

# FLINT WATER RATES

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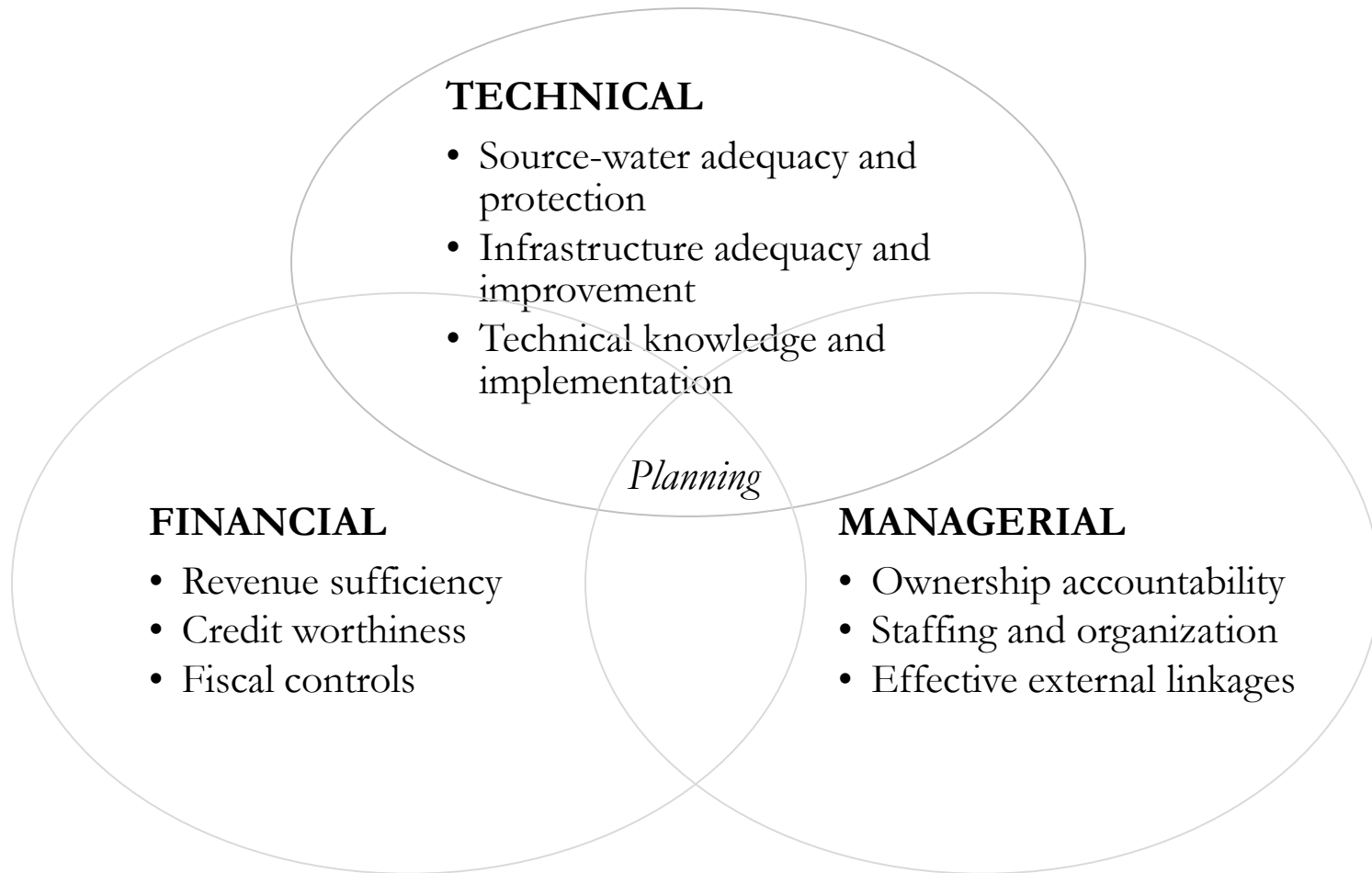
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MICHIGAN STATE UNIVERSITY

# What is water system capacity?

- Technical
  - ▶ The physical and operational ability of a water system to meet SDWA requirements, including the adequacy of physical infrastructure and the technical knowledge and capability of personnel.
- Financial
  - ▶ The ability of a water system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA requirements.
- Managerial
  - ▶ The ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements, including institutional and administrative capabilities.

# Elements of water system capacity

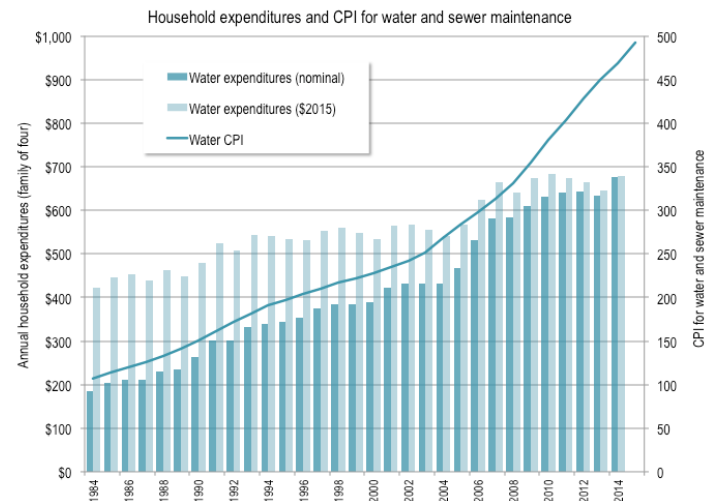
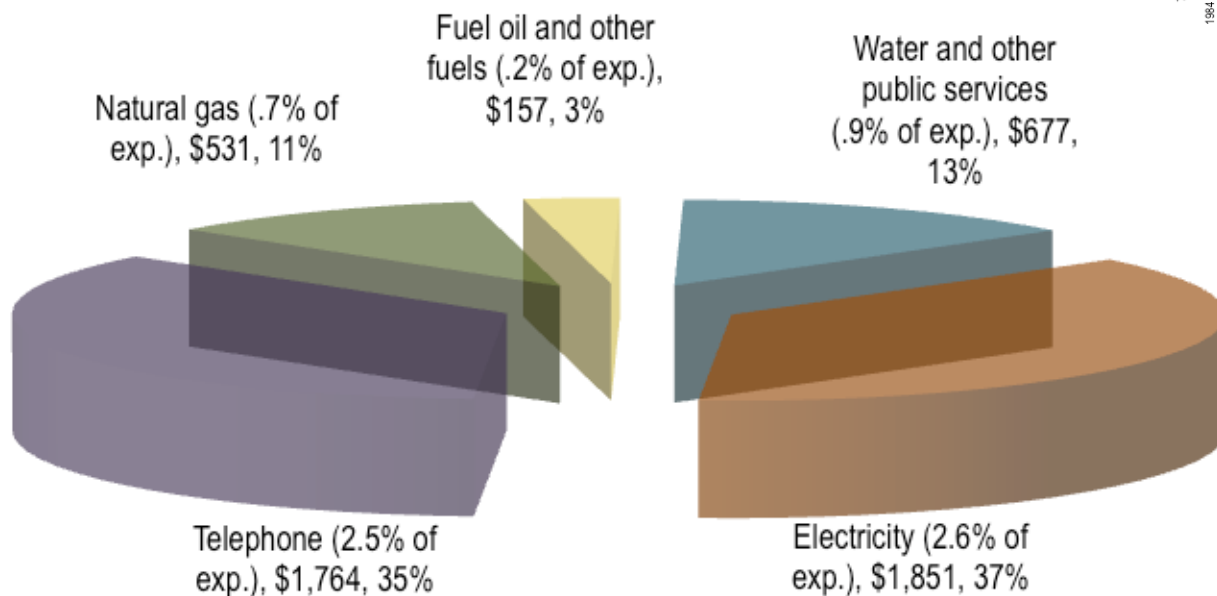


# Sustainable water systems (“enterprises”)

Rate revenues relative to expenditures	Expenditures relative to optimized compliant service level		
	< 1 expenditures are below optimum (“cost avoidance”)	= 1 expenditures are optimal	> 1 expenditures are above optimum (“gold plating”)
< 1 rate revenues are below expenditures (“price avoidance”)			
= 1 rate revenues are equal to expenditures		<b>SELF-SUSTAINING SYSTEM</b>	
> 1 rate revenues are above expenditures (“profit seeking”)			

# Household expenditures on utilities (US)

Consumer expenditures on utilities for a four-person household in 2014  
(\$4,980 and 7.0% of total household expenditures)



# Pressure on water costs and prices

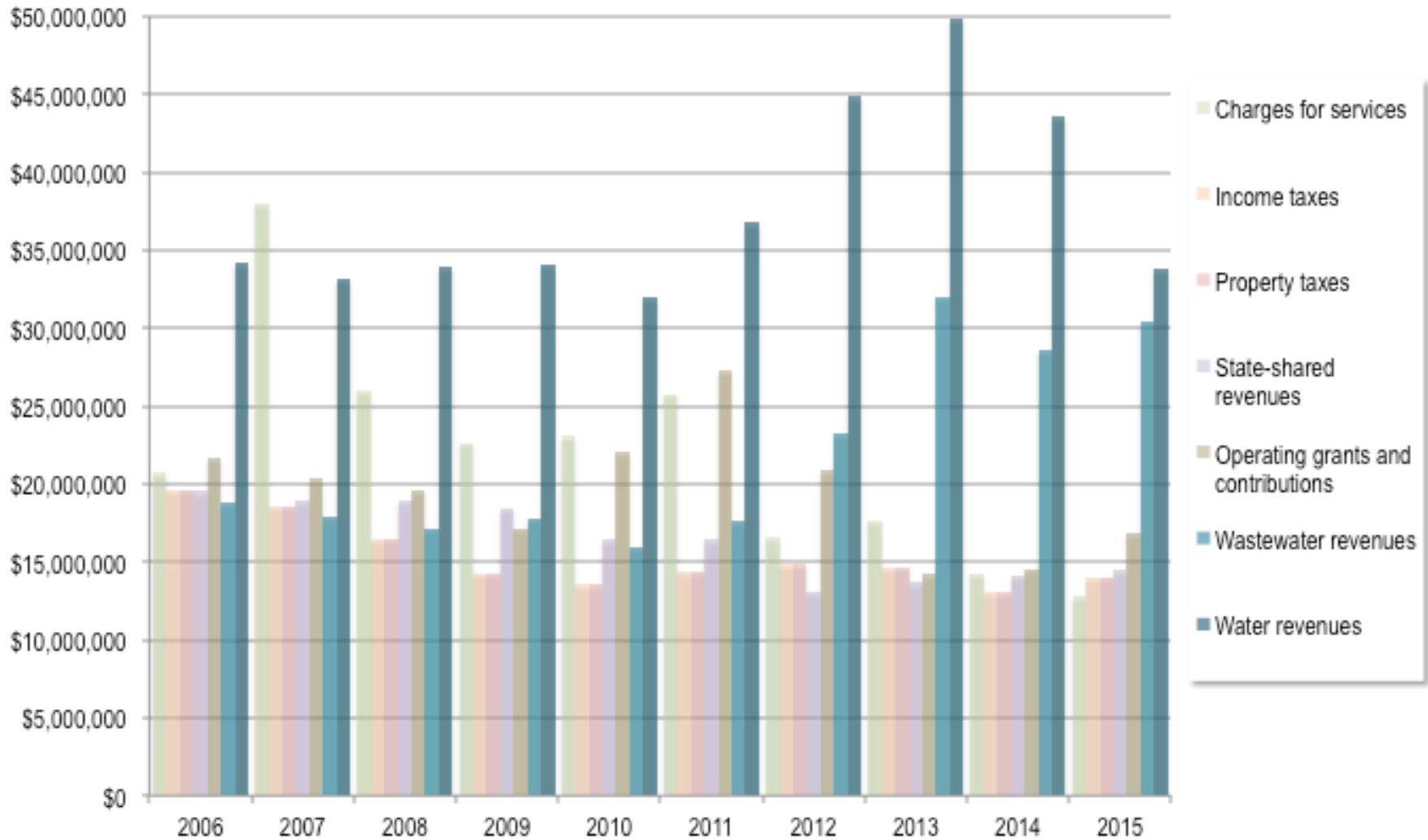
- Combined infrastructure needs of \$1 trillion need over next 25 years
- Operating cost pressures
  - ▶ Labor, energy, chemicals, and purchased water
  - ▶ Quality standards and compliance costs
  - ▶ New contamination threats (pharmaceuticals, fracturing)
  - ▶ Water supply constraints
  - ▶ Population growth (locational)
- Move to full-cost pricing
  - ▶ Historic underpricing (“willingness to charge”) & loss of subsidies (publics)
  - ▶ Fiscal necessity for local government
- Flat or declining water usage (pricing, programs, population, recession)
  - ▶ Usage decline in legacy cities is acute and resulting in excess capacity
  - ▶ Efficiency makes prices go up but costs make bills go up

## Water funding under Flint's city charter (1929, as amended)

- “We, the people of the City of Flint, desiring to place the management of the affairs of the city on a strictly business basis and to secure to the tax-payers an economical and efficient city government, do adopt this charter.”
- Section 197. Water Service Funds. No person, firm, or corporation or association shall be allowed free water service. There shall be no discrimination in rates except as an inducement for the prompt payment of bills. Payment for service shall be made to the City Treasurer. Funds derived from the sale of water may be expended for any purposes incident to the supplying of water including the construction, maintenance and extension of the sanitary sewer collection and disposal system, except that water funds shall not be used for the construction and maintenance of house connections to the sanitary sewage disposal system, nor for the construction of lateral sanitary sewers. **Water funds may not be used for any other purposes and shall be kept separate and not co-mingled with other City funds.** Water funds may be used for sanitary sewer purposes as provided by this section only after provision has been made for water system, maintenance, operating, depreciation reserve and obligations previously incurred pertaining to the water system.”
- “Section 197-A. Transfer of Water Funds. The City Commission shall have the power to transfer the sum of \$125,000 within two years after the approval of this amendment, from the surplus water fund, to the general fund, to be used for general city purposes.”

# Revenue sources in Flint (CAFR)

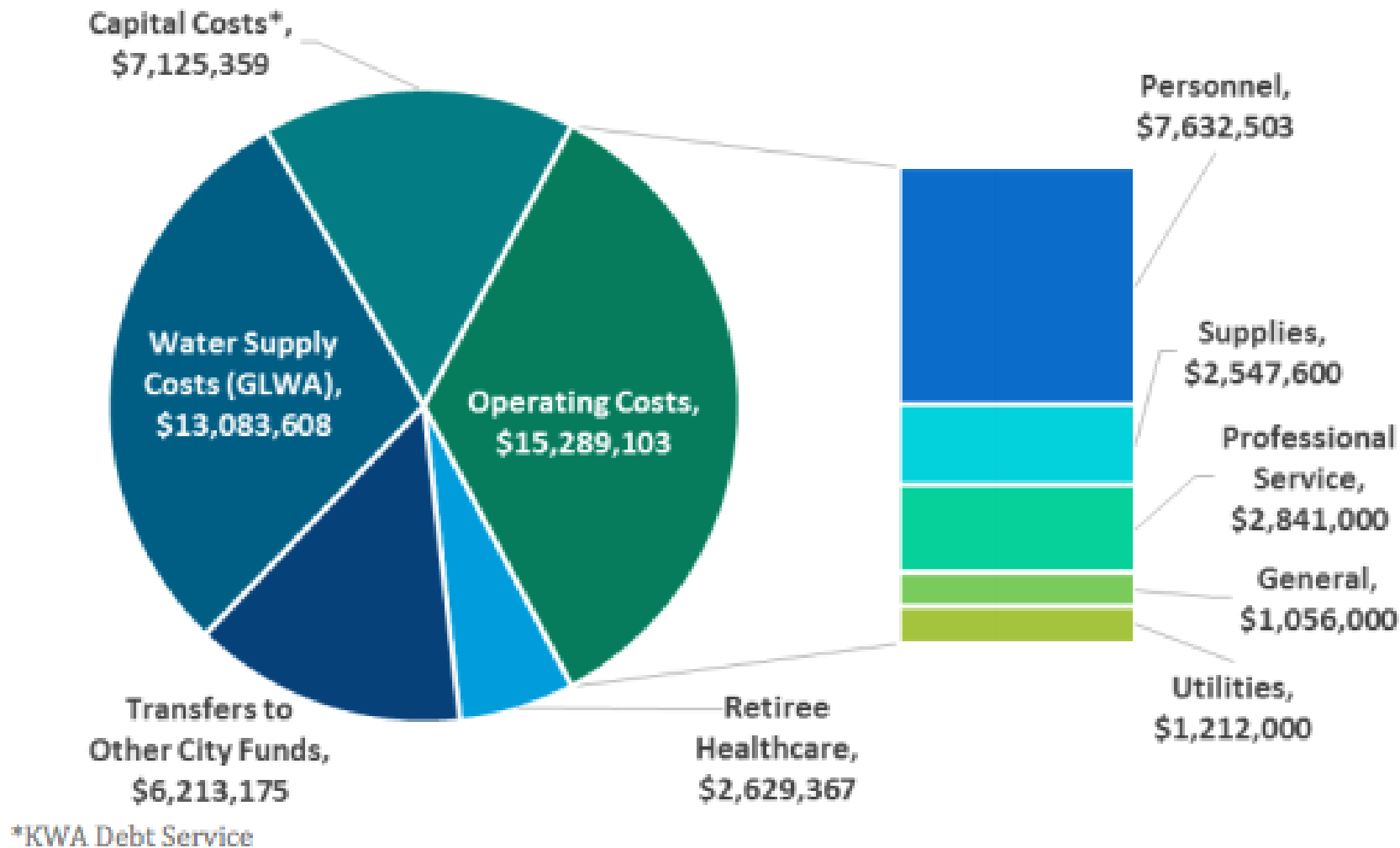
Revenue sources in Flint





# Cost and rate drivers (Raftelis, 2016)

**Figure B.2: FY 2017 Operating and Capital Costs by Type**



# Water bills (Raftelis, 2016)

**Figure ES.5: Flint Water Bill, Typical\* Customer (Historical)**



\*The typical customer uses 5 hundred cubic feet (CCF), or 3,740 gallons of water per month

\*\*Per Emergency Manager Order No. 31

\*\*\*Per Shears vs. City of Flint Decision

# Affordability policy solutions

- Payment assistance
- Arrearage forgiveness
- Budget billing
- Bill timing (monthly)
- Lifeline rates
- Disconnection policies
- Service limiters (time, flow)
- Smart meters (tamper resistant)
- Prepaid meters (self-rationing, self-disconnection)
- Tailored conservation programs and dynamic pricing
- Property value based fire-protection charges
- Coordinated outreach and counseling



# Water rate policies: some ideas for Flint to consider

- Convert tariff metrics from cubic feet to gallons
- Implement a stable multi-year but flexible rate plan (3 to 5 years)
  - ▶ Assess cost allocation between residential and nonresidential sectors
- Eliminate noneconomic (unjustified) transfers to general funds
  - ▶ All subsidies and transfers should be justified and transparent
- Design rates to give customers some control over bills (reduce fixed charge)
- Consider customer payment incentives
  - ▶ Prepayment discount
  - ▶ Timely payment discount
- Establish assistance programs for low-income households
  - ▶ Fixed charge waiver
  - ▶ Vouchers
  - ▶ Charitable assistance funds
- Cost-control incentives
  - ▶ Management bonuses for meeting targets
  - ▶ Profit-sharing dividends to customers when revenues exceed costs