

Public-Private Partnerships & Private Delivery/ Finance



**Roles for Federally Sponsored Financial Assistance: How
State Revolving Funds and WIFIA Can Support “Market-
Based” Solutions**

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Ground We Will Cover Today

EPA Funding Program Overviews

- Water Infrastructure Finance Innovation Act (“WIFIA”)
- State Revolving Funds (“SRFs”)

SRF/WIFIA Authority to Engage Private Parties

- The Basics
- Innovative Models (How public dollars can support “Market-Based Solutions” involving private parties)

Appendix - Where You Can Find Additional Information

WIFIA



EPA Funding: WIFIA

WIFIA Operates as a Highly Leveraged Federal Credit Program

- \$25 million Congressional appropriation funded a loss reserve
- OMB has set loss assumptions that are expected to result in 1.6% to 2% assumed loss rates for WIFIA loans
- Yields about \$1.5 billion in loan capacity funded by U.S. Treasury
- Loss rate varies based on loan risk assessments

EPA Funding: WIFIA

Eligible Borrowers

- Local, state, tribal, and federal government entities
- Partnerships and joint ventures
- Corporations and trusts
- Clean Water and Drinking Water State Revolving Fund (SRF) programs



Eligible Projects

- Wastewater conveyance and treatment projects that are eligible for the Clean Water SRF
- Drinking water treatment and distribution projects that are eligible for the Drinking Water SRF
- Enhanced energy efficiency projects at drinking water and wastewater facilities
- Brackish or seawater desalination, aquifer recharge, alternative water supply, and water recycling projects
- Drought prevention, reduction, or mitigation projects
- Acquisition of property if it is integral to the project or will mitigate the environmental impact of a project
- A combination of projects secured by a common security pledge or submitted under one application by an SRF program

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EPA Funding: WIFIA, Important Features

\$20
MIL

Minimum project size for large communities.

5
YEARS

Maximum time that repayment may be deferred after substantial completion of the project.

\$5
MIL

Minimum project size for small communities (population of 25,000 or less).

%

Interest rate will be equal to or greater than the U.S. Treasury rate of a similar maturity.

49%

Maximum portion of eligible project costs that WIFIA can fund.

Bar chart icon

Projects must be creditworthy.

35
YEARS

Maximum final maturity date from substantial completion.

Clipboard icon

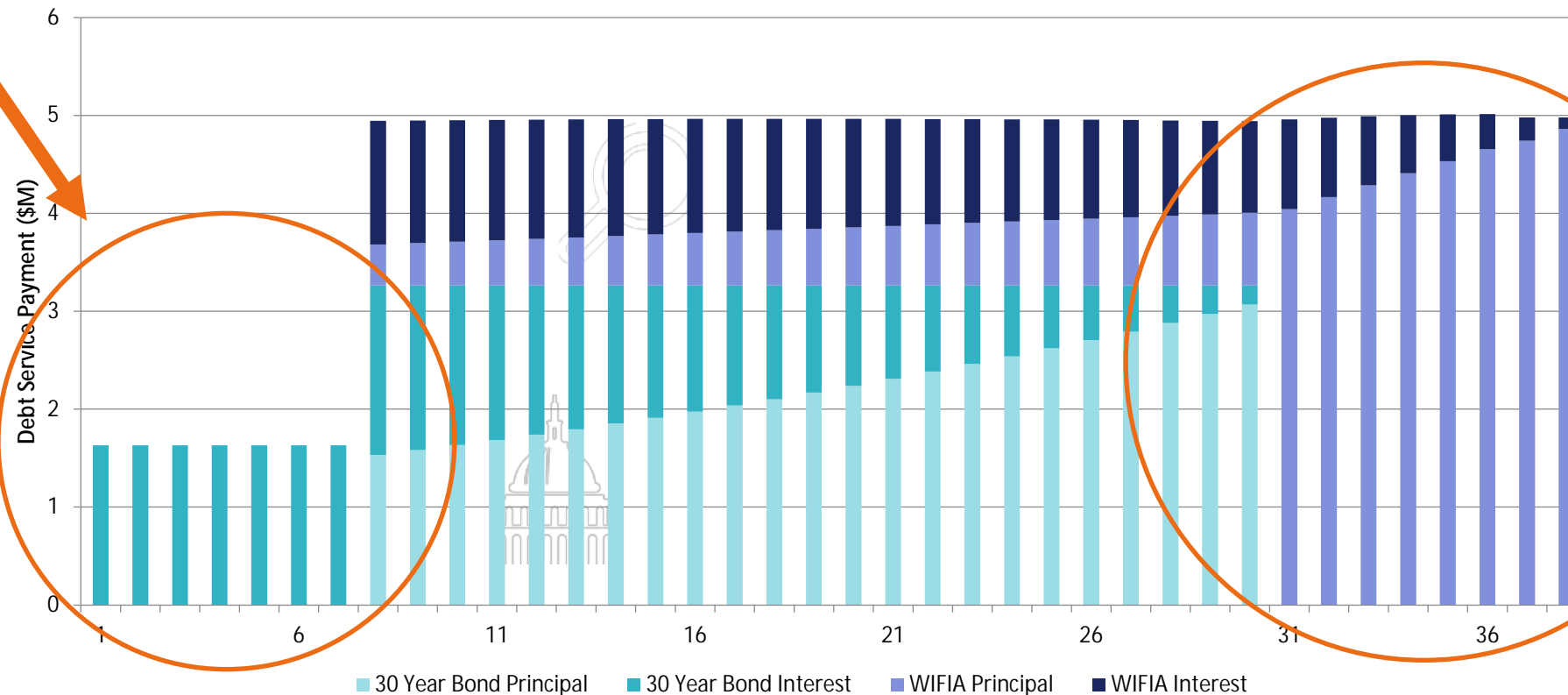
NEPA, Davis-Bacon, American Iron and Steel, and all federal cross-cutter provisions apply.

WIFIA Offer Flexible Repayment Terms

Interest-only
period for
bond

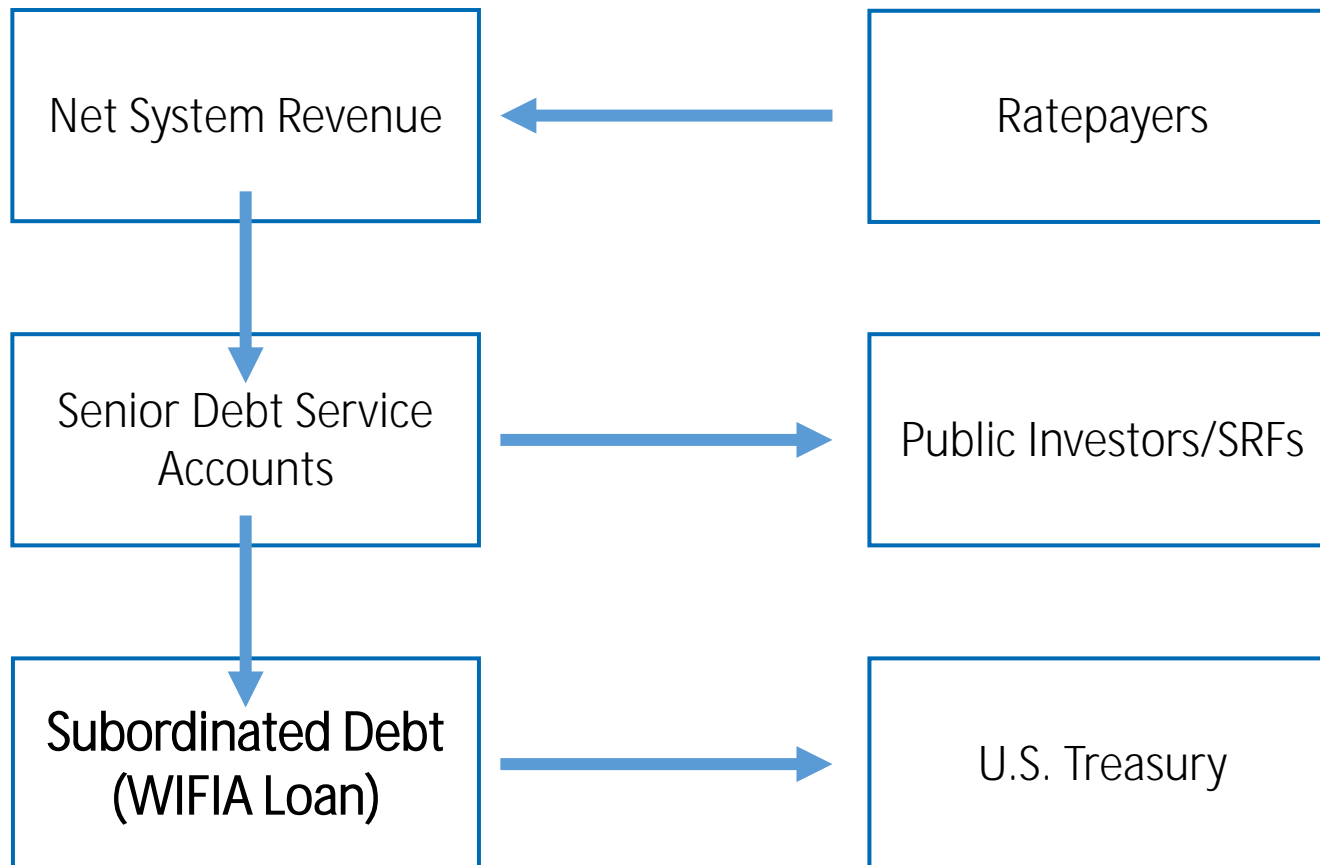

Amortization of a \$100M Financing

WIFIA
payments
backloaded



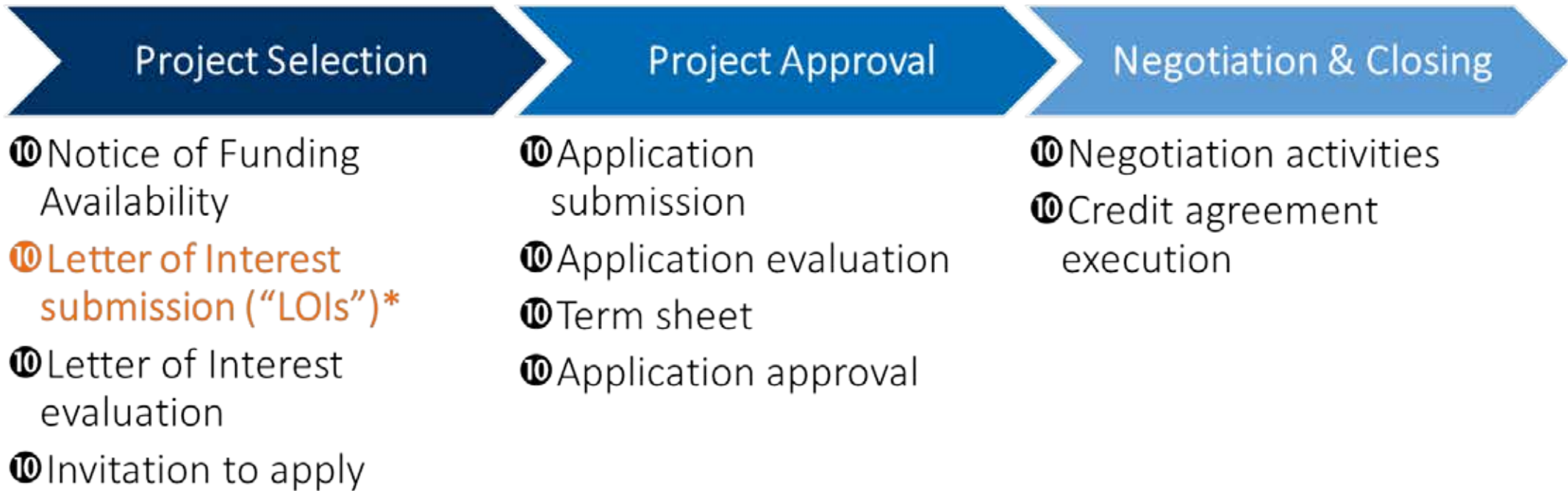
WIFIA Takes Subordinated Lien

Water Utility Lien Structure



Joint Utility tax-exempt-WIFIA financing can provide a very attractive blended interest rate for large water infrastructure projects (especially for mid to lower tier rated utilities)

WIFIA Application Process



For more information go to: www.epa.gov/wifia.

*First round letters of interest were due April 10, 2017.
The Agency Received 43 LOIs



State Revolving Funds



Clean Water
State Revolving Fund



SRF Financial Assistance: Operating Tools



Financial Assistance Authority Provided Under the Clean Water Act Offers Tools for Innovative Solutions

From Title VI, Section 603 (d)

Except as otherwise limited by State law, a water pollution control revolving fund of a State under this section may be used only—

- § (1) *to make loans;*
- § (2) *to buy or refinance the debt obligation of municipalities and intermunicipal and interstate agencies within the State at or below market rates, where such debt obligations were incurred after March 7, 1985;*
- § (3) *to guarantee, or purchase insurance for, local obligations where such action would improve credit market access or reduce interest rates;*
- § (4) *as a source of revenue or security for the payment of principal and interest on revenue or general obligation bonds issued by the State if the proceeds of the sale of such bonds will be deposited in the fund;*
- § (5) *to provide loan guarantees for similar revolving funds established by municipalities or intermunicipal agencies;*
- § (6) *to earn interest on fund accounts;*

Eligibilities Under the CWSRF



Eligible Borrowers

Point Source

- § Municipalities, including tribes
- § Inter-municipal and Interstate agencies

Nonpoint Source ("NPS")

- § Point source recipients
- § Private enterprises
- § Not-for-profits

Eligible Projects

- § Constructing Publicly Owned Treatment Works (POTWs)
- § Nonpoint source
- § National Estuary Program projects
- § Centralized systems
- § Stormwater
- § Reducing demand for POTW capacity (*e.g., through water conservation, efficiency, and reuse*)
- § Watershed pilot projects
- § Energy efficiency
- § Reusing or recycling wastewater, stormwater or subsurface drainage water
- § Security measures at POTWs
- § Technical assistance

EPA Funding: Clean Water & Drinking Water State Revolving Funds

Funds Awarded and Assistance Provided

Cumulative federal funds awarded	DW: \$20.B	CW: \$42.0B
Cumulative assistance provided	DW: \$32.5B	CW: \$118.7B
Point Source		114.0B
Non-Point Source		4.7B
Assistance provided in 2016	DW: \$2.5B	CW: \$7.6B



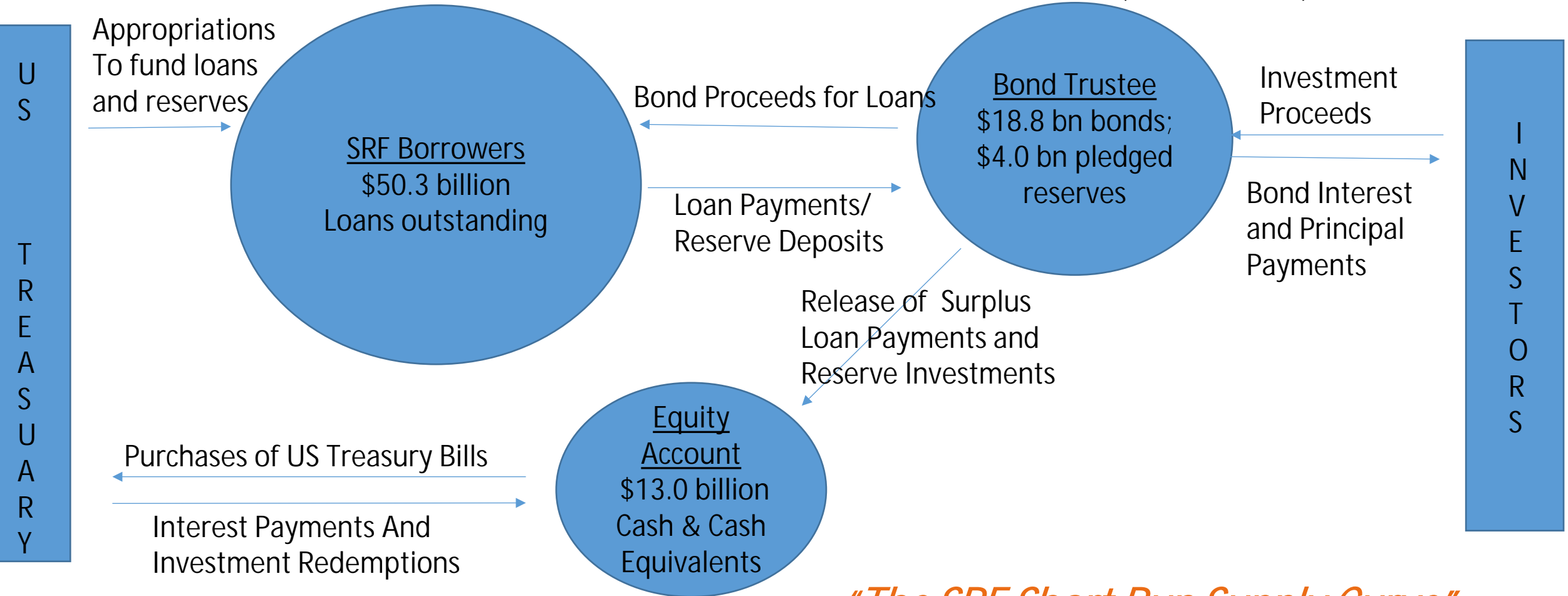
Low Non Point Source Funding

States required to provide 20% match of federal funds awarded

SRFs Created By Congress and Authorized Under the Clean Water and Safe Drinking Water Acts to support states in delivering "Financial Assistance" to Local Governments and Other Qualified Entities sponsoring "Eligible Projects"

EPA Funding: 2016 CWSRF Financial Position

Clean Water SRF Fund Flows/ Financial Position (June 2016)



"The SRF Short Run Supply Curve"

Innovating the SRFs To Better Serve Market Based GI and Other Forms of Ecosystem Services



EPA Funding: Broadening Financial Assistance Opportunities for Underserved NPS/GI Projects

CWSRFs have predominantly been operated as loan programs

Projects served are heavily weighted toward point source

Amount / Number

- Point Source \$144.0bn / 30,516
- NPS \$4.7bn / 16,717

An NPS Funding Breakthrough May Require New Approaches That Combines Public Tools and Private Capital

SRFs Have the Credit Capacity to Offer “High Quality” Guarantees where loan capacity is insufficient to support NPS

EPA Funding: Broaden Financial Assistance By Strategically Deploying the Guarantee

Putting the SRF Guarantee Authority to Work

- SRFs have triple-A balance sheet strength with excess credit capacity that can be leveraged to reach project categories that tend to be underserved
- Credit support can be provided to small property owners or project aggregators without disenfranchising existing SRF loan beneficiaries (primarily local government owned point and nonpoint source projects)
- Does not require SRF dollar outlays to work

Benefits:

- Can provide a vehicle for local governments and utilities looking for off-balance sheet solutions that involve third party project investors/ property owners engaged in GI
- The SRFs' top credit rating would assure liquidity to third party project investors and market access on the most favorable market rates available
- Loans can be warehoused by a commercial lender, local infrastructure bank and/or the SRF and then aggregated for long term financing with the benefit of the SRF Guarantee; at meaningfully reduced transaction costs

EPA Funding: Broadening Financial Assistance Opportunities for Underserved NPS/GI Projects

Are SRF Resources Sufficient to Support Both Triple-A Lending and Guarantee Programs?

State Revolving Funds (“SRFs”) have the financial tools and balance sheet strength to lend significant credit support. Credit capacity for a credit enhancement vehicle arises in three places:

- Equity pledged to SRF bond indentures exceeds levels needed to support outstanding triple-A ratings
- The daily average cash and investment balances of the programs
- Each year loan repayments and /or pledged assets recycle providing a residual cashflow that can provide a subordinate lien for a triple-A guarantee

In a January 2014 report, “Utilizing SRF Funding for Green Infrastructure Projects,” the USEPA Financial Advisory Board found that:

- ***a subordinate lien*** on the \$2 billion of recycled dollars ***alone*** could, in aggregate, support state level SRF triple-A credit enhancement vehicles with an initial capacity range of \$6 to \$28 billion (the range represents financing terms of 7 to 20 years).
- Looking to each of the three sources of excess SRF credit and other credit structuring applications (such as the cross-pledge of Clean Water and Drinking Water SRF dollars) would likely produce much higher capacity values.

EPA Funding: Broadening Financial Assistance Opportunities for Underserved NPS/GI Projects

Does the Addition of an SRF Guarantee Product Add Credit Risk That Can Jeopardize Future Funding Capacity?

Anytime leverage is increased credit risk will increase putting program equity and future funding capacity at greater risk

Key is effective management of credit risk to minimize risk of loss. This can be achieved by:

1. Designing security features that protects the program starting with a credit design that limits any credit fallout related to untested asset classes (i.e., the use of subordination)
2. Adopting strong loan security features (e.g., for private parties PACE or on-bill financing)
3. Adopting loan underwriting standards; and
4. For untested asset classes, finding non-SRF resources to fund initial loss reserves (perhaps philanthropic capital).

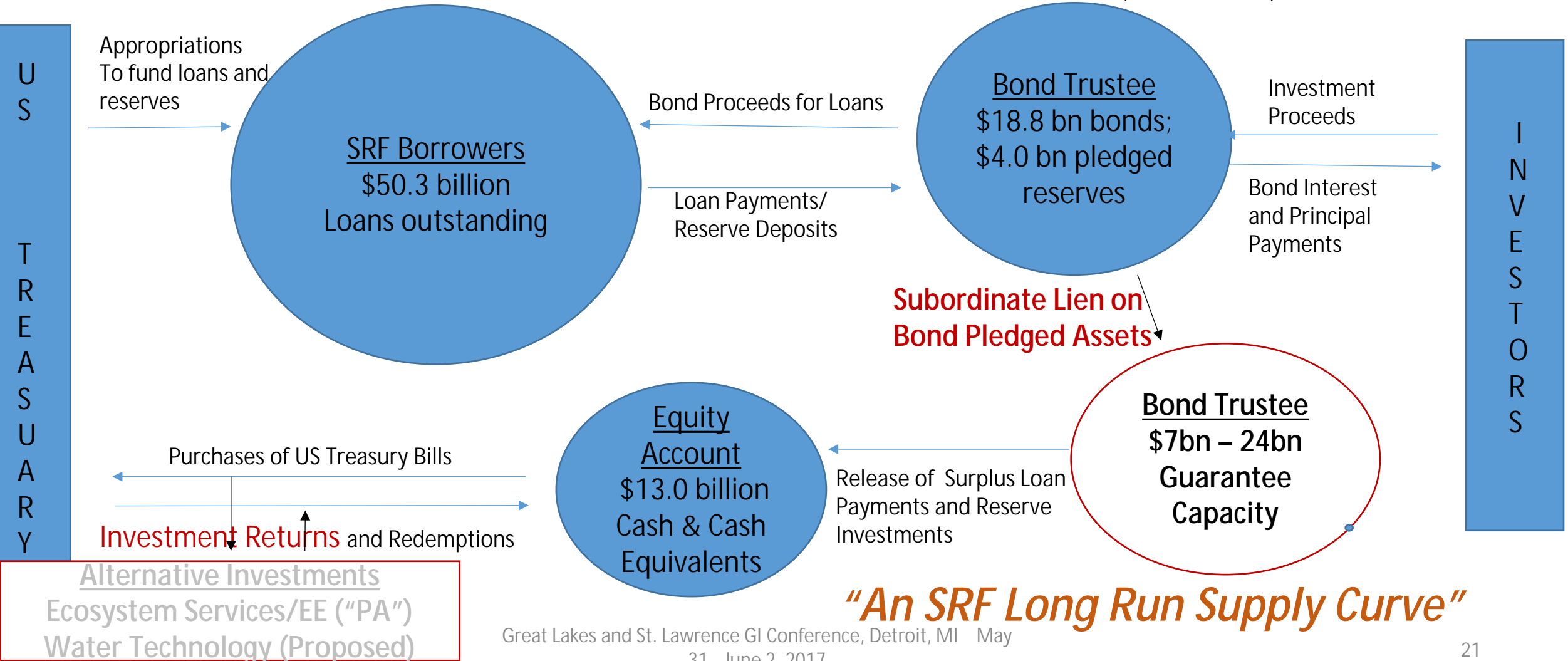
EPA Funding: Broadening Financial Assistance Opportunities for Underserved NPS/GI Projects

Bank and/or SRF Liquidity Can Support Loan Origination Prior to Securitization

- Bank credit or SRFs liquidity can be sources of initial financing *even if* higher priority projects have a first claim on available funds.
- These funds can be used to originate loans for NPS projects at below market rates
- This alleviates the need to rely solely on local bank funding to originate and hold loans
- The long term financing is then secured with the SRF guarantee (and a loss reserve)
- The Bank or SRF is then reimbursed allowing the cycle to repeat
- *In this manner SRFs working with local lenders can operate a statewide aggregation and securitization program for NPS projects*

EPA Funding: SRF Innovation

Clean Water SRF Fund Flows/ Financial Position (FY2016)



A Recent Success Story: New York SRF's Use of the Guarantee

\$24 Million New York State Energy Research and Development Authority Residential Energy Efficiency Financing Revenue Bonds, Series 2013A (Federally Taxable), SRF Guaranteed

- § The third-party irrevocable, unconditional SRF guarantee of bonds supported lending to commercial and residential energy efficiency projects consistent with State's 319 Plan. Loss reserve held by Collateral Agent, funded from Regional Greenhouse Gas Initiative revenues, covers first loss.
- § CWSRF Guarantee benefits from pledge of subordinate lien, available cash & cash equivalents and is cross-collateralized by the Drinking Water SRF
- § Underlying assets are unsecured residential loans with credit score and debt-to-income threshold requirements
- § Bonds were rated Aaa/AAA/AAA by Moody's, S&P and Fitch, respectively
- § Transaction assured market access and superior pricing. Loans benefitted from annual interest cost savings of about 2%.

Why is this Success Story of Value

Municipalities/Utilities Can Look to SRF Guarantee to Support Development of Environmental Markets

- § Impediments to the development of privately financed P3 solutions for Green Infrastructure stem from concerns about high costs of capital, lack of liquidity and loan seasoning.
- § A highly rated SRF guarantee product can address these weaknesses.

Non-Point Source (“NPS”) Projects Can Directly Benefit from SRF Supported Credit Enhancement Mechanisms

- § NPS Projects tend to rank lower on a state’s Project Priority List and are less likely to qualify for traditional SRF financing.
- § NPS Projects can be privately owned and still qualify as project eligible under the Clean Water Act. (Point source projects must be publicly owned)
- § Prerequisites for NPS Projects to obtain SRF financial support include:
 - § Project listing on the SRF Annual Intended Use Plan
 - § Categorical project listings on the statewide Section 319 Water Conservation Management or Section 320 Estuary Management Plans
 - § Confirmation of project eligibility under the federal Clean Water Act and state enabling legislation
- § Guarantee support should improve economics of NPS projects, including green infrastructure and source water protection
- § Triple-A pricing benefit can be delivered to private owners while impact of credit risk of private owners on the SRF can be managed with underwriting standards and third-party funded loss reserves

Hurdles to Overcome to Create Market Solutions



- Utilities will need to identify/create revenue streams for distributed infrastructure/environmental markets
- Utilities and states need to recognize there are financing tools available that are underutilized
- SRF Administrators need to push the envelope
- We need willing buyers and sellers





Water Infrastructure and Resiliency Finance Center

The Water Finance Center is an **information and assistance center**, helping communities make informed decisions for **drinking water, wastewater, and stormwater infrastructure** to protect human health and the environment.



Research

Advise

Innovate

Network

<https://www.epa.gov/waterfinancecenter>

Appendix

SRF Guarantees: First Solve for Net CashFlow

Can A Guarantee Product Be Managed Alongside Existing Loan Products?

It All Depends on Net Program CashFlows Which in FY2016 Consisted of:

	(in millions)
Loan Principal Repayments	\$4,093
Loan Interest Payments	<u>1,005</u>
Total Loan Payments	<u>\$5,098</u>
Bond Interest Paid	\$875
Bond Principal Paid	<u>1,573</u>
Total Bond Payments	<u>\$2,448</u>
Net SRF CashFlow	\$2,650

SRF Guarantees: Apply Rating Criteria

Can A Guarantee Product Be Managed Alongside Existing Loan Products?

And Rating Agency Discount of Cashflows for Assumed Credit Risk (Losses):

(in millions)

Total Loan Payments	\$5,098
Less: Total Bond Payments	<u>\$2,448</u>
Net SRF CashFlow	\$2,650

<i>Less: Triple-A SRF Loan Loss Assumptions</i>	<u>Moody's</u>	<u>S&P</u>	<u>Fitch</u>
(guaranteed portfolio is non-investment grade)			
Maximum Capital Charge	-79%	-65%	-57%
Net Annual Cashflow Available for SRF Guarantees:	\$556	\$927	\$1,139

SRF Guarantees: Determine Capacity Estimates

Can A Guarantee Product Be Managed Alongside Existing Loan Products?

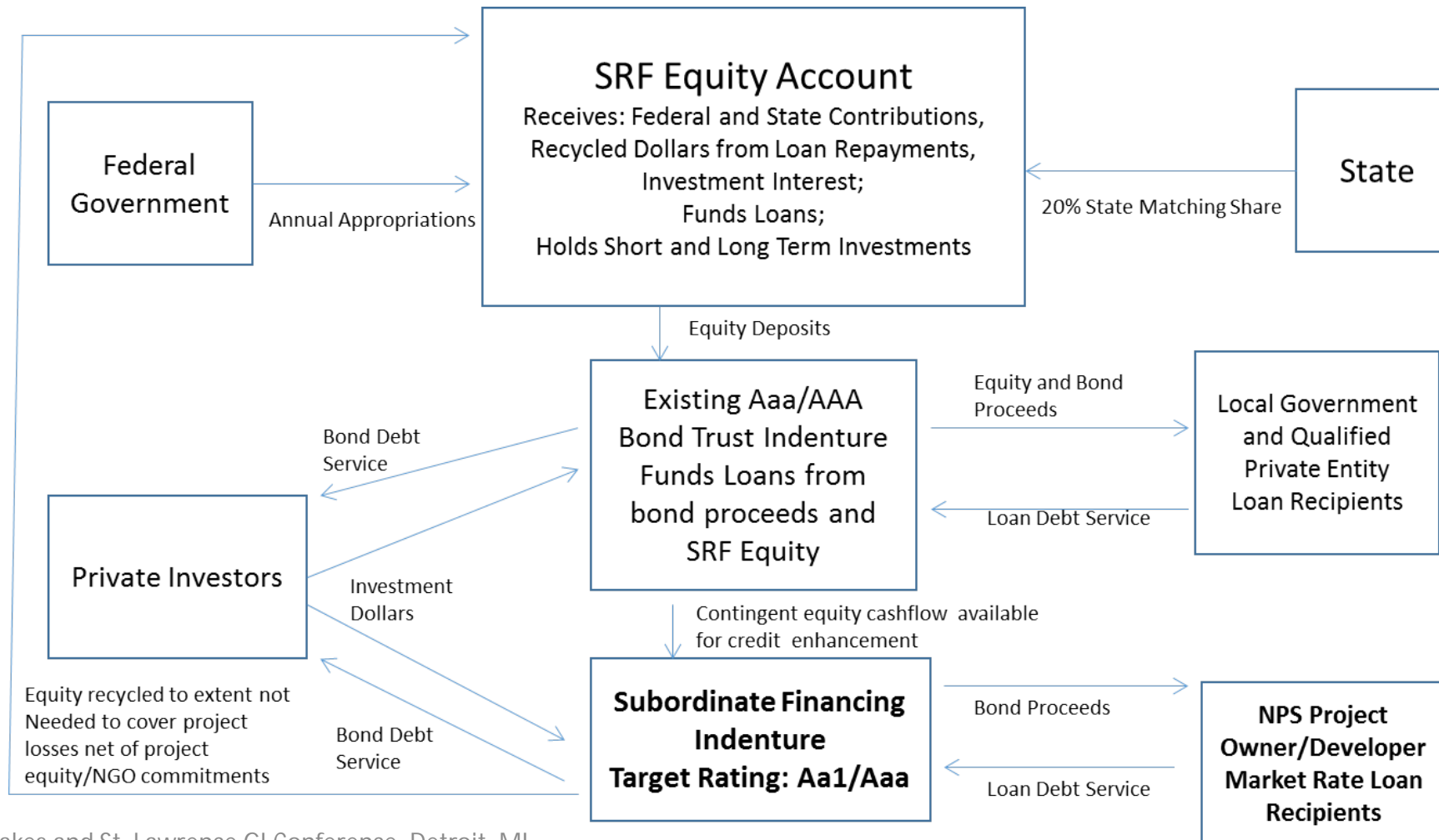
What Does Discounted Cashflow Yield in Terms of Triple-A Rated Guarantee Capacity?:

Terms	Interest Rate	Guarantee Capacity Based on Triple-A Criteria for Non-Investment Grade Portfolio			Guarantee Capacity Based on Triple-A Criteria for Investment Grade Portfolio		
		Moody's	S&P	Fitch	Moody's	S&P	Fitch
		(In Millions)			(In Millions)		
5Yrs	2.5%			\$24,115			\$81,991
7	2.5	\$7,738	\$12,534		\$7,738	\$25,148	
10	3.0	10,388	14,310	25,493	10,388	26,235	63,335
20	4.0	16,652	17,914	24,062	16,652	26,394	41,764

States that do not leverage program resources with bond financing will have guarantee capacity of 1.5x to 2x greater than a state that leverages its program resources

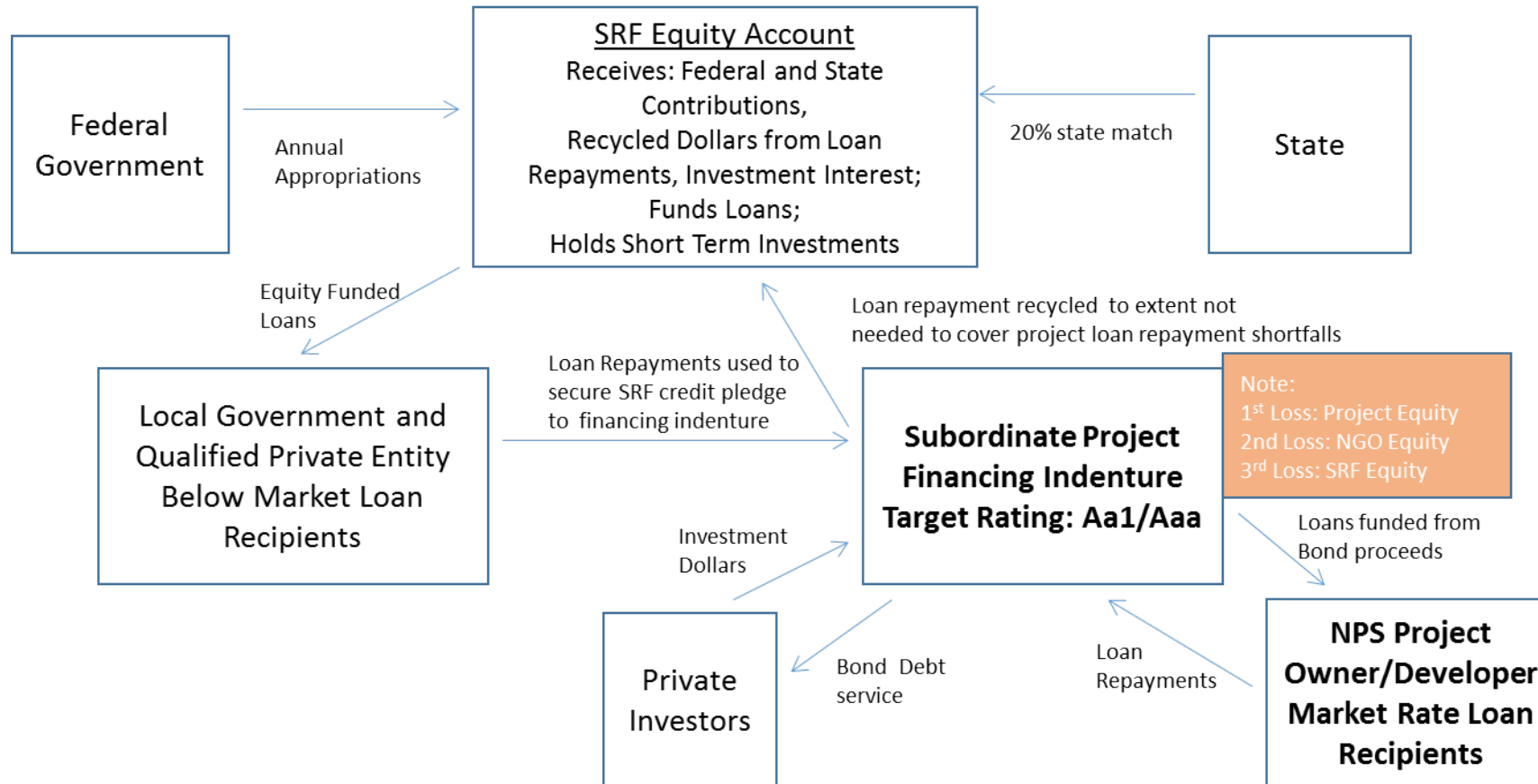
SRF Guarantees: Integration with Leveraged Financing Model

Framework for a Leveraged State Revolving Fund Credit Mechanism to Support NPS Projects



SRF Guarantees: Integration with Direct Financing Model

Framework for a State Revolving Fund Credit Mechanism to Support NPS Projects Using a Direct Financing Model



References

USEPA Financial Advisory Board

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www.epa.gov/waterfinancecenter

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