

Puget Sound Finance Officers Association Local Government Financial Forecasting



About FCS Group



- **Utility rate and fee consulting**
- **Utility management consulting**
- **Financial planning and analysis**
- **Economic services**

The Crux of Our Discussion Today...

- **We believe this statement drives to the heart of financial forecasting.**

Financial Forecasting: Why it is still about being roughly right than precisely wrong

by Ujval Nanavati, ET Online • Last Updated: Jun 26, 2019, 12:12 PM IST



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The Value of Financial Forecasting

“The goal of forecasting is not to predict the future but to tell you what you need to know to take meaningful action in the present.”

-Futurist Paul Saffo



Key Steps for Local Government Financial Forecasting

1

Defining Assumptions

2

Gather Information

3

Exploratory Analysis

4

Selecting a Methodology

5

Putting the Forecast to Use



Defining Assumptions

- **Selecting a time horizon**
 - » The further out the greater the level of uncertainty
 - » Five-year forecast is a common period for budgeting
- **Aligned with internal policies and/or practices**
 - » Conservative forecast: under-estimate revenues, plan for contingencies in expenditures
 - » Objective forecast: Primary goal is precision – greater risk of unplanned shortfalls and surpluses.
- **Responsive to changes in law and agency policies**

Gather Information

- **Separate revenues and expenditure data into meaningful categories**
- **Different elements of the forecast will respond to different factors**
 - » Population and housing
 - » Cost inflation indices
 - » Consumer spending
 - » Property values and new construction
 - » Financial projections from partner agencies
 - » Contract reimbursements and charges





Potential Data Sources (Revenue)



Property Tax Revenues

Property tax levy rate

Historical/anticipated new construction within jurisdiction



Sales Tax Revenue

Historical taxable retail sales by industry code by year and by month

Agency and/or regional quarterly economic forecasts (e.g., King County)



Utility Tax Revenues

Planned rate adjustments

Historical and anticipated residential and commercial growth rates



Development Fee Revenues

Building valuation data (BVD) from International Code Council

Historical and anticipated development projects



Other

Planned or anticipated one-time resources (e.g., grants)

Indirect cost recovery plans

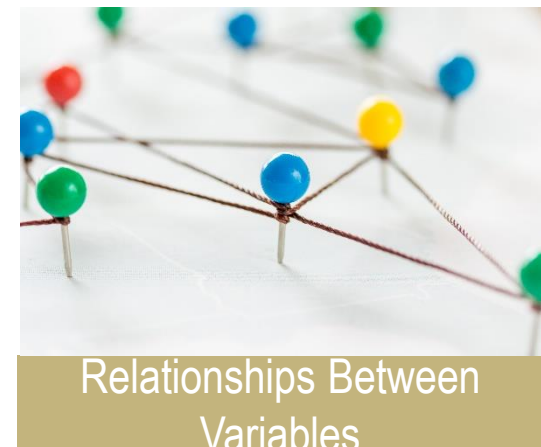


Potential Data Sources (Expenditures)

- **Historical Annual Expenditure Data at Line-Item Detail**
- **Department and Division Staff**
- **General Cost Inflation Indices**
 - » US Bureau of Labor Statistics (historical)
 - » Engineering News-Record Construction Cost Index (historical)
 - » Survey of Professional Forecasters (one to two-year outlook)
 - » US Energy Administration (one to two-year outlook)
- **Collective Bargaining Agreements**
- **Interagency Agreements**
- **Datasets used for revenue forecasting (e.g., population, housing)**

Exploratory Analysis

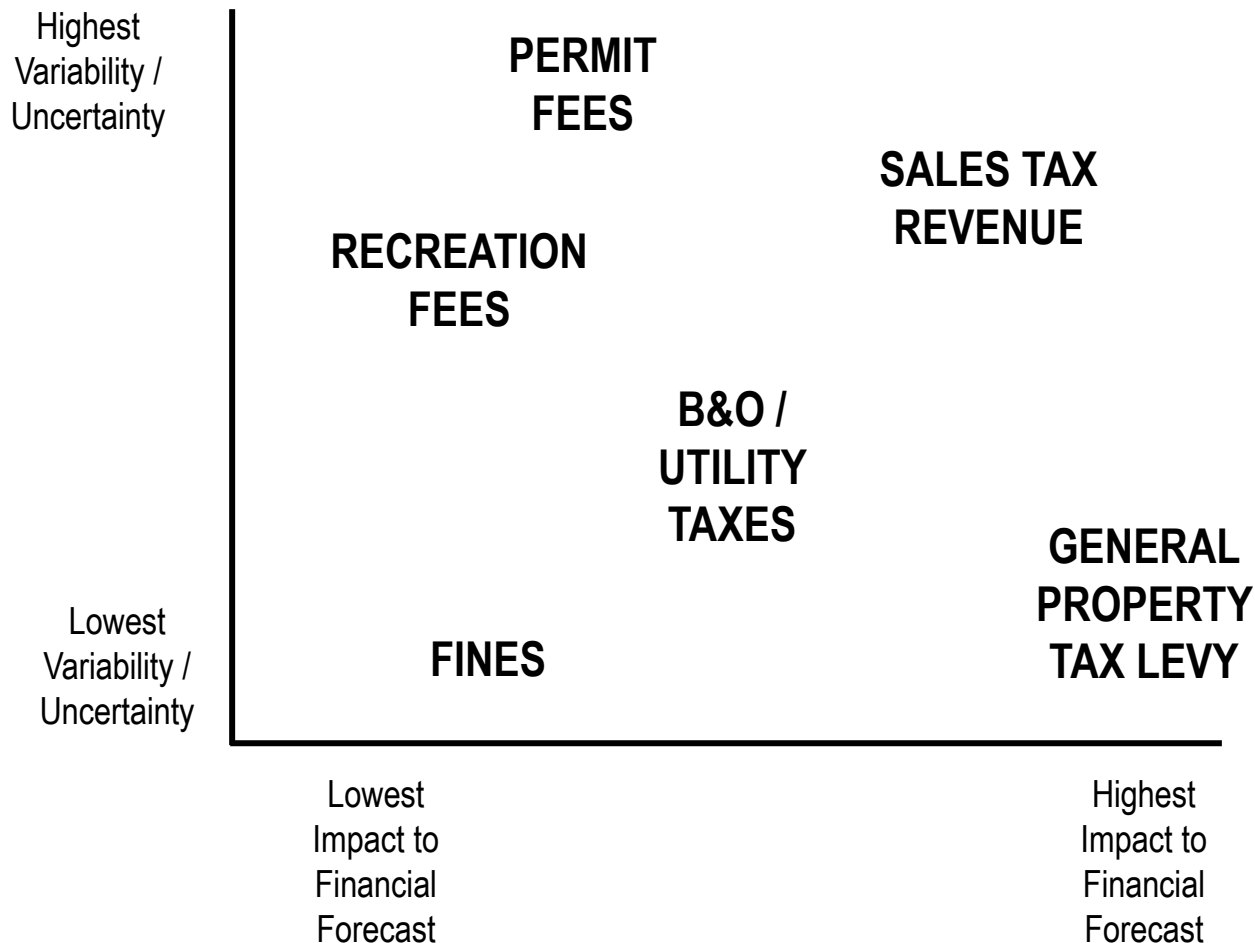
- Preliminary analysis to identify broad trends





Exploratory Analyses (continued)

- **Prioritize trend analyses to focus on revenue and expenditure categories that materially affect the financial forecast**





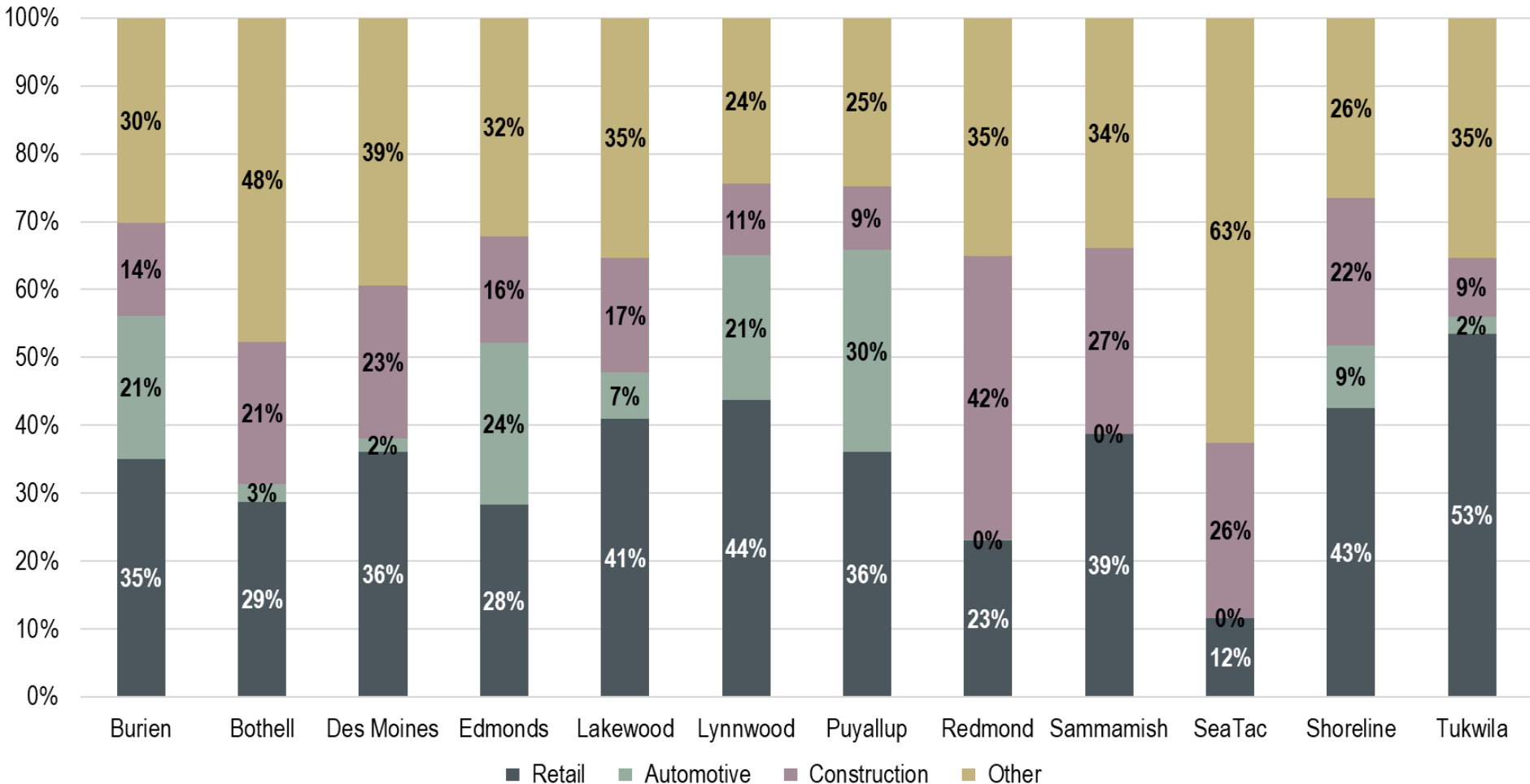
Forecasting Methods

- **Extrapolation:** Relies on historical trends to forecast future performance.
- **Regression or Econometrics:** Relies on measured relationships between demographic, economic, and other explanatory variables with financial performance. Forecasts of these variables are used to predict future financial performance.
- **Hybrid Forecast (recommended):** Relies on extrapolation, regression, and other data-driven methods along with forecasters' experience and knowledge.



Case Study: Taxable Retail Sales

2021 Taxable Sales %

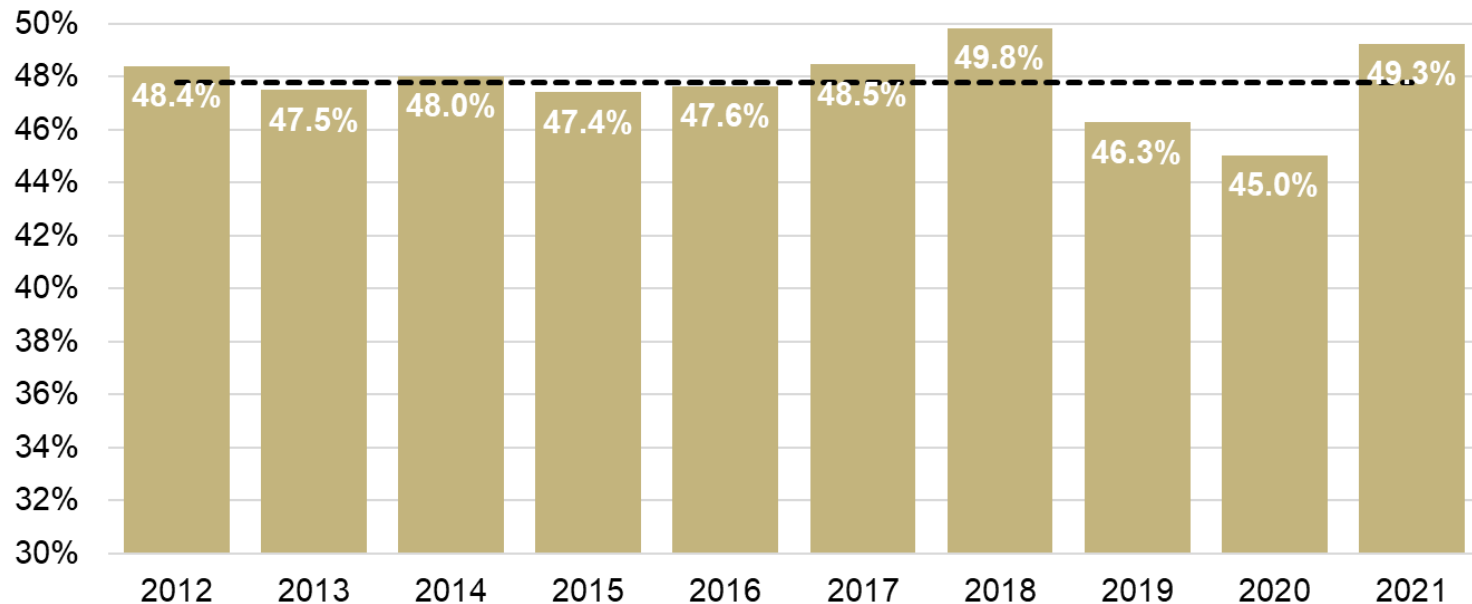




Sales Tax Forecasting: Case Study

- From 2012 to 2021, sales tax distributions through June have generated between 45.0% to 49.8% of total sales tax revenue for the year.
 - » Average distribution is 47.8% with a standard deviation of 1.4%

Percent of Annual Sales Tax Distributions through June





Sales Tax Forecasting: Case Study

- **Establish confidence intervals for monthly sales distributions as you move through the budget year to provide low, expected, and high estimates for revenue based on long-term historical data and current year performance.**

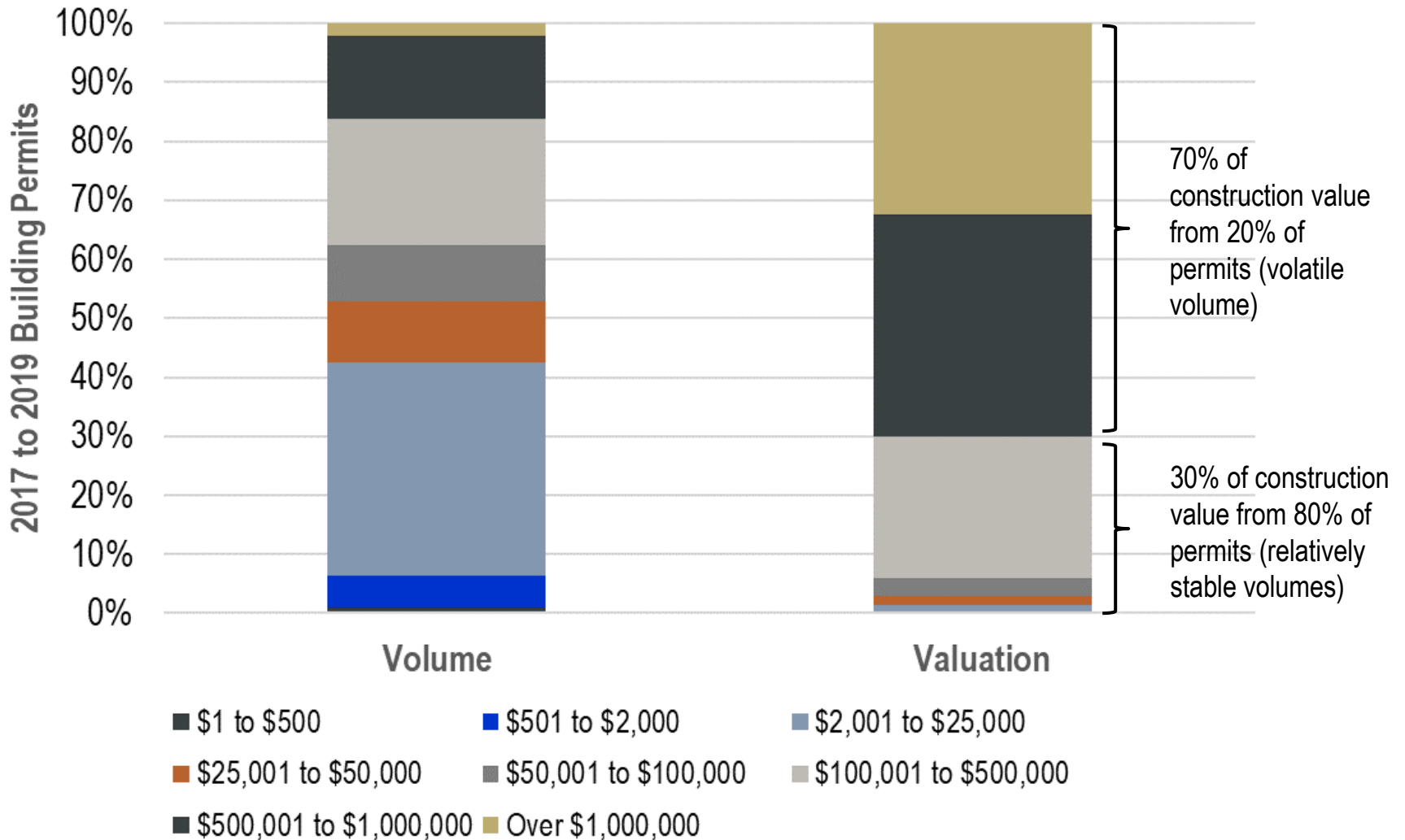
Cumulative Sales Tax Distributions by Quarter

| | 2022 Actual | Low | Expected | High |
|------------------|--------------------|------------|-----------------|-------------|
| Q1 | \$2.26M | \$2.29M | \$2.32M | \$2.34M |
| Q2 (through May) | \$3.95M | \$3.71M | \$3.79M | \$3.86M |
| Q3 | | \$6.05M | \$6.18M | \$6.31M |
| Q4 | | \$9.18M | \$9.48M | \$9.80M |

Low and high estimates based on 95 percent confidence interval from 2012-2021 distributions



Valuation Based Building Permit Fees: Case Study

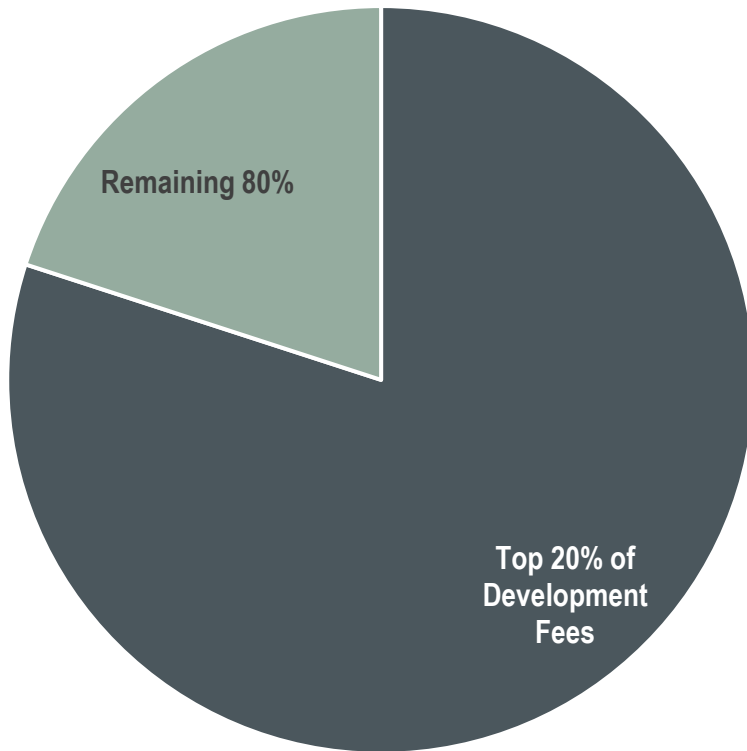




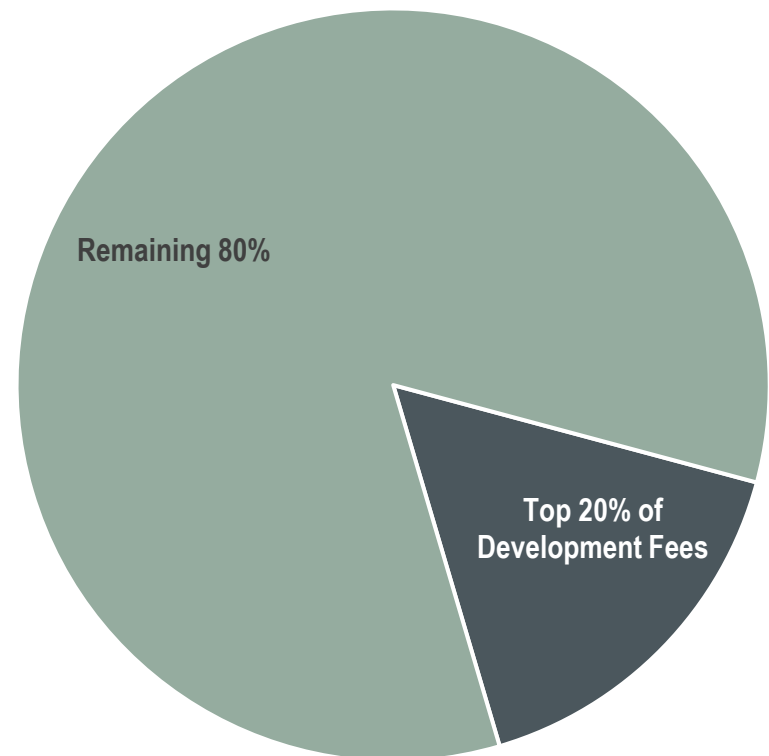
Development Permit Fees: Case Study

- **The Pareto Principle Applies**

Revenue
Sum=\$6.9M



Number of Fees
N=461



Focus on the subset of fee activity that matter most



Revenue Forecasting and Risk Management





Putting the Forecast to Use

- **Document and communicate the forecast process**

Scope and purpose

Basis for financial forecast (prior actuals, base budget, etc)

General assumptions for revenue and cost changes

Major factors and influences

High level summary of forecast

Annual cash flow

Financial reserve sufficiency

Areas of uncertainty

Decision points and options





Putting the Forecast to Use

- **Build clear, simple, and reasoned conclusions from the forecast**
 - » First, develop a broad narrative based on the most likely outcomes
 - » Second, communicate decision points and options
 - » Third, identify forecast limitations, risks, and contingencies
- **Develop communication and decision strategies in response to forecast**
 - » Establish timing of next steps in forecast process
 - » Link financial forecast to agency planning and budget process
 - » Internally evaluate financial forecasting methods, process, and outcomes



So, Back to Where We Started...

- **Forecasting is both an art and a science**
- **It is about assessing risks and mitigating those risks for the organization**

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- **To be roughly right, forecasts must be grounded in the details as the details will help you assess risk, determine materiality, and develop a reasonable forecast**

Thank you!
Questions?

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