Key objectives for this session.
1. Understand the importance and difficulties of revenue estimation.
2. Learn six best practices for forecasting and revenue estimation.
3. Learn different forecasting methods and the tradeoffs between them.

To balance the budget, we need to know both expenditures and revenues. We need to project revenues to understand the level of funding available for services and capital spending. Preparing revenue projections also helps us understand:
- trends,
- the sensitivity of different assumptions, and
- what effect those factors a local government can control – tax rates and fees – can have.

The responsibility for preparing the balanced budget rests with the budget officer.

Uncertainty that cannot be controlled. Expenses are relatively within control. Revenues often depend on outside forces over which there is little control. There is also complexity due to many different revenue sources and different estimation techniques. Consequences can be large if you get it wrong.
The ultimate objective is for our revenue forecasts to be consistent and as accurate as possible.

- Ready – Knowing our revenue sources and how they work.
- Aim – Knowing what estimation techniques and methods to use.
- Fire – Learning what to do with estimates over time.

First step in revenue estimation, know your revenues. Most local governments have many sources of revenues. These revenues are generated in different ways and there is a need to know them and how they work if we hope to hit the target. We have a responsibility to be reasonable and accurate.

By statute, local governments must make reasonable estimates of expected revenues. The experience of revenue realizations in past years is a good benchmark for “reasonable”. In practice most local government jurisdictions in North Carolina tend to be conservative for a variety of reasons.
There are consequences on both sides of missing revenue estimates.

- **Overestimate**
  - Insufficient Revenues
  - Mid-year cutbacks
  - Tapping into fund balance
- **Underestimate**
  - Excess Revenues
  - Needless Tax Hikes
  - Cuts or Limits on Services at budget time

There are important consequences for missing the mark in both directions.
- The optimist will overestimate the actual revenues.
- The conservative will underestimate.
- Both positions have implications.

To improve our forecasting, we should have a model for the factors driving revenue.

Developing a basic understanding of what drives revenues for local governments is an important part of knowing your revenues. What influences the amounts of revenues that are collected?

Every revenue source has a basic set of factors which determines its amount.

Not a complete model but population and economy key drivers. Population is not only total numbers but may also include other demographics such as persons per household. Economy is somewhat cyclical. Key variables are the tax base or fee base with tax rates and collection rates being important policy and administrative variables.

The tax base for many revenue sources varies with the economic cycle.

- "Elasticity" is the degree to which the Tax Base Varies with changes in the Economy

Revenues tend to vary with fluctuations in the economy. Some will have greater swings and others will be less sensitive.
We need to first know where our revenue comes from.

We need to know how revenue is generated. Many revenue sources in most local governments (40-60). Focus most attention on largest sources. What laws and rules, state and local, apply? What amounts of revenue are generated? What factors drive the revenue source?

A comprehensive document containing critical information about each of the revenue sources in a jurisdiction. Revenue Manual good for elected officials, new managers, new finance/budget officers, everyone. Possible items that could go into a revenue manual.

- Description of the Revenue Source
- Authority (Statutes, Ordinances)
- Use and Restrictions
- Rates (Current and Changes)
- Possible Exemptions
- Special Events in History
- Drivers of the Revenue
- Forecasting Method and Assumptions
- Multiple Years of Data
- Graph

Should be Comprehensive
May need to implement over time, focus first on biggest revenue sources
Start off with a simple spreadsheet matrix

Revenue manual examples at end of slides.
Revenue Forecasting in Local Government

Dale Roenigk

Slide 16

**AIM**

We need a set of tools or methods for making revenue estimations.

Second step in revenue estimation is using methods or techniques. We should use appropriate techniques to help us be as accurate as possible. We have in our spreadsheets, tools to help us do this better.

Slide 17

**Estimation methods can be classified as qualitative or quantitative**

![Qualitative and Quantitative Methods Diagram]

Goal of estimation methods should be:
- Accuracy
- Manageable effort with time and resources
- Transparent, understood by others

Qualitative and Quantitative Methods:
- Blend of both
- Quantitative and Qualitative are not necessarily different domains
- Can be combined usefully together
- Most employ some of both

Surveys show expert judgment is most common method, particularly for smaller jurisdictions.

**Examples of Expert Judgment**

Local Jurisdiction Service Experts
- *Parks and Recreation Department* estimation of users
- *Utility Director estimate of revenues*

Finance/Budget Officer Expertise

Outside Financial Experts
- *State Economists-Office of Fiscal Research*
- *Other Economists, Finance Experts, Local Business Experts*

Slide 18

**Qualitative methods relay on some expert judgment to make revenue estimates**

![Qualitative Methods Example]

Will more sales tax revenue bring me inner peace?
Expert Judgment has pluses and minuses.

**Pluses**
Expert Judgment based on experience can be good. Particularly critical when lacking data or when circumstances change significantly.
Cost is low and this method requires few resources.

**Minuses**
Danger of relying on expert judgment include biases, selective perceptions, wishful thinking, anchoring, political pressure, inconsistency, inability to replicate by others.
Generally easy to present but we may not understand the basis for the judgment.
Research suggests expert judgment may be somewhat less accurate than other estimation methods in most cases.

Quantitative Methods rely on the numbers to produce estimates.
Quantitative methods depend on using numbers to estimate revenues. Ideally should have several years of data to do well. Multiple techniques of varying complexity and resource requirements.

There are two types of quantitative models: trend and causal models.

- **Trend Models**
  - Incremental
  - Moving Average
  - Time Series-Simple Regression
- **Causal Models**

Trend Models are fundamentally historical, extending the trend.
Causal models, may be based on historical patterns, but do not need to be. Require factors to be identified.
We need to decide are we projecting the base or the collected revenue.

Estimation can be done on either the tax base or the collected revenue amounts. However, recognize that if tax rates and collection efficiency has changed over time, this will affect the accuracy of estimates based directly on actual collected revenues.

Incremental Models say here was the actual, lets adjust it by some increment. The increment can be $ or %, varying levels of change, using varying amounts of history. Simple, easy to understand, and easy to adjust. Can be “tuned” with expert judgment. Most commonly used quantitative models. Only modest data needed, accuracy uncertain during times of significant change.

Use Historical Data to Determine Increment
Increment based on Absolute Dollar Change or Percentage Change.
Increment may be zero (no change) or based on averages, minimum or maximum change, or last change
May use expert judgment to select or adjust increment
Incremental models are simple and easily understood.

Moving average models use averages of prior years which “move” over time.
Uses average of last “n” years. The average “moves” as it goes forward each year.
Expected_t+1 = Average (Actual_t, Actual_t-1, ..., Actual_t-n)

Easy to calculate, only modest data needed. More complex moving averages are possible but calculation effort increases. Moving Averages will lag strongly trending data. For calculations of monthly data, seasonal adjustments may be necessary.
Time series models use regression to project estimates forward

Uses a simple statistical regression to estimate an equation

$$\text{Expected}_t = \text{intercept} + (\text{slope} \times \text{year})$$

- The slope is the estimated increment for a single year
- Regression estimates are usually linear but can take other forms

Examples using data in Excel

Now easy to do with tools in Excel.
High variation or lack of trend may produce imprecise estimates.
Regressions may be “black box” to some and harder to sell.

Causal models are complex statistical methods to estimate revenue

Statistical deterministic models using regression with one or more factors other than time deemed to cause or explain expected levels of revenue.

$$\text{Expected}_t = \text{intercept} + b_1x_1 + b_2x_2 + b_3x_3$$

- Factors may be economic, demographic, or social in nature. Complex models don’t necessarily work better.
- Models require some expertise to develop and lots of data to estimate accurately. Also require future estimates of the causal factors to estimate the future revenues.
- Good causal models can be accurate if strong relationships are found.
- Surveys indicate limited use, particularly in small jurisdictions or those not under fiscal stress.

To make our aim true, we need to decide what method to use and how best to use these methods to make projections.

Selecting which estimation method to use depends on resources available including expertise, stability in revenue sources, and understanding of revenue sources.

Best Practice #2 is to select the appropriate method to use for estimation.

<table>
<thead>
<tr>
<th>Comparing Estimation Methods</th>
<th>Accuracy</th>
<th>Effort</th>
<th>Transparency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judgmental</strong></td>
<td>Low to Moderate</td>
<td>Low</td>
<td>Low to Moderate as it depends on “expert”</td>
</tr>
<tr>
<td><strong>Trend</strong></td>
<td>Moderate to High when stable</td>
<td>Low to Moderate</td>
<td>Moderate to High</td>
</tr>
<tr>
<td><strong>Causal</strong></td>
<td>Best if good model</td>
<td>Moderate to High</td>
<td>Moderate to High Depends on Complexity</td>
</tr>
</tbody>
</table>

Selecting a method depends heavily on the availability of data, one’s resources or skills, and time. Estimation is strongest when using a combination of quantitative methods with qualitative judgments to sharpen. Most tend to blend methods based on conditions.
As part of the projection process, alternative assumptions should be tested to understand the range of possibilities and sensitivity of results to key assumptions. Examples might include what should be the
- growth rate in property values
- growth in health care costs
Assumptions causing wider variation may warrant additional analysis and discussion among decision makers. Consider best and worst case scenarios.

To provide understanding of the future, revenue estimation should be extended for multiple years into the future (3-5). When combined with projection of expenses for the future, examining the balance can indicate future capability to fund services and capital expenditures along with the possible need for tax rate changes to maintain a balanced budget and healthy financial condition.

The third step for revenue estimation is what to do after the budget estimates have been made. The forecaster’s job is not over but needs to consider monitoring accuracy of the forecasts both for current needs and for improving the accuracy of future projections.

The revenue forecast that goes out with the budget is not the end of the process. We need learning feedback loops for the short and long term. Short term (within the next year) we need to monitor and update our forecasts throughout the year. If forecasts are coming in low or high, adjustments should be made to update the budget. Longer term, we also need to learn from our annual forecasts to improve our aim for the future.
Revenue Forecasting in Local Government

Slide 34

In the next fiscal year we need to monitor forecasts to determine if revenue projections are on the mark.

We need to monitor revenue forecasts as the new budget year unfolds. Forecasts are just estimates, they are not guarantees. If we monitor the actuals compared to the forecast, we can determine early if there appear to be errors which would leave more time for adjustments.

Slide 35

Best Practice #5 is to track actual revenues against estimates.

As the budgeted year unfolds, actual revenues received should be tracked against projections. Adjustments to budget can be made if projections prove inaccurate. Need to adjust for seasonality for monthly revenue numbers such as sales tax or when taxes are paid. As the year progresses, our forecast estimate will “funnel” into the actual if we adjust as we go.

Slide 36

We need to assess the accuracy of our forecasts and learn what works.

If we fail to study the accuracy of our forecasts, the likelihood of improvement is very low. Experience does not produce wisdom. We have to make a conscious effort to learn.

Slide 37

Best Practice #6 is to verify accuracy of estimates against actual results

Annual estimates should be compared to actuals to determine accuracy. Over time, knowledge about the precision of estimates for different revenue sources and different methods can be used to increase accuracy. Determine a confidence band for estimates. Inherent conservatism may mean estimates are generally low.
Revenue Forecasting in Local Government

Dale Roenigk

Slide 38

Best Practices

1. Revenue Manual
2. Use appropriate estimation methods
3. Test different assumptions
4. Project multiple years
5. Update estimates over the year for adjustment
6. Verify accuracy of estimates for future projections

Three steps and six best practices. Good forecasting should be based on a considered approach and attention to good practices which should lead to better forecasts over time.

Slide 39

Revenue estimation is science and art

- Uncertainty and variability cannot be eliminated.
- A degree of conservatism is warranted particularly for more volatile revenue sources.
- Adequate reserves can help with the inevitable misses.
- Adopt best practices where possible.

Uncertainty still reigns. There is a need to understand that no forecast will be perfect and planning for adverse circumstances will be required.

Some additional references

PROPERTY TAX - COUNTYWIDE OPERATIONS

REVENUE DESCRIPTION: Ad valorem tax based upon the assessment of the taxable value of property in Lee County.

LEGAL AUTHORIZATION FOR COLLECTION: Resolution 88-9-102

FUND: General Fund
ACCOUNT NUMBER: 001-1920-311100-0000-0000-00

SOURCE: Lee County Property Owners
USE: All General Purposes

FEE SCHEDULE: 4.4751 per $1,000 of taxable value of property for Fiscal Year 1998

METHOD OF PAYMENT: Property owner pays Tax Collector. Tax Collector remits collections to Clerk of Circuit Court for deposit.

FREQUENCY OF COLLECTION: Current year property taxes are received from December through April. A discount of 4% is granted for immediate payment.

EXEMPTIONS: Numerous exemptions exist. Especially note Chapter 196, Florida Statutes.

EXPIRATION: Tax assessed annually by the Board of County Commissioners.

SPECIAL REQUIREMENTS: Two public hearings, with appropriate public notice, pursuant to Florida Statute 200.055.

REVENUE COLLECTOR: Tax Collector/Recorded by Clerk of Circuit Court, Finance Division

FISCAL HISTORY AND REVENUE PROJECTIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>($000)</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>1985</td>
<td>30,272</td>
<td>28.1</td>
</tr>
<tr>
<td>1986</td>
<td>36,771</td>
<td>8.2</td>
</tr>
<tr>
<td>1987</td>
<td>41,940</td>
<td>13.3</td>
</tr>
<tr>
<td>1988</td>
<td>43,009</td>
<td>2.5</td>
</tr>
<tr>
<td>1989</td>
<td>50,881</td>
<td>18.5</td>
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<tr>
<td>1990</td>
<td>67,307</td>
<td>33.3</td>
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<tr>
<td>1991</td>
<td>77,267</td>
<td>13.8</td>
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<tr>
<td>1992</td>
<td>84,231</td>
<td>9.0</td>
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<td>1993</td>
<td>84,746</td>
<td>0.6</td>
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<td>1994</td>
<td>86,813</td>
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<td>1995</td>
<td>96,012</td>
<td>12.9</td>
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<tr>
<td>1996</td>
<td>85,899</td>
<td>-8.3</td>
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<tr>
<td>1997</td>
<td>90,716</td>
<td>5.6</td>
</tr>
<tr>
<td>1998</td>
<td>96,813</td>
<td>6.6</td>
</tr>
<tr>
<td>1999</td>
<td>98,875</td>
<td>3.2</td>
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<tr>
<td>2000</td>
<td>101,841</td>
<td>3.0</td>
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PROPERTY TAX – COUNTYWIDE OPERATIONS

DISCUSSION

Property tax revenue is a function of annual change in assessments, and the setting of millage by County Commissioners. Between FY85 and FY91, annual taxable valuation increased an average of 12%. The 1991-92 economic recession was a factor that led to dramatic changes beginning FY92. Changes from FY88 to FY98 are listed below.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Millage Rate</th>
<th>Adjustment</th>
<th>Change in Taxable Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987-88</td>
<td>3.6410</td>
<td>0.0000</td>
<td>10.6</td>
</tr>
<tr>
<td>1988-89</td>
<td>4.1410</td>
<td>0.3000</td>
<td>5.7</td>
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<td>1989-90</td>
<td>4.6850</td>
<td>0.7440</td>
<td>15.9</td>
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<tr>
<td>1990-91</td>
<td>4.7850</td>
<td>-0.1000</td>
<td>15.3</td>
</tr>
<tr>
<td>1991-92</td>
<td>4.7850</td>
<td>0.0000</td>
<td>9.8</td>
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<td>1992-93</td>
<td>4.6850</td>
<td>-0.1000</td>
<td>2.3</td>
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<tr>
<td>1993-94</td>
<td>4.6850</td>
<td>0.0000</td>
<td>2.9</td>
</tr>
<tr>
<td>1994-95</td>
<td>5.1501</td>
<td>0.4651</td>
<td>2.8</td>
</tr>
<tr>
<td>1995-96</td>
<td>4.5751</td>
<td>-0.5750</td>
<td>3.7</td>
</tr>
<tr>
<td>1996-97</td>
<td>4.4751</td>
<td>-0.1000</td>
<td>3.3</td>
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<tr>
<td>1997-98</td>
<td>4.4751</td>
<td>0.0000</td>
<td>4.1</td>
</tr>
<tr>
<td>1998-99</td>
<td>4.4751</td>
<td>0.0000</td>
<td>4.7</td>
</tr>
</tbody>
</table>

The .5750 reduction from FY95 to FY96 is the result of a .4050 mill elimination of the Solid Waste levy, and a .1700 mill shift from the General Fund to the Unincorporated MSTU, in response to the municipalities' concerns regarding dual taxation.

The figures for 1985-1997 reflect actual collections. The 1995 revenue increase of 12.9% reflects revenue growth caused primarily by the millage increase from 4.6850 to 5.1501. This increase helped to fund, in part, solid waste operations in lieu of special assessments. That levy was removed in FY95 with a resulting decline in revenue.

In FY96, 0.3700 mills was shifted from Countywide to Unincorporated MSTU to reflect a concern expressed by municipalities that certain county facilities (especially regional parks) costs were being borne by city residents, who were already paying for city parks and recreation.

In FY98, the millage rate was reduced by 0.1000 mills reflecting an additional shift from the Countywide to Unincorporated MSTU.

Projections for FY99 are based upon the July 1, 1998 estimate of taxable value from the Property Appraiser using the existing FY98 millage rate. FY00 projections were made after an examination of the historical pattern of housing starts, taxable value of new construction and change in taxable value. The projection rate was 3.0%.

Change in taxable value has been showing a continuous increase in FY95 having reached 4.1% in FY98. The change in taxable value from FY98 to FY99 is projected to be 4.7%. Historically, the growth in taxable value has been somewhat more erratic with declines in 1988, 1991 and 1996 over the previous years. Property taxes are deducted at 95% of projected revenues according to Florida law. Collection rates have been approximately 96% of projected revenues with the exception of the past several years in which the rate has fallen to 95%.
CURRENT REAL ESTATE TAXES

DESCRIPTION

A tax levied on land and buildings within the City of Pittsburgh. The tax is calculated by applying a tax millage rate on the assessed value of the property. The assessed value is set by Allegheny County.

Before the beginning of the year, the county provides the City with a certified valuation for all taxable property. This valuation is used to prepare the tax bills that are the original levy. By the end of the year, the levy is adjusted for appeals, exonerations, discounts and additions to arrive at the adjusted net levy. The adjusted net levy is all of the taxes that are due the city.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Building</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
<td>32.00</td>
</tr>
<tr>
<td>Land</td>
<td>184.50</td>
<td>184.50</td>
<td>184.50</td>
<td>184.50</td>
<td>184.50</td>
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<tr>
<td>Composite</td>
<td>58.57</td>
<td>58.58</td>
<td>58.41</td>
<td>58.43</td>
<td>58.36</td>
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</table>

<table>
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</thead>
<tbody>
<tr>
<td>Building</td>
<td>$1,706,412</td>
<td>$1,690,752</td>
<td>$1,684,673</td>
<td>$1,697,431</td>
<td>$1,724,664</td>
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<tr>
<td>Land</td>
<td>360,755</td>
<td>356,831</td>
<td>352,935</td>
<td>355,862</td>
<td>360,349</td>
</tr>
<tr>
<td>Total ($000s)</td>
<td>2,067,167</td>
<td>2,047,583</td>
<td>2,037,609</td>
<td>2,053,293</td>
<td>2,085,013</td>
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</table>

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>$54,605</td>
<td>$54,104</td>
<td>$53,910</td>
<td>$54,318</td>
<td>$55,189</td>
</tr>
<tr>
<td>Land</td>
<td>66,559</td>
<td>65,835</td>
<td>65,117</td>
<td>65,657</td>
<td>66,484</td>
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<tr>
<td>Original Levy*</td>
<td>121,164</td>
<td>119,939</td>
<td>119,026</td>
<td>119,974</td>
<td>121,674</td>
</tr>
<tr>
<td>Adjusted Net Levy</td>
<td>119,694</td>
<td>117,959</td>
<td>115,898</td>
<td>111,066</td>
<td>105,822</td>
</tr>
<tr>
<td>Actual Receipts</td>
<td>110,463</td>
<td>110,166</td>
<td>110,276</td>
<td>110,405</td>
<td>109,986</td>
</tr>
<tr>
<td>Budget</td>
<td>111,500</td>
<td>112,177</td>
<td>105,720</td>
<td>109,180</td>
<td>110,715</td>
</tr>
<tr>
<td>Actual/Original Ratio</td>
<td>0.9117</td>
<td>0.9185</td>
<td>0.9265</td>
<td>0.9202</td>
<td>0.9039</td>
</tr>
</tbody>
</table>

Original levy equals assessed valuation multiplied by millage rate.

FORECAST ASSUMPTIONS

Future tax receipts will depend on both assessment trends and collection rates.

The assessment freeze and the subsequent court decisions have had a dramatic effect on the assessed value of taxable property within the city. The court has ordered the Allegheny County Board of Assessment to increase assessments by two percent for 1999 and 2000. In 1999, certified assessments increased by only 0.72 percent over 1998 certified assessments because of appeals. It is assumed that the certified assessments will increase by a similar amount for 2000. The certified assessments will be available from the County before the beginning of the year. It is assumed that assessments will increase by 2.0 percent for 2001 with the new reassessment and by an additional 1.0 percent in subsequent years.

Historically, the ratio between the original levy and the actual collections has been between 90 and 94 percent. The 2000 year-end estimate and the projections for subsequent years are based on the average ratio for the years 1991 through 1998. The 1999 projections are based on collections through October.
The 1999 estimate is based on actual collections through October.

Formula:
Estimated Revenue = \((A \times B + C \times D) \times E\)

Where:
A = Assessed value of improvements
B = Tax rate on improvements
C = Assessment value of land
D = Tax rate on land
E = Actual receipts/original levy ratio

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessed Values</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improvements (A)</td>
<td>$1,739,669</td>
<td>$1,755,585</td>
<td>$1,790,696</td>
<td>$1,808,603</td>
<td>$1,826,689</td>
</tr>
<tr>
<td>Land (C)</td>
<td>360,384</td>
<td>360,563</td>
<td>367,774</td>
<td>371,452</td>
<td>375,166</td>
</tr>
<tr>
<td>Total Assessed Value</td>
<td>$2,100,053</td>
<td>$2,116,147</td>
<td>$2,158,470</td>
<td>$2,180,055</td>
<td>$2,201,856</td>
</tr>
<tr>
<td>Percent Change in Value</td>
<td>0.72%</td>
<td>0.77%</td>
<td>2.00%</td>
<td>1.00%</td>
<td>1.00%</td>
</tr>
<tr>
<td>Improvement Tax Rate (B)</td>
<td>32.0</td>
<td>32.0</td>
<td>32.0</td>
<td>32.0</td>
<td>32.0</td>
</tr>
<tr>
<td>Land Tax Rate (D)</td>
<td>184.5</td>
<td>184.5</td>
<td>184.5</td>
<td>184.5</td>
<td>184.5</td>
</tr>
<tr>
<td>Actual/Original Ratio (E)</td>
<td>0.91</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
<td>0.92</td>
</tr>
<tr>
<td>PEL Estimated Revenue ($000)</td>
<td>$111,140</td>
<td>$111,419</td>
<td>$114,668</td>
<td>$115,815</td>
<td>$116,973</td>
</tr>
</tbody>
</table>
BOISE CITY
FY2000 and FY2001 Two-Year Budget

Sales Tax

Sales tax revenue is the City’s second most significant revenue source for the General Fund received from the State.

Statute/Authorization: Idaho Code Title 63, Chapter 36, allows the State of Idaho to collect 5 percent sales tax primarily on the sale of goods. A portion of the State’s collections is shared with counties, school districts, cities and towns. The State program for distribution is comprised of two parts; each based on different formulas.

<table>
<thead>
<tr>
<th>Sales Tax Revenue</th>
<th>FY97 Actual</th>
<th>FY98 Actual</th>
<th>FY99 Budget</th>
<th>FY99 Projected</th>
<th>FY00 Approved</th>
<th>FY00 Projected</th>
<th>FY01 Projected</th>
<th>FY02 Projected</th>
<th>FY03 Projected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Sales Tax</td>
<td>$624,531</td>
<td>$665,162</td>
<td>$692,365</td>
<td>$715,950</td>
<td>$721,300</td>
<td>$750,152</td>
<td>$780,158</td>
<td>$811,364</td>
<td></td>
</tr>
<tr>
<td>Percent Increase</td>
<td>2.6%</td>
<td>4.0%</td>
<td>5.7%</td>
<td>9.3%</td>
<td>0.7%</td>
<td>4.0%</td>
<td>4.0%</td>
<td>4.0%</td>
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</tr>
<tr>
<td>Business Inventory</td>
<td></td>
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<td></td>
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<tr>
<td>Base</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td>$818</td>
<td></td>
</tr>
<tr>
<td>Excess</td>
<td>$1,484</td>
<td>$1,562</td>
<td>$1,639</td>
<td>$1,639</td>
<td>$1,721</td>
<td>$1,806</td>
<td>$1,896</td>
<td>$1,989</td>
<td></td>
</tr>
<tr>
<td>Total Inventory Repl.</td>
<td>$2,302</td>
<td>$2,380</td>
<td>$2,457</td>
<td>$2,457</td>
<td>$2,539</td>
<td>$2,624</td>
<td>$2,713</td>
<td>$2,807</td>
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</tr>
<tr>
<td>Population - % age</td>
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</tr>
</tbody>
</table>

amount, which is the difference between the base amount and 6 percent of the total sales tax revenue. The funds are distributed quarterly.

2) Revenue Sharing. In 1985, the State Legislature authorized revenue sharing of 7.75% of total sales tax proceeds to the cities and counties. One-half of the shared revenue is distributed to cities. Fifty percent (50%) of the cities portion is allocated based on the percentage of the city’s population compared to total population of all cities. Fifty percent (50%) is based on the percentage of the city’s preceding year taxable market value compared to the taxable market value of all cities. Payments are made quarterly.
### Projected Revenues

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Actual</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Estimated Value Per One Cent Levy</strong></td>
<td>109,223</td>
<td>109,223</td>
<td>135,324</td>
<td>156,532</td>
<td>149,704</td>
<td>154,195</td>
<td>158,820</td>
<td>163,595</td>
</tr>
<tr>
<td><strong>Required Rate Per $100 Valuation</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>General Fund</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad Valorem Taxes</td>
<td>7,791,351</td>
<td>8,227,621</td>
<td>6,580,974</td>
<td>7,945,905</td>
<td>11,985,909</td>
<td>11,565,883</td>
<td>12,645,162</td>
<td>13,185,102</td>
</tr>
<tr>
<td>Other Taxes/Licenses</td>
<td>416,338</td>
<td>435,849</td>
<td>435,520</td>
<td>440,730</td>
<td>458,152</td>
<td>467,346</td>
<td>476,693</td>
<td>486,256</td>
</tr>
<tr>
<td>Unrestricted</td>
<td>531,121</td>
<td>549,086</td>
<td>563,314</td>
<td>572,653</td>
<td>593,129</td>
<td>610,923</td>
<td>629,259</td>
<td>648,128</td>
</tr>
<tr>
<td>Restricted</td>
<td>644,165</td>
<td>552,907</td>
<td>603,402</td>
<td>611,768</td>
<td>585,424</td>
<td>600,099</td>
<td>615,061</td>
<td>630,437</td>
</tr>
<tr>
<td>Fees and Permits</td>
<td>981,133</td>
<td>917,918</td>
<td>874,485</td>
<td>932,828</td>
<td>961,485</td>
<td>970,515</td>
<td>989,925</td>
<td>1,009,723</td>
</tr>
<tr>
<td>Sales and Services</td>
<td>179,150</td>
<td>236,134</td>
<td>227,009</td>
<td>227,995</td>
<td>291,729</td>
<td>365,834</td>
<td>331,128</td>
<td>337,181</td>
</tr>
<tr>
<td>Interest Earnings</td>
<td>30,310</td>
<td>86,324</td>
<td>37,569</td>
<td>72,669</td>
<td>75,000</td>
<td>75,000</td>
<td>75,000</td>
<td>75,000</td>
</tr>
<tr>
<td>Other Revenues</td>
<td>74,800</td>
<td>97,526</td>
<td>40,207</td>
<td>40,707</td>
<td>41,207</td>
<td>41,707</td>
<td>41,707</td>
<td>41,707</td>
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<tr>
<td><strong>Lease Purchase</strong></td>
<td>463,192</td>
<td>450,280</td>
<td>1,345,708</td>
<td>511,159</td>
<td>1,520,000</td>
<td>791,978</td>
<td>410,495</td>
<td>447,629</td>
</tr>
<tr>
<td><strong>Other Transfers</strong></td>
<td>232,095</td>
<td>207,849</td>
<td>173,827</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Fund Bal Appro**</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fund Bal Appro**</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,174,081</td>
<td>5,069,274</td>
<td>12,085,700</td>
<td>5,262,712</td>
<td>14,476,405</td>
<td>8,231,848</td>
<td>6,579,253</td>
<td>7,251,748</td>
</tr>
<tr>
<td><strong>Projected Undesignated</strong></td>
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<tr>
<td><strong>Projecting Fundspreads</strong></td>
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</tr>
</tbody>
</table>

### Notes
- **Total:** Sum of all projected revenues.
- **Projected Undesignated Fund Balance:** Includes unencumbered funds.

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**Projected Undesignated Fund Balance:**
- 3,593,765
- 4,607,631
- 3,473,701
- 3,788,636
- 4,015,226
- 4,306,679
- 4,622,999
- 5,271,994

**Outstanding Debt:**
- **2003-2004:** $1,357,900
- **2004-05:** $1,357,900
- **2005-06:** $1,357,900
- **2006-07:** $1,357,900
- **2007-08:** $1,357,900
- **2008-09:** $1,357,900
- **2009-10:** $1,357,900
- **2010-11:** $1,357,900

**Debt Service:**
- **2003-2004:** $471
- **2004-05:** $464
- **2005-06:** $464
- **2006-07:** $451
- **2007-08:** $491
- **2008-09:** $593
- **2009-10:** $593
- **2010-11:** $593

**Projected General Revenue:**
- **2003-2004:** $1,357,900
- **2004-05:** $1,357,900
- **2005-06:** $1,357,900
- **2006-07:** $1,357,900
- **2007-08:** $1,357,900
- **2008-09:** $1,357,900
- **2009-10:** $1,357,900
- **2010-11:** $1,357,900

---

**Assessed Valuation:**
- **2003-2004:** $1,357,900
- **2004-05:** $1,357,900
- **2005-06:** $1,357,900
- **2006-07:** $1,357,900
- **2007-08:** $1,357,900
- **2008-09:** $1,357,900
- **2009-10:** $1,357,900
- **2010-11:** $1,357,900
### Major Assumptions Used in Five-year Forecasting Plan

<table>
<thead>
<tr>
<th>EXPENDITURES</th>
<th>FY06-07</th>
<th>FY07-08</th>
<th>FY08-09</th>
<th>FY09-10 &amp; FY10-11</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salary &amp; Wages:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fulltime, Overtime, Part-time, &amp; Temporary Salaries:</td>
<td>5% per year</td>
<td></td>
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<tr>
<td><strong>Fringe Benefits:</strong></td>
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</tr>
<tr>
<td>Fica (7.65%) Retirement (4.78% for police officers; 4.88% for all others), Supplemental Retirement (5% - Police Officers; 3% - all other employees)</td>
<td>17.43% of salaries for LEO; 15.53% non-LEO</td>
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</tr>
<tr>
<td>Health Insurance</td>
<td>15% per year</td>
<td></td>
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<tr>
<td>Dependent Health/Retiree Insurance Subsidies</td>
<td>15% per year</td>
<td></td>
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</tr>
<tr>
<td>Service Level Benefits</td>
<td>2.5% per year</td>
<td></td>
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</tr>
<tr>
<td>LEO Early Separation Allowance</td>
<td>5.0% per year</td>
<td></td>
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</tr>
<tr>
<td><strong>Operating Costs:</strong></td>
<td></td>
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</tr>
<tr>
<td>General Operating Costs</td>
<td>3% per year</td>
<td></td>
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</tr>
<tr>
<td>Computers &amp; Peripherals</td>
<td>PCs – GOAL: 4 yr replacement cycle; servers – 3 yr replacement cycle</td>
<td></td>
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</tr>
<tr>
<td>Affordable Housing</td>
<td>3% per year</td>
<td></td>
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</tr>
<tr>
<td>Governance Support</td>
<td>3% per year</td>
<td></td>
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</tr>
<tr>
<td>Landfill Fees</td>
<td>$1 increase in FY06-07; $2 increase per year following</td>
<td></td>
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</tr>
<tr>
<td>Transportation Costs</td>
<td>10% per year following FY06-07</td>
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<tr>
<td>Human Services</td>
<td>5% per year</td>
<td></td>
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<tr>
<td>Transfers To Other Funds</td>
<td>OWASA $20K Reimburse Revolving Loan Fund for Gen</td>
<td>NA</td>
<td>NA</td>
<td></td>
</tr>
</tbody>
</table>

15-6