

TIME RECEIVED  
May 5, 2014 2:08:55 PM EDT  
05-05-'14 14:00 FROM-

REMOTE CSID

DURATION  
58

PAGES  
2

STATUS  
Received

T-049 P0001/0002 F-646



## PENNSYLVANIA FOREST PRODUCTS ASSOCIATION

301 Chestnut Street, Suite 102, Harrisburg PA, 17101  
Ph: 717-901-0420 800-232-4562  
Fax: 717-901-0360  
Email: [pfoa@paforestproducts.org](mailto:pfoa@paforestproducts.org)  
Web: [paforestproducts.org](http://paforestproducts.org)

May 5, 2014

Honorable Julie Harhart  
House P.O. Box 202183  
Harrisburg, PA 17120

### **RE: Opposition to HB 997 – Soil Scientist Licensing**

Dear Representative Harhart:

The Pennsylvania Forest Products Association opposes HB 997, which would require the licensing of soil scientists and impose further state requirements on a wide range of activities that involve interaction with the soil.

While it may be beneficial to use a professional soil consultant expert in some circumstances, there is no compelling evidence or public outcry for imposing licensing requirements and mandating the use of licensed soil scientists on the extensive list of activities covered by the bill's definition of 'practice of 'soil scientist'.

HB 997 will have a negative impact on thousands of individuals and businesses across the Commonwealth who will be prohibited from continuing to conduct business as they have done for decades. As Pennsylvanians continue to struggle with today's difficult economic climate, state government should not impose additional burdensome requirements which make it more difficult for its citizens to compete in the marketplace.

For example, the forestry community already effectively manages the temporary earth disturbance associated with timber harvesting and other forestry activities through the requirements of the Chapter 102 regulations and the development and implementation of erosion and sedimentation plans by trained foresters and timber harvesters. This performance is documented in the recent draft of DEP's 2014 Integrated Water Quality Monitoring and Assessment Report, which reports that only 0.13 percent of the impaired stream miles in Pennsylvania are attributed to forestry activities. There is no need to require that these forestry E&S plans be developed or reviewed by state licensed soil scientists, as proposed by HB 997.

We do know that HB 997 would impose significant additional regulatory requirements and costs on forest landowners and forestry operations that will be an impediment to the continued economic and job recovery of the state's forest products industry. We are also concerned about the availability of licensed soil scientists in rural regions of Pennsylvania and the potential for unnecessary delays to forestry operations.

## Testimony of the PA Society of Professional Engineers on House Bill 997

May 7<sup>th</sup>, 2014 House Professional Licensure

9:30 a.m., Room 60, East Wing

The PA Society of Professional Engineers (PSPE) opposes licensing soil scientists as unnecessary. First and foremost, Engineering is defined in Pennsylvania law as "***the application of the mathematical and physical sciences for the design of public or private buildings, structures, machines, equipment, processes, works or engineering systems, and the consultation, investigation, evaluation, engineering surveys, construction management, planning and inspection...***". Soil science is one of the physical sciences. When science is applied for the purpose of design that impacts the public's health safety or welfare, it is by definition "engineering". If the practice of one of the sciences does not impact the public health, safety or welfare, it would seem unnecessary to regulate those scientists via a licensure requirement.

The exception to this is geology. Pennsylvania has licensed geologists since the early 1990s. At that time, PSPE supported the bill to license geologists because the test to become licensed as a geological engineer had been discontinued. This created a void that the Society recognized. Today engineers can be licensed as geotechnical engineers (geological engineering and geotechnical engineering are not the same), so a similar rationale does not exist for licensing soil scientists.

PSPE also questions if the Legislature is prepared to create licensure for each of the many fields of science. Soil science is a subset of earth science which is a subset of the natural sciences. Other earth sciences include geophysics, hydrology, meteorology, physical geography and oceanography. Additional broad categories include astronomy, biology, chemistry, and physics; each of which may have subsets like the above mentioned earth sciences. The licensing of scientists holds the potential of vastly increasing the number of regulated professions. The committee should consider which of the sciences the legislature will **not** license.

Another point to consider is who hires soil scientists. According to Benjamin Shimberg, the leading author on state licensing issues, lawmakers should consider if the group to be licensed is typically hired by the general public or are they hired by other professionals who are better able to judge their qualifications without licensure. It's hard to imagine that soil scientists are hired by the average person very often. Professionals, like engineers, sometimes engage the services of soil scientists but do not feel the need for the state to indicate which ones are qualified.

Regarding House Bill 997 specifically, this legislation describes the "practice of soil science" to include many of the same activities that are performed by geotechnical engineers. Geotechnical engineering is a discipline of engineering in which one can become licensed. Geotechnical engineering is defined as follows:

*“Geotechnical engineering is a branch of civil engineering dealing with the behavior of earth materials, as well as their interaction with structures. Professional Engineers practicing in this field examine the soil and rock strata to determine their physical and chemical properties. Using this information, they design foundations and earthworks structures for buildings, roads, and many other types of projects. Classifications of such geo-materials by Professional Geotechnical Engineers, or staff under their direction, is used to assist in developing models to analyze specific conditions. Hence, it is important such soil and rock analysis and classification, as well as all associated physical and chemical testing, not be under the strict jurisdiction of soil scientists.*

*The goal of geotechnical engineering is to design soil and rock stabilization systems/structures/elements that maintain safety for the public. This may include ensuring that a building, bridge, dam or other structure and/or engineering works overlying unstable subsurface conditions (i.e., soft soils and/or poor quality bedrock conditions) will remain standing, or avoiding or mitigating the effect of potential earthquakes and existing or potential landslides on major road, structures, etc. Geotechnical engineers may also work on projects that deal with underwater soils, such as those affecting marinas or offshore platforms.*

*The geotechnical design process starts with a subsurface investigation, where soil samples and rock cores are procured using test borings. Geotechnical engineers will then examine the properties of the soil and rock, including its stability, the presence of air or rock pockets, its expansive or compressive properties, and the chemical makeup of the earth. This investigation allows them to determine the impact of disturbing the subgrade, as well as what steps should be taken to prepare the site for construction.*

*Once subsurface work is complete, a geotechnical engineering professional can use the results of this research to develop and present recommendations to provide for stable foundations. These generally subsurface structures, constructed of steel, concrete, masonry, and sometimes other materials, support and distribute the weight of the building/superstructure/pavement/appurtenance/etc. The design process by engineers include calculating the load of both building materials and the people inside. These systems sometimes must also allow for structure deformations, and accommodate ground movements and impacts from weather. Typically, the less stable subsurface conditions, as revealed during the investigation undertaken by the geotechnical engineer, require the construction of the most complex foundation systems. To allow the geotechnical engineer to accomplish these tasks, he must be allowed to use the tools, practices, tests and knowledge available to him. Some of these practices/tests, incidentally completed by geotechnical engineers and routinely used by them since the genesis of the profession in the early 20<sup>th</sup> century, would be removed from their toolbox and be placed under the sole jurisdiction of soil scientists via the proposed soil scientist licensing bill. This could unnecessarily cripple the geotechnical engineering profession.*

*Geotechnical engineers also design earth support structures to accommodate roads, tunnels, dams, and other projects. Whenever the earth is moved or excavated, support systems must be implemented to retain the earth so that it does not fail and affect nearby structures, or injure*

*construction workers or the public. Earthworks systems may include concrete or steel retaining walls, which physically retain the soil and prevent collapses or cave-ins. Other popular methods use a combination of tie-backs, deadmen and/or driven or bored piles. Temporary earthwork structures may be also be used to protect workers during excavation and underground work.*

*To practice as a geotechnical engineer, one must obtain an undergraduate engineering degree and be licensed by the state that one practices. While some universities may offer specialized geotechnical programs, most students will find only general civil engineering programs. Upon graduation, candidates may find work in the field, working under the supervision of a licensed engineer. To perform geotechnical design work without supervision, one must secure a Professional Engineer (P.E.) license in civil or geotechnical engineering. To obtain this license, the engineer must have several years of relevant work experience then pass a state-administered engineering exam.”\**

Not only does the bill’s definition of soil science encroach on the already regulated practice of licensed geotechnical engineers, the legislation appears to restrict professional engineers from practicing “soil science” unless they also obtain a license as a soil scientist. In essence, the bill would, in large part, prohibit geotechnical engineers from performing work that they are presently performing as licensed professional engineers. Presumably, geotechnical engineers who presently perform this work for clients would be required to hire a licensed soil scientist to do it if House Bill 997 were enacted. This cost would, of course, be passed on to the owner of the project. Worse yet, engineers who work in the geotechnical field could be disciplined under this act for practicing soil science without a license even if it were determined that the activity was incidental to their engineering, as many of such work elements have been for decades.

Presently, there are three different professions licensed under the Board for Professional Engineers, Land Surveyors and Geologists. It is the largest of the design professional boards at the Bureau of Professional and Occupational Affairs (BPOA). It oversees many times the licensees as either the architects’ board or landscape architects’ board. It also has perhaps the most complex make up of any licensing board as it includes representatives of all three professions, (nine total), three public members as well as the Commissioner of BPOA. Adding yet another profession and additional professional members would make an already unwieldy board even more so.

While there are many sections of the bill that present problems to the engineering community, I will point out one that should give soil scientists pause. The current licensees under this act are given great flexibility in meeting the continuing education mandates of the law. The license holders may engage in a wide range of educational or professional activities to meet the 24 professional development hours that are required for relicensure every two years. The Board does not pre-approve courses and allows the licensee to make the determination of whether a particular course relates to that individual’s professional practice. In contrast, House Bill 997 specifies that the only manner in which a soil scientist can meet the continuing education requirement is to complete a course offered by the Soil Science Society of America. The designation of this sole source provider of continuing

education runs counter to the user friendly approach taken for the other licensees under the Act and may well be the most restrictive continuing education provision in any licensing act in Pennsylvania.

In conclusion, the Society of Professional Engineers urges the Professional Licensure committee to oppose House Bill 997 and the concept of licensing the practitioners of the sciences in general. Thank you for your consideration of these remarks.