

# Drinking Water Infrastructure Needs

*Legislative Water Commission*

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# EPA Needs Survey

**EPA and States  
evaluate  
infrastructure needs  
every 4 years**



# Compliance with Safe Drinking Water Act

**Purpose - Provide safe drinking water**

**>100 contaminants**

**Lead & copper,**

**Microbes**

**Nitrate**

**Solvents, etc.**



# MN Drinking Water Needs Survey

Estimated 20 year needs =  
\$7.4 billion

## Basic transmission and distribution needs

Replacing aging watermains, (looping) account for 62% of needs

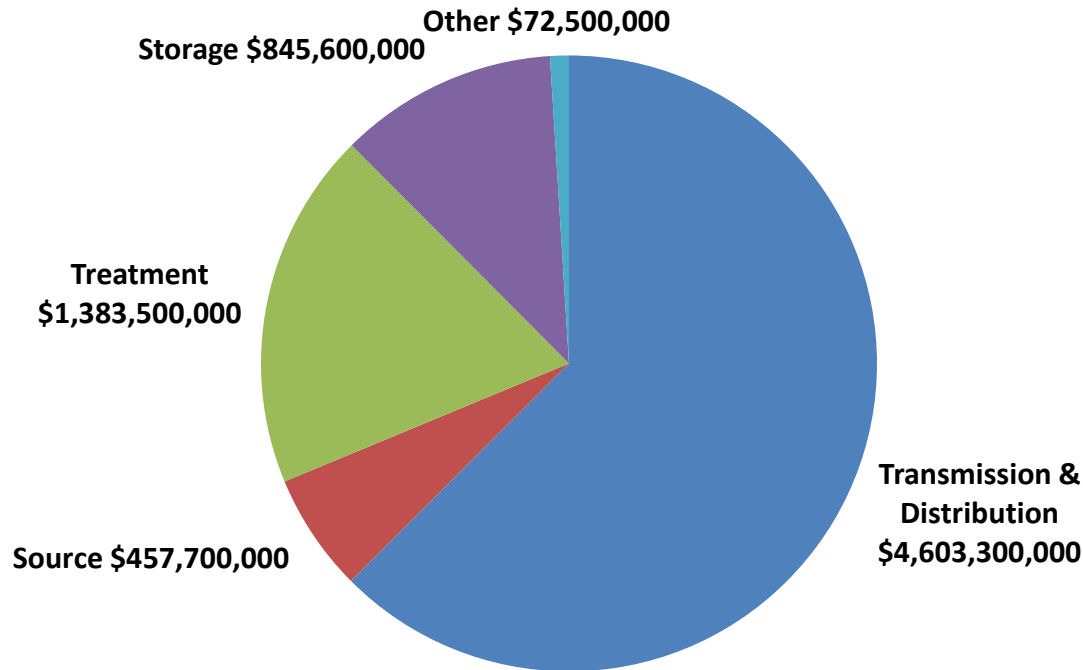
## Aging treatment systems

# 20 Year Drinking Water Infrastructure Needs

## 20 Year Drinking Water Infrastructure Needs for Minnesota by Project Type

Total Need - \$7,362,600,000

(Based on 2011 Drinking Water Infrastructure Needs Survey and Assessment)



# Current Water Demands

- *Funding requests for projects over the next 5 years*

**Drinking Water Revolving Fund Project Priority List**

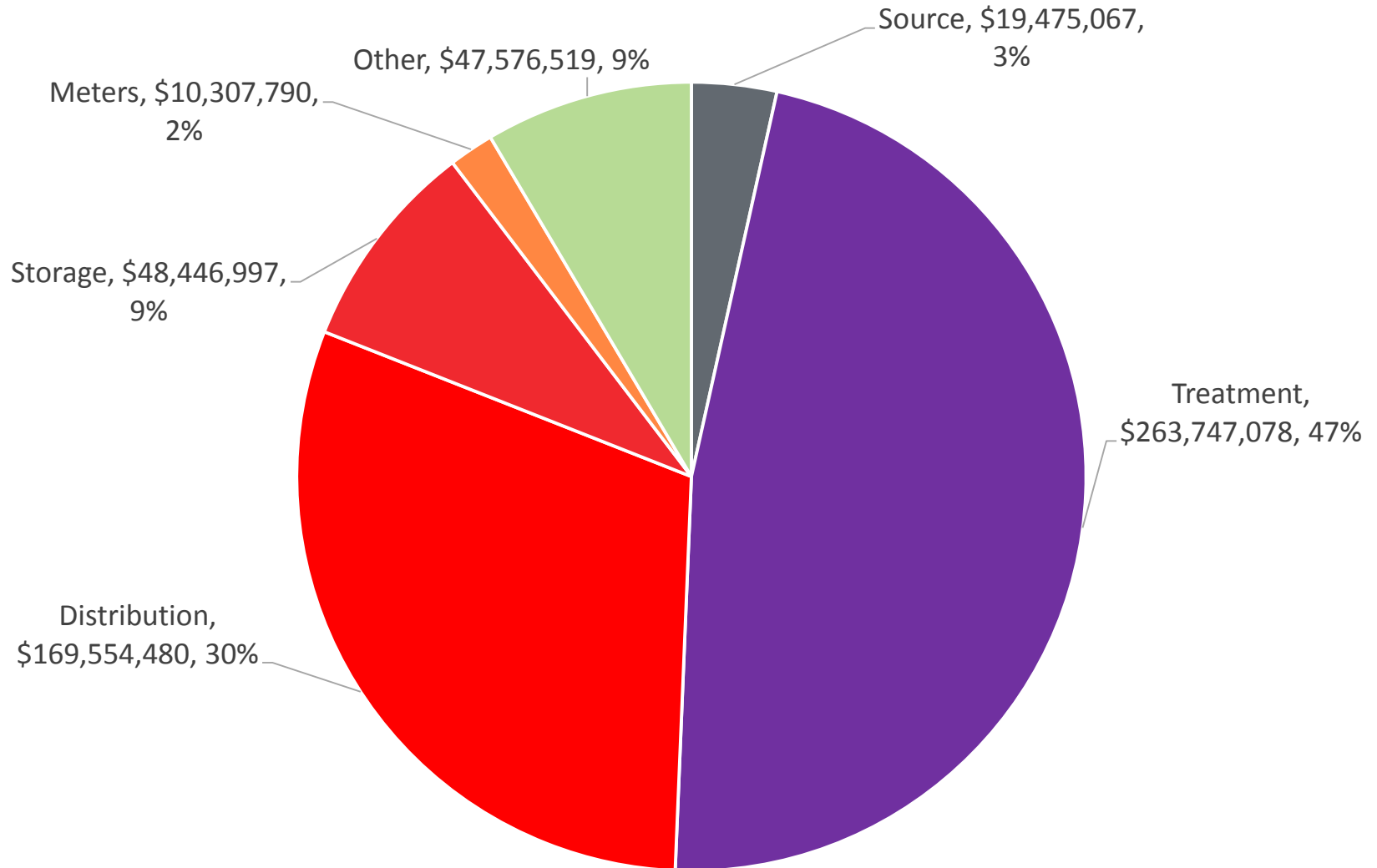
**331 projects totaling \$559 million**

**(271 projects totaling \$393 million last year)**



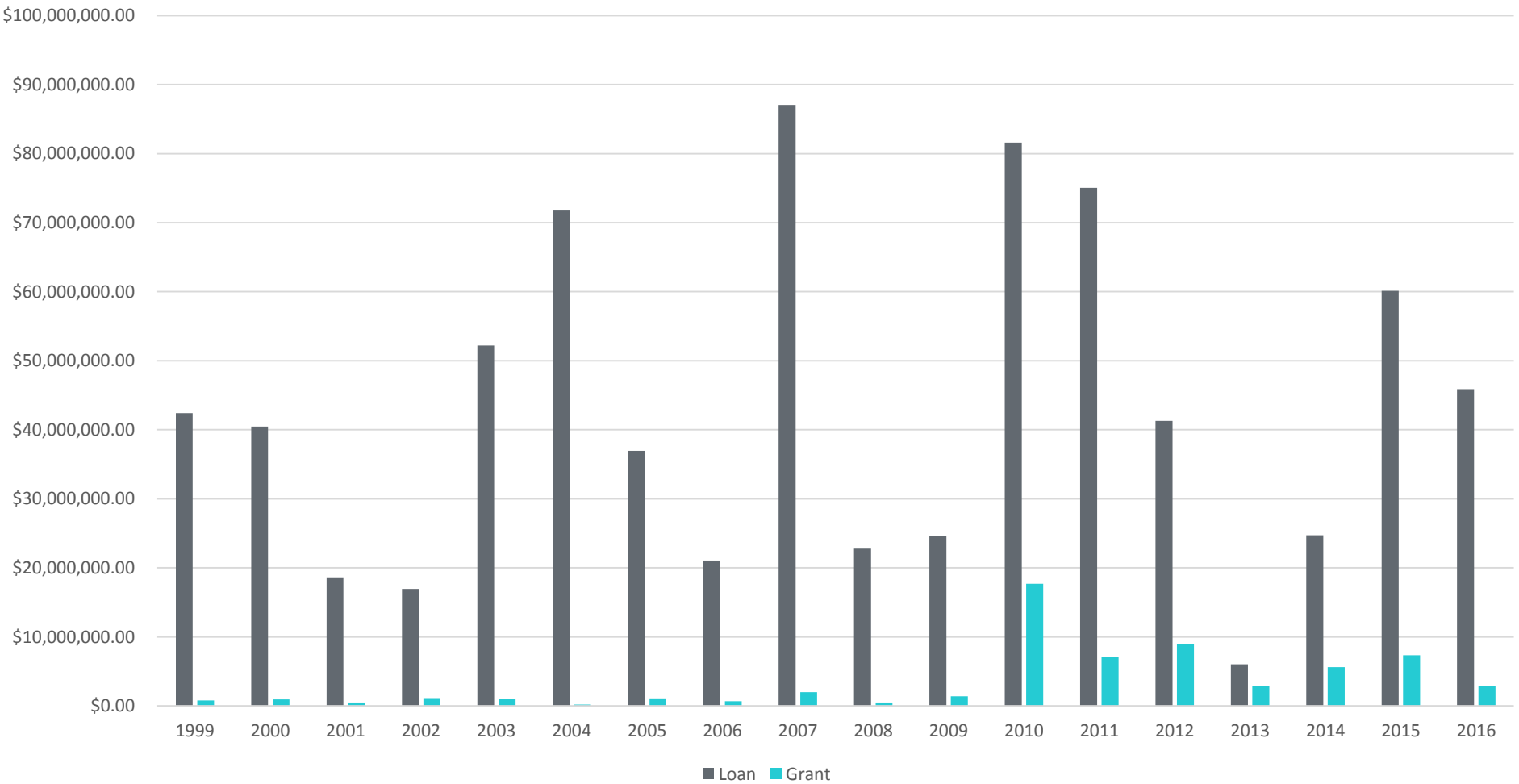
# 2017 DWRP PPL Breakdown by Project Type

(331 Projects - Totaling \$559M)



# Drinking Water Revolving Fund

## Loans & Grants by Year





# Current Funding Options

## Federal

USDA Rural Development grants and loans

## State – Public Facilities Authority

Drinking Water State Revolving Funds

Low interest loans

Water Infrastructure Fund (WIF)

Affordability Grants – 1.2% of Median Household Income

Point Source Implementation Grants (PSIG)

## Local

Pay as you go through system revenues

Market rate financing



# Drinking Water Infrastructure Issues

## Public Health Protection

### Watermain breaks

Allow contaminants to enter system

Water shut off till repairs completed or

do not drink?

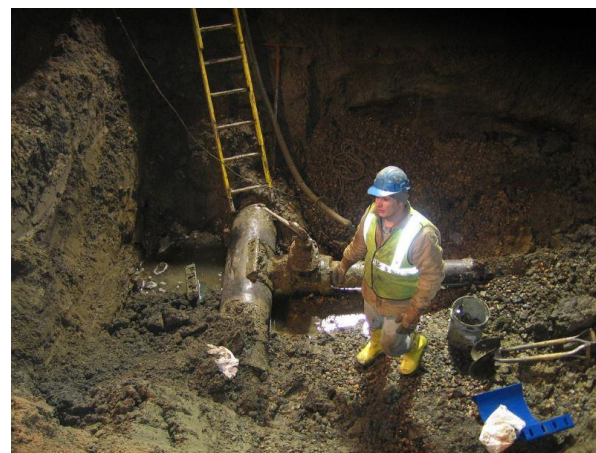


# Infrastructure

## Special Challenges

### Watermains

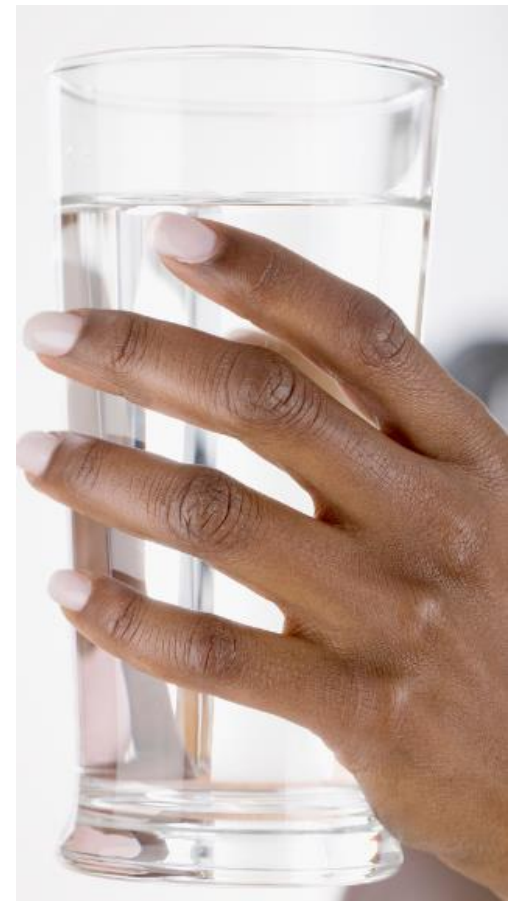
- **Costs to businesses**
- **Winter repairs**



# Drinking Water Infrastructure Issues

## Public health protection

- **100+ SDWA Contaminants**
  - Nitrate
  - Bacteria
  - Organic and Inorganic Chemicals
- **Unregulated Contaminants**



# Options for dealing with contaminants

Treatment  
New Wells





# Lead

## Key Issues and Interests

- **Main concerns**
  - Lead Service Lines (LSL)
  - Lead solder and plumbing fixtures
- **MN approach**
  - Corrosion control
  - Source assessment assistance
  - MDH gets results of testing
  - PWS homeowner notifications ASAP
  - Education
- **Schools and daycares**



# Other Infrastructure Challenges

## EPA and MN health based guidelines

**Contaminants of  
emerging concern**

**Unregulated  
contaminants**



# Other Infrastructure Challenges

## Unregulated Contaminants

**Increasing ability to detect more contaminants at lower concentrations**

**Balancing health effects and costs associated with contaminants**

What do we do if contaminants present but unregulated?

**Public's increasing concern with drinking water quality/safety and perception of risk**





# Public Health Vision for Water

## Water and Health Equity

1 in 5 in Minnesota have private well

- For those who drink from smaller public water supplies with limited resources



4 in 5 drink from public water supplies



# Public Health Vision for Water

## Health Equity

- **Some communities challenged financially**
- **Criteria for affordability – 1.2% of Median Household Income**
- **Minimal grants available – WIF will help some**
- **Asset management key for sustainable system**
  - Construction AND operation and maintenance costs a factor
  - Proper water rates needed to support system
- **Inability to afford safe drinking water a health equity issue**

# Source Water Protection

## Water and Health Equity

### Issue:

- **Paying to remove contaminants introduced by others**



# Other Infrastructure-related Challenges

**Issues:**

**Shortage of operators**

**Asset management**

Larger systems  
common, small  
systems less so



# Sustainable Utilities

## Local responsibilities

**Water systems are owned, built, operated  
governments**

**What are the challenges that local governments face?**

**Operational Issues**

**Level of Service**

**Rate Setting**

**Equipment maintenance and replacement**

**Capital Improvements**



## Asset Management

**What tools do utilities use to track the condition, useful life,  
criticality and replacement schedules of system components?**

**What can the state do to assist?**

Questions?