

**Example Calculation for Determining Economic Feasibility for a Public Utility  
Supporting Documentation for the Colorado Water Quality Roadmap Workgroup Meeting  
February 6, 2019**

The purpose of this document is to provide an example calculation to aid in training on utilizing EPA's 1995 Interim Economic Guidance for Water Quality Standards for public utilities. This example for "Mountain Town" is based upon a small hypothetical community located in La Plata County, Colorado. This document was developed to provide an example of what is minimally required to evaluate economic feasibility for the purpose of supporting a DSV proposal. DSV proponents are welcome to provide any additional data or information that they believe is relevant for characterizing socioeconomic conditions in their community.

## **1 Substantial Impact Analysis**

There are six socioeconomic indicators that are used to determine EPA's "secondary score," which is used to inform the community's ability to pay for pollution control. Each factor is assigned a score of 1 for "weak," 2 for "moderate," or 3 for "strong."

Since Colorado has statutory limits on property tax collections,<sup>1</sup> the secondary score was calculating following EPA guidance, which recommends that "Overall Net Debt Per Capita" is used instead of "Overall Net Debt as Percent of Full Market Value of Taxable Property"" and that "Property Tax Revenues as a Percent of Full-Market Value of Taxable Property"" is not used. Since most small towns and metro districts in Colorado do not have bond ratings, in most cases, the following 4 remaining indicators are used to calculate the secondary score:

- Overall Net Debt Per Capita
- Unemployment
- Median Household Income
- Property Tax Collection Rate

### **1.1 Overall Net Debt Per Capita**

How to calculate this metric: Direct net debt is Mountain Town's total debt. Overlapping net debt is debt repaid by Mountain Town's residents through property taxes. Multiple government entities collect property taxes from property owners in Mountain Town. La Plata County and the Durango School District collect mill levies on property in Mountain Town. In order to estimate the fraction of debt from these entities that is attributable to Mountain Town residents, the population of Mountain Town was divided by the population of each taxing district. This population ratio was then used to estimate the fraction of the debt that would be repaid through property taxes by Mountain Town residents.

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<sup>1</sup> The Gallagher Amendment and the Taxpayer's Bill of Rights (TABOR) Amendment are constitutional provisions that limit property tax collection rates in Colorado, more information can be found at: <https://www.colorado.gov/pacific/treasury/constitutional-provisions-0>

Where to find the data: Debt and population data for La Plata County were found in the Comprehensive Annual Financial Reports<sup>2</sup>. Debt for the Durango School District was obtained from the Colorado Department of Education reports on district bonded indebtedness<sup>3</sup>. The population of the Durango School District was obtained from Proximity One Colorado School District Demographic Profiles.<sup>4</sup> The total population of “Mountain Town” was provided by town staff.

Overall Net Debt Per Capita Score: Overall net debt is between \$1,000-\$3,000 per capita, which results in a score of “2” for moderate.

**Table 1. Overlapping Debt**

Taxing entities with levies on property in Mountain Town	Total Debt	Total Population	Mountain Town Population	Percent of Debt paid by Mountain Town residents	Mountain Town Overlapping Debt
La Plata County	\$242,353	55,589	1545	2.8%	\$6,736
Durango School District	\$46,620,000	37,490	1545	4.1%	\$1,921,256
Total					\$1,927,992

**Table 2. Debt Per Capita**

Direct Net Debt	\$900,000
Overlapping Debt	\$1,927,992
Total Debt	\$2,827,992
Debt Per Capita	\$1,830

## 1.2 Unemployment

Where to find the data: The annual unemployment rate for La Plata County and the State of Colorado<sup>5</sup> was obtained from the Bureau of Labor Statistics Local Area unemployment Statistics Map. The national unemployment rate was obtained from the Bureau of Labor Statistics Databases, Tables & Calculators by Subject<sup>6</sup>.

Unemployment Score: Since unemployment in La Plata County is relatively low, this indicator has a score of 3 for “strong.”

**Table 3. Comparison of Unemployment Rates**

La Plata County	National Average
2.5	4.4

<sup>2</sup> [http://co.laplata.co.us/government/departments/finance\\_procurement/comprehensive\\_annual\\_financial\\_reports\\_-\\_c\\_a\\_f\\_r/](http://co.laplata.co.us/government/departments/finance_procurement/comprehensive_annual_financial_reports_-_c_a_f_r/)

<sup>3</sup> <https://www.cde.state.co.us/cdefinance/bonddebt>

<sup>4</sup> [http://proximityone.com/co\\_sdc.htm](http://proximityone.com/co_sdc.htm)

<sup>5</sup> <https://data.bls.gov/map>

<sup>6</sup> <https://www.bls.gov/data/>

### 1.3 Median Household Income

Where to find the data: Median household income (MHI) data at the city, county and state level is available through the U.S. Census Bureau<sup>7</sup>. If the entity is a small metropolitan district, and MHI data is not available through the U.S. Census Bureau, the county MHI may be used to represent the metro district's MHI. Also, some small communities in Colorado have completed local income surveys through partnership with the Department of Local Affairs, in order to support a grant application. The local survey estimates of MHI, if available, are generally more accurate than the U.S. Census Bureau, since the local surveys often yield a much higher response rate.

**Table 4. Comparison of Median Household Income**

Median Household Income	Mountain Town	Colorado	Percent Difference
Census Data for 2012 - 2016 (in 2016 dollars)	\$61,910	\$62,520	-1.0%

Median Household Income Score: This indicator has a score of 2 for "moderate", since Mountain Town's median household income is equal to the State median, plus or minus 10%.

### 1.4 Property Tax Collection Rate

Where to find the data: Property tax collection rates are usually available through the county's comprehensive annual financial reports.

**Table 5. Property Tax Collection Rate**

County	Rate
La Plata County	99%

Property Tax Collection Rate Score: This indicator has a score of 3 for "strong", since the property tax collection rate exceeds 98%.

### 1.5 Secondary Score

The individual scores for the four indicators (Overall Net Debt Per Capita, Unemployment, Median Household Income, Property Tax Collection Rate) are averaged together. Mountain Town's Secondary Score is 2.5.

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<sup>7</sup> <https://www.census.gov/quickfacts/fact/table/laplatacountycolorado/PST045217>

**Table 6. Calculation of the Secondary Test Score**

Indicator	Secondary Indicators			Score
	Weak <sup>a</sup>	Mid-Range <sup>b</sup>	Strong <sup>c</sup>	
Bond Rating Worksheet T	Below BBB (S&P) Below Baa (Moody's)	BBB (S&P) Baa (Moody's)	Above BBB (S&P) Above Baa (Moody's)	N/A
Overall Net Debt as Percent of Full Market Value of Taxable Property Worksheet T	Above 5%	2% - 5%	Below 2%	N/A
Overall Net Debt Per Capita Worksheet T	Greater than \$3,000	\$1,000 - \$3,000	Less than \$1,000	2
Unemployment Worksheet T,	Above National Average	National Average	Below National Average	3
Median Household Income Worksheet T	Below State Median	State Median	Above State Median	2
Property Tax Revenues as a Percent of Full Market Value of Taxable Property Worksheet T	Above 4%	2% - 4%	Below 2%	N/A
Property Tax Collection Rate Worksheet T	< 94%	94% - 98%	> 98%	3
Average of Financial Management Indicators Worksheet T				N/A
	a. Weak is a score of 1 point		SUM	10
	b. Mid-Range is a score of 2 points			
	c. Strong is a score of 3 points		<b>AVERAGE</b>	<b>2.5</b>

## 1.6 Determination of Substantial Impacts

EPA's 1995 Guidance indicates that for communities with a Secondary Score between 1.5 - 2.5, user fees exceeding 2.0 percent of median household income would likely impose a "substantial" economic impact on the community.

**Table 7. Secondary Score Matrix**

Secondary Score	Threshold for Users Fees as a Percent of MHI		
	Less than 1.0 percent	Between 1.0 and 2.0 percent	Greater than 2.0 percent
Less than 1.5	?	X	X
Between 1.5 and 2.5	✓	?	X
Greater than 2.5	✓	✓	?

## 2 Widespread Impact Analysis

The following table includes the widespread impact analysis for the hypothetical example of Mountain Town. EPA's 1995 guidance recommends providing a qualitative description of impacts for each of the socioeconomic indicators in the following table.

**Table 8. Qualitative Description of Estimated Change in Socioeconomic Indicators Due to Pollution Control Costs Needed to Attain WQBELs (Worksheet M in EPA's 1995 Guidance)**

Estimated change in Median Household Income (MHI)	Mountain Town is a mostly residential community, with only a few commercial businesses and no industry. The local businesses might have to reduce employee's wages to offset the cost of higher sewer fees. Higher sewer fees could be a hindrance for economic development in Mountain Town and could become a disincentive for new businesses to open in Mountain Town. The pollution control costs associated with meeting standards could impact the salaries that the town could afford to pay its staff and contractors.
Estimated change in the unemployment rate	There are only a few businesses currently operating in Mountain Town, and if high sewer fees causes any of them to close or relocate, it would have a negative impact on resident's job opportunities.
Estimated change in overall net debt per capita.	In accordance with EPA guidance, net debt per capita was used in place of overall net debt as a percent of full market value of taxable property. The project would increase the net debt per capita from \$1,830 to a total of \$4,590.
Estimated change in % of households below the poverty line	The pollution control project may not result in significant a significant change in the % of households below the poverty line. However, La Plata County has insufficient affordable housing. Many of the residents that live in the multi-family and modular housing in Mountain Town are low-income or elderly residents living on fixed-incomes. If user fees were raised to a level that increased the cost of living on these residents, they would have a difficult time finding alternative options for affordable housing.
Impact on commercial development potential	There are only a few businesses currently operating in Mountain Town. Significantly higher sewer fees would be an obstacle to opening or maintaining a commercial business in Mountain Town.
Impact on property values	Unusually high sewer fees could deter prospective real estate buyers, which would reduce property values. If the low-income or elderly residents living on fixed-incomes find the sewer fees unaffordable and choose to relocate, this would result in a higher rate of vacant and for-sale properties, foreclosures and declining property values.