Engineering Law

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History of Engineering Law

Oregon began registering Engineers in 1919.

The Fourth State to do so.

Preceding States were Wyoming, Louisiana, and Florida.
Wyoming (the first) was mostly concerned with water rights and water supply issues.

The stated intent of the law was that “All the surveying and engineering pertaining to irrigation works should be properly done”
ORS 672.020
Practice of engineering without registration prohibited; seal required.

(1) In order to safeguard life, health and property, no person shall practice or offer to practice engineering in this state unless the person is registered and has a valid certificate to practice engineering issued under ORS 672.002 to 672.325.
ORS 672.005
Definition of the Practice of Engineering

(a) Performing any professional service or creative work requiring engineering education, training and experience.
ORS 672.005
Definition of the Practice of Engineering

(b) Applying special knowledge of the mathematical, physical and engineering sciences to such professional services or creative work as consultation, investigation, testimony, evaluation, planning, design and services during construction, manufacture or fabrication for the purpose of ensuring compliance with specifications and design, in connection with any public or private utilities, structures, buildings, machines, equipment, processes, works or projects.
ORS672.060 Exceptions

There is a very long list of exemptions.

However the only other design profession specifically exempted is Registered Architects practicing architecture.
Overlap with Geologists / MOU

Both Boards acknowledge that such qualified individuals, acting within their statutory responsibilities, should not be restricted from activities in the secondary field which are incidental to their primary field of professional practice. Registrants will be guided and constrained by their respective Board’s Code of Professional Conduct [Code of Ethics] and relevant legal interpretations provided by appropriate Counsel.
Application to Stream Restoration Projects

Some items listed in “Stream Corridor Restoration Principals Processes and Practices” that likely include engineering:

• Hydraulic and/or Hydrologic Analysis
• Stability Evaluation
• Preparation of Plans and Specifications
Hydraulic and or Hydrologic Analysis

Hydraulic and hydrologic scientific studies are not necessarily Engineering. However, such studies that are intended for use in design likely are Engineering.
Stability Evaluation and Design

Notwithstanding the overlap with Geology, the completion of a technical evaluation of slope stability for the purposes of design falls under Geotechnical Engineering and is Engineering.
Preparation of Plans and Specifications

The preparation of plans and specifications where the documents represent projects that have engineering content is also Engineering.
Q. Is the seal of the Certified Professional in Erosion and Sediment Control (CPESC) or the seal of the Certified Professional in Storm Water Quality (CPSWQ) an acceptable certification for a construction document?

A. There is a violation of law if the documents are sealed only by the CPESC or CPSWQ and the work involved engineering and the individual is not a registered professional engineer or architect qualified to perform this work.
On larger streams or where erosion is severe, an effective approach involves a team effort that includes expertise in soils, biology, plant sciences, landscape architecture, geology, engineering, and hydrology.
What Isn’t Engineering

Proscriptive solutions that are not selected based upon Engineering analysis or judgment and that are generally applied.

However, if the health and safety of the public is involved, this may not be true.
Regardless of the type of project, any site grading in excess of 50 cubic yards will require a grading permit. Obtaining a grading permit requires the submittal of a grading plan prepared by a Professional Engineer.
By incorporating Engineering in the phrase Bioengineering, the implication is that Engineering is included. The use of Engineer and Engineering is limited to work completed by a Registered Engineer.
An Aside about GPS

Definition of Surveying includes:

Making surveys that involve horizontal or vertical mapping control or geodetic control.