

# **Change is in the Water. Policy, Regulations and Connecting the Dots**



**21st Annual Joint Seminar  
GFL AWMA & GVC NYWEA**

# EPA Today



## EPA's "Back To Basics" Agenda - The three "E's"



### **EPA'S BACK-TO-BASICS AGENDA**

- ✓ Protecting the **environment**
- ✓ **Engaging** with partners
- ✓ Sensible regulations for **economic** growth



*"EPA is returning to its core statutory mission, and focusing on greater value and results. EPA will partner with the states and tribes to ensure a thoughtful approach is used to maximize resources to protect our air, land, and water. And, we will work with EPA staff to effectively use every taxpayer dollar we are entrusted."*

EPA Administrator Scott Pruitt Statement  
4/13/2017

## Cooperative Federalism

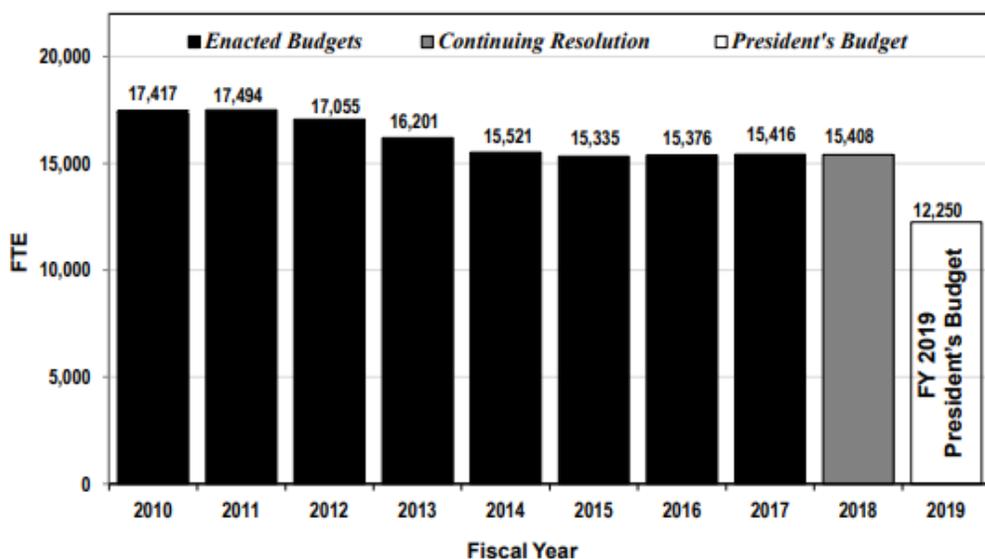
- Recognizing the states and tribes, as applicable, as the primary implementers and enforcers of our environmental laws and programs, and partnering with them to engender trust and maximize environmental results to protect human health and environment.
- EPA will allow the State/Tribe to do whatever they like within the “4 corners” of the law without EPA second guessing it, even if they don’t agree.
- This means there will likely be “different outcomes in different localities”. Additionally, Pruitt has stated that EPA will not be a State/Tribe “enforcement agent”, with an end to the “parent-child” relationship.

## Key EPA People

- Scott Pruitt, Administrator -Former Attorney General for Oklahoma and vocal EPA opponent.
- David Ross, Assistant Administrator for Water - Wisconsin assistant attorney general and director of the Environmental Protection Unit for the Wisconsin Department of Justice.
- Dennis Lee Forsgren, Jr., Deputy Assistant Administrator for Water - former lobbyist.
- Peter Lopez - Region 2 Executive Director - Served as a Member of the New York State (NYS) Assembly, where he served for over 10 years and 6 terms.

# EPA Employee Numbers

**EPA's FTE\* Ceiling History FY 2010 to 2019**



- Since 1999 EPA budget has been flat or decreasing
- More than 14 federal environmental programs have been added or updated since then
- EPA planning to use “lean manufacturing” techniques

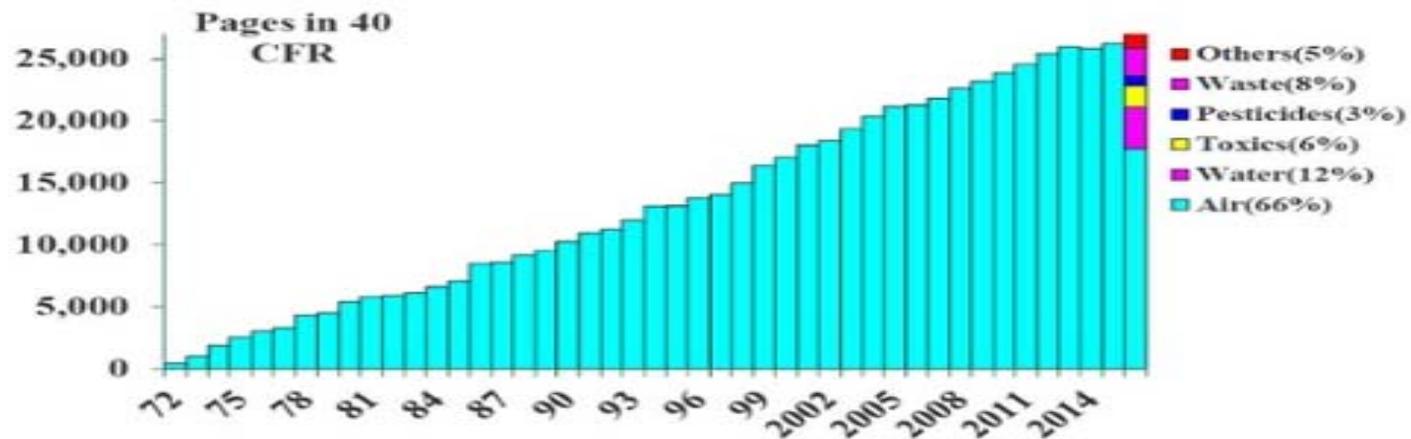
Source: *Shrinking EPA Workforce Has Already Sunk EPA to Reagan-Levels* BNA Environment Reporter 1/11/2018

# Executive Orders Get the Ball Rolling

- **Executive Order 13771** — *Reducing Regulation and Controlling Regulatory Costs*
- **Executive Order 13777** -- *Enforcing the Regulatory Reform Agenda* directs federal agencies to establish a Regulatory Reform Task Force

## Growth of U.S. EPA Regulations

Over 27,000 Pages in 2016!!



Source: U.S. Code of Federal Regulations

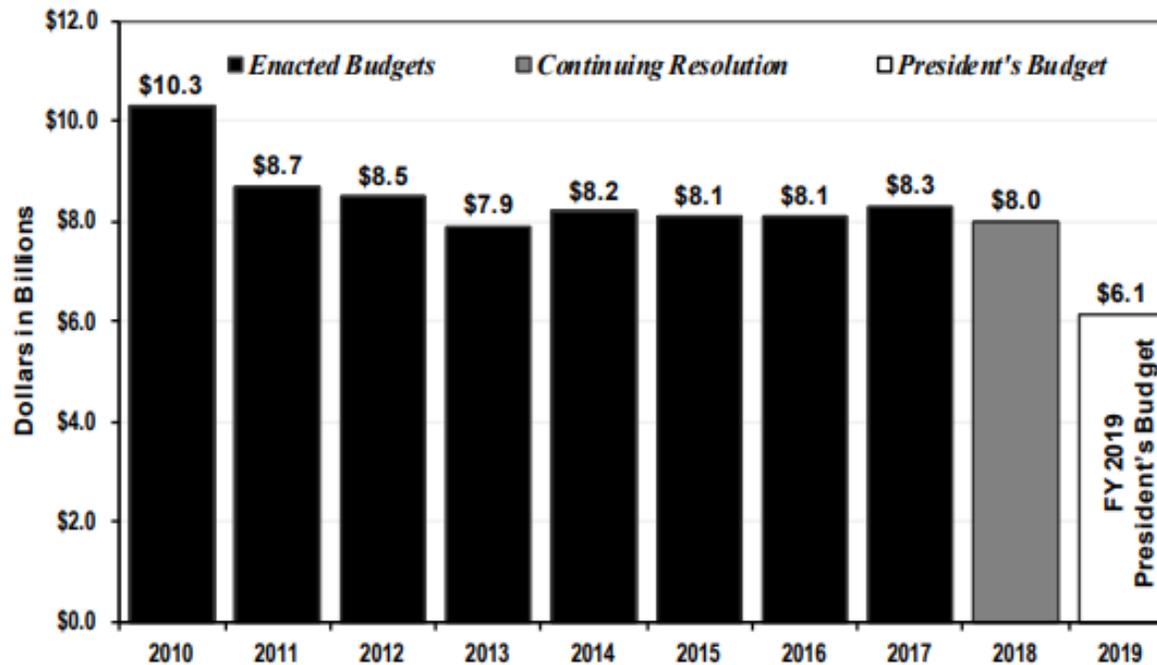
# Deregulation Status

- That directive called for repealing two regulations for every new rule promulgated and imposing a net zero regulatory cost increase for fiscal year 2017, which ended Sept. 30, 2017.
- According to the Fall 2017 EPA Unified Agenda report federal agencies released 22 deregulatory actions for every new rule adopted (67 deregulatory actions and three new regulations).
  - A reported cost savings of \$8.1 billion in lifetime net regulatory cost savings, averaging \$570 million per year.
  - Since January 2017, agencies have withdrawn or delayed 1,579 planned regulatory actions; of these, 635 were withdrawn, 244 were "made inactive" and 700 were delayed.
  - For FY 2018, the administration expects that agencies will issue at least three deregulatory actions for each new rule and will cut more than \$9.8 billion in lifetime costs for regulations (\$686.6 million per year).

**Source:** *White House Deregulation Push Is Just Getting Started*, Law 360 1/12/2018

# EPA Proposed 2018 Budget

## EPA's Enacted Budget FY 2010 to 2019



Notes:

Fiscal Year

All agency totals include applicable rescissions.

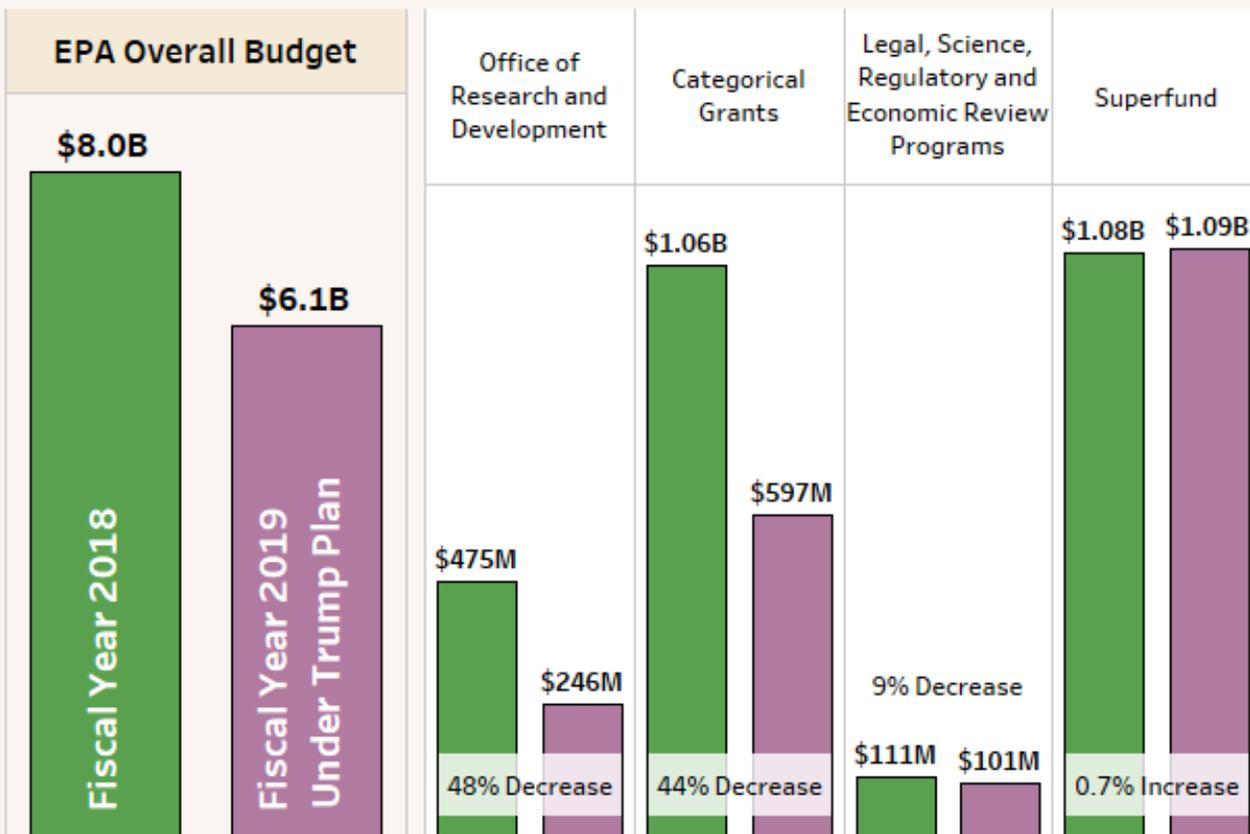
FY 2013 Enacted excludes Hurricane Sandy Relief supplemental funding.

FY 2018 is reported at the Annualized Continuing Resolution funding level.

FY 2019 President's Budget Request includes a proposed \$220.4 M cancellation of funds.

# How the Money Will Be Used – proposed 2019 budget

## EPA Budget Slashed 23% Under Trump Plan



Source: Environmental Protection Agency

- Categorical grants to States to carry out federal water, air, waste, pesticide and toxic substance programs, cut by 44%.
- Research and Development cut by 48%.
- Employee # cut by 20%.

## Permitting

- Pruitt announced on January 31 that “every permitting decision will be made within 6 months.”
- Infrastructure proposal cites 21 months for entire permitting process.
- EPA hadn’t tracked how long it takes to issue any permit.
- Most federal environmental permits are issued by the States.
- EPA has “asked” states to also “streamline” their environmental permitting.

“We built the Empire State Building in just one year. Isn’t it a disgrace that it can now take ten years just to get a minor permit approved for the building of a simple road?”

President Trump 2018  
SOTU 1/30/2018

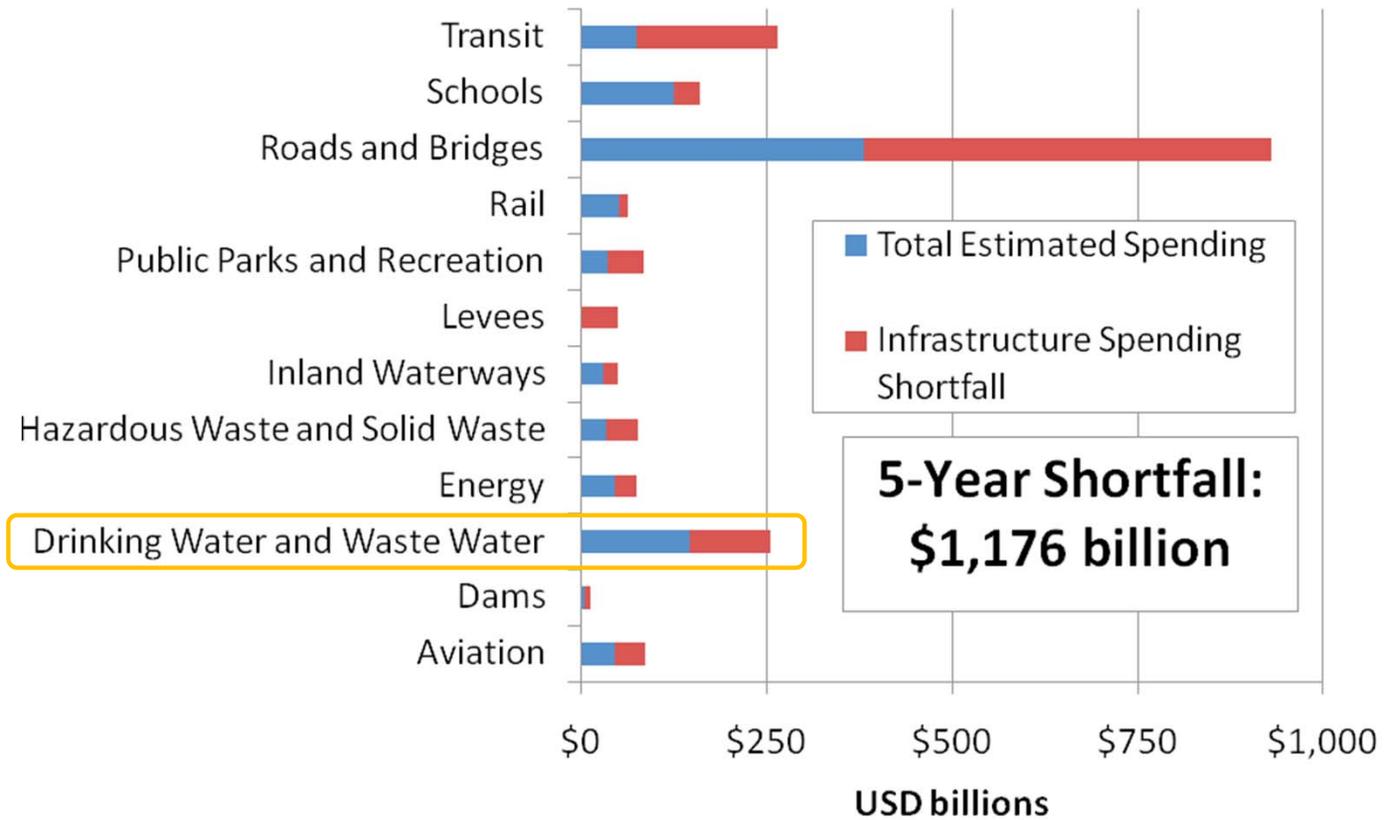
## What are the planning and design implications?

- EPA is being transformed.
- EPA will likely only focus on its “black & white requirements” under law.
- Federal enforcement will be reduced, but there will also be less enforcement people with whom one can discuss altering existing compliance orders.
- States will have the lead on many issues, but they will be getting significantly less federal monies.

# Infrastructure & Municipal Financing



## 5-Year Shortfall in Infrastructure Spending



Source: American Society of Civil Engineers

# Recent Water Related Budget Proposals

## Fiscal Year 2018 Appropriations

Program	FY15 Enacted	FY16 Enacted	FY17 Enacted	House FY18	Senate FY18	Our Request
Clean Water SRF	\$1.45B	\$1.35B	\$1.394B	\$1.144B	\$1.394B	\$2.8B
Drinking Water SRF	\$907M	\$863M	\$863M	\$863M	\$864M	\$1.8B
WIFIA			\$28M	\$30M	\$30M	\$45M
Total Combined	\$2.36B	\$2.213B	\$2.285B	\$2.037B	\$2.288B	\$4.645B

## FY 2019 Proposed Budget

- Funding for EPA water infrastructure would be held flat (almost \$2.3B)
- + Some of the \$20B national infrastructure?
- Regional Great Lakes & Chesapeake Bay protection efforts would see deep cuts
- Funding for state grants to reduce nonpoint source pollution

# Report on Benefits of SRF Funding

## ➤ **Federal Tax Revenues:**

- Every dollar of SRF spending results in \$0.93 in federal tax revenue.

## ➤ **Job Creation:**

- 16.5 jobs are generated for each million dollars in SRF spending — average salary of \$60k/yr.

## ➤ **Economic Benefits:**

- Every million dollars of SRF spending results in \$2.95 million dollars in output for the U.S. economy.

- **Source:** *The Economic, Job Creation, and Federal Tax Revenue Benefits of Increased Funding for the State Revolving Fund Programs*, WEF and the Water Reuse Association April 2016.

## Trump's Infrastructure Program - Recent "Leaked" Document + Legislative Outline

## "Funding Principles"

- \$200 Billion over 10 years, \$20B FY19
- Establish an Infrastructure Incentives Initiatives (50% of Appropriation)
  - Surface transportation, airports, passenger rail, maritime and inland ports, flood control, water supply, hydropower, water resources, drinking water, stormwater, Brownfields and Superfund sites.
  - \$100B over 10 years (DOT, USACoE and EPA)
- Transformative Projects Program – innovative and transformative projects that can't get private funding. (10% of Appropriation - \$20B over 10 years)
- Rural Infrastructure Program – encourage investment to facilitate freight movement, access to reliable and affordable transportation. Create incentive for States to partner with local and private investments. (25% of Appropriation - \$50B over 10 years, block grants)
- Private Activity Bonds – broader categories, less restrictions, must have "public attributes", remove State volume caps, Allow "change of use" when a public project is purchased by private.

# Criteria for Infrastructure Incentive Initiative

“Funding Principles”  
+ Legislative Outline

- Project Scoring (weighted score X % private \$)
  - Dollar value of project (10%)
  - Attraction of non-federal revenue to establish long term funding (50%)
  - Attraction of non-federal revenue to establish long term funding for O&M and rehabilitation (20%)
  - Updated procurements and project deliveries methods (10%)
  - New Technologies (5%)
  - Spur economic and social returns (5%)
  - Includes a look back” period for “new revenues)
- No more than 20% of Project cost
- No State more than 10%

## Water Infrastructure Principles

## “Legislative Outline”

- Expand SRF to privately owned public purpose facilities
- Expand WIFIA to cover flood mitigation, navigation and water supply and brownfields, non-public can apply.
- Streamline WIFIA/SRF procedures, and expand what costs are eligible.
- Expand WIFIA administrative funding and eligible pre-grant costs.

## What are the planning and design implications?

- Both the SRF and WIFIA funds are likely to grow, but the eligible project types are likely to grow faster.
- Most future municipal infrastructure funding will likely be largely from local or State sources.
- To access any new federal money, you're likely need to do additional bond financing and/or attract private money to your project.
- There may be incentives to private money to "flow" to W/WW projects, but these will look to repayments through rates or other sources.

# Waters of the US (WOTUS)



## Waters of the US — 46 Years later but still no court validated definition

- New rule issued in 2015, immediately challenged.
  - Effective date August 28, 2015 but stayed Nationwide
- Executive Order *Restoring The Rule Of Law, Federalism and Economic Growth By Reviewing The "Waters Of The United States" Rule*
- Executive Order urges EPA to go with just “Traditional Navigable Waters” (“Scalia Test”)
  - This would ignore the “Significant Nexus” part
  - of the Rapanos Supreme Court Decision.
- November 2017 Proposed rule to extend effective date by 2 years.
- Currently back to 1986 pre-“Rapanos” guidance – but US Associate Attorney General 1/25/2018 – “noncompliance will not... result in enforcement action.”

“EPA’s so called ‘Waters of the United States’ rule is one of the worst examples of federal regulation, and it has truly run amok, and is one of the rules most strongly opposed by farmers, ranchers and agricultural workers all across our land. It’s prohibiting them from being allowed to do what they’re supposed to be doing. It’s been a disaster.”

President Trump, 2/28/2017

## WOTUS – The Supreme Court Just Upset the Killing of the 2015 Rule

- Ruled that challenges to CWA rules similar to WOTUS has to start at the District Court level.
- Once published, the nationwide stay will evaporate.
- EPA proposed postponing effective date until 2020 in November.
- EPA fast tracked rule finalization and Pruitt signed it on Jan. 31.

## What are the planning and design implications?

- Probably won't affect most existing dischargers.
- New developments, especially on “greenfield” sites may need to go through the USACoE Preliminary and, perhaps, final Jurisdiction Determinations (JD).

# Climate Change



# Water and Climate Are Among the Biggest Global Risks

## Global Risks Report

The 5 risks that will have the biggest impact in the next 10 years

	rank
Weapons of mass destruction	1
Extreme weather events	2
Natural disasters	3
Failure of climate change mitigation & adaptation	4
Water crises	5

Source: Global Risks Perception Survey 2017-2018, World Economic Forum

## Climate Change Includes Severe Weather

- The definition continues to morph as the scientific understanding grows.
- 2017 weather caused more damage than ever before. It has continued into 2018.



Paris - late January



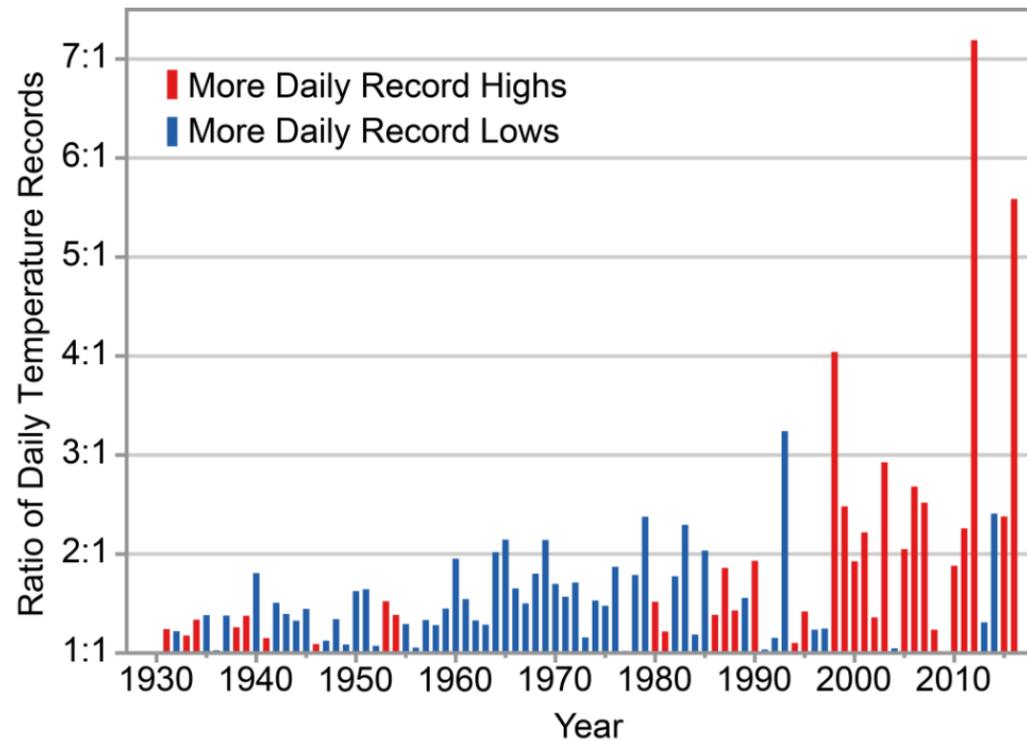
Puerto Rico after Maria



Houston after Harvey

# U.S. Global Change Research Program Climate Science Special Report (Nov. 2017)

Record Warm Daily Temperatures Are Occurring More Often ✘



## Climate Change – Presidential and EPA Actions

- Withdrew the Climate Action Plan
- Withdrew "Preparing the United States for Climate Change"
- Disbanded the Interagency Working Group on Social Cost of Greenhouse Gases
  - Withdrew multiple documents developed by the group to "ensure sound regulatory decision making"
- Withdrew policy that allowed agencies to 'use estimates of costs and benefits in their regulatory analyses that are based on the best available sciences and economics'.
- Announced that the United States would withdraw from the Paris agreement, the global pact to combat climate change.

## What are the planning and design implications?

- Flood prone areas will likely be larger and severe weather events more frequent. New designs should reflect these realities.
- Existing infrastructure may be vulnerable.

# Suddenly Americans Believe That Their Drinking Water May Not Be Safe



## Flint Was a Wakeup Call

- Residents exposed to elevated lead in their drinking water for an extended time.
- Source of water supply switched to the Flint River. Did not practice corrosion control.
- Didn't take all the required samples, sampled in incorrect places and used incorrect sampling protocol.
- Excluded two high samples which would have triggered corrective actions.

# EPA Preparing to Update Cu & Pb SDWA Rules

- Lead Service Line Replacement?
- Corrosion Control Treatment ?
- Tap Sampling?
- Publication Education & Transparency?
- Copper Requirements?

## Legionella was also an issue in Flint

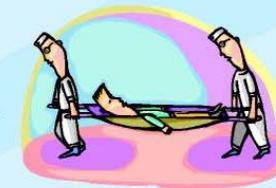
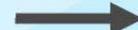
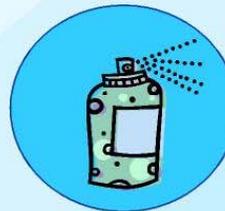
- In 2014 and 2015 there were 90 cases of Legionnaires Disease in the County that includes Flint.
- 12 people died.
- 6 local and State officials have been charged with involuntary manslaughter.
- The CDC linked these cases with the switch in Flint drinking water in February 2017 .

## Legionella and Legionnaires' disease

- “It is estimated that over 25,000 cases of [Legionnaires' disease] occur each year and cause more than 4,000 deaths.” US OSHA
- “66% of the disease outbreaks related to drinking water that have been reported were attributed to Legionella and all occurred as a result of colonization of water systems in buildings.” CDC, *Waterborne Disease Outbreak Surveillance Report* (2015)
- “Reported cases of legionellosis more than tripled between 2001 and 2012 in the United States...primarily from exposure to aerosolized water contaminated with *Legionella*.” *Journal of Public Health Management and Practice* (2015)

# Events leading to Legionnaires' disease

Supply Water



Susceptible

Host

## Amplification Aerosolization

- Temperature
- Stagnation
- Scale and sediment
- Protozoa
- Biofilm
- Showerheads
- Cooling towers
- Decorative fountains
- Whirlpool spas

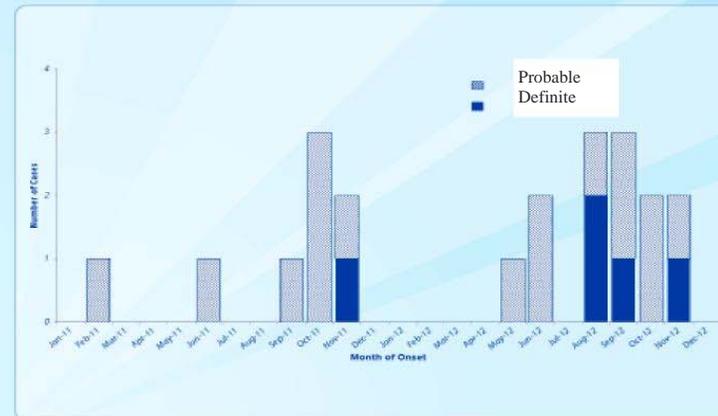
Transmission

Absence of disinfectant

## Epidemic curves of legionellosis outbreaks

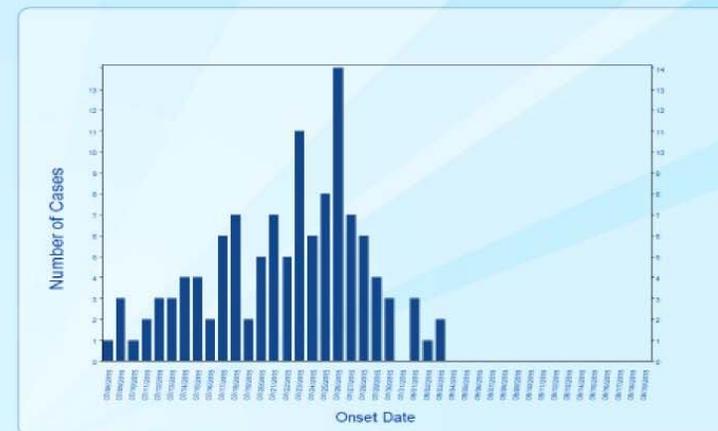
### Potable water<sup>1</sup>

- Longer period of time
- Continuing source



### Cooling tower<sup>2</sup>

- Explosive
- Point-source



1. Dargatzis A, et al. Clin Infect Dis. 2010;50(10):1596-1602. <http://dx.doi.org/10.1093/cid/cir102>

2. New York City, South Beach, 2015

## Favorable conditions for *Legionella* in a building water system:

- Temperature 77° - 108°F
- Stagnation
- Scale and sediments
- Lack of (or inadequate) residual disinfectant
- Protozoa

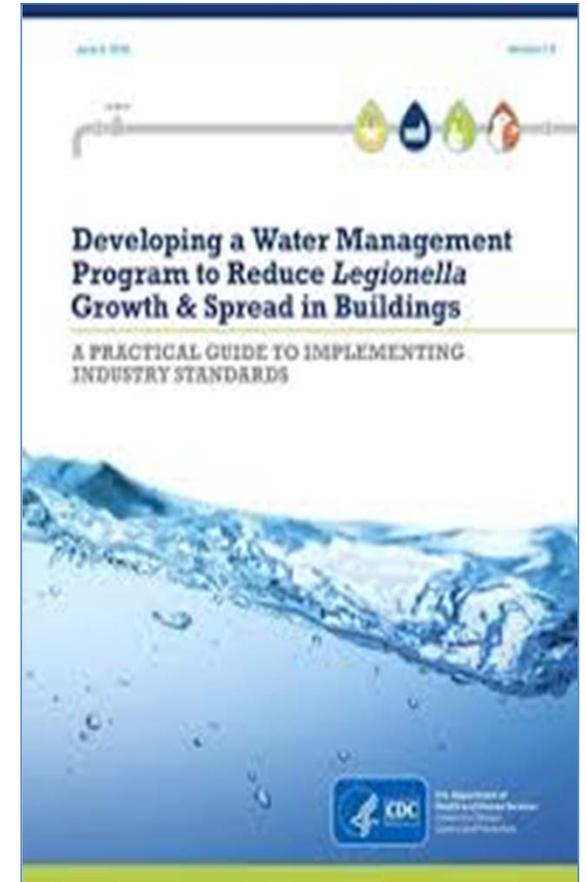
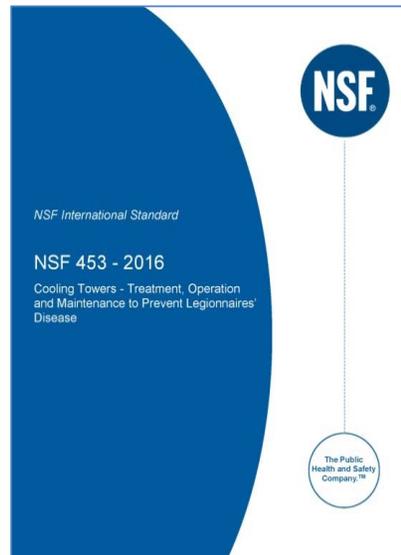
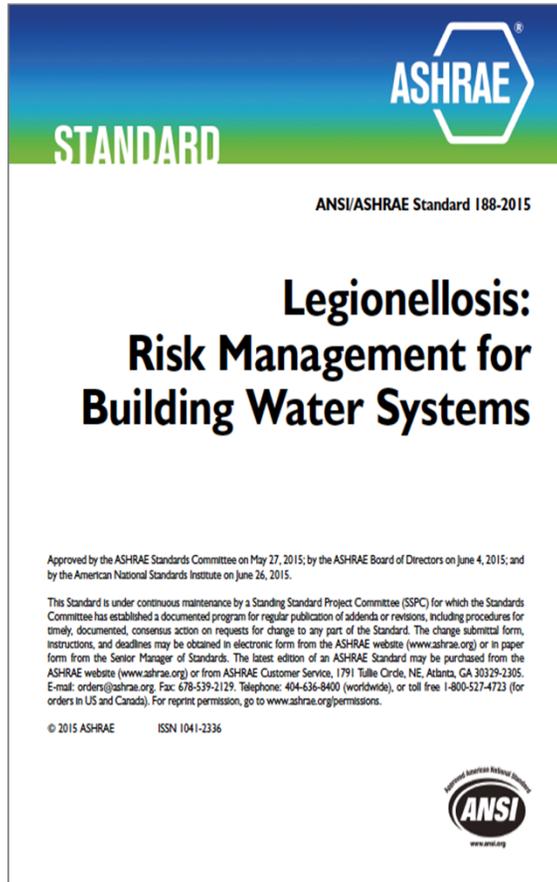


# Non Regulatory Standards & Guidelines

## ANSI/ASHRAE Standard 188-2015

## NSF Standard 453-2016

## CDC Toolkit



## New or “Emerging Contaminants”

- **Emerging contaminants** are chemicals that have been detected in global drinking water supplies at trace levels and for which the risk to human health is not yet known. They include pharmaceuticals, personal care products, pesticides, herbicides and endocrine disrupting compounds.
- 18 years since a new contaminant became regulated under the SDWA.
- The drinking water **Contaminant Candidate List** is a list of contaminants that are currently not subject to any proposed or promulgated national primary drinking water regulations, but are known or anticipated to occur in public water systems. (4 rounds to date)

# Current Emerging Contaminants of Drinking Water Concern

- 1- 4 Dioxane
- PFOA/PFOS
- Arsenic (regulated, but question is safe concentration)
- Cyanotoxins/Harmful Algal Blooms (HAB)
- Increasing salt levels, at least in winter

## What are the planning and design implications?

- Any changes to a drinking water system can have unintended consequences, potentially putting people at risk.
- Potable Water Systems, are a significant potential source of Legionella related illnesses.
- Potable water systems, especially the hot water supply in complex piping systems, can provide good growth conditions for Legionella.
- Existing buildings with complex water systems should have a water management plan.
  - The consensus voluntary standards should be considered when planning/designing new structures.

## What are the planning and design implications?

- Drinking water entities will likely have to expend significant monies to replace lead service lines.
- It's likely that existing potable water treatment technologies will not remove many of the emerging contaminants that potentially could harm humans.

# Change is also in NY Waters



## State of the State – Climate Change

- Expand Regional Greenhouse Gas Initiative and Reduce Emissions Equitably From the Highest-Polluting, High Demand "Peaker" Power Plants.
- Issue Solicitations to Develop at Least 800 MW of Offshore Wind Projects and Foster Offshore Wind Industry and Workforce in New York State.
- \$200 Million Investment for Energy Storage Target of 1,500 Megawatts by 2025 In Order to Increase Transmission of Clean and Renewable Energy
- Create the Zero Cost Solar for All Program for 10,000 Low-Income New Yorkers
- Reconvene Scientific Advisory Committee on Climate Change Disbanded by the Federal Government
- Governor Directs the Establishment of Energy Efficiency Target by Earth Day
- Regulations to Close all Coal Plants to be Adopted

# NY Has Projected “Sea Level” Rise for Some Area

## 6 NYCRR 490

*“...applies to consideration of sea-level rise by the Department, other State agencies, and applicants for relevant permits, approvals, and funding in the context of programs specified in the Community Risk and Resiliency Act”*

- Projected Sea Level Rises for**
- Mid-Hudson
  - New York City/Lower Hudson Region
  - Long Island Region

(a) Mid-Hudson Region

Time Interval	Low Projection	Low-Medium Projection	Medium Projection	High-Medium Projection	High Projection
2020s	1 inch	3 inches	5 inches	7 inches	9 inches
2050s	5 inches	9 inches	14 inches	19 inches	27 inches
2080s	10 inches	14 inches	25 inches	36 inches	54 inches
2100	11 inches	18 inches	32 inches	46 inches	71 inches

# Sea Level Rise – Keeping temperature change to 2°C can make a big difference!



<http://sealevel.climatecentral.org>

but if the present trend continues...



<http://sealevel.climatecentral.org>

Climate change also includes more severe weather events—Has our area already seen the affects?



Water levels for all of the Great Lakes remain above their long term average for January by at least a foot, and all lakes are at or above their levels at this time last year. ... Lake Ontario's level is forecast to fall by 3 inches over the next month. (1/28/18)

<http://www.lre.usace.army.mil/Missions/Great-Lakes-Information/Great-Lakes-Water-Levels/Water-Level-Forecast/Weekly-Great-Lakes-Water-Levels/>



## What are the planning and design implications?

- Resiliency should be considered for all structural planning and design.
- Projects located near water should consider whether they need to protect against flooding, even if not in a mapped flood zone.
- Because NY is moving separately from the federal government on climate change and resiliency, it will be important to keep abreast of NY specific requirements.

## 2018 Proposed NYS Budget Items

- Env. Protection Fund at \$300M- 3<sup>rd</sup> year at the highest ever.
- 2<sup>nd</sup> year of \$2.5 billion W/WW investment (incl. \$65M for HAB).
- NYSDEC operational funds remains flat.
  - No increase even though more implementation and enforcement of federal environmental laws will fall to State.
- CWSRF estimated to be approximately \$100 million in Federal funds and \$20 million in State matching funds.
  - Scoring heavily weighted toward solving WQ problems.
- DWSRF estimated to be approximately \$39 million in Federal funds.
  - Scoring heavily weighted toward violations
- Gov. also supporting “Design/Build” alternative delivery projects

# 2017 NY Clean Water Infrastructure Improvement Act Funding “Buckets”

## 2017 NY Clean Water Infrastructure Improvement Act Funding “Buckets”

- *\$1 billion Infrastructure improvements*
  - *\$150 million (included in the \$1B) – in support of intermunicipal water quality infrastructure projects*
- *\$58 million – Green infrastructure grants*
- *\$75 million – for septic upgrades/replace*
- *\$20 million Pb Service line replacements*
- *\$10 million – “Water Infrastructure Emergency Financial Assistance”*
- *\$50 million – CAFOs – assist farms/upgrading manure storage.*
- *\$130 million – Enhancing NYS Superfund and Protecting Drinking Water*
- *\$110 million – Land Acquisition Source Water Protection*
- *\$25 million – Salt storage – grant*
- *\$100 million – “Discretionary” [“Worthy Projects”]*
- *\$10 million – Information technology for tracking water quality water/waste water*
- *Update Source Water Protection Plans– Through WQIP not CWIIA*

## NYS Water Quality Improvement Project (WQIP)

- Competitive, statewide reimbursement grant program open to local governments and not-for-profit corporations to implement projects that directly address documented water quality impairments or protect a drinking water source.
- December 2017 grants totaling \$87 million for 95 water quality improvement projects were announced
- Now part of the Regional Economic Development Council (REDC) awards.

## What are the planning and design implications?

- NY not likely to be adding too much additional W/WW related funds in the 2018-2019 Budget.
  - State investment of the remainder of the \$2.5B over the next 4 years is not assured.
- Alternative delivery mechanisms, DB/DBO are going to be encouraged by the state, at least for Agency projects.
- Now might be the time to move on septic tank upgrades, especially in areas proximate to listed impaired waters.
- NYSDEC staff numbers will remain at its currently relatively low numbers, which will not lead to speedy project review.

## NYS Combatting HABs

- Some species of algae can produce toxins referred to as harmful algal blooms (HABs).
- HABs usually occur in nutrient-rich waters, particularly during hot, calm weather.
- State has instituted a *Suspicious Algal Bloom* reporting system.
- NYSDEC releases weekly lists of affected waters.



## State of the State - Harmful Algal Blooms (HABs)

- In 2017 NY dedicated \$2 million towards the design, engineering, and construction of upgrades to the drinking water treatment systems in the City of Auburn and Town of Owasco in 2017.
- Announced a \$65 million, 4-point initiative to aggressively combat HABs in Upstate New York.
- Twelve priority lakes that are vulnerable to HABs and are critical sources of drinking water and vital tourism drivers were chosen as priority waterbodies.
  - Conesus Lake; Honeoye Lake; Chautauqua Lake; Owasco Lake; Skaneateles Lake; Cayuga Lake

## NYS Combatting HABs

- Governor has proposed \$65M to combat Hazardous Algal Blooms that threaten recreational use of lakes and/or well as drinking water
- State's Water Quality Rapid Response Team to Convene Regional HABs Forums, Develop Community-Specific Action Plans and Cutting-Edge Pilot Projects

## What are the planning and design implications?

- Expect continued focus on existing and proposed discharger of nutrients.
- Lessons learned from the 12 pilot projects may be applied across the State.
- There likely will be increased pressure on non-point sources, especially municipal entities and others who receive State money, to reduce fertilizer and other nutrient applications.

# State Water-Related Legislation That Could Move This Year



## NY Water-related Legislation Likely to Move in 2018

- **S881/A1038 (O'Mara/ ) Paint Stewardship Program** – Minimizing public sector involvement. Already passed the Senate.
- **S7354/A9576 (Hannon/Gunther): Enacts the drug take back act** - This is the bill that the Governor's task force came up with after vetoing a bill that put the onus on drug stores.
- **S1225B/A1705B (Griffo/Woerner): Establishes the New York state clean energy production program** - This bill passed the senate and died in the assembly last session, now moving in the Assembly.
- **A2329/S3002 (Thiele/Lavalle) -- *Relates to the establishment, extension, powers and expenses of watershed protection improvement districts*** Passed Assembly, no movement in Senate in 2017. Not yet moving

## NY Water-related Legislation Likely to Move in 2018

- **A8270A/S6617A (Englebright/Avella) -- *Enacts the New York state climate and community protection act.*** Passed Assembly
- **A2348A /S2999 (Thiele/Lavalle) -- *Relates to financial assistance to small businesses for the purpose of pollution prevention, control and compliance*** – Passed Assembly, was moving in Senate.
- **A5699/S4591 (Hunter/) **Water Saving Performance Standards**** – Passed Assembly in 2017, near passage again.

**THANK  
YOU**



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