Submitted by **Richard G. Howe, P.G., C.P.G.**
Texas Licensed Geologist #27

Regarding the Texas Sunset Commission staff's recommendation for the abolishment of the Texas Board of Professional Geoscientists (TBPG) and the repeal of the Texas Geoscience Practice Act (Practice Act), I would like to respond to the issues that have been brought forth as the basis for their recommendations.

Issue No. 1 – *No complaints have been brought by the public, and history shows that there was no demand from the public to create the agency in the first place.*

Response: Regarding lack of complaints by the public, it should be noted that prior to the passage of the Professional Geoscience Practice Act, the only response available to the public for poor quality work that was not under the supervision of a regulatory agency like the Texas Commission on Environmental Quality (TCEQ) was to pay to have the work re-done and/or sue the professional (or firm) who performed the original work for damages.

Lack of public demand for a geoscience license was a result of lack of information on the part of the public regarding the specific nature of geoscience-related work. However, geoscientists recognized the need for licensing since they frequently saw the inadequate work product of individuals having insufficient training in geoscience concepts and techniques. Hence, geoscience professionals recognized the need for licensing to protect the public.

Issue No. 2 – *State Regulation of Geoscientists Provides No Measurable Public Benefit.*

Response: The existence of the TBPG and the Practice Act have indeed benefitted the public health, safety, and welfare by requiring geoscientists who practice before the public to have a base level of experience and education. Prior to the passage of the Texas Geoscience Practice Act, many unqualified individuals – having little to no education and training in geoscientific fields and applications – regularly and frequently performed various geoscience-related investigations which yielded erroneous results that had an adverse impact on property and health risk. These impacts included overlooking and/or misevaluating soil and groundwater contamination that affected the value of property and perpetuated risk to human health and included misidentifying and mischaracterizing geologic hazards such as surface faulting which yielded a direct threat to buildings, engineered structures, and human safety.

During my time in performing surface fault studies, I have frequently observed the inadequate and incompetent work of unqualified individuals. Specifically, this poor quality of work includes not recognizing a fault when present, failing to accurately delineate the fault and its ground deformation, and failing to provide needed information for engineering design. Surface faults have caused millions of dollars in property damage and loss, and they pose a risk to human life. The immediate threat to human life is related primarily to critical structures such as dams, bridges, and overpasses. Licensing ensures that professionals performing these studies not only have sufficient education and experience but it also emphasizes the liability that comes with such work.

I am often asked to follow up on the previous work of individuals who missed a fault or who were uncertain if one existed. Their work has sometimes allowed development to occur across a fault. In some instances, I have been able to identify the fault before the development was initiated. I have seen residential development that was adversely impacted despite a fault investigation having been performed.

Under the Geoscience Practice Act, I have perceived a decrease in the number of unqualified individuals performing fault investigations. Unfortunately, there is no statistical data showing the amount of incompetent and unqualified work before and after the passage of the Practice Act. And this is especially understandable since there was no quantitative benchmark of poor performance prior to the passage of the Practice Act.

Issue 3 – *The Board was not established in the first place to protect the Public, but primarily "to legitimize the profession" and to protect Geoscientists from the engineers and from untrained competitors.*

Response: The purpose of the TBPG was not to protect geoscientists and engineers from untrained competitors; rather, it was formed to administer the Geoscience Practice Act and thus safeguard the public from the uneducated, untrained, and unregulated practice of geoscience before the public. The practice of geoscience before the public addresses geologic conditions which negatively affect environmental contaminant transport and cleanup, groundwater availability and quality, engineered structures, and civil engineering projects. In particular, engineering projects include but are not limited to dams, pipelines, highways, levees, railroads, bridges, and tunnels.

My work involves identification of active surface faults along the Gulf Coast. Although these faults do not produce damaging seismic waves, the vertical and horizontal components of ground movement along faults will damage any engineered structure constructed across them unless they are identified and provisions are made to avoid a fault or compensate for the ground movement along it. The faults are not easily identifiable and require multi-stage approaches by a qualified geoscientist to identify them. Licensure of geoscientists allows professional engineers to rely on those qualified to perform this work.

Issue 4 – *Almost no geologists deal directly with the public – our clients are mainly organizations. Therefore licensing is not necessary for public protection.*

Response: This statement is totally erroneous since much geoscientific work is done for individuals. I myself have individual clients for whom I perform geologic studies. It should be pointed out that if the term "organizations" refers to governmental entities, businesses, and technical contractors such as engineering firms, the statement is correct to the extent that these "organizations" are part of the total clientele of geoscientists. However, the work performed for "organizations" can have direct impact on members of the public.

Issue 5 – *There are too many (50%) Texas geologists who are exempted from the requirement to get a license.*

Response: Texas is home to the largest concentration of geoscientists in the world. The majority of these are indeed in the petroleum industry and do not perform work that impacts the public health, safety, and welfare. Thus, petroleum geoscientists along with other geoscientists who are involved in the exploration and exploitation of natural resources do not need a license to practice within their application. However, licensure can be beneficial for those geoscientists associated with natural resources, especially when they deal with regulatory agencies such as the Texas Railroad Commission or the Texas Commission for Environmental Quality (TCEQ) that may oversee some particular area of activity that does impact public health and safety.

For the remaining geoscientists who practice before the public, their work does impact the public and therefore licensure is necessary. Although geoscientists who practice before the public are numerically in the minority of Texas geoscientists, their numbers and impact are still sufficient to warrant the need for licensure.

Issue 6 – *No meaningful enforcement action over the life of the Board.*

Response: The very existence of the Geoscience Practice Act and the TBPG serves as a strong deterrent to violations of rules and regulations that are applicable to geoscientists under the Act.

Meaningful enforcement action does not always require harsh responses on the part of the TBPG which often can correct violations via written reprimand.

Issue 7 – *More direct oversight of geoscientist' work is provided by other state agencies (Texas RRC, TCEQ), which renders ongoing state regulation of geoscientists unnecessary to protect the public.*

Response: Not all geoscience practice before the public falls within the purview of regulatory agencies and, consequently, the TBPG fills that void. Furthermore, the responsibilities of regulatory agencies such as TCEQ do not address ethical violations, do not require continuing education, and do not penalize geoscientists for technical incompetence whereas TBPG does.

An example of areas that are not governed by state agencies other than TBPG is geoscientific investigations involving geohazards such as surface faulting.

Issue 8 – *78% of CURRENT Texas PGs were Grandfathered, therefore did not take ASBOG, therefore there is no guarantee that they are, in fact, well-trained.*

Response: Although many Texas professional geoscientists are grandfathered, they did have to meet minimum requirements of education and experience as promulgated by the TBPG. These requirements, at the least, ensure a basic professional capability.

Additionally, it should be pointed out that some of the grandfathered PGs already had taken the ASBOG or other state required exams for licensing in other states.

Issue 9 – *The licensee population is steadily declining, from 6,600 in 2003 to 4200 in 2017.*

Response: Decrease in the number of geoscientists reflects petroleum geoscientists who relinquished their license because they either did not see a need for it as it pertained to their work or they left their profession entirely. The numbers that remain reflect a realization for the need for the license. As pointed out in the above response to Issue 5, the number of licensees who affect the general public is still substantial.

It was expected that the number of licensees would decrease from the initial number and would eventually plateau at a lower level. Despite the decline in licensees, the TBPG not only covers its operating costs from license fees, it also sends a surplus of funds to the state's coffers. After 14 years (2003-2017), 4,200 licensees is still a healthy number which reflects the importance and viability of the need for licensing.

Issue 10 – *Less restrictive means exist to ensure the safe practice of geoscience (i.e. certification by AIPG, AEG, AAPG, etc.).*

Response: While certification by professional peer groups is important, especially in states where licensing is not available, they do not possess the legal enforceability that state licensing has.

Issue 11 – *Only "Just over half of the states regulate the practice of geoscience or geology, while all states regulate engineers and architects."*

Response: The regulation of geoscience practice before the public has grown over the last few decades as states come to realize the impact that geoscience has on the public health, safety, and welfare. In a nation where population growth intersects with geologic factors, the demand for competent geoscientists will likely increase, and this no less so for Texas.

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August 15, 2018

Texas Sunset Advisory Commission
P.O. Box 13066
Austin, Texas 78711
Email: sunset@sunset.texas.gov

RE: **Response to the Sunset Advisory Commission staff recommendation regarding continuance of the Texas Board of Professional Geologists and the Texas Geoscience Practice Act.**

Dear Chairman Birdwell and Members of the Commission:

It has come to my attention that the staff of the Texas Sunset Advisory Commission (Commission) has recommended the abolishment of the Texas Board of Professional Geoscientists (TBPG) and the repeal of the Texas Geoscience Practice Act (Practice Act). I believe such recommendations are misguided and, if legislatively effected, will prove to be a grave disservice to the people of Texas.

Whereas there are several points of consideration listed by the Commission's staff in their recommendations, I will herein limit myself to a statement regarding the public benefit of the Geoscience Practice Act and the TBPG as I have seen it through my own professional experience.

My career in geoscience spans more than forty-two years and I have worked in applications of geology that deal directly with the public health, safety, and welfare; namely, Environmental Geology, Hydrogeology, and Engineering Geology. Most of my practice before the public has been in Engineering Geology where I have worked on geologic hazards which include slope stability, groundwater impact on construction, sink holes, and surface faults. My main expertise is surface faulting along the Gulf Coast of Texas and Louisiana.

Prior to the passage of the Practice Act, I frequently observed the work and reports of individuals who were not qualified to perform jobs requiring knowledge of geological concepts and techniques. Specifically, these were people who were either not trained or who were inadequately trained in the geosciences. The work of these individuals often required the client to endure costly additional work to correct the inadequate assessments and actions, and their incompetence impacted property values and often did not reduce risk to human health. Since the passage of the Practice Act, the frequency of inadequate work that I encountered decreased, and I attribute this to requirements of the Practice Act and the ever present threat of enforcement by the TBPG.

In particular, I would like to discuss Engineering Geology practice. Typically, this area of professional practice has no regulatory oversight other than the Practice Act and the TBPG. The application of this

geological discipline greatly affects the public health, safety, and welfare since it addresses geological conditions that control land use and engineering design. Engineering Geology is involved in the siting, design, and construction of critical structures such as dams, bridges, overpasses, nuclear facilities, and so forth. Likewise, it is applied to non-critical projects such as residential and commercial development, pipeline placement and design, and various public works projects involving placement of buildings and infrastructure design. Failure to identify geologic hazards and insufficient description of geologic conditions can lead to not just the loss of property but can pose a threat to human health and life.

During my years of working with surface faults, a geologic hazard that has caused millions of dollars in damage, I often have run across fault-related work that was woefully inadequate to the needs of the client and/or failed to detect and delineate active faulting. This has resulted in the loss of property and the tremendous waste of money. For people whose homes are among their biggest investments in life, the loss of a home due to faulting is a financial catastrophe.

I am often hired by clients to "clean-up" the work of firms and individuals who either failed to identify a fault on a site or incorrectly delineated the fault. When it comes to identifying faults, there is no room for error, and to ensure proper investigation of faults, a professional with training and experience in structural geology, stratigraphy, geomorphology, and subsurface investigative techniques is needed. Licensing is the only mechanism available to ensure that an individual has these needed qualifications.

When I submit a report to the client, I seal the report whereby I attest that I am licensed by the state and am professionally qualified to perform the work and that I have accepted liability for my work. The requirements of a license along with the attendant liability has decreased the amount of unqualified work that I see.

I urge the Sunset Advisory Committee to recommend the continuance of the TBPG and the Texas Geoscience Practice Act for the protection of the people of Texas.

Respectfully Submitted,

Richard G. Howe, P.G., C.P.G.
Texas Professional Geologist No. 27

From: Sunset Advisory Commission
To: Brittany Calame
Subject: FW: Public Input Form for Agencies Under Review (Public/After Publication)
Date: Thursday, August 16, 2018 3:04:30 PM

-----Original Message-----
From: sunset@sunset.texas.gov <sunset@sunset.texas.gov> On Behalf Of Texas Sunset Commission
Sent: Thursday, August 16, 2018 2:47 PM
To: Sunset Advisory Commission <Sunset@sunset.texas.gov>
Subject: Public Input Form for Agencies Under Review (Public/After Publication)

Agency: TEXAS BOARD PROFESSIONAL GEOSCIENTISTS TBPG

First Name: Richard G.

Last Name: Howe

Title: Geologist

Organization you are affiliated with: Terra Cognita, LLC

Email:

City: Houston

State: Texas

Your Comments About the Staff Report, Including Recommendations Supported or Opposed:
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property and health risk.
These impacts included overlooking and/or misevaluating soil and groundwater contamination that affected the value of property and perpetuated risk to human health and included misidentifying and mischaracterizing geologic hazards such as surface faulting which yielded a direct threat to buildings, engineered structures, and human safety.

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those geoscientists associated with natural resources, especially when they deal with regulatory agencies such as the Texas Railroad Commission or the Texas Commission for Environmental Quality that may oversee some particular area of activity that does impact public health and safety.

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Any Alternative or New Recommendations on This Agency: Based upon the impact to the public health, safety, and welfare that geoscientific applications have, I strongly recommend the continuance of the Texas Board of Professional Geoscientists and the Texas Geoscience Practice Act.

My Comment Will Be Made Public: I agree