

Dear Senator Riley,

As a former member of the Oregon State Board of Geologist Examiners (OSBGE), I respectfully submit this written testimony in Opposition to Senate Bill 44. The primary intent of this Bill is to permit OSBGE to allow mentorship of geologists by engineers. Although mentorship by engineers is not directly referenced in SB 44, this is the end effect as stated by OSBGE. If allowed, OSBGE intends to allow this mentorship in Rule.

On February 27, 2018, I sent an email to OSBGE in opposition to this proposal. A copy of this email is presented below, and I would like to include this email as part of my testimony.

I sincerely appreciate this opportunity to present this testimony. Please feel free to contact me with any questions.

Regards,

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From: Chris Humphrey <geohumphrey@yahoo.com>
To: VALENTINE Christine * OSBGE <christine.valentine@oregon.gov>; "osbge.info.@oregon.gov" <osbge.info.@oregon.gov>
Sent: Tuesday, February 27, 2018 4:02 PM
Subject: Mentorship of Geologists by Engineers

Dear Board,

In your Fall 2017 newsletter, the Oregon Geologist Examiner, you requested input related to the possibility of revising ORS 672.555 and ORS 672.565 to allow prospective engineering geologist candidates to be mentored under Oregon Professional Engineers (PEs) or Geotechnical Engineer (GEs) instead of Certified Engineering Geologists (CEGs). I am OPPOSED to this proposal for the following reasons:

Currently, ORS 672.565(2) states "An applicant for certification in a specialty shall meet all of the requirements of a registered geologist and any special requirements as the board may establish by rule, including a written examination. In addition, the applicant's seven years of geological work shall include one of the following: (a) A minimum of three years performed under the supervision of a registered geologist who is certified in the specialty for which the applicant is seeking certification; or (b) A minimum of five years' experience in responsible charge of geological work in the specialty for which the applicant is seeking certification." This statute was established to ensure that prospective engineering geologists would have sufficient mentorship under Certified Engineering Geologists (or Engineering Geologists in Responsible Charge) to adequately learn the public practice of engineering geology, to demonstrate competency, and to protect the public. Your proposed change would do none of this.

Some could argue that PEs or GEs who supervise geologists could be considered "in responsible charge of the geological work" and thereby are qualified to mentor geologists. However, the Board has already clarified this confusion in Section V(A)(3)(a) of the Professional Practices Guidance document. Oregon PEs or GEs cannot be considered "in responsible charge of geologic work" because they cannot legally

publicly practice geology or engineering geology in Oregon without being a RG or CEG; or being covered under an ORS 672.535 exemption. Oregon GEs can practice in the overlap area between geology and engineering, which is generally considered to be the practice of Geotechnics. However, when engineers practice geotechnics it is considered the practice of engineering, and when geologists practice geotechnics it is considered the practice of engineering geology. Since engineers do not have an exemption from the geology law (ORS 672.535), they cannot legally practice geology in Oregon, cannot be in responsible charge of geologic work, and cannot supervise geologic work.

As indicated above, PEs or GEs cannot mentor individuals in the public practice of geology or engineering geology without practicing geology/engineering geology themselves, which is not legal in Oregon. They can mentor individuals in the overlap between engineering and geology, however this work is considered engineering and not geology, and is regulated by OSBEELS, not OSBGE. The scope and quality of this engineering work is also regulated by OSBEELS, and therefore OSBGE has no ability to define the quality of mentorship or the content of the practice being taught. This is especially problematic because in many engineering firms geology staff are limited in the scope of work they can do. Many engineers believe that geologists (and engineering geologists) should not work in, or are not qualified to work in, the overlap area between geology and engineering. Therefore, many geologists never get a chance to even learn geotechnics or other engineering geology related fields. Without being mentored under qualified CEGs the Board cannot ensure that prospective engineering geologists are being adequately educated in engineering geology or even in the overlap area between engineering geology and engineer.

The Professional Practices Guidance document states, "Another common question asked is whether engineering geologic work can be completed by a RG if a registered Professional Engineer (PE) is also involved in the project? The answer is if the work done by the RG is engineering geology, then the RG must be a CEG or under the supervision of a CEG to do the work. A RG without a CEG certification is not considered qualified to work as a responsible professional geologist on a civil works project." If the Board were to allow engineers to mentor geologists, then the Board is implying (or suggesting) that geology combined with engineering is equivalent to engineering geology. However, the Board is already on records stating that this is not true.

In Oregon, the GE specialty is established under Rule and not Statute. Therefore, the definition of geotechnical engineering, its requirements, and even its continued existence can be changed without the approval of the Oregon legislature or the Board. Additionally, for the Board to allow mentorship under a GE, there would need to be a definition of the geotechnical engineering specialty in Statute. Currently the only definition is in Rule (80-040-0040). Because the Board does not have the authority to regulate the practice of engineering, the Board would have to work with OSBEELS to get this definition established in Statute. Alternatively, the Statute could simply reference the definition in Rule, and this is also very problematic. If OSBEELS decides to change their Rule language, the intent of the geology Statute may change. This would essentially give OSBEELS the authority to change the intent of geology statutes, therefore OSBEELS would have the authority to regulate the practice of geology in Oregon, at least to a limited extent. Currently, mentorship of geologists is not part of the practice of GEs in the engineering Rules. I believe that OSBEELS would have to modify their rules to ensure that GEs are qualified to mentor geologists in the practice of engineering geology.

Although there is an overlap between engineering geology and engineering, this does not mean that the entire practice of engineering geology falls within this overlap. Also, CEGs practice within the overlap is very different than how engineers practice within the overlap. CEGs use their understanding of geologic processes and their ability to 'interpret the earth' as the foundation in solving geotechnical problems. Whereas geotechnical engineers rely more on laboratory and in-situ testing and their calculations. Geology is very much of an art, based on the geologist's knowledge of geologic processes. Having an engineer mentor a geologist is like forcing an artist to paint by the numbers.

I do not believe that the problem of declining CEG applicants has to do with the lack of CEG mentors. The big reason applications have declined in recent years is because of Washington States newly adopted geology licensure law. Many of our past CEG applicants came from Washington, and this

is no longer the case since they have their own EG licensing program now. In fact, allowing engineers to mentor geologists could actually hurt CEG employment, since many firms keep seasoned CEGs on staff to help mentor younger geologists so they can later become certified. However, there is a more long-term problem that the Board has not been willing to address in recent years. The practice of engineering geology has been under attack for decades by many in the geotechnical engineering community, and it has been more and more difficult for CEGs to practice within their field. Many geologists who are interested in engineering geology and geotechnics realize that their future may be better if they just become engineers. In the past, engineering geologists would get their BS in geology and then get a MS specializing in engineering geology. However, today people interested in practicing engineering geology move to the engineering departments to get their MS in engineering. They do this because they believe that there's no future working as an engineering geologist. I fear that this trend will only accelerate if the Board agrees to allow engineers as mentors to our young geologists. By doing this the Board is essentially saying there is no difference between engineering geology and geotechnical engineering; and is telling our geology students and young practitioners that they might as well become engineers. This will not only be sad for the future of engineering geology but it will also endanger the public. Engineering geologists have a unique ability to solve civil works problems with limited subsurface and testing data. No level of drilling and testing can substitute for qualified engineering geologic interpretation. Without engineering geologists, mentored by 'qualified' CEGs, the public will be at greater risk.

Sincerely,

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