



**MUNICIPAL GREEN BOND DISCLOSURE:  
INVESTOR GUIDANCE AND ISSUER PERSPECTIVE**

SEPTEMBER 19<sup>TH</sup>  
10AM – 11:30AM





# Housekeeping

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# Speaker Introductions



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**Emily Robare**

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# Goals of the Webinar

1. Understand that green bonds continue to be an important topic.
2. Recognize the potential benefits of issuing green bonds
3. Appreciate the different types of investors that invest in green bonds, that is bonds that finance projects with an 'environmental benefit.'
4. Know what additional POS disclosure is required to have green bond investors interested in your green bond sale.





# **Survey Question #1**

## **What is the biggest hurdle in issuing green bonds?**

- ✓ No resources to produce project-specific disclosure
- ✓ Waiting to see a pricing benefit (i.e. greenium)
- ✓ Concerns about additional continuing disclosure requirements
- ✓ We have issued green bonds in the past



# Background/Purpose of the CGBMDC's Green Bond Paper

- The recently released **“Recommended Approach to Municipal Green Bond Disclosure”** was written with input from municipal market investors, specifically for U.S. municipal market issuers.
- The California Green Bond Market Development Committee (“CGBMDC”) established a subcommittee, comprised primarily of municipal bond investors, to develop this paper (resource).

## **Background/Purpose of the CGBMDC's Green Bond Paper**

### **The subcommittee members:**

Richard Akulich, Preston Hollow Community Capital

Raul Amezcua, Ramirez & Co., Inc.

David Blair, Nuveen

Mark Capell, Build America Mutual

Paul Charbonneau, Neuberger Berman

Kevin Civale, Esq., Stradling Yocca

Ruth Ducret, Breckinridge Capital Advisors

Ksenia Koban, Neuberger Berman

Akiko Mitsui, Individual Contributor

Kim Nakahara, Allspring Global Investments

Katryna Pouliot, Calvert Research Management

Emily Robare, Pacific Investment Management Co.

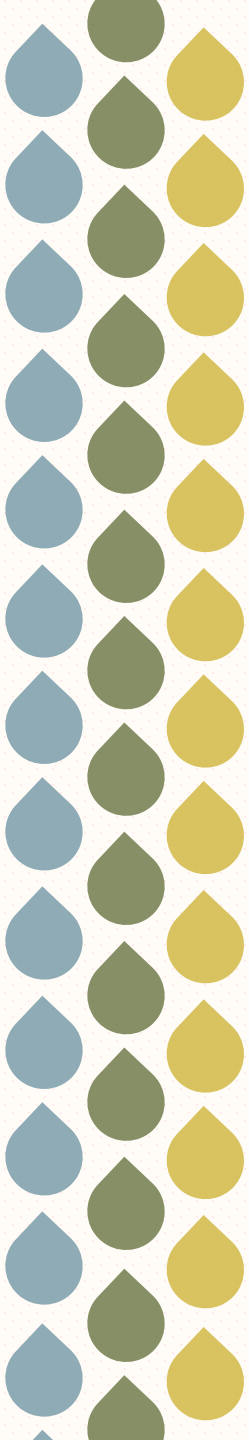
Barbara Van Scoy, Heron Foundation

David Wooley, UC Berkeley, Goldman School of Public Policy

# Background/Purpose of the CGBMDC's Green Bond Paper

The guidelines **only address information disclosure for investors' green bond assessments**, and not the broader environmental risk disclosures necessary for general credit analysis.

For purposes of this report, ***green bond* refers to a bond where the proceeds are used to fund projects with environmental benefits**, without regard to whether the bond is labeled as “Green” or not.





# An Example of Good Green Bond Project Disclosure

The District's Green Bonds Guidance further provides that in identifying potential projects for Green Bond financing, **the District's aim should be towards including projects that best meet one or more of the identified criteria** and excluding those projects that appear marginal or that have unresolved sustainability issues.

In identifying projects eligible for green bond financing, **the District considers projects that are designed to meet one or more of the following criteria to be “green” projects:** (i) maintain water quality; (ii) improve water use efficiency, including conservation through reduced water loss; (iii) improve biodiversity and ecosystem quality; (iv) protect against flooding; (v) reduce pollution; (vi) improve resilience (adaptation) to climate change; (vii) reduce the combustion of fossil fuels; (viii) reduce greenhouse gas emissions; (ix) implement “reduce, reuse, recycle” practices in preference to raw materials; or (x) adhere to sustainable purchasing guidelines



# An Example of Good Green Bond Project Disclosure

East Bay Municipal Utility District Expected Series 2022A Green Bonds Projects			
Project Name	Short Description	EBMUD Green Bond Criteria	Amount Funded
Treatment Plant Upgrades	The Project supports compliance with water quality regulations and improves the safety, reliability, and operation of the water treatment plants. Work included under this project includes design completion and the start of construction of the Orinda Water Treatment Plant (“WTP”) filter air scour, Sobrante WTP control system modernization, and other improvements for chemical safety and reliability.	1, 2, 5, 6	\$40.9 million
Open Cut Reservoir Program	Open-cut reservoir rehabilitation, replacement, and demolition projects are necessary to remove hazardous materials, reduce maintenance costs, improve safety, and improve water quality by optimizing storage in the distribution system.	1, 2, 5	\$21.7 million



# An Example of Less Than Ideal Green Bond Project Disclosure

It simply states bonds are designated as...

*“Green” due to the proceeds being used to finance sustainable water and wastewater management projects that contribute to the development of sustainable infrastructure for clean water and/or drinking water and wastewater treatment.*

No additional verbiage on additional environmental benefits.

Ruth Ducret, Senior Research Analyst  
[rducret@breckinridge.com](mailto:rducret@breckinridge.com)





1993  
YEAR FOUNDED

- Experienced asset manager
- Offices in Boston and San Diego

88  
EMPLOYEES

100%  
INDEPENDENTLY OWNED

- Committed to independence
- Clients are our top priority

\$44+ Billion  
ASSETS UNDER MANAGEMENT

Category	Amount
SECTOR-FOCUSED FIXED INCOME	\$35.8B
MULTI-SECTOR FIXED INCOME	\$8.6B

- Customized separate accounts
- Fixed income, dividend income and sustainable investing strategies

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Breckinridge Capital Advisors | 13



# Breckinridge: ESG Integration

## ESG INTEGRATION

### Why

- Risk management
- Additional insight
- Longer-term horizon
- PRI commitment

### How

- Emphasizes materiality
- Internal frameworks
- Proprietary scores & ratings
- Data from a variety of sources

## APPROACHES

### CORPORATES<sup>1</sup>

#### ESG Research Focus: Credit Risk Management

- Sector-based frameworks
- Evaluate CSR disclosure and commitments
- Actively monitor issuer controversies
- Engage in direct dialogue with issuers

### MUNICIPALS

#### ESG Research Focus: Credit Risk Management

- Sector-based frameworks
- Analyze data from U.S. Census, FBI, EPA and others
- Evaluate sustainability initiatives and plans
- Engage in direct dialogue with issuers

### AGENCY MBS & CMBS

#### ESG Research Focus: Prepayment Risk

- Climate risk score adjusts prepayment speeds
- Score based on state level climate risks
- Incorporates third party climate change research

### ABS

#### ESG Research Focus: Credit Risk Management

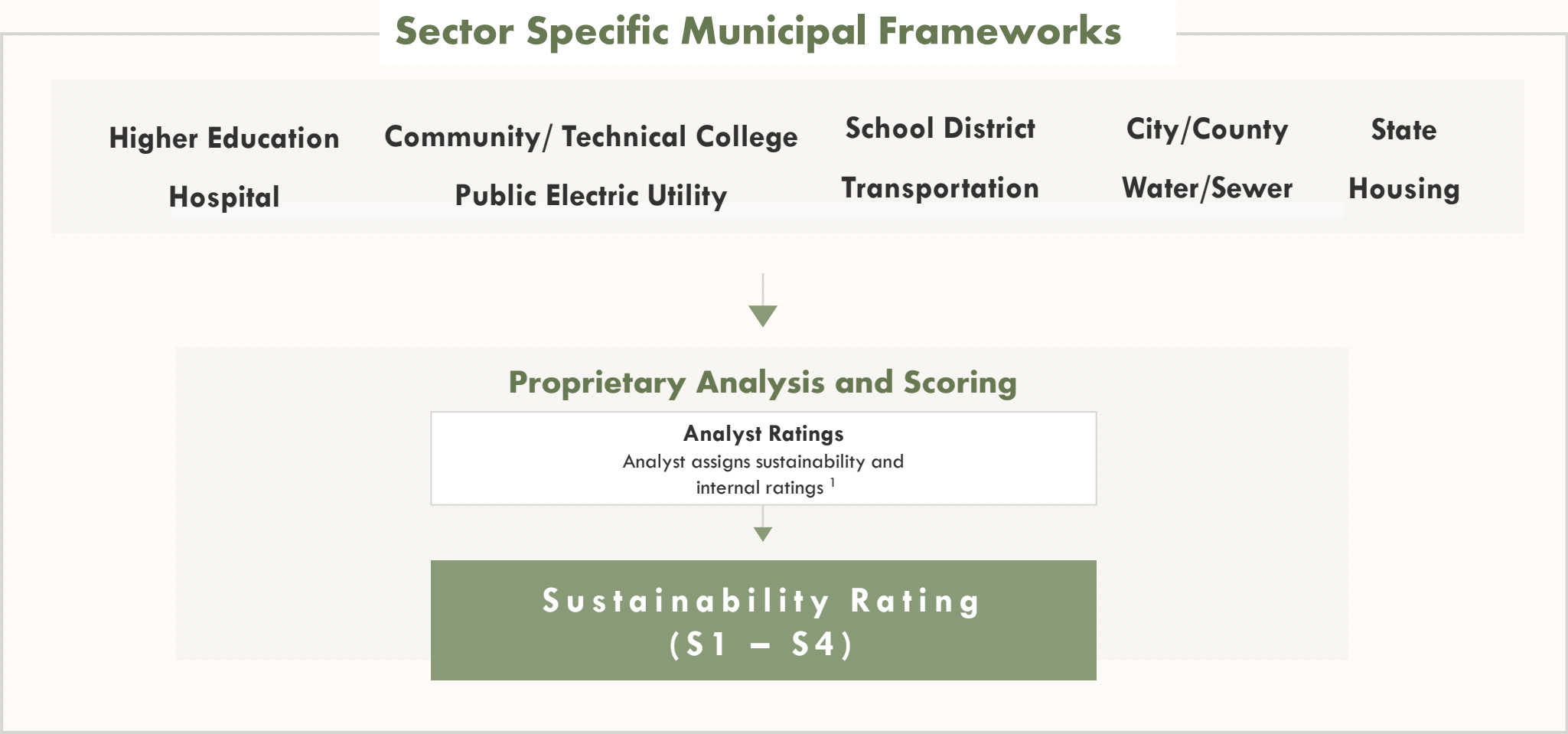
- Sector-based frameworks
- Contains sector-risk ratings for ABS sub-sectors
- Utilizes Bloomberg ESG data and third-party scores

<sup>1</sup> May include issuers of asset backed securities.

# Municipal: ESG Research Approach



Our ESG integration methodology incorporates municipal frameworks comprised of both quantitative and qualitative ESG factors to derive a composite sustainability rating.



<sup>1</sup> Ratings may be peer reviewed to ensure consistency.

<sup>2</sup> Engagement discussion takeaways can inform an analyst's view on a sector theme or material ESG risk.



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Equity investments are volatile and can decline significantly in response to investor reception of the issuer, market, economic , industry, political, regulatory or other conditions.

Breckinridge believes that the assessment of ESG risks, including those associated with climate change, can improve overall risk analysis. When integrating ESG analysis with traditional financial analysis, Breckinridge’s investment team will consider ESG factors but may conclude that other attributes outweigh the ESG considerations when making investment decisions.

There is no guarantee that integrating ESG analysis will improve risk-adjusted returns, lower portfolio volatility over any specific time period, or outperform the broader market or other strategies that do not utilize ESG analysis when selecting investments. The consideration of ESG factors may limit investment opportunities available to a portfolio. In addition, ESG data often lacks standardization, consistency and transparency and for certain companies such data may not be available, complete or accurate.

Breckinridge’s ESG analysis is based on third party data and Breckinridge analysts’ internal analysis. Analysts will review a variety of sources such as corporate sustainability reports, data subscriptions, and research reports to obtain available metrics for internally developed ESG frameworks. Qualitative ESG information is obtained from corporate sustainability reports, engagement discussion with corporate management teams, among others. A high sustainability rating does not mean it will be included in a portfolio, nor does it mean that a bond will provide profits or avoid losses.

Net Zero alignment and classifications are defined by Breckinridge and are subjective in nature. Although our classification methodology is informed by the Net Zero Investment Framework Implementation Guide as outlined by the Institutional Investors Group on Climate Change, it may not align with the methodology or definition used by other companies or advisors. Breckinridge uses the financed emissions methodology developed by the Partnership for Carbon Accounting Financials (PCAF) to track, monitor and allocate emissions.

These differences should be considered when comparing Net Zero application and strategies.

Targets and goals for Net Zero can change over time and could differ from individual client portfolios. Breckinridge will continue to invest in companies with exposure to fossil fuels; however, we may adjust our exposure to these types of investments based on net zero alignment and classifications over time.





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# Disclaimer - Continued

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The Bloomberg Municipal Bond Index is considered representative of the broad market for investment grade, tax-exempt bonds with a maturity of at least one year.

The Bloomberg U.S. Government/Credit Index measures the performance of investment grade, U.S.-dollar denominated government and corporate bonds with maturities of at least one year.

The Bloomberg U.S. Aggregate Bond Index measures the investment-grade, U.S.-dollar denominated, fixed-rate taxable bond market.

The Bloomberg U.S. Agency CMBS Index measures the market for investment-grade, multi-family CMBS debt-issued by U.S. government agencies, Freddie Mac and Fannie Mae.

The Bloomberg Managed Money Short measures the performance of U.S.-dollar denominated short term, tax-exempt bond market.

The S&P 500 Index is a common measure of the broad U.S. equity market and is composed of the top 500 publicly traded U.S. companies. (Source: S&P Dow Jones)

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## Muni Green Bond Disclosure

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*CDIAC Green Bonds Webinar*

September 19, 2023

### **IMPORTANT NOTICE**

Please note that the following contains the opinions of the manager as of the date noted, and may not have been updated to reflect real time market developments. All opinions are subject to change without notice.

# PIMCO: Best Practice Guidance for Sustainable Bond Issuance

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## Key Takeaways

1. **A label doesn't confirm virtue.** PIMCO can map Green, Social, Sustainability, and Sustainability-Linked bonds internally across a spectrum based on Strategic Fit, Impact Assessment, and Red Flags/Reporting.
2. **Best practices** may include:
  - Bond framework as a stand-alone document, not just a Use of Proceeds paragraph in the Official Statement.
  - Clear and full alignment with ICMA Principles and Guidelines
  - Connection with issuer's long-term sustainability strategy and objectives
  - Use of proceeds aligned with UN Sustainable Development Goals (SDGs)
3. While issuers can self-label, PIMCO suggests **obtaining independent external verification** (e.g., second-party opinion, certification) of an ESG-labelled bond.

### Helpful Disclosure Examples:

- **State clean water trust:** Appendix with extensive detail on eligible project categories and descriptions of funded projects
- **City Housing Finance Agency:** Discussion of alignment with Climate Bonds Initiative's low carbon buildings criteria

For Illustrative Purposes Only

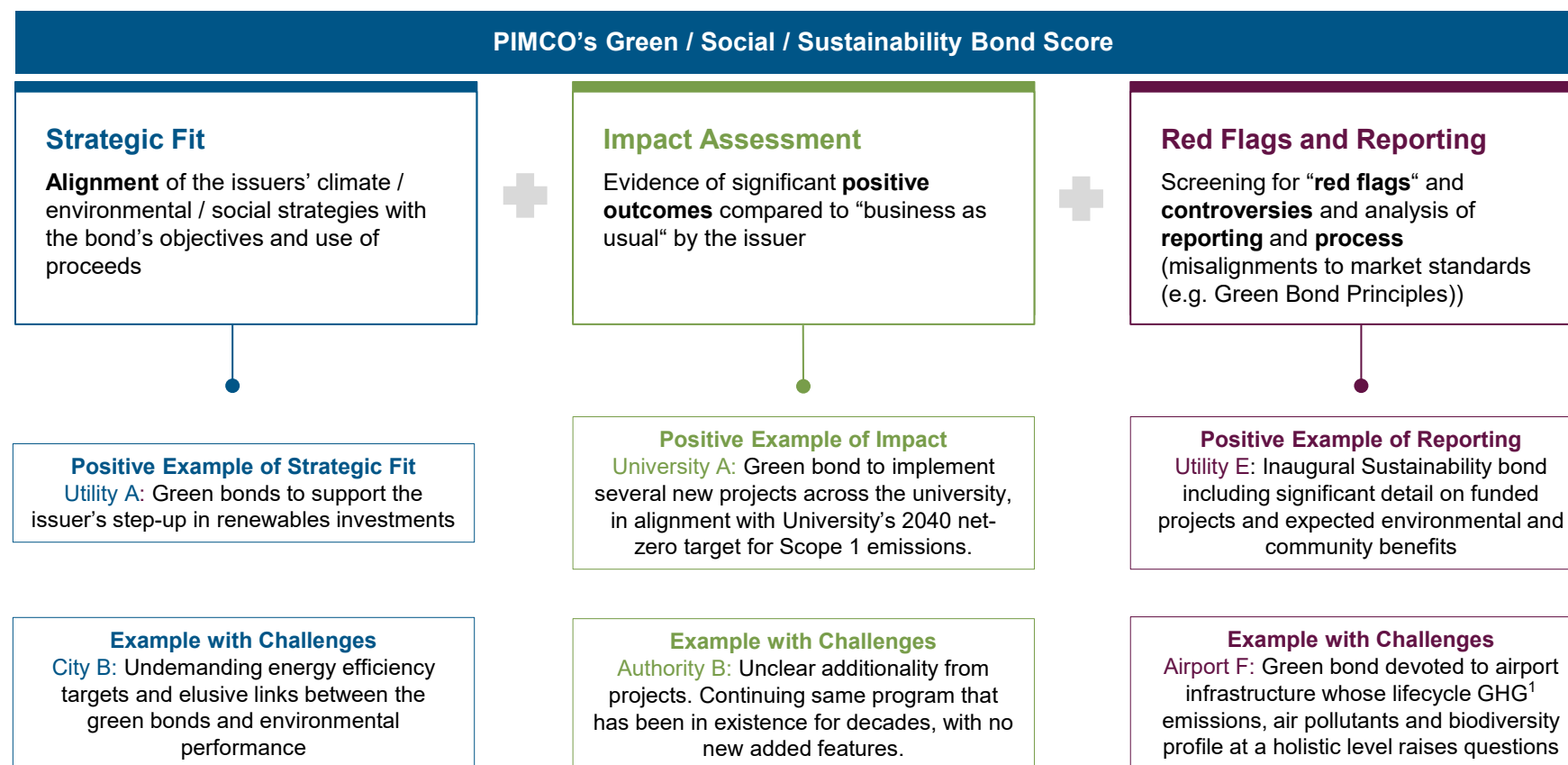
SOURCE: PIMCO

Refer to Appendix for additional ESG investing, investment strategy, and risk information.



# Evaluating credentials of Green, Social, Sustainability-labelled Bonds

Assessing the rationale for “use-of-proceeds” bonds and positive impact credentials (‘greenness’)



For Illustrative Purposes Only

SOURCE: PIMCO

<sup>1</sup>Green house gas

Refer to Appendix for additional ESG investing, investment strategy, and risk information.

# Disclosures

**ESG INVESTING**

**ESG-Labelled Bonds** are defined as green, social, and sustainable bonds and sustainability-linked bonds. **Green Bonds** are those issues with proceeds specifically earmarked to be used for climate and environmental projects. **Social Bonds** are use-of-proceeds bonds earmarked to finance new and existing projects or activities with positive social impacts. **Sustainability Bonds** are use-of-proceeds bonds earmarked to finance new and existing projects or activities with positive environmental and social impacts. **Sustainability-Linked Bonds (SLBs)** are bonds that include sustainability-linked covenants, as explained by the issuer through use of a framework and/or legal documentation.

PIMCO is committed to the integration of Environmental, Social and Governance ("ESG") factors into our broad research process and engaging with issuers on sustainability factors and our climate change investment analysis. At PIMCO, we define ESG integration as the consistent consideration of material ESG factors into our investment research process, which may include, but are not limited to, climate change risks, diversity, inclusion and social equality, regulatory risks, human capital management, and others. Further information is available in PIMCO's Sustainable Investment Policy Statement.

**ESG investing is qualitative and subjective by nature**, and there is no guarantee that the factors utilized by PIMCO or any judgment exercised by PIMCO will reflect the opinions of any particular investor, and the factors utilized by PIMCO may differ from the factors that any particular investor considers relevant in evaluating an issuer's ESG practices. In evaluating an issuer, PIMCO is dependent upon information and data obtained through voluntary or third-party reporting that may be incomplete, inaccurate or unavailable, or present conflicting information and data with respect to an issuer, which in each case could cause PIMCO to incorrectly assess an issuer's business practices with respect to its ESG practices. Socially responsible norms differ by region, and an issuer's ESG practices or PIMCO's assessment of an issuer's ESG practices may change over time. There is no standardized industry definition or certification for certain ESG categories, for example "green bonds"; as such, the inclusion of securities in these statistics involves PIMCO's subjectivity and discretion. There is no assurance that the ESG investing strategy or techniques employed will be successful. Past performance is not a guarantee or reliable indicator of future results.

**INVESTMENT STRATEGY**

There is no guarantee that these investment strategies will work under all market conditions or are appropriate for all investors and each investor should evaluate their ability to invest long-term, especially during periods of downturn in the market.

**RISK**

**A word about risk: All investments** contain risk and may lose value. Investing in the **bond market** is subject to risks, including market, interest rate, issuer, credit, inflation risk, and liquidity risk. The value of most bonds and bond strategies are impacted by changes in interest rates. Bonds and bond strategies with longer durations tend to be more sensitive and volatile than those with shorter durations; bond prices generally fall as interest rates rise, and low interest rate environments increase this risk. Reductions in bond counterparty capacity may contribute to decreased market liquidity and increased price volatility. Bond investments may be worth more or less than the original cost when redeemed.

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# East Bay Municipal Utility District

**Robert Hannay**  
*Treasury Manager*

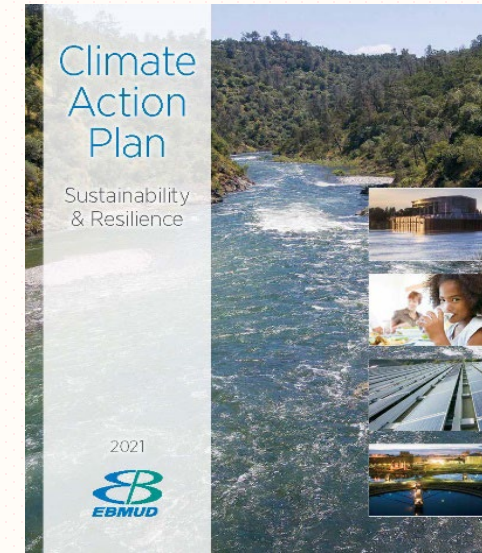
September 19, 2023





# Approach to Green Bonds

- Long history of promoting sustainability & environmental stewardship
  - Board adopted District's first Sustainability Policy in 1994
- About \$570M in green bonds issued since 2015
  - Next issuance expected in early 2024
  - Bond proceeds fund qualified projects on a reimbursement basis
- Self-certified in accordance with the District's Green Bond Guidance
  - Detailed project descriptions included in Appendix of OS



APPENDIX G  
THE DISTRICT'S GREEN BOND GUIDANCE AND  
EXPECTED SERIES 2022A GREEN BOND PROJECTS

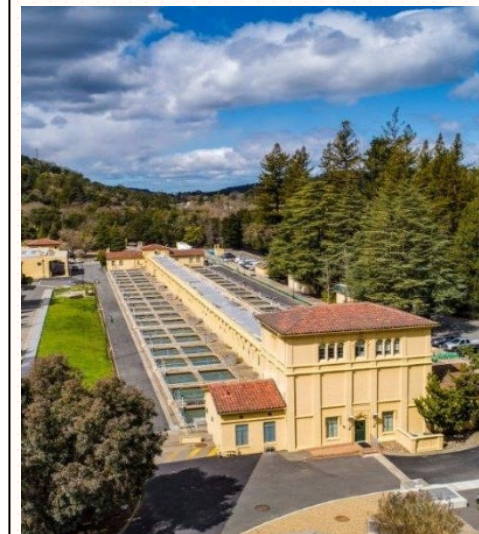
The District anticipates funding or reimbursing CIP expenditures for the Water System projects identified in the table below using proceeds of the Series 2022A Bonds. These projects were selected using the District's Guidance for Issuing Green Bonds, which was last approved by the District's Board on March 22, 2022. A complete copy of the District's Green Bond Guidance as approved by the District's Board on March 22, 2022 is attached below.

The District's criteria are presented below in a numbered list for easier reference in the table below:

1. Maintain water quality
2. Improve water use efficiency, including conservation through reduced water loss
3. Improve biodiversity and ecosystem quality
4. Protect against flooding
5. Improve resilience (adaptation) to climate change
6. Reduce pollution
7. Reduce the combustion of fossil fuels
8. Reduce greenhouse gas emissions
9. Implement "reduce, reuse, recycle" practices in preference to raw materials
10. Adhere to sustainable purchasing guidelines

Project Name	Short Description	EBMUD Green Bond Criteria	Amount Bonded
Treatment Plant Upgrade	The project supports a comprehensive water quality upgrade and improves the reliability, efficiency, and operation of the water treatment plant. Work included under this project includes storage expansion and the construction of the District's Water Treatment Plant CIP (CIP) Water Storage Expansion Project, the construction of the District's Water Treatment Plant CIP (CIP) Water Storage Expansion Project, and other improvements for the District's water supply and reliability.	1, 2, 5, 6	\$10.0 million
Open City Reservoir Project	Open city reservoir rehabilitation, replacement, and construction projects are necessary to ensure that water is stored in a safe and secure manner, and to improve water quality by optimizing storage in the distribution system.	1, 2, 5	\$17.0 million

(Table continued on next page)



# EBMUD Green Bond Guidance

- Board approved in 2015 and updated in 2022
- Criteria are aligned with frameworks established by the:
  - International Capital Market Association's Green Bond Principles
  - United Nations' Sustainable Development Goals
  - Climate Bonds Initiative's Climate Bonds Taxonomy
- 2022 Guidance includes mapping to other frameworks
  - No representation is made that the projects satisfying the District's criteria will necessarily fit the mapped criteria from the other frameworks



Pardee Reservoir located on the Mokelumne River in the central Sierra Nevada Mountains

# Kevin Civale

Shareholder

Stradling Yocca Carlson & Rauth, P.C.







## **Disclosure Practices Continue to Evolve to Meet Regulatory & Market Developments**



- As you are hearing today, a vigorous “buy side” has continued to develop
  - Institutions devoting significant resources to ESG analysis
  - Increasing number of “green funds” established
- SEC heightened focus on ESG disclosure
  - Establishment of climate and ESG task force (2021)
  - Increasing number of enforcement actions relating to misleading ESG disclosure
  - Rulemaking in process for corporate issuers, final rule expected later this year



# Documentation Considerations




Generally, green bond issuance does not include enforceable contractual obligations of issuer to adhere to identified standards/principles.

Statement of present intention.

Legal documents typically provide flexibility to review project.

Green bond expectations must be consistent with State and federal tax law requirements.

Reporting requirement *may* be contractual. If so, consider making it a separate document from your Continuing Disclosure Undertaking pursuant to Rule 15c2-12.



# Federal Securities Law Considerations

## Materiality

- Federal securities law generally requires all “material” information be disclosed
- Information is material if “there is a substantial likelihood that a reasonable investor or prospective investor would consider the information important in deciding whether or not to invest”

## Designation Description

- Clearly describe designation approach
- If self-certified, describe analysis used
- Describe environmental benefit on which certification was based
- Make it clear the green bond designation doesn’t affect security for repayment (i.e., green bonds have no more or less claim to repayment than other non-green bonds, if issued)





# More Federal Securities Law Considerations

## Disclaimers (aka free insurance)

- No contractual promise to build identified project or comply with green standards
- No assurance that project as constructed will achieve anticipated benefits
- No obligation to comply with changes in standards
- Describe verifier opinion (and state it is only an opinion, not a guarantee)

## Optional Extras

- Include second-party opinion – if you do, you own it
- Post-issuance reporting could be subject to the federal securities law – if you do it, make sure to follow guidelines

# Goal 1 - Green Bonds Continue to be an Important Topic

- Since 2014, \$100+ billion of green bonds have been issued in the U.S.
- **In California, over 150 Green bonds have been issued, totaling over \$30 billion since 2014.**

## California Green Bonds

<b>\$16,415,000</b>		<b>\$486,875,000</b>		<b>\$248,010,000</b>		<b>\$268,355,000</b>		<b>\$47,380,000</b>
								
<b>SAN DIEGO UNIFIED SCHOOL DISTRICT</b>		<b>SAN FRANCISCO CITY &amp; COUNTY PUC</b>		<b>LOS ANGELES WORLD AIRPORTS</b>		<b>SAN JOSE FINANCING AUTHORITY</b>		<b>CITY &amp; COUNTY OF SAN FRANCISCO</b>
<b>Elec of 2012, GO Refunding Bonds, Series ZR-3</b>		<b>Water Revenue Refunding Bonds, 2023 Sub-Series C</b>		<b>Sub Refunding Revenue Bonds, Series 2023A</b>		<b>Wastewater Revenue Bonds, Series 2022B</b>		<b>CFD No. 2014-1 Special Tax Bonds, Series 2022B</b>
<b>May 2023</b>		<b>July 2023</b>		<b>March 2023</b>		<b>November 2022</b>		<b>November 2022</b>

# Green Bonds Continue to be an Important Topic

## California Green Bonds

**\$18,815,000**



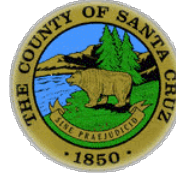
**SANTA CLARITA PUBLIC  
FINANCING AUTHORITY**  
Lease Revenue Bonds, Series  
2022A & B  
October 2022

**\$88,830,000**



**WESTERN PLACER WASTE  
MANAGEMENT AUTH**  
Solid Waste Revenue Bonds,  
Series 2022A  
August 2022

**\$19,945,000**



**SANTA CRUZ COUNTY  
CAPITAL FINANCING AUTH**  
Revenue Bonds,  
Series 2022  
June 2022

**\$133,950,000**



**EAST BAY MUNICIPAL  
UTILITY DISTRICT**  
Water System Revenue  
Bonds, Series 2022A  
June 2022

**\$686,730,000**



**SAN FRANCISCO BAY AREA  
RAPID TRANSIT DISTRICT**  
Elec. Of 2022 GO Bonds,  
Series D-1 & D-2  
May 2022

**\$294,990,000**



**CALIFORNIA STATE PUBLIC  
WORKS BOARD**  
Lease Revenue Bonds,  
2022 Series D  
May 2022

**\$99,025,000**



**CITY OF  
LOS ANGELES**  
Wastewater System Sub Rev  
Bonds, Series 2022-A  
April 2022

**\$89,900,000**



**LOS ANGELES COUNTY  
SANITATION DISTRICTS FA**  
Revenue Bonds,  
Series 2022A  
March 2022

**\$30,000,000**



**EAST BAY REGIONAL PARK  
DISTRICT**  
Elec. Of 2008 GO Bonds,  
Series 2022A-2  
February 2022

**\$13,205,000**



**WOODLAND FINANCE  
AUTHORITY**  
Water Revenue Refunding  
Bonds, Series 2021  
December 2021

# Green Bonds Continue to be an Important Topic

## California Green Bonds

**\$24,910,000**



**MONTEREY REGIONAL WASTE  
MGMT AUTH**  
IWMS Refunding Revenue  
Bonds, Series 2021  
November 2021

**\$49,060,000**



**SAN DIEGO  
COUNTY**  
Certificates of Participation,  
Series 2021  
November 2021

**\$486,875,000**



**LOS ANGELES COUNTY PUBLIC  
WORKS FA**  
Lease Revenue Bonds,  
Series 2021F  
October 2021

**\$30,000,000**



**SOLANO  
COUNTY**  
Certificates of Participation,  
Series 2021  
September 2021

**\$36,170,000**



**ROWLAND  
WATER DISTRICT**  
Water Revenue Refunding  
Bonds, Series 2021A  
August 2021

**\$30,000,000**



**FREEMONT UNION  
HIGH SCHOOL DISTRICT**  
Elec. Of 2018 GO Bonds,  
Series 2021B  
May 2021

**\$271,455,000**



**SAN DIEGO COUNTY WATER  
AUTHORITY**  
Water Revenue Refunding  
Bonds, Series 2021B  
April 2021

**\$39,145,000**



**CALLEGUAS MUNICIPAL  
WATER DISTRICT**  
Water Revenue Refunding  
Bonds, Series 2021A  
March 2021

**\$10,090,000**



**LUCIA MAR UNIFIED SCHOOL  
DISTRICT**  
Refunding Certificates of  
Participation, Series 2021  
March 2021

**\$79,305,000**



**SOUTHERN CALIFORNIA  
PUBLIC POWER AUTH**  
Refunding Revenue Bonds,  
Series 2021-1  
March 2021

# Green Bonds Continue to be an Important Topic

## California Green Bonds

**\$104,285,000**



**SAN FRANCISCO  
MUNI TRANS AGENCY**  
Revenue Bonds,  
Series 2021C  
February 2021

**\$34,185,000**



**MARYSVILLE JOINT UNIFIED  
SCHOOL DISTRICT**  
Certificates of Participation,  
Series 2021  
February 2021

**\$23,305,000**



**OXNARD  
FUNANCING AUTHORITY**  
Water Revenue Bonds, Series  
2021A  
February 2021

**\$42,600,000**



**CITY OF  
VALLEJO**  
Water Revenue Bonds, Series  
2021A  
February 2021

**\$17,710,000**



**WESTMINSTER  
SCHOOL DISTRICT**  
Certificates of Participation,  
Series 2021  
January 2021

**\$19,880,000**



**FALLBROOK PUBLIC  
UTILITY DISTRICT**  
Wastewater Rev Ref Bonds,  
Series 2021A & B  
January 2021

**\$131,200,000**



**SUNNYVALE  
FINANCING AUTHORITY**  
Lease Revenue Bonds, Series  
2020  
October 2020

**\$122,970,000**



**SONOMA-MARIN AREA RAIL  
TRANSIT DISTRICT**  
Measure Q Revenue Ref Bonds,  
Series 2020A  
October 2020

**\$128,625,000**



**MOUNTAIN HOUSE  
FINANCING AUTHORITY**  
Utility System Revenue Bonds,  
Series 2020A & B  
October 2020

**\$54,410,000**



**ROSEDALE-RIO BRAVO WATER  
STORAGE DISTRICT**  
Refunding Revenue Bonds,  
Series 2020A & B  
September 2020

# Green Bonds Continue to be an Important Topic

## California Green Bonds

**\$1,356,095,000**



**LOS ANGELES  
COUNTY MTA**

Measure R Junior Sub Sales  
Tax Rev Ref Bonds, 2020A  
August 2020

**\$271,205,000**



**TRANSBAY JOINT  
POWERS AUTHORITY**  
Sen & Sub Tax Allocation  
Bonds, Series 2020ABC  
June 2020

**\$11,690,000**



**CITY OF  
BERKELEY**  
Elec. Of 2008 GO  
Refunding Bonds, Series B  
May 2020

**\$400,000,000**



**SACRAMENTO MUNICIPAL  
UTILITY DISTRICT**  
Electric Revenue Bonds,  
Series 2020H  
April 2020

**\$123,000,000**



**DUBLIN UNIFIED  
SCHOOL DISTRICT**  
Elec. Of 2016 GO Bonds, Series  
2016C  
April 2020

**\$20,000,000**



**LYNWOOD  
UTILITY AUTHORITY**  
Enterprise Revenue  
Bonds, Series 2020A  
April 2020

**\$20,925,000**



**CITY OF  
SANTA CRUZ**  
Water Revenue Bonds, Series  
2019  
November 2019

**\$54,785,000**



**STOCKTON PUBLIC  
FINANCING AUTHORITY**  
Water Revenue Refunding  
Bonds, Series 2019A  
November 2019

**\$10,675,000**



**HARBOR DEPT OF  
THE CITY OF LOS ANGELES**  
Refunding Revenue Bonds,  
Series 2019C-1 & C-2  
September 2019

**\$335,000,000**



**SAN DIEGO ASSOCIATION OF  
GOVERNMENTS**  
Capital Grant Receipts Rev  
Bonds, Series 2019A & B  
July 2019





## **Goal 1 - Green Bonds Continue to be an Important Topic**

- **Issuer Perspective** A key goal of every bond sale is to maximize the universe of potential investors, which helps secure competitive interest rates.
  - If investors have greater confidence that a green bond will conform to their requirements over time, greater demand should result and potentially, better pricing for the issuer.



## **Goal 1 - Green Bonds Continue to be an Important Topic**

- **Investor Perspective:** Most municipal bond financed projects have environmental benefits, but **investors require additional data and disclosure about the use of bond proceeds in order to accept and categorize such bonds as green bonds.**



## Goal 2 – Benefits of Issuing Green Bonds

- **Potentially, Better Pricing.** Increase demand for your bonds from a broader group of investors. Greater demand could result in lower borrowing cost.
- **Strong Management.** Signal to investors that your organization's management is taking environmental risks seriously and addressing them on a timely basis.
- **Leadership.** Be recognized as a leader by residents, taxpayers, employees who care about environmental stewardship.
- **Free Positive Publicity.** Perhaps even the local press will write a favorable story about your organization.



# **Survey Question #2**

**Which is the most critical attribute of a green bond?**

- ✓ The municipal issuer labels the bond “green”
- ✓ A 3<sup>rd</sup>-party affirms the bond’s “green” label
- ✓ Proceeds fund projects with environmental benefits



## **Goal 3 - Municipal Green Bond Investors Are Not All the Same**

- **Investors are diverse in terms of type, size, investment strategy and/or focus, with different disclosure needs**
- **Certain green bond investors need project specific environmental disclosure** to drive positive and negative screening techniques as well as enact thematic investing with a focus on environmentally responsible investments

# Municipal Green Bond Investors Are Not All the Same

## Green-Focused

Investors with a mandate around a specific theme (e.g., environmental, etc.)

## Impact

Investors that seek a particular impact that may require more specific and measurable metrics

## Integration

Investors who incorporate material environmental risks into their traditional credit analysis

## Traditional

Investors who follow traditional credit analysis without a specific environmental mandate





# Green Bond Verification Reports & Second Party Opinions

- The use of second and third-party opinions or certifications are an ICMA green bond principles 'key recommendation' and can increase confidence in a green bond label, but not necessary.
- Many **environmentally-focused and impact investors perform their own internal analyses in order to determine whether a bond meets their internal green bond criteria.**
- **Most green bond investors need additional project specific disclosure information** to make their own internal assessment, regardless of inclusion or exclusion of any third-party report.



# **Survey Question #3**

**What type of investors  
purchase Green Bonds?**

- ✓ Green bond focused investors
- ✓ Impact investors
- ✓ Integration investors
- ✓ Traditional muni investors
- ✓ All of the above

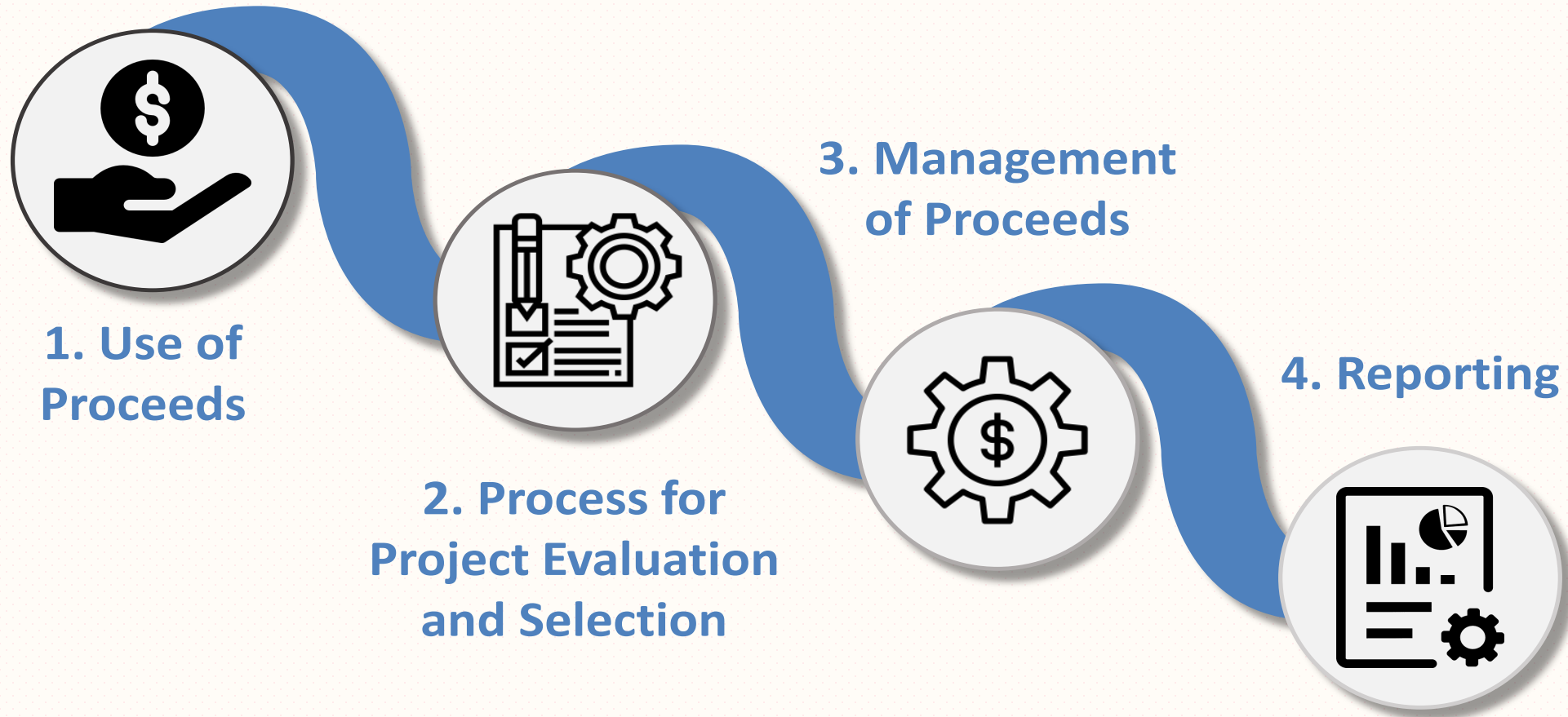


## Goal 4 - Current Labeling Frameworks

- The International Capital Market Association's ("ICMA") **Green Bond Principles ("GBP")** is the most commonly utilized framework. In 2022, 74% of municipal issuers who issued green bonds followed the GBP<sup>3</sup>. While ICMA offers a general framework, it does not specifically address the disclosure requirements of many municipal green bond investors.
- The **Climate Bonds Initiative (CBI)** Certification incorporates the ICMA framework, but takes it further by addressing the disclosure recommendations discussed therein and utilizing sector-specific standards to show consistency with global climate goals.

# The ICMA Framework

The most basic level of green bond disclosure should follow the ICMA Green Bond Principles (“GBP”) four core components.



# Sample Project Specific Impact Metrics



## Green-Buildings

- ✓ Energy efficiency, amount/percent reduction in energy used
- ✓ Reduction in carbon emissions
- ✓ Waste management (e.g., reduction in construction and/or operations)
- ✓ Walkability/access to public transportation



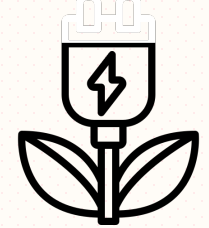
## Water

- ✓ Reduction in water losses in water transfer and/or distribution
- ✓ Reduction in water consumption
- ✓ Mandatory water conservation programs
- ✓ Discussion of monitoring/efficiency systems



## Transportation

- ✓ Expected increase in sewage treatment capacity
- ✓ Expected decrease in nutrient level in local waterways
- ✓ Description of recycled water system and expected benefits



## Power

- ✓ Generation capacity by resource (fuel source)
- ✓ Reductions in fossil fuel use
- ✓ Toxic emissions and waste
- ✓ Specific indicators for CO2 emission reductions

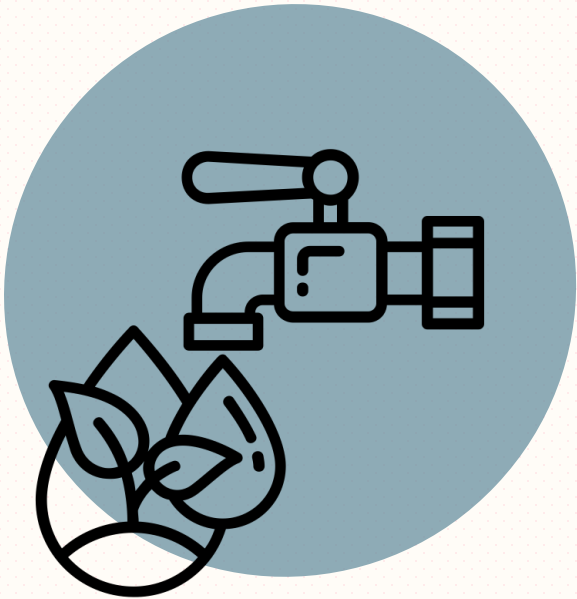
# PROJECT SPECIFIC IMPACT METRICS – Green Buildings



- **Examples of useful metrics and information include, if or when applicable:**
- Building certification (e.g., LEED, Energy Star, BREEAM)
- **Energy efficiency, amount/percent reduction in energy used**
- **Reduction in carbon emissions**
- Renewable energy sources including applicable threshold or exclusions
- Water efficiency (e.g, amount and/or percent of water use reduction, water recycling)
- **Waste management (e.g., reduction in construction and/or operations)**
- Use of sustainable or efficient materials, including reuse/recycled materials, low VOC paints, xeriscaping, sustainable sourcing of certified materials (e.g., FSC certification)
- Protection of native species, water supplies and/or air quality
- Adaptive re-use of existing/historic properties
- **Walkability/access to public transportation**
- Protection of green fields/reductions in impervious surface
- Use of low carbon building material



# PROJECT SPECIFIC IMPACT METRICS – Water



- **Examples of useful metrics and information include, if or when applicable:**
- Discussion of any known environmental hazards
- Handling and treatment of any “forever chemicals”
- Age of major capital infrastructure components
- Current status of CEQA, EPA, NPDES permits, including date of last issued permit, date of permit expiration, and cease-and-desist orders
- **Reduction in water losses in water transfer and/or distribution** – current estimated water loss percentage and estimated improvements to loss percentage
- **Reduction in water consumption** – on a per customer basis, if in a growth area
- Discussion of any specific/separate charges related to system improvements or to support conservation
- Discussion of water recycling systems, including water re-use/water use avoided

# PROJECT SPECIFIC IMPACT METRICS – Water

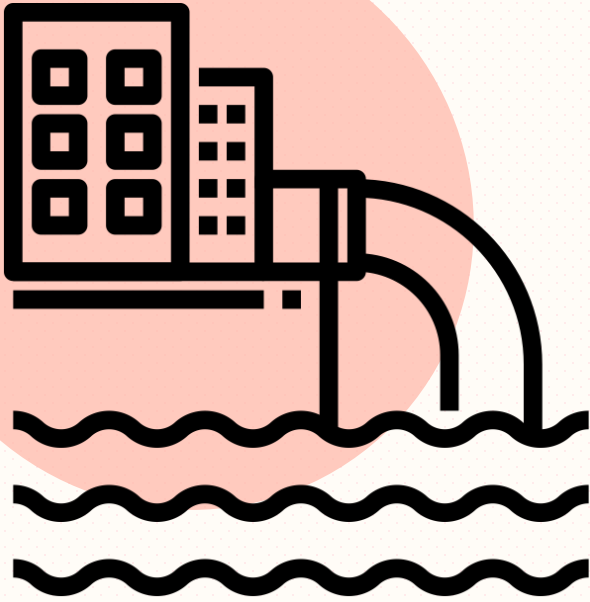
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- Discussion of current wastewater treatment process (e.g., primary, secondary, or tertiary), including any expected reductions in wastewater treated/avoided
- Flood mitigation project impact
- Drought plans such as any **mandatory water conservation programs**
- Requirements for new development/additional customers
- Average daily and annual demand versus supplies
- **Discussion of monitoring/efficiency systems**
- Disclosure of significant system leaks
- Status/plan for lead pipe mitigation and replacement
- Strength of water rights



# PROJECT SPECIFIC IMPACT METRICS – Wastewater

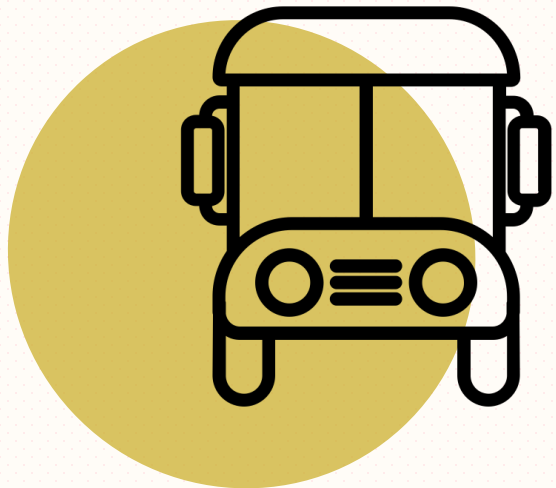


- **Examples of useful metrics and information include, if or when applicable:**
- Discussion of any known environmental hazards
- Comparisons of utilization to capacity (e.g., average daily flow versus max/peak flow versus, average daily capacity versus peak capacity)
- **Expected increase in sewage treatment capacity** due to the project
- Expected reduction in Combined Sewer Overflow amount (in CCF)
- Expected amount of overflow waste recaptured by project
- **Expected decrease in nutrient level in local waterways**
- Discussion of any specific/separate charges related to system improvements or to support conservation
- **Description of recycled water system and expected benefits**
- Discussion of current wastewater treatment process (e.g., primary, secondary, or tertiary), including any expected reductions in wastewater treated/avoided
- Planned use of renewable energy via onsite clean generation or procurement

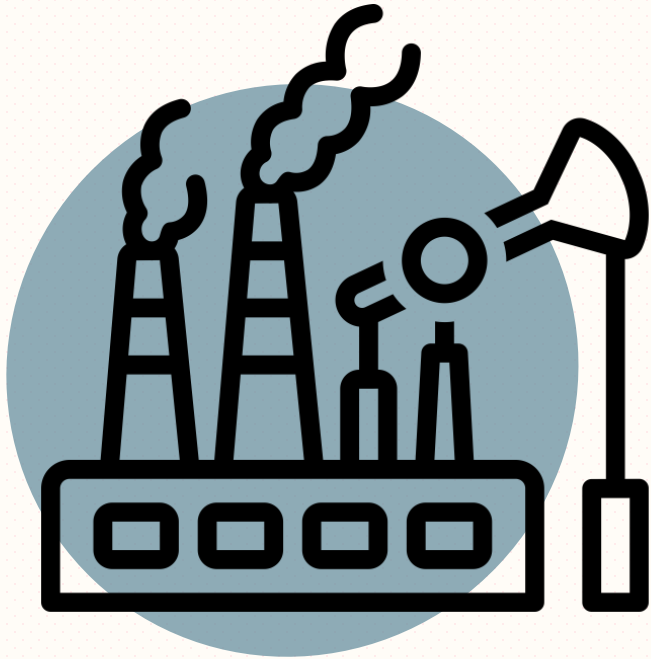
# PROJECT SPECIFIC IMPACT METRICS – Transportation



- Examples of useful metrics and information include, if or when applicable:
- **Public transportation riders: Number of passenger miles**, gallons of gas, and/or CO2 emissions reduced or avoided per day/year
- Relationship to community or state electrification and alternative fuel strategies
- Sources of system power
- **Pounds of CO2 per passenger mile**
- Development/incorporation of bicycle lanes; how many linear miles?
- Development of walkable communities
- **Congestion pricing strategies**
- **Amount of cool pavement utilized**
  - Number of electric vehicle charging stations; either total or on some per-unit measure like per square mile
  - Electric vehicle charging stations along HOV/toll roads
  - The extent to which any federal funding (such as grants) are subject to specified environmental standards



# PROJECT SPECIFIC IMPACT METRICS – Power



- Examples of useful metrics and information include, if or when applicable:
- **Generation capacity by resource (fuel source)**, and energy sales by resource (fuel source)
- Power source mix over last decade and commitment to and timing of clean energy within capital plan
- **Reductions in fossil fuel use**, including specific goals or targets
- Transition risks, including to local community
- Dispatch stack, fuel and power supply hedges, outage information
- Carbon emissions:
  - Clear outline of state emissions standards and any and pending energy legislation. How is the utility positioned relative to these standards?
  - Data that shows generation mix, current and historical

# PROJECT SPECIFIC IMPACT METRICS – Power

(Continued)



- Carbon emissions (continued):
  - Is the utility subject to any energy legislation that could adversely impact its ability to operate in the future?
  - Does the utility have contracts in place to procure clean energy at some point in the future?
  - Clear disclosure on how the utility plans to achieve clean energy goals/targeted future generation mix
- **Toxic Emissions and Waste:**
  - Increased disclosure around how generation byproducts are disposed
  - How are the byproducts protected from natural disaster?
  - Are state and/or federal guidelines being followed?
  - If the utility has decommissioned assets, disclosure on how the assets were decommissioned and what state/federal guidelines were followed
- **Specific indicators for CO2 emission reductions**
- Details of any Integrated Resource Plan that incorporates carbon reduction strategies for power plants





# Survey Question #4

**What is most important to ensure investors treat bonds as green?**

- ✓ Secure a third-party verification report
- ✓ Secure a second-party opinion
- ✓ Disclose project-specific environmental benefits

# Q&A



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## **UPCOMING CDIAC EVENTS**

*The Bond Buyer California Public Finance Pre-  
Conference: Managing Your Borrowing Costs  
Through Market Turbulence*  
October 18, 2023 | San Francisco

*Fundamentals of Public Investing*  
February 28-29, 2024  
**Details Coming Soon**

**Please help CDIAC  
improve our  
programming by  
completing the survey  
immediately after the  
webinar.**



