



Preparing for the NHDES Subsurface Bureau ISDS Installer Exam

April 2024

Recommended Preparation for the Exam

Examinees must demonstrate a working knowledge of RSA 485-A:29-35 and Env-Wq 1000 and ability to read approved Individual Sewage Disposal Systems (ISDS) plans in New Hampshire. Examinees will be asked to:

- Demonstrate knowledge of septic system installation procedures and practices including, but not limited to, Env-Wq 1004, Env-Wq 1008 thru Env-Wq 1010, Env-Wq 1012 thru Env-Wq 1021 and Env-Wq 1023.
- Demonstrate knowledge of septic system installation procedures and practices including the instrumentation used and the appropriate steps needed to install an ISDS.
- Demonstrate the ability to read and understand all aspects of ISDS plans including site plans, contours, plan profiles, cross-sections and details.
- Demonstrate an understanding of the Design Intent and how it relates to surrounding grade (Env-Wq 1003.13.)
- Demonstrate an understanding of acceptable field adjustments from approved plans (modifying ISDS component locations and elevations).
- Demonstrate the ability to use an engineer's scale to measure distances on a plan and lay out ISDS components objects with a drafting compass.
- Demonstrate the ability to read contours and interpolate between 2-foot contour intervals to an accuracy of 6 inches vertically.
- Demonstrate the ability to draw contours at 2-foot intervals in given survey spot elevations.
- Demonstrate an understanding of the required setbacks between ISDS components and receptors (Env-Wq 1008.04).

Although RSA 485-A and Env-Wq 1000 govern the installation of ISDS in New Hampshire, they do not encompass all information required to successfully install an ISDS or pass the exam. Examinees are encouraged to review approved plans through the [NHDES OneStop website](#) to familiarize themselves with an approved ISDS plan and practice relating what is shown on a plan and what is observed on a site. Working under the supervision of a licensed ISDS installer will assist examinees in obtaining a deeper understanding of the trade.

Recommended Reading

- [NH RSA Chapter 485-A \(Water Pollution and Waste Disposal\)](#)
- [NHDES Env-Wq 1000 \(Subdivision and Individual Sewage Disposal System Design Rules\)](#) Hard copies available at the NHDES Office (29 Hazen Drive, Concord, New Hampshire 03302-0095). Please call for applicable fees and mailings (603) 271-3501

Exam Format

Only the exam is provided to the examinees. The exam is open book and examinees are encouraged to bring any materials that may assist them including (but not limited to):

- Pen/pencil/eraser (bring spares as the exam room may not have a sharpener)
- Engineers scale with a 1:20 scale
- Drafting/geometry compass
- Calculator
- Watch or some method of keeping track of time other than a phone.
- Copies of applicable laws and NHDES administrative rules that govern ISDS design in New Hampshire (bookmarked to reference key areas) including, but not limited to RSA 485-A:29-35, Env-Wq 1000.

Examinees should obtain copies prior to the exam as they will not be available at the time of the exam.

- Scratch/scrap paper

Points are not deducted for spelling errors, but answers must be legible to receive credit. Partial credit may be awarded on short answer questions for correct, but incomplete answers.

Other than a calculator, the use of electronics (including phones, laptops, tablets) is prohibited. If phones are brought into the exam room, they need to be turned off or placed off the desk, screen down and silenced. If an examinee needs to make or receive a phone call, they must be escorted out of the exam room.

The exam is divided into two parts. Examinees will have three (3) hours to complete the exam using that time at their discretion.

Part 1 consists of approximately 40 multiple-choice, true/false and short-answer/fill-in-the-blank type questions. Examinees will be asked to answer questions pertaining to NH RSA-485-A and Env-Wq 1000 including ISDS installation procedures and requirements in the following general categories:

- Sewer Pipes, Septic Tanks and Effluent Pipe
Example: The approved plan calls for a single 2,000-gallon septic tank, but you need to use two tanks to avoid an underground electric line. What is the minimum size for the first tank?
- Effluent Disposal Areas (includes only types listed in Env-Wq 1000)
Example: (TRUE/FALSE) Retaining walls/foundations can be located within the EDA fill slopes.
- General Site
Example: The terms “mottling” and “redoximorphic features” often appear in test pit logs. What do these phrases refer to?
- Administrative Rules
Example: How often do you need to renew the DES ISDS Installer license? What other requirements must be met within that period before you can renew?

Part 2 consists of approximately 30 questions that will require short answers and basic sketching. Examinees will be asked to answer questions in the following general categories:

- Reading and understanding ISDS profiles
- Re-calculating ISDS elevations from adjusted dimensions

- EDA Layout from swing-ties
- Reading, Scaling and Understanding Site Plans
- Understanding the ISDS Design Intent
- Sketching contours based on spot grades

To pass the NHDES ISDS Installers exam, examinees must pass both parts of the exam. There is no time allotment for each portion of the exam and, for this reason, examinees that pass one part, but not both, must take the exam again in its entirety.