

# Reinventing the Water Grid

Successes, Challenges, and Unintended Consequences

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# Water at GreenBuild Why?



# The Water Conservation Success Story

## THE POWER OF PLUMBING + POLICY

CELEBRATING 20 YEARS OF WATER EFFICIENT TOILETS

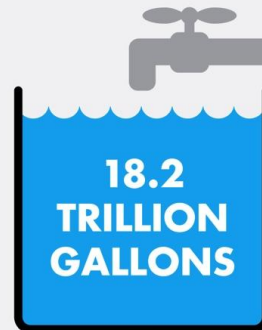
**54% LESS**  
WATER USED BY  
EVERY TOILET  
INSTALLED  
AFTER 1994



BEFORE

&

AFTER



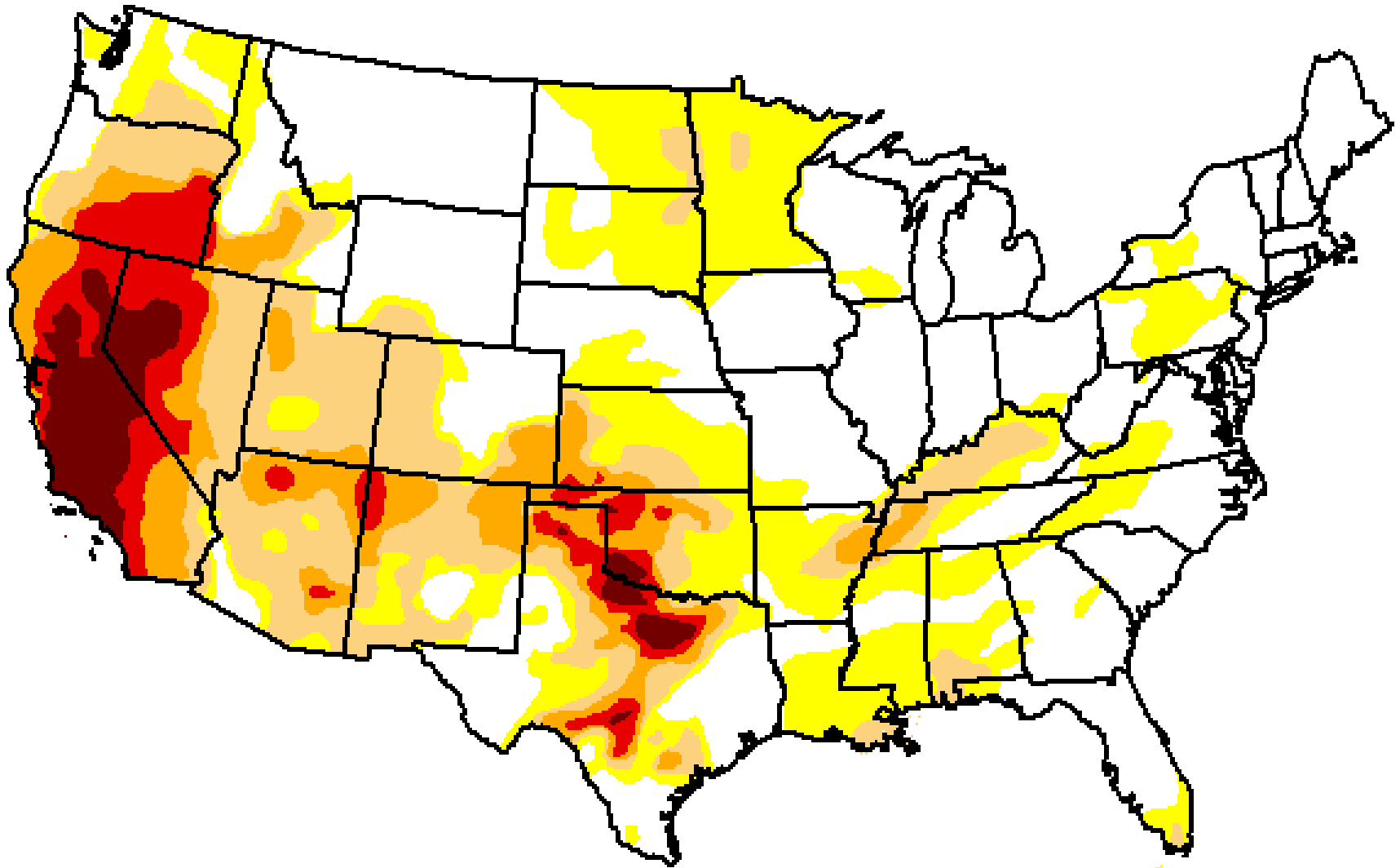
SAVED FROM MORE EFFICIENT  
TOILETS MANDATED BY THE  
ENERGY POLICY ACT OF 1992

ENOUGH WATER SAVED TO SUPPLY



NEW YORK CITY + CHICAGO + LOS ANGELES  
FOR **20 YEARS\***

Current water use is non sustainable



## Current water use is non sustainable

# February 17, 2015

(Released Thursday, Feb. 19, 2015)

Valid 7 a.m. EST

*Drought Conditions (Percent Area)*

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
<b>Current</b>	45.26	54.74	32.13	16.44	8.60	3.37
<b>Last Week</b> <i>2/10/2015</i>	47.51	52.49	29.00	16.18	8.49	3.27
<b>3 Months Ago</b> <i>11/18/2014</i>	52.78	47.22	29.45	17.13	8.82	3.79
<b>Start of Calendar Year</b> <i>12/30/2014</i>	53.20	46.80	28.68	16.93	8.96	2.54
<b>Start of Water Year</b> <i>9/30/2014</i>	52.22	47.78	30.57	18.66	9.41	3.85
<b>One Year Ago</b> <i>2/18/2014</i>	46.79	53.21	35.73	21.26	7.26	1.14

*Intensity:*



D0 Abnormally Dry



D3 Extreme Drought



D1 Moderate Drought



D4 Exceptional Drought



D2 Severe Drought

# Challenges

***Watershed level: Supplies***

Overdrafting available supplies

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## ***Building Level***

Codes and current practices are hard to change

Diminished flow of treated water

Dual piping

# Challenges

## ***Watershed level: Supplies***

Overdrafting available supplies

## ***Building Level***

Codes and current practices are hard to change

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## ***Watershed level: Stormwater and Wastewater***

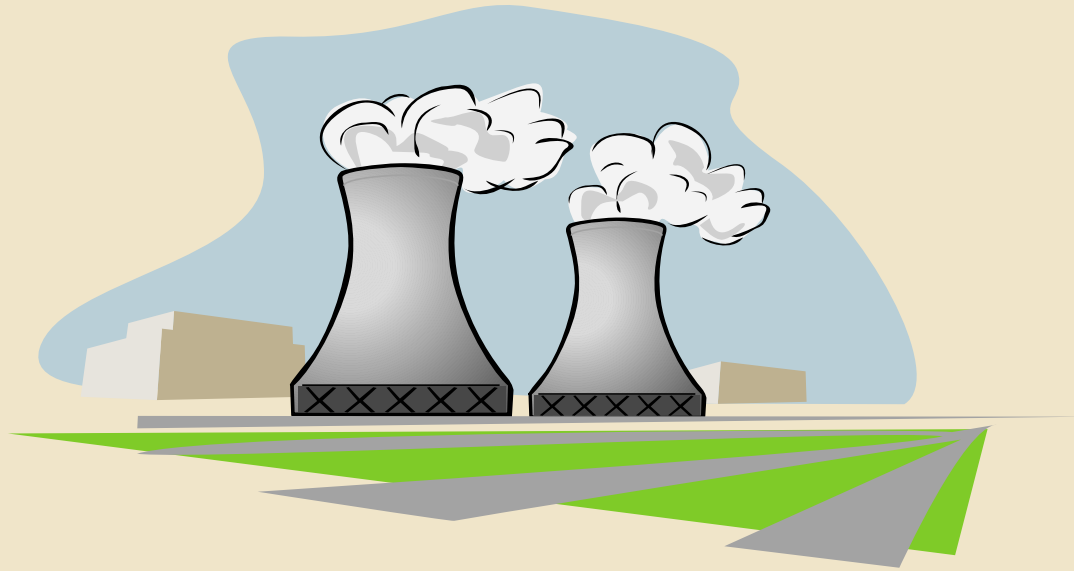
Green / Low impact infrastructure

Decentralized treatment:

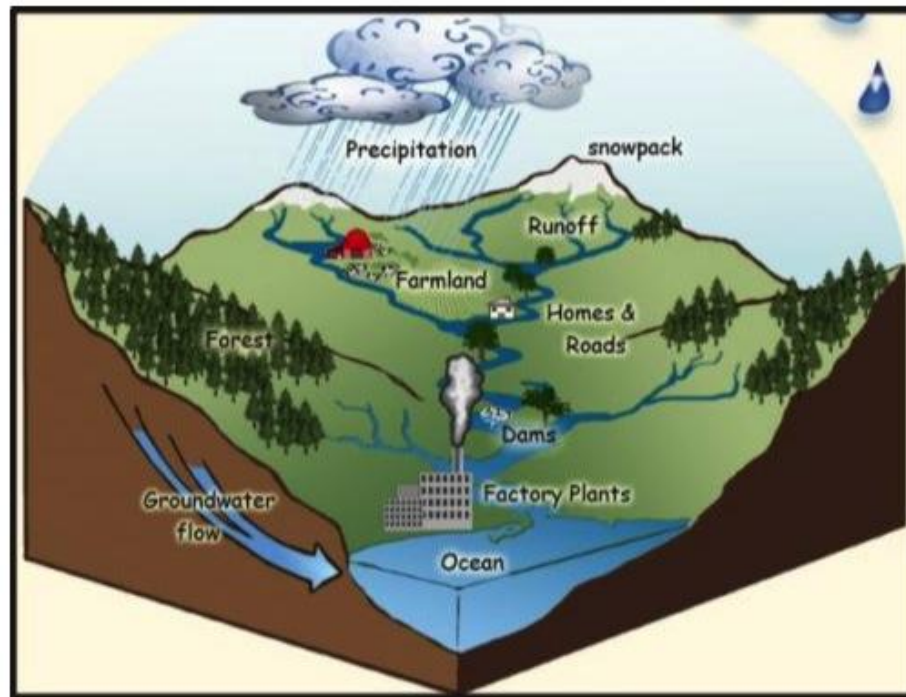
Public health and public acceptance concerns



# Water-Energy Nexus



ed:  
ste it!



Our rivers are losing their baseflow.

# Lake Peachtree



# Lake Peachtree



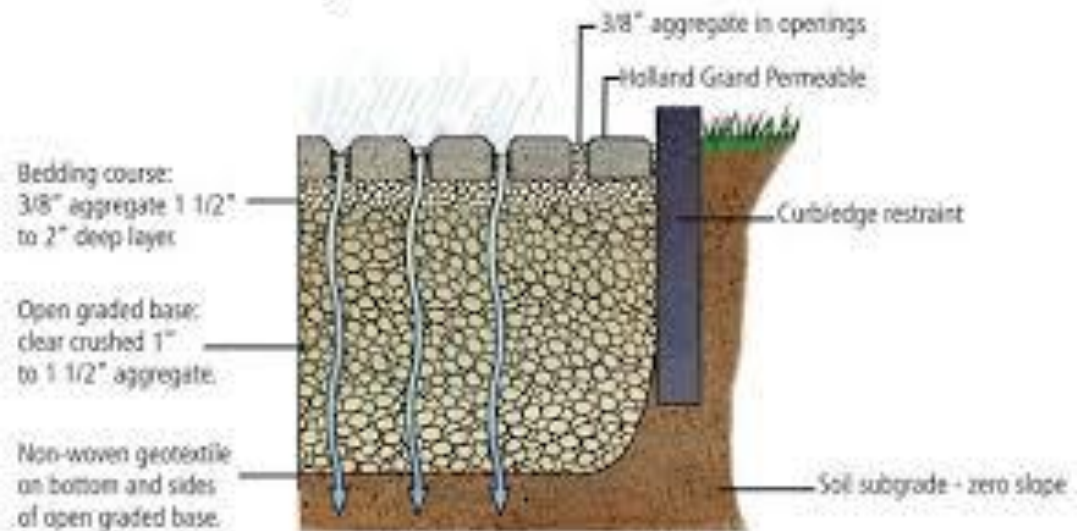
# One Consequence of Reduced Flows



# Green Infrastructure



Typical Permeable Paver Installation



# Smart Sewering



Constructed treatment wetlands that target nutrient and emerging pollutants.