

About Civil Engineers



Employment Outlook

This occupation is expected to grow at nearly the same rate (9.6%) between 2008 and 2018 as the statewide average (9.1%) for all occupations. An estimated total of 877 job openings are expected over the 10-year period, mostly due to the need to replace retiring workers.

Wages

Hourly wages for civil engineers in 2011 range from \$24.48 for entry-level workers to \$51.11 near the top of the pay scale. The average hourly wage is \$36.58. This translates to \$76,079 for a full-time, year-round position.

Selected Skills

- Calculate stress, load or capacity of structures and materials
- Design and lay out construction projects
- Apply structural and safety principles to buildings

License Requirements

In Oregon, civil engineers must be registered as professional engineers to perform their work. Civil engineers achieve this certification by passing an exam. Visit oregon.gov/OSBEELS/registration.shtml for registration and exam information.

Learn More About Green Jobs...

QualityInfo.org/Green



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Civil Engineers

GREEN Jobs in Oregon



GREEN JOBS

Civil engineers perform duties in planning, designing, and overseeing construction and maintenance of building structures and facilities. These may include roads, airports, bridges, harbors, irrigation projects, power plants, or water and sewage systems.

GREEN JOBS

Not all civil engineers are “green.” Green workers have essential job duties in at least one of the five categories included in the definition of a green job. Green jobs work to:

- Increase energy efficiency
- Produce renewable energy
- Prevent, reduce, or mitigate environmental degradation
- Clean up and restore the natural environment
- Educate, consult, and provide other services that support the above

Day in the Life of a Civil Engineering Associate: Jeremiah Hess

What do you do in a typical day?

I work for a metropolitan water bureau as a hydraulic engineer. I work with the computerized model of the city’s drinking water system. I identify water demands, such as those in new subdivisions. I study fire hydrant flow requirements, how much water can we provide, and systems that need improvement, like old pipes. I recommend improvements and create projects out of those recommendations.



Does your job help benefit the environment? How is it considered green?

We consider sustainability and stewardship of resources of all projects. This includes the financial, environmental, and social costs. We reduce or eliminate the use of, and exposure to, hazardous and toxic materials. We provide information, tools, and training for employees to enable them to provide water services in a sustainable manner.

What is the most challenging part of your job?

It is challenging to work with limited resources. For example, engineers design and manage pump stations, storage reservoirs, and pipelines to efficiently deliver a safe supply of drinking water. If there is a problem with any of those systems, I need to recommend a solution. It is challenging to balance the costs of a multi-million dollar project with our limited resources of material and people.

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Education and Training

Workers must have a bachelor’s degree to gain the necessary skills for this occupation. Those with a master’s degree have a competitive advantage in this labor market. Training programs for this occupation include, but are not be limited to:

General Civil Engineering

- Oregon State University
- Oregon Institute of Technology
- Portland State University
- University of Portland

Water Resources Engineering

- Oregon State University

Environmental Engineering

- Portland State University

Visit QualityInfo.org/Green for more information about green jobs in Oregon.

