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## FISCAL IMPACT REPORT

SPONSOR Egolf ORIGINAL DATE 02/03/09  
LAST UPDATED 02/10/09 HB 473  
SHORT TITLE State Engineer Qualifications SB \_\_\_\_\_  
ANALYST Woods

### APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY09	FY10		
NFI	NFI		

(Parenthesis ( ) Indicate Expenditure Decreases)

### SOURCES OF INFORMATION

LFC Files

#### Responses Received From

Office of the State Engineer (OSE)

Attorney Generals Office (AGO)

New Mexico Board of Licensure for Professional Engineers & Professional Surveyors (PELS)

### SUMMARY

#### Synopsis of Bill

House Bill 473 expands the types of professionals that qualify to be the state engineer. Currently only “a technically qualified and registered professional engineer” may be appointed state engineer by the governor. This bill would also allow a “qualified appropriately credentialed professional geohydrologist, hydrologist, geologist or attorney” to be appointed state engineer.

There is no appropriation attached to this legislation.

### SIGNIFICANT ISSUES

AGO notes that it is unclear what “qualified appropriately credentialed professional” may mean with respect to geohydrologist, hydrologist, geologist and attorney. Presumably, it may mean different things for different professional disciplines. Currently, geohydrologists, hydrologists and geologists are not licensed by any professional board in New Mexico. This raises the question as to whether any geohydrologist, hydrologist, geologist meets the standard or whether all geohydrologists, hydrologists and geologists meet the standard if they have a college degree in one of those disciplines. Similarly, while attorneys are licensed to practice law in New

Mexico, is a current law license necessary for an attorney to be state engineer since, presumably, the state engineer will not be required to practice law and will continue to be represented by the Attorney General? This lack of clarity as to what constitutes a “qualified appropriately credentialed professional” geohydrologist, hydrologist, geologist or attorney is not found in the current requirement for an engineer to be state engineer. The statute currently requires that the state engineer “shall be a technically qualified and registered professional engineer under the Engineering and Land Surveying Practice Act. Thus an engineer must have a specific registration provided for under state statute to be qualified to be state engineer.<sup>1</sup>

OSE General Counsel raises a number of discussion points in response to this legislation. They are included below in their entirety:

I am unaware of any reason for the change proposed in this bill. Professional engineers have served the state with distinction for over a century, first as Territorial Engineer and then as State Engineer. Steve Reynolds, who held the position for 35 years, was perhaps the most respected water administrator in the history of western water. After his tenure as New Mexico State Engineer, Eluid Martinez went on to serve with distinction as the Commissioner of the federal Bureau of Reclamation (BOR), the only New Mexican to be appointed to that position. Tom Turney held the position of State Engineer second longest and led the transformation of the office into one which today is recognized as among the most technically advanced in the west. The current State Engineer has been at the top of the list for appointment to BOR Commissioner. Having represented the last three State Engineers serving in each of the last three administrations, it is my opinion that the state could not be better served than by a professional engineer as State Engineer. My experience with the water management systems of other western states leads me to conclude that the existing limits in New Mexico's water code on who may serve as State Engineer and the requirements for replacing him or her insulate water management and policy from being dictated by the politics of the moment, which I observe to be common problem in those states that have compromised the independence of their state engineers by making the position subservient to political appointees.

Ken Whisenhunt, head coach of the Arizona Cardinals, was quoted in Saturday's *Albuquerque Journal* as saying that his degree in civil engineering assists his coaching in that engineers are problem solvers by definition. In football, the problem is focusing strengths against weaknesses and addressing weaknesses with the available resources. By training and experience, engineers are analytical problem solvers who assess every variable to ensure that even the most minute detail is taken into account. In my tenure I have seen New Mexico's State Engineers increasingly utilize and rely on their lawyers, geologists, hydrologists, and other experts as part of the problem solving process. Engineers look at the total picture and get input from other specialists as appropriate to a given problem. No other profession, in my opinion is as objective in weighing competing opinions in solving the problem.

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<sup>1</sup> The AGO response carries the caveat, *This analysis is neither a formal Attorney General's Opinion nor an Attorney General's Advisory Opinion letter. This is a staff analysis in response to the agency's, committee's or legislator's request.*

Water is New Mexico’s most precious resource and it is becoming more precious as time goes by. There are many highly technical issues concerning the measurement, appropriation, and distribution of both surface and groundwater and now even deep aquifers within the state. The water code delegates to the State Engineer the general supervision of the waters of the state and of the measurement, appropriation, and distribution thereof. The broad variety of technical responsibilities inherent in this charge make it imperative that the State Engineer have a technical background and education, training, and experience as an engineer. A preponderance of the issues faced by the State Engineer on a daily basis requires an understanding of engineering principles and the ability to apply those principles in solving water problems within the state of New Mexico.

Since the enactment of the 1907 water code, the law presently codified at Section 72-2-1 NMSA 1978 has required that the State Engineer be “a technically qualified and registered Professional Engineer. . . .” It is significant that the law requires the State Engineer not only to be a registered PE, but also to be “technically qualified.” This additional requirement suggests that the drafters of the 1907 water code understood that the special technical duties and responsibilities delegated to the State Engineer make it essential that he or she have specialized expertise developed in fields related to the construction and safety of dams and other works for the diversion, storage, and carriage of water. The other professionals listed in HB 473 do not develop this highly specific expertise. To allow these other professionals to serve as State Engineer would undermine or eliminate this additional requirement that has been part of the water code for over one hundred years.

A quick review of the water code reveals numerous duties or responsibilities assigned to the State Engineer that only a professional engineer qualified by experience in specialized fields related to the construction and safety of dams and other water works can perform. The following is only a partial list:

- §72-5-32: (review and approve construction plans for dams);
- §§72-5-1, -3, -6: (review and approve feasibility and construction plans for works for the diversion, storage, or carriage of water);
- §72-5-6, -8: (determine time within which construction of works shall be completed);
- §72-5-9: (approve qualifications of registered professional engineer in charge of construction of works);
- §72-5-9: (inspect and approve works as constructed, or require changes);
- §72-5-10: (issue certificate of construction);
- §72-5-11: (inspect constructed works for safety and order any changes needed to put works in safe condition);
- §72-5-13: (inspect to determine amount of water applied to beneficial use); and
- §72-5-26: (direct the construction and maintenance of measuring devices).

The State Engineer carries out his responsibility to ensure the safety of New Mexico’s dams through the Dam Safety Bureau of the OSE’s Water Resources Allocation Program. To be certified as a dam safety engineer, registration as a professional engineer is

required. The State Engineer must have the capability, the experience, the training and the knowledge to communicate and assess the job done by the Dam Safety Bureau Chief and the ability to evaluate the effectiveness of the Dam Safety Bureau and their programs. Only a registered professional engineer possesses the necessary education, knowledge, skill, and ability required to perform this function.

Knowledge of hydraulics and design of water conveyance structures used for irrigation works along with the ability to evaluate the feasibility of the plans related to various water rights applications all require extensive knowledge of water and its properties along with specific knowledge of other materials such as soil mechanics, concrete design, and the mechanics of various materials as they apply to open channel and closed pipe flow. All these require the engineer to be the “responsible charge” and to have engineering experience, training, education and expertise.

The State Engineer is in the position of “responsible charge” for all aspects of water allocation, storage and delivery within New Mexico. Responsible charge is defined by E&SPA as responsibility for the direction, control and supervision of engineering or surveying work, as the case may be, to assure that the work product has been critically examined and evaluated for compliance with appropriate professional standards by a licensee in that profession. By sealing or signing plans and other documents, the professional engineer or professional surveyor accepts responsibility for the engineering or surveying work, respectively, represented by the documents and that applicable engineering or surveying standards have been met.

PELS indicates that the bill opens the consideration of an appointment to the position of State Engineer from a field of other professionals, as well as the consideration of a licensed professional engineer. HB 473 will be contrary to sections of the Engineering and Surveying Practice Act, Sections 61-23-1 through 61-23-32 NMSA, 1978. PELS further states:

Specifically, HB 473 as written violates Section 61-23-21. C., that states “An individual, firm, partnership, corporation or joint stock association may not use or assume a name involving the terms “engineer”, “professional engineer”, “engineering”, “registered” or “licensed” engineer or any modification or derivative of such terms unless that individual, firm, partnership, corporation or joint stock association is qualified to practice engineering in accordance with the requirements in this section.”

HB 473 as written would also violate Section 61-23-27. ENGINEERING-PUBLIC OFFICER-LICENSURE REQUIRED. This section states “No person except a licensed professional engineer shall be eligible to hold any responsible office or position for the state or any political subdivision of the state that includes the performance or responsible charge of engineering work.”

#### **PERFORMANCE IMPLICATIONS:**

PELS advises that: “The public’s safety, health and welfare may be in jeopardy in that HB 473 as proposed violates Section 61-23-1. DECLARATION OF POLICY., that states in part ‘The legislature declares that it is a matter of public safety, interest and concern that the practices of engineering and surveying merit and receive the confidence of the public and that only qualified

persons be permitted to engage in the practices of engineering and surveying. In order to safeguard life, health and property and to promote the public welfare, any person in either public or private capacity practicing or offering to practice engineering or surveying shall be required to submit evidence that he is qualified to so practice and shall be licensed as provided in the Engineering and Surveying Practice Act.”

**ADMINISTRATIVE IMPLICATIONS:**

PELS suggests that while these other professional fields may perform the duties of the “State Engineer” admirably, their administrative duties would not carry the additional statutory requirements that are met only by a professional licensed under the Engineering and Surveying Practice Act. With the exception of the attorney, these other professional fields proposed in HB 473 do not have professional licensure requirements in the State of New Mexico.

**CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP**

PELS states: “HB 473 with its proposed amendments is in conflict with the New Mexico Engineering and Surveying Practice Act. “

**TECHNICAL ISSUES:**

OSE states: “It is not clear whether the phrase ‘qualified appropriately credentialed professional’ on page 1, lines 22-23 modifies only ‘geohydrologist’ or also modifies the other professionals listed.

PELS states: “There are many instants involving the construction of major public water works involving water works that the State Engineer is ultimately responsible for. Requiring that the “State Engineer” be licensed allows for that individual to be held more accountable when licensed under the New Mexico Engineering and Surveying Practice Act.”

**OTHER SUBSTANTIVE ISSUES:**

OSE advises that New Mexico has no professional licensure for geohydrologists, hydrologists, or geologists, therefore there is no avenue to qualify “appropriately credentialed” professionals in these fields. The Engineering and Surveying Practice Act (E&SPA) defines “engineer” as a person who is qualified to practice engineering by reason of his intensive preparation and knowledge in the use of mathematics, chemistry, physics and engineering sciences, including the principles and methods of engineering analysis and design acquired by professional education and engineering experience. The E&SPA makes it unlawful for any person to assume or use any title or description tending to convey the impression that he is a professional, licensed engineer unless that person is licensed or exempt under the E&SPA. Section 61-23-2 NMSA 1978 (excerpt below). As a result, unless the requirement of Section 72-2-1 NMSA 1978 that the State Engineer be a licensed professional engineer is retained, the title of “State Engineer” must be changed. The name of the Office of the State Engineer may have to be changed as well. OSE notes:

61-23-2. DECLARATION OF POLICY.--The legislature declares that it is a matter of public safety, interest and concern that the practices of engineering and surveying

merit and receive the confidence of the public and that only qualified persons be permitted to engage in the practices of engineering and surveying. In order to safeguard life, health and property and to promote the public welfare, any person in either public or private capacity practicing or offering to practice engineering or surveying shall be required to submit evidence that he is qualified to so practice and shall be licensed as provided in the Engineering and Surveying Practice Act. It is unlawful for any person to practice, offer to practice, engage in the business, act in the capacity of, advertise or use in connection with his name or otherwise assume, use or advertise any title or description tending to convey the impression that he is a professional, licensed engineer or surveyor unless that person is licensed or exempt under the provisions of the Engineering and Surveying Practice Act. A person who engages in the business or acts in the capacity of a professional engineer or professional surveyor in New Mexico, except as otherwise provided in Sections 61-23-22 and 61-23-27.10 NMSA 1978, with or without a New Mexico license, has thereby submitted to the jurisdiction of the state and to the administrative jurisdiction of the board and is subject to all penalties and remedies available for a violation of any provision of Chapter 61, Article 23 NMSA 1978. The practice of engineering or surveying shall be deemed a privilege granted by the board based on the qualifications of the individual as evidenced by the licensee's certificate, which shall not be transferable.

**WHAT WILL BE THE CONSEQUENCES OF NOT ENACTING THIS BILL:**

OSE suggests that Section 72-2-1 NMSA 1978 will continue to require that the State Engineer be a technically qualified and registered professional engineer in New Mexico.

**AMENDMENTS:**

None proposed by respondents.

BW/mt:svb