

# Town of Ludlow



## Financial Indicator Analysis

FY2008—FY2018

# Introduction

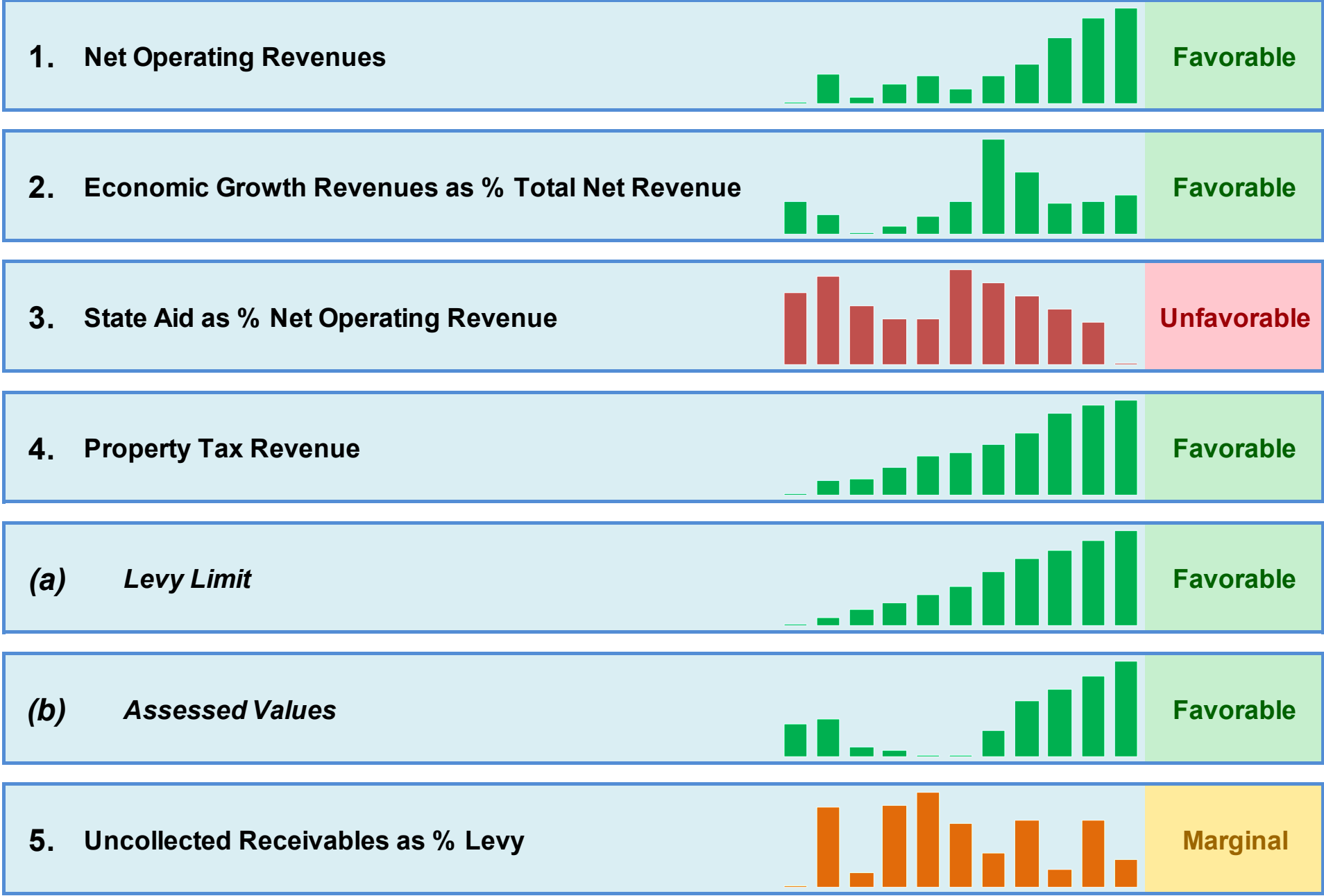


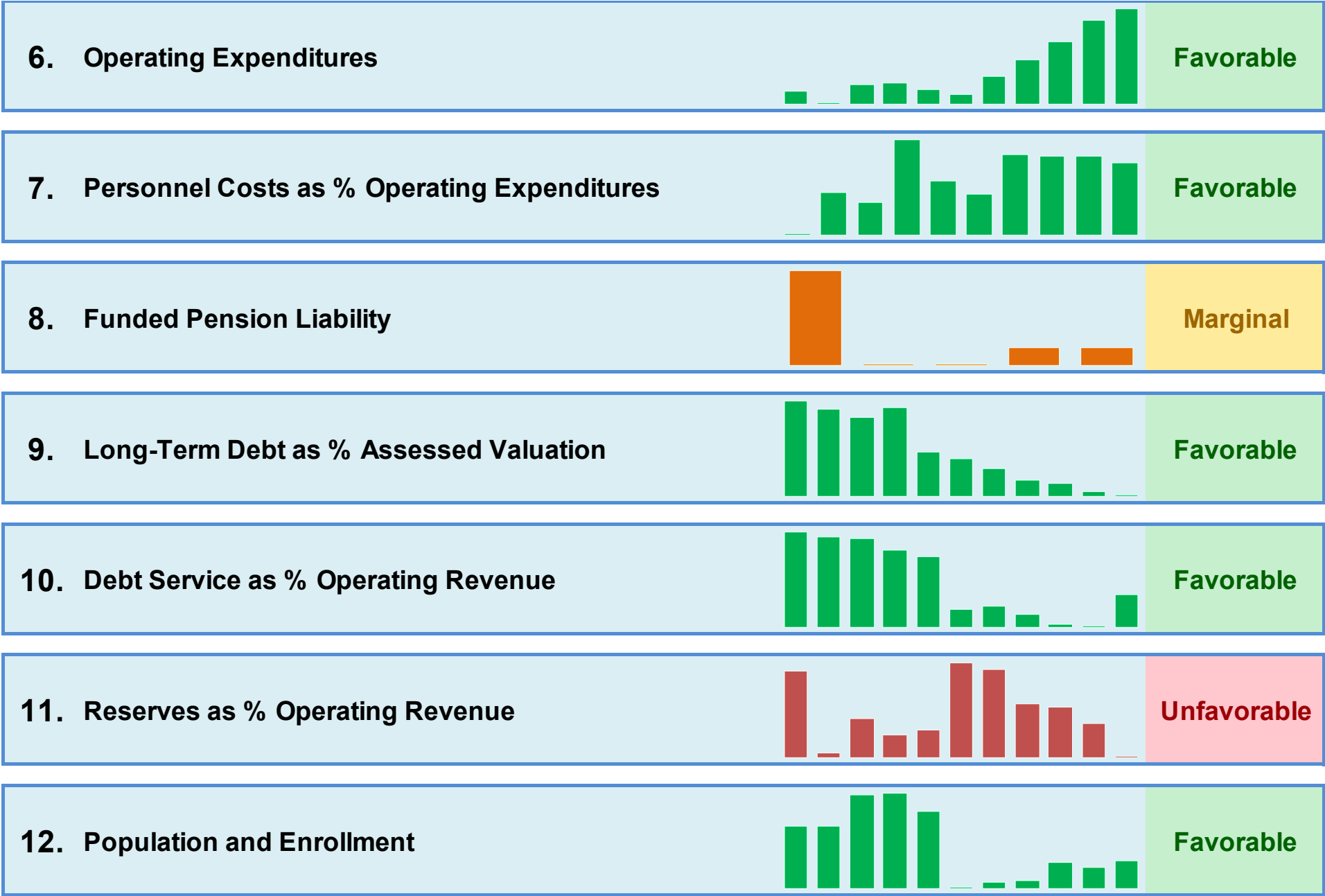
The financial indicators within this report are meant to provide a snapshot of the Town of Ludlow's fiscal health by identifying trends in key revenue, expenditure, and demographic categories. Based on the direction of the trend over time, each indicator is classified as Favorable, Marginal, or Unfavorable. A Favorable rating means that the indicator is a source of fiscal strength. Marginal indicators do not show a clear enough trend over time to be considered Favorable or Unfavorable and could indicate a trend toward Unfavorable. An Unfavorable indicator shows a clear negative trend and is likely a source of fiscal stress. In most cases, an Unfavorable indicator is a starting point for further investigation rather than a blueprint for immediate action. These indicators are monitored carefully by town staff, who will develop a plan to mitigate any negative impacts and reverse the trend. The town will address Unfavorable trends when discussing policy priorities for the upcoming fiscal year.

# Table of Contents

---

| Indicator   | Page Number |
|---|-------------|
| Indicator Dashboard   | <i>iii</i>  |
| 1 - Net Operating Revenues  | 1           |
| 2 - Economic Growth Revenues as a Percentage of Total Net Revenue | 2           |
| 3 - State Aid as a Percentage of Net Revenue                      | 4           |
| 4 - Property Tax Revenue  | 6           |
| 4a - Levy Limit   | 7           |
| 4b - Assessed Values  | 9           |
| 5 - Uncollected Receivables as a Percentage of Tax Levy           | 10          |
| 6 - Operating Expenditures  | 11          |
| 7 - Personnel Costs as a Percentage of Operating Expenditures     | 12          |
| 8 - Funded Pension Liability                                      | 14          |
| 9 - Long-Term Debt as a Percentage of Assessed Valuation          | 15          |
| 10 - Debt Service as a Percentage of Operating Revenue            | 16          |
| 11 - Reserves as a Percentage of Operating Revenue                | 17          |
| 12 - Population and Enrollment                                    | 18          |





*This page intentionally left blank.*

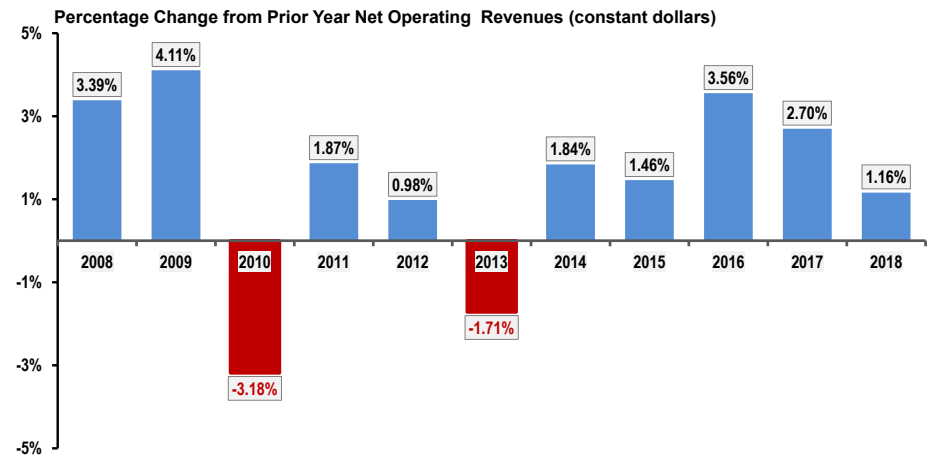
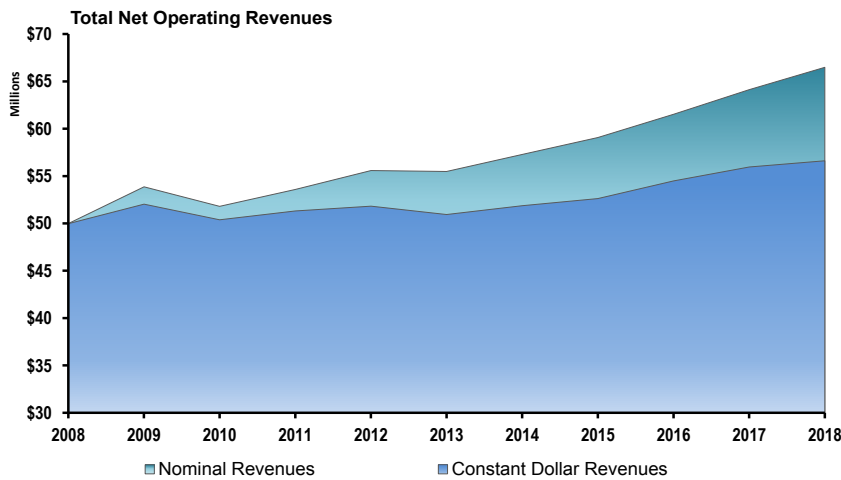
# Indicator 1: Net Operating Revenues

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



| Fiscal Year | Gross Operating Revenues | Less: Free Cash Used to Reduce Tax Rate | Less: Other Funds Used To Reduce Tax Rate | Less: Other Appropriated Free Cash | Less: Available Funds/One-Time Revenues | Less: Exempt Debt | Net Operating Revenues | CPI-U, prior calendar year | CPI-U adjustment | Net Operating Revenues (Constant Dollars) | Percent Change From Prior Year |
|-------------|--------------------------|---|---|------------------------------------|---|-------------------|------------------------|----------------------------|------------------|---|--------------------------------|
| 2008        | \$ 53,403,784            | \$ 1,500,000                            | \$ 16,702                                 | \$ 698,332                         | \$ 606,238                              | \$ 601,696        | \$ 49,980,816          | 227.4                      | 100%             | \$ 49,980,816                             | 3.39%                          |
| 2009        | \$ 57,327,041            | \$ 1,375,000                            | \$ 108,385                                | \$ 409,398                         | \$ 1,081,250                            | \$ 487,597        | \$ 53,865,411          | 235.4                      | 96.6%            | \$ 52,034,810                             | 4.11%                          |
| 2010        | \$ 54,468,681            | \$ 875,000                              | \$ 591,790                                | \$ -                               | \$ 747,520                              | \$ 454,278        | \$ 51,800,093          | 233.8                      | 97.3%            | \$ 50,382,126                             | -3.18%                         |
| 2011        | \$ 56,182,229            | \$ 825,000                              | \$ 91,790                                 | \$ 430,516                         | \$ 851,892                              | \$ 403,312        | \$ 53,579,719          | 237.4                      | 95.8%            | \$ 51,322,781                             | 1.87%                          |
| 2012        | \$ 58,299,022            | \$ 800,000                              | \$ 91,790                                 | \$ 150,000                         | \$ 1,005,241                            | \$ 664,755        | \$ 55,587,236          | 243.9                      | 93.2%            | \$ 51,826,722                             | 0.98%                          |
| 2013        | \$ 57,626,603            | \$ 500,000                              | \$ 233,099                                | \$ 164,342                         | \$ 1,072,841                            | \$ 167,836        | \$ 55,488,485          | 247.7                      | 91.8%            | \$ 50,940,983                             | -1.71%                         |
| 2014        | \$ 60,556,139            | \$ 500,000                              | \$ 73,628                                 | \$ 1,421,623                       | \$ 1,165,396                            | \$ 111,766        | \$ 57,283,726          | 251.1                      | 90.6%            | \$ 51,877,019                             | 1.84%                          |
| 2015        | \$ 61,794,991            | \$ 800,000                              | \$ 73,628                                 | \$ 940,941                         | \$ 804,441                              | \$ 106,728        | \$ 59,069,253          | 255.2                      | 89.1%            | \$ 52,634,593                             | 1.46%                          |
| 2016        | \$ 64,319,189            | \$ 900,000                              | \$ 520,796                                | \$ 53,675                          | \$ 1,215,962                            | \$ 99,873         | \$ 61,528,883          | 256.7                      | 88.6%            | \$ 54,505,914                             | 3.56%                          |
| 2017        | \$ 67,168,431            | \$ 1,100,000                            | \$ 70,796                                 | \$ 404,867                         | \$ 1,372,941                            | \$ 95,357         | \$ 64,124,470          | 260.5                      | 87.3%            | \$ 55,976,601                             | 2.70%                          |
| 2018        | \$ 71,000,881            | \$ -                                    | \$ 1,600,000                              | \$ 1,171,659                       | \$ 1,279,940                            | \$ 461,261        | \$ 66,488,021          | 267.0                      | 85.2%            | \$ 56,626,877                             | 1.16%                          |

Data Source: DLS Gateway - Tax Recap

Consistent revenue growth is one measure of a town's ability to maintain existing service levels in the face of increasing costs. This indicator shows the change in Ludlow's net operating revenues over time. Net operating revenues are calculated by using the total gross revenue available from all sources, less tax revenue raised from a debt exclusion. Revenue raised for the purpose of servicing exempt debt is temporary and tied to a specific use, and so excluding it from this calculation provides a more accurate representation of the revenue available to the town for funding routine public services.

Ideally, the annual percentage increase from prior year revenues should be steady, positive, and predictable. A trend of decreasing net operating revenues, after accounting for the effects of inflation, is a warning indicator; if municipal revenues are decreasing, they may soon be insufficient to maintain a consistent level of service. Likewise, a high degree of volatility in the rate of year-to-year change may also be a warning sign. From FY2008 to FY2013 net operating revenues declined on a constant dollar basis. In FY2010 there was a decrease in nominal revenues exacerbated by inflation, but while FY2011 and FY2013 showed nominal increases, it was not enough to counteract inflation. While percentage increases from prior year revenues have been declining since FY2014, the overall revenue trend shows steady increases.

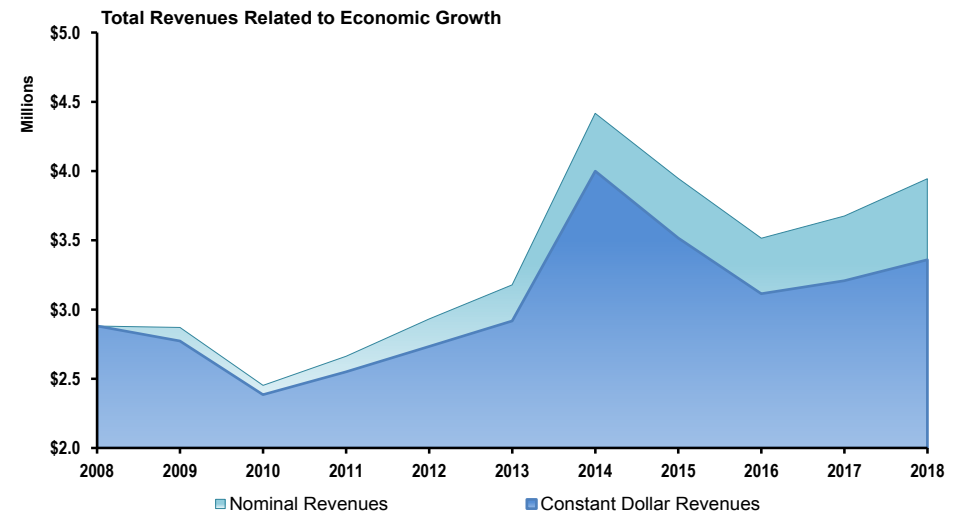
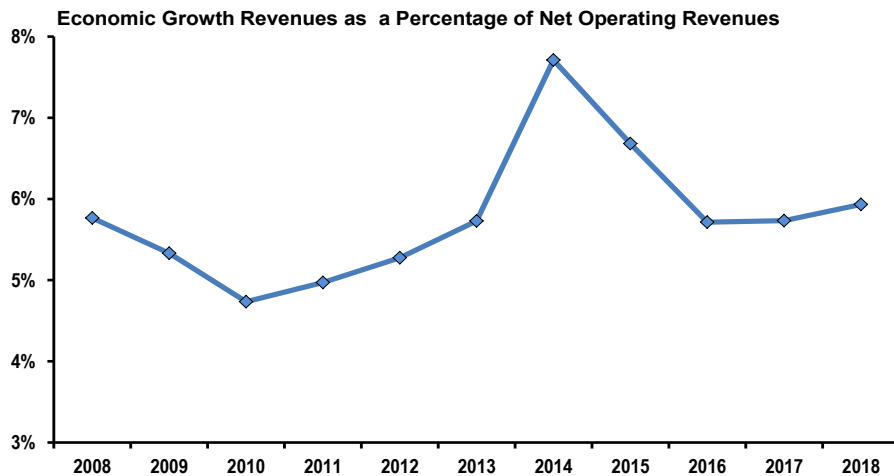
## Indicator 2: Revenues Related to Economic Growth

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



| Fiscal Year | Net Operating Revenues<br>(constant dollars) | Building-Related<br>Fees and Permits | Meals, Rooms,<br>Other Excise | Motor Vehicle<br>Excise | New Growth  |                           |                      |                     | Total Economic Growth Revenues (Adjusted for Inflation) |                                  |                     |                     |  |
|-------------|--|--------------------------------------|-------------------------------|-------------------------|-------------|---------------------------|----------------------|---------------------|---|----------------------------------|---------------------|---------------------|--|
|             |  |                                      |                               |                         | Residential | Commercial/<br>Industrial | Personal<br>Property | Total New<br>Growth | Nominal<br>Dollars                                      | CPI-U, prior<br>calendar<br>year | CPI-U<br>adjustment | Constant<br>Dollars | As a % of Net<br>Operating<br>Revenues |
| 2008        | \$ 49,980,816                                | \$ 113,607                           | \$ 64,073                     | \$ 2,112,581            | \$ 381,817  | \$ 71,242                 | \$ 138,009           | \$ 591,068          | \$ 2,881,329  | 227.4                            | 100%                | \$ 2,881,329        | 5.76%                                  |
| 2009        | \$ 52,034,810                                | \$ 117,058                           | \$ 60,465                     | \$ 2,151,108            | \$ 341,655  | \$ 25,978                 | \$ 174,768           | \$ 542,401          | \$ 2,871,032  | 235.4                            | 96.6%               | \$ 2,773,461        | 5.33%                                  |
| 2010        | \$ 50,382,126                                | \$ 93,500                            | \$ 62,170                     | \$ 1,914,481            | \$ 250,083  | \$ 16,174                 | \$ 115,941           | \$ 382,198          | \$ 2,452,349  | 233.8                            | 97.3%               | \$ 2,385,219        | 4.73%                                  |
| 2011        | \$ 51,322,781                                | \$ 151,754                           | \$ 80,750                     | \$ 1,993,048            | \$ 176,753  | \$ 23,664                 | \$ 237,157           | \$ 437,574          | \$ 2,663,126  | 237.4                            | 95.8%               | \$ 2,550,947        | 4.97%                                  |
| 2012        | \$ 51,826,722                                | \$ 394,998                           | \$ 101,542                    | \$ 2,041,560            | \$ 235,089  | \$ 11,714                 | \$ 146,982           | \$ 393,785          | \$ 2,931,885  | 243.9                            | 93.2%               | \$ 2,733,541        | 5.27%                                  |
| 2013        | \$ 50,940,983                                | \$ 176,899                           | \$ 193,721                    | \$ 2,141,728            | \$ 157,699  | \$ 8,710                  | \$ 499,420           | \$ 665,829          | \$ 3,178,177  | 247.7                            | 91.8%               | \$ 2,917,713        | 5.73%                                  |
| 2014        | \$ 51,877,019                                | \$ 139,953                           | \$ 310,967                    | \$ 2,451,433            | \$ 279,615  | \$ 35,866                 | \$ 1,199,553         | \$ 1,515,034        | \$ 4,417,387  | 251.1                            | 90.6%               | \$ 4,000,453        | 7.71%                                  |
| 2015        | \$ 52,634,593                                | \$ 168,741                           | \$ 315,537                    | \$ 2,375,581            | \$ 188,267  | \$ 448,641                | \$ 450,502           | \$ 1,087,410        | \$ 3,947,269  | 255.2                            | 89.1%               | \$ 3,517,277        | 6.68%                                  |
| 2016        | \$ 54,505,914                                | \$ 370,339                           | \$ 338,255                    | \$ 2,428,574            | \$ 184,608  | \$ 31,204                 | \$ 162,683           | \$ 378,495          | \$ 3,515,663  | 256.7                            | 88.6%               | \$ 3,114,381        | 5.71%                                  |
| 2017        | \$ 55,976,601                                | \$ 167,181                           | \$ 365,389                    | \$ 2,721,987            | \$ 238,178  | \$ 41,514                 | \$ 141,330           | \$ 421,022          | \$ 3,675,579  | 260.5                            | 87.3%               | \$ 3,208,548        | 5.73%                                  |
| 2018        | \$ 56,626,877                                | \$ 216,746                           | \$ 410,324                    | \$ 2,700,000            | \$ 375,880  | \$ 25,427                 | \$ 216,150           | \$ 617,457          | \$ 3,944,527  | 267.0                            | 85.2%               | \$ 3,359,496        | 5.93%                                  |

Data Source: Town revenue reports, DLS Gateway - Tax Recap, Form LA-13

New growth and certain local receipts are generally responsive to changes in the local economy. Periods of healthy economic activity are often linked to an increase in local economic development, creating new growth for the property tax levy and generating an increase in permit fees related to new construction and an acquisition of business-related personal property. Additionally, periods of prosperity generally affect the meals and rooms taxes, and make it more likely that residents will purchase vehicles. Conversely, a downturn in the economy may lead to a decrease in these revenue-generating factors.

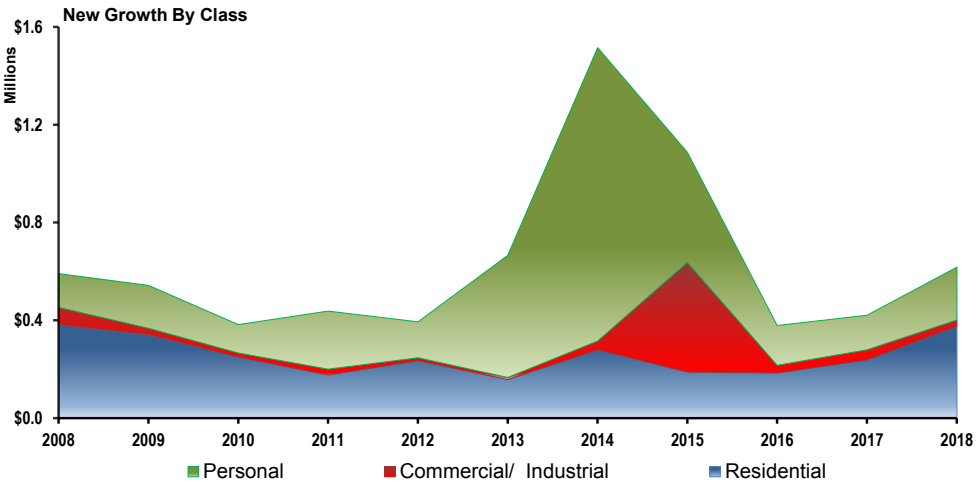
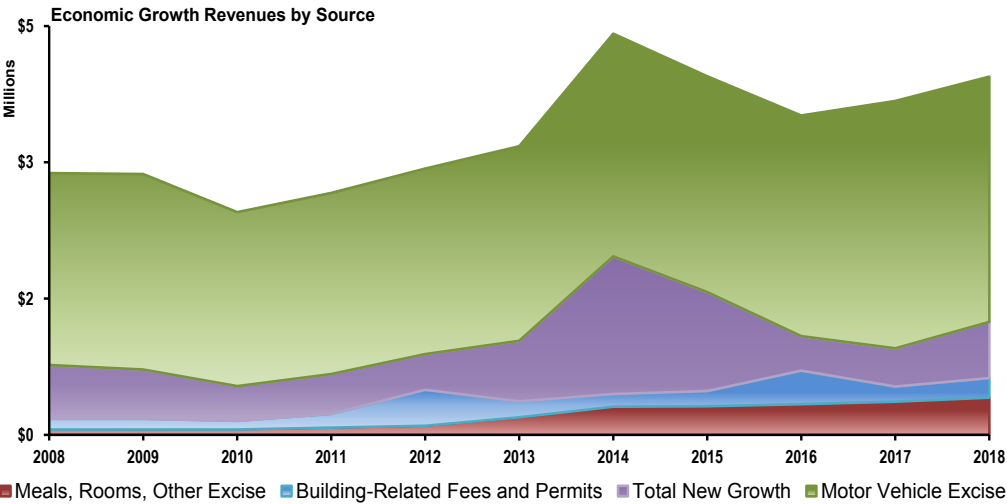
Maintaining a balance between revenues tied to the economy and other revenues helps mitigate the effects of economic slowdowns or recessions. Even though new growth is part of the property tax, it is included in this analysis since it is a reflection of new value added to the tax rolls as a result of construction. A trend indicating a decline in revenues related to economic growth may indicate that these revenue sources will need to be supplemented or replaced by others in the future.



Favorable

Marginal

Unfavorable



Overall, Ludlow's economic growth revenues show a positive trend, generally keeping pace with inflation and remaining between 4-6% of total operating revenues. Fiscal 2014 is the recent high point at 7.71% of revenue, owing largely to a spike in new growth from personal property. The trend has moderated significantly since then, although FY2017 and FY2018 have seen modest increases.

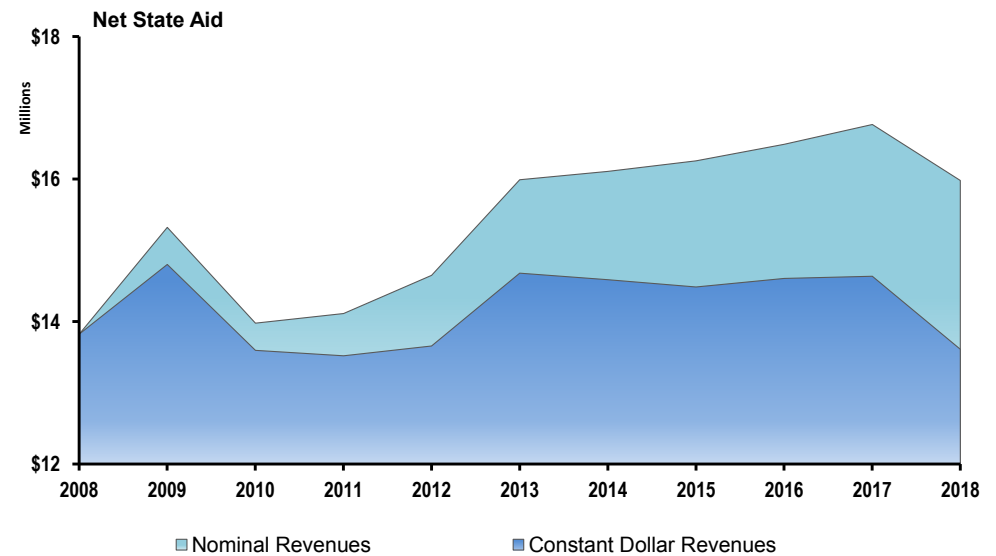
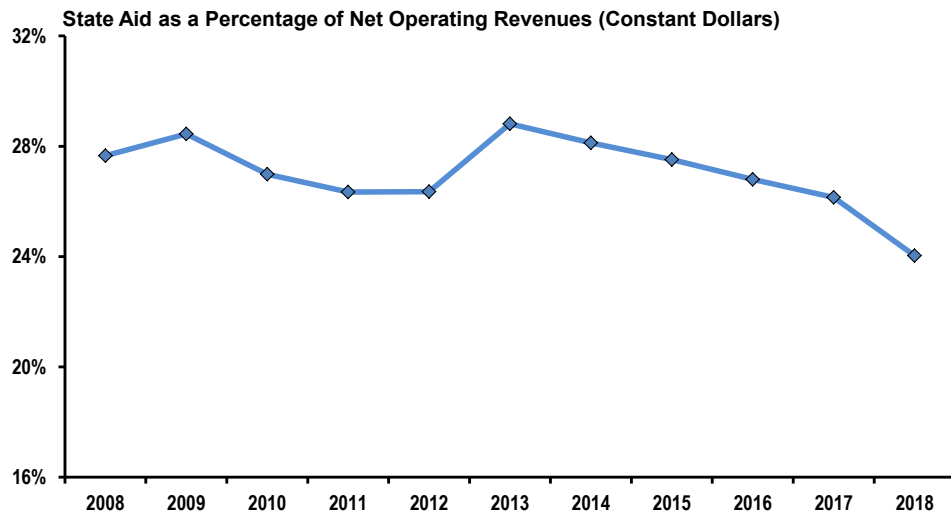
### Indicator 3: State Aid as a Percentage of Operating Revenues

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



| Fiscal Year | Cherry Sheet Revenue Less Offsets | Less MSBA Reimbursements | Less State Assessments | Net State Aid | CPI-U adjustment | Net State Aid (Constant Dollars) | Net Operating Revenues (Constant Dollars) | Net State Aid as % Operating Revenue |
|-------------|-----------------------------------|--------------------------|------------------------|---------------|------------------|----------------------------------|---|--------------------------------------|
| 2008        | \$ 15,658,424                     | \$ (1,772,553)           | \$ (63,677)            | \$ 13,822,194 | 100%             | \$ 13,822,194                    | \$ 49,980,816                             | 27.7%                                |
| 2009        | \$ 16,807,669                     | \$ (1,413,671)           | \$ (71,358)            | \$ 15,322,640 | 96.6%            | \$ 14,801,905                    | \$ 52,034,810                             | 28.4%                                |
| 2010        | \$ 15,509,271                     | \$ (1,413,671)           | \$ (117,481)           | \$ 13,978,119 | 97.3%            | \$ 13,595,484                    | \$ 50,382,126                             | 27.0%                                |
| 2011        | \$ 15,646,169                     | \$ (1,413,663)           | \$ (120,269)           | \$ 14,112,237 | 95.8%            | \$ 13,517,787                    | \$ 51,322,781                             | 26.3%                                |
| 2012        | \$ 15,898,385                     | \$ (1,098,828)           | \$ (152,195)           | \$ 14,647,362 | 93.2%            | \$ 13,656,458                    | \$ 51,826,722                             | 26.4%                                |
| 2013        | \$ 16,112,957                     | \$ -                     | \$ (122,976)           | \$ 15,989,981 | 91.8%            | \$ 14,679,538                    | \$ 50,940,983                             | 28.8%                                |
| 2014        | \$ 16,274,933                     | \$ -                     | \$ (166,819)           | \$ 16,108,114 | 90.6%            | \$ 14,587,754                    | \$ 51,877,019                             | 28.1%                                |
| 2015        | \$ 16,463,231                     | \$ -                     | \$ (208,078)           | \$ 16,255,153 | 89.1%            | \$ 14,484,411                    | \$ 52,634,593                             | 27.5%                                |
| 2016        | \$ 16,745,224                     | \$ -                     | \$ (257,849)           | \$ 16,487,375 | 88.6%            | \$ 14,605,489                    | \$ 54,505,914                             | 26.8%                                |
| 2017        | \$ 16,975,098                     | \$ -                     | \$ (209,539)           | \$ 16,765,559 | 87.3%            | \$ 14,635,271                    | \$ 55,976,601                             | 26.1%                                |
| 2018        | \$ 17,093,414                     | \$ (876,912)             | \$ (235,752)           | \$ 15,980,750 | 85.2%            | \$ 13,610,571                    | \$ 56,626,877                             | 24.0%                                |

Data Source: DLS Municipal Databank

A trend showing declining state aid as a percentage of total revenue may be considered a warning indicator. At 24% of FY2018 operating revenue, state aid is a significant portion of Ludlow's total budget. The town should make plans to ensure that other revenue sources are available to cover any gaps in funding that may be introduced by declining state aid.

On a constant dollar basis, Ludlow's total state aid has fluctuated between just under \$15 million and just over \$13 million, and when adjusted for inflation its current state aid funding is virtually unchanged from FY2008. Since FY2013, the budget's share of state aid has declined every year before dropping from 26.1% in FY2017 to a low of 24% in FY2018. As a result, this indicator is unfavorable.

# Indicator 3: State Aid as a Percentage of Operating Revenues

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable

## State Aid Receipts Detail

| Fiscal Year | Chapter 70 Aid | Charter Tuition Reimbursement | School Lunch (Offset) | School Choice Receiving Tuition (Offset) | Unrestricted General Government Aid | Police Career Incentive | Veterans' Benefits | Exemptions: VBS and Elderly | State Owned Land | Public Libraries (Offset) | Total State Aid Revenues |
|-------------|----------------|-------------------------------|-----------------------|--|-------------------------------------|-------------------------|--------------------|-----------------------------|------------------|---------------------------|--------------------------|
| 2008        | \$ 11,536,063  | \$ 28,114                     | \$ 19,649             | \$ 644,723                               | \$ 3,802,034                        | \$ 120,914              | \$ 63,677          | \$ 86,729                   | \$ 20,893        | \$ 37,964                 | \$ 16,360,760            |
| 2009        | \$ 12,688,709  | \$ 18,957                     | \$ 19,692             | \$ 671,134                               | \$ 3,802,034                        | \$ 123,516              | \$ 71,358          | \$ 80,693                   | \$ 22,402        | \$ 39,908                 | \$ 17,538,403            |
| 2010        | \$ 12,434,935  | \$ 138,723                    | \$ 21,913             | \$ 696,584                               | \$ 2,691,527                        | \$ 22,115               | \$ 117,481         | \$ 84,308                   | \$ 20,182        | \$ 27,538                 | \$ 16,255,306            |
| 2011        | \$ 12,738,623  | \$ 66,128                     | \$ 19,387             | \$ 636,613                               | \$ 2,583,866                        | \$ 11,207               | \$ 120,269         | \$ 98,045                   | \$ 28,031        | \$ 27,996                 | \$ 16,330,165            |
| 2012        | \$ 13,097,378  | \$ 134,056                    | \$ 21,786             | \$ 586,441.0                             | \$ 2,397,042                        | \$ -                    | \$ 152,195         | \$ 88,682                   | \$ 29,032        | \$ 27,767                 | \$ 16,534,379            |
| 2013        | \$ 13,211,578  | \$ 71,393                     | \$ 21,943             | \$ 566,212                               | \$ 2,583,866                        | \$ -                    | \$ 122,976         | \$ 94,102                   | \$ 29,042        | \$ 25,891                 | \$ 16,727,003            |
| 2014        | \$ 13,282,703  | \$ 58,645                     | \$ 21,250             | \$ 563,045                               | \$ 2,644,943                        | \$ -                    | \$ 166,819         | \$ 92,206                   | \$ 29,617        | \$ 25,112                 | \$ 16,884,340            |
| 2015        | \$ 13,351,728  | \$ 61,716                     | \$ 21,008             | \$ 509,783                               | \$ 2,718,292                        | \$ -                    | \$ 208,078         | \$ 92,961                   | \$ 30,456        | \$ 30,198                 | \$ 17,024,220            |
| 2016        | \$ 13,418,728  | \$ 122,467                    | \$ -                  | \$ 499,229.0                             | \$ 2,816,151                        | \$ -                    | \$ 257,849         | \$ 99,573                   | \$ 30,456        | \$ 30,087                 | \$ 17,274,540            |
| 2017        | \$ 13,564,533  | \$ 127,937                    | \$ -                  | \$ 562,404.0                             | \$ 2,937,246                        | \$ -                    | \$ 209,539         | \$ 105,750                  | \$ 30,093        | \$ 29,132                 | \$ 17,566,634            |
| 2018        | \$ 13,642,593  | \$ 17,860                     | \$ -                  | \$ 507,900.0                             | \$ 3,051,799                        | \$ -                    | \$ 235,752         | \$ 115,345                  | \$ 30,065        | \$ 29,574                 | \$ 17,630,888            |

Data Source: DLS Municipal Databank

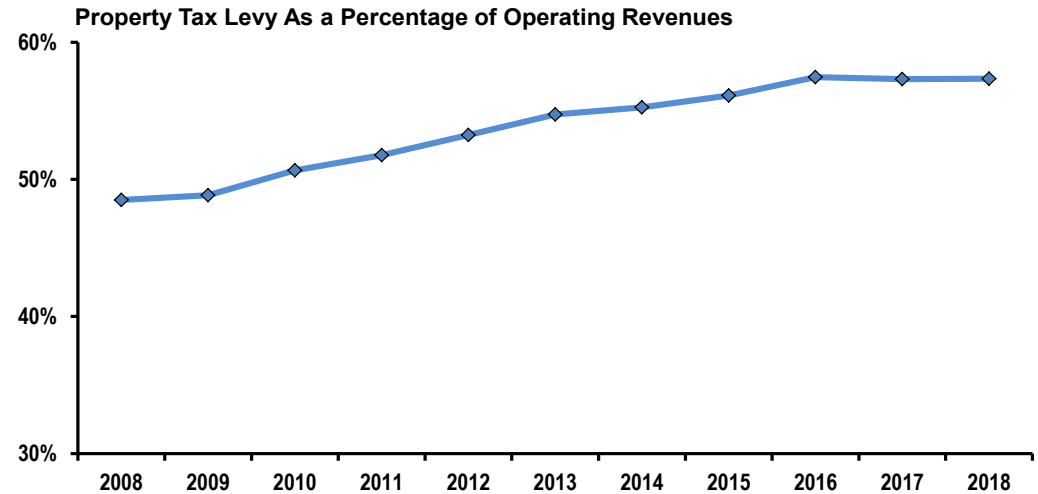
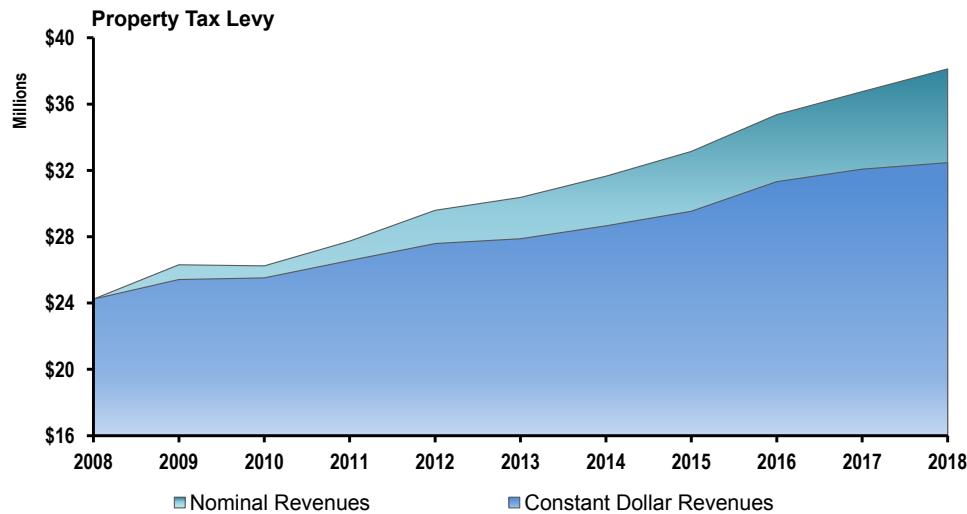
## State Assessments Detail

| Fiscal Year | Air Pollution | RMV Non-Renewal Surcharge | Regional Transit | Special Education | School Choice Sending Tuition | Charter School Sending Tuition | Total State Assessments |
|-------------|---------------|---------------------------|------------------|-------------------|-------------------------------|--------------------------------|-------------------------|
| 2008        | \$ 4,657      | \$ 15,800                 | \$ 68,581        | \$ 7,126          | \$ 164,651                    | \$ 62,104                      | \$ 63,677               |
| 2009        | \$ 4,755      | \$ 19,600                 | \$ 74,399        | \$ 440            | \$ 137,174                    | \$ 53,838                      | \$ 71,358               |
| 2010        | \$ 5,044      | \$ 19,580                 | \$ 79,722        | \$ 4,478          | \$ 76,740                     | \$ 186,159                     | \$ 117,481              |
| 2011        | \$ 5,149      | \$ 25,720                 | \$ 84,148        | \$ 586            | \$ 81,044                     | \$ 138,766                     | \$ 120,269              |
| 2012        | \$ 5,217      | \$ 21,660                 | \$ 93,433        | \$ 1,677          | \$ 106,480                    | \$ 229,004                     | \$ 152,195              |
| 2013        | \$ 5,207      | \$ 21,920                 | \$ 99,155        | \$ 1,854          | \$ 115,859                    | \$ 272,385                     | \$ 122,976              |
| 2014        | \$ 5,402      | \$ 24,100                 | \$ 108,110       | \$ -              | \$ 132,649                    | \$ 297,453                     | \$ 166,819              |
| 2015        | \$ 5,367      | \$ 23,720                 | \$ 107,662       | \$ 6,674          | \$ 187,851                    | \$ 301,321                     | \$ 208,078              |
| 2016        | \$ 5,547      | \$ 23,720                 | \$ 96,733        | \$ 7,977          | \$ 204,660                    | \$ 434,878                     | \$ 257,849              |
| 2017        | \$ 5,685      | \$ 23,720                 | \$ 102,941       | \$ -              | \$ 232,966                    | \$ 591,162                     | \$ 209,539              |
| 2018        | \$ 5,672      | \$ 24,840                 | \$ 103,853       | \$ 2,031          | \$ 261,046                    | \$ 327,018                     | \$ 235,752              |

Data Source: DLS Municipal Databank

## Indicator 4: Property Tax Revenue

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis



A decline in property tax revenues, adjusted for inflation, indicates the town may face increasing difficulty funding a consistent level of service into the future.

In Ludlow, property tax revenue has grown on both a nominal and constant dollar basis, indicating that it is keeping pace with inflation. Therefore, this indicator is favorable. Note that the tax levy is presented net of any debt exclusions, since those receipts are reserved for payment of exempt debt service and will expire when the debt is paid off.

| Fiscal Year | Property Tax Levy | Less Debt Exclusions | Net Property Tax Levy | CPI-U adjustment | Net Tax Levy (constant dollars) | % Change from prior year | Prop Tax as a % Operating Revenue |
|-------------|-------------------|----------------------|-----------------------|------------------|---------------------------------|--------------------------|-----------------------------------|
| 2008        | \$ 24,843,392     | \$ (601,696)         | \$ 24,241,696         | 100%             | \$ 24,241,696                   | 3.39%                    | 48.50%                            |
| 2009        | \$ 26,798,971     | \$ (487,597)         | \$ 26,311,374         | 96.6%            | \$ 25,417,190                   | 4.85%                    | 48.85%                            |
| 2010        | \$ 26,697,121     | \$ (454,278)         | \$ 26,242,843         | 97.3%            | \$ 25,524,476                   | 0.42%                    | 50.66%                            |
| 2011        | \$ 28,137,666     | \$ (403,312)         | \$ 27,734,354         | 95.8%            | \$ 26,566,100                   | 4.08%                    | 51.76%                            |
| 2012        | \$ 30,254,227     | \$ (664,755)         | \$ 29,589,472         | 93.2%            | \$ 27,587,724                   | 3.85%                    | 53.23%                            |
| 2013        | \$ 30,542,388     | \$ (167,836)         | \$ 30,374,552         | 91.8%            | \$ 27,885,237                   | 1.08%                    | 54.74%                            |
| 2014        | \$ 31,763,396     | \$ (111,766)         | \$ 31,651,630         | 90.6%            | \$ 28,664,200                   | 2.79%                    | 55.25%                            |
| 2015        | \$ 33,257,548     | \$ (106,728)         | \$ 33,150,820         | 89.1%            | \$ 29,539,563                   | 3.05%                    | 56.12%                            |
| 2016        | \$ 35,457,370     | \$ (99,873)          | \$ 35,357,497         | 88.6%            | \$ 31,321,756                   | 6.03%                    | 57.46%                            |
| 2017        | \$ 36,846,048     | \$ (95,357)          | \$ 36,750,691         | 87.3%            | \$ 32,081,025                   | 2.42%                    | 57.31%                            |
| 2018        | \$ 38,585,108     | \$ (461,261)         | \$ 38,123,847         | 85.2%            | \$ 32,469,524                   | 1.21%                    | 57.34%                            |

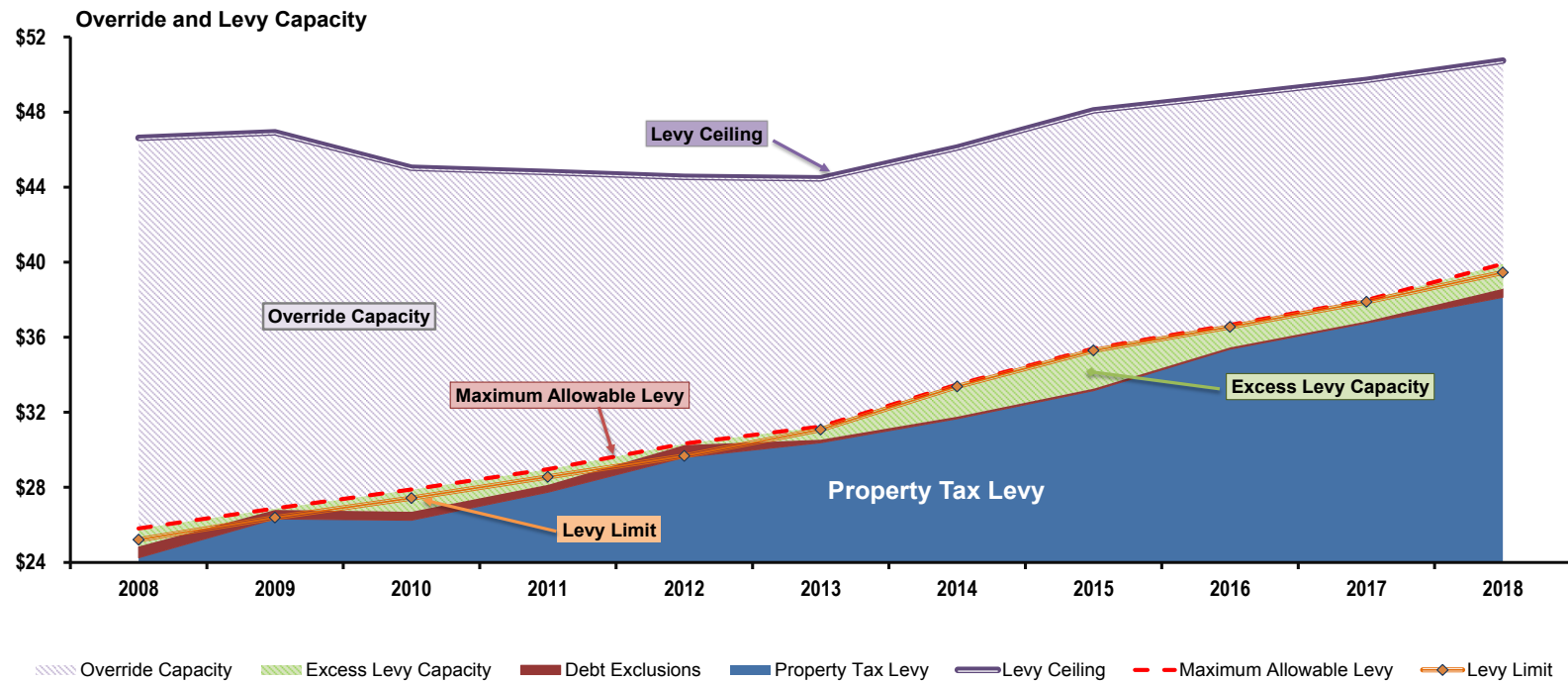
Data Source: DLS Gateway - Tax Recap

While Ludlow's property tax shows a healthy growth trend, note that as a percentage of total operating revenues it has increased significantly since FY2008 (from 48.5% to 57.34% in FY2018). This may be an indication that revenue from other sources has been decreasing over time

while the burden on the property tax has increased. Tax levy growth is attributed both to the 2.5% annual increase in the levy limit allowed by Proposition 2.5, as well as any new growth. See indicators **4a - Levy Limit**, and **4b - Assessed Values**, for more detailed information.

## Indicator 4a: Levy Limit

Favorable Marginal Unfavorable



### Levy Limit Calculation

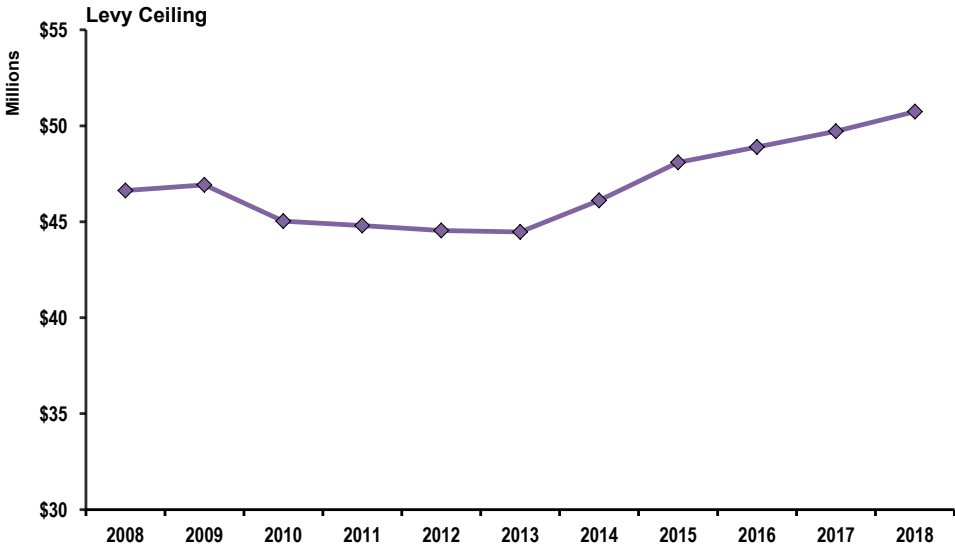
| Fiscal Year | Prior Year Tax Levy Limit | Amended Prior Growth | 2.5% Increase | Certified New Growth | Override | Levy Limit    | Debt Exclusions | Levy Ceiling  | Prop Tax Levy (net of Debt Exclusions) | Maximum Allowable Levy | Property Tax Levy | Excess Levy Capacity | Override Capacity | Override Capacity as % Levy Ceiling |
|-------------|---------------------------|----------------------|---------------|----------------------|----------|---------------|-----------------|---------------|--|------------------------|-------------------|----------------------|-------------------|-------------------------------------|
| 2008        | \$ 24,012,386             | \$ 2,906             | \$ 600,382    | \$ 591,068           | \$ -     | \$ 25,206,742 | \$ 601,696      | \$ 46,627,989 | \$ 24,241,696                          | \$ 25,808,438          | \$ 24,843,392     | \$ 965,046           | \$ 20,819,551     | 44.65%                              |
| 2009        | \$ 25,206,742             | \$ 3,818             | \$ 630,264    | \$ 542,401           | \$ -     | \$ 26,383,225 | \$ 487,597      | \$ 46,916,967 | \$ 26,311,374                          | \$ 26,870,822          | \$ 26,798,971     | \$ 71,851            | \$ 20,046,145     | 42.73%                              |
| 2010        | \$ 26,383,225             | \$ 1,160             | \$ 659,610    | \$ 382,198           | \$ -     | \$ 27,426,193 | \$ 454,278      | \$ 45,035,629 | \$ 26,242,843                          | \$ 27,880,471          | \$ 26,697,121     | \$ 1,183,350         | \$ 17,155,158     | 38.09%                              |
| 2011        | \$ 27,426,193             | \$ 8,271             | \$ 685,862    | \$ 437,574           | \$ -     | \$ 28,557,900 | \$ 403,312      | \$ 44,805,201 | \$ 27,734,354                          | \$ 28,961,212          | \$ 28,137,666     | \$ 823,546           | \$ 15,843,989     | 35.36%                              |
| 2012        | \$ 28,557,900             | \$ 3,610             | \$ 714,038    | \$ 393,785           | \$ -     | \$ 29,669,332 | \$ 664,755      | \$ 44,543,914 | \$ 29,589,472                          | \$ 30,334,087          | \$ 30,254,227     | \$ 79,860            | \$ 14,209,827     | 31.90%                              |
| 2013        | \$ 29,669,332             | \$ -                 | \$ 741,733    | \$ 665,829           | \$ -     | \$ 31,076,895 | \$ 167,836      | \$ 44,470,570 | \$ 30,374,552                          | \$ 31,244,731          | \$ 30,542,388     | \$ 702,343           | \$ 13,225,839     | 29.74%                              |
| 2014        | \$ 31,076,895             | \$ -                 | \$ 776,922    | \$ 1,515,034         | \$ -     | \$ 33,368,851 | \$ 111,766      | \$ 46,114,105 | \$ 31,651,630                          | \$ 33,480,617          | \$ 31,763,396     | \$ 1,717,221         | \$ 12,633,488     | 27.40%                              |
| 2015        | \$ 33,368,851             | \$ -                 | \$ 834,221    | \$ 1,087,410         | \$ -     | \$ 35,290,482 | \$ 106,728      | \$ 48,087,837 | \$ 33,150,820                          | \$ 35,397,210          | \$ 33,257,548     | \$ 2,139,662         | \$ 12,690,627     | 26.39%                              |
| 2016        | \$ 35,290,482             | \$ -                 | \$ 882,262    | \$ 378,495           | \$ -     | \$ 36,551,239 | \$ 99,873       | \$ 48,893,230 | \$ 35,357,497                          | \$ 36,651,112          | \$ 35,457,370     | \$ 1,193,742         | \$ 12,242,118     | 25.04%                              |
| 2017        | \$ 36,551,239             | \$ -                 | \$ 913,781    | \$ 421,022           | \$ -     | \$ 37,886,042 | \$ 95,357       | \$ 49,711,343 | \$ 36,750,691                          | \$ 37,981,399          | \$ 36,846,048     | \$ 1,135,351         | \$ 11,729,944     | 23.60%                              |
| 2018        | \$ 37,886,042             | \$ -                 | \$ 947,151    | \$ 617,457           | \$ -     | \$ 39,450,650 | \$ 461,261      | \$ 50,743,173 | \$ 38,123,847                          | \$ 39,911,911          | \$ 38,585,108     | \$ 1,326,803         | \$ 10,831,262     | 21.35%                              |

Data Source: DLS Gateway - Levy Limit, DE-1, Tax Recap

The levy ceiling (an amount equal to 2.5% of the community's total assessed value) is a cap on the size of a community's maximum allowable levy. Although a community can pass an override or debt exclusion to exceed its levy limit, the limit cannot exceed the levy ceiling. If the levy limit calculation produces a number greater than

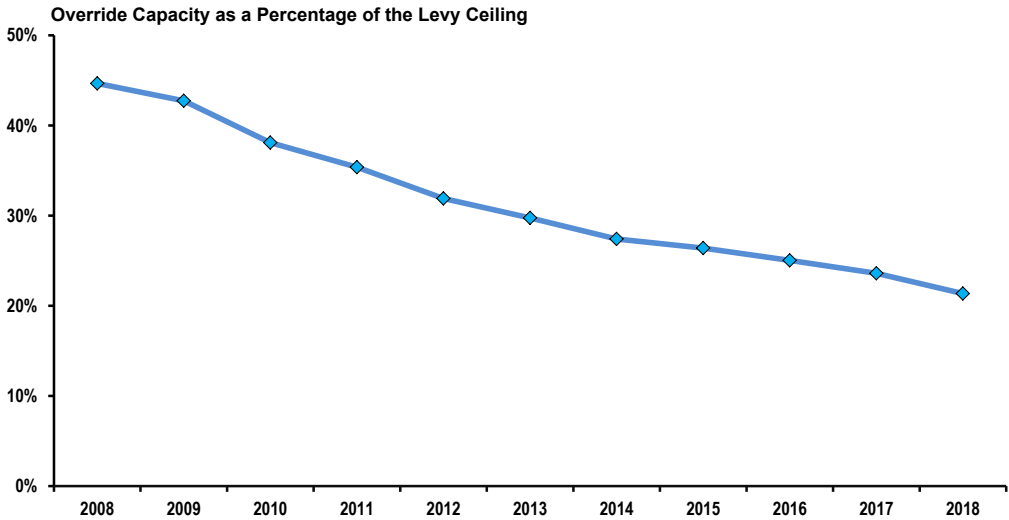
the levy ceiling, the ceiling must be used in its place. If a community cannot increase its levy limit normally, it is said to have reached the "levy cap." Ludlow is not in danger of hitting its levy cap.

|           |          |             |
|-----------|----------|-------------|
| Favorable | Marginal | Unfavorable |
|-----------|----------|-------------|



When a community hits the levy cap and its levy ceiling is in decline, it becomes progressively more difficult to raise funds from the property tax. This environment also severely hampers a town's ability to expand services or finance large capital projects through overrides or exclusions, since the levy ceiling is directly tied to a town's override capacity (the difference between the levy limit and the levy ceiling).

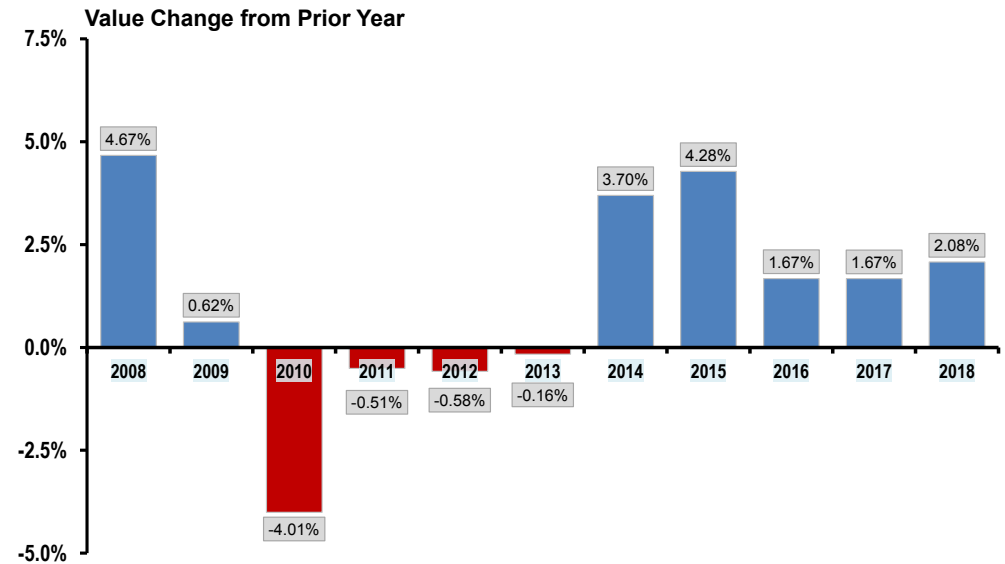
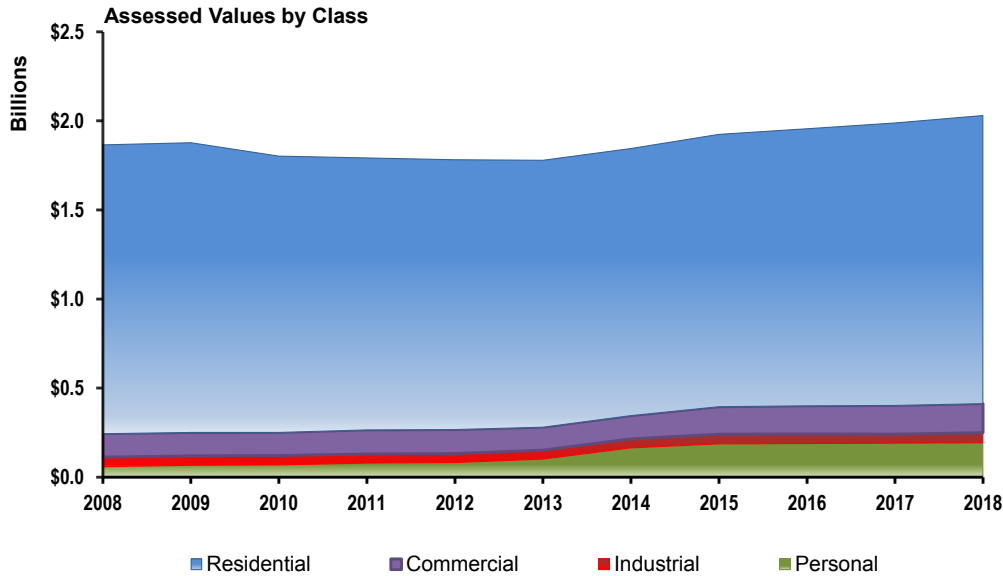
Ludlow's trends in this area are generally positive. The town has maintained significant excess levy capacity since FY2008, indicating an ability to raise further tax revenue without the need for an override. Additionally, the town maintains significant override capaci-



ty, although it has declined by about half since FY2008, as has the override capacity as a percentage of the levy ceiling. New growth has generally been steady, with a spike in personal property values in FY2014. A significant increase in commercial/industrial values mitigated a decrease in FY2015, while FY2016-18 saw a return to typical levels of growth on a slightly increasing trend.

With a healthy override and levy capacity, as well as consistent new growth, Ludlow's property tax revenue is likely to continue growing favorably.

## Indicator 4b: Assessed Values



Since FY2008, Ludlow's total assessed values have increased \$164,607,350, or 8.83% and the trend has been largely positive. The town experienced declining values in FY2010-13, likely attributable to the Great Recession, but in FY2014 values started to rebound, primarily driven by increases in the personal property class that continues into the present. However, while the commercial, industrial, and personal property classes have increased in value since FY2008, residential values have decreased by \$3.38 million, or 0.21%. However, despite this overall decrease, residential values have increased since their low point of \$1.498 billion in FY2013, which is a positive trend.

### Assessed Values

| Fiscal Year                   | Residential           | Commercial           | Industrial          | Personal              | Total Value           | Value Change from Prior Year | Levy Ceiling        |
|-------------------------------|-----------------------|----------------------|---------------------|-----------------------|-----------------------|------------------------------|---------------------|
| 2008                          | \$ 1,620,828,488      | \$ 131,951,192       | \$ 53,785,980       | \$ 58,553,890         | \$ 1,865,119,550      | 4.67%                        | \$ 46,627,989       |
| 2009                          | \$ 1,626,268,352      | \$ 130,590,008       | \$ 53,052,520       | \$ 66,767,800         | \$ 1,876,678,680      | 0.62%                        | \$ 46,916,967       |
| 2010                          | \$ 1,550,378,145      | \$ 129,724,865       | \$ 52,798,620       | \$ 68,523,540         | \$ 1,801,425,170      | -4.01%                       | \$ 45,035,629       |
| 2011                          | \$ 1,527,096,827      | \$ 135,103,103       | \$ 51,115,620       | \$ 78,892,500         | \$ 1,792,208,050      | -0.51%                       | \$ 44,805,201       |
| 2012                          | \$ 1,515,096,717      | \$ 133,975,003       | \$ 50,833,220       | \$ 81,851,630         | \$ 1,781,756,570      | -0.58%                       | \$ 44,543,914       |
| 2013                          | \$ 1,498,444,140      | \$ 128,743,200       | \$ 50,304,720       | \$ 101,330,740        | \$ 1,778,822,800      | -0.16%                       | \$ 44,470,570       |
| 2014                          | \$ 1,499,674,752      | \$ 129,725,408       | \$ 50,720,420       | \$ 164,443,610        | \$ 1,844,564,190      | 3.70%                        | \$ 46,114,105       |
| 2015                          | \$ 1,528,545,717      | \$ 153,545,533       | \$ 54,859,260       | \$ 186,562,980        | \$ 1,923,513,490      | 4.28%                        | \$ 48,087,837       |
| 2016                          | \$ 1,555,419,409      | \$ 157,483,511       | \$ 53,741,610       | \$ 189,084,670        | \$ 1,955,729,200      | 1.67%                        | \$ 48,893,230       |
| 2017                          | \$ 1,585,883,576      | \$ 161,020,494       | \$ 50,411,190       | \$ 191,138,460        | \$ 1,988,453,720      | 1.67%                        | \$ 49,711,343       |
| 2018                          | \$ 1,617,447,510      | \$ 162,628,630       | \$ 57,211,200       | \$ 192,439,560        | \$ 2,029,726,900      | 2.08%                        | \$ 50,743,173       |
| <b>\$ Change Since FY2008</b> | <b>\$ (3,380,978)</b> | <b>\$ 30,677,438</b> | <b>\$ 3,425,220</b> | <b>\$ 133,885,670</b> | <b>\$ 164,607,350</b> |                              | <b>\$ 4,115,184</b> |
| <b>% Change Since FY2008</b>  | <b>-0.21%</b>         | <b>23.25%</b>        | <b>6.37%</b>        | <b>228.65%</b>        | <b>8.83%</b>          |                              | <b>8.83%</b>        |

Data Source: DLS Municipal Databank

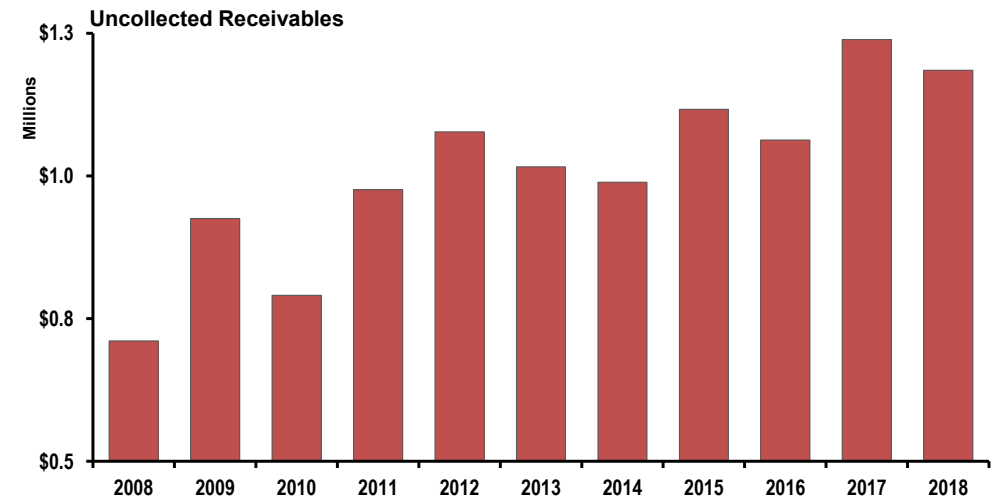
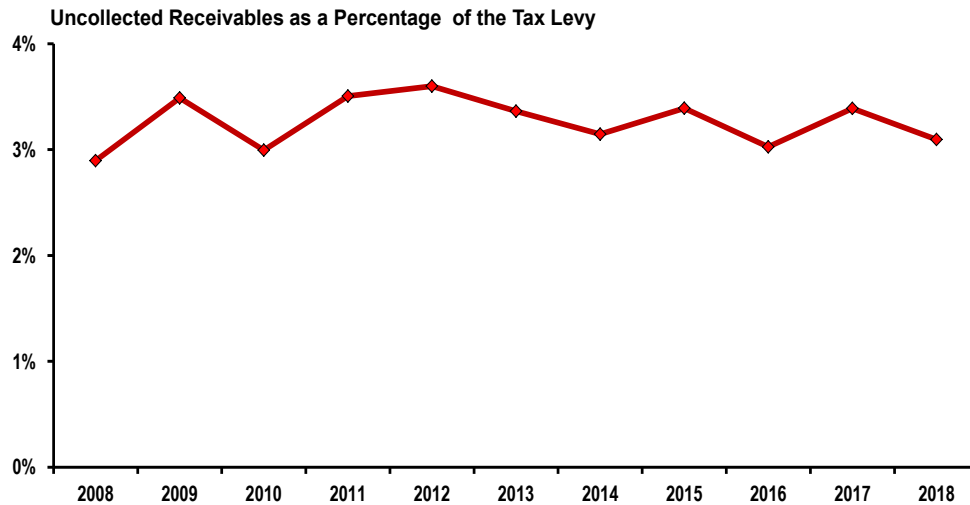
## Indicator 5: Uncollected Receivables as a Percentage of Tax Levy

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



A trend of uncollected property tax receivables greater than 5% of the total annual property tax levy (net of overlay) is a warning indicator. Practically speaking, an increase in uncollected taxes may lead to a decrease in liquidity, introducing some uncertainty as to whether the town will have available revenue to fund its appropriations.

Ludlow's uncollected taxes have consistently remained between 2.5% and 3.5%, which is below the amount considered a warning in this indicator. While this shows that the town's tax collections are consistent, they are not improving, and uncollected taxes increased in FY2015 and FY2017 after decreasing the year prior. Thus this indicator is rated as marginal and should be monitored.

| Fiscal Year | Property Tax Levy | Less Overlay | Property Tax Levy (Net of Overlay) | Cumulative Uncollected Receivables as of June 30th | Cumulative Uncollected Receivables as % Tax Levy |
|-------------|-------------------|--------------|------------------------------------|--|--|
| 2008        | \$ 24,843,392     | \$ (289,894) | \$ 24,553,498                      | \$ 711,062   | 2.9%   |
| 2009        | \$ 26,798,971     | \$ (264,919) | \$ 26,534,052                      | \$ 925,423   | 3.5%   |
| 2010        | \$ 26,697,121     | \$ (287,506) | \$ 26,409,615                      | \$ 790,878   | 3.0%   |
| 2011        | \$ 28,137,666     | \$ (297,822) | \$ 27,839,844                      | \$ 975,969   | 3.5%   |
| 2012        | \$ 30,254,227     | \$ (322,857) | \$ 29,931,370                      | \$ 1,077,362                                       | 3.6%   |
| 2013        | \$ 30,542,388     | \$ (326,463) | \$ 30,215,925                      | \$ 1,016,207                                       | 3.4%   |
| 2014        | \$ 31,763,396     | \$ (318,053) | \$ 31,445,343                      | \$ 988,955   | 3.1%   |
| 2015        | \$ 33,257,548     | \$ (324,358) | \$ 32,933,190                      | \$ 1,116,818                                       | 3.4%   |
| 2016        | \$ 35,457,370     | \$ (325,570) | \$ 35,131,800                      | \$ 1,062,999                                       | 3.0%   |
| 2017        | \$ 36,846,048     | \$ (276,000) | \$ 36,570,048                      | \$ 1,239,152                                       | 3.4%   |
| 2018        | \$ 38,585,108     | \$ (285,067) | \$ 38,300,041                      | \$ 1,185,385                                       | 3.1%   |

Data Source: DLS Municipal Finance Trend Dashboard

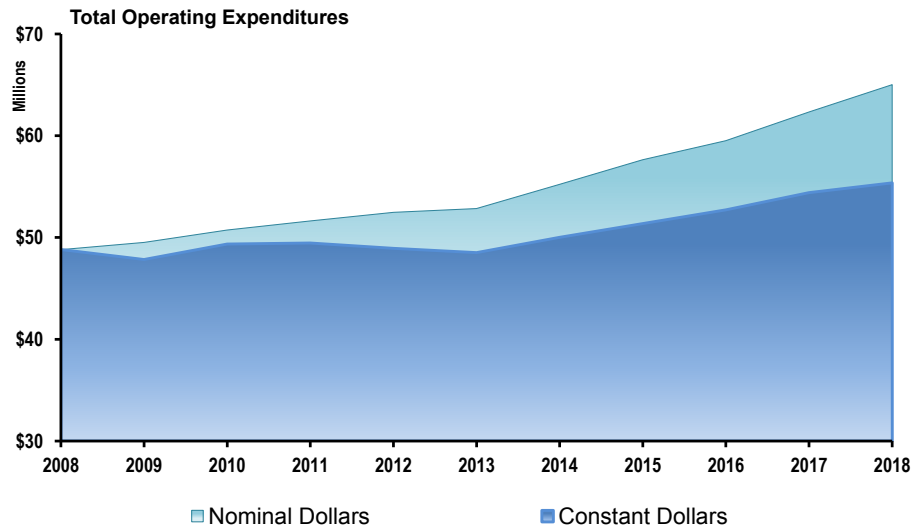


## Indicator 6: Operating Expenditures

Favorable

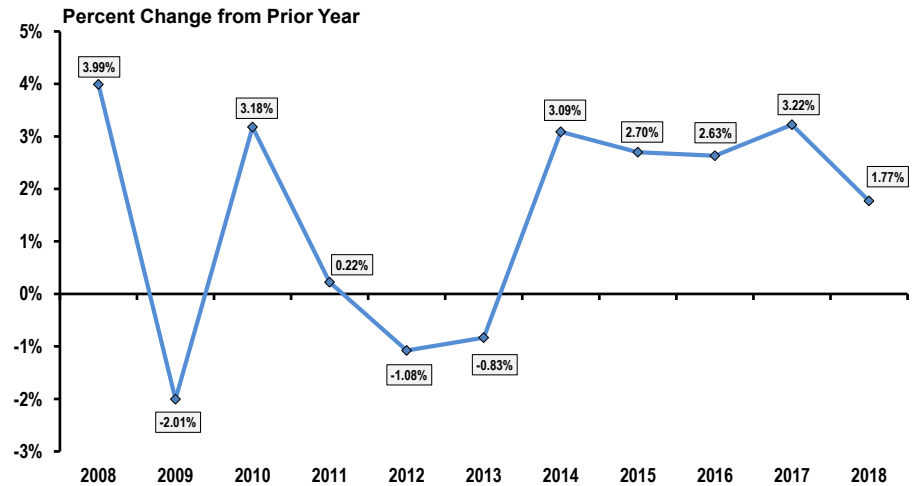
Marginal

Unfavorable



A steep increase in annual operating costs, after accounting for inflation, may indicate that a community's expenses are unsustainable without accompanying revenue increases or budget adjustments.

On a constant dollar basis, Ludlow's annual operating expenditures have increased steadily over time. The rate of increase has remained fairly steady since FY2014, but FY2018 saw the lowest percentage change since then, at a 1.77% increase from the prior year.



### Total Operating Expenditures

| Fiscal Year | Nominal Dollars | CPI-U adjustment | Constant Dollars | % Change |
|-------------|-----------------|------------------|------------------|----------|
| 2008        | \$ 48,801,688   | 100.00%          | \$ 48,801,688    | 3.99%    |
| 2009        | \$ 49,505,406   | 96.60%           | \$ 47,822,979    | -2.01%   |
| 2010        | \$ 50,730,440   | 97.26%           | \$ 49,341,754    | 3.18%    |
| 2011        | \$ 51,625,500   | 95.79%           | \$ 49,450,879    | 0.22%    |
| 2012        | \$ 52,467,342   | 93.23%           | \$ 48,917,891    | -1.08%   |
| 2013        | \$ 52,840,902   | 91.80%           | \$ 48,510,380    | -0.83%   |
| 2014        | \$ 55,219,166   | 90.56%           | \$ 50,007,321    | 3.09%    |
| 2015        | \$ 57,635,462   | 89.11%           | \$ 51,356,991    | 2.70%    |
| 2016        | \$ 59,500,170   | 88.59%           | \$ 52,708,760    | 2.63%    |
| 2017        | \$ 62,325,922   | 87.29%           | \$ 54,406,582    | 3.22%    |
| 2018        | \$ 65,011,681   | 85.17%           | \$ 55,369,499    | 1.77%    |

Data Source: Schedule A Reports

### Schedule A Expenditure Categories

| Fiscal Year | Education     | Debt Service | Fixed Costs   | Public Works | Police       | Fire         | Other Public Safety | Human Services | Culture and Recreation | General Government | Assessments/Other |
|-------------|---------------|--------------|---------------|--------------|--------------|--------------|---------------------|----------------|------------------------|--------------------|-------------------|
| 2008        | \$ 23,809,143 | \$ 3,213,790 | \$ 8,840,881  | \$ 3,652,037 | \$ 2,877,220 | \$ 1,924,403 | \$ 701,681          | \$ 666,012     | \$ 549,356             | \$ 2,263,649       | \$ 303,516        |
| 2009        | \$ 25,200,110 | \$ 3,330,389 | \$ 7,813,252  | \$ 3,858,833 | \$ 2,838,715 | \$ 1,859,964 | \$ 831,863          | \$ 762,067     | \$ 581,848             | \$ 2,179,685       | \$ 248,680        |
| 2010        | \$ 25,590,852 | \$ 3,121,734 | \$ 9,297,382  | \$ 3,417,463 | \$ 2,808,112 | \$ 1,936,417 | \$ 786,651          | \$ 700,038     | \$ 573,311             | \$ 2,202,541       | \$ 295,939        |
| 2011        | \$ 25,135,568 | \$ 2,938,899 | \$ 9,929,358  | \$ 3,869,120 | \$ 3,022,523 | \$ 1,919,819 | \$ 817,707          | \$ 771,231     | \$ 626,858             | \$ 2,270,956       | \$ 323,461        |
| 2012        | \$ 25,021,848 | \$ 2,837,505 | \$ 10,975,864 | \$ 3,444,108 | \$ 3,081,571 | \$ 1,921,355 | \$ 945,151          | \$ 802,617     | \$ 645,095             | \$ 2,320,555       | \$ 471,673        |
| 2013        | \$ 25,910,981 | \$ 1,472,192 | \$ 11,012,272 | \$ 3,716,817 | \$ 3,264,769 | \$ 2,054,942 | \$ 1,018,975        | \$ 875,914     | \$ 678,591             | \$ 2,298,999       | \$ 536,450        |
| 2014        | \$ 26,603,002 | \$ 1,656,500 | \$ 11,639,355 | \$ 3,946,140 | \$ 3,397,364 | \$ 2,134,638 | \$ 1,147,013        | \$ 964,423     | \$ 727,024             | \$ 2,416,133       | \$ 587,574        |
| 2015        | \$ 27,855,617 | \$ 1,438,077 | \$ 12,067,046 | \$ 3,971,170 | \$ 3,471,920 | \$ 2,242,983 | \$ 1,141,635        | \$ 1,026,914   | \$ 732,655             | \$ 3,025,099       | \$ 662,346        |
| 2016        | \$ 28,571,517 | \$ 1,212,765 | \$ 12,049,662 | \$ 3,528,949 | \$ 3,784,121 | \$ 2,452,119 | \$ 1,114,271        | \$ 1,005,744   | \$ 840,595             | \$ 3,625,306       | \$ 1,315,121      |
| 2017        | \$ 30,084,519 | \$ 1,209,488 | \$ 13,477,620 | \$ 3,642,317 | \$ 3,915,604 | \$ 2,689,351 | \$ 1,149,600        | \$ 1,047,734   | \$ 792,315             | \$ 3,028,520       | \$ 1,288,854      |
| 2018        | \$ 30,661,298 | \$ 2,202,105 | \$ 14,500,450 | \$ 3,659,348 | \$ 4,104,399 | \$ 2,617,161 | \$ 1,223,741        | \$ 1,032,457   | \$ 797,905             | \$ 2,808,329       | \$ 1,404,488      |

Data Source: Schedule A Reports

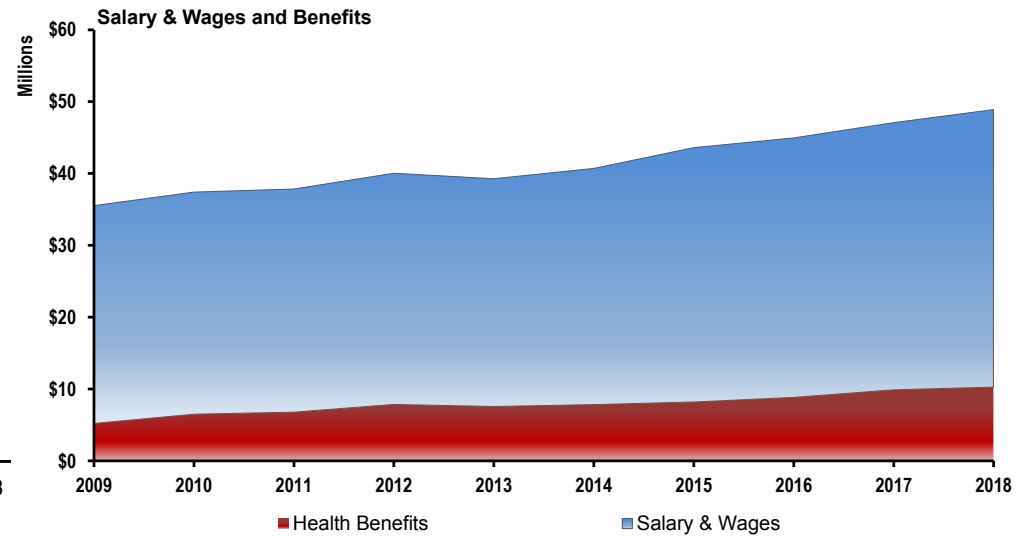
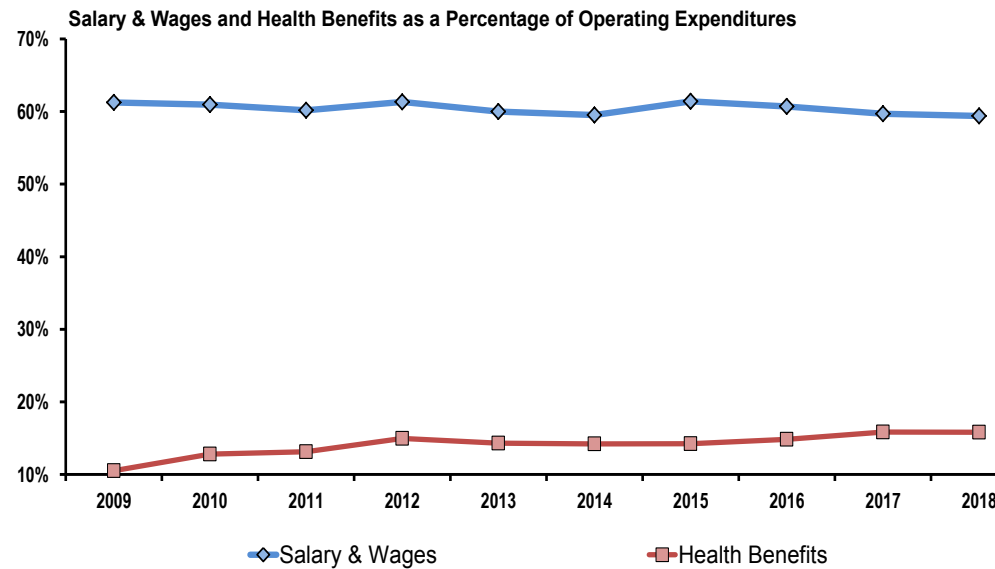
# Indicator 7: Personnel Costs as a Percentage of Operating Expenditures

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



| Fiscal Year | As a % of Operating Expenditures |                |                 |       | Per FTE        |                 |                    |
|-------------|----------------------------------|----------------|-----------------|-------|----------------|-----------------|--------------------|
|             | Operating Expenditures           | Salary & Wages | Health Benefits | FTE   | Salary & Wages | Health Benefits | Total Compensation |
| 2009        | \$ 49,505,406                    | \$ 30,321,189  | \$ 5,198,929    | 1,104 | 61.25%         | 10.50%          | 71.75%             |
| 2010        | \$ 50,730,440                    | \$ 30,915,819  | \$ 6,493,360    | 1,098 | 60.94%         | 12.80%          | 73.74%             |
| 2011        | \$ 51,625,500                    | \$ 31,067,306  | \$ 6,772,452    | 1,146 | 60.18%         | 13.12%          | 73.30%             |
| 2012        | \$ 52,467,342                    | \$ 32,183,668  | \$ 7,854,471    | 1,161 | 61.34%         | 14.97%          | 76.31%             |
| 2013        | \$ 52,840,902                    | \$ 31,699,063  | \$ 7,565,057    | 1,163 | 59.99%         | 14.32%          | 74.31%             |
| 2014        | \$ 55,219,166                    | \$ 32,859,763  | \$ 7,843,193    | 1,169 | 59.51%         | 14.20%          | 73.71%             |
| 2015        | \$ 57,635,462                    | \$ 35,390,298  | \$ 8,195,861    | 1,179 | 61.40%         | 14.22%          | 75.62%             |
| 2016        | \$ 59,500,170                    | \$ 36,118,051  | \$ 8,829,484    | 1,172 | 60.70%         | 14.84%          | 75.54%             |
| 2017        | \$ 62,325,922                    | \$ 37,209,234  | \$ 9,876,216    | 1,149 | 59.70%         | 15.85%          | 75.55%             |
| 2018        | \$ 65,011,681                    | \$ 38,616,267  | \$ 10,279,027   | 1,148 | 59.40%         | 15.81%          | 75.21%             |

Data Source: Schedule A Reports

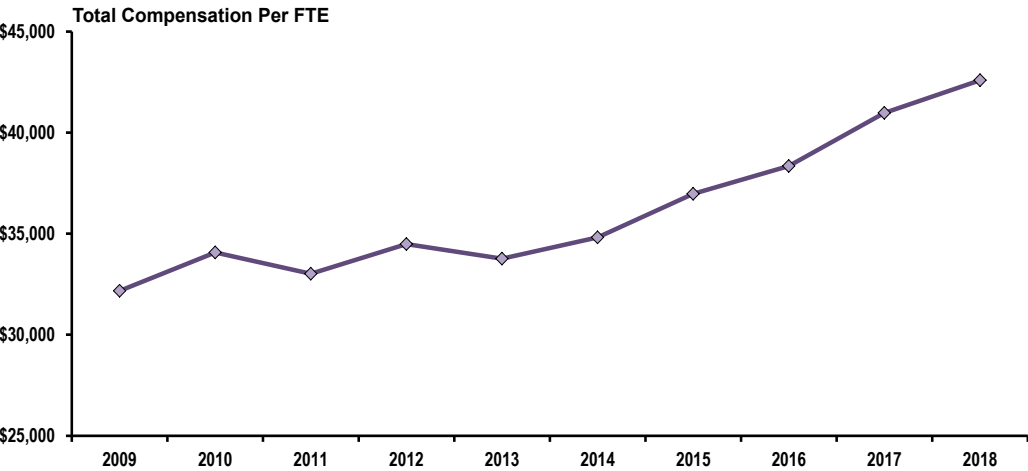
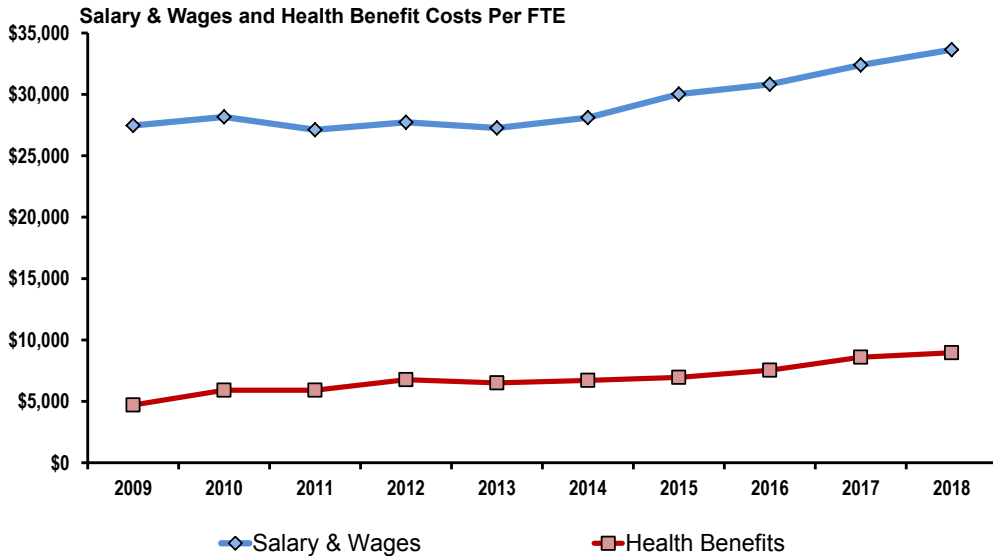
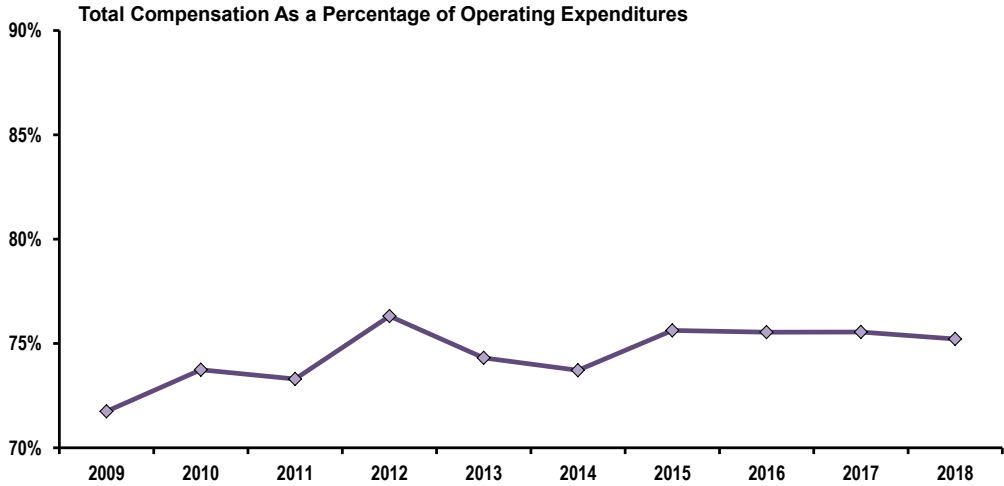
A trend of increasing salaries, wages, and employee health benefits as a percentage of a community's annual operating expenditures may indicate that those costs are rising at an unsustainable rate. As compensation costs grow relative to the total budget they may crowd out departmental spending on other areas, including routine facility maintenance and necessary capital investment.

In Ludlow, both the cost of regular compensation and health benefits has remained largely steady over time relative to the town's overall operating budget. However, a clear growth trend in compensation per Full-Time Equivalent (FTE) employee begins in FY2013. This indicates that while the town is managing its compensation costs relative to budget, the cost of compensating an individual employee is increasing over time.

Favorable

Marginal

Unfavorable



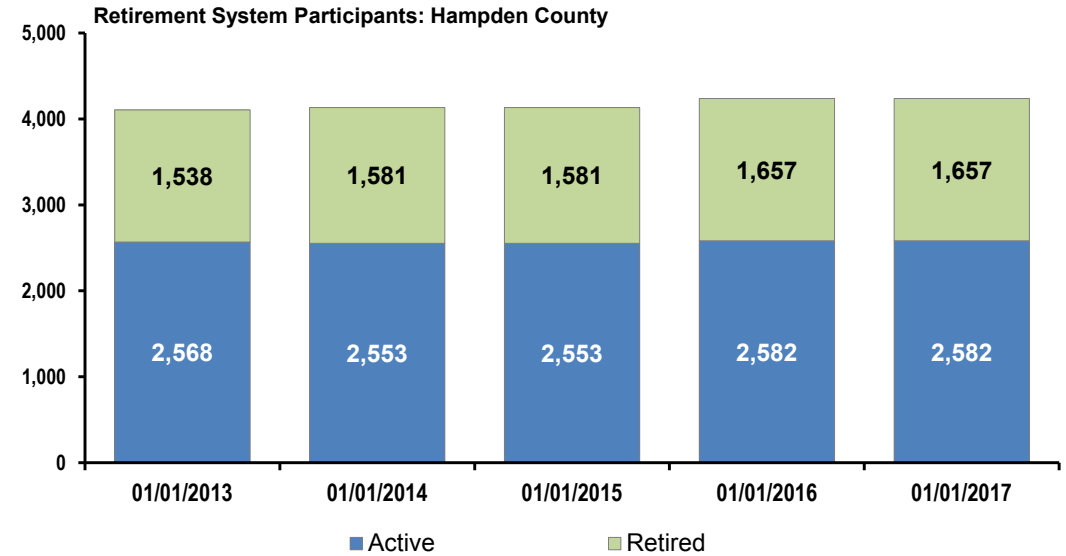
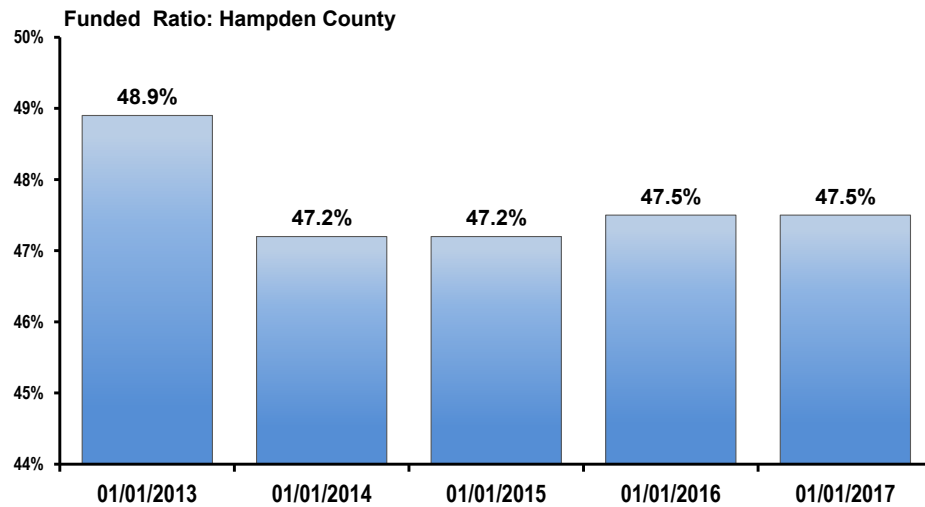
## Indicator 8: Funded Pension Liability

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



| Report Date | Unfunded Liability | % Funded | Assumed Rate of Return | Year Fully Funded |
|-------------|--------------------|----------|------------------------|-------------------|
| 01/01/2013  | \$ 255,000,000     | 48.9%    | 8.00%                  | 2036              |
| 01/01/2014  | \$ 298,600,000     | 47.2%    | 7.88%                  | 2036              |
| 01/01/2015  | \$ 298,600,000     | 47.2%    | 7.88%                  | 2036              |
| 01/01/2016  | \$ 344,700,000     | 47.5%    | 7.75%                  | 2036              |
| 01/01/2017  | \$ 344,700,000     | 47.5%    | 7.75%                  | 2036              |

Data Source: PERAC Annual Reports for Hampden County Retirement System

| Participants |        |         |                    |                            |
|--------------|--------|---------|--------------------|----------------------------|
| Report Date  | Active | Retired | Total Participants | Ratio of Active to Retired |
| 01/01/2013   | 2,568  | 1,538   | 4,106              | 1.67                       |
| 01/01/2014   | 2,553  | 1,581   | 4,134              | 1.61                       |
| 01/01/2015   | 2,553  | 1,581   | 4,134              | 1.61                       |
| 01/01/2016   | 2,582  | 1,657   | 4,239              | 1.56                       |
| 01/01/2017   | 2,582  | 1,657   | 4,239              | 1.56                       |

Data Source: PERAC Annual Reports for Hampden County Retirement System

A community's funded ratio is the total value of a pension plan's assets weighed against its accrued liabilities. A trend showing the funded ratio decreasing over time indicates a diminishing ability for the community to cover its accrued liability, which may put pressure on the budget as other items are cut to make pension payments.

Ludlow is part of the regional Hampden County Retirement System. As of January 1, 2013, the system was 48.9% funded with an 8.00% assumed rate of return and a target date of 2036 for full funding. However, the funded ratio decreased to 47.2% in 2014, coinciding

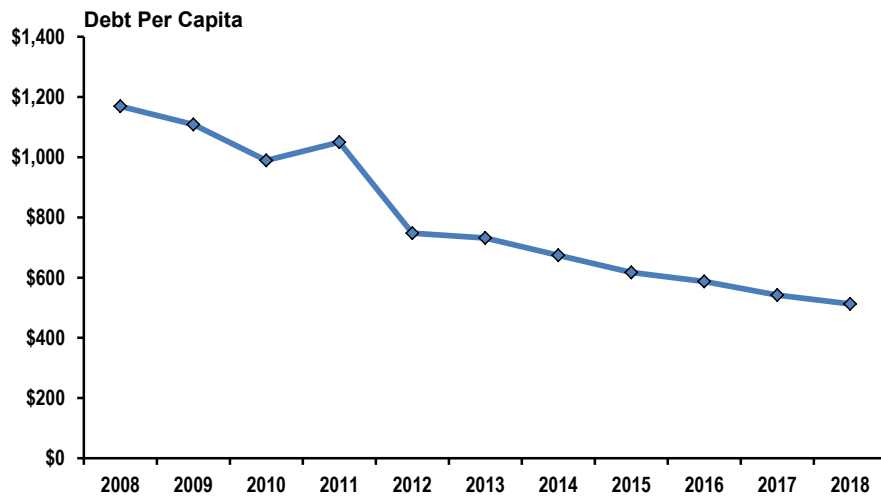
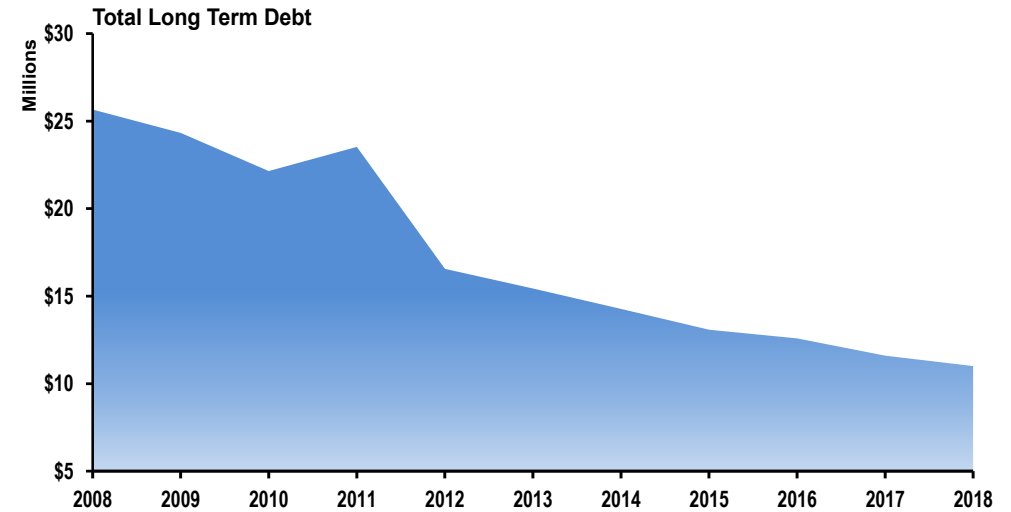
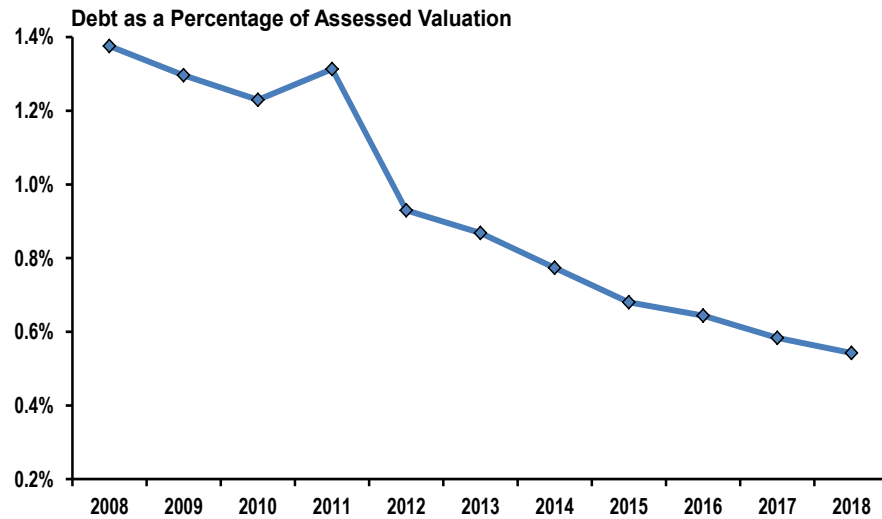
with a reduction in the assumed rate of return to 7.88%. By 2017, Hampden County's funded ratio has improved slightly to 47.5%, with a further adjusted rate of return of 7.75%. However, this is still well below the funded level in 2013, and so this indicator is marginal until a clear growth trend emerges.

Throughout the period shown here, the ratio of active to retired employees has remained positive, but has decreased from 1.67 in 2013 to 1.56 in 2018.

Favorable

Marginal

Unfavorable



| Fiscal Year | Assessed Valuation | Bonds Outstanding | Population | Debt as % Assessed Valuation | Debt Per Capita |
|-------------|--------------------|-------------------|------------|------------------------------|-----------------|
| 2008        | \$ 1,865,119,550   | \$ 25,659,707     | 21,946     | 1.38%                        | \$ 1,169        |
| 2009        | \$ 1,876,678,680   | \$ 24,329,980     | 21,951     | 1.30%                        | \$ 1,108        |
| 2010        | \$ 1,801,425,170   | \$ 22,145,386     | 22,382     | 1.23%                        | \$ 989          |
| 2011        | \$ 1,792,208,050   | \$ 23,533,063     | 22,410     | 1.31%                        | \$ 1,050        |
| 2012        | \$ 1,781,756,570   | \$ 16,564,109     | 22,161     | 0.93%                        | \$ 747          |
| 2013        | \$ 1,778,822,800   | \$ 15,441,721     | 21,103     | 0.87%                        | \$ 732          |
| 2014        | \$ 1,844,564,190   | \$ 14,269,069     | 21,176     | 0.77%                        | \$ 674          |
| 2015        | \$ 1,923,513,490   | \$ 13,081,964     | 21,195     | 0.68%                        | \$ 617          |
| 2016        | \$ 1,955,729,200   | \$ 12,591,873     | 21,451     | 0.64%                        | \$ 587          |
| 2017        | \$ 1,988,453,720   | \$ 11,598,758     | 21,395     | 0.58%                        | \$ 542          |
| 2018        | \$ 2,029,726,900   | \$ 11,006,145     | 21,472     | 0.54%                        | \$ 513          |

Data Source: Town debt report, Municipal Databank, Statement of Indebtedness

Total long-term debt in excess of 5% of a community's assessed valuation is generally prohibited under Mass General Law Chapter 44 §10, and approaching this limit is often considered a warning sign by bond rating agencies. Evaluating a community's debt in this way is an indicator of both a community's overall debt burden as well as its effort in consistently investing in its capital assets. While a high debt load may be an indication

of fiscal strain, low and decreasing debt may indicate underinvestment in capital assets and infrastructure. Ludlow's debt burden is well below the 5% threshold and has steadily declined to 0.54% of assessed valuation in FY2018 from a high point of 1.38% in FY2008, indicating that the town's overall debt load is not a source of fiscal stress.

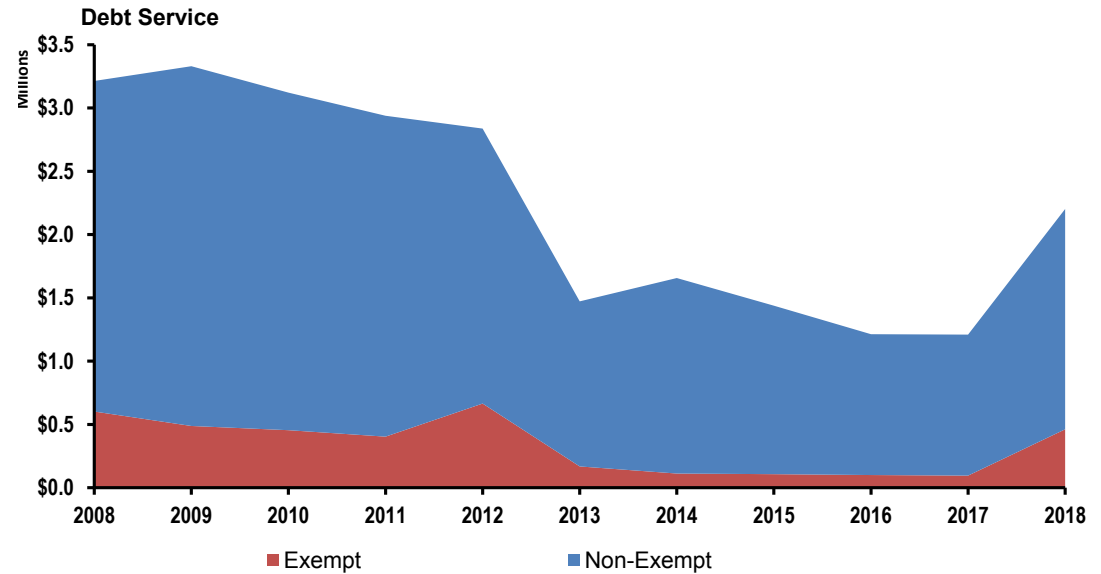
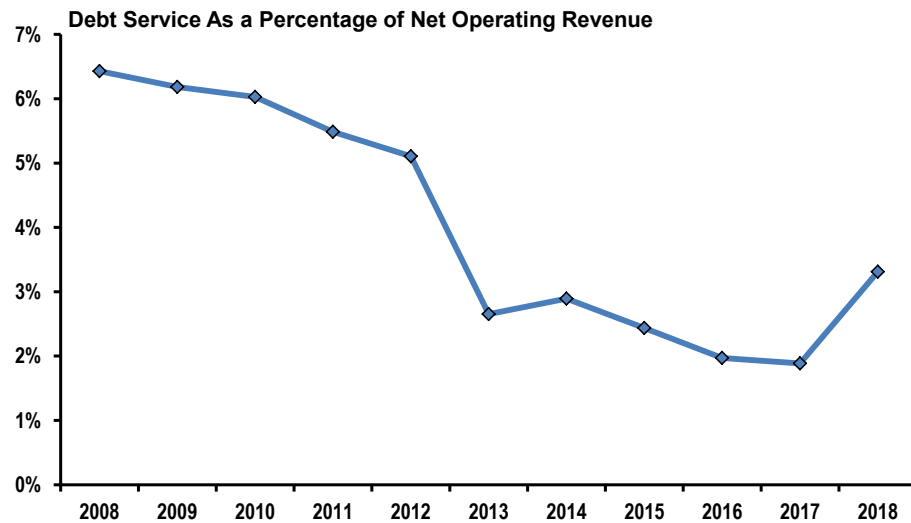
# Indicator 10: Debt Service as a Percentage of Operating Revenue

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



Annual debt service in excess of 10% of net operating revenues may indicate that the town's debt load is too high. A trend of increasing debt load may negatively affect a community's ability to maintain spending on essential services as more revenues must be set aside to service debt. Conversely, a declining trend may indicate that the town is not maintaining investment in its capital assets and is losing the capacity to do so as operating expenses take on a greater proportion of the budget. The town should find a favorable balance between these two extremes, ideally set by policy.

| Fiscal Year |                         |                     |                    |                                     | As % of Net Operating Revenue |        |       |
|-------------|-------------------------|---------------------|--------------------|-------------------------------------|-------------------------------|--------|-------|
|             | Non-Exempt Debt Service | Exempt Debt Service | Total Debt Service | Operating Revenue (Nominal Dollars) | Non-Exempt                    | Exempt | Total |
| 2008        | \$ 2,612,094            | \$ 601,696          | \$ 3,213,790       | \$ 49,980,816                       | 5.23%                         | 1.20%  | 6.43% |
| 2009        | \$ 2,842,792            | \$ 487,597          | \$ 3,330,389       | \$ 53,865,411                       | 5.28%                         | 0.91%  | 6.18% |
| 2010        | \$ 2,667,456            | \$ 454,278          | \$ 3,121,734       | \$ 51,800,093                       | 5.15%                         | 0.88%  | 6.03% |
| 2011        | \$ 2,535,587            | \$ 403,312          | \$ 2,938,899       | \$ 53,579,719                       | 4.73%                         | 0.75%  | 5.49% |
| 2012        | \$ 2,172,750            | \$ 664,755          | \$ 2,837,505       | \$ 55,587,236                       | 3.91%                         | 1.20%  | 5.10% |
| 2013        | \$ 1,304,356            | \$ 167,836          | \$ 1,472,192       | \$ 55,488,485                       | 2.35%                         | 0.30%  | 2.65% |
| 2014        | \$ 1,544,734            | \$ 111,766          | \$ 1,656,500       | \$ 57,283,726                       | 2.70%                         | 0.20%  | 2.89% |
| 2015        | \$ 1,331,349            | \$ 106,728          | \$ 1,438,077       | \$ 59,069,253                       | 2.25%                         | 0.18%  | 2.43% |
| 2016        | \$ 1,112,892            | \$ 99,873           | \$ 1,212,765       | \$ 61,528,883                       | 1.81%                         | 0.16%  | 1.97% |
| 2017        | \$ 1,114,131            | \$ 95,357           | \$ 1,209,488       | \$ 64,124,470                       | 1.74%                         | 0.15%  | 1.89% |
| 2018        | \$ 1,740,844            | \$ 461,261          | \$ 2,202,105       | \$ 66,488,021                       | 2.62%                         | 0.69%  | 3.31% |

[Data Source: Schedule A Reports](#)

Declining from 6.43% in FY2008 to 3.43% in FY2018, Ludlow's proportion of debt to other costs is well below the 10% threshold and does not present a danger of straining de-

partmental spending. However, while steady from FY2008-12, the consistent decrease from FY2013-17 may indicate a diminishing capacity for capital investment. Officials should examine

their future capital needs and determine whether increased investment will be necessary, as may be suggested by the increase in debt service in FY2018.

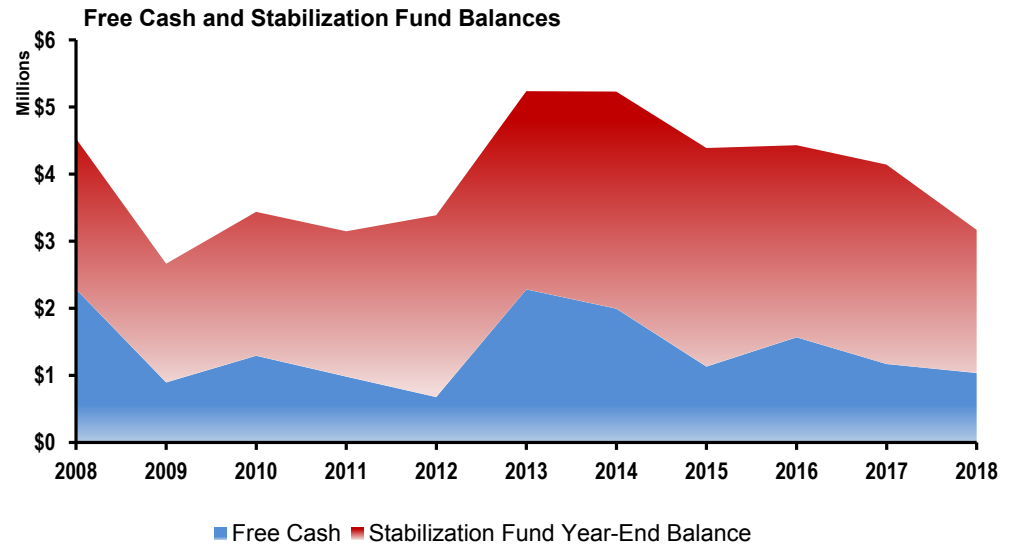
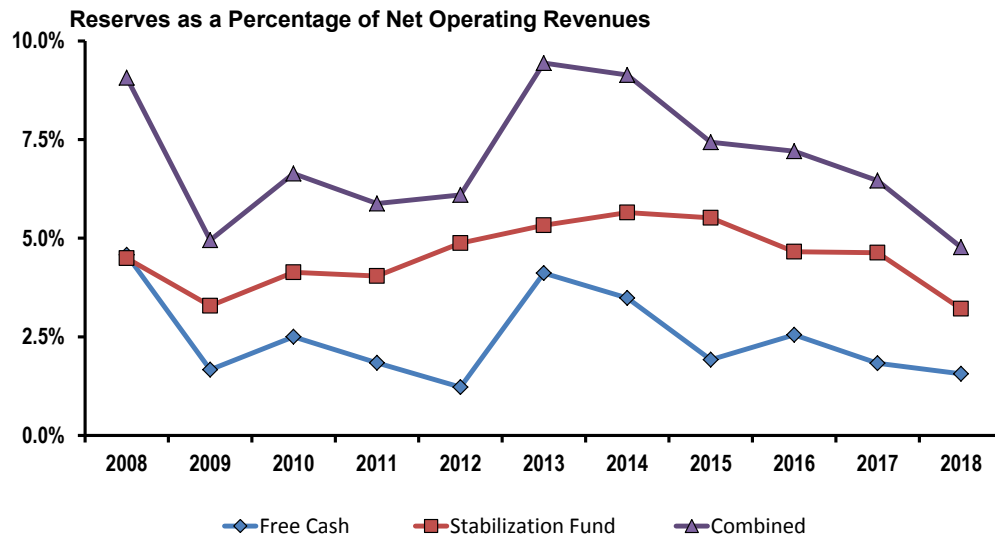
# Indicator 11: Reserves as a Percentage of Operating Revenue

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



Maintaining healthy reserve levels allows a town to finance emergencies and other unforeseen needs, hold money for specific future purposes, or in very limited instances, to serve as revenue sources for the annual budget. Reserve balances and policies can also positively impact the town's credit rating and consequently its long-term cost to fund major projects.

Declining reserves as a percentage of a town's net operating revenue is a warning indicator and may suggest a declining ability to finance town obligations in the face of an emergency. Reserves below 5-7% of revenues may be considered unfavorable. Ideally, town reserve levels should be set by policy.

| Fiscal Year | As a Percentage of Net Operating Revenues |                                     |                   |                        | As a Percentage of Net Operating Revenues |                    |          |
|-------------|---|-------------------------------------|-------------------|------------------------|---|--------------------|----------|
|             | Free Cash                                 | Stabilization Fund Year-End Balance | Combined Reserves | Net Operating Revenues | Free Cash                                 | Stabilization Fund | Combined |
| 2008        | \$ 2,286,384                              | \$ 2,246,089                        | \$ 4,532,473      | \$ 49,980,816          | 4.57%                                     | 4.49%              | 9.07%    |
| 2009        | \$ 898,228                                | \$ 1,768,963                        | \$ 2,667,191      | \$ 53,865,411          | 1.67%                                     | 3.28%              | 4.95%    |
| 2010        | \$ 1,295,250                              | \$ 2,142,993                        | \$ 3,438,243      | \$ 51,800,093          | 2.50%                                     | 4.14%              | 6.64%    |
| 2011        | \$ 984,493                                | \$ 2,165,291                        | \$ 3,149,784      | \$ 53,579,719          | 1.84%                                     | 4.04%              | 5.88%    |
| 2012        | \$ 679,656                                | \$ 2,709,227                        | \$ 3,388,883      | \$ 55,587,236          | 1.22%                                     | 4.87%              | 6.10%    |
| 2013        | \$ 2,283,970                              | \$ 2,954,969                        | \$ 5,238,939      | \$ 55,488,485          | 4.12%                                     | 5.33%              | 9.44%    |
| 2014        | \$ 1,996,749                              | \$ 3,236,963                        | \$ 5,233,712      | \$ 57,283,726          | 3.49%                                     | 5.65%              | 9.14%    |
| 2015        | \$ 1,133,119                              | \$ 3,259,156                        | \$ 4,392,275      | \$ 59,069,253          | 1.92%                                     | 5.52%              | 7.44%    |
| 2016        | \$ 1,569,736                              | \$ 2,864,069                        | \$ 4,433,805      | \$ 61,528,883          | 2.55%                                     | 4.65%              | 7.21%    |
| 2017        | \$ 1,171,659                              | \$ 2,970,848                        | \$ 4,142,507      | \$ 64,124,470          | 1.83%                                     | 4.63%              | 6.46%    |
| 2018        | \$ 1,038,159                              | \$ 2,133,558                        | \$ 3,171,717      | \$ 66,488,021          | 1.56%                                     | 3.21%              | 4.77%    |

Data Source: DLS Municipal Finance Trend Dashboard

In all cases, Ludlow has experienced a loss in free cash and the stabilization fund, its main reserves, since FY2008. In addition, the FY2018 combined reserves as a percent of budget is below 5%, at 4.77%. Due to the negative trend and reserves dipping below 5%, this indicator is unfavorable.

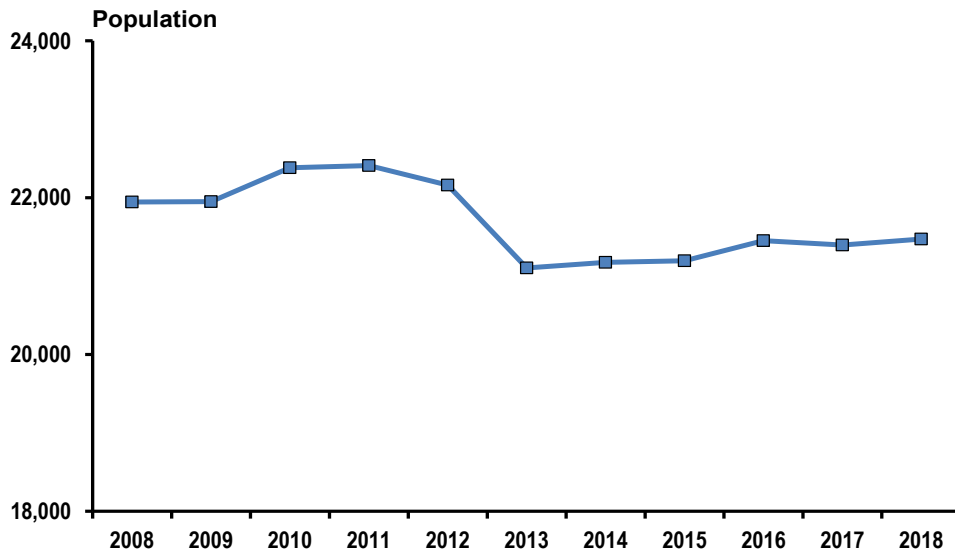
## Indicator 12: Population and School Enrollment

Town of Ludlow / FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



A trend of population growth over time indicates an increased burden on government services and should be monitored to better plan for future expenses. As the number of residents increases, there is a greater need for police and fire protection, trash collection, repairing wear and tear on local roads and infrastructure, and an increased demand for other government services. Additionally, a population increase may also lead to more school-age children and a corresponding uptick in school enrollment, which greatly impacts education costs.

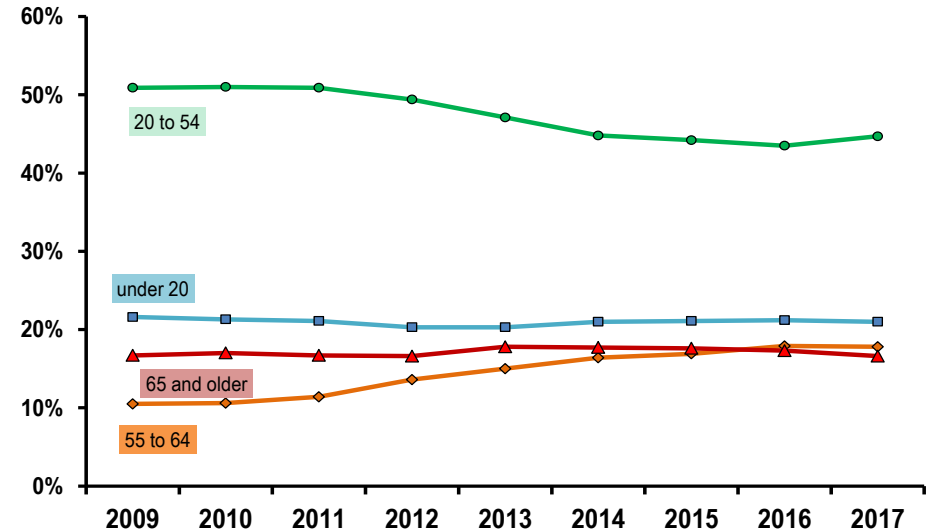
| Year | Population |
|------|------------|
| 2008 | 21,946     |
| 2009 | 21,951     |
| 2010 | 22,382     |
| 2011 | 22,410     |
| 2012 | 22,161     |
| 2013 | 21,103     |
| 2014 | 21,176     |
| 2015 | 21,195     |
| 2016 | 21,451     |
| 2017 | 21,395     |
| 2018 | 21,472     |

[Data Source: DLS Municipal Databank, Socioeconomic Data](#)

Ludlow's population has remained relatively steady since 2008. Since then, the 20 to 54 age cohort has decreased from 50.9% of the population to 44.7%, while

the 55 to 64 cohort has increased from 10.5% to 17.8%. While the 20 to 54 age cohort still represents a significant plurality, these trends indicate an aging population, potentially increasing demand for senior services in the near future as the 55 to 64 year olds age into the 65

**Age Cohorts as a Percentage of Total Population**



[Data Source: US Census Community Survey, American FactFinder](#)

and older category. The under 20 cohort has remained steady (with a slight decrease) as a percentage of the population, in line with the trend of decreasing school enrollment (see next page).



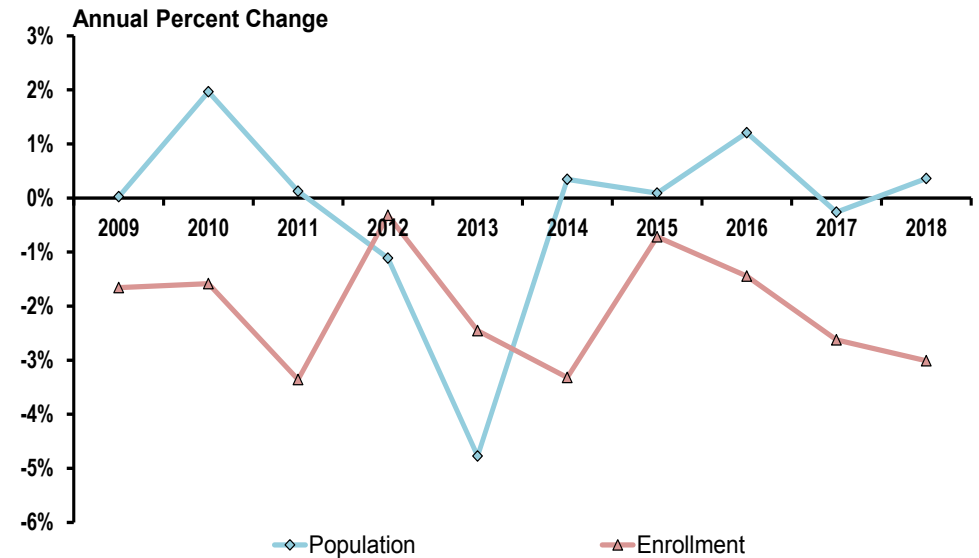
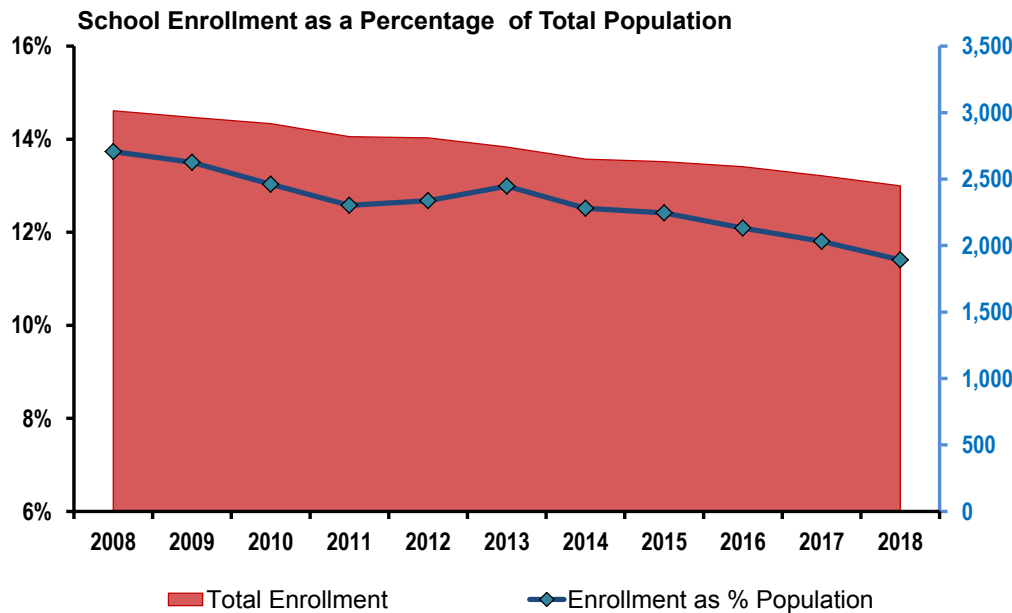
## Indicator 12: Population and School Enrollment

Town of Ludlow | FY2008—FY2018 Financial Indicator Analysis

Favorable

Marginal

Unfavorable



Total school enrollment and enrollment as a percentage of the population has decreased since 2008, indicating decreasing demand for the public school system over time.

| Year | Population | School Enrollment | Enrollment as % Population | Annual % Change |                   |
|------|------------|-------------------|----------------------------|-----------------|-------------------|
|      |            |                   |                            | Population      | School Enrollment |
| 2008 | 21,946     | 3,014             | 13.73%                     |                 |                   |
| 2009 | 21,951     | 2,964             | 13.50%                     | 0.02%           | -1.66%            |
| 2010 | 22,382     | 2,917             | 13.03%                     | 1.96%           | -1.59%            |
| 2011 | 22,410     | 2,819             | 12.58%                     | 0.13%           | -3.36%            |
| 2012 | 22,161     | 2,810             | 12.68%                     | -1.11%          | -0.32%            |
| 2013 | 21,103     | 2,741             | 12.99%                     | -4.77%          | -2.46%            |
| 2014 | 21,176     | 2,650             | 12.51%                     | 0.35%           | -3.32%            |
| 2015 | 21,195     | 2,631             | 12.41%                     | 0.09%           | -0.72%            |
| 2016 | 21,451     | 2,593             | 12.09%                     | 1.21%           | -1.44%            |
| 2017 | 21,395     | 2,525             | 11.80%                     | -0.26%          | -2.62%            |
| 2018 | 21,472     | 2,449             | 11.41%                     | 0.36%           | -3.01%            |

Data Source: DLS Municipal Databank, Socioeconomic Data