



METER REPLACEMENT PROGRAM

ACCURACY + EFFICIENCY + TECHNOLOGY





Customer Advisory Committee Meeting 1

OCTOBER 23, 2019



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PLEDGE OF ALLEGIANCE



MEETING AGENDA

- Study Overview
- Overview of Water Meters
- Overview of CHWD's Water Meters
- New Technology Overview
- CAC Tabletop Exercise
- Next Steps



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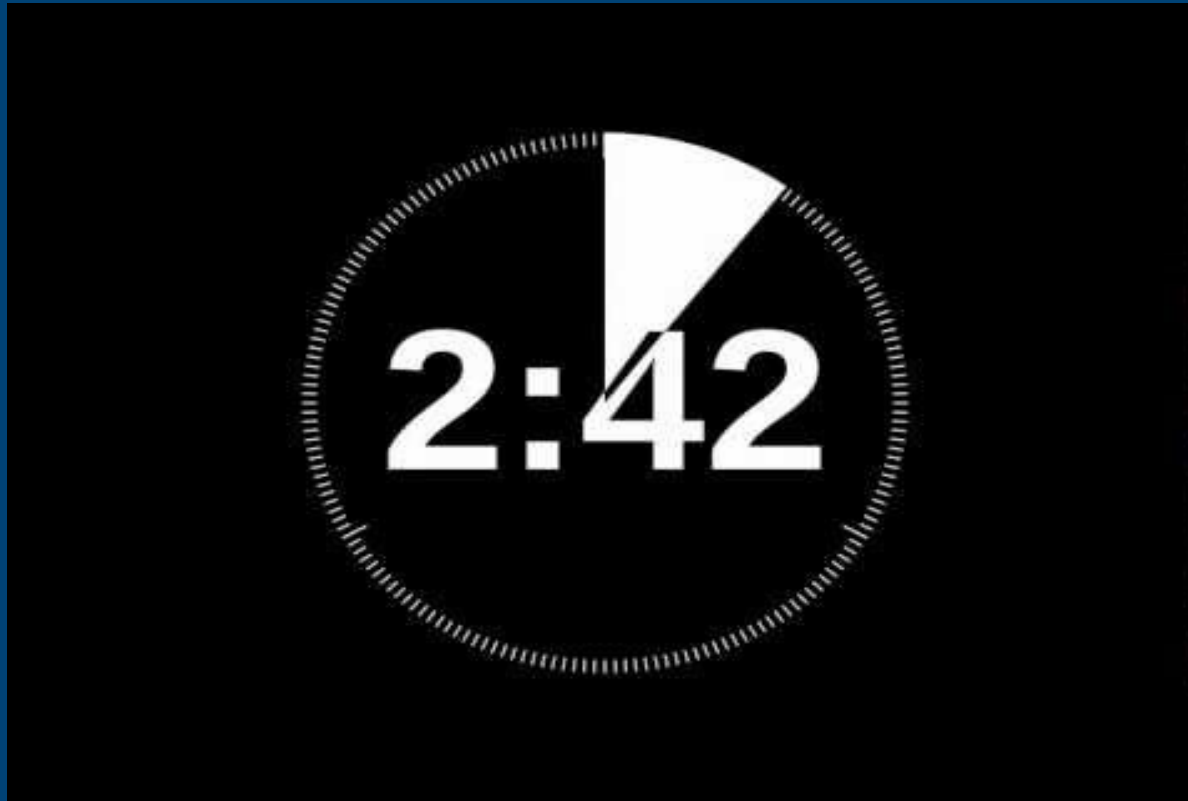
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APPROVE MEETING #8 SUMMARY – SEPTEMBER 10, 2019



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STUDY OVERVIEW

Meter replacement cycle

- 20 years per AWWA and manufacturers' guidelines
- Currently, CHWD has approximately 20,000 meters



STUDY DEVELOPMENT

- CHWD Strategic Planning Project
- Multi-Agency Planning Study
- Consortium of 12 agencies



PLANNING STUDY

Seven phases:

- 1) Individual Agency Assessment
- 2) Next Generation Program Options
- 3) Meter Testing Program Strategy
- 4) Implementation Strategy
- 5) Long Term Planning (Beyond Next Generation)
- 6) Final Report/Plan Adoption
- 7) Public Outreach Strategy

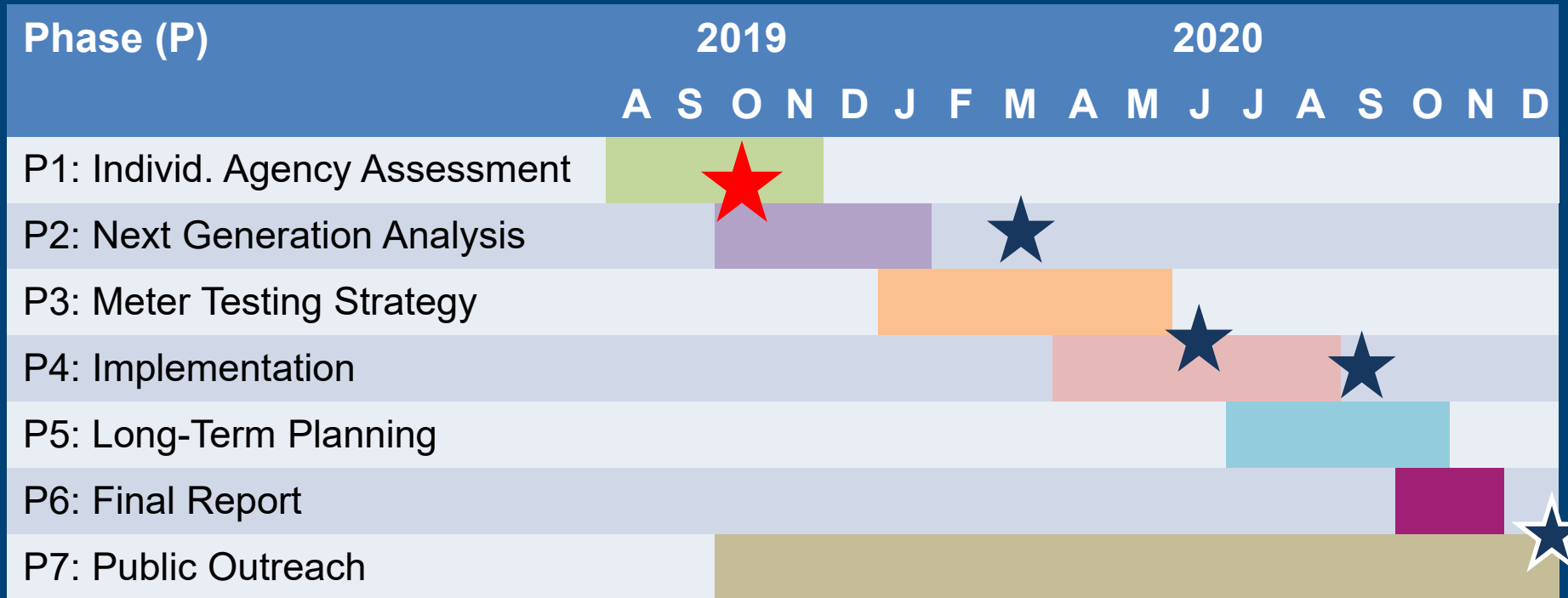


IMPORTANCE OF THE CONSORTIUM

- Economies of scale
- Valuable input from a variety of agencies and technical experts
- Study is a model for other regional programs



STUDY SCHEDULE



★ = CAC Meeting



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CONSORTIUM & CAC

Consortium

CHWD

CAC



IMPORTANCE OF THE CAC

- Valuable input from the end users
- Involvement in the long-range financial planning for the meter testing and replacement program
- Involvement in the public engagement component of the study



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Gather CAC Questions for Clarification



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OVERVIEW OF WATER METERS

BACKGROUND

Why Measure Water?

- Understanding capacities
 - Ensuring a water supply for our customers
- Balancing our water resources
 - Surface water supplies
 - Groundwater supplies
 - Environment

BACKGROUND

- State & Federal Laws
 - SB 229 (1991): Required meters for new connections
 - Central Valley Project Improvement Act (1992/Federal): Required metering of all CHWD connections
- 1997-2008: CHWD installed meters
- 2009: CHWD Metered billing

BACKGROUND

Why use meters?

- Know system demands
- Billing based on usage
- Understand water losses (leaks)
- Identify customer leaks
 - Prior to meters, we relied on manual inspections
 - Billing now flags anomalies

BACKGROUND

Specifics of metering

- Meter Body
 - Various measurement devices
- Reading a Meter
 - Manual read
 - Touch read
 - Drive by
 - Automatic smart read
- Meter data transmitted to billing



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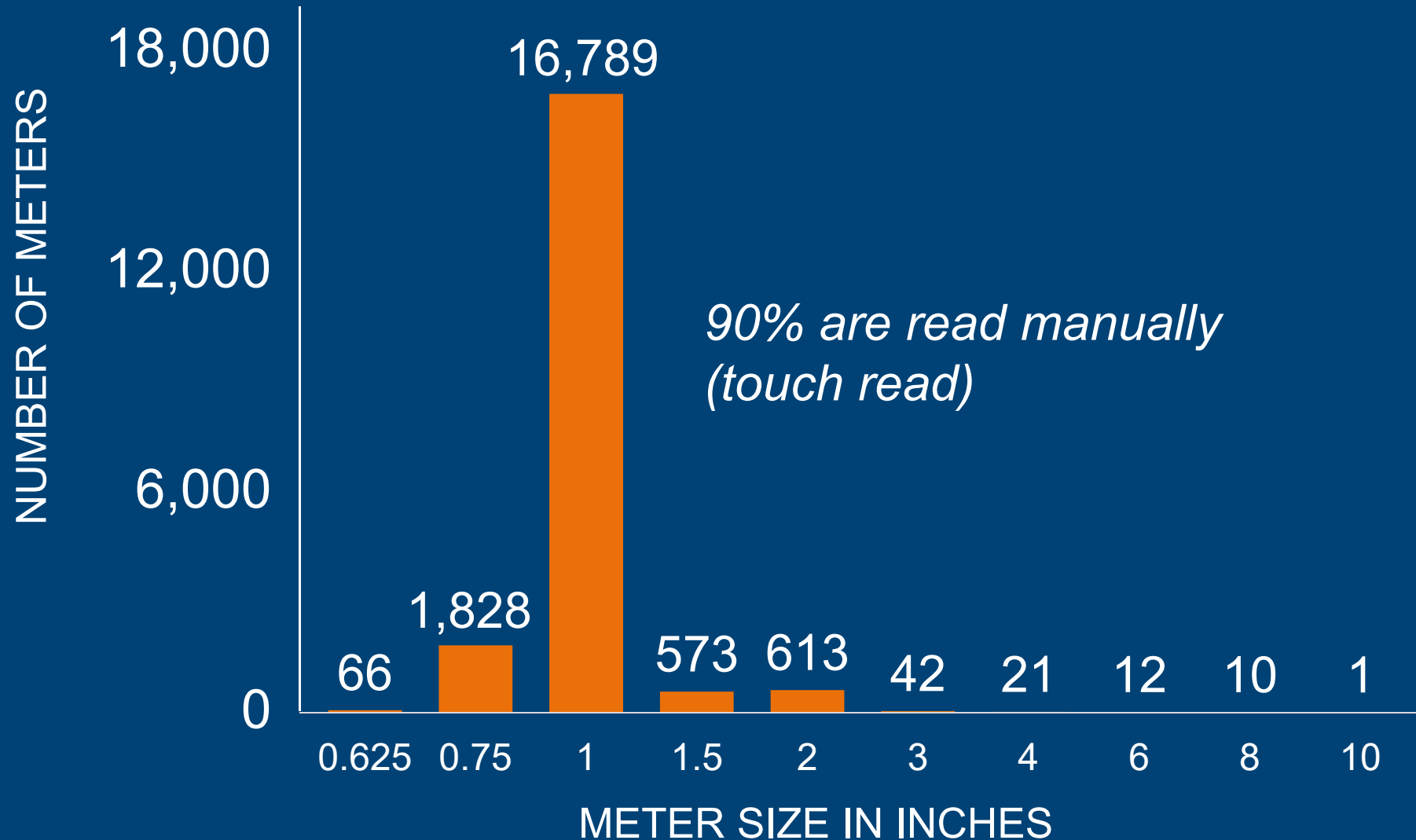


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OVERVIEW OF CHWD'S WATER METERS

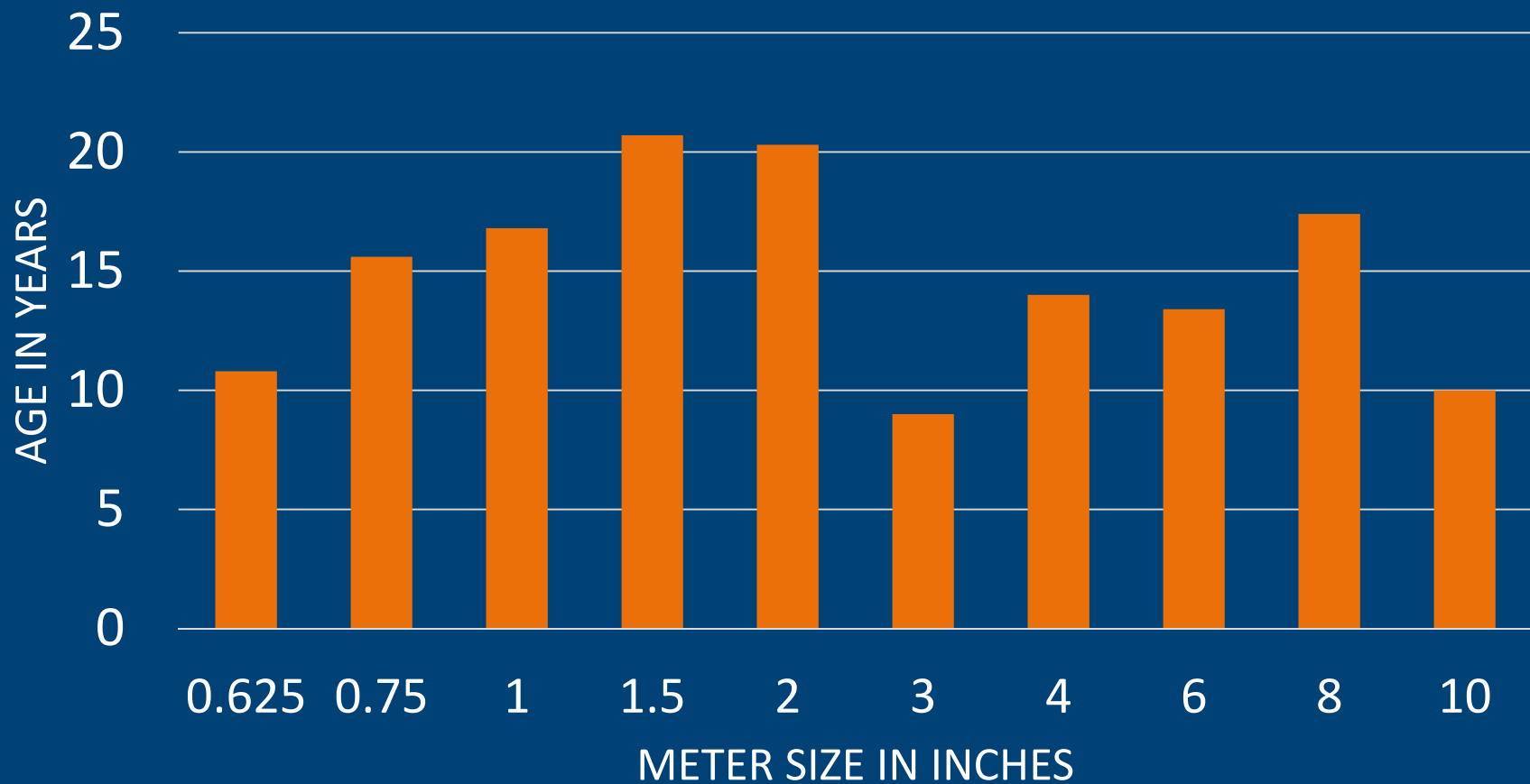
CHWD METERS

Number of deployed meters by size



CHWD METERS

Average Age of Meters by Size





CONSORTIUM METERS

Agency/Meter Brand	Badger	Hersey	Master Meter	Neptune	Sensus
CHWD				X	X
City of Folsom		X			X
City of Sacramento	X	X		X	X
Placer County Water Agency	X				
Sacramento County					X
Sac Suburban Water District	X		X		
San Juan Water District				X	X



CONSORTIUM METERS

Agency	Average Age of Meters 5/8"-2" (Years)	Number of Meters
CHWD	17	19,869
City of Folsom	7	21,386
City of Sacramento	12	129,086
Placer County Water Agency	10	37,078
Sacramento County	13	53,120
Sac Suburban Water District	11	42,225
San Juan Water District	19	10,558
TOTAL		313,322



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NEW TECHNOLOGY

NEW TECHNOLOGY OVERVIEW

Advantages of new technologies

- Online customer portal
 - Track usage in real-time or at set intervals
 - Leak alert option
 - Customers can see usage spikes
 - District can notify customers of usage spikes
 - Field staff will know if the leak is on the District's or customer's side of the meter

NEW TECHNOLOGY OVERVIEW

Advantages of new technologies

- Meter reading from a central location (safer & more efficient)
- Reduced labor cost for meter reading
- Alert for illegal water use
- Facilitates compliance with future regulations

NEW TECHNOLOGY OVERVIEW

Disadvantages of new technologies

- Fewer field inspections to identify:
 - Damaged meter boxes
 - Customer construction issues
 - Landscaping obstructions
- Data transmission & storage needs (increased cost)
- Additional components (battery & electronics)



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BREAK



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ANSWER CAC QUESTIONS



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SOLICIT CAC INPUT



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TABLE GROUP ACTIVITY



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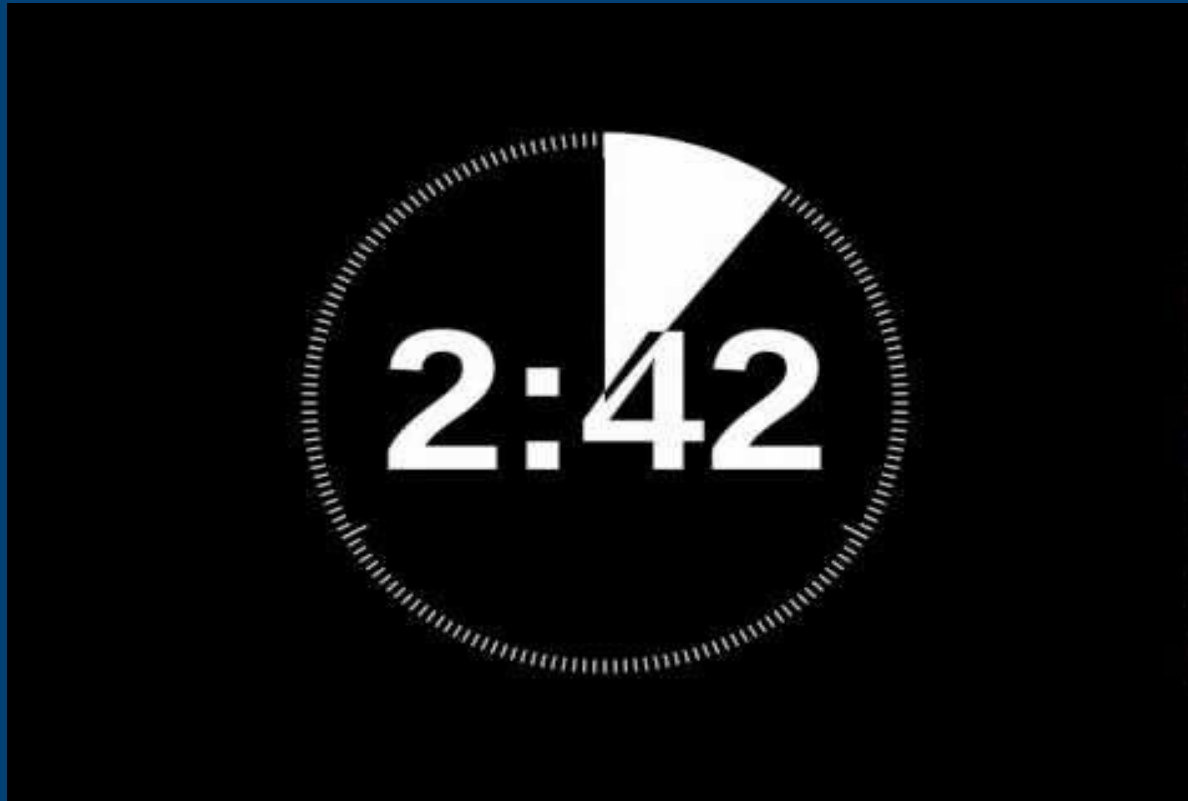
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NEXT STEPS



CAC MEETING #2

Wednesday, March 11th

- New technology findings **(Phase 2)**
- How the CAC's input was included in the Study **(Phase 2)**
- Introduction to meter testing **(Phase 3)**



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VISIT THE CAC WEBPAGE:

**[chwd.org/customer-
advisory-committee/](https://chwd.org/customer-advisory-committee/)**



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CLOSING



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**SLIDES BELOW ARE HELD
FOR FUTURE USE**



STUDY COST (ALL PHASES)

CHWD's cost (single agency)	\$450,405
CHWD's cost (w/consortium)	\$155,751 <i>(65% discount)</i>

TECHNICAL MEMO OVERVIEW

What is a technical memo?

- Structure
- Key information/components
- Deadline(s)