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## FISCAL IMPACT REPORT

ORIGINAL DATE 2-20-07

SPONSOR Jennings LAST UPDATED \_\_\_\_\_ HB \_\_\_\_\_

SHORT TITLE Natural Waters Elements and Properties SB 1125

ANALYST Woods

### APPROPRIATION (dollars in thousands)

Appropriation		Recurring or Non-Rec	Fund Affected
FY07	FY08		
NFI	NFI		

(Parenthesis ( ) Indicate Expenditure Decreases)

Duplicates HB1184

### SOURCES OF INFORMATION

LFC Files

#### Responses Received From

Office of the State Engineer (OSE)

Energy, Minerals and Natural Resources Department (EMNRD)

### SUMMARY

#### Synopsis of Bill

Senate Bill 1125 proposes to add a new section to Chapter 72, article 1 of the Water Code to include physical properties and all thermal and chemical elements contained or dissolved in natural waters of the state to the definition of natural waters subject to appropriation for beneficial use, including physiochemical properties, heat, naturally occurring minerals, minerals and chemicals added by human activity, and the chemical elements of hydrogen and oxygen.

There is no appropriation attached to this legislation.

### SIGNIFICANT ISSUES

OSE states that this legislation appears to be an attempt to overcome recent court decisions in state and federal courts ruling that geothermal heat is a mineral, which can be owned and reserved by the United States under federal law. This bill proposes to do this by changing state law to include geothermal heat and other mineral properties as part of the water owned by the state. The bill proposes to assert state ownership over these resources by adding the physical properties and all elements of water as part of the natural resource, water, that can be

appropriated for beneficial use under state engineer permits and water rights under Chapter 72, Article 1. However, the bill's potential to change the definition of the beneficial use of water under the Water Code may have unintended and potentially far-reaching effects upon the state engineer's administration and adjudication of water rights throughout the state.

OSE adds that to incorporate mineral, chemical and geothermal resources as components of the overall resource of the "waters belonging to the public that are subject to appropriation for beneficial use" could mean that the appropriation and beneficial use of these components of water might create a right to water of a certain quality. This could result in expanding the definition of impairment to include diminishment of any of these components of water. Further, this expansion would have a significant impact upon the state engineer's ability and authority to issue permits for new appropriations or transfers of existing water rights. While a permit to appropriate water is already required for diversions of water for activities related to the removal or recovery of heat or minerals from water, the use of hot water recognized under a permit might now be impaired if the temperature changes. This bill would change the nature of the impairment analysis required before a permit to divert the water for use in the recovery or extraction of these resources could be issued.

OSE advises that these resources are currently subject to the authority and regulation of other state agencies, such as the Energy, Mineral and Natural Resources Department, which has jurisdiction over the recovery of resources and geothermal resources, and the Environment Department, which has jurisdiction over water quality, and any elements and properties of water, including heat, which may be pollutants. Moreover, any mineral or element or heat content contained in the water is subject to the Energy, Mineral and Natural Resources Department as well as federal law and jurisdiction, such as the Federal Geothermal Steam Act of 1970, 30 U.S.C. §§ 1001-28, which can not be preempted by state law. The use of the State's geothermal resources are governed by the Geothermal Resources Act, §§ 19-13-1 to -28, and the Geothermal Resources Conservation Act §§ 71-5-1 to -24. The Geothermal Resources Conservation Act defines geothermal resources as "the natural heat of the earth or the energy, in whatever form, below the surface of the earth present in, resulting from, created by or which may be extracted from this natural heat and all minerals in solution or other products obtained from naturally heated fluids, brines, associated gases and steam, in whatever form, found below the surface of the earth, but excluding oil, hydrocarbon gas and other hydrocarbon substances." NMSA 1978, § 71-5-3(A). The only exemption from this definition is an exemption from the payment of royalties, not from the Act, for the incidental loss or extraction of heat in the beneficial use of potable water where the water is 250 degrees Fahrenheit or less.

OSE concludes that the New Mexico Court of Appeals has recently held that construing § 71-5-2.1 as defining geothermal resources more narrowly than the Federal Geothermal Steam Act would violate the Supremacy Clause of the U.S. Constitution, which prohibits states from modifying or changing existing federal law. Therefore, HB1184 cannot modify federal law or affect federal jurisdiction over geothermal resources subject to the Federal Geothermal Steam Act.

EMNRD notes that the legislation "may be subject to constitutional objections." Water is defined as public property, and made subject to appropriation by Article XVI, Sections 2 and 3 of the New Mexico Constitution. Although the power of the legislature to provide by statute for the administration of water rights is well established, the power to determine what constitutes water subject to these provisions may be the prerogative of the courts. The bill also, EMNRD

suggests, conflicts, or potentially conflicts, with various existing State statutes, and with public and private property rights. Furthermore, it leaves unresolved many questions that would arise if its provisions defining certain substances as water subject to appropriation are valid. EMNRD presents the following discussion points as they apply to the various attributes and constituents of water referred to in the bill.

(1) Physiochemical properties of water. The bill does not define this term, and its meaning is not readily apparent.

(2) Heat contained within water. To the extent that the bill defines heat contained within water as water subject to appropriation, it conflicts with Sections 71-5-1 through 71-5-24, NMSA 1978 (the Geothermal Resources Conservation Act), which treats geothermal resources as minerals and entrusts the Oil Conservation Division (OCD) with regulatory authority over their production, and with Sections 19-13-1 through 19-13-28, which provide for leasing of State lands for geothermal production. The legislature visited the relationship between water use and geothermal resources previously in 2003 when it enacted Section 71-5-2.1 NMSA 1978. That section provides that heat extracted from water incidental to beneficial use of the water (if the water temperature is less than 250 degrees Fahrenheit) is not a geothermal resource. However, it does not undertake to define the heat as water, or to make the heat itself subject to appropriation. Furthermore, it does not apply to geothermal resources occurring at higher temperatures. This bill would seem to define ALL geothermal resources as water subject to appropriation, and not minerals, as other statutes assume they are.

(3) Naturally occurring minerals dissolved in water. The ownership of minerals occurring in solution in natural waters is unclear in New Mexico. To the extent, however, that the courts decide that such minerals constitute "minerals" subject to separate ownership under existing state and federal laws, the same considerations noted below in connection with minerals dissolved in water due to human activities are implicated. This provision also could interfere with the power to OCD to regulate the disposition of produced water (water produced in connection with oil and gas operations) by use, an authority confirmed by amendments to the Oil and Gas Act [Sections 70-2-12.B (15) and 70-2-12.1 NMSA 1978, as amended]. Any use of produced water would require treatment to remove naturally occurring minerals, and the bill might impact this process. How and to what extent the bill would impact the regulation of produced water, or whether it would even apply to produced water, is unclear.

(4) Minerals or chemicals dissolved in water due to human activities. Under this provision of the bill, minerals extracted by a leaching process whereby the minerals become dissolved in water would themselves be water, subject to appropriation to beneficial use, instead of being private property subject to disposition and sale, as they undoubtedly would be if produced by some other method. This provision may conflict with the provisions of the Fifth and Fourteenth Amendments to the United States Constitution and with Article II, Sections 18 and 20 of the New Mexico Constitution, prohibiting taking of private property without due process or without compensation. Furthermore it may conflict with the proprietary rights of the United States and the State of New Mexico under patent provisions reserving minerals to the state or federal governments. Finally, although the bill makes minerals dissolved in water public property subject to appropriation, like the water itself, it does not expressly provide for extension of

the regulatory authority of the State Engineer (OSE) to appropriations of such minerals. Thus the bill leaves uncertain whether, and to what extent, the OSE would have the power or the duty to regulate appropriation and use of minerals extracted in this manner.

A separate problem involves the implications for environmental regulation of the concept that minerals dissolved in water by human activity are subject to appropriation. Under this concept, an appropriator of such minerals could acquire a private right to their continued presence in the water that could conflict with regulatory requirements of the Environment Department (ED) or OCD mandating abatement for the protection of water quality.

(5) The hydrogen and oxygen that form the chemical composition of water. Although the law as to ownership of hydrogen and oxygen extracted from natural water is not settled, one would presume that ownership of and rights to these substances are identical to the ownership of and rights to the water. Therefore this portion of the bill is probably not problematic.

## ADMINISTRATIVE IMPLICATIONS

OSE indicates that if this bill is interpreted to expand the existing definition of the beneficial use of water within the state to include the beneficial use of the physical properties and all elements of the water, there would be a significant, if not crippling, effect upon the ongoing adjudications currently undertaken by the OSE. Each of the tens of thousands of water right claims under the State's eleven current adjudications may be subject to reevaluation and further claims to identify the physical properties or elements to be protected from impairment. This, OSE suggests, could bring adjudications to a virtual standstill. Additionally, administrative hearings on aggrieved or protested applications for permits would be similarly hampered by the need to consider these components of water as water subject to appropriation or impairment, as detailed in the administrative implications for water rights administration.

OSE opines that the state engineer's administration of water rights throughout the state may be significantly impacted as well by an increase in the number of applications for permits to and declarations of the appropriation of water for these additional beneficial uses. Further, if the state engineer must consider these properties and elements as components of water under a water right that may be subject to impairment, applications for new appropriations of water or to transfer water rights would need to be evaluated for possible impacts upon the properties and elements of water used under existing water rights. This would require the state engineer to obtain the resources of experts in water chemistry, heat flow, etc. to review applications and existing water rights uses. Such evaluations would be complex and add an even higher degree of uncertainty to the current hydrologic evaluations conducted by the OSE.

EMNRD indicates that the bill would make questionable the authority of OCD to regulate exploitation of geothermal resources occurring at temperatures above 250 degrees Fahrenheit, as now provided in the Geothermal Resources Conservation Act. Further, To the extent that the bill were interpreted as allowing private parties to acquire rights by appropriation to minerals dissolved in water as a result of human activity, it could present obstacles to the implementation of ED and OCD rules requiring abatement of water pollution to protect water quality.

## **CONFLICT, DUPLICATION, COMPANIONSHIP, RELATIONSHIP**

SB1125 is a duplicate to HB1184.

## **TECHNICAL ISSUES**

OSE notes that the administration and adjudication of physical properties and thermal and chemical elements of waters as part of the waters subject to appropriation under a water right will require technology and technological expertise beyond the current scope of the OSE and the OSE's resources.

## **OTHER SUBSTANTIVE ISSUES**

OSE The new section to the Water Code proposed by these bills would conflict with the Geothermal Resources Act, §§ 19-13-1 to –28, and the Geothermal Resources Conservation Act §§ 71-5-1 to –24, and the Environment Department's jurisdiction over water quality and the components of water which may be pollutants, as well as other statutes and agencies dealing with the use of heat, minerals, and chemical elements that may be contained in, dissolved in, or extracted from water.

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

OSE indicates that the state engineer will continue to administer and adjudicate water rights based on the beneficial use of water, not the components of water, for irrigation, domestic, residential, commercial and municipal uses throughout the state.

EMNRD suggests that high temperature geothermal resources will continue to be regulated by OCD under the Geothermal Resources Conservation Act, and, to the extent found on State lands, will be subject to existing statutes providing for leasing of these resources and payment of royalties to the State. Questions involving ownership of and rights to other attributes and constituents of water will be left for resolution by the courts in accordance with the common law.

BFW/mt