

# Financing Options for Stormwater Infrastructure: Making the Most of Measure W

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North Santa Monica Bay Watershed Area  
Committee Meeting

Caroline Koch, Water Policy Director  
WaterNow Alliance



## ENGAGE

our growing network and connect them to opportunities, ideas, data, resources and one another

## ADVOCATE

for a sustainable water future by eliminating barriers and advancing solutions through our policy work

## DEMONSTRATE

success by showcasing strategies that communities can replicate and scale

# OUR MISSION

WaterNow is a nonprofit network of local water leaders championing sustainable, equitable, affordable, and innovative water solutions in their communities



# WHAT DO WE MEAN BY SUSTAINABLE?

Providing safe, healthy, and affordable water services for people while preserving the integrity of water resources and the environment for future generations





# WHAT DO WE MEAN BY EQUITABLE?

Water equity means universal access to secure, affordable, safe, and healthy drinking water, and wastewater and stormwater management services.

Equitable water infrastructure investment should support the long-term sustainability of our waterways, water systems, and utilities





[tapin.waternow.org](http://tapin.waternow.org)

- ✓ Creates pathways and opportunities to invest capital at large scale in localized infrastructure
- ✓ Expanding the definition of water infrastructure to include distributed solutions
- ✓ Putting distributed installations on non-utility owned properties in multi-year capital plans along with conventional counterparts



# WHAT IS ONSITE, LOCALIZED, DISTRIBUTED WATER INFRASTRUCTURE?

- ✓ Distributed over many properties, public and private
- ✓ Not owned and operated by city/utility/water agency
- ✓ Operate in concert with built infrastructure
- ✓ Paid for by the utility

# MEETING STORMWATER CHALLENGES WITH DISTRIBUTED GSI

Strategies and technologies that manage stormwater where it falls, makes beneficial use of rainwater & improve water quality



**Bioswales**

Engineered landscape elements designed to increase infiltration of stormwater to the groundwater basin and filter out pollutants.



**Blue roofs**

A non-vegetated roof intended to store stormwater in temporary ponds, then gradually release the water to mitigate runoff.



**Constructed wetlands**

Man-made wetlands that mimic the stormwater capture and nutrient load reduction benefits of natural wetlands and treat waste and stormwater with specific vegetation, soils, and bacteria instead of chemicals.



**Green roofs**

Vegetated roof with a layer of soil atop a drainage system to filter contaminants, absorb rainfall and delay runoff to reduce stress on stormwater systems, lower energy bills, reduce heat island effects and improve air quality.



**Green streets**

Integration of vegetated areas into street design to facilitate storage, infiltration, and evapotranspiration of stormwater.



**Land conservation**

The conservation of riparian areas, wetlands, steep hillsides and other open spaces to provide natural stormwater retention, source water quality protection, and groundwater recharge.



**Permeable pavement**

Permeable pavers and porous concrete surfaces that allow water to penetrate pavement and soak slowly into the ground rather than run off into city drains to reduce stress on stormwater systems.



**Rainwater harvesting**

Systems to capture precipitation for use in outdoor landscaping to use in place of drinking water.



**Urban tree canopies**

The planting of trees to absorb stormwater and reduce heat island effects.

# BIOSWALES



# PERMEABLE PAVEMENT



# GREEN ROOFS & RAIN GARDENS



# NATIVE LANDSCAPING & TURF REPLACEMENT



# LEAK DETECTION DEVICES



# HIGH EFFICIENCY APPLIANCES & FIXTURES



# PRIVATE LEAD SERVICE LINE REPLACEMENTS



# SCALING INVESTMENT IN DISTRIBUTED SYSTEMS

Conventional thinking is that you can only pay for distributed green infrastructure out of annual operating cash



But annual rate revenue is often not sufficient to cover large scale investments

# WHAT CAN WE BORROW TO DO?

- Grey Infrastructure:
  - tunnels
  - pipes
- Distributed Infrastructure



# WHY ARE WE TALKING ABOUT DEBT FINANCING DISTRIBUTED OPTIONS?

- ✓ Big things, e.g., pipes, plants, and distributed, onsite solutions, are in multi-year capital plans
- ✓ To scale up distributed infrastructure you need to add it to your multi-year capital plan
- ✓ Most large capital programs are debt financed



# BENEFITS OF DEBT FINANCING DISTRIBUTED SOLUTIONS



- ✓ Practical
- ✓ Match costs with benefits
- ✓ Invest for implementation at scale
- ✓ Intergenerational equity
- ✓ Access to efficient and inexpensive financing

# APPLYING CAPITALIZATION & DEBT-FINANCING CONCEPTS

**Example:** Your utility has a \$70 million budget. You'd like to invest in a major GSI grant program that will cost \$10 million

## Using Annual Operating Cash

- Raise rates in Year 1 by ~14%
- Pay for program in Year 1
- Implement program in Year 1
- Benefits over 20 years

## Using Debt

- Raise rates in Year 1 by ~1%
- Pay back over 20 years
- Implement program in Year 1
- Benefits over 20 years

# BUT ISN'T DEBT EXPENSIVE?

- ✓ Rates so low—almost free money
- ✓ Current rates for “AAA” rated is 3.95%
- ✓ Inflation rates:
  - 2018 – 2.4%
  - 2019 – 1.8%
  - 2021 – 4.7%
  - 2022 – 8.3%



# OTHER COMMON CONCERNS DEBT FINANCING DISTRIBUTED INFRASTRUCTURE - MYTH BUSTING

“I don’t like debt, it’s impractical and inappropriate”

“It may follow the rules, but it’s not the proper use of debt financing”

“Distributed infrastructure is not infrastructure with a useful life”

“This spending will not create an asset that will meet federal tax guidelines”

# THREE GATES OF SPEECH

Before you speak, let your words  
pass through three gates – Is it...

True?

Necessary?

Kind?

# THREE GATES OF DEBT FINANCING

Before you can issue debt, you have to pass through three gates

Legal authority?

Tax law compliance?

Appropriate accounting treatment?

# LEGAL AUTHORITY FOR DEBT FINANCING DISTRIBUTED GREEN INFRASTRUCTURE



- ✓ For governmental entities authority is required
- ✓ Exercise of authority is subject to
  - ✓ Substantive requirements
  - ✓ Procedural requirements



# LEGAL AUTHORITY FOR DEBT FINANCING

## SOURCES OF REQUIREMENTS

- State Constitution
- State Statutes
- Municipal Charter
- Existing Debt Contracts



# DGI ANALYSIS APPLYING KEY TERMS

Is GSI, e.g., bioswale, rain garden, curb bump out, part of the “System”?

- ✓ Can the system be viewed expansively?
- ✓ Is benefit to the system sufficient?
- ✓ Does the municipality need some sort of control?
- ✓ Does the municipality need to own something?

# CALIFORNIA AUTHORITY TO ISSUE MUNICIPAL BONDS

Financing scope & requirements depends on issuing entity and authority, e.g.,

- ✓ Revenue and GO bonds may finance regional- and parcel-scale GSI
- ✓ Ownership or control of financed projects depends on bond type and issuing entity
- ✓ Voter approval requirements vary by bonding authority used and issuing entity



# POOLED BONDS

California municipalities may be eligible to issue pooled bonds if...



1. Sole service provider in the area
2. Serve > 1,000 connections or 5,000 in total population
3. Have independent rate setting authority
4. Have authority to issue revenue bonds
5. Bond amount between \$1M - \$30M

# THREE GATES OF DEBT FINANCING

Before you can issue debt, you have to pass through three gates

Regulatory  
authority?

Tax law  
compliance?

Appropriate  
accounting  
treatment?

# ACCOUNTING RULES ALLOW US TO DEBT FINANCE A WIDE VARIETY OF ITEMS



- ✓ Own property in the traditional way-own and operate asset
- ✓ “Own” through contracts and easements
- ✓ Fund by using Regulated Operations accounting

# CHOICES FOR DEBT FINANCING – STANDARD APPROACH



Acquire rights in programs/projects, e.g., contracts, easements

- ✓ Las Vegas Turf Buyback
- ✓ Milwaukee

# SNWA: GOING BIG ON TURF REPLACEMENTS



## Goal

- Turf change-outs on private property to conserve water

## Implementation to Date

- 152 billion gallons / 467,000 AF saved
- 200 million square feet of turf converted

## Total Rebate Investments

- \$260 million (as of 2021)

## Funding Sources

- Combination of rate revenue and SNWA-issued revenue bonds



# MMSD: GOING BIG ON GREEN INFRASTRUCTURE



## Goal

- Capture 740 million gallons of stormwater per storm with GI

## Implementation to Date

- Projects capturing 43 million gallons of stormwater per storm
- Helped reduce CSOs by 96%

## GI Investments

- \$20 million (2020-2023)

## Funding sources

- Combination of rate revenue and MMSD-issued climate bond



# CHOICES FOR DEBT FINANCING – ALTERNATIVE APPROACH



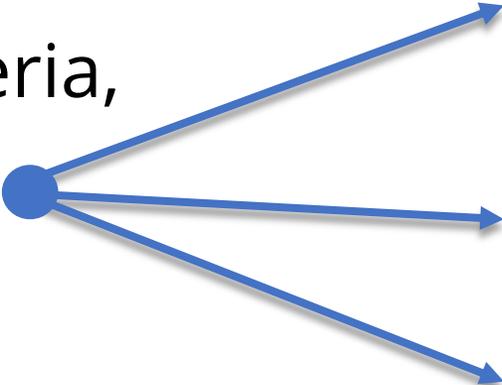
Treat investments as regulated assets

- ✓ LADWP – Turf rebates, etc.
- ✓ Seattle – GSI rebates
- ✓ Denver – Lead line replacement

# WHAT ARE REGULATED OPERATIONS?

Regulated Operations accounting does not require governmental ownership or control over a tangible asset

If you meet these criteria,  
costs incurred =  
**Regulatory Assets**

- 
- Rates established by the entity's governing board with legal authority
  - Rates designed to recover the cost of specific regulated activities
  - Reasonable to assume that rates will recover those costs and can be collected from customers

# WHERE DID REGULATED OPERATIONS COME FROM?

- 
- 1982 – FASB #71
  - 2010 – GASB #62 paragraphs 476-500
  - 2018 GASB Implementation Guide



# WHY IS THIS REGULATED OPERATIONS APPROACH IMPORTANT?

- ✓ Create an asset without ownership
- ✓ Provide funding for grants or rebates for things like permeable pavement or turf replacement on private property
- ✓ Pay for things you don't own and operate



# WILL MY FINANCE PEOPLE KNOW ABOUT THIS RULE TO CREATE A REGULATORY ASSET?

- Exception to general accounting rules
- Not taught
- Traditional accounting rules require ownership and control
- Most often been used in the power industry—not water, wastewater, stormwater



# LADWP: WATER CONSERVATION & CAPTURING RAINWATER

## Goal

- Variety of water efficiency and stormwater capture rebate programs

## Implementation to Date

- Saves 25,000 acre-feet/year

## Total DI Investment

- \$160 million (as of 2020)

## Funding sources

- Combination of operating revenues and bond financing



# SEATTLE PUBLIC UTILITIES & KING COUNTY: BEING 'RAINWISE'

## Goal

- Manage 700 million gallons/year runoff by 2025

## Implementation to Date

- 410 million gallons/year as of 2020

## Total DI Investments

- ~\$122 million (as of 2019)

## Funding sources

- Combination of operating revenues and bond financing



# DENVER WATER: GETTING THE LEAD OUT

## Goal

- Replace 64,000-84,000 lead service lines by 2035

## Implementation to Date

- 4,500 lead service lines replaced in 2020

## Estimated Cost

- \$304 - \$556 million over 15 years

## Funding sources

- Combination of rates, loans, and grants
- Future bond financing





QUESTIONS?





# THANK YOU

Caroline Koch, WaterNow Alliance

[cak@waternow.org](mailto:cak@waternow.org)

