

**WAC 308-15-053 What are the specialty licenses?** The types of specialty licenses are engineering geologist and hydrogeologist.

(1) **Engineering geologist.**

(a) **Elements of the engineering geologist specialty practice.** The practice of engineering geology involves the interpretation, evaluation, analysis, and application of geological information and data, as follows: Geotechnical soil and rock units are designated, characterized, and classified, using standard engineering soil and rock classification systems. Site characteristics are interpreted based on surface landforms, current and past geologic processes, the distribution and strength characteristics of soil and rock, and ground and surface water. Geotechnical zones, domains or layers are designated based on soil and rock strength characteristics, common landforms, related geologic processes, or other pertinent factors. Proposed land development or modification is evaluated and, where appropriate, analyzed to estimate the likely behavior of soil and rock under static and dynamic conditions. Proposed modifications may include such things as vegetation removal, using various types of materials in construction, applying loads to shallow or deep foundations, constructing cut or fill slopes and other grading, and modifying ground and surface water flow. The effects of surficial and deep-seated geologic processes are evaluated and analyzed to estimate the potential effect on public health, public safety, land use, or proposed development.

(b) **Typical engineering geologic applications and types of projects.** Engineering geology is applied from conception through planning, design, construction, maintenance, and, in some cases, reclamation and closure. Planning-level engineering geologic work is commonly conducted in response to forest practice regulations, critical areas ordinances, and the State Environmental Policy Act. Typical planning-level engineering geologic applications include timber harvest planning, proposed location of residential and commercial developments and other buildings and facilities, and alternative route selection for roads, rail lines, trails, and utilities. Site-specific engineering geologic applications may include, for example, evaluation of and recommendations for cuts, fills, and tunnels for roads, trails, railroads, and utility lines; foundations for bridges and other structures, retaining walls and shoring, dams, buildings, water towers, slope stability evaluation and stabilization, channel and shoreline stabilization, and other structures; rock bolt systems; rockfall protection systems; blasting; and other major earthwork projects such as for aggregate sources and landfills.

(2) **Hydrogeologist.**

(a) **Elements of the hydrogeologist specialty.** The hydrogeologist license is a specialty license that requires having a geologist license. The practice of hydrogeology involves the study, interpretation, and application of the movement of water and other fluids through geologic materials, the mechanical, physical, chemical, and thermal interaction of fluids with geologic materials, and the transport of energy and chemical constituents by fluids in the subsurface.

(b) **Typical hydrogeologic applications and types of projects.** Typical applications include regional or basin groundwater resource, quantity and quality, characterization, development and protection of groundwater resources, subsurface characterization; design of vadose and saturated zone environmental cleanups; design, chemical testing, and construction supervision of test, production, recharge, injection, remediation, dewatering and resource protection wells; fluid flow and transport modeling; dewatering system design; and evaluation of poten-

tial impacts caused by past, current, or future activities on the quantity and quality of groundwater and soil gas, and the range of potential mitigations.

[Statutory Authority: RCW 18.220.040, 18.220.050, and 43.24.086. WSR 19-22-034, § 308-15-053, filed 10/31/19, effective 12/1/19. Statutory Authority: RCW 18.220.040, 18.220.050. WSR 05-01-174, § 308-15-053, filed 12/21/04, effective 1/21/05.]