San Diego County Water Authority
Our Region's Trusted Water Leader

Road to Water Use Efficiency Standards

Workshop #6

September 29, 2021

- Welcome
- Walk-Through of CalWEP “What the Framework” Website
- Road Trip – Itinerary
- 1st Leg – Panel 1
- Pit Stop/Stretch Break
- 2nd Leg - Panel 2
- Wrap Up

Zoom Rules

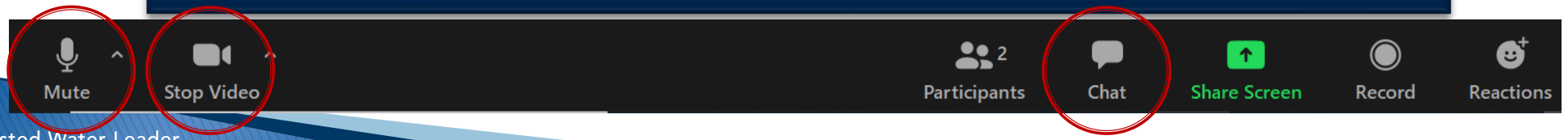
RENAME YOURSELF:
Change your username to your first & last name.

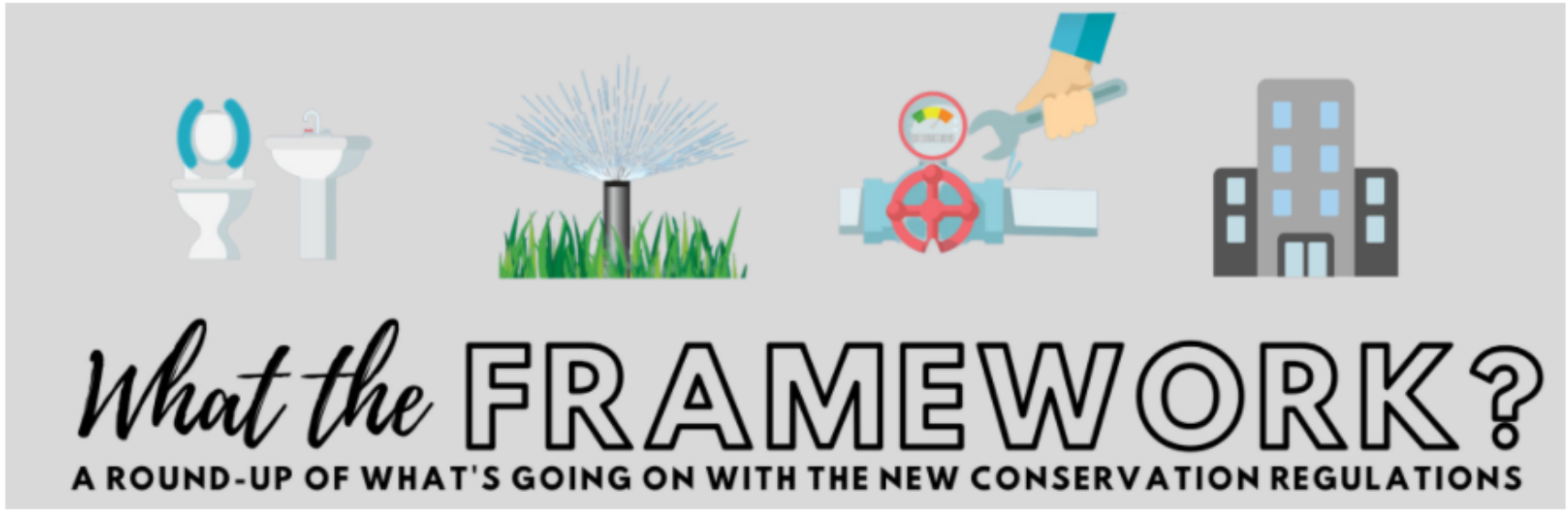
SHOW US WHO YOU ARE:
Turn on your video when speaking.

BE AWARE OF BACKGROUND NOISE:
Stay on mute if you're not talking.

SEE WHAT OTHERS ARE SAYING:
Open the chat pane.

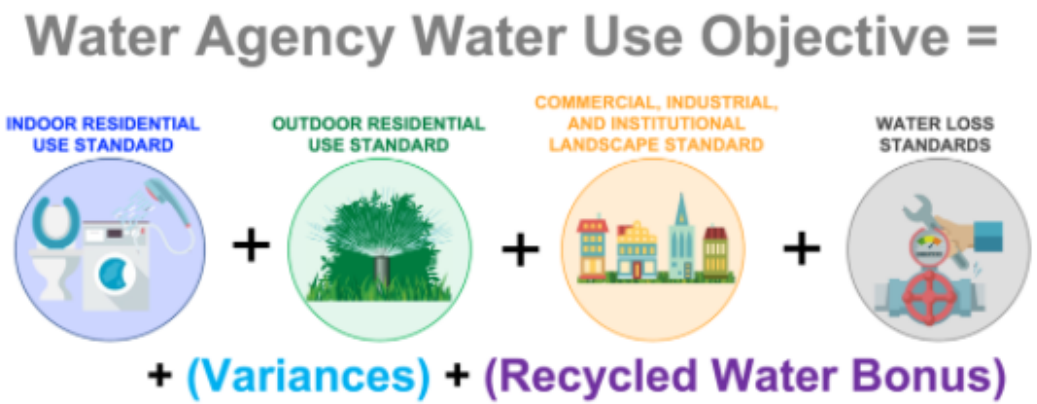
ASK A QUESTION:
Use the chat function to ask questions.





If you don't have time to attend a million meetings each week related to SB 606/AB 1668, CalWEP, RWA, and ACWA have teamed up and have you covered. Our team will post bi-weekly updates for each standard below keeping you up to date on the latest developments as the SWRCB and DWR go through the regulation and rulemaking process. Have something you think we should be covering? Reach out to us at hello@calwep.org

To recap, here is the breakdown of the water use objective:



CII performance measures will also be developed and information related to these are included in the updates with CII Landscape Standards.

LEGISLATIVE TIMELINES & STATUS

Component	Timing	Lead Agency
Permanent monthly reporting	Since Oct. 1, 2020	SWRCB
Water loss standards	~~June 2020~~ 2021?	SWRCB
Recommendation on indoor standards	~~January 2021~~ August 2021	DWR
Residential irrigable land measurements	~~January 2021~~ March 2021	DWR
Recommendation on WUE standards*	October 2021	DWR
UWMP/WSCP updates	July 2021	DWR
Adoption of WUE standards*	July 2022	SWRCB
Annual water shortage assessment	June 2022	DWR

*WUE standards include:
- Outdoor residential use standard
- Standard for CII outdoor landscape area with dedicated irrigation meters
- Performance measures for CII water use
- Appropriate variances
- Guidelines and methodologies for calculating urban water use objectives

ACWA

Last updated July 2021

RECENT EVENTS BY STANDARD

Indoor Standard (DWR)

- May 11 – DWR Draft Report proposed:
  - 2020: 55 gpcd (no change in current statute)
  - 2025: 47 gpcd (5.5 gpcd less than current statute)
  - 2030: 42 gpcd (8 gpcd less than current statute)
- July 19 – Additional DWR Workshop and last opportunity for stakeholder comments
- Mid-August – DWR expects to release final report with recommended standard (*recommended standard requires legislation to go into effect)

Outdoor Standard (DWR)

- June 30 – Water suppliers Landscape Area Measurement (LAM) data correction/ request for ongoing data corrections
- June 30 – Standards and Methodology Workgroup Meeting, DWR proposed:
  - ET adjustment factor of 0.7
  - Irrigable not irrigated (INI) used as buffer (20% of INI)
- August 30 – Deadline for DWR to review submitted adjustment requests and deliver final LAM data to the suppliers
- Next workshop: August

CII Performance Measures (DWR)

- Ongoing discussions with DWR:
  - Threshold for mixed use meter conversion
  - Classification System
- May 17 – DWR White Paper on BMPs
- Next workshop: August 23 – DWR Monthly CII Meetings (fourth Monday)

Variance & Bonus (DWR)

- July 21 @ 1:00 pm – DWR Monthly Meeting

Water Loss Performance Standards (State Water Board)

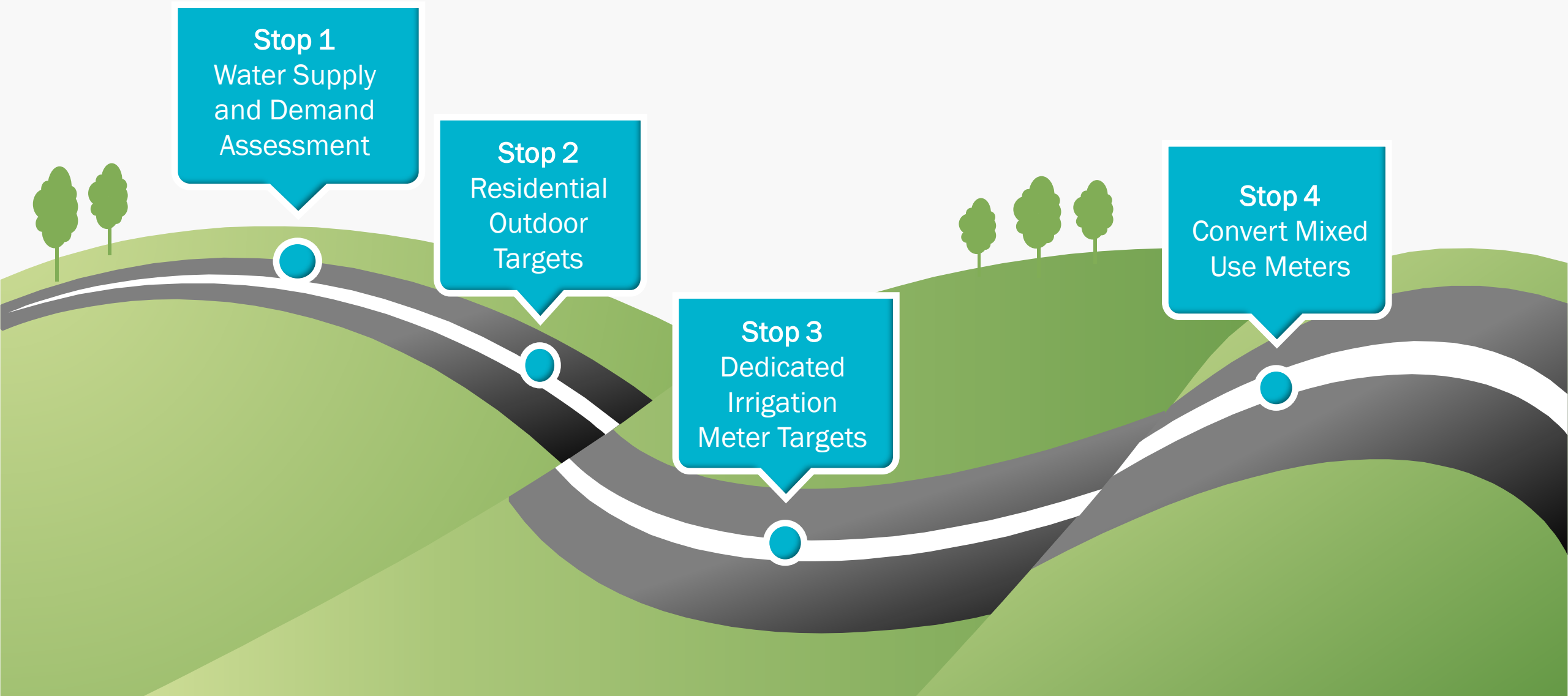
- April 15 – Revised draft economic model and performance standards
- Ongoing discussions:
  - CMUA Compliance Path – >30% reduction
  - Changes to economic model
- Fall? – Formal Rulemaking w/ 45 public comment period

Water Supply and Demand Assessment (DWR)

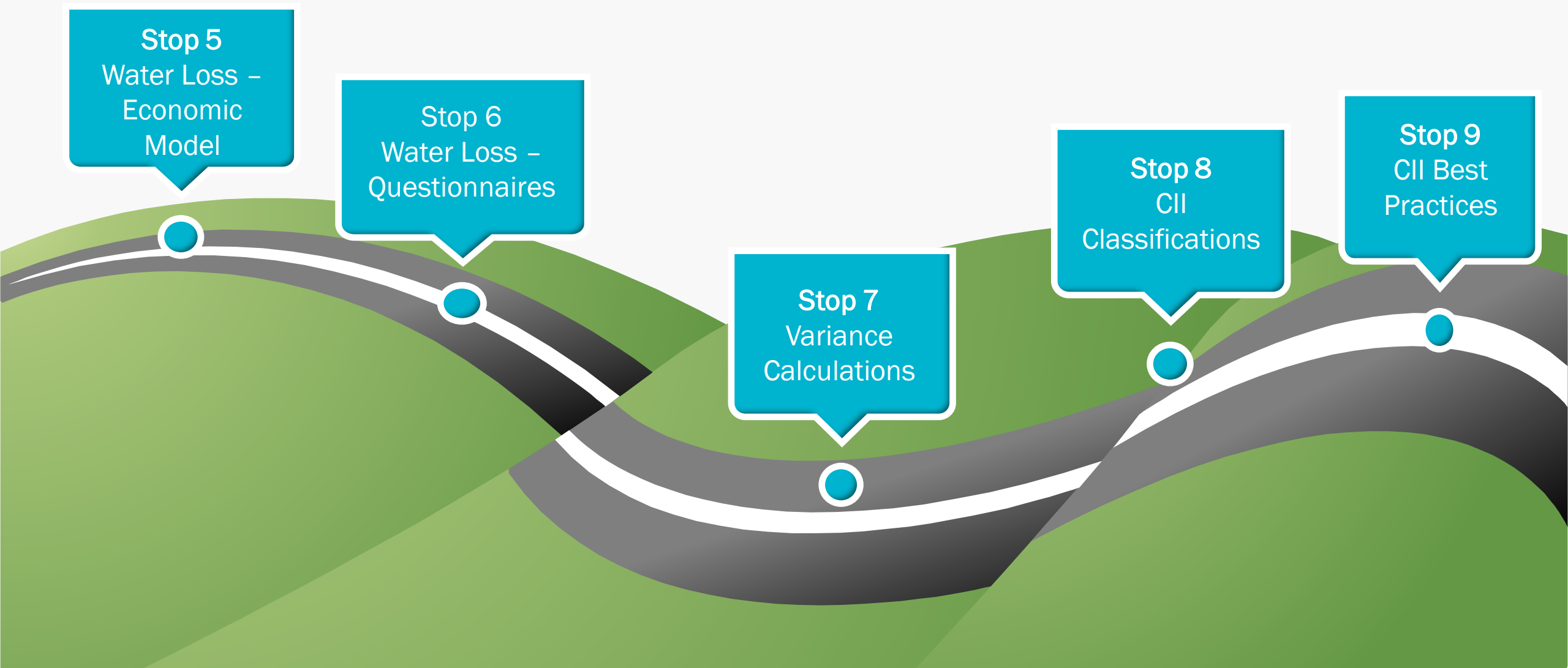
- July – Draft guidance document
- August – Workshop


CALIFORNIA WATER USE
EFFICIENCY ROAD TRIP

Road to California Water Use Efficiency Standards



Road to California Water Use Efficiency Standards



Stop 1: Water Supply and Demand Assessment

Due Date: June 1, 2022, and June 1 annually thereafter

What is it? Evaluation of urban water suppliers water supply reliability for the current year and one dry year with information about any anticipated shortage and triggered shortage response actions

Information Needed: Current year unconstrained demand, current year available supply, infrastructure capabilities constraints

Notes: Procedure is included in Water Shortage Contingency Plan. No guidance from DWR on annual report yet.

Panel/Group Questions

- Who in your organization will participate in the annual assessment?
  a. **Large water utility response:** They have a focused group/division to do assessments (8 FTE) with other groups including conservation to support them.
  b. **Medium water utility response:** They have a small team, same as UWMP team – engineering and ops staff – not a fulltime effort, adding this requirement as a part of other annual reports that are already being done.
  c. **Small water utility response:** They have one person to prepare and review annual assessments; hopefully UWMP work will feed into these annual reports. They rely on the fact that it's an iterative process without many curveballs. They have a consultant in the wings in case something BIG arises for which they did not plan.
- Do you anticipate any roadblocks to preparing the annual supply and demand assessment?
  a. **Large water utility response:** They feel like it's just another report to complete. Supply and demand assessments are their "bread & butter" (i.e., their staff does this every day). They need to tackle moving parts, like third parties who think they know better and "tinker" with the data.
  b. **Medium water utility response:** It's about consistency – the same information provided across multiple reports. They would like to see a streamlining of these reports.
  c. **Small water utility response:** There is a learning curve to adjust to new operational realities. They try to keep a fresh mindset when submitting this data.

Panel/Group Questions

- What are the potential benefits of the supply and demand assessment?
  a. **Large water utility response:** They say it's like taking a test you're well prepared for and know you're going to do well on. They have done the work so these annual assessments should reflect how well they've been doing. However, it does depend on actual report contents.
  b. **Medium water utility response:** It's important to show the state the benefits and strengths behind this approach.
- What are the potential drawbacks?
  a. **Medium water utility response:** There is a false sense of what the situation is. A few years ago, agencies in NorCal would not have anticipated such low snowpack and supply shortages.
  b. **Small water utility response:** There is a mystery surrounding what approach the state takes over time. Is it a reward or punitive approach? How will the current educational approach change if conditions become more severe over time? Will the state take into consideration local conditions and drought preparation strategies?

Stop 2: Residential Outdoor Targets

Due Date: January 1, 2024, and January 1 annually thereafter

What is it? Calculate aggregate efficient outdoor residential water use

Information Needed: Landscape area measurements (provided by DWR), evapotranspiration data (spatial CIMIS), efficiency factors

Note: May need information on recycled water areas, special landscape areas, effective precipitation, and agricultural areas

Panel/Group Questions

- Who in your organization will participate in the collection of necessary data?
  a. **Large water utility response:** They are big with an existing program that they've had for 20 years.
  b. **Medium water utility response:** They have a small GIS team.
- Do you anticipate any roadblocks to collecting the needed information? State standard = 80% irrigation efficiency
  a. **Large water utility response:** Theoretical vs. empirical – The standards created by the state are using theoretical data. For example, CIMIS doesn't consider effective precipitation, like reference evapotranspiration. But going forward, agencies are going to have to take this into account. However, rain is not uniform throughout a service area; this will be a difficulty for a lot of people. The state believes that MWELO is being achieved, but this is incorrect; it is not being implemented or achieved throughout the state. **The challenge is that DWR has people who are creating stories so that the narrative leads to their desired end.** It's very ineffective; the numbers are never going down – they'll only go up and we'll look bad in the end.
  b. **Medium utility response:** How can DWR have such a small team setting the standards? The challenge is to communicate realistic data that's been tested for accuracy. One must also consider variations within service areas – snow in one area but never in another. Water use cannot be linked to one standard. They don't think that's being taken into consideration by DWR; the numbers aren't being "ground-truthed." They feel DWR needs to look at the real situation, but that's not being done.

Panel/Group Questions

- Do you anticipate any roadblocks to collecting the needed information? State standard = 80% irrigation efficiency? What are the potential benefits of having an accurate residential landscape calculation? What are the potential drawbacks?
  a. **Small water utility response:** This is just one person – GIS, etc. – who did 80% of the work on the UWMP. S/he looked at that data in the context of state standards and felt comfortable with the state's Landscape Area Measurements (LAMs) but that could change. Empirical vs. theoretical is "spot-on." One person at the small agency has the experience and knowledge that state staff does not have. CIMIS stations are a "wild card" as well. Believe it is around 80% assumed efficiency. Classes on irrigation efficiency emphasize 60%. Sothern Nevada Water Authority reality is that the water is not there due to its 90% dependency on Colorado River (CR) water. On one level, if the water's not there, that's one issue; but if the water IS there, that's another issue. Utility hopes there is a communal environment where numbers are "ground-truthed" (e.g., Landscape Area Measurements: DWR asked for challenges/corrections but that takes a lot of staff and time).
  b. **Water efficiency expert response:** She tried to recreate and reach this target in her landscape, but she couldn't. And yet, the state is asking the average homeowner to do this! It's a challenge for even the best residential customer.
- **Questions –**
  a. **AGENCY QUESTION:** Has anyone received a reply to agency feedback on LAMs? DWR has ONE PERSON working on this.
  b. **Medium/large water utility response:** Feel they are fortunate to have GIS staff who reported that DWR provided parcels compared to what medium/large water utility staff thinks they have included a huge error rate. However when the GIS staff looked at the sum across all parcels the overall error rate was small.

Stop 3: Dedicated Irrigation Meter Targets

Due Date: January 1, 2024 , and January 1 annually thereafter

What is it? Calculate aggregate efficient outdoor irrigation of landscape areas with dedicated landscape meters or equivalent technology in connection with CII water use

Information Needed: Landscape area measurements (supplied by urban water supplier), evapotranspiration data (spatial CIMIS), efficiency factors

Note: May need information on recycled water areas, special landscape areas, effective precipitation, and agricultural areas

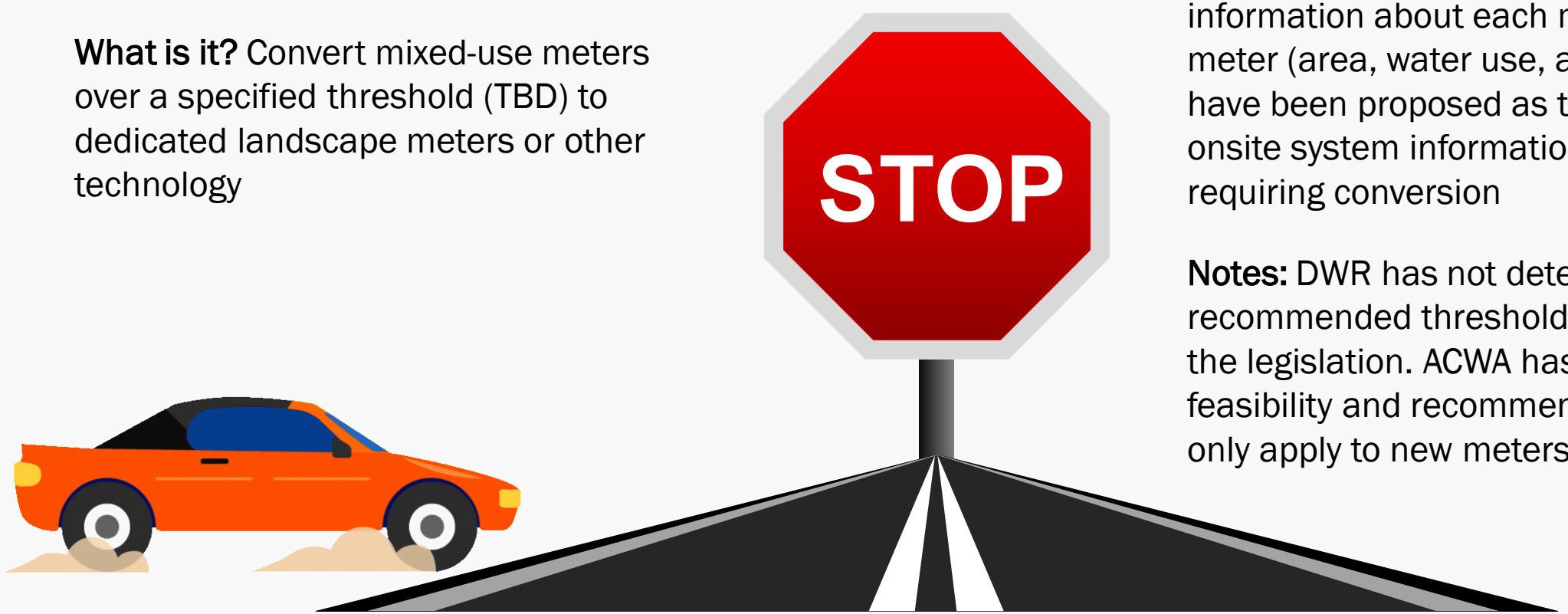
Panel/Group Questions

- Who in your organization will participate in the collection of necessary data?
- Do you anticipate any roadblocks to collecting the needed information?
- What are the potential benefits of converting landscape meters?
- What are the potential drawbacks?
  a. **Large water utility response:** Their concern is the cost to convert, additional meter fees. However, just because you put in a dedicated irrigation meter doesn't mean you'll save water. It needs someone to monitor and/or champion it. Water bills on large properties often go to corporation headquarters or property management out of state who are too far offsite to truly care.
  b. **Medium water utility response:** They see drawbacks/challenges the same as a large agency, that they're more of a drawback then a benefit.
  c. **Small water utility response:** They are not concerned.

Stop 4: Convert Mixed Use Meters

Due Date: Unknown

What is it? Convert mixed-use meters over a specified threshold (TBD) to dedicated landscape meters or other technology



Information Needed: Threshold information about each mixed-use meter (area, water use, and efficiency have been proposed as thresholds), onsite system information for meters requiring conversion

Notes: DWR has not determined a recommended threshold as required in the legislation. ACWA has evaluated feasibility and recommends that this only apply to new meters.

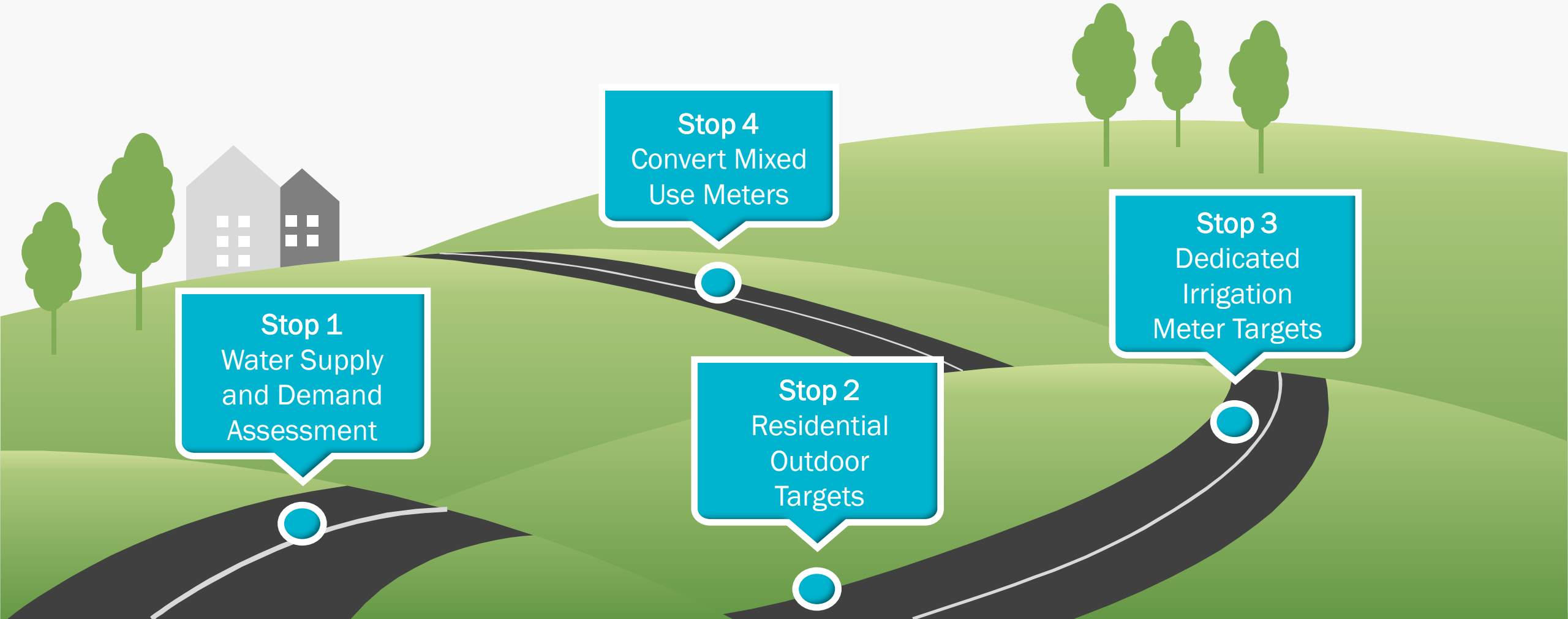
Panel/Group Questions

- Who in your organization will participate in the collection of necessary data?
- Do you anticipate any roadblocks to collecting the needed information?
- What are the potential benefits of having an accurate dedicated meter landscape calculation?
- What are the potential drawbacks?

Responses:

a. **Large water utility response:** The challenge is getting to the site, getting their time, doing the analysis. Are there specific issues related to heat sources (i.e., cooling towers)? A very large corporate site could take many calls, many weeks and multiple site visits to convert.
b. **Medium water utility response:** Supports ACWA recommendation that this only apply to new meters. If it does not, it will involve a different part of the organization to implement (meter techs).
c. **Small water utility response:** Again, one person would be doing this. 500 CII meters – query history, look for bell curves with increased use during summer and start auditing those. Doing this with existing meters is a big lift as it could require new service connections, digging up the road, laying new line…who will pay for that? The public? The property owner? Are the presumed savings there? Probably not.

1st Leg of the Road Trip Recap



Stop 5: Water Loss – Economic Model

Due Date: TBD – July 1, 2023 (proposed)

What is it? Model to calculate urban water supplier specific water loss target

Information Needed: Baseline year's water loss audits, number of unreported leaks, cost of leak repair, leak detection efficiency

Notes: Economic model is still under development. Next update proposed in December 2021.

Panel/Group Questions

- Who in your organization will participate in the collection of necessary data?
    a. **Medium/large water utility response:** They are a midsize utility with 200K customers. They feel fortunate that they have buy-in from management which is key to having an **active water loss team** from departments across the organization (6-7 ppl).
    b. **Small/medium water utility response:** They have 88K connections and support from upper management. Their auditing is done in-house. The auditor is a city employee. They are connected at state level with a strong asset management team. Processes have been documented.
- Do you anticipate any roadblocks to collecting the needed information?
    a. **Medium/large water utility response:** Issue encountered with data and equipment errors that result in under-reporting – agency has been ground-truthing this and ended up with negative loss, which the state won't accept. DWR model didn't result in different numbers (gallons per connection per day = GPCD).
- What are the potential benefits of agency specific data for the economic model?
- What are the potential drawbacks?

Panel/Group Questions

- Feedback on the tool?
    a. **Water utility response:** Certified water loss professional – with the new tool version in the grades fewer gray areas used to calculate validity score (v5 versus v6). Can do a master meter supply adjustment to make water loss not negative anymore.
    b. **Consultant response:** Not set up to handle AMI.
    c. **Medium/large water utility response:** Says to use v5; they're not ready for us to use v6.

California Water Loss Control Model
https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/water_loss_control.html

AWWA Water Audit Software
https://www.awwa.org/Resources-Tools/Resource-Topics/Water-Loss-Control/Free-Water-Audit-Software

Stop 6: Water Loss – Questionnaires

Due Date:

- Data Quality – January 1, 2023 (proposed)
- Pressure and Asset Management – July 1, 2024, and 2027 (proposed)

What is it? Collect information on systems pressures and asset management

Information Needed: Meter testing information, meter testing and calibration, devices used to control pressure, program used to maintain valves, evaluation of pressure reduction potential, records of infrastructure failure, replacement prioritization information, distribution pipe replaced, feasible water loss reduction

Note: From November 2020 SWRCB proposal, water loss still under development

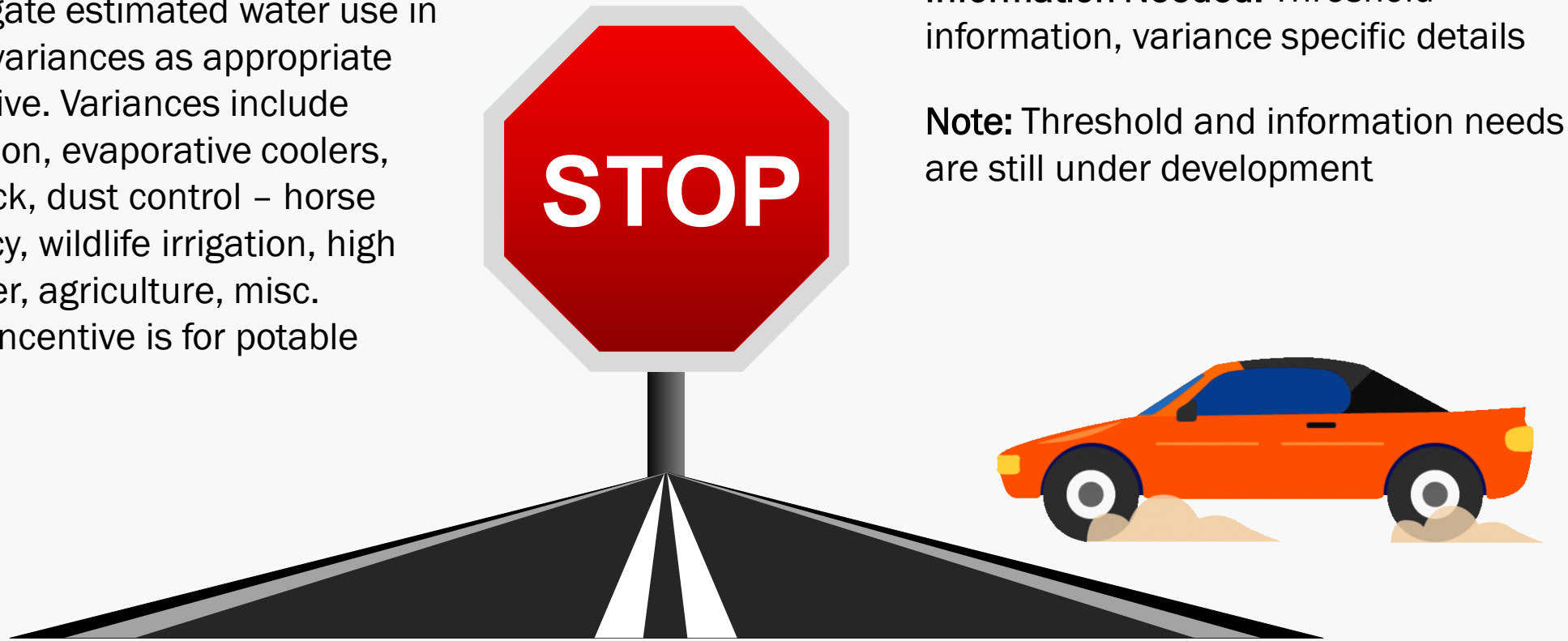
Panel/Group Questions

- Who in your organization will participate in the collection of necessary data?
  a. **Medium/large water utility response:** Same water loss team working on Stop 5 + Operations.
  b. **Small/medium water utility response:** Same water loss team working on Stop 5.
- Do you anticipate any roadblocks to collecting the needed information?
- What are the potential benefits of providing accurate information about pressure and asset management?
- What are the potential drawbacks?
  a. **Other agency question:** Who's collecting the information and how are they going to use it? Fear that this will become mandatory.
- Additional comments:
  a. **Other agency:** In addition to the economic model, the State Water Board will calculate the water loss target for you. There are two sets of questionnaires: 1) water loss, and 2) asset management.

Stop 7: Variance Calculations

Due Date: January 1, 2024 , and January 1 annually thereafter

What is it? Aggregate estimated water use in accordance with variances as appropriate and bonus incentive. Variances include seasonal population, evaporative coolers, horse and livestock, dust control – horse corrals, emergency, wildlife irrigation, high TDS recycled water, agriculture, misc. irrigation. Bonus incentive is for potable reuse only.



Information Needed: Threshold information, variance specific details

Note: Threshold and information needs are still under development

Panel/Group Questions

- Do you plan on calculating any variance targets and bonus incentive to see how they impact your target?
  a. **Small/medium water utility response:** No plans for variances.
  b. **Medium/large water utility response:** No plans for variances.
  c. **Additional agency comments:** Before you can apply for a variance, you have to prove it has a significant impact. Dependent on the accuracy level of your data, for example "my agricultural variance impacts my score by at least 10%".
- Who in your organization would participate in the collection of necessary data?
- Do you anticipate any roadblocks to collecting the needed information?
- What could be the drawbacks of not calculating variance and bonus data?
- Question
  a. **Additional agency comments:** Heard that problems with Landscape Area Measurements would have to be handled down the road – is that still true? Consultant Response: Unknown, may be an appeal path. TBD. They need some sort of process for this, like the variance process.
  b. **Are there any concerns about agriculture sites?** No response from attendees on concerns with agriculture.

Stop 8: CII Classifications

Due Date: TBD

What is it? Classifying CII accounts by a standard system as specified in legislation

Information Needed: CII account use

Note: Several proposals and timelines are under discussion

Panel/Group Questions

- Additional Description: Classifying CII accounts by a standard system as specified in legislation. Status TBD – current proposal is to break up traditional CII accounts even further. The thought is that if we break out water use by classification even further, we can do a more thorough analysis that results in savings – break out the industries or segments of the service area to analyze. Current proposals are for 15-18 categories.
- Who in your organization will participate in the classification of the necessary data?
  a. **Small/medium water utility response:** Collaborates closely with billing department and has used SIC codes for years.
  b. **Medium/large water utility response:** Another "to be tackled" in conjunction with GIS staff.
- Do you anticipate any roadblocks to collecting the needed information?
  a. **Small/medium water utility response:** Not huge roadblocks for agency. Agency participates in ACWA workgroup and supports fewer categories for agencies that don't breakdown customer classes.
- What are the potential benefits of having standardized CII classifications across the state?
- What are the potential drawbacks?
  a. **Challenges:** What do you do with strip malls (restaurants, barbers, other business types) on one meter? What about hospitals with multiple meters?

Stop 9: CII Best Practices

Due Date: January 1, 2024 , and January 1 annually thereafter

What is it? Documentation of the implementation of the performance measures for CII water use

Information Needed: Information about CII performance measures

Note: DWR final performance measure recommendations are still under development

Panel/Group Questions

Additional Description: Documentation of the implementation of the performance measures for CII water use. DWR final performance measures still under development.

- Who in your organization will participate in the collection of necessary data?
- Do you anticipate any roadblocks to collecting the needed information?
    a. **Small/medium water utility response:** The challenge is that we don't have jurisdiction to enforce BMPs on all customers. "Sustained reduction" rebates include various components. Every agency's CII programs are different – need flexibility.
- What does your current CII program look like?
- What are the potential drawbacks of implementing new CII best practices?

Call for CII Case Studies

DWR CII Best Management Practice White Paper

Help Us Help You with meeting the upcoming Conservation as a California Way of Life CII program implementation requirements.

Email CII Case Studies to lisa@maddauswater.com.

MADDAUS WATER MANAGEMENT INC.

2nd Leg of the Road Trip Recap

Chose Your Ride, Grab Your Passengers and Let's Go!