

**Economic Analysis of HB18-1201**  
**“Severance Tax Voter-approve Revenue Change”**

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HB18-1201 intends to allow the Colorado State government to retain additional severance tax revenues and incorporate them into government spending. This will only occur in years when revenues would otherwise create the need for tax refunds under the Taxpayer Bill of Rights (“TABOR”). The bill is subject to the State leaving current exemptions and credits on severance taxes static and not interfering with current percentage allocations to local governments. The purpose of this bill is to increase the fiscal spending limit by the amount of the severance tax. Adding the tax amount to the fiscal limit may help to guarantee the existing operations paid for by the tax as the revenues are sheltered from refund.

The rationale behind the severance tax is to achieve socially efficient levels of production, and then use revenues to mitigate losses of environmental capital. Occasionally, when firms produce goods there are negative externalities. These are costs to actors other than the producer and are not factored into the firm’s production model. Production is then at a level that is good for the company but not the population at large. Typically, there is a problem of over production, which can be mitigated by raising costs to production through a tax. When producers see their production costs rise, they tend to produce less. This tax an economically viable option for attaining a socially optimal level of production.

Extractive operations lead to environmental degradation that creates costs in pollution of air, water, and land, as well as ecological disruptions associated with reductions in habitat loss and noise pollution. It is important to not only consider costs from direct usage, but costs that arise from the non-use of goods. This can include the observable beauty of our environment or the importance of natural wildlife, for example. The severance tax incorporates such values into costs to production, thereby more closely reflecting the socially optimal production.

Severance taxes are assessed to producers at the source at an ad valorem rate (Severance Tax). Through the production chain, prices increase to reflect this additional cost increase. Final products that reach consumers are then inflated in price, meaning the effect of this tax is shared between producer and consumer. This is known as a tax incidence and indicates economic distortions for both actors. A tax refund can help to reduce this distortion while maintaining a socially optimal output. Due to Colorado state government revenue and spending requirements, refunds often place strains on the state budget and cause more problems than they help solve.

Severance taxes are subject to TABOR revenue and spending limitations. Revenue under TABOR is made up of the general fund, cash funds, and federal funds (JBC Staff 2016). When the sum of these revenues reach TABOR's revenue limit, the government must give out refunds. TABOR stipulates that these refunds must come from the general fund until that fund is exhausted. Severance taxes are part of the cash fund, meaning they can contribute to fiscal limit and the need for a refund, but do not help pay for it. To replenish the general fund, bills are introduced to reorganize the tax revenues from the remaining funds.

In the past, this leads to the severance tax revenues patching holes in other government spending. As reported by the Denver Post, use of severance tax revenue included "[...]an opera house in Leadville, [...] a new sport shooting complex in Palisade, [...] a clubhouse at a shooting complex in Gypsum, [...] and a new recreation center in Montrose" (Osher 2017). Spending revenues on unrelated projects in years of excess hurt the performance of severance tax funded projects in years of revenue decline (Herrick 2018). Over the past 9 years, severance taxes provided \$181.7 million on average in yearly revenue (Colorado General Assembly 2018). Such revenue should be reinvested to account for the now diminished value of our environmental

capital stock. Instead, the current structure leaves severance taxes susceptible to spending which does not preserve the stock

This bill has the potential to be an economically responsible act on the part of the Colorado General Assembly. As revenues are incorporated into fiscal limits, revenue volatility is better accounted for. For example, in a year of very high revenues, the fiscal limit is also increased to alleviate refund pressure on the general fund. In turn, there is less of a need for redistributing funds within the government. Operations aimed at restoring or compensating our loss of natural capital are then at less risk of losing funding. This is a more efficient process and creates more certainty in the revenue system.

The severance tax is a sound principle in environmental economics, and the bill helps to protect its revenues from reappropriation in refund years. It is important to protect these revenues as the projects they support satisfy legitimate actions of government. Currently, spending is intended for conservation efforts, water infrastructure improvements, and transfers to affected communities. Conservation efforts create public goods while infrastructure improvements and transfers to local governments likely provide positive returns on investment. As these operations are funded based on percentages of the severance tax, refunds potentially reduce the total amount allocated. The bill helps prevent this from happening.

Conservation efforts funded through the severance tax provide public goods in our environment through representation of non-use activities. The value of resources or the physical use of land is usually apparent. Costs that are less apparent arise when the land is not actually used, leading to option, bequest, and existence values. Respectively, the first two describe the option to use the environment at some point in the future and the value of environment passed on

to the next generation. Existence values are where people assess value on environments and ecologies which they do not intend to use but still value.

The government creates a public good through representation of environmental non-use values. There would be high transaction costs to assessing and compiling the various non-use values of citizens within and outside of the state. The state government can act as a single, unified actor in the interest of these individuals, reducing transaction costs, and appropriately alleviating some social costs to production through conservation.

If a government's investment does not provide a public good, it should at least provide a positive return on investment to the state's economic output. Fiscal multipliers are estimates of the value of return on each dollar spent by the government and are used by institutions such as the Congressional Budget Office ("CBO") to assess policy outcomes. They are not the only tool, but serve as an easy numeric comparison between returns on policies. The CBO estimates suggest the government actions that might yield the highest returns are present in current severance fund operations for infrastructure spending and transfers to local governments.

Spending on water infrastructure has the potential for a positive return on investment, making it another fair use of government funds. Multiplier estimates for infrastructure spending range from 0.4 to 2.2 (Whalen Reichling 2015). In Colorado, a changing, dry climate may make this investment more valuable than it would be in other areas, possibly contributing to a higher multiplier. Though there is a risk of infrastructure spending being an inefficient venture, there is also a probability it is a legitimate and economically beneficial use of government funds.

The current system also provides a percentage of funds to communities most affected by extraction related activities. These local governments are more knowledgeable of local affairs

and can spend money more effectively than the state could. Direct transfers to local governments also have high multiplier estimates, residing somewhere between 0.4 and 1.8 (Whalen Reichling 2015). Market economies are made up of individuals who are the most informed actors to their preferences and well-being. However, proper assessment and coordination of action on extractive operations may be difficult to accomplish for individual citizens. Local governments are more aware than the state government of the most pressing issues facing their community, while also being more informed on the nuances of the issue than the individuals within the community.

The existing severance tax system is functional in certain actions and disruptive in others. The underlying economic logic behind the severance tax is sound, and the current spending activities on conservation, infrastructure, and aid to affected communities are economically justifiable. Concerns lie in what happens when high revenues assist in triggering state refunds. As general funds are reduced, the state is forced to appropriate funds from revenues like the severance tax to cover for other projects. Natural capital stock is not adequately preserved or compensated for as a result. This bill attempts to reduce the likelihood of these reappropriations by increasing the fiscal spending limit. Through this, environmental quality and Colorado's capital stock are better maintained for present and future generations. With this in mind, I urge the committee to pass this bill.

### Works Cited

- Colorado General Assembly, Cong. House, Joint Budget Committee, and Scott P Thompson. "Supplemental Budget Requests." *Supplemental Budget Requests*, JBC, 2018. 71st Congress, document.
- Herrick, John. "Colorado's Oil and Gas Regulatory Agency Is Running out of Money – Fast." *The Colorado Independent*, The Colorado Independent, 21 Feb. 2018, [www.coloradoindependent.com/168666/severance-tax-shortfall-conservation-programs](http://www.coloradoindependent.com/168666/severance-tax-shortfall-conservation-programs).
- Osher, Christopher N. "Tale of Two States: North Dakota Has \$4 Billion Saved from Oil and Gas Taxes; Colorado Has Almost None." *The Denver Post*, The Denver Post, 27 Jan. 2017, [www.denverpost.com/2017/01/27/n-dakota-4-billion-saved-oil-gas-colorado-none/](http://www.denverpost.com/2017/01/27/n-dakota-4-billion-saved-oil-gas-colorado-none/).
- "Severance Tax | File." *Severance Tax | File | Department of Revenue - Taxation*, Colorado Department of Revenue, [www.colorado.gov/pacific/tax/severance-tax-file](http://www.colorado.gov/pacific/tax/severance-tax-file).
- Whalen, Charles J, and Felix Reichling. "The Fiscal Multiplier and Economic Policy Analysis in the United States: Working Paper 2015-02." *Congressional Budget Office*, Wiley Periodicals, Inc, 12 Aug. 2015, [www.cbo.gov/publication/49925](http://www.cbo.gov/publication/49925).