Presentation Overview

- Economic & Budget Outlook
- TABOR Situation
- Budgetary Pressures
- Assessed Values Forecast
- K-12 Enrollment Forecast
- Census Bureau Differential Privacy
Economic Outlook
Consumers continue to drive growth in economic activity

Contributions to Real Gross Domestic Product (GDP)
Annualized Change over the Prior Quarter

Employment growth continues, but will slow further as the labor market tightens

Year-over-Year Change in Nonfarm Employment

Source: U.S. Bureau of Labor Statistics. Seasonally adjusted. Colorado nonfarm employment estimates include estimates of revisions expected by Legislative Council Staff as a part of the annual rebenchmark process.
Inflationary pressures remain fairly subdued

CPI-U Inflation, U.S. City Average

December 2019 over December 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headline</td>
<td>2.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core</td>
<td>2.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td>3.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food</td>
<td>1.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>2.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apparel</td>
<td>-1.2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>2.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Care</td>
<td>4.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td>1.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>2.1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>2.3%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

December Forecast

<table>
<thead>
<tr>
<th>Category</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. City Average</td>
<td>1.8%</td>
<td>2.1%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Denver-Aurora-Lakewood</td>
<td>1.9%</td>
<td>2.1%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau. Seasonally adjusted.
Lower birth rates have slowed natural population growth

Natural Population Growth (Births minus Deaths)
Thousands of People

Lower Birth Rates following the Great Recession

Source: Colorado State Demography Office 2019 estimates and projections.
Housing costs continue to influence Colorado migration

Net Migration to Colorado

Thousands of People

Source: Colorado State Demography Office 2019 estimates and projections.
Forecast Change in Enrollment
FY 2019-20 to FY 2020-21, Student FTE

Source: Legislative Council Staff December 2019 forecast.
Crude oil prices remain subdued by strong supply, weaker demand

West Texas Intermediate

Crude Oil Price

Dollars per Barrel

$160
$120
$80
$40
$0


Crude Oil Production

Millions of Barrels per Month

Colorado
Right Axis

United States
Left Axis


Source: Energy Information Administration. Average weekly prices through December 13, 2019.
New oil and gas activity has fallen off

U.S. Active Drilling Rig Counts

Colorado Rig Counts

Source: Baker Hughes. Data through October 25, 2019.
Oil prices pose a risk to the forecast

West Texas Intermediate (WTI) Crude Oil Price

Historic Price

Upper bound 95% Confidence Interval: $90.52
Forecast WTI: $59.50
Lower bound 95% Confidence Interval: $31.68

Economic Outlook

U.S. and Colorado economic growth will continue, but at slower rates

• Labor markets will tighten further, constricting business growth and profits with higher wages
• Inflationary pressures will remain subdued on slower global economic demand for goods and slowing housing costs
• Energy, manufacturing, and export industry activity expected to remain soft into 2020

Recessionary risk for 2020 has eased, but risk remains elevated for 2021 and 2022.
General Fund Budget Outlook
General Fund Budget
FY 2019-20: $12.2 Billion

Spending by Department

- K-12 36.1%
- Health Care 25.8%
- Corrections 7.3%
- Higher Education 9.1%
- Human Services 8.6%

Fund Source

- General Fund
- Cash Funds
- Federal Funds
- Reappropriated

Data source: Joint Budget Committee Staff, Budget in Brief. *Subject to change with 2020 legislation.
Ongoing shifts in taxpayer behavior and slowing economic growth are expected to drive General Fund revenue growth.

Gross General Fund Revenue
Billions of Dollars

Change Relative to September Expectations
FY 2019-20: $-10.9M
FY 2020-21: $166.1M

Year-over-Year Growth
2020-21: 4.1%
2021-22: 3.0%

Source: Colorado Office of the State Controller and Legislative Council Staff December 2019 forecast.
TABOR Outlook
Revenue Subject to TABOR
Dollars in Billions

Expected TABOR Surpluses

Referendum C Cap

TABOR Limit Base

Referendum C Five-Year Timeout Period

Source: Colorado Office of the State Controller and Legislative Council Staff December 2019 forecast.
Full TABOR History and Outlook

Revenue Subject to TABOR
Dollars in Billions

Source: Colorado Office of the State Controller and Legislative Council Staff December 2019 forecast.
TABOR surplus revenue is set aside in the year in which a surplus occurs to pay refunds in the following budget year.

Expected TABOR Refunds & General Fund Budget Impacts
Dollars in Millions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Refunded in Fiscal Year:</td>
<td>2019-20</td>
<td>2020-21</td>
<td>2021-22</td>
<td>2022-23</td>
</tr>
</tbody>
</table>

Source: Colorado Office of the State Controller and Legislative Council Staff December 2019 forecast.
*This amount includes $0.1 million in underrefunds from the FY 2014-15 surplus.
TABOR Refund Obligation

Reimburse Local Gov’ts for Property Tax Exemptions
Up to ~$160 million

If ~$430 million+

Temporary Income Tax Rate Reduction
Next ~$280 million
If the refund is large enough to fund the first mechanism and the rate reduction

Sales Tax Refund
Any remaining
Risks to the Forecast

Upside Risks for FY 2019-20

• Ongoing shifts in taxpayer behavior with federal tax law changes
• Taxation of out-of-state (including online) sales tax collections

Elevated downside risk for FY 2020-21 and FY 2021-22

• Slower growth as the economic expansion matures
• Leading indicators improved some, but still flashing warning signs

In the current TABOR refund situation...

• The TABOR limit will constrain revenue growth
• Upside surprises mean larger TABOR refunds
• Higher than expected cash fund revenue will increase General Fund budgetary pressures
TABOR Refunds are refunded from General Funds

In a TABOR surplus situation...

General Fund dollars in = General Fund dollars out

General Funds

TABOR Limit

Amount available for the General Fund Budget

Cash Funds

TABOR Refunds

General Funds
TABOR Refunds are refunded from General Funds.

In a TABOR surplus situation...

Cash Fund dollars in = General Fund dollars out

TABOR Limit

Amount available for the General Fund Budget

General Funds

Cash Funds

TABOR Refunds
Severance Taxes Are Noisy

Dollars in Millions

Source: Office of the State Controller and Legislative Council Staff December 2019 forecast (f).
Budgetary Pressures
General Fund Budget
FY 2019-20: $12.2 Billion*

Fund Source

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>Spending by Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Fund</td>
<td>Corrections 7.3%</td>
</tr>
<tr>
<td>Cash Funds</td>
<td>K-12 36.1%</td>
</tr>
<tr>
<td>Federal Funds</td>
<td>Health Care 25.8%</td>
</tr>
<tr>
<td>Reappropriated</td>
<td>Higher Education 9.1%</td>
</tr>
<tr>
<td></td>
<td>Human Services 8.6%</td>
</tr>
</tbody>
</table>

Data source: Joint Budget Committee Staff, Budget in Brief. *Subject to change with 2020 legislation.
General Fund Budgetary Pressures

- **Cash fund volatility:** In a TABOR refund situation, higher cash fund revenue means less General Fund revenue
- **Full-day kindergarten**
- **Medicaid costs:** Rising costs, aging population
- **Technology costs:** Higher costs, greater reliance, rising risks
- **Transportation:** New sources of funding?
A disproportionate share of Medicaid spending is for the elderly and disabled

Medicaid Caseloads
Thousands

Medicaid Expenditures
Billions

Assessed Valuation Forecast
## Assessed Values in Colorado

### Dollars in Billions

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Assessed Value</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$91.6</td>
<td>3.3%</td>
</tr>
<tr>
<td>2015</td>
<td>$105.3</td>
<td>15.0%</td>
</tr>
<tr>
<td>2016</td>
<td>$101.4</td>
<td>-3.7%</td>
</tr>
<tr>
<td>2017</td>
<td>$111.6</td>
<td>10.1%</td>
</tr>
<tr>
<td>2018</td>
<td>$115.9</td>
<td>3.8%</td>
</tr>
<tr>
<td>2019</td>
<td>$135.6</td>
<td>17.0%</td>
</tr>
<tr>
<td>2020f</td>
<td>$140.1</td>
<td>3.4%</td>
</tr>
<tr>
<td>2021f</td>
<td>$152.2</td>
<td>8.6%</td>
</tr>
<tr>
<td>2022f</td>
<td>$155.1</td>
<td>1.9%</td>
</tr>
</tbody>
</table>

Source: Colorado Division of Property Taxation and Legislative Council Staff December 2019 forecast (f).
Residential Market Value

Residential Assessment Rate

2019 & 2020: 7.15%

2021 & 2022: 7.13%
But the forecast is not without risks

West Texas Intermediate (WTI) Crude Oil Price

K-12 Enrollment Forecast
## K-12 Public School Enrollment

*Full-Time Equivalent (FTE) Students*

<table>
<thead>
<tr>
<th>Region</th>
<th>Actual 2019-20</th>
<th>Percent Change*</th>
<th>Estimated 2020-21</th>
<th>Percent Change</th>
<th>Estimated 2021-22</th>
<th>Percent Change</th>
<th>Average Growth**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro Denver</td>
<td>494,190</td>
<td>3.2%</td>
<td>491,985</td>
<td>-0.4%</td>
<td>490,832</td>
<td>-0.2%</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Northern</td>
<td>91,722</td>
<td>4.8%</td>
<td>93,069</td>
<td>1.5%</td>
<td>93,690</td>
<td>0.7%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Colorado Springs</td>
<td>124,019</td>
<td>4.7%</td>
<td>125,051</td>
<td>0.8%</td>
<td>125,791</td>
<td>0.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Pueblo</td>
<td>33,370</td>
<td>4.0%</td>
<td>33,139</td>
<td>-0.7%</td>
<td>32,809</td>
<td>-1.0%</td>
<td>-0.8%</td>
</tr>
<tr>
<td>Eastern Plains</td>
<td>26,898</td>
<td>4.4%</td>
<td>27,188</td>
<td>1.1%</td>
<td>27,456</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>San Luis Valley</td>
<td>7,414</td>
<td>2.8%</td>
<td>7,489</td>
<td>1.0%</td>
<td>7,545</td>
<td>0.7%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Mountain</td>
<td>25,489</td>
<td>2.6%</td>
<td>25,368</td>
<td>-0.5%</td>
<td>25,272</td>
<td>-0.4%</td>
<td>-0.4%</td>
</tr>
<tr>
<td>Southwest Mountain</td>
<td>13,589</td>
<td>4.1%</td>
<td>13,615</td>
<td>0.2%</td>
<td>13,680</td>
<td>0.5%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Western</td>
<td>51,909</td>
<td>3.3%</td>
<td>52,002</td>
<td>0.2%</td>
<td>52,064</td>
<td>0.1%</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Statewide Total</strong></td>
<td><strong>868,597</strong></td>
<td><strong>3.6%</strong></td>
<td><strong>868,907</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>869,138</strong></td>
<td><strong>0.0%</strong></td>
<td><strong>0.0%</strong></td>
</tr>
</tbody>
</table>

Source: Colorado Department of Education and Legislative Council Staff December 2019 forecast.

*Percent change from 2018-19, when kindergarten students were counted as 0.5 FTE.

**Compound average annual growth rate between 2019-20 and 2021-22.*
Total K-12 Enrollment

Source: Colorado Department of Education and Legislative Council Staff December 2019 forecast (f).

*Prior to 2019-20, kindergarten students were counted as 0.5 FTE.
Census Bureau Differential Privacy
Census Bureau Differential Privacy

• Beginning with the 2020 Census, the Census Bureau is planning to implement new “differential privacy” changes that will add noise to data at the sub-state level
• Proposed changes will result in population counts that differ from actual counts
• This may impact funding distributions and data reliability

• The Census Bureau is accepting feedback on the proposed changes: dcmd.2010.demonstration.data.products@census.gov
DOLA's Interactive Maps: Total Population
Difference in Population Between Counts and Differential Privacy Data

Maps available at: http://arcg.is/1X4afz
DOLA’s Interactive Maps: Ages 0 to 17

Difference in Population Between Counts and Differential Privacy Data

Maps available at: http://arcg.is/1X4afz
More Information on Differential Privacy

Census Bureau Website
https://www.census.gov/about/policies/privacy/statistical_safeguards/disclosure-avoidance-2020-census.html

Colorado State Demography Office Contacts
https://demography.dola.colorado.gov/contact/
Interactive Maps: http://arcg.is/1X4afz

National Academies Workshop Presentations
https://sites.nationalacademies.org/DBASSE/CNSTAT/DBASSE_196518
Questions?

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