

# City of San José Energy and Water Building Performance Ordinance (BPO)

Potential Changes to Building Performance Ordinance Language  
October 2024



*Environmental Services*



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# Questions/Feedback

We will allow time at the end of the presentation for questions or comments. Please feel free to utilize the Zoom chat during the presentation.

Our Email: [benchmarking@sanjoseca.gov](mailto:benchmarking@sanjoseca.gov)



# Building Performance Ordinance Overview

**San José City Council adopted the Energy and Water Building Performance Ordinance in 2018**

The ordinance has two separate requirements:

## 1. Benchmarking

- All **covered buildings** must submit their water and energy usage data to the City by **May 1**.

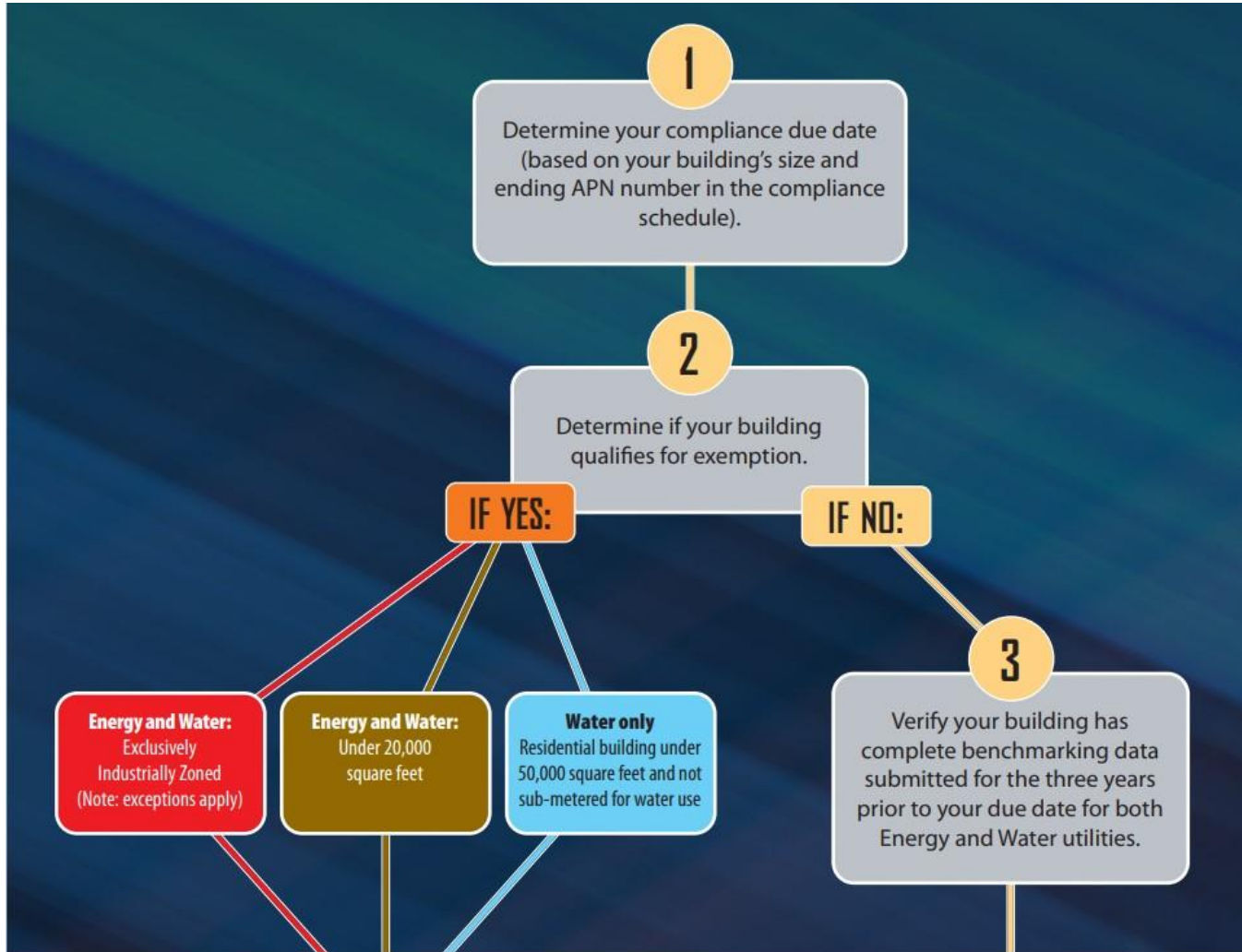
### **Covered buildings include:**

- Publicly-owned buildings with a gross floor area (GFA) of 15,000+ square feet.
- Privately-owned commercial and multifamily buildings with a GFA of 20,000+ square feet.

## 2. Beyond Benchmarking

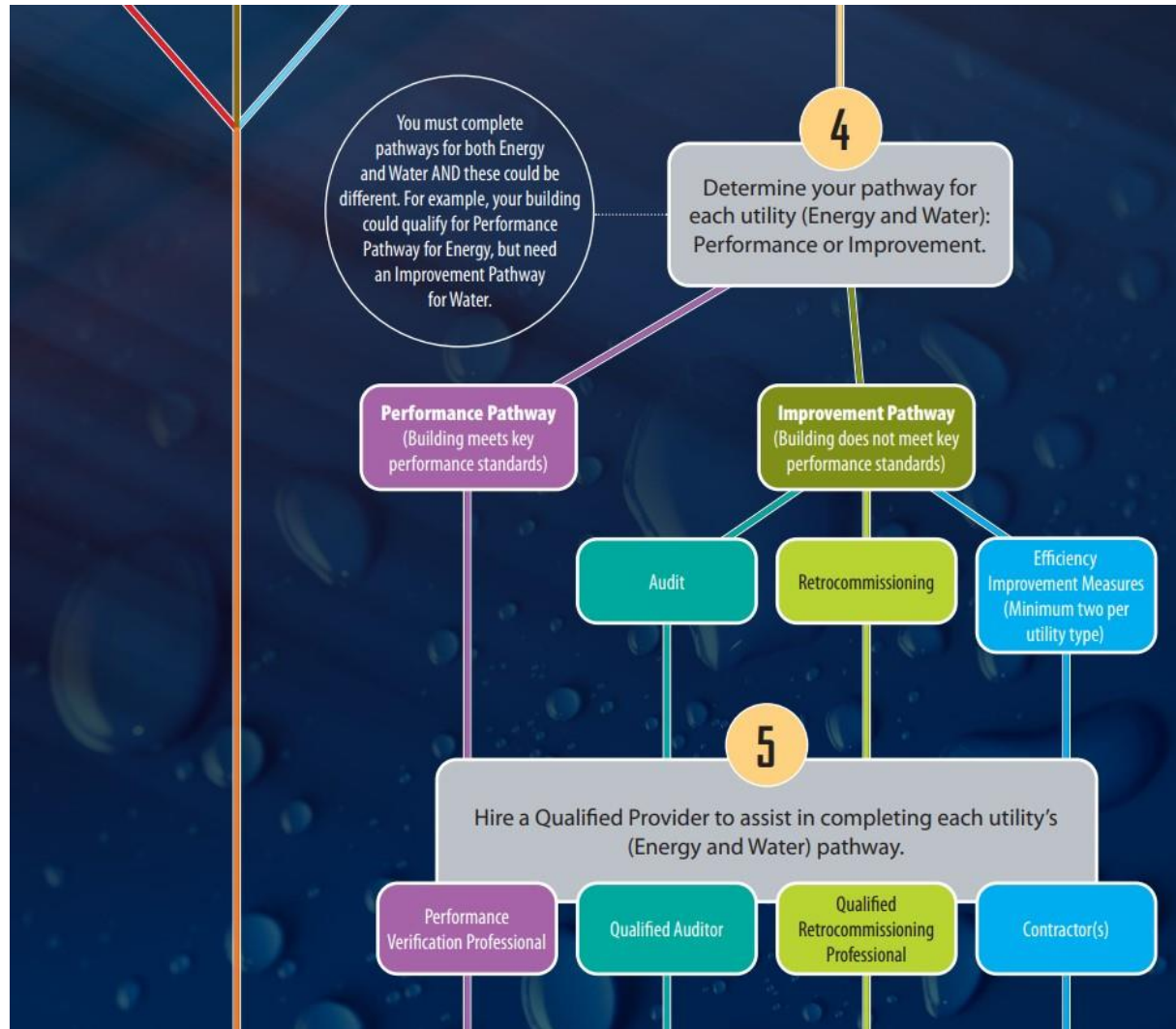
- Buildings must show either water and energy efficiency **or** efforts to improve efficiency.
- Covered buildings must comply with Beyond Benchmarking requirements every **five** years.

# Beyond Benchmarking Compliance Pathways



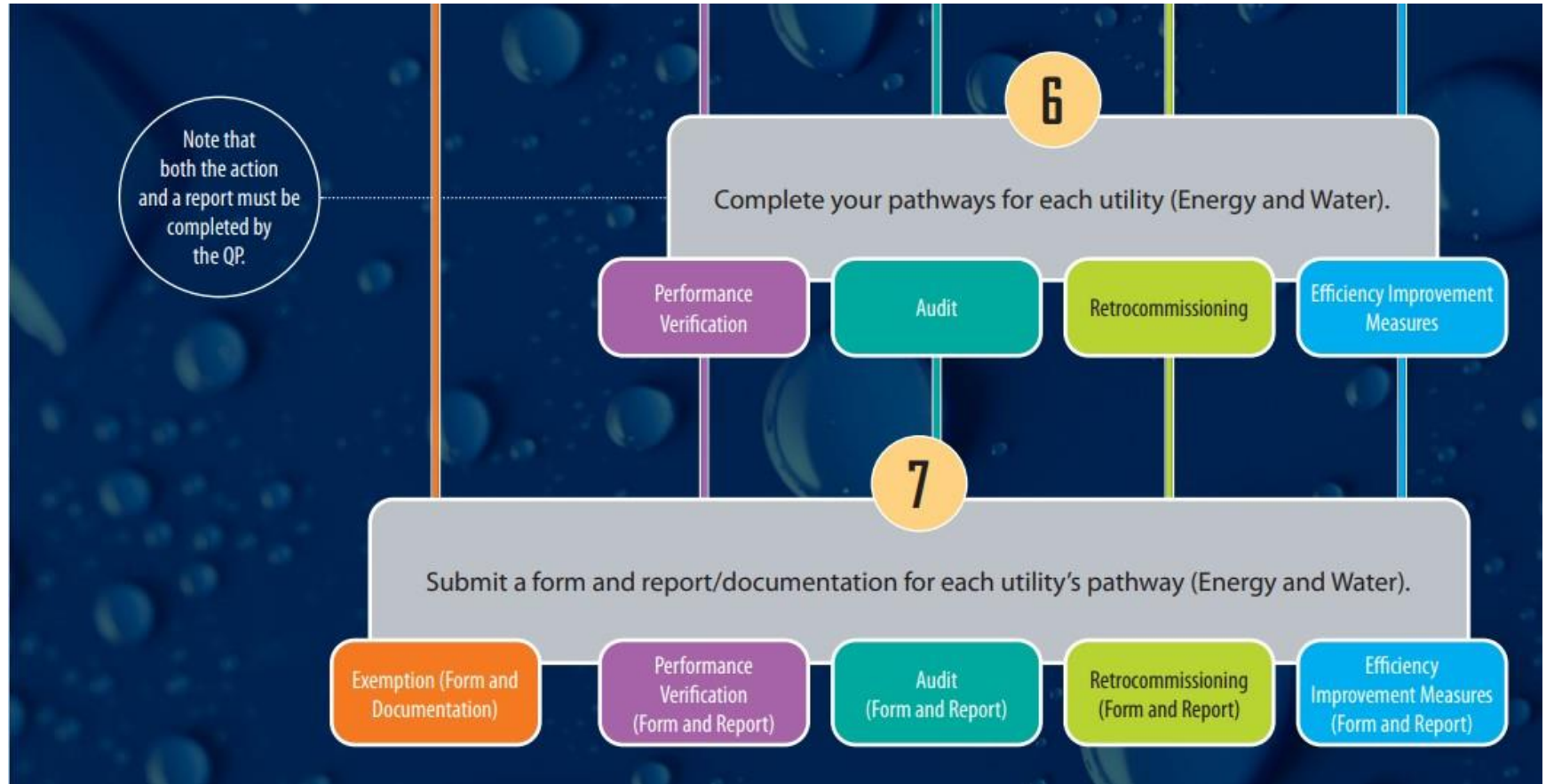
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# Beyond Benchmarking Compliance Pathways (Cont'd.)



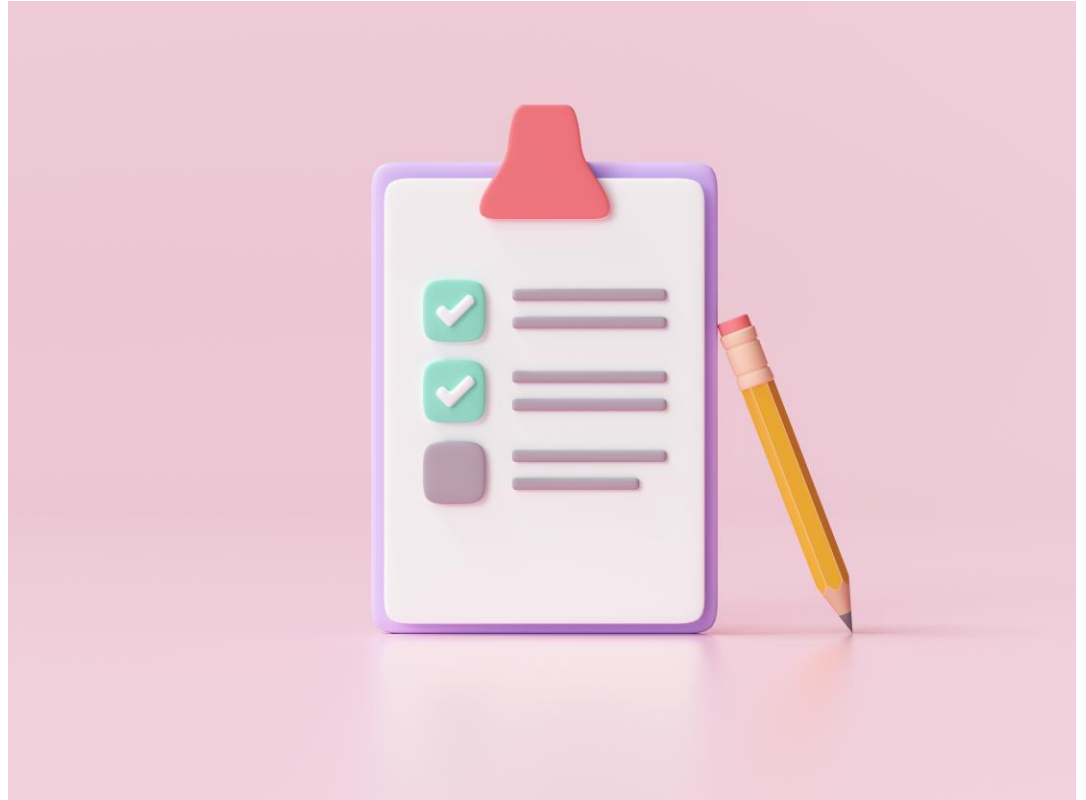
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# Beyond Benchmarking Compliance Pathways (Cont'd.)



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**Please  
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the poll!**



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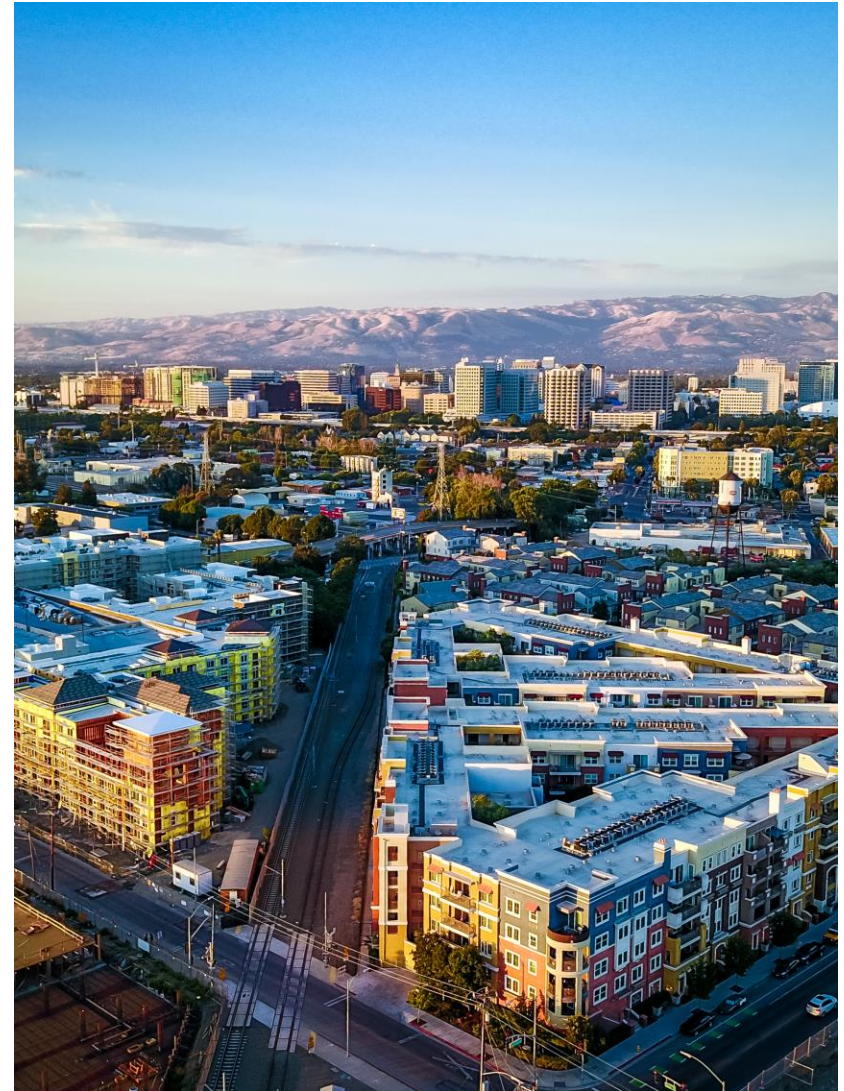
# Potential Changes to the Ordinance

We're proposing making two changes:

1. Remove minimum requirements "**functional performance testing reports**" and "**operational training conducted**" from the audit report found in **section 17.85.420 A.2** of the Building Performance Ordinance.


Why?

These items exceed ASHRAE Level 2 audit standards and industrial-standard audit requirements.







2. Audit Report: A report of the Audit, completed and signed by Qualified Auditor, shall be submitted to the City and maintained by the Owner as required in Section [17.85.500](#). The report shall meet the requirements of Section [17.85.410](#) and shall include, at a minimum, the following:
- a. The date(s) that the Audit was performed;
  - b. Identifying information on the auditor;
  - c. Information on the Base Building Systems and equipment;
  - d. A list of all Retrofit Measures that can reduce Energy or Water use, or cost of operating the Property, costs of each measure, and an estimate of the Energy and/or Water savings associated with each measure;
  - e. ~~Functional performance testing reports;~~
  - f. ~~Operational training conducted;~~ 
  - g. Acknowledgment that an ASHRAE Level 2, or alternate approved assessment or audit was conducted; and
  - h. Identification of existing electric vehicle charging stations, equipment, and infrastructure, as defined in Article 625 of the California Electric Code, including:
    - i. Number of existing electrical charging stations; and
    - ii. Number of "EV Capable" parking spaces as defined in California Green Building Standards (CalGreen) Sections 5.106.5.3.3 (Non-residential) and 4.106.4.2 (Residential) or as thereafter amended; or if no "EV Capable" parking spaces are present, number of 40-ampere minimum branch circuit capacity within the nearest circuit panel to existing parking spaces.

## Read this section of the Building Performance

Ordinance: [https://library.municode.com/ca/san\\_jose/codes/code\\_of\\_ordinances?nodeId=TIT17\\_BUCO\\_CH17.85CISAJOENWABUPEOR\\_PT4BEBEPADEINENWAPE\\_17.85.420IMPAPRREADENWAEF](https://library.municode.com/ca/san_jose/codes/code_of_ordinances?nodeId=TIT17_BUCO_CH17.85CISAJOENWABUPEOR_PT4BEBEPADEINENWAPE_17.85.420IMPAPRREADENWAEF)



## Potential Changes to the Ordinance (Cont'd.)

2. The Ordinance currently uses the **mean** value to help calculate the Energy Use Intensity (EUI) and Water Use Intensity (WUI) target metrics. We are evaluating a change from using the **mean** value to using the **median** value for target metrics.

Currently, one way to achieve the Performance Pathway of Beyond Benchmarking for both energy and water is to:

- Have a weather normalized site EUI as calculated by Energy Star Portfolio Manager (ESPM) that is **25%** below the calculated **mean** for that property type [Section 17.85.410 B.1.c].
- Have a WUI as calculated by ESPM that is **25%** below the locally calculated **mean** for that property type [Section 17.85.410 B.2.c].

# Difference Between Mean and Median

## Definitions

- A **mean** is an average of a data set.
- A **median** is the middle value of a data set.

## Example:

- 1, 4, 9, 16, 25, 36, 49, 58, 100
  - The **mean** of these numbers is 33.
  - The **median** of these numbers is 25.





# Reason to Propose a Change

- When the **mean** value is used, it can be heavily skewed by outliers, especially when a building use type has a limited sample size.
- Energy Star Portfolio Manager (ESPM), the benchmarking tool that San José uses to collect data from buildings already produces **median** EUI data.
- Switching to using the **median** value would **lower** the target EUI and WUI numbers for most buildings.
  - Incentivizes buildings to improve their efficiency even further.
  - Better aligns with Climate Smart San José greenhouse gas emissions reduction and water conservation goals.

# What are the Impacts?

What the difference between using the **mean** value vs using the **median** value EUI and WUI means for you:

## EUI

- If we used the **median** value instead of the **mean** value, buildings would see an average decrease of **18%** in their target EUI.



## WUI

- If we used the **median** value instead of the **mean** value, buildings would see an average decrease of **25%** in their target WUI.





# What are the Impacts? (Cont'd.)

Almost all property types would see their EUI and WUI target numbers change.

## **EUI** target number

- 89% of covered buildings would see a decrease in their target EUI number
- 12% of covered buildings would see an increase in their target EUI number

## **WUI** target number

- 99% of covered buildings would see a decrease in their target WUI number
- 1% of covered buildings would see an increase in their target WUI number
- 0.25% of covered buildings would see no change in their target WUI number



## What are the Impacts? (Cont'd.)

Fewer buildings would qualify for the **Performance Pathway** using their EUI and WUI.

Right now:

- **48%** of buildings are 25% below the **mean** WUI.
- **42%** of buildings are 25% below the **mean** EUI.

If the median value was used instead of the mean value:

- **34%** of buildings would be 25% below the **median** WUI.
- **30%** of buildings would be 25% below the **median** EUI.



# What are the Impacts? (Cont'd.)

- Of all approved 2023 and 2024 Beyond Benchmarking submissions so far, **22% used one of the following Performance Pathway metrics:**
  - The Property has a weather normalized site Energy Use Intensity as calculated by the Benchmarking Tool that is twenty-five percent (25%) below the calculated mean for that property type;
  - The Property has a Water Use Intensity as calculated by the Benchmarking Tool that is twenty-five percent (25%) below the locally calculated mean for that property type.
- Of these, **31% would not have been approved if the language was median**. That equals 36 of the 115 buildings that submitted under the above metrics.
- Out of all the total approved 2023 and 2024 Beyond Benchmarking submissions (Performance or Improvement Pathway), **only 7% would not have been approved**. That equals 36 buildings out of 516 total buildings.





# Questions/Feedback

- Feel free to raise your hand or type in the chat if you have any questions or comments.
- The City will accept public comments about the proposed changes to the Building Performance Ordinance by email: [benchmarking@sanjoseca.gov](mailto:benchmarking@sanjoseca.gov).

# Resources

- [SanJoseCA.gov/Benchmarking](http://SanJoseCA.gov/Benchmarking)
- [SanJoseCA.gov/Beyond-Benchmarking](http://SanJoseCA.gov/Beyond-Benchmarking)
- [Municode Chapter 17.85 - City of San José Energy and Water Building Performance Ordinance](#)
- For questions/comments, email [benchmarking@sanjoseca.gov](mailto:benchmarking@sanjoseca.gov).



[www.ClimateSmartSJ.org](http://www.ClimateSmartSJ.org)

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# Thank you!



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