Increasing Taxpayer Awareness and Utilization of Tax Expenditures

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I. Background and Report Overview

Statute [Section 39-21-403(2)(c)(I)(C), C.R.S.] allows the Legislative Oversight Committee Concerning Tax Policy (Committee) to request that the Office of the State Auditor prepare up to two reports annually on specific, discrete topics related to existing tax policy. On October 31, 2024, the Committee asked our office to review and report on best practices for increasing taxpayer awareness and utilization of tax expenditures available to individuals and businesses in Colorado. This report provides the results of our work on this tax topic.

As we have noted in many of our tax expenditure evaluation reports, whether eligible taxpayers know about a given tax expenditure (hereafter, "awareness") and the extent to which they use the tax expenditure (hereafter, "utilization" or "uptake") are important factors in the tax expenditure's success at meeting its intended purpose. This report is organized based on these two umbrella topics, along with a supplemental section at the end of the report containing additional information on current efforts in Colorado to increase tax expenditure awareness and/or utilization:

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We consulted a variety of sources to develop the content for this report, including:

- Academic research on strategies for increasing awareness and/or utilization of tax expenditures, including some studies that have looked at practices in other states.
- Publications from other government agencies, nonprofit organizations, and think tanks.

- Our experience evaluating tax expenditures—in particular, the conclusions and evidence presented in our evaluation reports published between January 2020 and March 2025.
- Input from agencies and individuals who have relevant experience, including those who design tax expenditures; administer tax expenditures; inform individuals and/or businesses about tax expenditures; and/or assist taxpayers with applying for or claiming tax expenditures (collectively referred to as "stakeholders" throughout the rest of this report).

Although we identified sources in each of these categories, we found a surprising lack of publications from academic, think tank, and governmental sources that specifically examine techniques for improving taxpayer awareness and/or utilization of tax expenditures. Two notable exceptions to this are the federal and state versions of the Earned Income Tax Credits (EITCs) and business tax incentives, two topics on which we found a more substantial body of research. Some of the conclusions in publications that address these topics can be extended to a broader range of tax expenditures—for example, strategies that have been effective for increasing awareness and/or utilization of the EITCs may also be effective for other tax expenditures that are intended to provide financial assistance to taxpayers with low incomes. However, given the lack of available information on some other topics in this report, we took a more practical approach to developing the content for those topics—namely, examining relevant trends in our own evaluation reports and consulting with agencies and individuals who have relevant experience.

II. Awareness – Who needs to know?

This section identifies the entities that need to know about a tax expenditure in order for it to be claimed by a taxpayer.

State agencies and other administering organizations. The Department of Revenue (DOR) has a role in administering most of Colorado's tax expenditures, since it administers and collects most of the State's taxes. However, other agencies may also be involved in administering a tax expenditure. For example:

- The Office of Economic Development and International Trade (OEDIT) administers aspects of many of Colorado's business incentive tax expenditures, such as the Job Growth Credit, the Advanced Industry Credit, and the Rural Jump-Start Tax Expenditures. OEDIT's administrative role varies depending on the tax expenditure but can include reviewing a business' application to claim an expenditure to ensure that the business is eligible; calculating and certifying the amount of a business' tax expenditure; providing lists of businesses that have been certified to claim an expenditure to DOR; and issuing tax credit certificates to certified businesses.
- The Division of Insurance, housed within the Department of Regulatory Agencies (DORA), administers and collects the State's insurance premium taxes, so all tax expenditures that apply to the insurance premium tax are administered by the Division.

- Other state agencies administer aspects of just one or two tax expenditures. For example:
 - The Division of Conservation (also a division of DORA) administers many aspects of the Conservation Easement Credit, including certifying conservation easement holders, reviewing conservation easement donations to ensure that they qualify for the credit, and issuing tax credit certificates to landowners for qualified donations.
 - Administration of the Historic Structures Credit is divided among a number of agencies. Property owners seeking to receive the credit for the historic rehabilitation of residential properties may apply for the credit with History Colorado's State Historic Preservation Office (SHPO) or with a certified local government. Owners of commercial properties must apply with OEDIT, which reviews and approves applications in consultation with SHPO.
 - The Department of Early Childhood assesses individuals who apply for an Early Childhood Professional Credential (ECPC) and assigns each qualified individual an ECPC Level, which determines the amount of the Early Childhood Educator Credit that the individual is eligible to receive.

In general, we have found that the administering entities of Colorado's tax expenditures are aware of these tax expenditures and have established a system for administering them. In the rare case when an administering entity was not aware of their role in administering a tax expenditure, we have found that the tax expenditure has not been used much, if at all, and is generally not meeting its purpose.

Example: During our 2022 evaluation of the Registration Number Credit, we found that the Colorado Disability Funding Committee and its staff were not aware of the credit, which they had a role in administering. Specifically, the Committee had not been issuing credit certificates to purchasers of vehicle registration numbers, which purchasers were required to attach to their tax returns to claim the credit. The credit had rarely been claimed, and the General Assembly subsequently eliminated the credit after Tax Year 2024.

Claimants, including taxpayers and their agents. "Taxpayers" generally refers to individuals, businesses, and other entities (such as trusts or fiduciaries) that receive the direct financial benefit of the tax expenditure. In some cases, a tax expenditure cannot be claimed unless the taxpayer receiving the benefit is aware of it because the tax expenditure can only be claimed if the taxpayer takes direct action, such as business tax incentives that require a business to submit an application. However, there are also many instances in which a tax expenditure can be claimed by someone else on the taxpayer's behalf. Entities that commonly claim or apply a tax expenditure for taxpayers include:

• **CPAs, accountants, and tax preparers.** Both individuals and businesses may choose to use these tax professionals to handle their taxes. In these instances, the taxpayer may be aware of the tax benefits they are receiving, but tax professionals may also claim tax expenditures on the taxpayer's behalf without the taxpayer's express knowledge. Multiple stakeholders indicated that

informing tax professionals about a tax expenditure can be an effective method of increasing taxpayer awareness, possibly because tax professionals can have contact with many eligible taxpayers. Some CPAs also specialize in particular industries and can help ensure that businesses in those industries are aware of tax expenditures that are specific to them; one example is the oil and gas industry.

• Retailers, distributors, and other vendors. When individuals and businesses make purchases that are exempt from Colorado sales tax, the vendor typically applies the exemption to the purchase automatically, often without informing the purchaser. Similarly, excise tax exemptions may be claimed by distributors before the product is sold to retailers and subsequently to the final purchaser. In some cases, vendors may need to know about a sales or excise tax exemption in order to apply it, but vendors can also use point of sales systems or sales tax software that is managed by a third party who ensures that these systems or software remain compliant with federal, state, and local tax laws.

Throughout the rest of this report, unless otherwise stated, our use of the term "taxpayer" includes both the taxpayer themselves as well as any person or entity that has a role in claiming or applying the tax expenditure on the taxpayer's behalf.

III. Awareness - Who can help get the word out?

Taxpayers may find out about new tax expenditures from the state agencies that administer the tax expenditures. However, stakeholders have frequently told us that they found out about a given tax expenditure through other connections, including businesses, organizations, and individuals. Since taxpayers commonly find out about tax expenditures through their connections with others, the taxpayers who are most likely to be unaware of tax expenditures for which they may be eligible are those that lack the resources needed to gain these connections. For example, in multiple evaluations, we found that small businesses may not be aware of tax expenditures because they may not have access to certain resources, such as experienced CPAs, legal staff, or industry groups, that are generally more accessible to larger businesses. Additionally, certain groups of individuals are less likely to have connections that can inform them about tax benefits, including individuals with low incomes who are not required to file a tax return—and who, therefore, may not have any contact with tax professionals—and those who do not speak or read English fluently—and who, therefore, are less likely to utilize resources that are only available in English. It may be particularly challenging to inform these taxpayers about a tax expenditure. Therefore, groups that help less-connected taxpayers learn about or claim a tax expenditure can be particularly impactful.

We identified a number of groups that may help to inform taxpayers about tax expenditures. These groups generally have a vested interest in looking after their clients and will often help inform taxpayers and their agents about tax expenditures for which they may be eligible. Notably, however, some organizations may not actively promote a tax expenditure even if they are aware of it. In our experience, this may happen because the organization does not have sufficient resources to prioritize promoting a tax expenditure; they are concerned about the legal ramifications of providing tax

advice; or they do not believe that the tax expenditure would provide a large enough monetary benefit to their clients to warrant promoting.

Other beneficiaries (for both businesses and individuals). For many tax expenditures, the only person or entity receiving a significant financial benefit is the taxpayer themselves. However, some tax expenditures may be granted only if the taxpayer provides a financial or nonfinancial benefit to a secondary entity, such as tax expenditures that reimburse taxpayers for a portion of their investment in an approved business or their contribution to an approved charitable organization. In these cases, the taxpayer making the investment or contribution claims the tax expenditure and, therefore, receives the direct financial benefit, but the secondary entity receives the indirect financial or nonfinancial benefit from the investment or contribution. Secondary beneficiaries have a vested interest in informing potential investors or donors about the tax expenditure because doing so may result in the investor/donor deciding to make or increase the amount of an investment/contribution.

Example: We have conducted multiple evaluations in which secondary beneficiaries played a significant role in spreading the word about a tax expenditure, including:

- The Child Care Contribution Credit (evaluated in 2021), intended to incentivize taxpayers to
 contribute financially to child care organizations and services in Colorado. We reported that
 word of mouth from eligible child care organizations often drew in contributions from the
 community.
- The Rural & Frontier Healthcare Preceptor Credit (2023), intended to encourage healthcare providers in rural communities to mentor healthcare students. Representatives of healthcare programs at universities and colleges reported that the credit helped them attract and retain healthcare mentors from rural areas of the state.

Industry groups and trade organizations (for businesses and individuals). Organizations that focus on serving the needs of a particular industry can play a significant role in informing businesses and/or their employees about tax expenditures, especially if the tax expenditure specifically targets the industry in question.

Example: In our 2025 evaluation of the Early Childhood Educator Credit, we found that awareness of the credit was generally very high. Child care providers and child care industry organizations reported that they were aware of and publicized the credit, which likely helped increase taxpayer awareness. In contrast, our 2022 evaluation of the Military Service Persons Reacquiring Residency Deduction found that representatives of military groups were generally not aware of the deduction. The deduction was not used by many taxpayers.

Economic development organizations (for businesses). These organizations often have a local focus, such as supporting economic development in a particular county, city, or other specific area. They may help businesses in a variety of ways, including assisting with grant applications, connecting businesses with other people and resources, aiding in site selection, and providing businesses with

information about tax expenditures and other financial benefits for which they may be eligible. One stakeholder commented that local partners like economic development organizations can play a crucial role in getting the word out about business incentives, particularly for tax expenditures with little funding or other resources available for outreach.

Example: During our 2021 evaluation of the Enterprise Zones Contribution Credit, organizations that had created qualifying projects commonly reported that they had heard about the credit through a local economic development organization. This credit had been claimed by about 12,000 taxpayers per year who donated to qualifying projects.

Advocacy and service-oriented organizations (for individuals). Some publications have emphasized the role that service organizations, such as free or low-cost tax assistance clinics, can play in informing individuals about and/or assisting them with claiming the credit. Additionally, during our evaluation work, some organizations that advocate for or provide services to particular groups of individuals have stated that they inform clients about a particular tax expenditure for which clients may be eligible or, if the organizations were not aware of the tax expenditure until we reached out to them, that they planned to inform their clients about it going forward.

Example: Our 2022 evaluation of the Olympic Medalist Deduction found that the deduction had only been used by a very small number of eligible taxpayers as of Tax Year 2018, which was the first year the deduction was available. However, organizations that represent Olympic athletes reported that athletes may not have been aware of the deduction at that point, but in more recent years, these organizations have publicized the deduction to potentially eligible athletes. Therefore, more eligible athletes may have claimed the deduction in subsequent tax years.

Employers (for individuals). For some tax expenditures available to individuals, employers may be well-placed to provide eligible employees with information about the tax expenditures. For example, some tax expenditures are available to a broad enough population of individuals that a significant number of employers are likely to employ at least one eligible person, such as the Colorado EITC (claimed on about 311,000 individual income tax returns in Tax Year 2022) and the Colorado Child Tax Credit (claimed on about 133,000 individual income tax returns in Tax Year 2022). Although recent years have seen a number of states, including Colorado, adopt requirements for employers to notify their employees about the availability of tax credits like these, a 2019 study found that these laws have not increased claim rates because they did not increase the number of people filing a tax return. Finally, some tax expenditures may only be available to employees of specific pre-approved businesses, in which case these businesses may be a main source of information about the tax expenditure for eligible employees.

¹ Taylor Cranor, Jacob Goldin, and Sarah Kotb, "Does Informing Employees About Tax Benefits Increase Take-up? Evidence from Earned Income Tax Credit Notification Laws," National Tax Journal, June 2019.

Example: In our 2025 evaluation of the Rural Jump-Start (RJS) Tax Expenditures, we found that less than half of the employees of RJS businesses who were eligible for the RJS New Hire Credit had actually claimed the credit. One factor that may have contributed to the low claim rate was lack of awareness, as only half of responding RJS businesses reported that they had informed eligible employees about the credit before they were hired.

Other "points of contact" that are likely to be able to reach a significant portion of eligible taxpayers (for both businesses and individuals). In some cases, government agencies may have regular contact with many of the individuals who are eligible for a specific tax expenditure. In these instances, the agencies may be able to inform individuals about the tax expenditure during the course of their regular contact with these individuals. There may also be other groups or professionals that have reason to be in contact with eligible taxpayers, which can include anyone with specialized knowledge on the types of taxpayers that are likely to be eligible or on specific subjects related to the tax expenditure. For example, site selectors that are hired to determine the most advantageous locations for new or expanding businesses may inform their clients about tax expenditures that are available to businesses choosing to locate in Colorado. We also found several sources (including the Federal Reserve Bank of Chicago and Code for America) and stakeholders reporting that, in the case of individual income tax expenditures, "sharing information with families through sources they trust or already have contact with can be an effective way to connect families to tax-filing assistance," which can include informing them about tax expenditures.

Example: Several stakeholders who spoke with us about strategies for increasing awareness and utilization mentioned that some state agencies in Colorado have begun collaborating on getting the word out to individuals with low incomes who may be eligible for significant tax benefits like the EITC and Child Tax Credit. Some state and local agencies are already working directly with specific communities, and one stakeholder mentioned that training these agency staff in "warm hand-off" techniques can be a great way to increase uptake. For example, if an agency staff person mentions to an individual that if they file their taxes, they may be able to receive thousands of dollars in refundable tax credits, then directs them to a website describing the credits, this can be "much more effective than flyers at getting people to feel confident and safe enough to try [to file a return and claim the credits]." Between 2022 and 2024, the Colorado Department of Public Health and Environment (CDPHE) awarded a total of \$1.1 million in grants to eight community-based organizations for purposes of tax credit outreach. These organizations integrated their tax credit outreach with some of their existing services, such as food assistance networks and food security programs, early childhood education networks, and services for non-English speakers like Spanish-language radio.

² Nathan Anderson, Kartik Athreya, Jason Keller, and Roisin McCord, "Why Are Millions of Dollars in Tax Refunds Going Unclaimed?" Federal Reserve Bank of Chicago: ProfitWise News and Views, March 2022.

IV. Awareness – What mechanisms can help get the word out?

We identified a variety of mechanisms that can help inform taxpayers about available tax expenditures. Some of these mechanisms are best employed by the administering agency, but others can be used by any organization with an interest in increasing taxpayer awareness.

Clear instructions on tax forms. Ensuring that a tax expenditure is both mentioned and clearly explained on tax forms can help ensure that taxpayers are aware of the tax expenditure and know how to claim and calculate it correctly.

Example: During our 2020 evaluation of the Oil and Gas Severance Tax Deductions for Transportation, Manufacturing, and Processing Costs, we found that oil and gas operators were generally aware of the deduction. However, all interest owners of oil and gas operations must pay severance taxes, and we found that some interest owners—namely, those who were not involved with actual operations, such as farmers who owned the land where an operation was located—were unlikely to be aware of or claim the deductions. One of the key factors we identified that likely contributed to this lack of awareness was that there was no place on the Department's forms where these deductions could be reported. Oil and gas operators knew to deduct transportation, manufacturing, and processing costs when calculating gross income for severance tax purposes because this was the standard approach to calculating gross income in the oil and gas industry. However, without that industry knowledge and with no information about the deductions on the tax forms, interest owners who were not operators were unlikely to be aware of the deductions.

Supplemental taxpayer guidance materials. Administering agencies may make information about a tax expenditure available in locations other than the instructions on official tax forms, such as on an informational webpage or in a PDF on their website. These supplemental guidance materials may be more easily understandable for those without a tax or accounting background because they may use less formal or technical language and provide more details than official tax form instructions. Finally, these materials provide an easy way for organizations other than the administering agency to distribute information about the tax expenditure, such as a trade organization wanting to inform their member businesses or an advocacy organization wanting to inform eligible individuals. Both DOR and OEDIT provide supplemental materials about many of the tax expenditures that they administer on their respective websites, as do some other administering agencies.

Example: During our 2024 evaluation of the Business Personal Property Income Tax Credit, we found that many taxpayers did not seem to be aware of the credit. Trade organizations mentioned to us that having a premade pamphlet about the credit from DOR that they could distribute to their members could help increase businesses' awareness of the credit. DOR commonly provides taxpayer guidance documents about specific tax expenditures and other tax topics on its website but did not have guidance documents on this particular credit. The General Assembly passed legislation in 2025 that will repeal this credit after Tax Year 2025.

Tax preparation software. Many individuals, businesses, and tax professionals use tax preparation software to prepare and file tax returns. For example, Internal Revenue Service (IRS) data indicates that about 91 percent of federal individual income tax returns and 84 percent of federal corporation income tax returns were filed electronically in Federal Fiscal Year 2023. Similarly, in Colorado, DOR data shows that about 91 percent of state individual income tax returns and 78 percent of corporate income tax returns were filed electronically in State Fiscal Year 2024. According to a 2021 National Bureau of Economic Research (NBER) working paper that was later published in the Journal of Public Economics, tax preparation software can prompt taxpayers to provide all of the information necessary to determine their eligibility for various tax expenditures, then "automatically [map] their answers into a completed tax return. As a result, filing a return with these methods should typically result in taxpayers taking up all tax-administered benefits for which they qualify," provided that the software company has incorporated the relevant tax expenditures into their program. Therefore, this software can help to inform taxpayers of tax expenditures, to the extent that the software provides notice about their availability, and may also be able to claim tax expenditures on taxpayers' behalves without their express knowledge.

Since tax preparation software is so widely used, ensuring that tax expenditures are incorporated into this software for all users may be a particularly effective way to increase taxpayer awareness and/or utilization. For example, the 2021 NBER working paper reported that the "relatively high take-up rate [of the EITC] among filers [when compared with non-filers] is likely due [in part to] the widespread use of assisted tax preparation methods," including tax preparation software as well as tax professionals.⁴ Additionally, DOR reported that they work closely with tax software companies, as "accurate software is key to providing taxpayer access to income tax benefits."

Example: In two of our evaluations, we examined tax preparation software and found that it provided information about the tax expenditures in question—the Previously Taxed Income Deduction (evaluated in 2021) and the Credit for Taxes Paid to Other States (2023). We found that both tax expenditures were being used, although we could not attribute this directly to the fact that information was made available via tax preparation software.

Outreach to eligible taxpayers and other points of contact. When considering potential methods of increasing taxpayer awareness, outreach is likely one of the first methods that comes to mind. We chose to discuss this topic last in this section because the topic of outreach is both broad and nuanced, and because stakeholders generally talk about the effects of outreach on both awareness and utilization together.

Taxpayer outreach can take many forms. For example, direct communications with eligible taxpayers can include mailers, texts, emails, and phone calls. Some administering agencies may hold regular information sessions or training seminars in order to reach groups of eligible taxpayers.

³ Jacob Goldin, Tatiana Homonoff, Rizwan Javaid, and Brenda Schafer, "Tax Filing and Take-Up: Experimental Evidence on Tax Preparation Outreach and EITC Participation," NBER Working Paper No. 28398, January 2021, p. 2. ⁴ Ibid., p. 5.

Communications intended to reach eligible taxpayers more indirectly can include handouts, posters, social media posts, newsletters, videos, and media advertisements.

Outreach efforts may also be directed at "points of contact"—organizations and individuals that are likely to have contact with eligible taxpayers, such as those included in Section III above—so that these points of contact can then spread the word to eligible taxpayers within their spheres of influence. Tactics for reaching points of contact can include the above methods of contacting taxpayers directly, but stakeholders also mentioned to us that meeting points of contact in person can be an effective method of outreach—even if it means traveling across the state. According to one stakeholder, directing outreach at points of contact can be particularly helpful if the administering agency has limited resources available for outreach. DOR reported that it meets regularly with a variety of tax preparer groups, including meetings to provide these groups with legislative updates, as well as some advocacy groups, community groups, and tax preparation assistance sites.

As discussed, we did not identify many academic studies that examined the effectiveness of different approaches to outreach in improving taxpayer awareness or utilization. However, one study of federal EITC claims found that the way in which written information is provided makes a difference in the extent to which these communications can increase taxpayer credit claims.⁵ Specifically, researchers sent written information about the EITC to eligible taxpayers who had not previously claimed it. They found that if they sent written communications more than once, simplified the information being provided, or displayed the range of potential credit amounts in the headline, more taxpayers claimed the credit. Another study that examined the EITC stated that "evaluations of awareness interventions [with respect to the EITC] have yielded mixed results, with a few studies showing substantial effects…but most finding either no effect or effects that are modest in magnitude."⁶

Although outreach methods vary, as does their effectiveness, the following points regarding outreach appear to be significant:

• Outreach is most effective in increasing taxpayer awareness and utilization when it is consistent. For example, one multi-year study found that reaching out to eligible taxpayers resulted in higher uptake of the federal EITC, but reaching out in just a single tax year did not result in these same taxpayers continuing to claim the EITC in subsequent tax years. One stakeholder emphasized the importance of consistent outreach multiple times during our conversation with them.

⁵ Saurabh Bhargava and Dayanand Manoli, "Psychological Frictions and the Incomplete Take-Up of Social Benefits: Evidence from an IRS Field Experiment," American Economic Review, November 2015.

⁶ Jacob Goldin, Tatiana Homonoff, Rizwan Javaid, and Brenda Schafer, "Tax Filing and Take-Up: Experimental Evidence on Tax Preparation Outreach and EITC Participation," NBER Working Paper No. 28398, January 2021, p. 4. ⁷ John Guyton, Pat Langetieg, Day Manoli, Mark Payne, Brenda Schafer, and Michael Sebastiani, "Reminders and Recidivism: Using Administrative Data to Characterize Nonfilers and Conduct EITC Outreach," American Economic Review: Papers & Proceedings, May 2017, p. 473.

- In general, outreach can be consistent only if there are sufficient resources for this purpose on an ongoing basis. One stakeholder estimated that administering a typical business credit, including coordinating outreach, requires a minimum of one staff person working full time, although they also noted that the number of staff needed will depend on the individual credit. Another stakeholder indicated that whether outreach increases tax expenditure uptake seems correlated with the amount of money and effort devoted to outreach.
- The most effective outreach method(s) vary depending on the tax expenditure and who is eligible to claim it. Tax expenditures that are very broad—i.e., for which many individuals or businesses are eligible—require different outreach strategies than tax expenditures that are very narrow. One stakeholder suggested that the best approach for broad tax expenditures is some form of mass marketing campaign, whereas direct contact with individual eligible taxpayers is likely more effective for very narrowly targeted tax expenditures.
- Even effective outreach may require a number of years to yield results. We have found that awareness of tax expenditures is generally lower when the tax expenditure first becomes available; some tax expenditures may simply need time for the outreach tactics employed to increase awareness and utilization to take effect. One stakeholder mentioned that it is common for business tax incentives to have a "ramp period" in which the tax expenditure is available but underutilized, even if the administering agency is engaging in effective outreach techniques.
- In some cases, outreach may not be enough to increase taxpayer uptake. Even if outreach increases taxpayer awareness of a tax expenditure, taxpayers may still choose not to claim it. This may be particularly relevant for individuals who do not have taxable income and, therefore, are not required to file an income tax return, meaning that they generally do not receive the refundable credits for which they may be eligible, or for tax expenditures that are less well-designed from a utilization perspective (see Sections V through VII). For example, a 2020 NBER working paper, later published in the American Economic Journal: Economic Policy, that examined California's state EITC reported that "For low-income households who do not file taxes, the hurdle of submitting a tax return may be too big for a simple outreach effort, no matter how well-designed or behaviorally informed, to overcome. Getting families over this hurdle evidently requires more than just information and pointers to existing assistance." 8

Example: Our 2025 evaluation of the Rural Jump Start Tax Expenditures noted that in 2024, the General Assembly increased appropriations for OEDIT's administration of the Rural Jump Start Program from \$100,000 to \$300,000. Additionally, we noted that since our previous evaluation of these tax expenditures (published in 2020), "OEDIT staff dedicated specifically to the RJS Program have marketed the Program and worked on outreach to eligible counties and businesses, and the number of participating counties and businesses has increased."

⁸ Elizabeth Linos, Allen Prohofsky, Aparna Ramesh, Jesse Rothstein, and Matt Unrath, "Can Nudges Increase Takeup of the EITC?: Evidence from Multiple Field Experiments," NBER Working Paper No. 28086, November 2020, pp. 6-7.

V. Utilization – General Considerations

Some taxpayers may know about a tax expenditure but choose not to claim it even if they are eligible for it. This section reviews factors beyond awareness that may affect taxpayer decisions regarding whether to claim any given tax expenditure. We also identified two types of tax expenditures—business incentives and benefits for individuals with low incomes—for which there are additional considerations regarding utilization; these are addressed in sections VI and VII.

Tax expenditure structure. In order for tax expenditures to be used by eligible taxpayers, they must be structured so that the intended beneficiaries are able to access them and see benefit in their use. There are a number of tax expenditure structures that are commonly used:

• **Deductions** can only be used to the extent that a taxpayer has the taxable income to claim them. Therefore, they are generally more consistently useful for taxpayers with larger incomes because these taxpayers are more likely to have sufficient taxable income to be able to subtract the entire value of their deductions. In contrast, taxpayers with smaller incomes may have taxable incomes that are much lower than the value of their deductions. In such cases, deductions can reduce the taxpayer's taxable income to \$0, but the remaining value of the deduction is generally lost to the taxpayer. In addition to individuals with low incomes, businesses operating on small profit margins or at a loss can also have low or no taxable income, including new businesses, which may not be profitable in their first years of operation.

Deductions are particularly well-suited for excluding a particular type of income from being taxed for all taxpayers and are less well-suited for "incentivizing" tax expenditures—those that are intended to change taxpayers' behaviors or financial decisions. Because of the way they are structured, deductions are generally not able to provide benefits that are large enough to influence taxpayer decisions. Specifically, the maximum amount saved by the taxpayer as a result of a deduction is calculated by multiplying the amount of the deduction by the income tax rate. Therefore, the maximum value of a deduction is limited to the Colorado income tax rate, which in recent years has ranged from a low of 4.25 percent in Tax Year 2024 to a high of 4.63 percent in Tax Year 2018.

- Exemptions from sales tax are similar to income tax deductions in that they are best suited for exempting a particular type of sale from sales tax, and the amount saved by the taxpayer is equal to the price of the item multiplied by the sales tax rate. Colorado's state sales tax rate has been 2.9 percent since 2001.
- Nonrefundable credits provide a dollar-for-dollar reduction in the total amount of taxes owed by the taxpayer. They are similar to deductions in that they can only be used to the extent that the taxpayer has sufficient income tax liability to claim their full value—in other words, a taxpayer can reduce their tax liability to \$0 using a nonrefundable credit but will not receive a refund for any additional credit amount remaining. Therefore, as with deductions, nonrefundable credits are less useful to taxpayers with lower taxable incomes. Some

nonrefundable credits can be carried forward for a certain number of income tax years, which can allow some taxpayers with lower tax liabilities to claim the full value of their credit over time. Nonrefundable credits have the advantage of providing potentially larger benefits to taxpayers than deductions, since their value is not limited by the income tax rate, while still limiting the tax expenditure's total benefit to the amount of a taxpayer's income tax liability.

• Refundable credits can generally be claimed by any eligible taxpayer regardless of their income tax liability. Unlike nonrefundable credits, if a taxpayer has a refundable credit amount that is greater than the total amount of taxes they owe, they will receive a refund of the remaining credit value after the credit has reduced their tax liability to \$0. For this reason, refundable credits are particularly well-suited for tax expenditures that are intended to provide financial assistance to individuals or businesses with low taxable incomes.

Other design elements can also affect the usefulness of tax expenditures, such as making a tax credit transferable to other taxpayers. For taxpayers that are eligible for substantial tax credits but have low tax liabilities, the ability to sell their credits to taxpayers with higher income tax liabilities can help them retain some of the credit's value that would otherwise be lost.

Administrative burden of claiming, including amount of time and monetary expense. Tax expenditures can be administratively difficult to claim, which can increase the amount of time, effort, and expense that the taxpayer must put in to successfully claim the tax expenditure. For example, a taxpayer might have to provide a significant amount of documentation to demonstrate their eligibility; coordinate between multiple administering entities; or use a computer program that may be complicated or confusing to apply for the tax expenditure. Depending on the taxpayer, their tax situation, and the tax expenditure's value, the taxpayer may decide that the tax expenditure is worth going through the effort of claiming it. In other cases, they may decide that the value they expect to receive from the tax expenditure is not worth the administrative burden.

Example: In our 2022 evaluation of the Medical Marijuana Sales Tax Exemption for Indigent Patients, we estimated that less than 1 percent of medical marijuana patients with low incomes who were likely eligible for the exemption had been approved to claim it by Colorado's Medical Marijuana Registry (Registry). The administrative burden of applying for Registry approval was likely one reason for the exemption's low uptake. Specifically, among other things, the Registry required patients to submit a certified copy of their Colorado income tax return with their application. We found that many patients who qualified for this exemption likely had gross incomes that were below the federal standard deduction and were, thus, not likely to have federal or Colorado taxable income. Since individuals with no taxable income are not required to file a tax return, these patients would have needed to file a tax return for the sole purpose of applying for the Registry's approval in order to claim the exemption. In 2025, the General Assembly passed legislation allowing the exemption to any medical marijuana patient who presents to the seller a valid electronic benefits transfer (EBT) card or other form of identification used to receive state or federal benefits.

Expected monetary value of tax expenditure. Tax expenditures that are not expected to provide much monetary value are less likely to be claimed, even if taxpayers are aware of them. As discussed previously, this can be because the taxpayer decides that the administrative burden of claiming the tax expenditure is not worth the value they expect to receive. In other cases, such as when the administrative burden is extremely low or nonexistent, it is not clear why a taxpayer has chosen not to claim a tax expenditure.

Example: During our 2025 evaluation of the Rural Jump Start Tax Expenditures, we reported that no businesses have claimed the RJS Sales Tax Refund since it became available in 2016, despite the fact that most businesses that responded to our survey reported that they were aware of the refund. The refund's benefit is small, just 2.9 percent of the purchase price, and some purchases that would otherwise qualify for the refund are likely already exempt from sales tax under other tax expenditure provisions.

Tax expenditure clarity. Tax expenditures that are confusing to taxpayers tend not to be claimed as frequently and/or tend to be claimed incorrectly. This can include tax expenditures that are complex and difficult to understand as well as those with provisions that are broadly worded and open to interpretation.

Example: During our 2024 evaluation of the Manufacturing Sales Tax Exemptions, DOR staff reported that vendors frequently applied and purchasers frequently sought to claim the Machinery Exemption for ineligible purchases of machinery. Although DOR provided supplemental guidance materials about this exemption, the exemption's eligibility requirements were still complex and difficult to understand because Colorado statute required that a purchase would have been eligible for a long-defunct federal income tax credit in order to be eligible for Colorado's Machinery Exemption. DOR stated that this "reliance on a federal law repealed more than 30 years ago is problematic...even if taxpayers and tax practitioners can find [copies of the federal law from that time], the text is voluminous and complex."

VI. Utilization – Considerations for Business Tax Incentives

Our evaluations of business tax incentives and academic research on this topic have demonstrated that there are a few significant trends that affect utilization of tax expenditures that are specifically intended to influence businesses' decisions. This section provides an overview of these trends. For more information on business tax incentives, including a discussion of best practices and a list of business tax incentives available to Colorado businesses, see our tax topic report on business tax incentives, which we anticipate publishing in August 2025.

Small tax benefits are unlikely to influence taxpayer decisions. We have evaluated a variety of Colorado tax expenditures intended to incentivize various business decisions, including hiring new employees, locating a business or project in Colorado, and investing in certain business assets, such as equipment. In many of these evaluations, we mentioned that a tax expenditure is more likely to influence a business' decisions if the tax expenditure provides a larger benefit relative to the

business' costs. Research demonstrates that business tax incentives must be fairly substantial in order to influence business decisions. For example:

- Typical state incentives for job creation provide businesses with a value of 2 to 3 percent of the company's wages. A 2018 study used economic modeling to estimate that incentives of this size induce just 10 to 15 percent of the total job creation associated with the incentives. 9
- A 2018 meta-analysis of 30 academic studies estimated that economic development incentives likely "tip" between 2 percent and 25 percent of business location and expansion decisions, depending on factors like the design and size of the incentive as well as each business' individual circumstances.¹⁰

However, we also have often heard from businesses that even small tax expenditures can be helpful and meaningful to them. In particular, businesses operating on small profit margins or for whom an important purchase is almost, but not quite, financially viable may be more impacted by small tax expenditures. Therefore, small tax expenditures may be able to provide meaningful financial assistance to some taxpayers but much of the time are unlikely to sway business investment, location, or hiring decisions.

Example: In 2020, we determined that the New Investment Credit was unlikely to incentivize businesses to purchase eligible property (depreciable or amortizable property with a useful life of at least 3 years) because the credit amount was small—less than 1 percent of the purchase amount. Similarly, we found that the Enterprise Zone (EZ) Credits (evaluated collectively in 2020, with the exception of the EZ Renewable Energy Investment Credit, which has since expired, and the EZ Contribution Credit) were too small to have incentivized most businesses to make eligible investments or locate within EZs. Specifically, the credits available for business investments, such as depreciable property and certain research activities, provided businesses with between 1 percent and 4 percent of the total investment amount, while the credits for hiring new employees provided, at most, between 2 percent and 5 percent of total estimated annual employment costs for the new employees. Additionally, only 11 percent of businesses reported that the credits were a significant influence or a deciding factor in their location and investment decisions, and 59 percent said that they would have created the same number of jobs without the credits.

Businesses make decisions based on multiple factors. This has been another recurring point in many of our evaluations of tax expenditures intended to incentivize business decisions. Even when a tax expenditure provides businesses with a significant benefit, it is rarely the single deciding factor for a business, and businesses often reported that other factors were more important to their decision than the tax expenditure. For example, academic literature indicates that some of the most important factors for businesses when determining where to locate include the availability of skilled

⁹ Timothy J. Bartik, "Who Benefits From Economic Development Incentives? How Incentive Effects on Local Incomes and the Income Distribution Vary with Different Assumptions about Incentive Policy and the Local Economy," Upjohn Institute Technical Report No. 18-034, March 2018.

¹⁰ Timothy J. Bartik, "'But For' Percentages for Economic Development Incentives: What percentage estimates are plausible based on the research literature?" Upjohn Institute Working Paper 18-289, July 2018.

labor, favorable local labor costs, proximity to transportation infrastructure, and technology infrastructure. Although tax expenditures can help reduce a business' costs, at least temporarily, they cannot make up for other factors that may dissuade the business from making the desired decision. Finally, no tax expenditure will be the direct cause of all related business activity; there will always be some forgone revenue going to taxpayers who would have made the same decision regardless of the tax expenditure.

Example: During our 2022 evaluation of the Job Growth Credit, which provides businesses with a credit equal to about 3.8 percent of the annual wages paid to newly hired employees, 15 of the 16 businesses that responded to our survey stated that the credit was one of multiple factors that influenced the decision to locate their job creation project in Colorado. Of these, only two businesses reported that the credit was one of the most important factors in their decision. The last business stated that they would have located their project in Colorado regardless of the credit.

Other programs may be available that are more beneficial. Other programs that provide a greater monetary benefit to the taxpayer when compared with the tax expenditure are more likely to influence the taxpayer's decision. In some cases, other programs may be more likely to achieve the tax expenditure's goal than the tax expenditure itself. This can be because they provide a larger financial benefit and/or other, nonfinancial benefits that taxpayers value more highly than the tax expenditure.

Example: We have evaluated a number of tax expenditures that were underutilized, in part, because taxpayers had access to other funding that provided a much larger monetary benefit. The Rural Broadband Equipment Sales Tax Refund (evaluated in 2022) was intended to encourage broadband providers to install broadband infrastructure in rural areas of the state. However, we found that the refund would have funded less than 1 percent of the cost of a typical installation project, and providers also had access to grant funds that provided much larger benefits, such as Colorado's Broadband Fund, which covered about 60 percent of project costs, and the federal ReConnect Loan and Grant Program, which covered about 70 percent of costs. The refund had not been claimed since it was originally enacted in 2014, although we also identified other factors that contributed to this.

VII. Utilization – Considerations for Tax Expenditures Providing Financial Assistance to Individuals with Low Incomes

Studies have found that incomplete uptake—in which some individuals who are eligible for a benefit do not receive the benefit—is a problem for many means-tested social welfare programs in the United States, including benefits administered through the federal tax code, such as the EITC and the Child Tax Credit. We identified two additional considerations for maximizing taxpayer uptake of tax expenditures that are intended to provide financial assistance to individuals with low incomes.

Reduce administrative barriers for individuals claiming financial assistance tax expenditures. Individuals who qualify for financial assistance tax expenditures may face significant

challenges when it comes to accessing these benefits. For example, people with lower incomes are less likely to be able to access tax filing resources, such as tax preparation software and tax professionals, particularly if their main language is not English. Therefore, as stated in a 2022 publication from the Economic Security Project, "to make tax credits truly accessible, claiming should be made as automatic as possible for taxpayers." For example, a couple of NBER working papers indicated that pre-populating income tax returns using existing administrative data may help reduce the administrative burden for taxpayers eligible for financial assistance tax expenditures. 12, 13 The Economic Security Project publication indicated that it may be beneficial to leverage existing programs—for example, using eligibility for another state program to assess taxpayers' eligibility for a financial assistance tax expenditure. Finally, some individuals who are eligible for these tax expenditures may not have any taxable income and, thus, may not be required to file an income tax return. When these individuals do not file tax returns, they generally are not able to access tax benefits that can provide them with financial assistance. Strategies for increasing uptake among nonfilers include encouraging them to file a tax return, providing them with an alternative method of accessing the tax expenditure, or automatically calculating and disbursing their benefit based on administrative data or prior year tax returns.

Example: During our 2025 evaluation of the Senior Housing Credit, we reported that the credit provided a substantial benefit to about 8,500 seniors with low incomes who received the PTC Rebate, which is available to seniors with very low incomes who incur certain housing expenses and submit an application for the rebate to DOR. The rebate application also requires seniors to report all of the information needed to demonstrate eligibility for the Senior Housing Credit, and the Department automatically granted the Senior Housing Credit to eligible PTC Rebate applicants. Many individuals who are eligible for the PTC Rebate likely do not have any taxable income because their incomes are so low. Therefore, allowing the credit to be claimed via the PTC Rebate application may have allowed as many as 8,500 eligible seniors to access the credit who likely would not have received it otherwise.

For financial assistance tax expenditures that are available long-term, consider accounting for inflation or other cost changes over time. According to the Institute on Taxation and Economic Policy, "Any feature of an income tax that is based on a fixed dollar amount will be vulnerable to inflationary effects. In many states, this means that tax breaks designed to provide low-income tax relief—including exemptions, standard deductions, and most tax credits—are worth a little bit less to taxpayers every year." Further, "indexing income taxes for inflation helps ensure that the tax system treats people in roughly the same way from year to year." As noted, any aspect of a financial assistance tax expenditure that is based on a fixed dollar amount would need to be

¹¹ "Full and equitable access to state tax credits," Economic Security Project, October 2022, p. 1.

Elizabeth Linos, Allen Prohofsky, Aparna Ramesh, Jesse Rothstein, and Matt Unrath, "Can Nudges Increase Take-up of the EITC?: Evidence from Multiple Field Experiments," NBER Working Paper No. 28086, November 2020.
 Jacob Goldin, Tatiana Homonoff, Rizwan Javaid, and Brenda Schafer, "Tax Filing and Take-Up: Experimental Evidence on Tax Preparation Outreach and EITC Participation," NBER Working Paper No. 28398, January 2021.
 Indexing Income Taxes for Inflation: Why It Matters," Institute on Taxation and Economic Policy, August 2016, p. 1.

¹⁵ Ibid., p. 2.

adjusted. For example, for a financial assistance credit of \$750 that is available to taxpayers with federal taxable incomes up to \$50,000, both the credit amount (\$750) and the eligibility cut-off (\$50,000) would need to be adjusted for inflation. Adjusting the credit amount would allow the credit to provide the same relative value to taxpayers as time goes on, and adjusting the eligibility cut-off would ensure that taxpayers whose incomes have increased solely due to inflation do not lose eligibility for the credit.

Example: In our 2023 evaluation of the Child Care Expenses Credits, we noted that the eligibility cut-off for the credits (AGI of \$60,000) had not been adjusted since the original credit was created in 1996. If the cut-off had been adjusted for inflation, it would have increased to about \$116,300 in 2023—almost double the original amount. Therefore, we included a policy consideration in this report that the General Assembly could consider adjusting the income limit to account for inflation. The General Assembly made a number of changes to these credits in 2024, including annual inflation adjustments to the \$60,000 eligibility cut-off starting in Tax Year 2027.

VIII. Current Efforts to Increase Awareness and Utilization of Tax Expenditures

We identified a number of efforts in Colorado that may increase taxpayer awareness and/or utilization of tax expenditures. The list below is not exhaustive and does not include proposed legislation that was not enacted.

- Get Ahead Colorado is an information campaign to help Coloradans get access to tax credits. The Get Ahead Colorado website (and Hacia Adelante Colorado, the Spanish version) provides information about specific tax credits—including the federal and state EITC, the federal and state Child Tax Credit, the state Family Affordability Credit, and the state Early Childhood Educator Credit—as well as links to other sites where individuals can file their taxes or get assistance with tax preparation. Recently, staff administering the website added a Colorado-specific tax credit calculator that allows users to quickly estimate the amounts of federal and Colorado tax credits for which they may be eligible. The site also contains resources for partner organizations, including email, newsletter, and social media templates containing information about filing and tax credits, as well as flyers, posters, and handouts in multiple languages. CDPHE's Economic Mobility Program, which operates Get Ahead Colorado, has also led other efforts related to tax credit outreach, such as training 2-1-1 call centers on specific tax credits that benefit low- and middle-income Coloradans and funding and sponsoring AmeriCorps teams at Volunteer Income Tax Assistance (VITA) sites. According to Economic Mobility Program staff, over the course of three tax seasons, 2-1-1 referred about 14,000 callers to free tax filing resources, and the funded VITA sites assisted Coloradans in claiming over \$24 million in income tax refunds.
- Starting in Tax Year 2023, Colorado employers must provide an annual written notice to all employees of the availability of the federal and state EITC and the federal and state Child Tax Credit. The notice must be in English and in any other language that the employer typically uses to communicate with the employee.

- In 2025, statute requires DOR to create a pilot program that will help Coloradans with lower incomes to claim certain tax credits for prior tax years. In collaboration with a thirdparty entity, DOR will identify up to 100,000 Colorado households that may be eligible to claim four credits—the federal EITC, state EITC, federal Child Tax Credit, and/or Colorado Child Tax Credit—for up to 2 prior tax years (i.e., households that did not claim these credits in a prior tax year but may have been eligible to do so) and notify them of their eligibility for the program. Depending on the resources available, the program will assist individuals in filing and/or amending a federal and/or state income tax return, including claiming one or more of the four credits, and it may do this by creating pre-populated income tax returns using information provided by or shared with the consent of the taxpayer. DOR and the third-party entity must begin administering this program by August 15, 2025, and provide a written report on the program, including recommendations for improving and continuing the program, by December 15, 2025. House Bill 24-1288, which created the pilot program, also enacted two additional policies that may assist government agencies in contacting households about benefits for which they may qualify, but these policies do not apply to benefits claimed via income tax returns.
- Colorado public higher education institutions and technical schools must notify certain students who are Colorado residents and who enter post-secondary school within 2 years of graduating from high school that they are eligible for a refundable tax credit. Schools must also provide these students with the total amount of the credit, which is based on the amount of tuition and fees paid for their education.
- Low- or no-cost tax preparation and filing services, some of which are funded by the federal and/or state government, are available to some taxpayers. These include VITA, Tax Counseling for the Elderly (TCE), and AARP Foundation Tax-Aide sites, which provide free tax preparation and assistance to people making \$67,000 or less, seniors, people with disabilities, and those with limited knowledge of English.

IX. Conclusion

As with any policy decision, when creating or modifying a tax expenditure, legislators must balance multiple and often competing considerations. Awareness and utilization are key factors in whether a tax expenditure is effective, but they must be balanced with other important considerations. For example:

Although decreasing administrative barriers to claiming a given tax expenditure can help increase
utilization, this also results in decreased oversight and increased risk for improper claims—when
a taxpayer claims a tax expenditure for which they are not eligible or claims an incorrect amount.
Therefore, some tax expenditures may still warrant significant administrative oversight,
particularly those that are high value and/or have complex requirements, including many
business incentives.

- Providing information about a tax expenditure in the instructions for tax forms can help inform
 taxpayers about the tax expenditure, but this also increases the length and complexity of tax
 documents, which can be overwhelming for taxpayers and also increases administrative costs to
 the State. As a result, including information about all available tax expenditures on tax forms
 may not be a feasible solution.
- State resources are limited and need to be allocated intentionally, and efforts to improve awareness and utilization for a particular tax expenditure are most likely to be effective if legislators are first able to identify why the tax expenditure is underutilized. For example, employing a marketing campaign to spread the word about a credit is unlikely to increase uptake if taxpayers are already aware of the credit but choose not to claim it for other reasons. Although our office's tax expenditure evaluation reports can provide some insights into whether taxpayers are aware of and utilizing an expenditure, we may not be able to identify every factor that impacts uptake for a given tax expenditure. Eligible taxpayers can be difficult to identify and contact or might not respond to our request for feedback. Additionally, we do not contact taxpayers who claimed a particular tax expenditure on their tax returns because statute requires us to adhere to state and federal confidentiality laws.

Lastly, the strategies presented in this report (and any other strategies employed to increase awareness and utilization) are unlikely to achieve complete taxpayer awareness and utilization; for example, no marketing campaign can reach every individual, and businesses sometimes fail to claim tax credits for which they applied and were approved. On a broader scale, comparatively low taxpayer awareness or understanding of certain tax expenditures may be a result of limited tax literacy among Coloradans and national taxpayers as a whole. Specifically, the National Taxpayer Advocate identified limited tax literacy as a widespread problem on a national scale in their 2024 Annual Report to Congress, naming this as one of the top 10 most serious problems facing taxpayers. The Advocate is the head of the Taxpayer Advocate Service, an independent organization within the IRS that identifies areas in which taxpayers have problems in their dealings with the IRS and proposes administrative and legislative changes to mitigate these problems. The 2024 Annual Report noted that many taxpayers, individuals and businesses alike, have reported gaps in basic tax knowledge, such as where to get Forms W-2 and 1099; what kinds of records and receipts businesses are required to keep for tax purposes; and whether a \$1,000 tax deduction or a \$1,000 tax credit is more valuable. The report recommended a variety of approaches for improving tax literacy, including providing "accessible tax education at key moments during the lives of individuals and families and the lifecycles of businesses" and developing "accessible tax education materials in consultation with tax preparer communities," including materials targeted to vulnerable populations such as the elderly, immigrants, individuals with disabilities, and taxpayers with low incomes. 16 Low tax literacy is a challenging issue to address and encompasses more than just awareness and utilization of tax expenditures, but increased tax literacy among Coloradans would help improve taxpayers' understanding and uptake of tax expenditures that are available to them.

¹⁶ National Taxpayer Advocate Annual Report to Congress, 2024, pp. 111-112.

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