

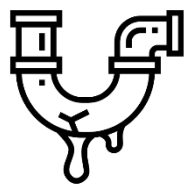
Urban Water Use Objective and Recycled Water

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Overview of the Urban Water Use Objective

► Urban Water Use Objective (UWUO) =



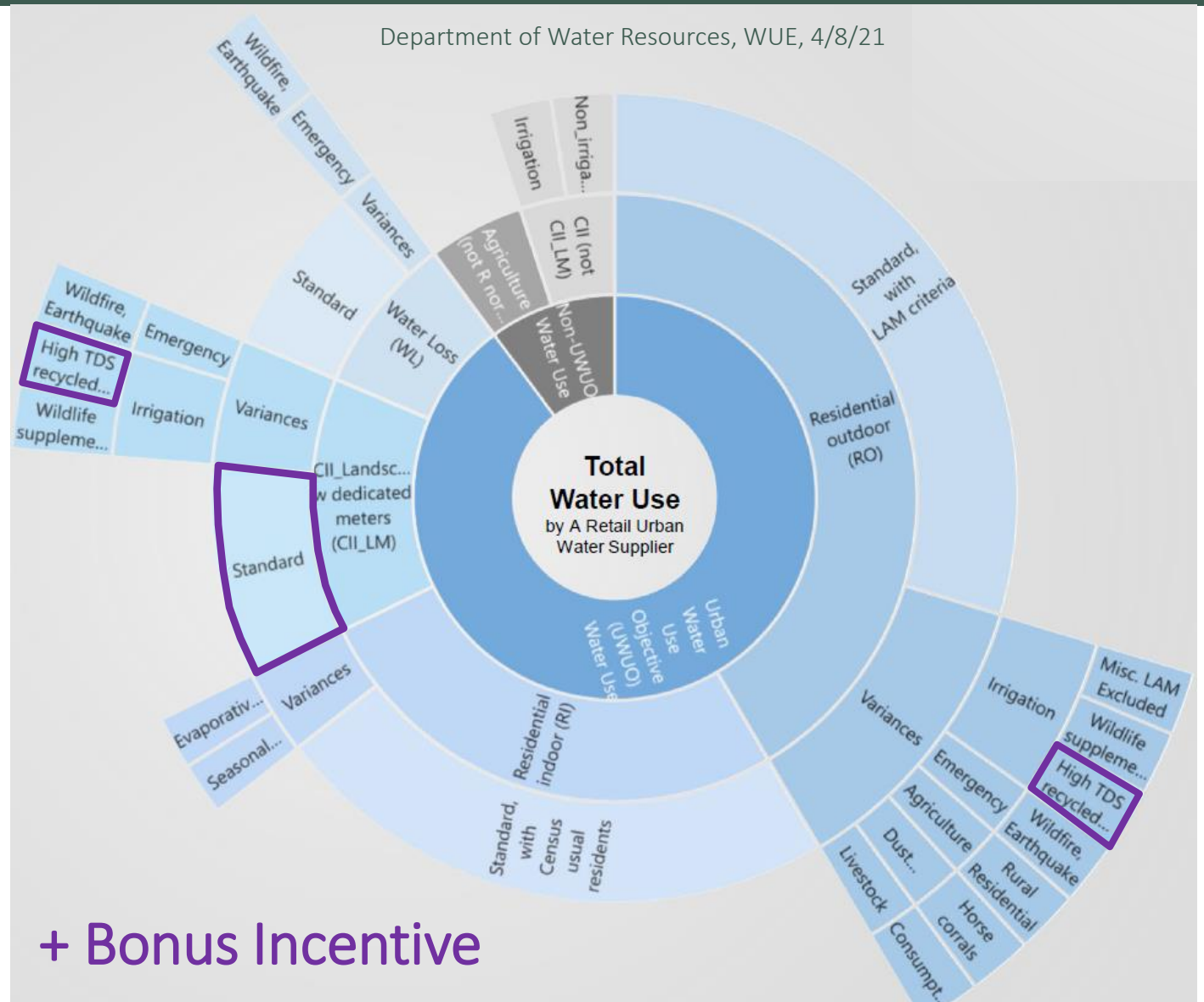
Indoor Residential + Outdoor Residential + Water Loss + Commercial, Industrial, Institutional
Dedicated Irrigation Meter

► Potable Use Bonus Incentive

► The **UWUO + Bonus Incentive** will be compared to **actual use** for residential, water loss, and CII's with dedicated irrigation meters.

Recycled Water

- ▶ Commercial, Industrial Institutional with a Dedicated Irrigation Meter (CII-DIM) Standard
- ▶ CII-DIM Variance for high TDS recycled water
- ▶ Residential outdoor Variance for high TDS recycled water
- ▶ Bonus Incentive



Outdoor Standards

- ▶ Based on the model water efficient landscape ordinance

- ▶ Outdoor Residential =

$$[ET_o - P_{eff}] * \text{landscape area} * 0.8 * 0.62$$

- ▶ CII-Dedicated Irrigation Meter =

$$[ET_o - P_{eff}] * \text{landscape area} * 0.8 * 0.62$$

+

$$[\text{new landscape area} * 0.45 * ET_o * 0.62]$$

+

$$[\text{special landscape area} * 1.0 * ET_o * 0.62]$$

Recycled Water irrigated landscapes are considered special landscape areas.

- ET adjustment factor (based on irrigation efficiency)
- Conversion to gallons
- Local Evapotranspiration
- Effective precipitation (up to 25% of total precipitation)

Variances: High TDS Recycled Water Irrigation

- ▶ Applied to outdoor residential or CII-DIM
- ▶ Recycled water irrigated landscapes are able to use a higher ETA factor in the outdoor objective calculation, but high TDS water may use an even higher ETA factor.
- ▶ Allows for leaching of high TDS recycled water (over 1,000 mg/L)
- ▶ Balances different policies: water use efficiency, recycled water use for resilience, and safe applications for water quality protection

Variances: High TDS Recycled Water Irrigation

▶ Standard Calculation

- ▶ For TDS $\leq 2,000$ mg/L: Variance Volume = $0.0003 \times \text{TDS (mg/L)} \times \text{ETo} \times (\text{landscape area}) \times 0.62$
- ▶ For TDS $> 2,000$ mg/L: Variance Volume = $0.33 \times \text{ETo} \times (\text{landscape area}) \times 0.62$

▶ Plant-Based Calculation

- ▶ For sprinkler irrigation systems: Variance Volume = $\text{Plant Factor} / (0.75 \times (1 - \text{Leaching Requirement})) \times \text{ETo} \times (\text{landscape area}) \times 0.62 - 1.0$
- ▶ For drip or micro-spray systems: Variance Volume = $\text{Plant Factor} / (0.81 \times (1 - \text{Leaching Requirement})) \times \text{ETo} \times (\text{landscape area}) \times 0.62 - 1.0$

Bonus Incentive

- ▶ Additional allowable water use amount to incentivize potable reuse
- ▶ Bonus Incentive is not part of the UWUO but is in addition to.
- ▶ Potable reuse is supply side, but the state wants to give credit to those moving forward with potable reuse.
- ▶ May give up to a 10% (not existing facilities) or up to a 15% (existing facilities) bonus of total UWUO.
- ▶ Includes groundwater augmentation, residential, and CII-DIM deliveries.

Indoor Standards Impact to Recycled Water

- ▶ Office of Research, Planning and Performance studied potential impacts on wastewater
- ▶ Wastewater effluent may increase in TDS, requiring salt removal or blending of recycled water
- ▶ Resulting in smaller volume of recycled water produced
- ▶ Report will be out later this year

All workshops, presentations,
and guidelines can be
downloaded from the **Water Use
Efficiency Sharepoint**. Email
wue@water.ca.gov for access.

Thank you.