



NPDES PERMIT RENEWAL

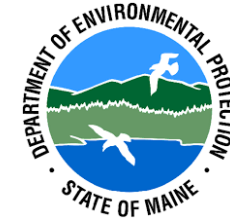
What You Need to Know and What You Need to Do

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GOALS FOR ROUNDTABLE

- 1. Understand basics of NPDES Permitting in New England**
- 2. Review trends in NPDES Permit requirements**
- 3. Proactive technical planning**
- 4. Financial planning**
- 5. Affordability and financial impact**

TOPIC #1: OVERVIEW OF NPDES PERMITS



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Permit Renewal Timeline

- **Application**
 - Due 6 months prior to permit expiration
 - MA & NH: Use EPA Forms 2A and 2S
 - Signatory
- **Draft permit & comment period**
 - Minimum of 30 days
- **Final permit**
 - Response to comments issued with permit

The image shows a tilted view of EPA Form 3510-2A (Rev. 1-99), titled 'BASIC APPLICATION INFORMATION FOR ALL APPLICANTS'. The form is designed for NPDES permit applications and includes sections for facility information, applicant details, and existing environmental permits. Key sections include:

- FACILITY NAME AND PERMIT NUMBER:** Located at the top right.
- PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:** The main heading for the application data.
- A.1. Facility Information:** Includes fields for Facility name, Mailing Address, Contact person, Title, Telephone number, and Facility Address (not P.O. Box).
- A.2. Applicant Information:** Includes fields for Applicant name, Mailing Address, Contact person, Title, and Telephone number.
- A.3. Existing Environmental Permits:** A section for listing existing permits, including PSD, RCRA, and other state-issued permits.
- A.4. Collection System Information:** A section for providing information on municipalities and areas served by the facility, including the type of collection system and population served.

The form is identified as EPA Form 3510-2A (Rev. 1-99) and replaces EPA forms T1505-6 & T1505-22.

TOPIC #1: OVERVIEW OF NPDES PERMITS

Navigating the Renewal Process

- **Sampling to support renewal application**
 - Expanded Effluent sampling for design flows of 1 MGD or more
 - Sludge sampling
 - Sufficiently sensitive methods 40 CFR 122.21(e)(3)(i)
 - Clean hands/dirty hands
 - Results considered in permit development

FACILITY NAME AND PERMIT NUMBER:

SUPPLEMENTAL APPLICATION INFORMATION

PART D. EXPANDED EFFLUENT TESTING DATA
Refer to the directions on the cover page to determine whether this section applies to the treatment works.

Effluent Testing: 1.0 mgd and Pretreatment Treatment Works. If the treatment works has a design flow greater than 1.0 mgd and is required to have a pretreatment program, or is otherwise required by the permitting authority to provide the data, the data for the following pollutants. Provide the indicated effluent testing information and any other information required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. Data must be based on data collected through analyses conducted using 40 CFR Part 136 methods. In addition, these data must be based on data collected through analyses conducted using 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not specifically listed in this form. You may have on pollutants not specifically listed in this form. Indicate in the blank rows provided below any data you may have on pollutants not specifically listed in this form. All data must be based on at least three pollutant scans and must be no more than four and one-half years old.

Outfall number: _____ (Complete once for each outfall discharging effluent to waters of the United States)

POLLUTANT	MAXIMUM DAILY DISCHARGE			AVERAGE DAILY DISCHARGE			Number of Samples	A
	Conc.	Units	Mass	Conc.	Units	Mass		
METALS (TOTAL RECOVERABLE), CYANIDE, PHENOLS, AND HARDNESS								
ANTIMONY								
ARSENIC								
BERYLLIUM								
CADMIUM								
CHROMIUM								
COPPER								
LEAD								
MERCURY								
NICKEL								
SELENIUM								
SILVER								
THALLIUM								
ZINC								
CYANIDE								
TOTAL PHENOLIC COMPOUNDS								
HARDNESS (AS CaCO ₃)								
Use this space (or a separate sheet) to provide information on other metals requested by the permit writer.								

EPA Form 3510-2A (Rev. 1-99). Replaces EPA forms 7550-6 & 7550-22.

TOPIC #1: OVERVIEW OF NPDES PERMITS

Navigating the Renewal Process

- **Meetings and discussions with regulators**
 - Collaborative and open discussion
- **Public comment period**
 - Minimum of 30 days
 - Request extension if needed
 - Submit comments

TOPIC #2: TRENDS IN NPDES PERMITS

Nutrients

- **Phosphorus**
- **Nitrogen**
- **Watershed-based strategies**
 - CT, MA, VT: Long Island Sound
 - NH: Great Bay

TOPIC #2: TRENDS IN NPDES PERMITS

Metals

- **Aluminum**
 - 2018 Final Aquatic Life Criteria for Aluminum in Freshwater
- **Copper**
- **Zinc**
- **Enforcement orders**

TOPIC #2: TRENDS IN NPDES PERMITS

“CMOM”

- **Collection System Operation and Maintenance Requirements**
 - Mapping
 - Proactive vs. Reactive
 - Tracking
 - Reporting
- **Overlap with state requirements**

TOPIC #3: PROACTIVE TECHNICAL PLANNING FOR NEW PERMIT

Evaluation Prior to Final Permit

- **Understand potential effluent limitations and monitoring requirements**
- **Facility Evaluation or Plan**
- **Comprehensive wastewater planning**
- **Asset management**

TOPIC #4: LONG-TERM FINANCIAL PLANNING

Things to consider...

1. You may not have a complete awareness of your capital needs and risk
2. Nobody likes surprises.
3. The longer you have to plan, the better your plan will be.

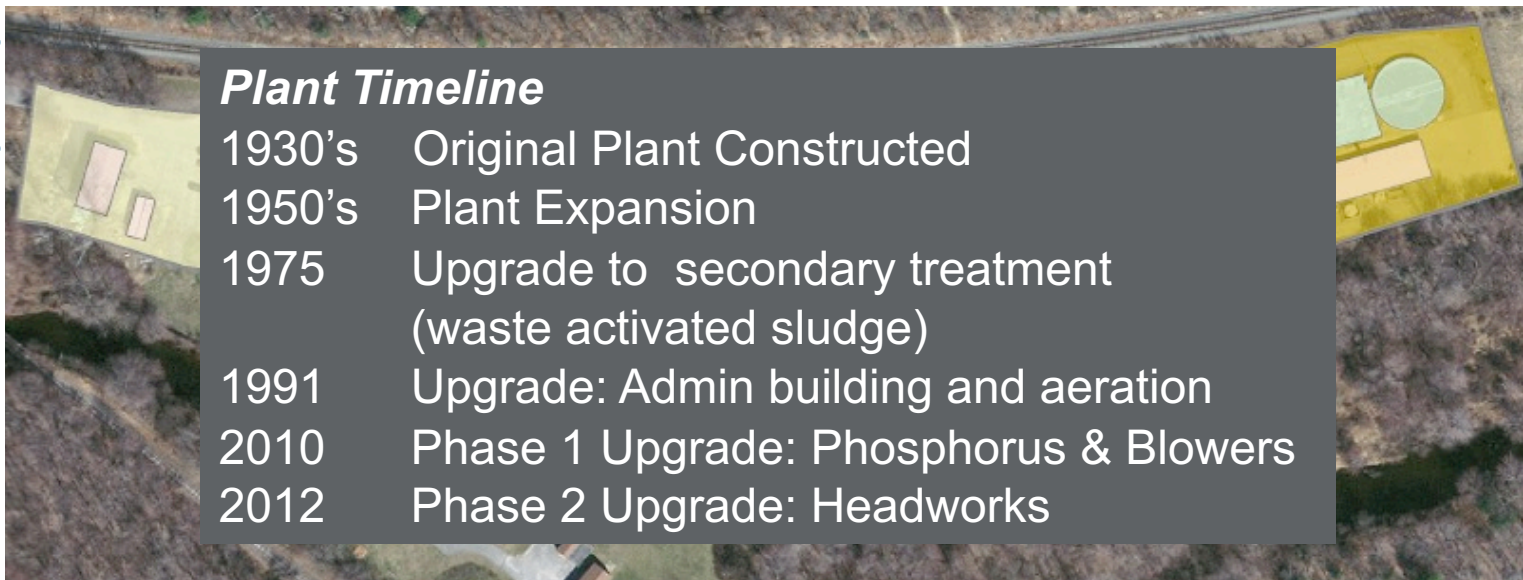
TOPIC #4: LONG-TERM FINANCIAL PLANNING

You may not have a complete awareness of our capital needs and risk

- Treatment plants grow like hospitals
- Upgrades may only focus on adding process
- Scopes often get scaled back

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Plant Timeline

1930's	Original Plant Constructed
1950's	Plant Expansion
1975	Upgrade to secondary treatment (waste activated sludge)
1991	Upgrade: Admin building and aeration
2010	Phase 1 Upgrade: Phosphorus & Blowers
2012	Phase 2 Upgrade: Headworks

old

TOPIC #4: LONG-TERM FINANCIAL PLANNING

The first element to planning is a comprehensive Capital Improvement Plan (CIP)

- **The “Asset Management” Approach**

- Looks at equipment (assets) from a risk perspective
- Take advantage of existing information
- Can help identify blind spots
- Good way to involve non-technical stakeholders
- Good way to integrate community specific values
- Data driven results withstand scrutiny

- **Facilities may now be oversized**

- Decreased usage and loss of manufacturing

TOPIC #4: LONG-TERM FINANCIAL PLANNING

The second element to planning is a comprehensive financial model

Forecasting considerations

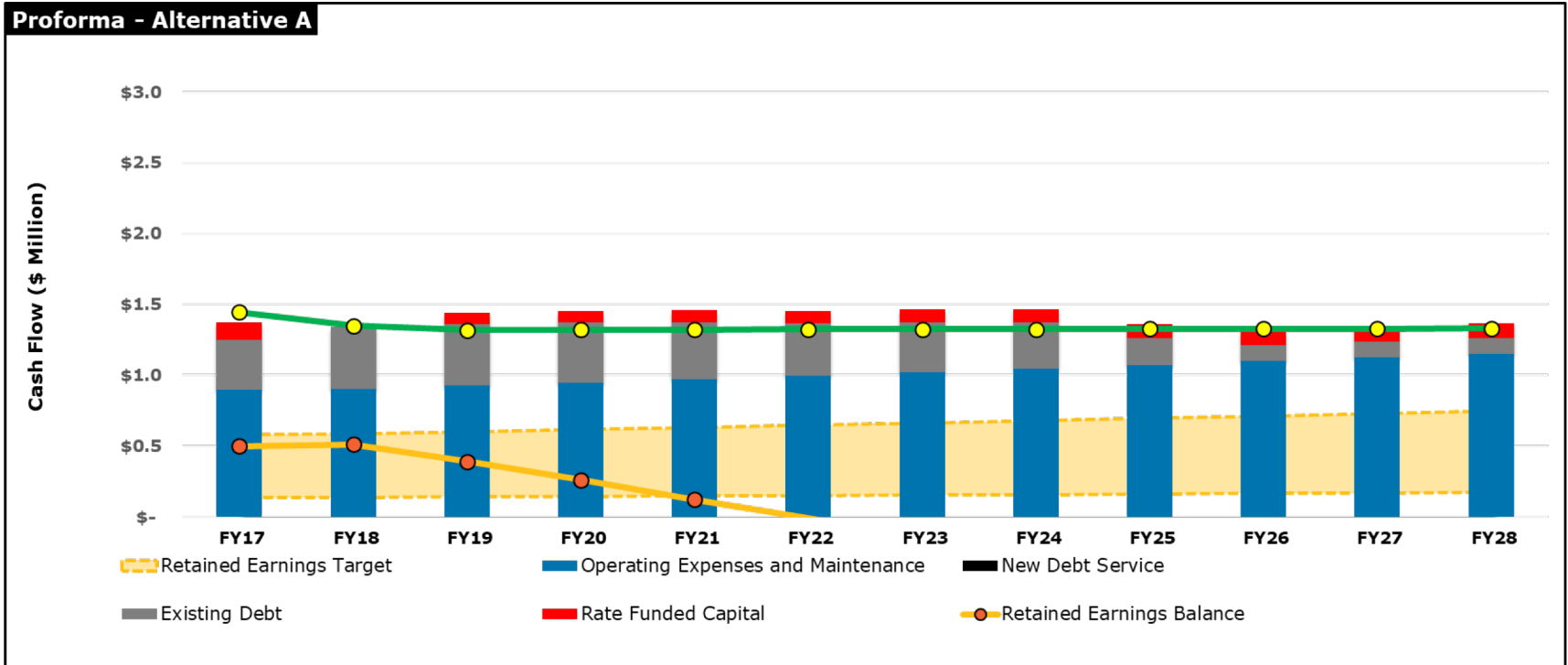
- Declining usage = declining revenue
- Costs and requirements increasing
- Capital Improvements are key driver of rate increases
- Taking the long view is invaluable

TOPIC #4: LONG-TERM FINANCIAL PLANNING

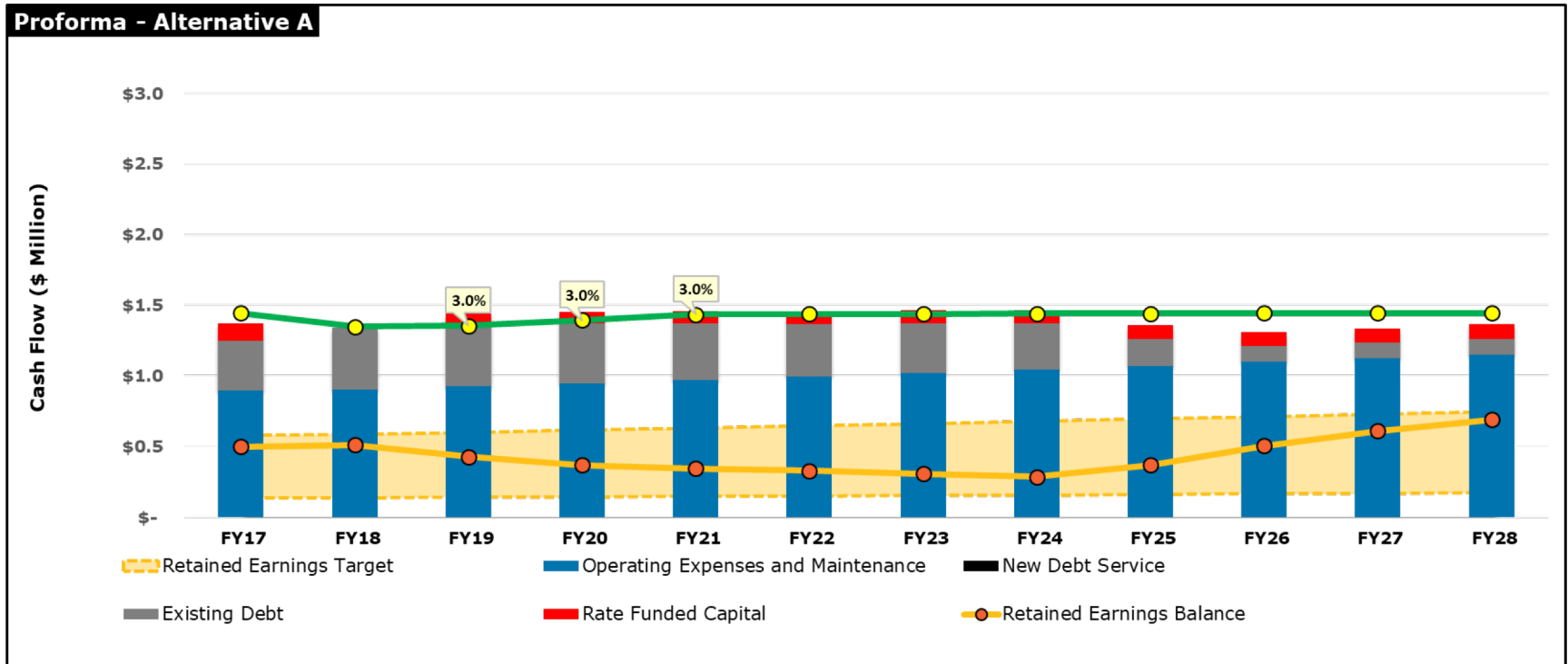
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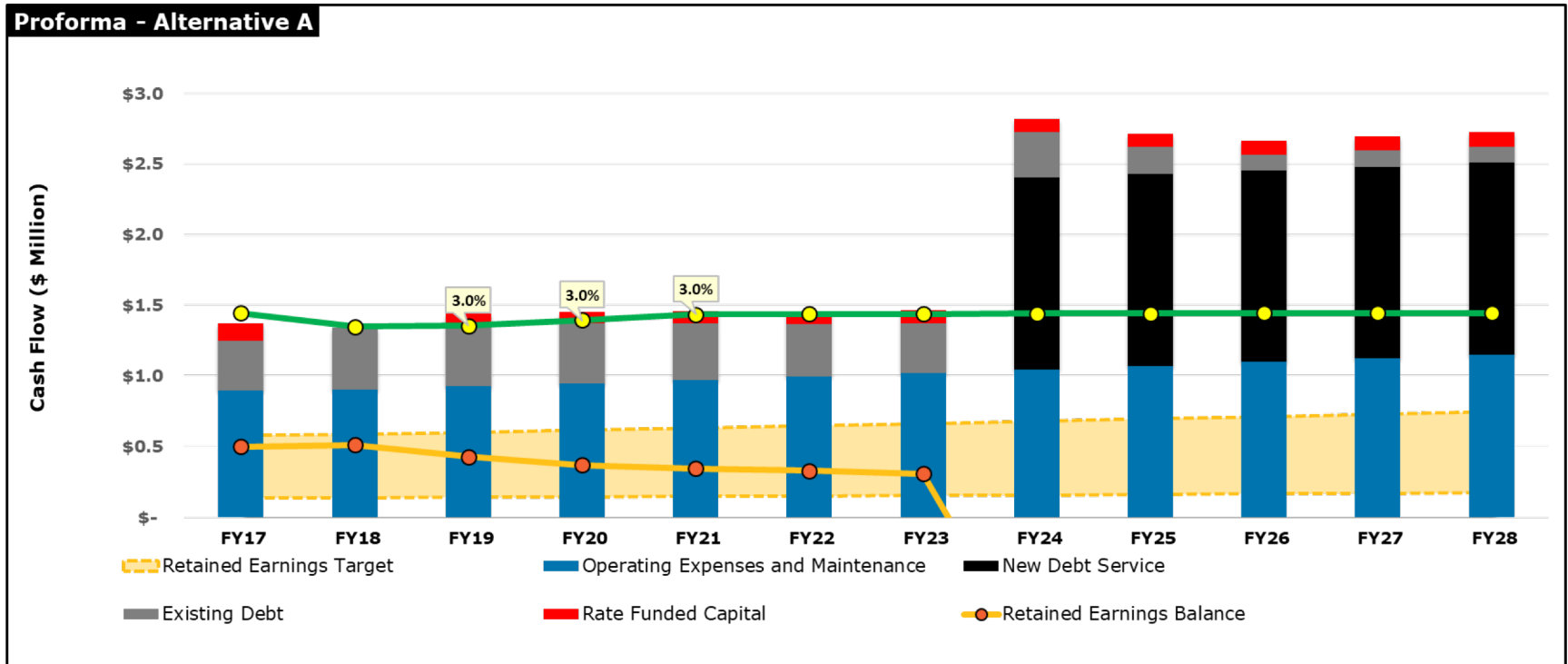
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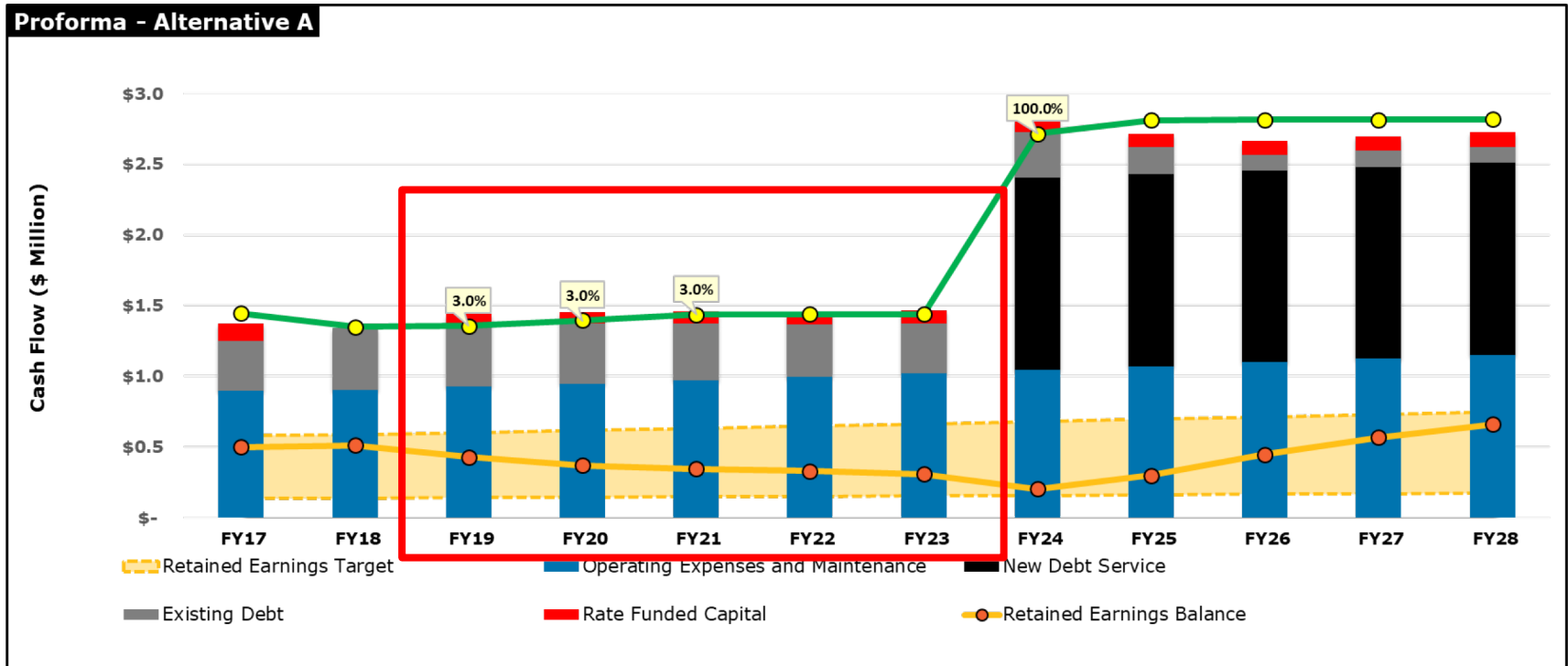
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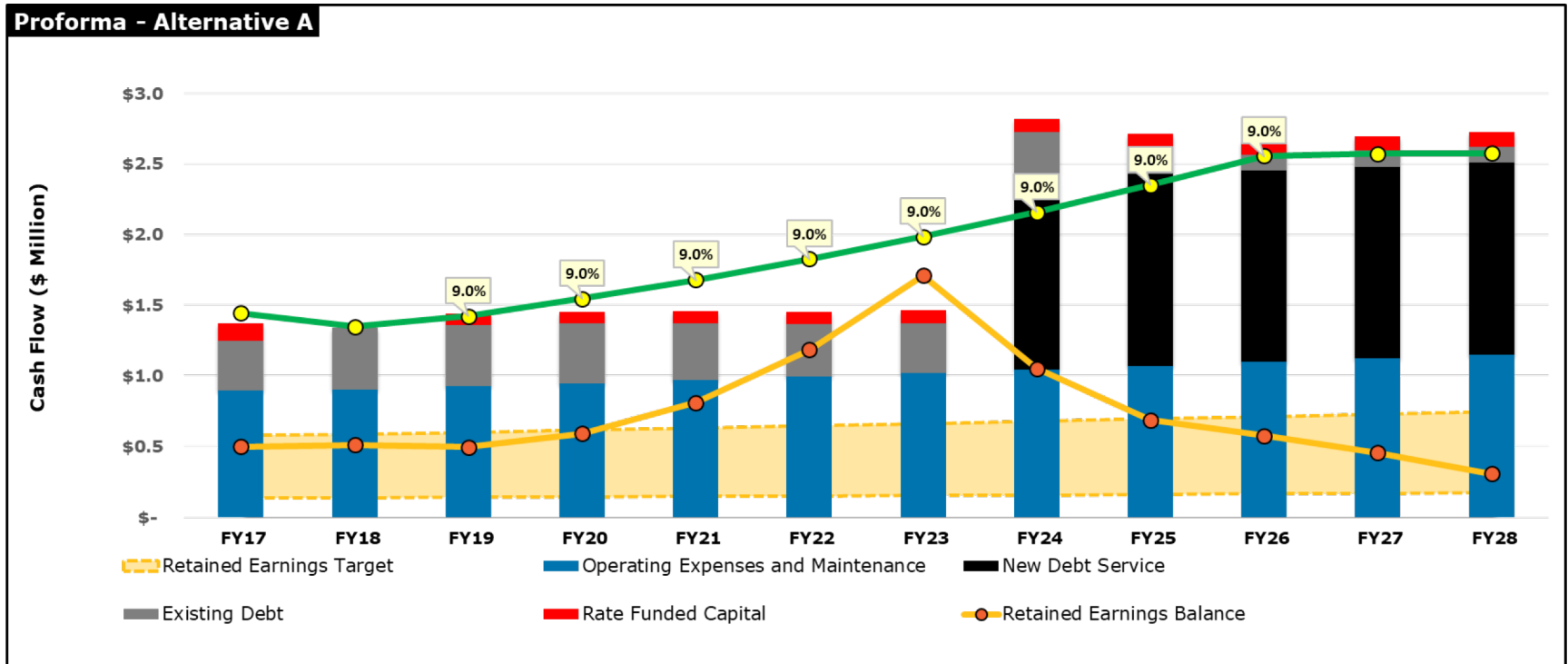
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TOPIC #5: AFFORDABILITY AND FINANCIAL IMPACT

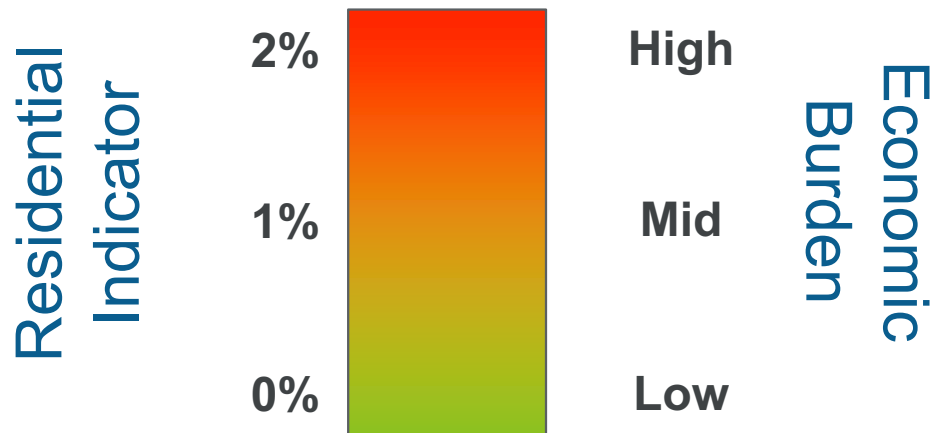
Things to consider

- 1. What do you want to know and what are you going to do with that knowledge?**
- 2. Rates and Costs are objective, affordability is subjective**
 - Affordability does not mean the inability to pay, but rather the point at which water utility pricing places an undue burden on households

TOPIC #5: AFFORDABILITY AND FINANCIAL IMPACT

Economic Burden – the Residential Indicator

$$\frac{\text{Annual Utility Cost}}{\text{Median Household Income}} = \text{Residential Indicator}$$

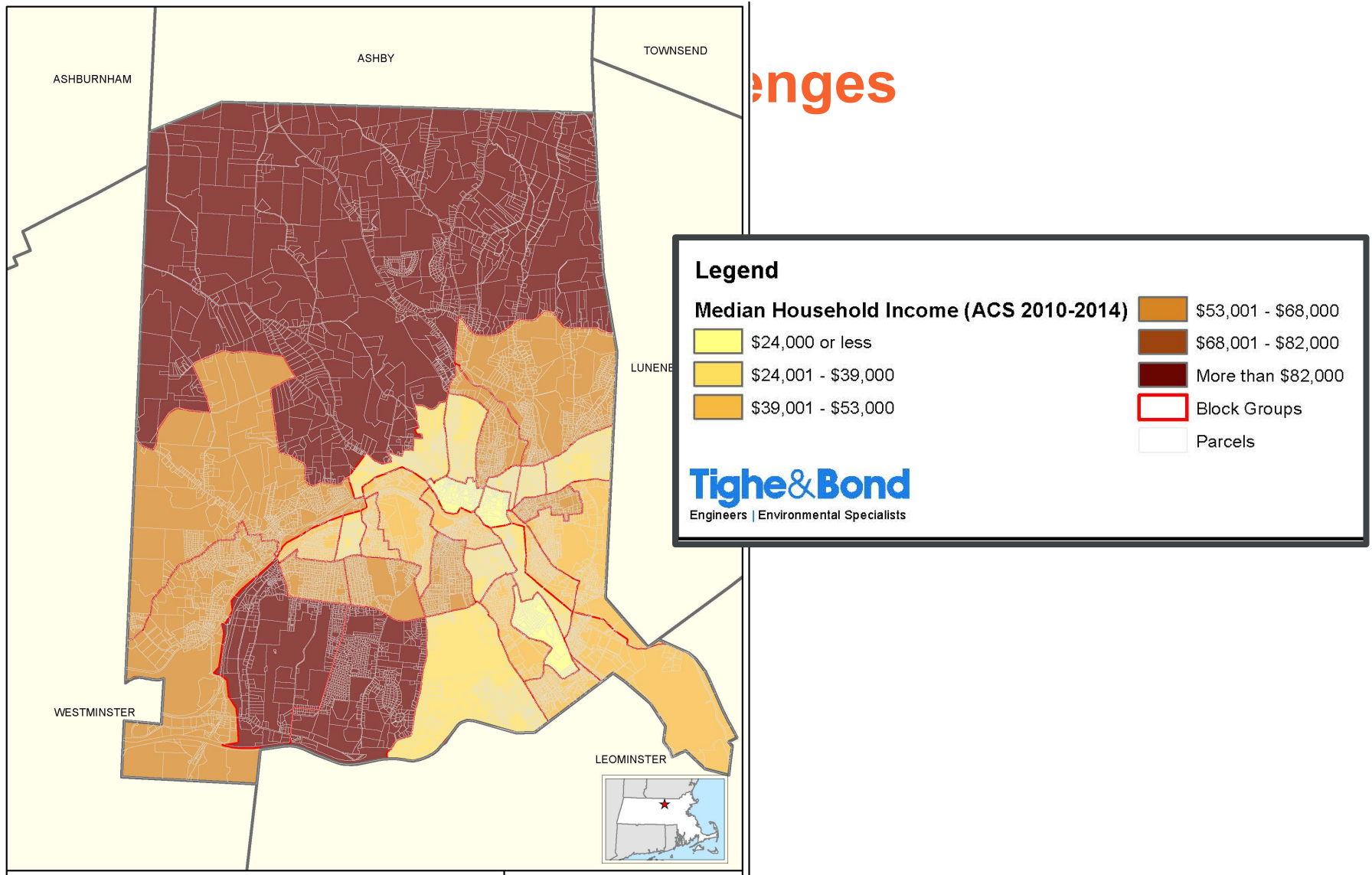


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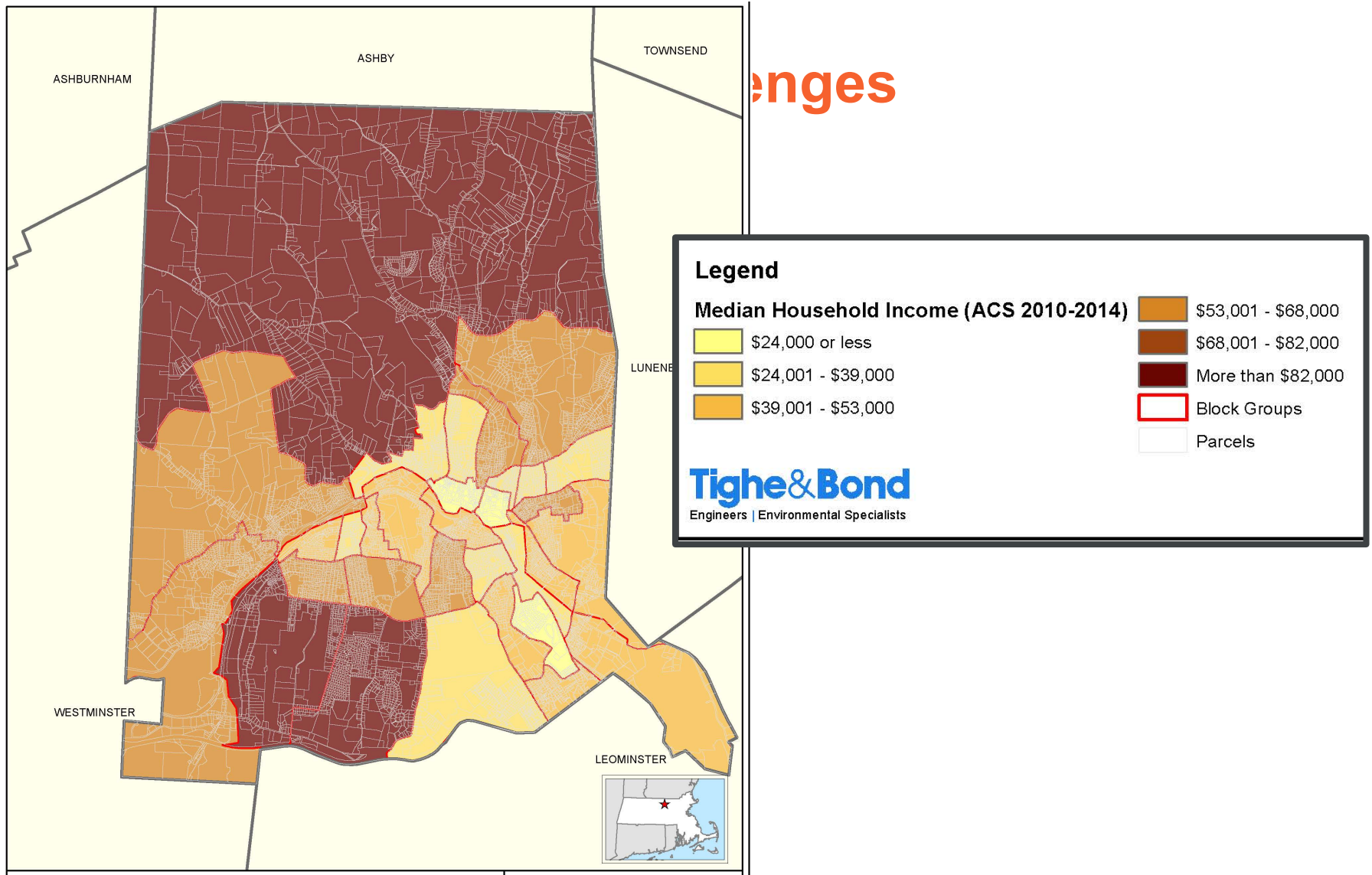
Residential Indicator Challenges

- “The Flaw of Averages”
- Growing Income Disparities
- Non Homogenous Communities

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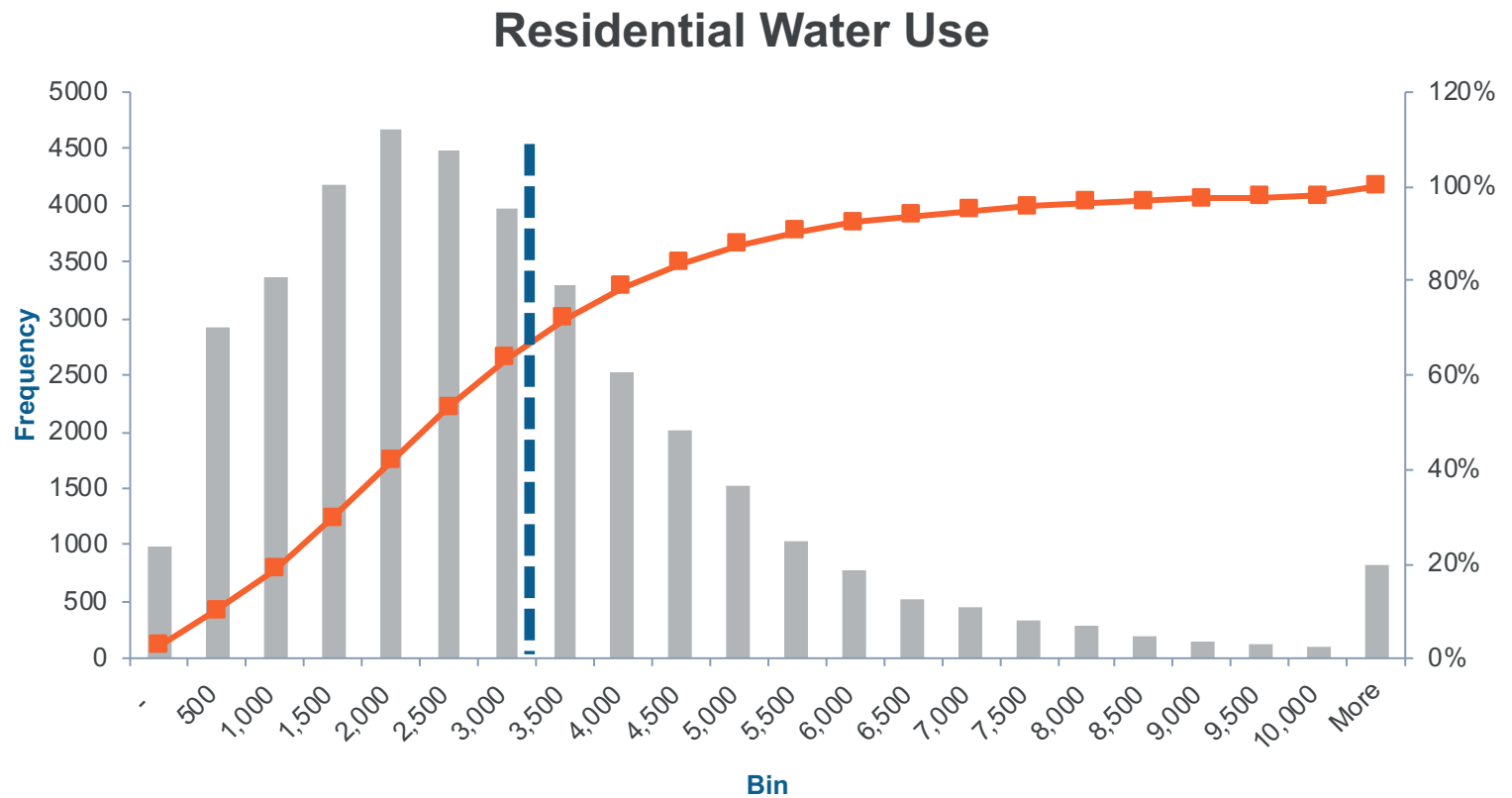
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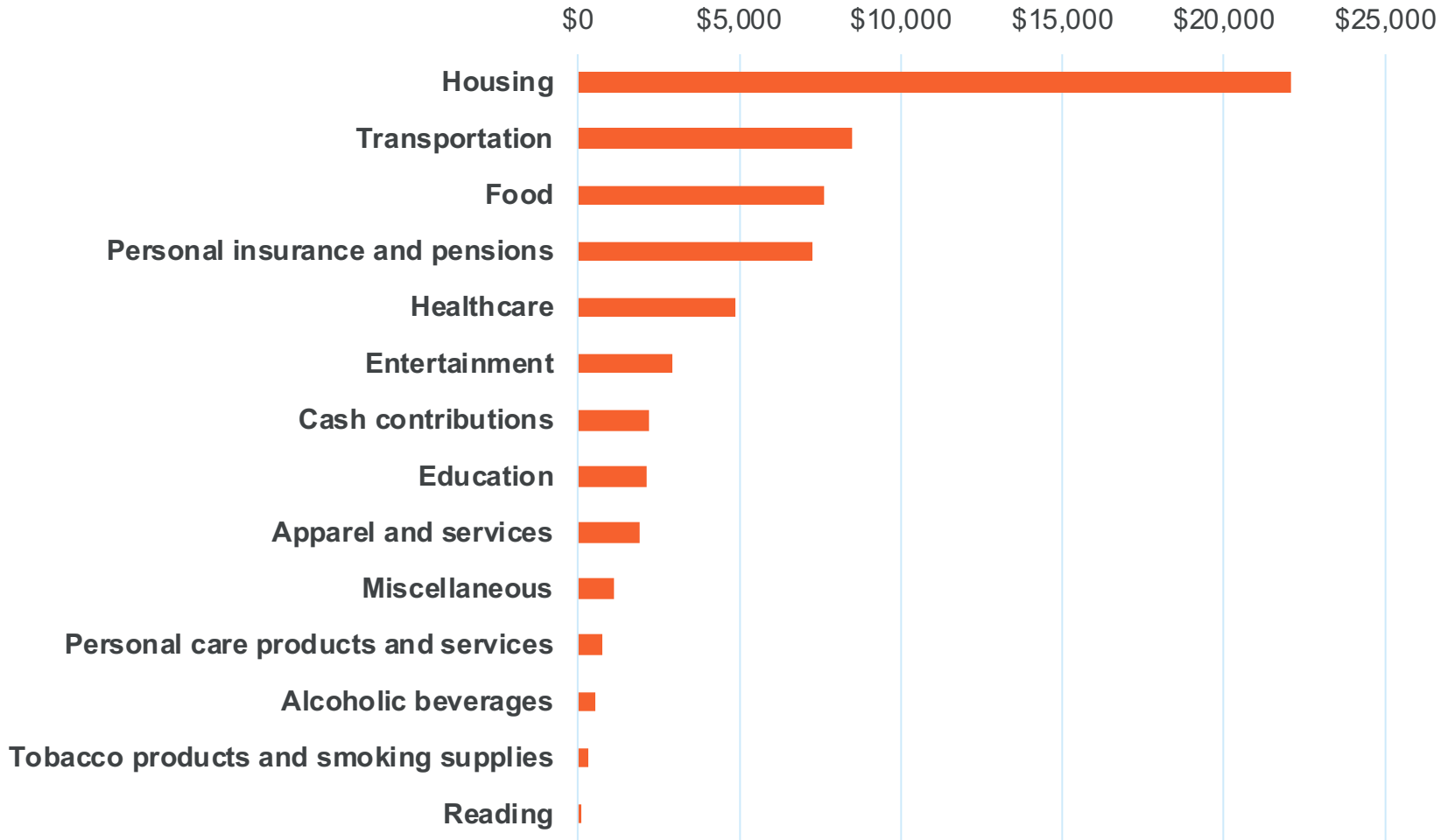
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Residential Indicator Challenges



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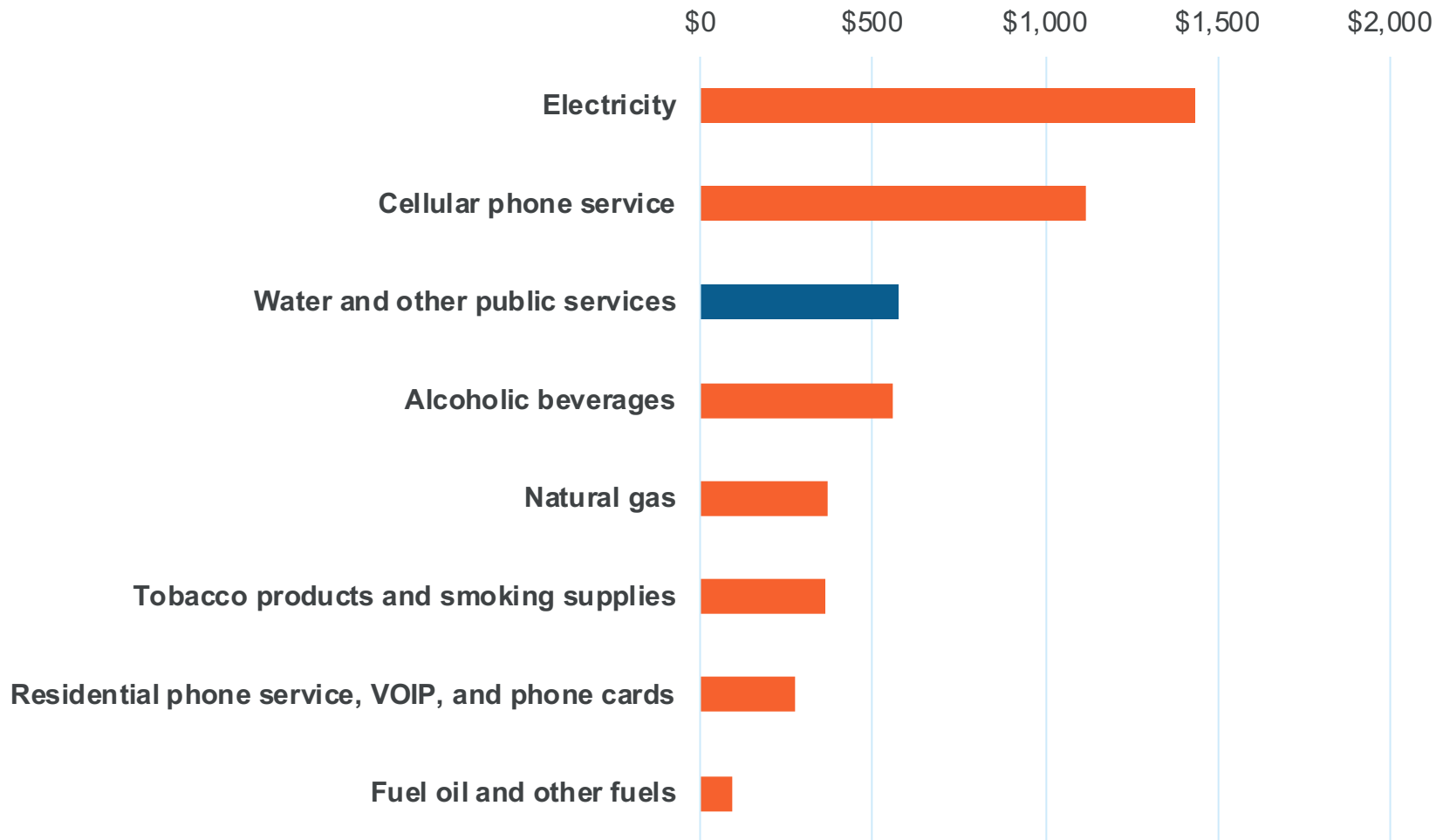
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Consumer Expenditure Survey, 2016-2017

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Consumer Expenditure Survey, 2016-2017

TOPIC #5: AFFORDABILITY AND FINANCIAL IMPACT

Things to consider

1. What do you want to know and what are you going to do with that knowledge?

- Residential Indicator, does it really matter?
- What significance does affordability play in your community?
- Should you consider integrated planning?
- Should you consider cost mitigation

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TOPIC #5: AFFORDABILITY AND FINANCIAL IMPACT

Financial Mitigation

Overt or Covert?

- Overt: Customer Assistance Program
 - Develop cost criteria
 - Develop application criteria
 - Adoption
- Covert: Rate Design
 - Base fee with allowance
 - Assumes low income = low water usage

QUESTIONS AND DISCUSSION

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