Kachemak Bay Conservation Society
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Wednesday, March 16, 2022

Dear Members of the Senate Finance Committee:

We are writing on behalf of our members in strong opposition to SB 62, which would allow lateral drilling and hydraulic fracturing—or fracking—under the Kachemak Bay Critical Habitat Area (CHA) as well as under all other protected lands in Alaska. If SB 62 passes, it will re-write the rule book on oil and gas extraction in protected lands and waters across the state, including State Game Sanctuaries, State Game Refuges, State Parks, and State Critical Habitat Areas by amending the Alaska Lands Act Section 1. AS 38.05 to read:

> "Unless specifically provided, a statute that restricts the surface use of an oil and gas lease or a gas only lease in specified acreage does not also restrict subsurface use for oil and gas resource development that can be accomplished by drilling from acreage that does not have surface use restrictions."

There are those who say this bill is only about Kachemak Bay CHA, but the language in Section 1 does not specify Kachemak Bay; it is general to any statute that restricts surface use of oil and gas, and would apply to any protected land and water in Alaska. While drilling is permitted in most places in our state, we have closed some of our most productive and rich public lands and waters to oil and gas extraction to promote the health of fish, wildlife, and habitat. It is necessary that we maintain this balance if we want to continue to support wild places, wild salmon, big game, their supporting industries, and our Alaskan way of life.[1]

SB 62 would be in direct conflict with Alaska Statute 16.20.500, which states that the purpose of the Kachemak Bay CHA is to:

> "protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose."

In all likelihood, it is also in direct conflict with the statutory purpose of every other State Park, Game Refuge or Sancuary, Critical Habitat Area where it would be applied.

Since lateral drilling technology allows companies to drill and frack up to six miles into protected areas from outside platforms, since we can assume SB 62 will require seismic testing within protected lands and waters, since horizontal drilling and fracking require millions of gallons of fresh water, since these technologies produce massive amounts water that is toxic to living organisms, since the track record on this kind of drilling shows very high rates of spills, leaks, and contamination of aquifers, this bill isn't worth it. It would come at a huge cost to

[1] https://iseralaska.org/static/legacy_publication_links/2014_06-EconomicsWilderness.pdf

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commercial, sport and subsistence fishermen, as well as local guides, lodges, B&Bs, and charter boat companies. Losses to these industries also represent losses to the State of Alaska, in the from of sales tax, fishing licenses, etc. This proposal could devastate some of our key protected lands and waters and the businesses they support. It is not worth the risks.

Hilcorp Cannot be Trusted Under Kachemak Bay CHA.

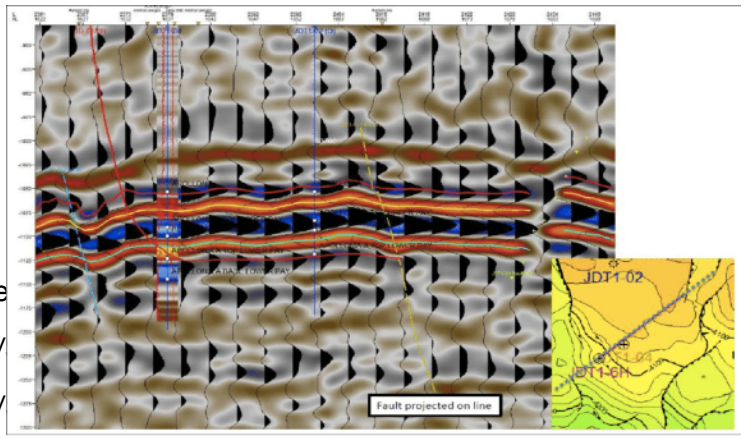
Hilcorp owns the pads from which the directional drilling under the Kachemak Bay CHA are proposed to operate. Hilcorp not the kind of actor who should be operating under a Critical Habitat Area. Their record is so bad that the Alaska Oil and Gas Conservation Commission has concluded that Hilcorp has a culture of disregard for regulatory standards:

"The disregard for regulatory compliance is endemic to Hilcorp's approach to its Alaska operations...Hilcorp's conduct is inexcusable."[2]

What is their record? According to Alaska Department of Environmental Conservation records, over the course of operations in Alaska beginning in 2012, Hilcorp is responsible for over 90 crude oil spills or discharges, including spilling 10,000 gallons on Alaska's North Slope in 2015.[3] In 2017, a gas leak in Cook Inlet remained un-repaired for over four months while it leaked roughly 100,000 cubic feet of natural gas per day.[4] More recently, they are responsible for a 302-gallon crude oil spill on August 3, 2019, and a 126-gallon crude oil spill on October 20, 2019 and 8,000 gallon slop oil spill in 2020.

Seismic Drilling In Protected Lands and Waters

We can reasonably expect that seismic exploration on protected lands and waters will be required for horizontal drilling to occur. See, for example a the image below of a seismic survey used for well in Egypt.



SB 62 will bring seismic exploration into our

[2] AOGCC Notice of Proposed Enforce

[3] https://dec.alaska.gov/Applications/

[4] https://dec.alaska.gov/Applications/

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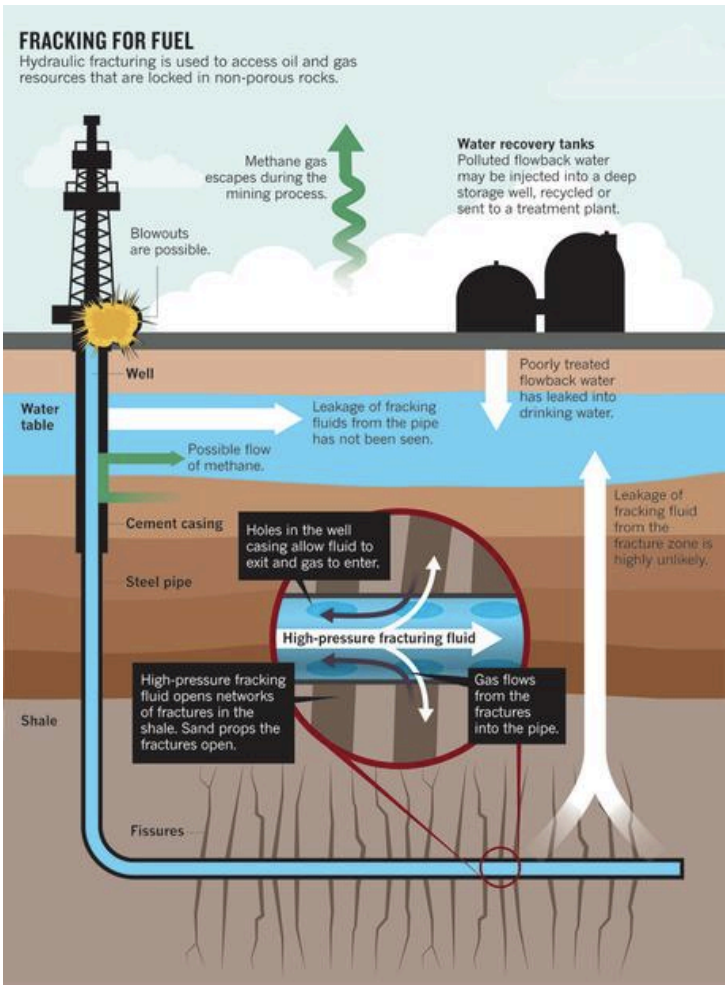

Fracing infrastructure. Illustration from article in Nature, Sept. 15, 2011, Natural Gas: Should fracing stop?, by Robert W. Howarth, Anthony Ingraffea, & Terry Engelder. http://www.nature.com/nature/journal/v477/n7364/fig_tab/477271a_F1.html

protected lands and waters.

Seismic surveys can be done year after year, as the results of any one proprietary study are not available to any other company. It is well-known that seismic surveys threaten marine mammals, and kill large numbers of zooplankton, disrupting the food web. They have no place in Kachemak Bay CHA, or any of Alaska's State Parks and Reserves. These areas are protected for a reason, and they should stay that way.

Horizontal Drilling Generally Means Fracking

While SB 62 does not explicitly name fracking, according to the US Energy Information Administration, hydraulically fractured horizontal wells accounted for 69% of all oil and natural gas wells drilled in the United States in 2016, and the trend was steadily increasing.

Comments made by DNR during the proceedings in the House Fisheries Committee on HB 82 made it sound likely that fracking would be used in the Kachemak Bay Critical Habitat Area, and there is nothing in the bill to prohibit its use there or anywhere else in the state.

Hydraulic fracturing involves forcing a liquid under high pressure from a wellbore against a rock formation until it fractures. The injected fluid contains a proppant—small, solid particles, usually sand or a man-made granular solid of similar size—that wedges open the expanding fractures. The proppant keeps the fracture open, allowing hydrocarbons such as crude oil and natural gas to flow more easily from the additional surface area to the rock formation provided by the fractures back to the wellbore (the drilled hole) and then to the surface.

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The legislature protected Kachemak Bay and other Public Lands for a reason, and it was not to allow horizontal drilling and fracking.

Fishing vs. Fracking

Legislators might be tempted to think that we can drill, frack and fish in the same regions. But, as can be seen in the information below, the statistics and reports do not support that view. And that is precisely why we have closed some our most productive habitats to oil and gas extraction. According to the USGS and the EPA, there are a wide range of risks to marine and freshwater associated with both horizontal drilling hydraulic fracturing.[5]

- Stress on surface water and ground water supplies from the withdrawal of large volumes of water used in drilling and hydraulic fracturing;
- Contamination of underground sources of drinking water and surface waters resulting from spills, faulty well construction, or by other means;
- Adverse impacts from discharges into surface waters or from disposal into underground injection wells; and
- Air pollution resulting from the release of volatile organic compounds, hazardous air pollutants, and greenhouse gases.
- It is important to note that the 2005 Energy Policy Act exempted fracking from the Safe Drinking Water Act. This regulatory exclusion is often referred to as the Halliburton loophole and it means that the "produced water" that comes back out of the well does not meet Safe Drinking Act Standards. Produced water is full of heavy metals from the earth, and each well can require up to 40,000 gallons of chemicals to drill. An analysis by researchers at the Yale School of Public Health identified 157 chemicals used in fracking that are toxic.[6] The back-flow it is toxic and presents high risks to fish, wildlife and habitats in protected lands and waters nearby.

We break down some of the risks below.

Water Withdrawals

[5] https://www.epa.gov/uog; https://www.usgs.gov/faqs/what-environmental-issues-are-associated-hydraulic-fracturing?qt-news_science_products=0#qt-news_science_products

[6] https://environmentamerica.org/reports/ame/fracing-numbers-0

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The average water withdrawal in a horizontal drilling and fracking operation is 3 million gallons per well and can be up to 16 million gallons.[7]

Where will the water come from? In the case of Kachemak Bay, most likely from The Anchor River, which is right next to the pad from which horizontal drilling is proposed. The Anchor River has its own Critical Habitat Area upstream, which would be impacted from these withdrawals. In this region, horizontal drilling fracking will mean drawing down water levels in and around the Anchor River—which in turn means warmer water and harm to essential fish habitat in both the Anchor and Kachemak Bay where juvenile fish are rearing and where adult salmon need fresh water to find their way home on the Anchor.

Across Alaska, we can expect that large-scale freshwater withdrawals along the perimeter of areas closed to oil and gas drilling will have significant negative impacts on the protected areas themselves. These withdrawals will directly affect protected areas in cases where water tables and aquifers that cross the boundaries of protected areas are drawn-down—with the potential for direct harm to fish populations, and wildlife as streams, lakes, tundra, wetlands and peatlands all stand to be negatively impacted.

Alaska's waters are already warming, threatening the foundation of our fisheries. According to the US Fish and Wildlife Service, over the past half-century, annual available water has declined 62% on the western Kenai Peninsula; wetlands have decreased 6—11% per decade in surface area on the Kenai Lowlands. Current trends indicate that the southern Kenai Peninsula will loose 10-20% of our snowpack by 2030-2059. The additional stress to our salmon streams and to our protected lands and waters is unacceptable if we want healthy fisheries in the future.

Leaks and Groundwater

Hydraulically fractured horizontal wells are particularly prone to leaks into groundwater. Well bores are surrounded by casings that pass through underground aquifers and groundwater. Casings are meant to act as a barrier between underground water and the shaft through which the toxic frack fluid and gas flow. But casings are known to fail or break, allowing frack fluid and naturally-occurring heavy metals to contaminate groundwater.

Produced water contains high levels of heavy metals that are harmful to living organisms. This is no small matter, when according to studies by Duke University, up to 16% of hydraulically fractured oil and gas wells spill liquids every year.

[7] https://environmentamerica.org/reports/ame/fracing-numbers-0

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When casings fail, frack fluid and methane can leak from the well bore directly into the water supply, causing dangerous gas buildups, and making water unfit to drink, which has occurred all around the country.[8] For example, *Scientific American* found "a string of documented cases of gas escaping into drinking water – in Pennsylvania and other states." In December 2011, US EPA released a 121-page draft report linking the contamination of drinking water wells near the town of Pavillion, Wyoming to nearby gas drilling**.** We cannot allow this kind of contamination in our most productive fish and wildlife habitats.

Kachemak Bay National Estuarine Research Reserve has done some groundwater surveys in the area near Kachemak Bay specified in SB 62. They surveyed 2 groundwater wells near Anchor Point—one hit water at 87 ft and the other is 248 ft below sea level. How many more underwater aquifers are there in the region? Where are they? What is their depth? Can we count on DEC to find out? Can we be sure that these wells won't be contaminated? Can we be sure contamination won't harm the Critical Habitat? There is a chance that the activities proposed by this bill could contaminate these and other large aquifers beneath the Kachemak Bay Critical Habitat Area, the Anchor River Critical Habitat Area, as well as water used by Anchor Point residents. Lastly, a blow-out is always a scenario that must be considered.

SB 62 would be in direct conflict with Alaska Statute 16.20.500, which states that the purpose of the Kachemak Bay and Fox River Flats Critical Habitat Area is "to protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose."

Harm to Key Industries

Horizontal drilling and fracking take too much fresh water (from salmon streams and aquifers and reservoirs that feed salmon streams), they make too much toxic water, are too likely to hit underground aquifers, and statistically havee too many spills and leaks of toxic water. We can't both drill, frack and fish in the Kachemak Bay CHA, or in any other protected area.

Harm to fish populations, wildlife, and critical habitats will hurt Commercial Fishermen, guides, lodges, and the broader tourism

[8] Abrahm Lustgarten and ProPublica, "Drill for Natural Gas, Pollute Water," Scientific American, 11/17/2008

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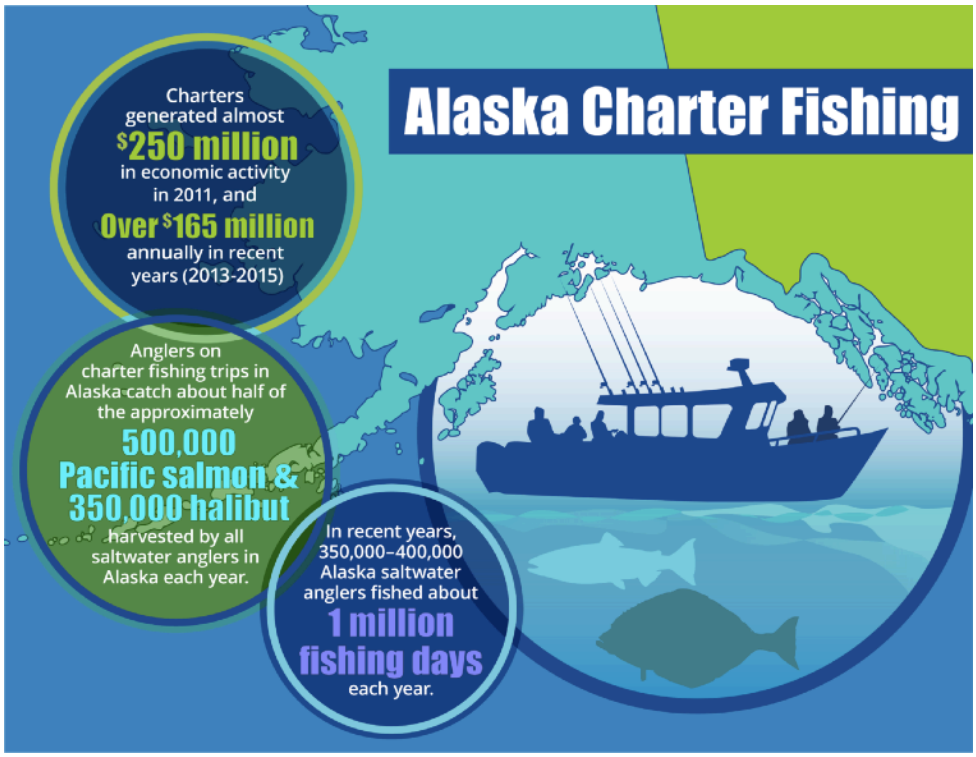
industry in the Kachemak Bay region and across Alaska. These are industries are a key pillar in the Alaskan economy.

2018 "Economic Impact of Alaska's Visitor Industry" by the McDowell Group

According to the 2018 "Economic Impact of Alaska's Visitor Industry" by the McDowell Group, Alaska's visitor industry has shown strong growth over the last decade, reflecting significant increases in visitor volume. Between 2008 and 2017, visitor volume increased by 15 percent (and by 27 percent since the industry's low point in 2010), reaching a record 2.2 million visitors in 2017. Over the same period, the number of visitor industry jobs grew by 20 percent; and both labor income and economic output grew by 32 percent. Growth in the Kenai Peninsula and in the is particularly significant.

Consider, for example, the charter industry, which would be one of the sectors most directly effected in the Kachemak Bay region. In 2019, NOAA Fisheries released the first full estimate of the economic contribution of the charter fishing sector in Southern Alaska. They estimated that the charter sector generated almost $250 million in economic activity (measured in total regional output) in Southern Alaska in



https://www.fisheries.noaa.gov/feature-story/alaskas-valuable-recreational-fishing-industry

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2011 and more than $165 million annually in recent years (2013-2015). In recent years, between 350,000 and 400,000 Alaska saltwater anglers fished about 1 million fishing days each.

Costs to the State of Alaska

Since horizontal drilling and fracking uses enormous amounts of fresh water and presents significant risks to surrounding waterbodies, these processes will need to monitored and permitted through the Department of Environmental Conservation (DEC). This will cost money. It is not possible that the fiscal note for SB 62 is zero. DEC needs to write an impact assessment for fresh-water withdrawals and disposal of "Produced Water." DEC needs to write a fiscal note for the cost of managing wells that passing through underground aquifers in protected areas.

Since our protected lands were set aside by the legislature to protect fish, wildlife and habitats, and drilling underneath our protected lands has a high risk of harming them through all the processes outline above, impacts to fish and wildlife and habitats in our protected lands and waters will need to be assessed and monitored by ADF&G and DNR, and this will cost money. Costs of monitoring impacts of seismic work, and impacts to underground aquifers, rivers, and lakes, are of particular importance. ADF&G and DNR need to write a fiscal note for the cost of this bill.

*

In conclusion, we repeat, SB 62 would be in direct conflict with Alaska Statute 16.20.500, which states that the purpose of the Kachemak Bay CHA is to:

> “protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose.”

In all likelihood, it is also in direct conflict with the statutory purpose of every other State Park, Game Refuge or Sanctuary, Critical Habitat Area where it would be applied. Please vote this down.

Sincerely,
Roberta Highland,

President, Kachemak Bay Conservation Society