



STORMWATER POLICY FORUM

April 25th, 2022

Opening Keynote Speaker

Andrew Sawyers, U.S. Environmental Protection Agency Director of the Office of Wastewater Management

Congressional Updates

Steve Dye, Legislative Director of Water Environment Federation

Funded in Infrastructure Investment & Jobs Act

Guaranteed Funding: \$12.7B

Clean Water State Revolving Fund (CW SRF)

✓ **\$1.9B in FY22**

- \$2.2B in FY23
- \$2.4B in FY24
- \$2.6B in FY25 & FY26

CW SRF Emerging Contaminants Grants (PFAS, Rx, Microplastics)

- \$225M/yr in FY22 – FY26
- ✓ **\$100M in FY22**

Need Annual Appropriations

*Potential Additional Funding: \$25B
Starting in FY23*

CW SRF

- FY22 \$2.4B
- FY23 \$2.75B
- FY24 \$3B
- FY25 & FY26 \$3.25

✓ **+ CW SRF \$1.6B/yr**

Connecting to POTWs

Energy Efficiency Grants

Stormwater Centers of Excellence

Stormwater Planning & Implementation Grants

Sewer Overflow Grants (OSG)

Water Workforce Grants

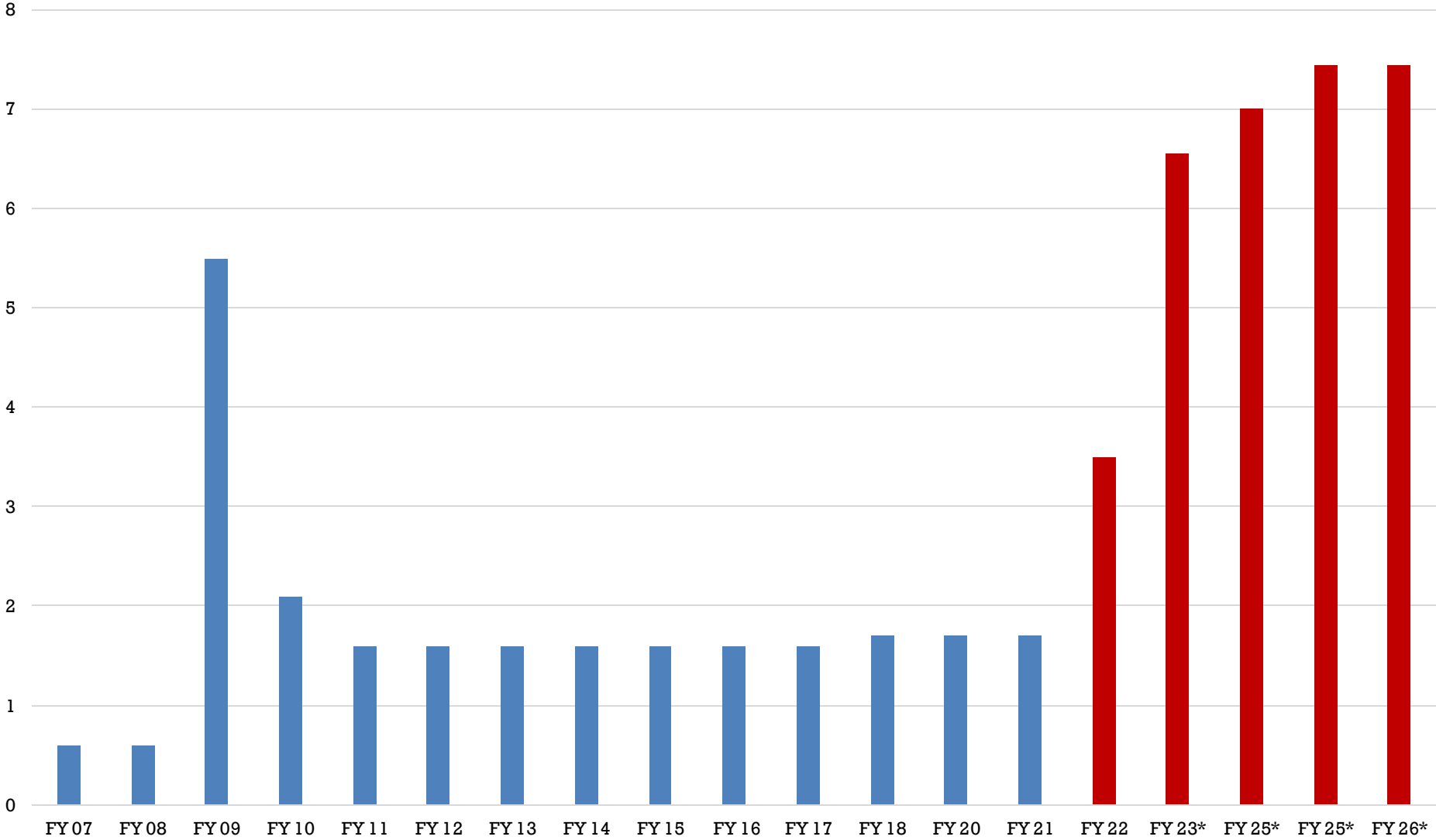
Low Income Ratepayer Grants

WIFIA

Resilience & Sustainability Grants

Small POTW Grants

Clean Water SRF Funding (in billions)



* = contingent upon appropriations

Currently Available (or soon to be)

Clean Water SRF

- \$1.9 billion w/ 49% in additional subsidization
- \$1.6 billion w/ up to 10% in additional subsidization

Clean Water SRF – Emerging Contaminants

- \$100 million in grants

Sewer Overflow & Stormwater Reuse Municipal Grants (OSG)

- \$43 million for CSO, SSO & Stormwater collections systems grants

Drinking Water SRF -- \$1.9B & \$1.1B

Drinking Water SRF – Emerging Contaminants -- \$800M

Drinking Water SRF – Lead Service Line Replacement -- \$3 billion

WIFIA

- \$50 million = \$5 billion in low interest federal loans

Applicant Steps for Success

- 1. Contact the State Infrastructure Financing Authority about the potential project.**
 - Clean Water SRF, OSG, and Drinking Water SRF program administrators
- 2. Contact the State regulatory and construction permit writers.**
- 3. Get on State Clean Water SRF Intended Use Plan.**
 - Need Engineering Report
- 4. Begin developing American-made itemized equipment and materials list**

Bipartisan Infrastructure Law SRF Implementation

Memo

- <https://www.epa.gov/dwsrf/bipartisan-infrastructure-law-srf-implementation-memorandum>
- 49% of \$1.9B in IIJA FY22 in Additional Subsidization: **\$931M**
- Municipalities that meet the state's affordability criteria. CWA sect. 603(i)(2)
- Additional subsidization to benefit individual ratepayers in the residential user rate class.
- Entities that implement a process, material, technique, or technology that addresses water or energy efficiency goals; **mitigates stormwater runoff; or encourages sustainable project planning, design, and construction.**

FY22 Omnibus Appropriations Bill

- Up to 10% of \$1.6B in FY22 Omnibus for Green Project Reserve (GPR): **>\$160M**
- Green Project Reserve (EPA's 2012 CWSRF Guidance)
 - **Green Infrastructure**
 - Water Efficiency
 - Energy efficiency is the use of improved technologies and practices to reduce the energy consumption of water quality projects, use energy in a more efficient way, and/or produce/utilize renewable energy.
 - Environmental Innovation

Coronavirus State & Local Fiscal Recovery Funds (CSLRF)

- ~\$150B of \$350B remaining available.
- Wastewater utilities owned by City or County Eligible.
 - Due to drafting error, Special Districts/Independent Authorities are ineligible.
- CW SRF Eligible = CSLRF Eligible
- Eligibility includes:
 - Green Project Reserve projects
- <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds>

What on the Horizon?



Available in FY23

- 49% of \$2.2B in IIJA FY22 in Additional Subsidization: **\$1.1B**
 - Municipalities that meet the state's affordability criteria. CWA sect. 603(i)(2)
 - Additional subsidization to benefit individual ratepayers in the residential user rate class.
 - Entities that implement a process, material, technique, or technology that addresses water or energy efficiency goals; **mitigates stormwater runoff**; or **encourages sustainable project planning, design, and construction.**
- Up to 30% of \$2.75B in IIJA FY23 in Additional Subsidization: **>\$825M***
- Up to 10% of \$1.6B in FY23 Budget for Additional Subsidization: **>\$160M***

• * = Contingent upon Congressional appropriations

Funded in Infrastructure Investment & Jobs Act

Guaranteed Funding: \$12.7B

Clean Water State Revolving Fund (CW SRF)

- **\$1.9B in FY22**
- **\$2.2B in FY23***
- \$2.4B in FY24
- \$2.6B in FY25 & FY26

CW SRF Emerging Contaminants Grants (PFAS, Rx, Microplastics)

- **\$225M/yr in FY23 – FY26***

* = included in Pres. Biden's Budget Request

Need Annual Appropriations

Potential Additional Funding: \$25B

Starting in FY23

CW SRF

- FY22 \$2.4B
- FY23 \$2.75B
- FY24 \$3B
- FY25 & FY26 \$3.25

+ CW SRF \$1.6B/yr*

Connecting to POTWs \$40M*

Wastewater Energy Efficiency Grants \$20M*

Stormwater Centers of Excellence \$5M*

Stormwater Planning & Implementation Grants \$10M*

Sewer Overflow Grants (OSG) \$280M*

Water Workforce Grants \$17M*

Low Income Ratepayer Grants

WIFIA \$67M*

Resilience & Sustainability Grants \$25M*

Small POTW Grants \$10M*

Other Items

EPA CWA Financial Capabilities Assessment Guidance

- EPA-HQ-OW-2020-0426
- www.regulations.gov/document/EPA-HQ-OW-2020-0426-0071
- Comments Due April 25, 2022
- **Joint WEF/AWWA/NACWA Webcast**
 - <https://www.wef.org/government-affairs-webcasts>

PFAS

- EPA PFAS Roadmap
- CERCLA Liability Exemption for Water Agencies?

WEF Water Advocates Program



How YOU can help NOW!

1. Go to: bit.ly/wef-water-advocates

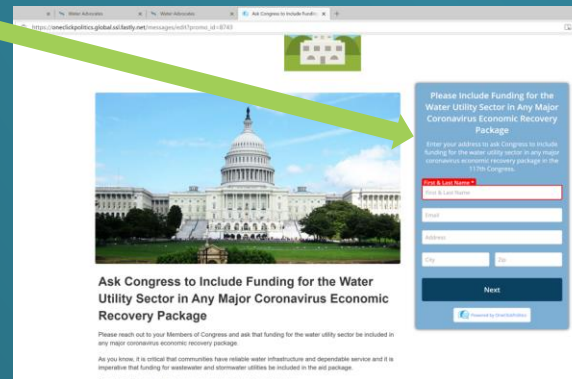


2. Click the call-to-action buttons:

- FY23 Water Infrastructure Appropriations
- Co-sponsor Wipes Labeling Legislation
- PFAS Liability Exemption

3. Fill out your info!

4. Share on social media!



Please Include Funding for the Water Utility Sector in Any Major Coronavirus Economic Recovery Package

Enter your address to ask Congress to include funding for the water utility sector in any major coronavirus economic recovery package in the next session of the Congress.

First & Last Name *

State & Zip *

Phone *

City *



Please click below to reach out to your Members today!

SUPPORT INCLUDING WATER INFRASTRUCTURE FUNDING IN THE CORONAVIRUS RELIEF PACKAGE

Take Action Now:

Support Water Infrastructure Funding in FY 2022!

Write your Members to urge them to provide robust funding for water infrastructure funding programs in the fiscal year 2022 budget!

The Clean Water and Drinking Water State Revolving Funds programs (SRF) are important financing tools for wastewater, drinking water, and stormwater agencies to build and modernize the water infrastructure that protects public health, the environment, and promotes economic growth. The importance of safe and reliable drinking water and wastewater service during the Covid-19 crisis further highlights how critical it is for there to be robust funding to help communities address the challenges of aging water infrastructure. The Clean Water and Drinking Water SRF programs should be funded at levels that reflect the reality of our nation's water infrastructure crisis.

The EPA has estimated that \$655 billion is needed for drinking water and wastewater infrastructure over the next 20 years - and that doesn't include another estimated \$100 billion needed for stormwater infrastructure. For FY22, it is necessary that the appropriation amounts for SRF programs be doubled - at least \$2.8 billion for the CWSRF and \$1.3 billion for the DWSRF (the fully authorized amount), I also urge you to fully fund the Water Infrastructure Finance and Innovation Act (WIFIA) program at \$55 million for FY22. Congress created this new loan and loan guarantee program in 2014, and in 2015 corrected statutory language to the program to make it more useful to communities seeking low interest financing.

Our federal budget is under tremendous pressure and Congress is making difficult decisions about how to prioritize spending. Increased investment in water infrastructure will not only ensure that communities have clean and safe water, but studies have shown that there is tremendous support among the public for increased investments in water infrastructure, and those investments have a higher job creation return-on-investment rate than federal investments in military, transportation, healthcare and personal income tax cuts.

SUPPORT FUNDING FOR WATER INFRASTRUCTURE IN FY 2022

WEF Contact:
Amy Kathman
akathman@wef.org

Questions?



RECOMMENDATIONS TO
**IMPROVE THE
STORMWATER
PROGRAM
IN THE U.S.**

2022



WEF Stormwater Institute and NMSA Recommendation Document

Steve Dye, Legislative Director of Water Environment Federation (WEF)

Scott Taylor, WEF Stormwater Institute (SWI) Advisory Chair

Seth Brown, Executive Director of NMSA

Randy Neprash, Vice Chair of NMSA

Four Core Recommendations

Recommendations Available at:

<https://wefstormwaterinstitute.org/programs/stormwater-policy-and-advocacy/>

1. Advance Stormwater Provision in Bipartisan Infrastructure Framework
2. Stormwater Infrastructure Funding Tools
3. Fund Atlas 14 Country-wide Implementation
4. Provide for Comprehensive Source Control of Stormwater Pollution

RECOMMENDATIONS TO
**IMPROVE THE
STORMWATER
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2022

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Advance Stormwater Provision in Bipartisan Infrastructure Framework

Request: Fund the recently authorized stormwater programs for the construction, rehabilitation, and advancement of stormwater infrastructure and technologies.

Provide in the FY23 Budget:

- \$5 million for the establishment of 5 Centers of Excellence for Stormwater Control Infrastructure Technologies (CESCITs) (IIJA Sect. 50217)
- \$10 million for community planning and implementation grants for stormwater or watershed-based planning investments (IIJA Sect. 50217)
- \$280 million for Sewer Overflow and Stormwater Reuse Municipal Grants (OSG) program (IIJA Sect. 50204)

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Advance Stormwater Provision in Bipartisan Infrastructure Framework

Provide in the FY23 Budget:

- \$100 million for the Healthy Streets program, which includes a focus on high albedo road surfaces and porous pavements (IIJA Sect. 11406)
- \$125 million for Clean Water Infrastructure Resiliency and Sustainability Grant (IIJA Sect. 50205)
- \$125 million for the Alternative Source Water Pilot program, including stormwater capture (IIJA Sect. 50203)
- \$10 million for the Small & Medium POTW Circuit Riders Technical Assistance, including stormwater management (IIJA Sect. 50206)

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Advance Stormwater Provision in Bipartisan Infrastructure Framework

Provide in the FY23 Budget:

- \$5 million to complete the Clean Watersheds Needs Survey, including more data on municipal stormwater infrastructure needs (IIJA Sect. 50220)
- Funding to establish the EPA Rural and Low-Income Water Assistance Pilot Program (IIJA Sect. 50109)
- \$2.75 billion for the Clean Water State Revolving Fund, as it is authorized to receive in FY23 (IIJA Sec. 50210)
- \$225 million for emerging contaminants grants through the Clean Water State Revolving Fund ((IIJA pg. 2589)

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Stormwater Infrastructure Funding Tools

Request: Develop new and improve existing funding programs to drive needed stormwater infrastructure investment across the country.

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- Establishment of a Stormwater Construction Grant Program (SCGP) that would transition into a Stormwater State Revolving Fund (SSRF) program.
- Establishment of a program to promote, fund, and incentivize the formation of local stormwater utilities.



Stormwater Infrastructure Funding Tools

- Adjust the recently established Overflow and Stormwater Grants (OSG) program state allocation formula.
- Revise the CWA Section 319 program to allow projects by MS4 permittees – create a separate stormwater sub-program with the 319 program.
- Create a national Extended Producer Responsibility (EPR) fund to support trash/plastics reduction/capture investments for communities across the country.

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Fund Atlas 14 Country-wide Implementation

Request: Provide funding to NOAA to improve and unify precipitation frequency estimates across multiple Federal agencies to provide a single set of authoritative products that will be used and recognized by all practitioners and local authorities.

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- Precipitation frequency estimating should be integrated and unified across NOAA, USACE, FEMA, US EPA, USGS, USFS and other Federal agencies.
- A single set of applicable products needs be provided by NOAA that is sufficiently authoritative to be accepted and used by all practitioners and local authorities.



Provide for Comprehensive Source Control of Stormwater Pollution

Request: Direct the US EPA to establish a permanent program within the Office of Wastewater Management and provide funding to be dedicated to developing a pollutant source control program for the environment and specifically stormwater.

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2022



Questions?



STORMWATER POLICY FORUM
Break

Panel 1: U.S. EPA Stormwater Program Updates and Q&A

Lisa Biddle, Municipal Branch

Rachel Urban, Stormwater Program

Robyn DeYoung, Green Infrastructure & Integrated Planning Program

Heather Goss, National Transportation Liaison

EPA Stormwater Program Updates

Office of Wastewater Management
Water Permits Division

Lisa Biddle, Municipal Branch

Rachel Urban, Stormwater Program

Robyn DeYoung, Green Infrastructure & Integrated Planning Program

Heather Goss, National Transportation Liaison



Stormwater Permitting Program



Construction



Industrial Activities



Municipal

Revised General Permits



Construction General Permit

- Approx. 15,000 Permittees
- 2022 CGP: Finalized January 2022, effective February 17, 2022
- Coming soon: Construction General Permit Inspector Training ([landing page](#))



Multi-Sector General Permit (Industrial Activities)

- Approx. 2,400 Permittees (29 industrial sectors)
- 2021 MSGP: Finalized January 2021, effective March 1, 2021
- Currently updating: Industrial Stormwater Fact Sheet Series ([link to Federal Register Notice & details](#))



Municipal Stormwater Permitting Updates

- March 2022: Census Bureau eliminated definition of “urbanized area” in 2020 Census
- Stormwater BMP Fact Sheet Series Updates
- Stormwater Smart – Communication tools for outreach and education
- MS4 Permitting Compendium on Green Infrastructure
- Resources on off-site stormwater management



**PFAS Strategic Roadmap:
EPA's Commitments to Action
2021–2024**



Pollution Prevention & Source Control

- Emerging contaminants
- Trash / plastics / tires
- Industrial pollutants in stormwater
- Engagement on true source control



Building Community Resiliency

- Climate change is affecting us now
- Underserved communities are disproportionately affected
- Underinvesting in water infrastructure puts our communities at risk
- Green infrastructure & integrated planning are important tools to help communities respond





Green Infrastructure Resources

- EPA promotes green infrastructure with resources on:
 - Community partnerships, technical assistance, and collaborative knowledge sharing
 - Strategies to overcome barriers to green infrastructure adoption
 - Funding opportunities
- As of 2021, EPA reestablished the Green Infrastructure Federal Collaborative
 - Webinars focused on accessing **funding**, incorporating **environmental justice**, and **overcoming barriers**
 - Master Summary of Funding and Technical Assistance Opportunities

Green Infrastructure Webcast Series

- Going Green for Good: Long-Term Considerations for Operations and Maintenance of Green Infrastructure
 - Thursday, April 28, 2022, 1:00 pm - 2:30 pm Eastern
- Summer 2022: Green Infrastructure Asset Management
- Fall 2022: Green Infrastructure Jobs
- Recordings available online: <https://www.epa.gov/green-infrastructure/green-infrastructure-webcast-series>
- Stay in touch: GreenStream List Serve
 - join-greenstream@lists.epa.gov



Municipal Integrated Planning Framework

- Established in 2012 – a voluntary process for municipalities to meet CWA requirements and human health goals by sequencing stormwater and wastewater projects
- Provides guidance for EPA, states, and municipalities
- Reinforced by law in 2019 under Water Infrastructure Improvement Act



Integrated Planning Resources

- EPA is providing technical assistance to states and municipalities to develop components of their integrated plans, now until Sept. 2022
 - To receive technical assistance contact: Evan Kirk, emkirk@sog.unc.edu
- Other resources on EPA's Integrated Planning website:
 - Report to Congress
 - Fact sheets
 - Plans already developed
 - Case studies
 - Toolkit for states (Summer 2022)





Incorporating Green Infrastructure into Roadway Projects in Santa Fe

Prepared for the City of Santa Fe through Technical Assistance from the U.S. Environmental Protection Agency, Office of Wastewater Management

Long-term Stormwater Planning

- Focus areas:
 - Asset management
 - Financing/funding
 - Green infrastructure opportunities analysis
 - Incorporating green infrastructure into roadways
- Guide, worksheets, examples
- Targeted 2022 release





Thank you!

Biddle.lisa@epa.gov

Panel 2: Stormwater Financial Needs and Accessibility

Seth Brown, Executive Director – National Municipal Stormwater Alliance (NMSA)

Deirdre Finn, Executive Director of the Council of Infrastructure Financing Authorities (CIFA)

Teri Wenck, Director of Fitch Rating Agency

Stormwater Needs from a National Perspective

WEF Stormwater Policy Forum

Seth Brown, PhD, PE | Executive Director

National Municipal Stormwater Alliance (NMSA)



Current Needs

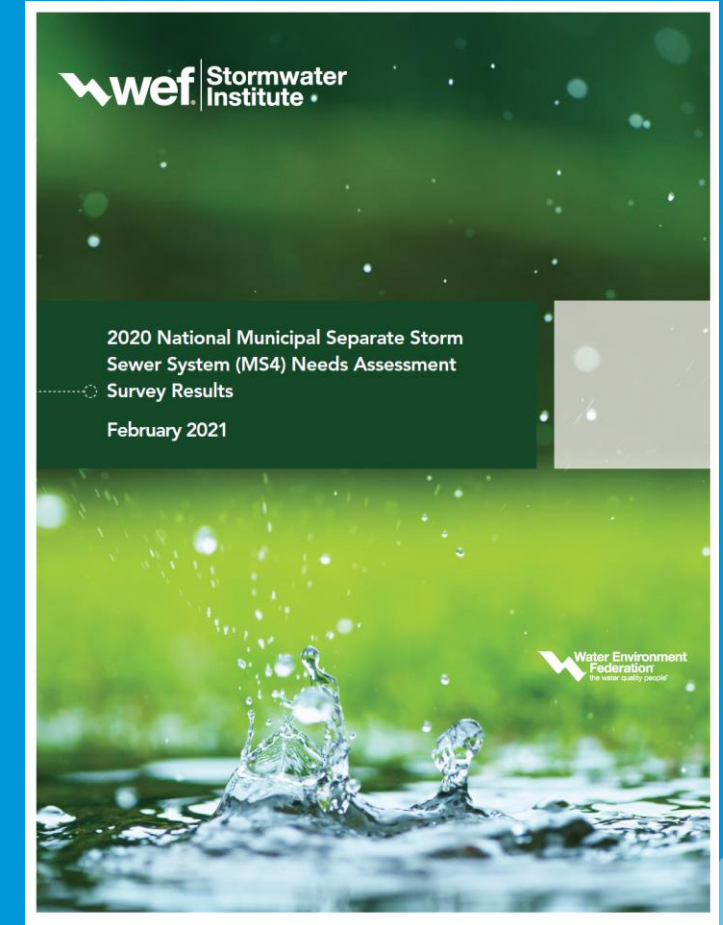


Water Environment Federation (WEF) Stormwater Institute's 2020 MS4 Needs Assessment Survey – 2nd survey

Address challenges and needs in MS4
sector

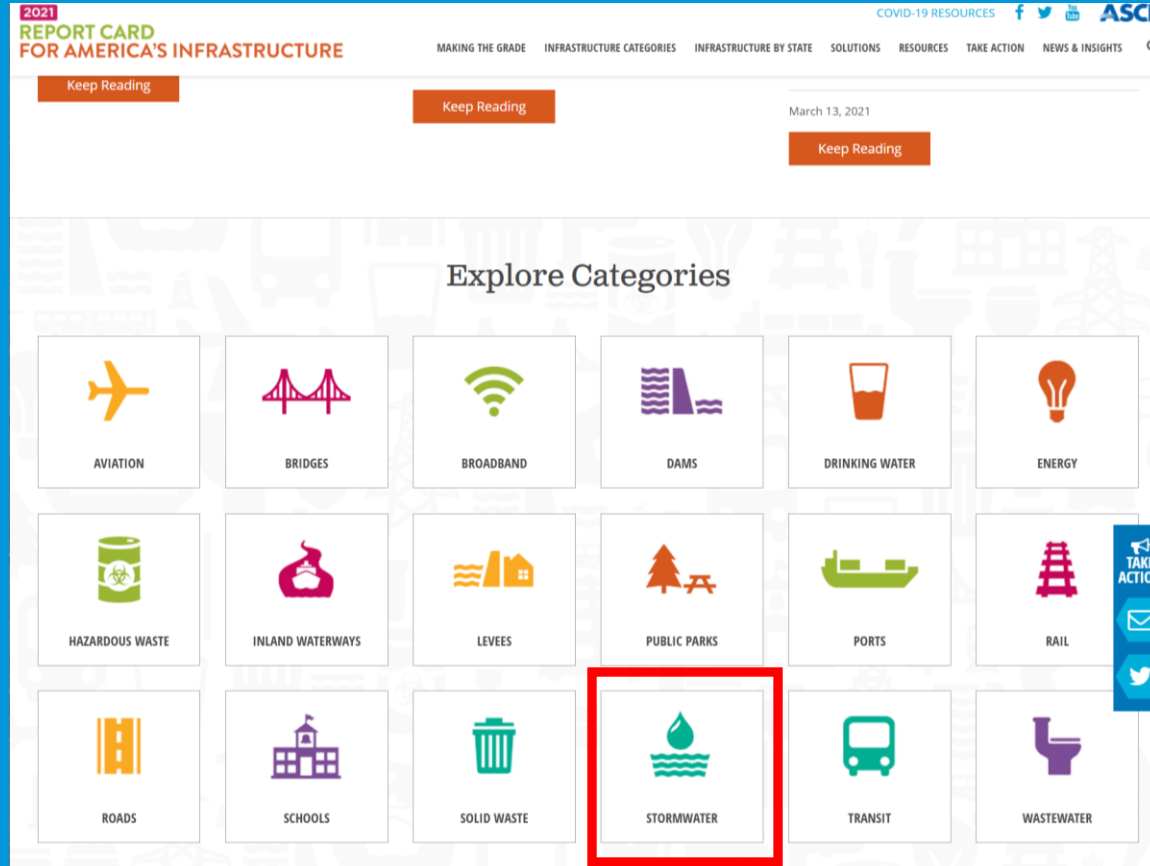
Identified an estimate of current MS4
budgets and an estimated annual
funding gap in stormwater sector

<https://wefstormwaterinstitute.org/programs/ms4survey/>



WEF,2021

Higher Recognition



ASCE, 2021

The 2021 ASCE Infrastructure Report Card includes stormwater as a separate category for the first time – with a grade of “D”!

Current Needs



Water Environment Federation (WEF) Stormwater Institute's 2020 MS4 Needs Assessment Survey – 2nd survey

- Identified an estimate of current MS4 budgets = \$18-\$24 billion
- Identified an estimated annual funding gap in stormwater sector = \$8.5 billion

<https://wefstormwaterinstitute.org/programs/ms4survey/>



WEF, 2021

All About the Benjamins...

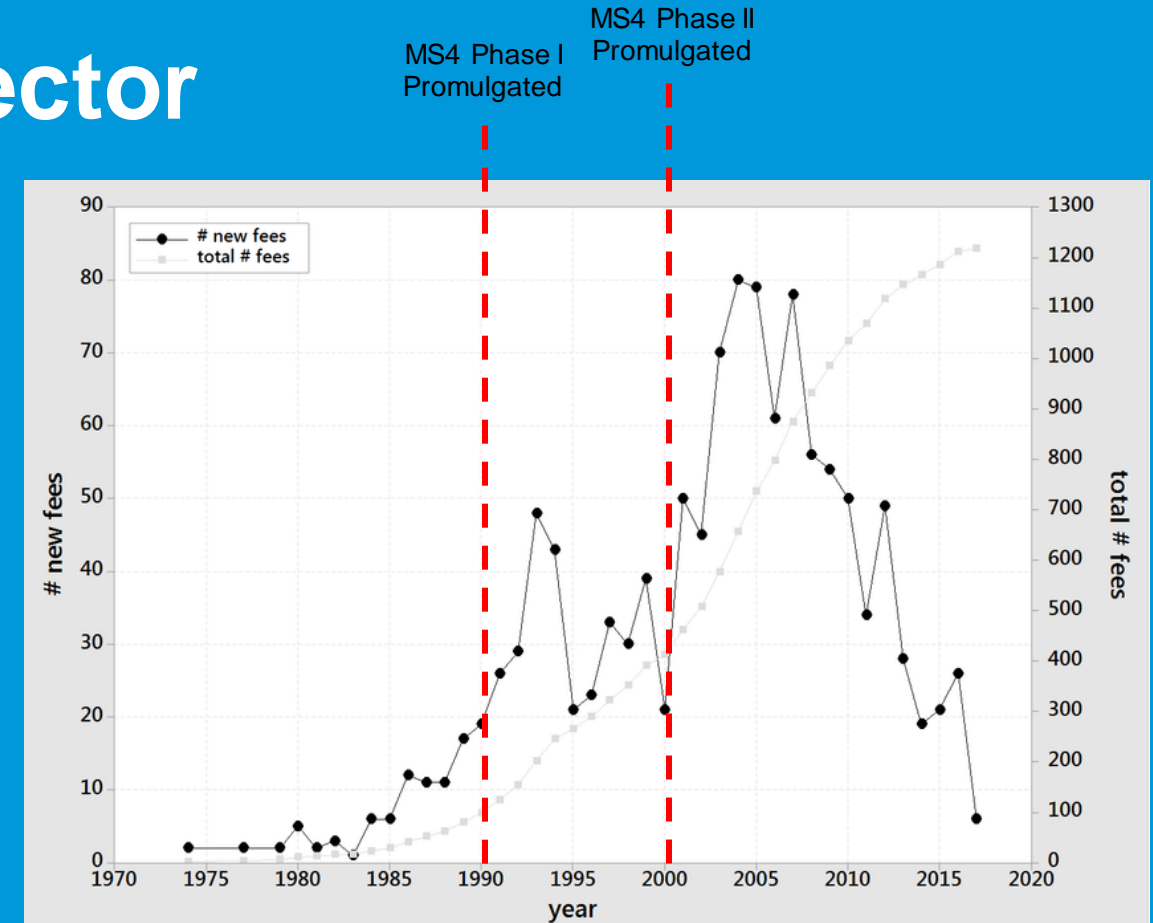
- Top need overall in the sector
- Needs at all levels

Local


- 95-98% of all funding from local level
- Dedicated funding programs still a minority
 - 1,800 established out of 7,500 total
 - Rate of formation is decreasing!

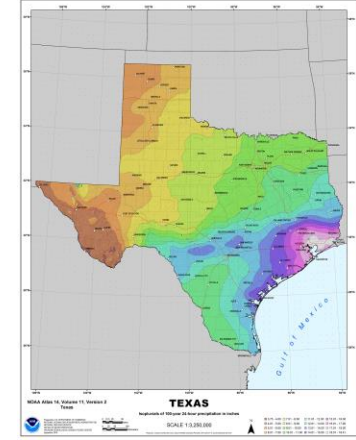
Federal/State

- State grant programs are a consistent source
 - Ex. Virginia's Stormwater Local Assistance Fund (SLAF) grant program)
- Federal funding is limited compared to other sectors (and compared to identified needs)



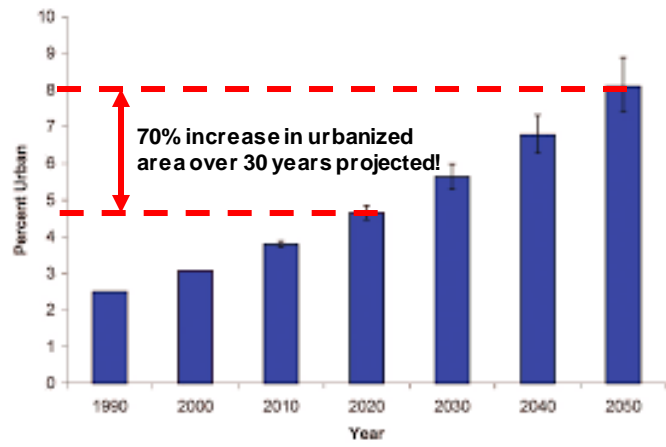
Driving Factors

- **Emerging contaminants/pollutants**
 - *Microplastics, 6PPD, PFAS....*
- **Increasing awareness of impacts**
 - **No more Sergeant Schultz** → 
- **Climate change and dynamic precipitation**
 - *Flooding impacts, excess heat....*
- **Urbanization always on the move...**
 - *Currently ~ 4.75% urban in US*
 - *Projected to be 8.1% by 2050*



CNN, 2021

NOAA, 2019



US Forest Service, 2005



SFPUC, 2022

Clean Water State Revolving Fund (SRF) and Stormwater

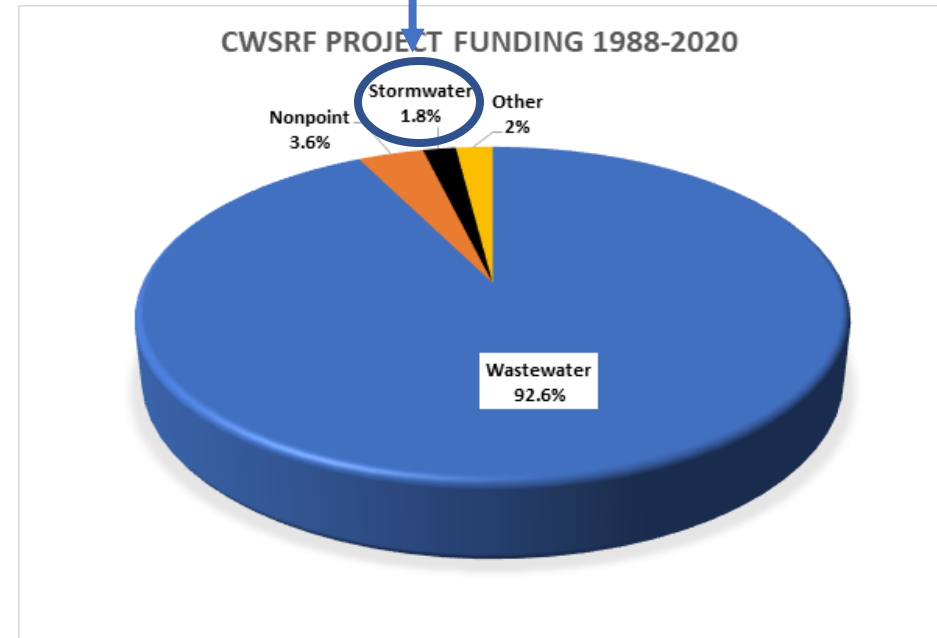


- **SRF assistance for stormwater has been very limited**

- Only 1.8% has gone to stormwater

- **Why?**

- Legacy issues
- Status quo
- Over subscription by wastewater
- Institutional barriers
- Lack of repayment mechanisms
- Lack of awareness
- Lack of investment scale
- Limited approach to financing in sector



U.S. EPA, 2021

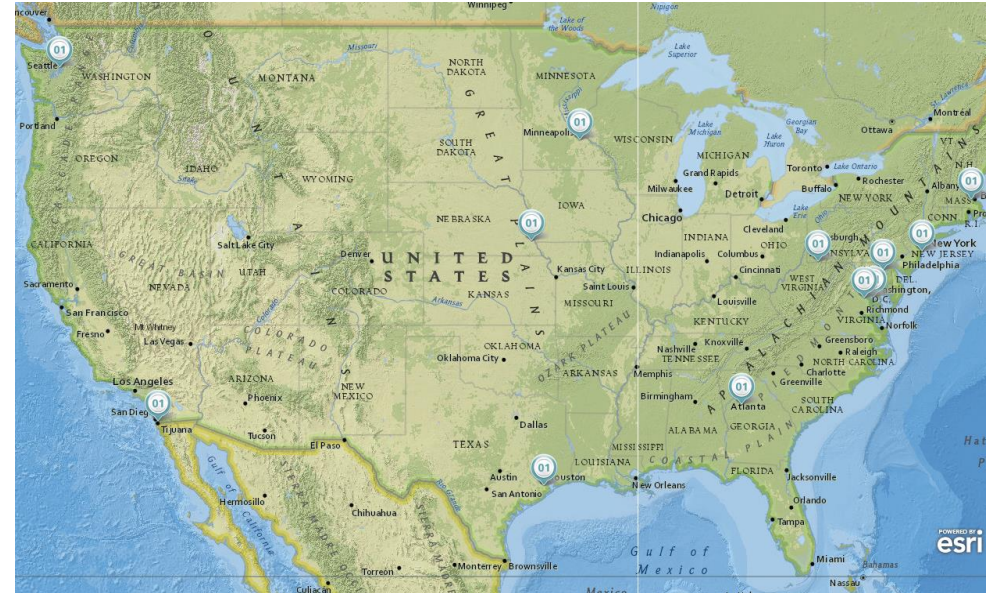
- **But there are other options and opportunities for federal funding**

Economic Return on GI



• Economic Input/Output Analysis

- 12 counties in analysis
- The return on \$1 of input for GI investments generated a range of \$1.34 to \$1.74 in economic output, with an overall average value of \$1.55 across the 12 locations
- The number of jobs created per \$1 million of investment in GI range from 8 to 17 with an overall average of 13.



Industry/Sector/Investment Type	Economic Output per \$1 of Input	Total Jobs Created/Supported per \$1M of Input
State Revolving Fund	\$2.95	16
Green Infrastructure	\$1.55	13
Drinking Water, Wastewater, Stormwater	\$2.26	16

What's missing here?



Questions?

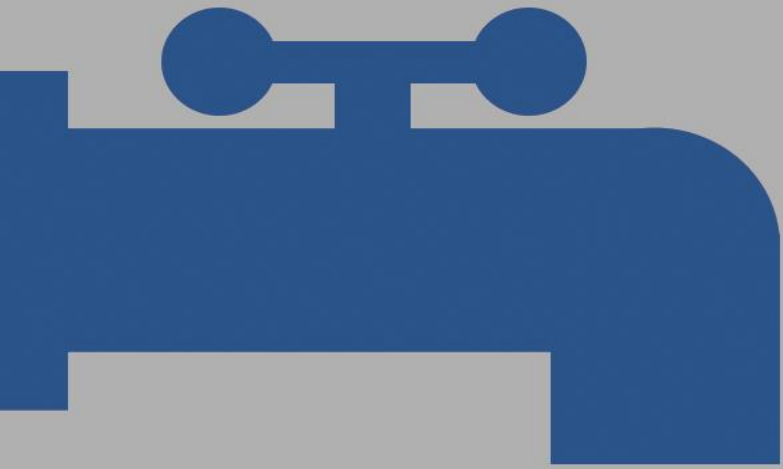
Email Seth Brown, PE, PhD – NMSA, Executive Director

seth.brown@nationalstormwateralliance.org

Or

Visit our website at nationalstormwateralliance.org

Visit our Youtube channel at [http://bit.ly/NMSA Youtube](http://bit.ly/NMSA_Youtube)



CIFA

COUNCIL OF INFRASTRUCTURE FINANCING AUTHORITIES



WEF Stormwater Policy Forum



SRF Subsidized Loans Save \$1.3 million in Interest Payments for Every \$10 Million in Loans

Current Market Rate
2.62%

2021 Average Clean Water SRF Subsidized Rate
1.047%

Clean Water SRF Affordability Criteria

- **Determines eligibility for additional subsidy, not loans**
- **Defined by the states using income, unemployment, population trends and other relevant data**
- **Exception: Water systems that don't meet the criteria can be eligible if the additional subsidy is “directed through a user charge rate system” to individual ratepayers that may experience hardship due to increased rates from the project**



Additional Subsidy

**Principal Forgiveness
Grant**

Negative Interest Loans

Infrastructure Investment and Jobs Act Reauthorizations and Policy



Reauthorization

Clean Water SRF:

2022: \$2.4 billion

2023: \$2.75 billion

2024: \$3 billion

2025 and 2026: \$3.25 billion

Additional Subsidy: Clean Water SRF

SRFs must use at least 10% and may use up to 30% of annual federal funding for additional subsidy for water systems that meet state-defined affordability criteria.

Additional Subsidy: Clean Water SRF

Other eligible projects (already eligible):

- to address water-efficiency goals
- to address energy-efficiency goals
- to mitigate stormwater runoff
- to encourage sustainable project planning, design, and construction

Technical Assistance: Clean Water SRF

SRFs may use up to 2% of annual federal funding for technical assistance to support small, rural and tribal communities.

Infrastructure Investment and Jobs Act Appropriations



All Eligible Projects

Year	Clean Water SRF	State Match	Additional Subsidy	Green Projects
2022	\$1,902,000,000	10%	49%	10%
2023	\$2,202,000,000	10%	49%	10%
2024	\$2,403,000,000	20%	49%	10%
2025	\$2,603,000,000	20%	49%	10%
2026	\$2,603,000,000	20%	49%	10%
Total	\$11,713,000,000			

Emerging Contaminants

Year	Clean Water SRF	State Match	Additional Subsidy	Green Projects
2022	\$100,000,000	0%	100%	10%
2023	\$225,000,000	0%	100%	10%
2024	\$225,000,000	0%	100%	10%
2025	\$225,000,000	0%	100%	10%
2026	\$225,000,000	0%	100%	10%
Total	\$1,000,000,000			

Hot Topics

- **Build America, Buy America (equivalency)**
- **Deadlines, Timelines, Reallotment**
- **Green Infrastructure**



Deirdre Finn, Executive Director

www.cifanet.org

dfinn@cifanet.org



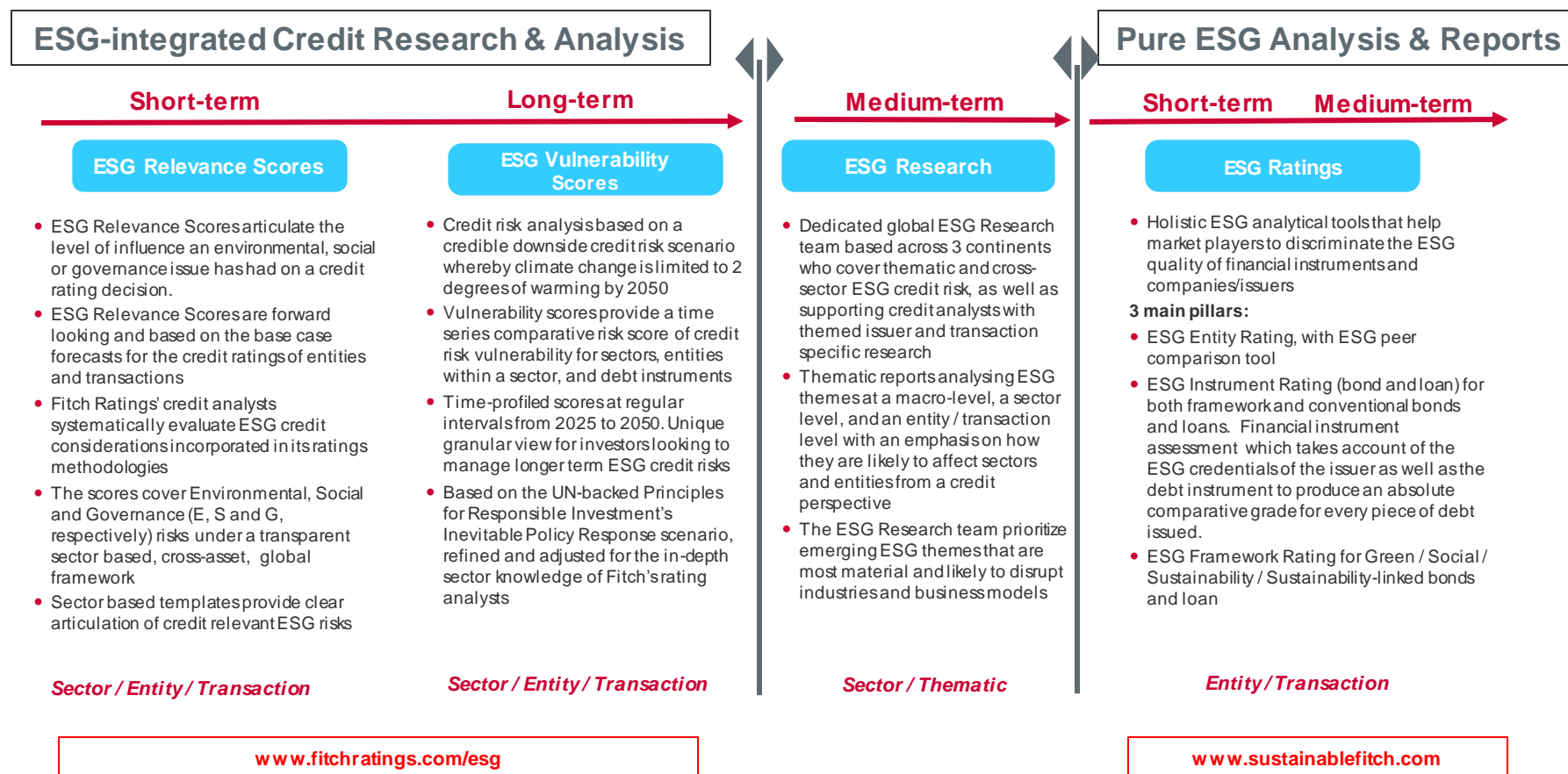
COUNCIL OF INFRASTRUCTURE FINANCING AUTHORITIES

ESG Relevance Scores and Credit Ratings

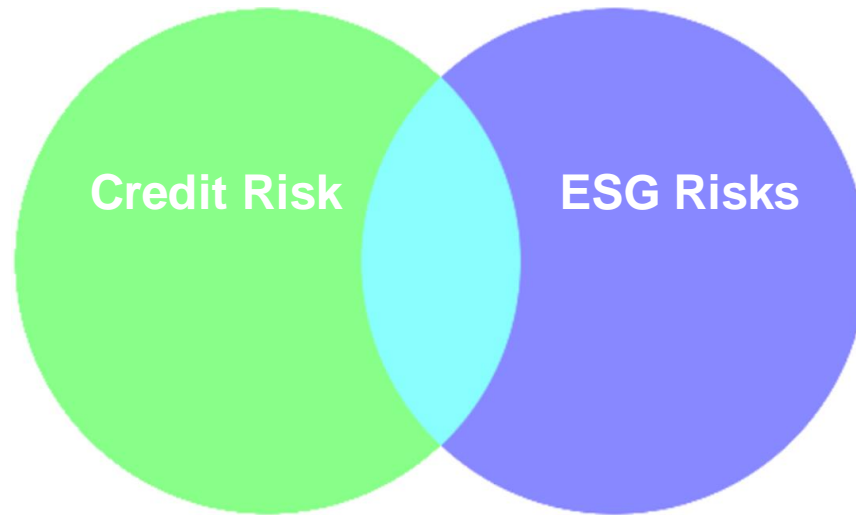
- Teri Wenck, CPA

April 25, 2022

ESG Credit Research & Analysis – Fitch Ratings Suite of ESG Products

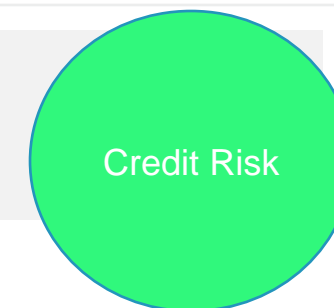


ESG Relevance Scores – Intersection Between ESG and Credit Risk



- Which ESG risks are relevant for different industry sectors
- Which ESG risks are having an impact in rating decisions for individual issuers
- Which ESG risks have actually resulted in rating action
- Score assignment is under an ESG framework, not included in rating criteria

ESG Relevance Scores – Intersection Between ESG and Credit Risk

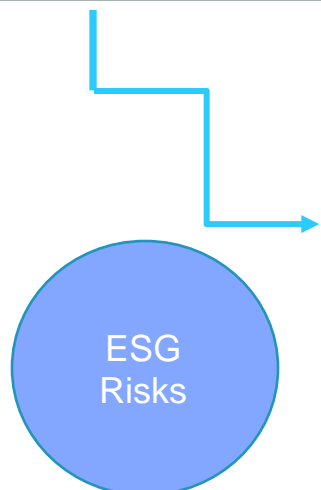


Credit Rating Assignments - Reflect Sector-Specific Rating Criteria

Revenue Supported Rating Criteria – Enterprise Sectors

Key Risk Drivers

- **Revenue Defensibility** – Revenue Source Characteristics/Service Area Characteristics/Rate Flexibility
- **Operating Risk** – Operating Cost Burden/Capital Planning and Management
- **Financial Profile** – Leverage Profile/Liquidity Profile



Environmental (E)	General Issues	E Score	Sector-Specific Issues	Reference
	Water & Wastewater Management	3	Water use in operations; water utilities' financial targets for water quality, leakage, and usage	Operating Risks
	Waste & Hazardous Materials Management; Ecological Impacts	3	Impact of waste including pollution incidents; discharge compliance	Operating Risks
	Exposure to Environmental Impacts	3	Exposure to extreme weather events (e.g. risk of drought and flooding)	Operating Risks; Asymmetric Risk Factors
Social (S)	Human Rights, Community Relations, Access & Affordability	3	Product affordability and access	Revenue Defensibility; Operating Risks; Asymmetric Risk Factors
Governance (G)	Management Strategy	3	Strategy development and implementation	Asymmetric Risk Factors

Fitch ESG Relevance Score	Definition
5	Highly relevant, a key entity, transaction or program rating driver that has a significant impact on an individual basis.
4	Relevant to entity, transaction or program rating; not a key rating driver but has an impact on the ratings in combination with other factors.
3	Minimally relevant to ratings, either very low impact or actively mitigated in a way that results in no impact on the entity, transaction or program rating.
2	Irrelevant to the entity, transaction or program ratings; relevant to the sector.
1	Irrelevant to the entity, transaction or program ratings; irrelevant to the sector.

ESG and Credit Ratings

- Since 2015 investors have been calling on CRA's to systemically incorporate ESG characteristics into their credit ratings.
- Fitch's ESG Relevance Scores (ESG.RS) framework is designed to provide an integral, comprehensive and credit focused approach to displaying sector and issuer level ESG credit risks across all its ratings.
- ESG.RS do not assess "ESG performance", they are observations of whether ESG risks are relevant and material to credit rating decisions.
- Only a portion of ESG risks translate to credit risks, through a variety of transmission mechanisms.

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Credit-Relevant ESG Derivation

Virginia Beach (VA) [Stormwater] has 1 ESG rating driver and 10 ESG potential rating drivers

- Virginia Beach (VA) [Stormwater] has exposure to exposure to extreme weather events (e.g. risk of drought and flooding) which, in combination with other factors, impacts the rating.
- Virginia Beach (VA) [Stormwater] has exposure to water use in operations; water utilities' financial targets for water quality, leakage, and usage but this has very low impact on the rating.
- Virginia Beach (VA) [Stormwater] has exposure to impact of waste including pollution incidents; discharge compliance but this has very low impact on the rating.
- Virginia Beach (VA) [Stormwater] has exposure to product affordability and access but this has very low impact on the rating.
- Virginia Beach (VA) [Stormwater] has exposure to quality and safety of products and services; data security but this has very low impact on the rating.
- Virginia Beach (VA) [Stormwater] has exposure to impact of labor negotiations and employee (dis)satisfaction but this has very low impact on the rating.

Showing top 6 issues

Overall ESG Scale			
key driver	0	issues	5
driver	1	issues	4
potential driver	10	issues	3
not a rating driver	3	issues	2
	0	issues	1

Environmental (E)

General Issues	E Score	Sector-Specific Issues	Reference	E Scale
GHG Emissions & Air Quality	2	Emissions from operations	Operating Risks	5
Energy Management	2	Energy use in operations	Operating Risks	4
Water & Wastewater Management	3	Water use in operations; water utilities' financial targets for water quality, leakage, and usage	Operating Risks	3
Waste & Hazardous Materials Management; Ecological Impacts	3	Impact of waste including pollution incidents; discharge compliance	Operating Risks	2
Exposure to Environmental Impacts	4	Exposure to extreme weather events (e.g. risk of drought and flooding)	Operating Risks; Asymmetric Risk Factors	1

How to Read This Page

ESG scores range from 1 to 5 based on a 15-level color gradation. Red (5) is most relevant and green (1) is least relevant.

The Environmental (E), Social (S) and Governance (G) tables break out the individual components of the scale. The right-hand box shows the aggregate E, S, or G score. General Issues are relevant across all markets with Sector-Specific Issues unique to a particular industry group. Scores are assigned to each sector-specific issue. These scores signify the credit-relevance of the sector-specific issues to the issuer's overall credit rating. The Reference box highlights the factor(s) within which the corresponding ESG issues are captured in Fitch's credit analysis.

The Credit-Relevant ESG Derivation table shows the overall ESG score. This score signifies the credit relevance of combined E, S and G issues to the entity's credit rating. The three columns to the left of the overall ESG score summarize the issuer's sub-component ESG scores. The box on the far left identifies some of the main ESG issues that are drivers or potential drivers of the issuer's credit rating (corresponding with scores of 3, 4 or 5) and provides a brief explanation for the score.

Classification of ESG issues has been developed from Fitch's sector ratings criteria. The General Issues and Sector-Specific Issues draw on the classification standards published by the United Nations Principles for Responsible Investing (PRI) and the Sustainability Accounting Standards Board (SASB).

Social (S)

General Issues	S Score	Sector-Specific Issues	Reference	S Scale
Human Rights, Community Relations, Access & Affordability	3	Product affordability and access	Revenue Defensibility; Operating Risks; Asymmetric Risk Factors	5
Customer Welfare - Fair Messaging, Privacy & Data Security	3	Quality and safety of products and services; data security	Asymmetric Risk Factors	4
Labor Relations & Practices	3	Impact of labor negotiations and employee (dis)satisfaction	Asymmetric Risk Factors	3
Employee Wellbeing	2	Worker safety and accident prevention	Asymmetric Risk Factors	2
Exposure to Social Impacts	3	Social resistance to major projects or operations that leads to delays and cost increases and/or unfavorable regulatory regimes	Operating Risks; Financial Profile	1

Governance (G)

General Issues	G Score	Sector-Specific Issues	Reference	G Scale
Management Strategy	3	Strategy development and implementation	Asymmetric Risk Factors	5
Governance Structure	3	Governing body independence and effectiveness; degree of political or external influence	Asymmetric Risk Factors	4
Group Structure	3	Complexity, transparency and related-party transactions	Asymmetric Risk Factors	3
Financial Transparency	3	Quality and timing of financial disclosure	Asymmetric Risk Factors	2
				1

CREDIT-RELEVANT ESG SCALE	
How relevant are E, S and G issues to the overall credit rating?	
5	Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis.
4	Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors.
3	Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating.
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Applicable Criteria & References
Public Sector, Revenue-Supported Entities Rating Criteria (Mar 2020)
U.S. Water and Sewer Rating Criteria (Apr 2020)

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