



THE STATE
of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Natural Resources

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May 22, 2023

The Honorable Click Bishop, Co-Chair
The Honorable Cathy Giessel, Co-Chair
The Honorable Bill Wielechowski, Vice Chair
Senate Resources Committee
Alaska State Capitol
Juneau, Alaska 99801

RE: Senate Bill 69 Geothermal Resources

Dear Senators Bishop, Giessel, and Wielechowski:

On April 17, 2023, the Division of Oil & Gas and other representatives from the Department of Natural Resources and the Alaska Oil & Gas Conservation Commission provided testimony on the Governor's Geothermal Resources legislation. Below are a few questions from that hearing that deserved some expanded answers for the benefit of the committee.

Could somebody drill an oil well 100 feet down and start pumping 25 barrels a day for personal use? (Sens. Wielechowski and Bishop)

The situation is unlikely because of several physical and cost limitations. If a hypothetical Alaskan discovered oil on or near the surface of his land, he would be faced with significant problems. In fact, it is likely he would already have noticed his water smelled of petroleum and was unsafe to drink. Also, given the cool ground temperatures, it's most likely oil would present as very thick, potentially even waxy, requiring expensive equipment and heat input to process the crude into usable petroleum products. Given these factors, the landowner would probably try to make his land available to oil developers with sufficient capital to produce the oil, who would necessarily seek an oil and gas exploration license or lease from DNR.

To clarify, where the mineral estate, which includes oil, gas, geothermal, coal, gold, copper, et cetera, belongs to the State, it would not automatically be free for surface owners to seize those minerals. Royalties must be paid to the owner of the minerals, and a lease or similar agreement is usually required between the mineral owner and the developer for resource extraction. Considering the value of royalties from those minerals to the State, mineral resources like oil or gold are both highly valuable and portable, and the logistics of extracting them and paying royalties is relatively simple. Geothermal resources, on the other hand, are neither highly valuable nor portable without significant investment in production equipment and transmission infrastructure unless they are found adjacent to a large customer base. Since there may be some ambiguity about

common private uses of ground heat versus commercial-grade geothermal resources that could produce power, DNR is seeking this clarification in statute.

DNR believes it is prudent to make clear that, where private landowners may be able to use the State's geothermal resources within their means, they should be allowed to do that without interference from DNR. They may still need drilling and environmental permits from agencies other than the Division of Oil & Gas, but they wouldn't owe the State royalties because there is no commercial activity to invoke the royalty statute, which relies on revenue ([AS 38.05.181\(g\)](#)).

Even if it were decided that nobody has a right to private use of the State's geothermal resources, discovering such a use and enforcing it would be of little value compared to the cost. Oil might be a different case, and perhaps a private landowner could develop small quantities of oil privately, but it would still be illegal, and it would be extremely expensive to discover and enforce.

Additionally, hydrocarbons are specifically excluded from the definition of geothermal resources. Exploration and production of oil and gas is governed by existing oil and gas leasing statutes.

Questions on Bernie Karl's geothermal operation at Chena Hot Springs outside of Fairbanks regarding surface/subsurface estate ownership and DNR permits. (Sen. Claman)

As was stated on the record during the hearing, the Chena Hot Springs Resort surface and mineral estate are private.

Water rights are managed by DNR's Division of Mining Land and Water ([water rights web page](#)), which has the following records assigned to Chena Hot Springs Resort LLC:

- [LAS 13573 water right](#)
- [LAS 19528 water right](#)
- [LAS 25325 geothermal power plant water supply \(1,440,000 gallons per day\)](#)
- [LAS 25326 power plant cooling water supply \(2,160,000 gallons per day\)](#)

Land records can be queried using [DNR's Alaska Mapper public web tool](#).

Can a company come and pump Alaska water out of the ground, as the temperature requirements are proposed to be removed? (Sen. Wielechowski)

No. Water is a common public resource managed by the State ([Alaska Constitution](#), Art. VIII, § 13. Water Rights, "All surface and subsurface waters reserved to the people for common use..." and [AS 46.15 Water Use Act](#)). While common use, such as residential drinking water wells, are not typically permitted, a significant use would need to be permitted by DMLW's water section.

Under 11 AAC 93.035 there is a requirement to apply for the use of a significant quantity of water.

11 AAC 93.035. Requirement to apply for the use of a significant amount of water.

(a) A significant amount of water is that amount of water for which an application for a water right or an application for a temporary water use authorization is required, as described in (b) of this section.

(b) A person shall file an application for a water right under [11 AAC 93.040](#) or for a temporary water use authorization under [11 AAC 93.220](#) before

(1) the consumptive use of more than 5,000 gallons of water from a single source in a single day;

(2) the regular daily or recurring consumptive use of more than 500 gpd from a single source for more than 10 days per calendar year;

(3) the non-consumptive use of more than 30,000 gpd (0.05 cubic feet per second) from a single source; or

(4) any water use that may adversely affect the water rights of other appropriators or the public interest.

(c) A person using less than the amount of water described in (b) of this section acquires no water right or priority unless an application is filed and a permit or certificate is issued under [11 AAC 93.035](#) – [11 AAC 93.140](#). The use of water without a permit or certificate is subject to appropriation by others, and the use of water without a water right is subject to curtailment in order to supply water to lawful appropriators of record or to protect the public interest.

Furthermore, the purpose and effect of removing the temperature floor from the statutory definition of “geothermal resources” is to expand the mineral resources—not water resources—that can be leased by DNR and potentially developed as a power and revenue generating resource. The statutory definition of geothermal resources, whether in its present form or under this legislation, has no bearing on the use of water under [AS 46.15](#).

Please let me know if we can be of further help in providing information.

Sincerely,



Joe Byrnes
Legislative Liaison
Department of Natural Resources

Cc: Laura Stidolph, Director, Governor’s Legislative Office