected shortfall of geoscience workers and improve access to groundwater that is essential for people around the world.

NGWA and OSU are creating a series of groundwater training courses delivered online with future development of classroom and field courses. The program will offer career development opportunities for industry professionals, university students and entry-level workers, and can prepare them for rigorous certification exams or could lead to university degrees. These courses will improve the safety and skills of drilling industry members and systematically address the critical shortage of professionals in the industry.

### The Impact of the Drilling Industry

- **44% of Americans** rely on water from wells provided by the groundwater industry.<sup>1</sup>
- The major increase in our economic output over the last **100 years** is due to wells providing energy from the hydrocarbon industry.<sup>2,3</sup>
- Clean water **increases life expectancy by 20+ years.**<sup>4,5</sup>

### Issue at Hand

The national geoscience workforce faces **an estimated 135,000-person shortfall starting in 2022**, due to an aging workforce combined with an increased demand for geoscientists.<sup>6</sup> This estimate was made prior to the global pandemic of COVID-19.

### Initial Steps

- **Currently developing Drilling Basics Online**, a series of five, eight-hour sessions created by industry professionals, scientists, engineers and experts in online education. The course covers the skills and competencies tested for on groundwater drilling exams.
- OSU and NGWA are excited the initial funding for the Drilling Basics is in place and has been provided by private donors and industry sponsors. **NGWA and OSU have already taken active steps in addressing this critical need.**
- NGWA and OSU have the **established infrastructure** for this program and have gained interested collaborators both nationally and internationally.
- Additional land-grant universities may deliver course content in the field, and the program may even **expand internationally** based on demand.

NGWA and OSU have partnered together to address this critical need and maintain the infrastructure to launch a nation-wide online training program. Additional support is needed so we can act NOW. The future of the groundwater industry is depending on us.

Promotional Video: [https://ostate.tv/media/Introducing+Drilling+Basics+Online/1\\_2dgn8ix6](https://ostate.tv/media/Introducing+Drilling+Basics+Online/1_2dgn8ix6)



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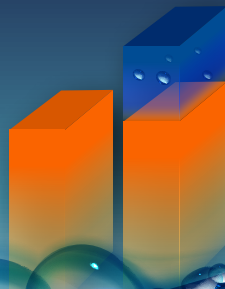
Learn more at:

<https://okla.st/ngwau>

## SIGNIFICANCE OF THE DRILLING INDUSTRY

The major increase in our economic output over the past 100 years is due to wells providing energy from the hydrocarbon industry.

**44% of Americans** rely on water provided by the groundwater industry.



Clean water increases life expectancy by **20+ years.**



## ISSUE AT HAND

The national geoscience workforce faces a

# 135,000

person shortfall starting 2022.\*

\* Shortfall is due to an aging workforce combined with an increased demand for geoscientists. This estimate was made prior to the global pandemic of COVID-19.

INTRODUCING

## DRILLING BASICS ONLINE

This fully online training program is designed to address the critical shortage of qualified drilling professionals.



Only **40 hours** of coursework

Completion of Drilling Basics Online could lead to certifications or even college credit.

The online platform has

### unlimited capacity



The platform scales up as demand grows!

### High-quality curriculum

created by OSU professors and geoscience professionals with

### 25+ years of experience.



## Drilling Basics Online

### Executive Summary

Drilling Basics Online is a series of groundwater training programs delivered entirely online. Developed collaboratively through NGWA and OSU, the intent of the program is to provide groundwater training for industry professionals, university students and entry-level workers, which can lead to certifications or university degrees as career development. This will improve the safety and skills of industry members and systematically address the critical shortage of professionals in the drilling industry.

### Curriculum

The five courses that make up Drilling Basics Online and number of hours to completion are listed in the table below. Each course will have interactive programming where **students learn at their own pace**, which is key for working professionals. Each course will be developed by an instructional designer in collaboration with NGWA industry experts and OSU faculty. The projected timeline includes a pilot program beginning in 2021 with the full program to launch in 2021. General costs associated with Drilling Basics lies near \$100 thousand.

Drilling Basics Online Course Titles	Hours for Completion
General Workplace Safety	8
Geology and Groundwater Basics	8
Hydrogeology and Fluid Mechanics of Drilling	8
Rig Types and Well Design	8
General Drill Rig Safety	8
<b>Total Hours for Completion</b>	<b>40</b>

### Benefits of Drilling Basics Online

- **Delivered entirely online** through OSU’s online learning platform, this training is entirely self-paced to accommodate those working at home, the currently unemployed or non-drilling days for workforce employees. **There is an unlimited capacity** able to accommodate high volumes of participants at any given time.
- **There is an established audience** for this program. With the current number of NGWA members and required drilling exams in 16 states, projections for participation in Drilling Basics Online predicts participation among **1,500 – 5,000 people within the first two years alone**.
- OSU & OK Energy Producers Alliance economists anticipate energy sector job losses of 10-20,000 in OK alone due to COVID-19.<sup>7,8</sup> Oklahoma Oil & Gas companies reported over \$2 billion in losses for the second quarter of 2020, and this only represents 6 companies.<sup>9-13</sup> This program **could potentially help decrease oil & gas unemployment** by provided the training necessary to transition to the groundwater industry.
- **NGWA and OSU have established the infrastructure** for the training program as well as gained interested partners (American Association of Petroleum Geologists, Society for Exploration Geophysicists and the National Centre for Groundwater Research and Training in Australia). Additional land grant universities may be utilized to deliver course content in the field, and the program may **expand internationally** based on demand for the generated offerings.

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