

WATER FOR LIFE

Safe, dependable, and affordable water now and into the future



Board of Water Supply
City & County of Honolulu

Stakeholder Advisory Group

**Board of Water Supply
City & County of Honolulu**

Tuesday, January 10, 2017

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Board of Water Supply
City and County of Honolulu

Dave Ebersold
Facilitator

WELCOME

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Public Comments on Agenda Items



Meeting Objectives

- ◆ Receive updates regarding the BWS
- ◆ Set framework for and discuss financial planning policies
- ◆ Receive your input on
 - Types of financial policies
 - Desired financial strength
 - Risk management
- ◆ Identify “typical” customer types for rate impact evaluation



Action

Review and accept notes from
Stakeholder Advisory Group Meetings #9 and #10
held on Wednesday, September 14, 2016 and
Tuesday, November 15, 2016

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Ernest Lau, P.E.
BWS Manager and Chief Engineer

BWS UPDATES

The Importance of a Long-Term Financial Plan

- ◆ Why are we developing a long-term financial plan?
- ◆ Why is the financial plan considering a horizon of 30 years; do other agencies do this?
- ◆ What is expected of the Stakeholder Advisory Group in this process?

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Mahalo!

Questions & Answers



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Facilitator

Brian Thomas

Public Financial Management

LONG-TERM FINANCIAL PLAN FINANCIAL POLICIES

BWS's Authority to Make Rates is Established in City Charter

- ◆ “The board shall have the power to fix and adjust reasonable rates and charges for the furnishing of water and for water services so that the revenues derived therefrom shall be sufficient to make the department self-supporting.”
- ◆ PUC regulates privately owned utilities

RCH Section 7-109 Rates, Revenues and Appropriations

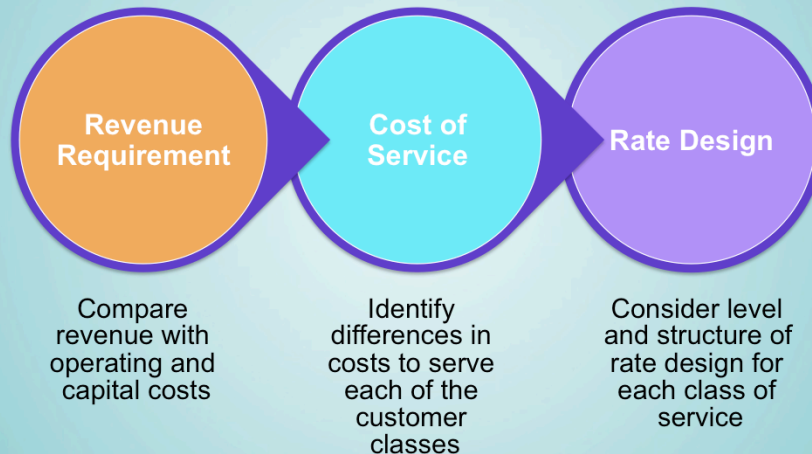
Examples of privately owned utilities include Hawaiian Electric, Hawaiian Telcom, Hawaii Gas, and 38 private water and sewer companies in Hawaii.

Cost-Based Ratemaking is Intended to Support 3 Key Objectives for Utilities

- ◆ Provide sufficient funding to build, operate, maintain and reinvest
- ◆ Provide safe and reliable drinking water and fire protection
- ◆ Allow for economic development and community sustainability

*American Water Works Association, Manual M1,
Principles of Water Rates, Fees and Charges, 6th Edition, 2012*

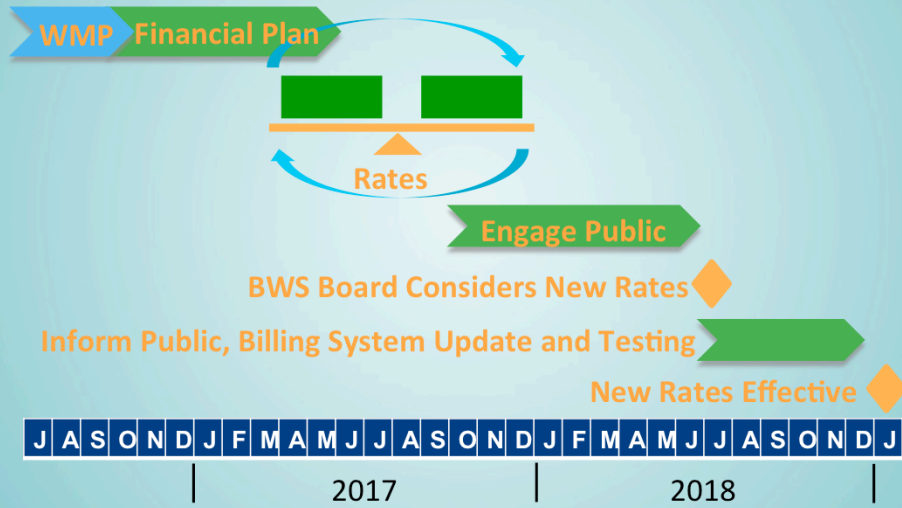
Three Primary Steps of Rate Making

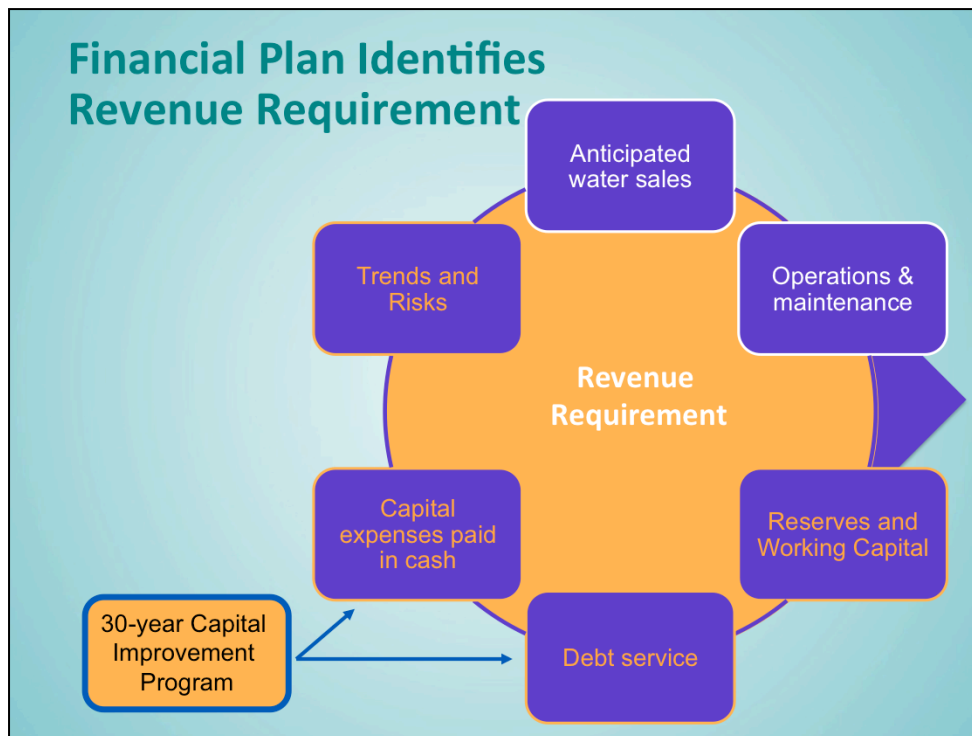


Using a “pie” analogy to describe the three primary steps of rate making:

- The *revenue requirement* is the size the pie.
- *Cost of service* is the cost of the ingredients.
- *Rate design* is the size of each person’s slice of the pie.

Financial Plan and Rates Schedule





At the last workshop, we discussed the major elements of a the Long-Term Financial Plan. And while it was not on the diagram, we really focused on bracketing the range of scenarios for the Capital Improvement Program, which ultimately determines the amount of money that we need to make decisions about how much to borrow and how much to pay in cash.

4 Major Drivers of Revenue Requirements and Rates

Operations & Maintenance

Operations and maintenance costs

Capital Expenses Paid in Cash vs. Debt

How the Capital Improvement Program is financed

Reserves and Working Capital

Financial policies for credit ratings and stability

Trends and Risks

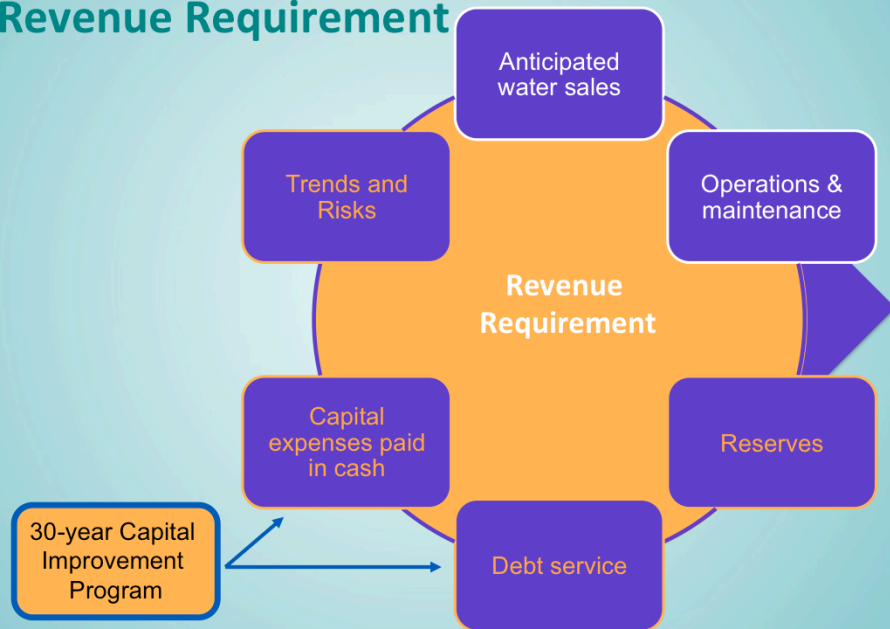
Preparedness to respond to changing trends and risks

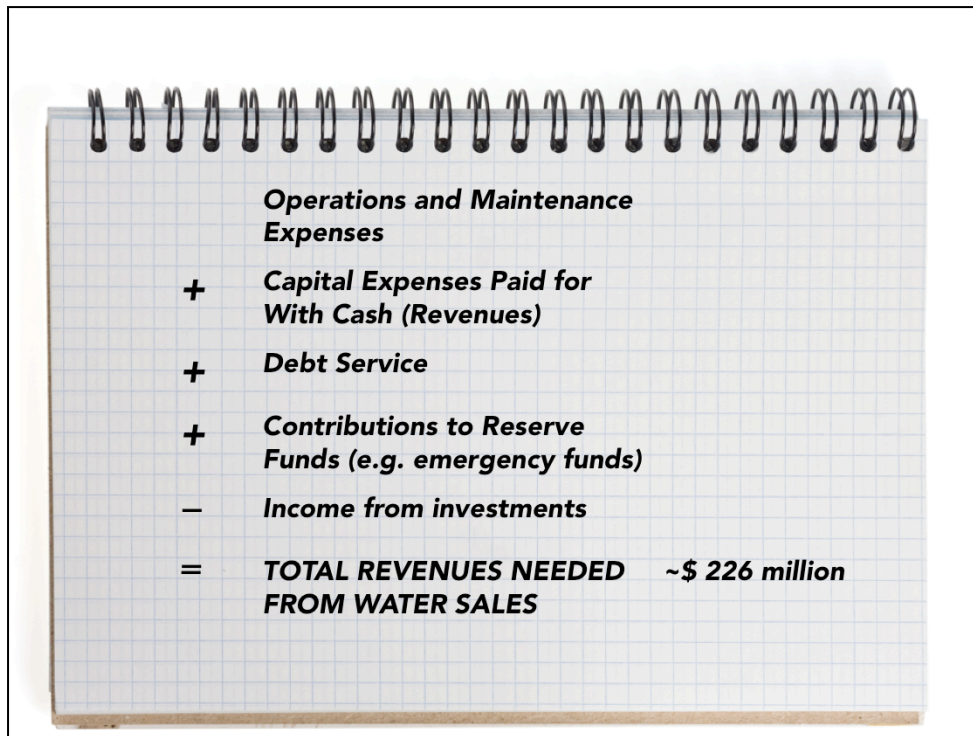
The reason that we focus on these items in the financial plan is that, what drives the revenue requirement out into the future, and thus water rates, are Operations and Maintenance costs, the Capital Improvement Program, financial policies for credit ratings and stability, and how the organization is prepared to respond to changing trends and risks.

Some Things to Think About

- ◆ Are BWS's current financial policies adequate?
- ◆ What additional policies should be developed, e.g. rate stabilization fund, disaster recovery, repair and replacement?
- ◆ What levels of reserves and working capital should be associated with those policies?
- ◆ What should the BWS do (or not) from a financial policy perspective about trends and risks like climate change, conservation, and economic cycles?

Financial Plan Identifies Revenue Requirement





The Fiscal Year (FY) 2017 budget for water and recycled water sales is \$226 million.

Financial Policy Questions

- ◆ How much working capital is needed?
 - Cash on hand for normal operations
 - Money set aside for unforeseen events
- ◆ How should the BWS fund capital projects?
 - How much debt?
 - How much from revenues?
- ◆ What is an appropriate level of debt service coverage?
- ◆ What is the maximum ratio of debt to equity?

- **Working capital** is the amount of cash on hand that can be put to work to meet the needs of providing water service. It might also include setting aside funds for rate stabilization, and/or disaster recovery efforts.
- How we fund capital projects has a big impact on the amount of working capital needed. Just like homeowners obtain a mortgage to purchase a home, the BWS can borrow money for its capital projects by obtaining State Revolving Fund Loans and selling bonds. The decision about how much is paid from revenues and how much from debt is similar to how much of a down payment you make when you take out a mortgage. It is a way of balancing the burden of how much of your house you pay for today, and how much you pay for in the coming decades.
- **Debt service coverage** is the amount of cash on hand to make loan payments with. The contracts that are established when the BWS sells bonds have minimum debt service coverage requirements. Similar to your personal credit score, agencies that can maintain greater debt service coverage are viewed as lower risk and can receive higher bond ratings, which results in lower interest costs, which saves the BWS's customers money.
- The **ratio of debt to equity** is a measure to limit the ability to borrow beyond your ability to repay the loans. Lower debt to equity ratios are more favorable. . . and can result in lower borrowing costs. BWS's debt to

Summary of BWS's Current Financial Policies

- ◆ Unrestricted fund balance = 45 days operating expenses, including annual debt service
- ◆ 1.60x senior annual debt service
- ◆ 1.30x junior annual debt service
- ◆ 40% to 50% debt to net assets ratio
- ◆ No specific contingency reserve
- ◆ Maintain relationships with rating agencies

The BWS maintains in reserve 45 days of operating expenses including any annual debt service.

The BWS also maintains in reserve 1.60 times what we owe in senior annual debt service, and 1.30 times what we owe for junior annual debt service.

Senior debt is like a first mortgage – it gets paid first. A second mortgage is subordinate, so if funds are limited, it gets paid after the first.

Prudent Reserves and Working Capital Policies Provide Important Benefits



Higher credit ratings



Disaster recovery



Covers unanticipated costs



Reduces rate shock

Reserves can help:

- Achieve or maintain high credit ratings that reduce the cost of borrowing.
- Provide funding for emergencies and disaster recovery.
- Cover unanticipated operating/maintenance costs or timing issues that cannot be met with debt financing.
- Reduce volatility of rates and charges by providing a buffer against changes in commodity prices, like fuel, and other expenses.

“It is essential that governments maintain adequate levels of fund balance [reserves] to mitigate current and future risks (e.g., revenue shortfalls and unanticipated expenditures) and to ensure stable rates”

Government Finance Officers Association (GFOA), “Determining the Appropriate Levels of Working Capital in Enterprise Funds”, Best Practice, approved February 2011

“Fitch views long-term financial planning as a fundamental component for successful utility operations given long-range planning can clearly highlight future structural deficits necessitating revenue development, expenditure containment or both...

Fitch believes utilities are more likely to be stable when such decisions are considered in advance, as a result of financial forecasting....”

*Fitch Water and Sewer Revenue Bond Criteria,
November 30, 2016*

“Cash is the paramount resource utilities have to meet expenses, cope with emergencies and navigate business interruptions...”

Moody's Rating Criteria Municipal Utility Debt, December 15, 2014

“In addition, liquidity and reserves provide working capital, funding for unexpected operational problems, and general budgetary flexibility.”

Standard and Poor's U.S. Public Finance Waterworks, Sanitary Sewer, and Drainage Utility Systems: Rating Methodology and Assumptions, January 19, 2016

What are the Minimum Recommended Fund Levels?

- ◆ Government Finance Officers Association (GFOA) recommends
 - Starting at 90 days cash
 - Never lower than 45 days cash
- ◆ Additional working capital could be set aside for
 - Unanticipated “big ticket” repair and replacement
 - Emergencies
 - Disaster recovery
 - Rate stabilization

*Determining the appropriate levels of working capital in enterprise funds,
GFOA Best Practice, February 2011*

What Comparable Municipal Water Utilities Do

Utility	Reserve Fund	Policy
DC Water	Working Capital Operating Reserve R&R Reserve	60 days cash \$125 million or 120 days cash \$35 million
San Antonio Water System	Working Capital Total Operating Reserve (including Working Capital)	60 days cash 300 days cash
Las Vegas Valley Water District	Working Capital Capital Reserve Unforeseen Events	180 days cash 1 year of average CIP 1% of depreciable assets
San Diego Water Department	Minimum Target including Emergency Fund	30 days cash 45 days cash
LADWP	Operating reserve	150 days cash

These utilities were chosen for comparison because of their similarities to BWS. They all are large; highly rated by bond rating agencies (all are AA or better); they face similar risks (e.g. earthquakes, hurricanes, drought, climate change); and they all have high political visibility.

What We See on the Other Islands

Utility	Reserve Fund	Policy
Maui County	Unrestricted Fund Balance	5-15% of revenues
	Emergency Reserve	20% of General Fund Revenue
	Debt Service/Operating Expenditures	Less than or equal to 10%
	Net Debt per capita	Less than or equal to \$2,500
Hawaii County	Disaster Emergency Fund	\$10 million target
	Open Space and Natural Resources Fund	2% of tax revenues
	Open Space and Natural Resources Maintenance Fund	0.25% to \$3 million annual maximum
	Budget Stabilization Fund	5-15% of general fund spend

Maui's and Hawaii's Departments of Water Supply both issue debt through their respective Counties. The policies shown above refer to the Counties as a whole and are not exclusive to the water departments.

Amount of Cash Influences Bond Ratings

Reserve Levels in Days Cash						
Moody's						
Rating Category	Aaa	Aa	A	Baa	Ba	B
Reserve Levels (All Utilities)	>250	150-250	35-150	15-35	7-15	<7
Fitch						
Rating Category	Stronger		Midrange		Weaker	
Reserve Levels (Water Utilities)	>365		~180		<90	
Standard & Poor's						
Rating Category	AAA	AA	A	BBB	BB	B
Reserve Levels (Water Utilities)	>150	90-150	60-90	30-60	15-30	<15

BWS had 456 days cash on hand at the end of FY 2016

One of many things that bond rating agencies look at is the amount of cash the utility has available to make bond payments with. Reserves equal to approximately 365 days (1 year) of operating expenses are common for AAA or high AA rated water agencies.

FitchRatings

Fitch Affirms Honolulu Bd of Water Supply, HI Water Revs at
“AA+”; Outlook Stable
Nov. 2016



New Issue: Moody's assigns Aa2 to Honolulu Board of
Water Supply (HI) Water System Revenue Bonds 2014

BWS' s Debt Service Coverage Ratio

$$\begin{aligned} &= \text{Net operating revenue} / \text{Annual debt service} \\ &= \$ 106.6 \text{ million} / \$17.9 \text{ million} \\ &= 5.96 \end{aligned}$$

Note: Debt Service Coverage Ratio (DSC Ratio) measures the amount of money, after operating expenses, that's available to pay your debts

DSC Ratios Consider Range and Balance

Management Objective	Lower Coverage	Higher Coverage
Cost Efficiency	Lowers near-term revenue requirement and rates	Increases near-term revenue requirement and rates
	More outstanding debt	Less outstanding debt
	Weakens credit ratings and increases interest expense	Strengthens credit ratings and decreases interest expense
Predictable Rates	Lower margin for managing volatility in net revenue means more volatile rates	Greater margin for managing volatility in net revenue means less volatile rates
Intergenerational Equity	More debt means costs shifted to future generations	Less debt means costs shifted to current generation

DSC Ratio Targets for Comparable Municipal Water Utilities

Utility	Reserve Fund Policy
DC Water	Senior = 1.4x Total = 1.2x
San Antonio Water System	1.7x
Las Vegas Valley Water District	1.5x
San Diego Water Department	1.5x
LADWP	1.8x

These municipal water utilities have credit ratings that are AA or better.

Higher DSC Ratios = Higher Rating

Debt Service Coverage Ratio						
Moody's						
Rating Category	Aaa	Aa	A	Baa	Ba	B
Reserve Levels (All Utilities)	>2.0x	1.71-2.00 x	1.26-1.70 x	1.01-1.25 X	0.71-1.00 x	<=0.70
Fitch						
Rating Category	Stronger		Midrange		Weaker	
Reserve Levels (Water Utilities)	>=2.0x		~1.5x		<=1.25x	
Standard & Poor's						
Rating Category	AAA	AA	A	BBB	BB	B
Reserve Levels (Water Utilities)	>=1.60x	1.40-1.60 x	1.20-1.40 x	1.10-1.20 x	1.00-1.10 x	<1.00

BWS's DSC Ratio at the end of FY 2016 was 5.96

Debt service coverage ratio is another of the many things that bond rating agencies use to evaluate the credit worthiness of a utility. Strong AA rated municipal water utilities typically are in the 1.7-2.0 range.

Debt Financing Provides Multiple Benefits

- ◆ Allows system investments beyond available revenue
- ◆ Accommodates “spikes” in system needs
- ◆ Spreads the cost of long-term improvements to include future ratepayers
- ◆ Better matches life of the asset
- ◆ Helps keep rates affordable for current ratepayers

Example of Savings Achieved from Higher Bond Rating

- ◆ Difference between A and AA ratings can be 50-100 basis points (0.50% - 0.75%)
- ◆ Master Plan includes approximately \$800 million of expenditures over the next 10 years
- ◆ Difference in annual debt service of approximately \$3.0 - \$6.1 million
- ◆ Approximately \$90 - \$183 million over 30 year life of debt
- ◆ Higher bond rating increases “purchasing power” by 10% – 20%

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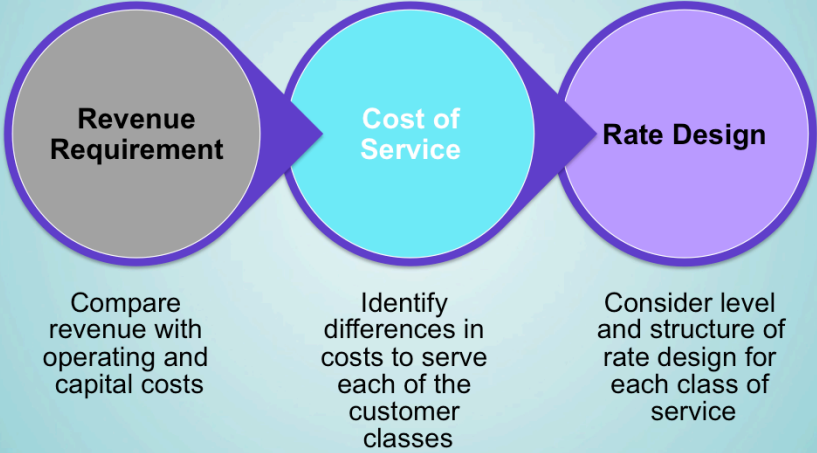
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Facilitator

TYPICAL CUSTOMER IDENTIFICATION FOR RATE IMPACT EVALUATION

Three Primary Steps of Rate Making



Cost of Service Considers Differences Among BWS' s Customer Classes



Single-Family



Multi-Family

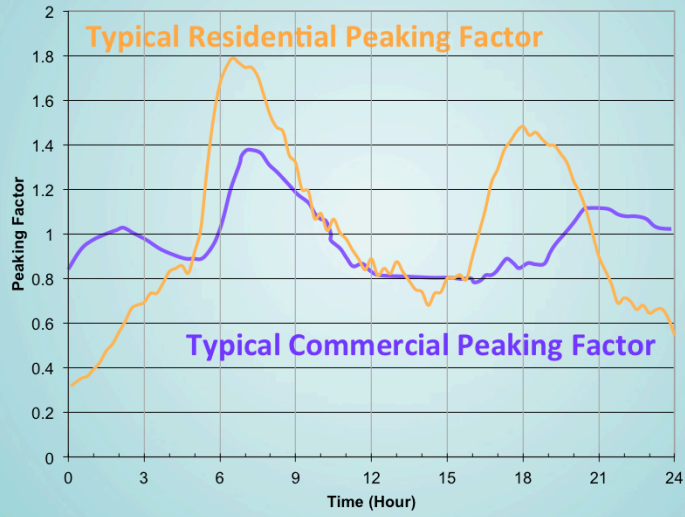


Commercial/Industrial

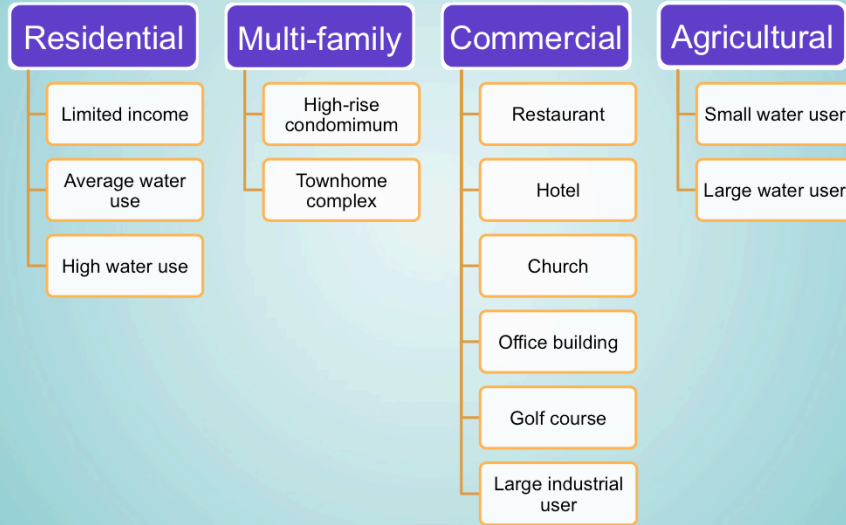


Agricultural

Residential Peaking Factors are Higher than Others



Consider Impacts to “Typical” Customers



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SUMMARY AND NEXT STEPS

Other Items

- ◆ Next Meeting
Tuesday, February 7, 2017
4:00 – 6:30 pm
Blaisdell Center

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