

PROJECT 2030

WATER MAIN REPLACEMENT



CITRUS
HEIGHTS
WATER
DISTRICT

PROJECT 2030
WATER MAIN REPLACEMENT



Customer Advisory Committee Meeting 8

SEPTEMBER 10, 2019



PLEDGE OF ALLEGIANCE

MEETING AGENDA

Public Comment

Approve Meeting #7 Summary

Introduction

Review of Project Phasing and Implementation

Project Recap including Recommendation to the Board

New Project – Meter Replacement Program Study

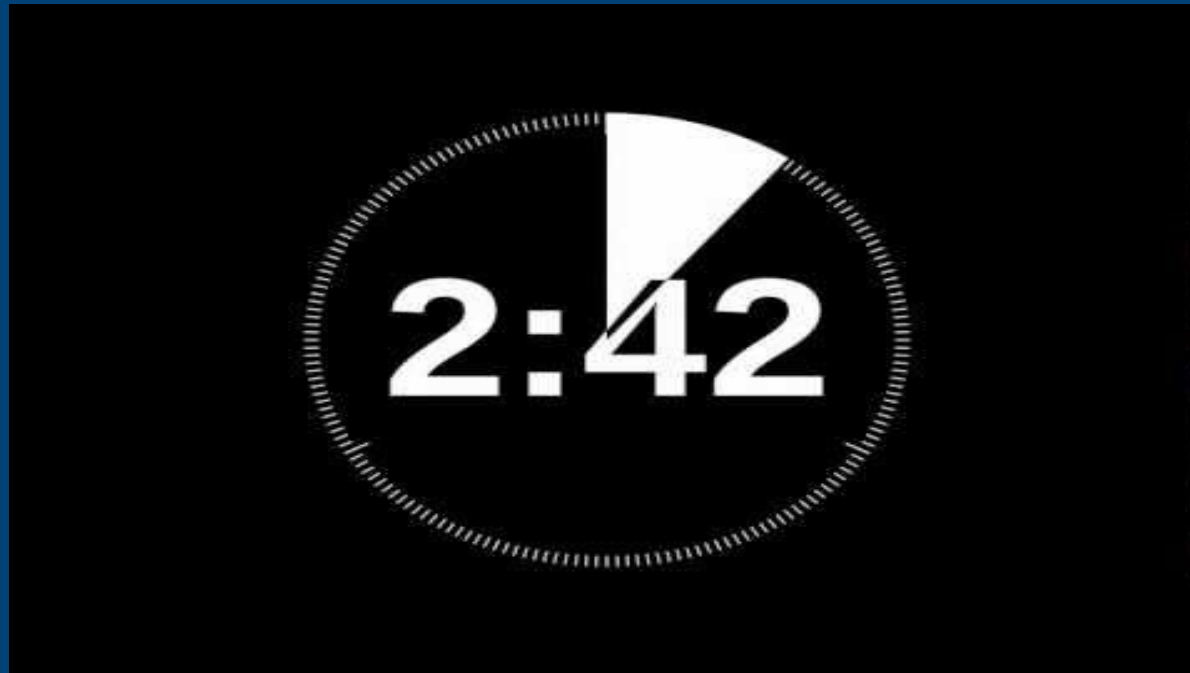
Next Steps

Recognize Retiring CAC Members



PUBLIC COMMENT

PUBLIC COMMENT





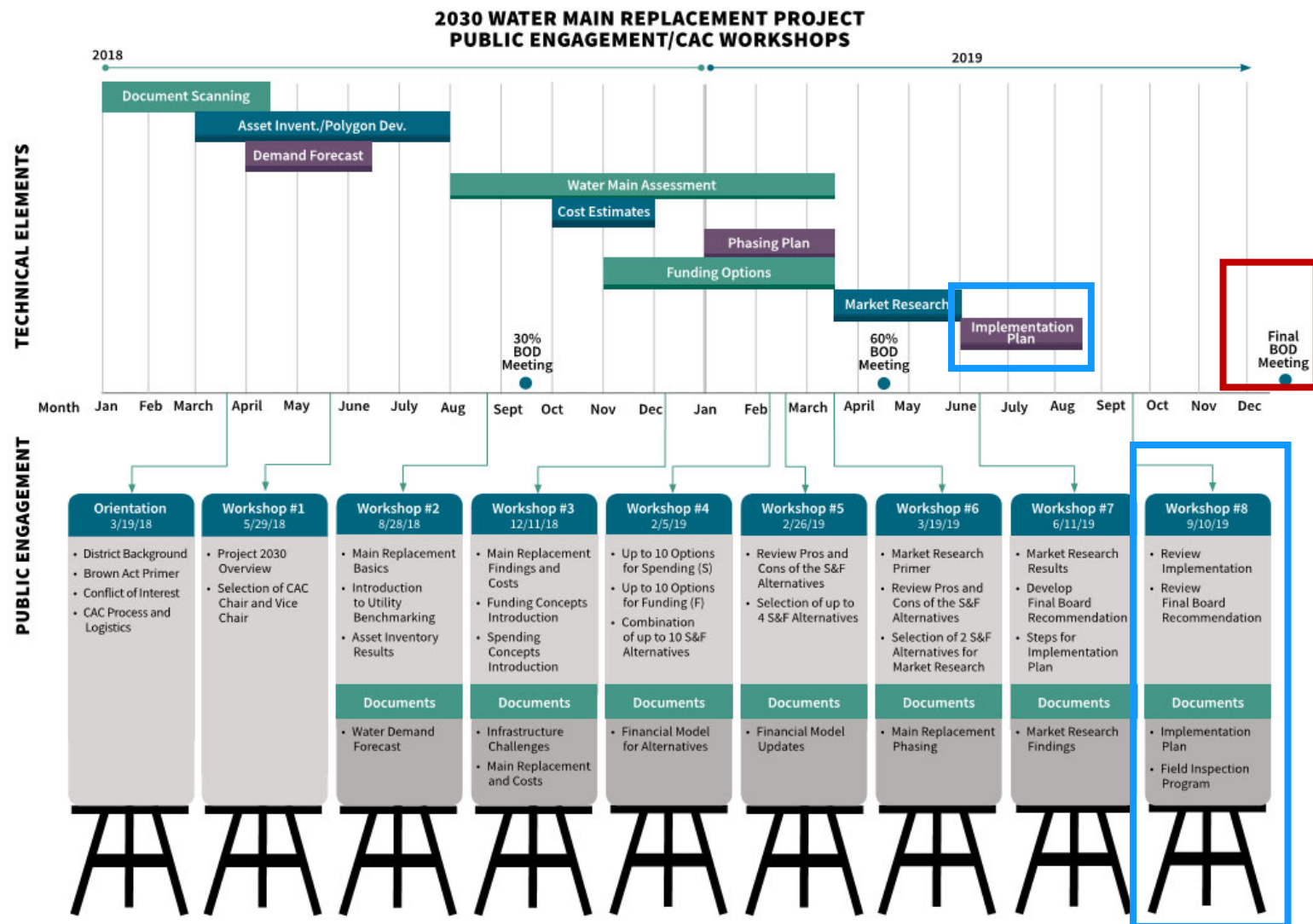
APPROVE MEETING #7 SUMMARY – JUNE 11, 2019



WHERE WE ARE & WHERE WE ARE GOING



PROJECT OVERVIEW



PROJECT 2030 SCOPE

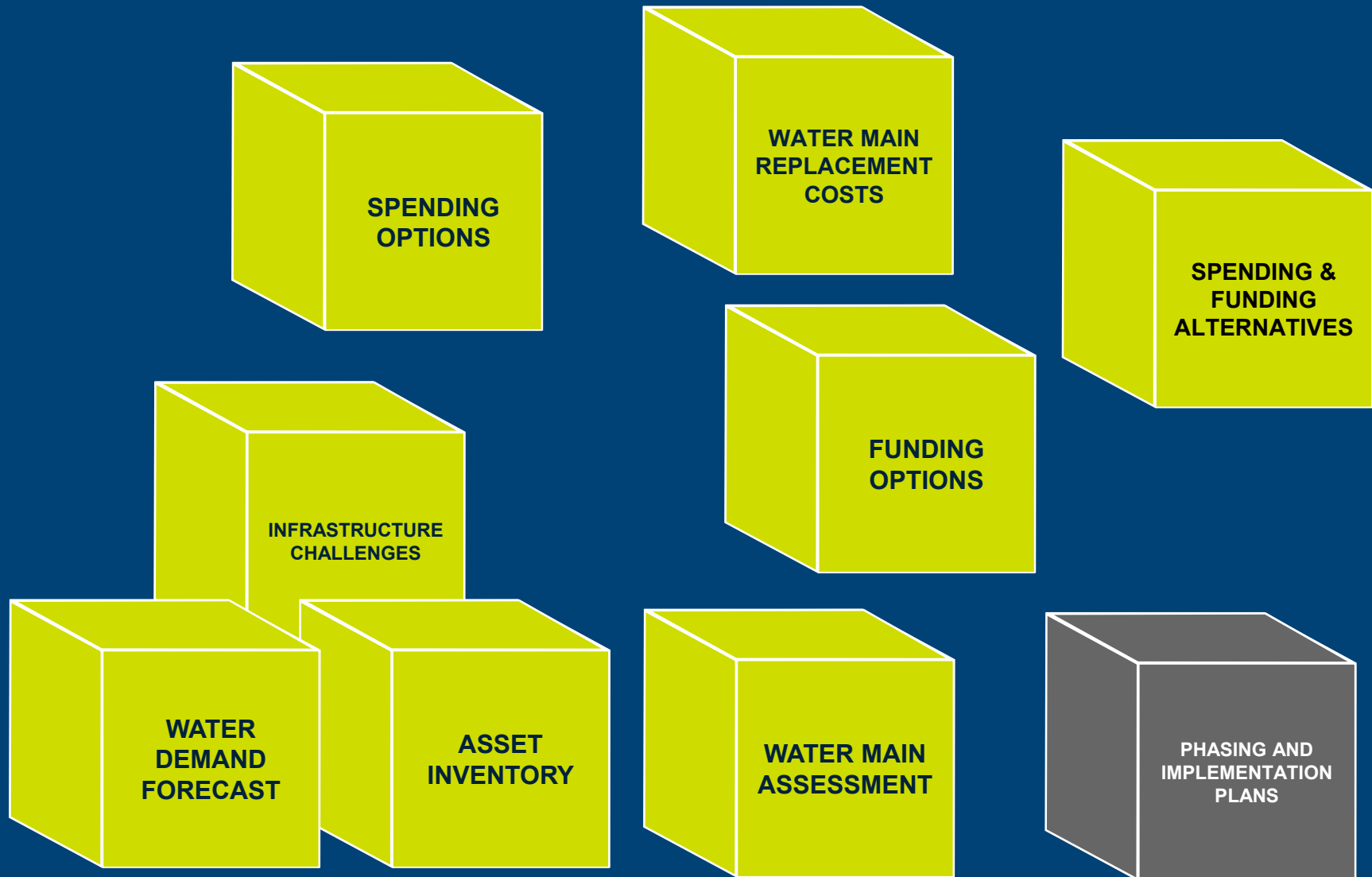




REVIEW OF PROJECT PHASING AND IMPLEMENTATION PLANS



PROJECT 2030 BUILDING BLOCKS



PREFERRED ALTERNATIVE

Alternative 5.4

Funding Description	Cost (2018 \$)	Avg. Annual Spending	Prefunding	Percent Debt	System Replaced by 2080
Prefunding with Debt	\$390 million	\$7.8 million	\$22.5 million	4%	72%



REVIEW OF PROJECT PHASING PLAN

Technical Memo No. 6

TM NO. 6 – PHASING PLAN OVERVIEW

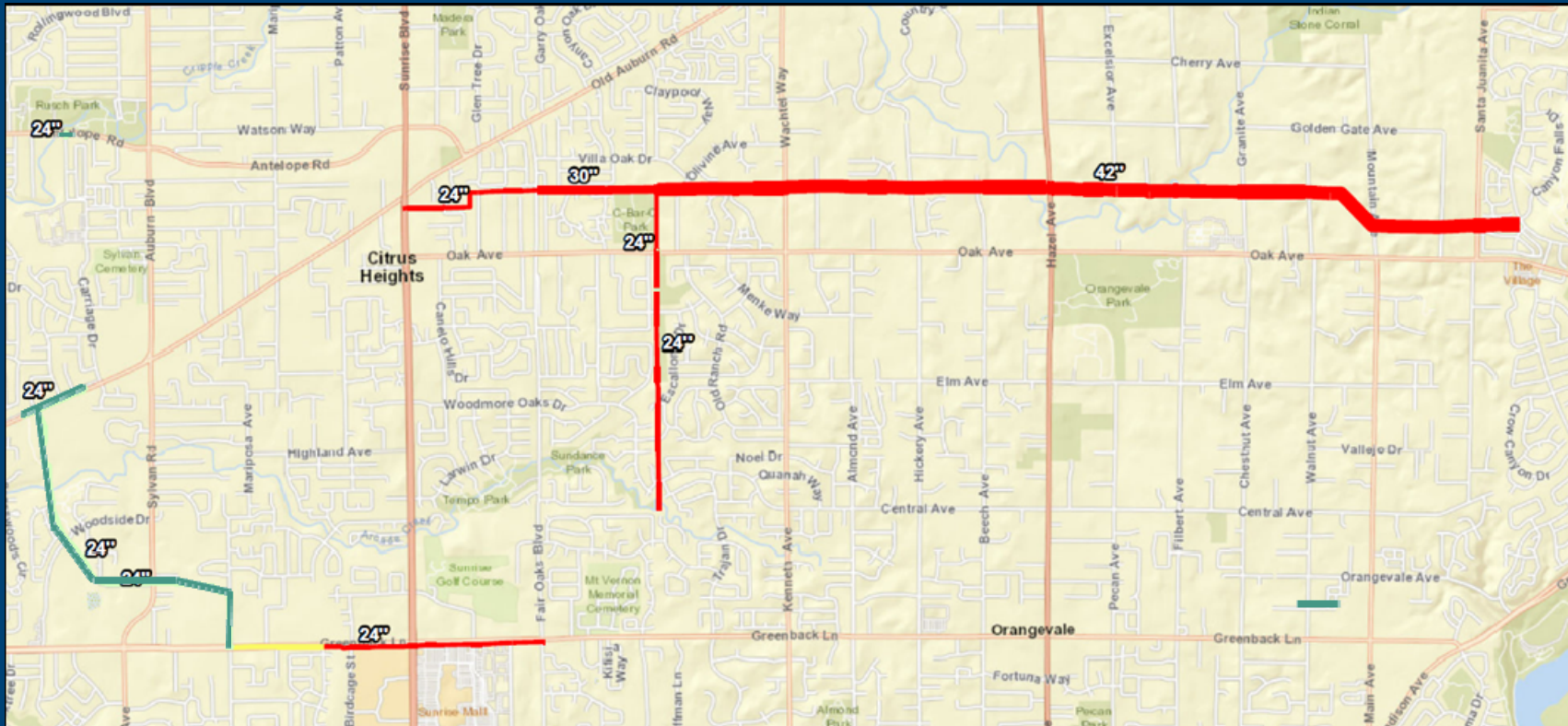
- Introduction
- Purpose
- Asset Management Model
- Methodology
- Project Ranking
- Results

Delineation of Projects

- **Linear Projects (LPs) – Large diameter transmission pipelines**
 - Replacement complicated by function of these pipes
 - Planning must include supply redundancy considerations including use of Cooperative Transmission Pipeline (CTP)
- **Project Areas (PAs) – Neighborhood level areas consisting of transmission and distribution pipelines**
 - 30 PAs identified
 - Defined by major roads and creeks
 - Economies of scale



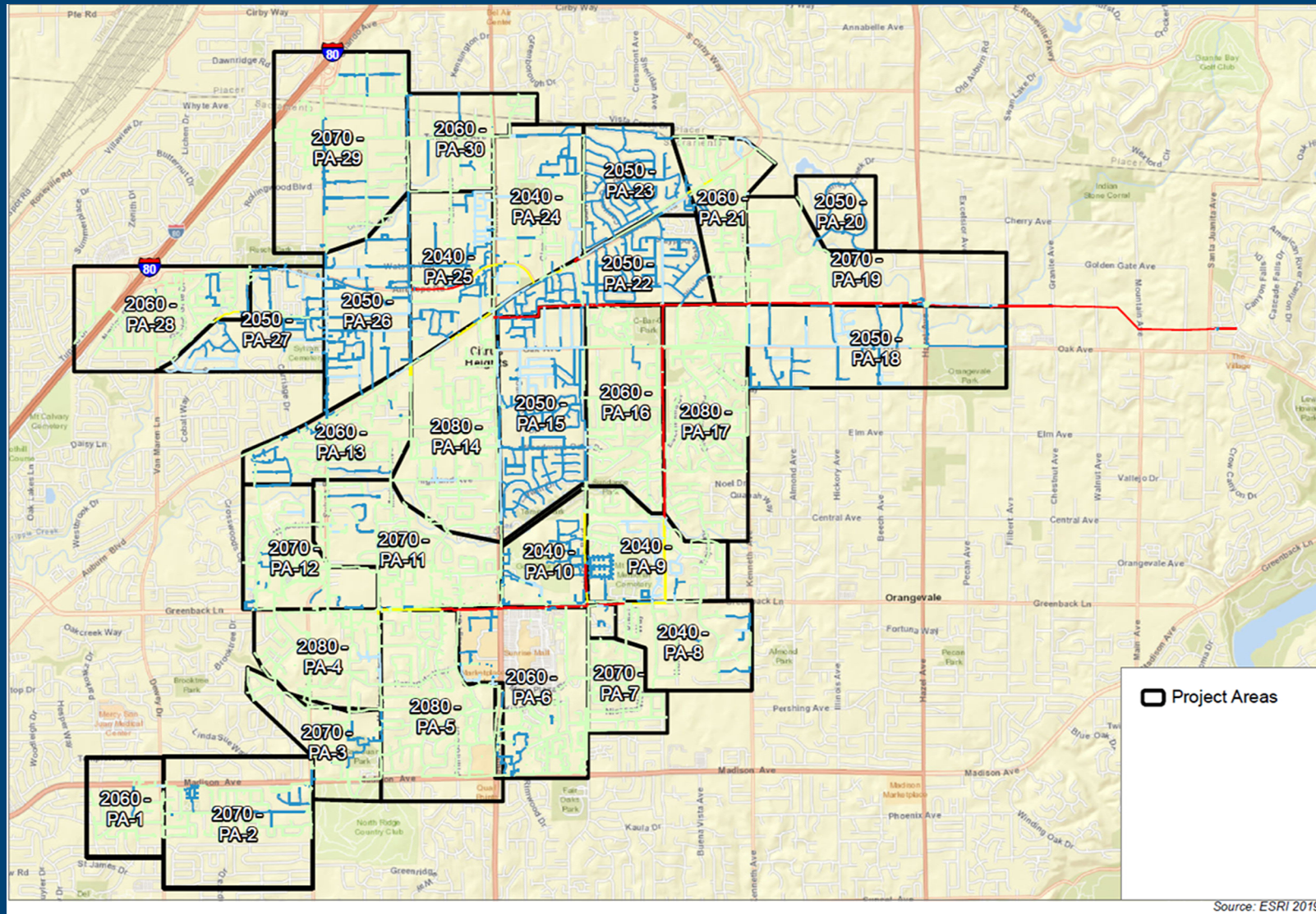
MAP OF LINEAR PROJECTS



PROJECT 2030 WATER MAIN REPLACEMENT



MAP OF PROJECT AREAS



Source: ESRI 2019.

Recall from CAC Workshop No. 3

- Risk Analysis – Computer Software
 - Likelihood of Failure (LOF)
 - Consequence of Failure (COF)

Total Risk Score =

$$(\%_{\text{LOF}_1} \times \text{LOF}_1) + (\%_{\text{LOF}_2} \times \text{LOF}_2) + \dots$$

multiplied by

$$(\%_{\text{COF}_1} \times \text{COF}_1) + (\%_{\text{COF}_2} \times \text{COF}_2) + \dots$$

TM NO. 6 – PHASING PLAN

Recall from CAC Workshop No. 3

- INITIAL RELATIVE WEIGHTING

Likelihood of Failure (LOF)		Consequence of Failure (COF)	
LOF #1: Pipe Age / Survival Probability	50%	COF #1: Pipe Diameter	20%
LOF #2: Pipe Material	25%	COF #2: Pipe Flow	20%
LOF #3: Historical Main Breaks	15%	COF #3: Transmission Pipelines	25%
LOF #4: Creek Crossings	10%	COF #4: Critical Facilities	10%
		COF #5: Creek Crossing	10%
		COF #6: High Traffic	10%
		COF #7: Difficult Access	5%
LOF Total	100%	COF Total	100%

TM NO. 6 – PHASING PLAN

Recall from CAC Workshop No. 3

- NUMBER CRUNCHING



TM NO. 6 – PHASING PLAN

Recall from CAC Workshop No. 3

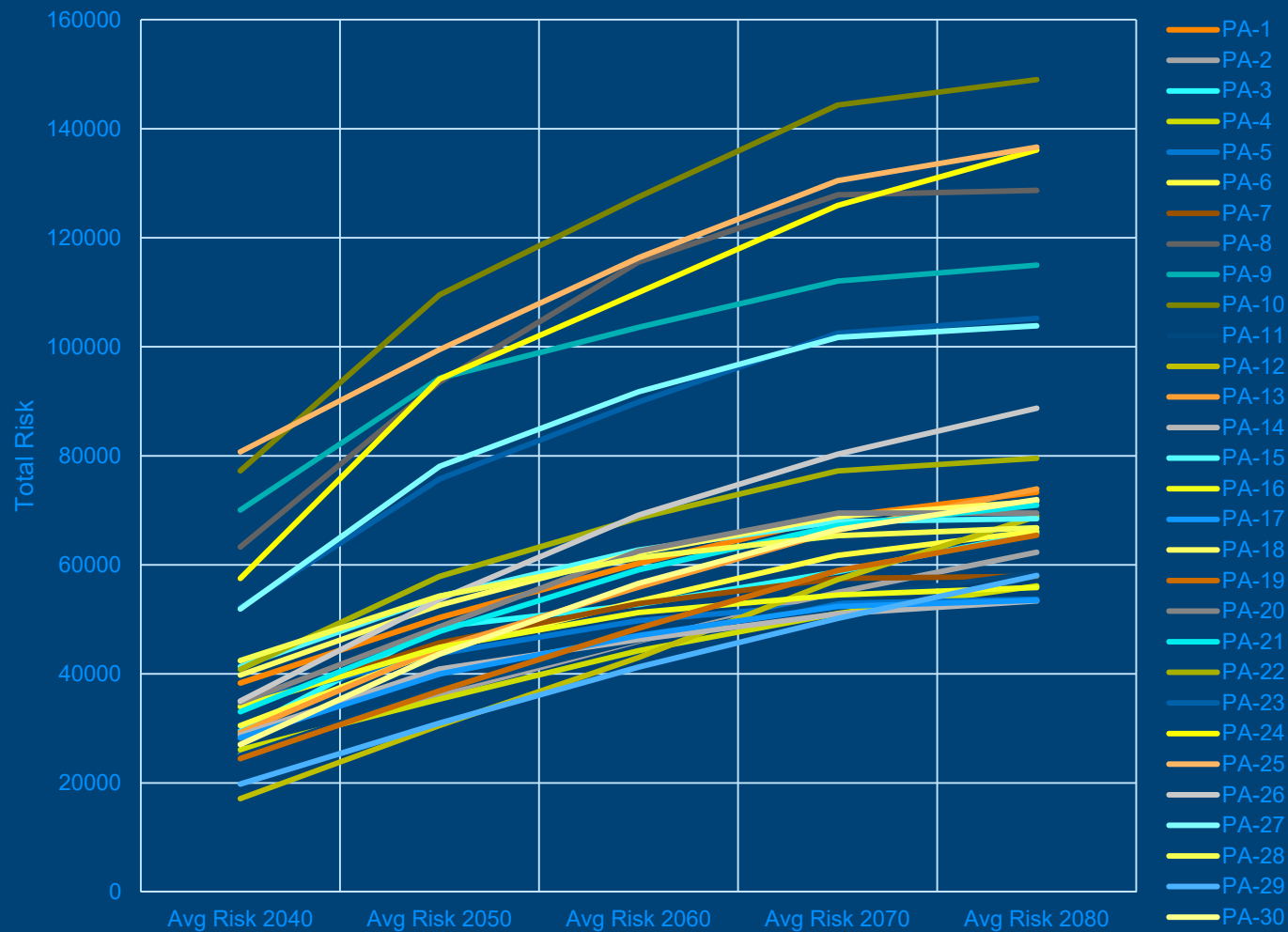
- MODEL OUTPUT **COF** x **LOF** = **TOTAL RISK**

ID	COF4 (Intersection)	COF5 (Intersection)	COF6 (Intersection)	COF10 (DIAMETER)	COF2 (Intersection)	COF12 (Intersection)	COF11 (Intersection)	Consequence of Failure	LOF1 (Intersection)	LOF4 (Intersection)	LOF5 (Intersection)	LOF6 (FD1 -)	Likelihood of Failure	Total Risk	Normalized Risk	Risk (By Grading)	Diameter	Material	Install Date
12288	100	0	0	200	180	250	0	730	75	0	##	400	575	419750	1000	5	42	CML	1/1/1957
12770	100	0	0	200	180	250	0	730	75	0	##	400	575	419750	1000	5	42	CML	1/1/1957
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12768	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957
12771	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957
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12775	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957
12776	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957

Project Rank:

- Linear Projects have the highest COF and total Risk
- Linear Projects are the highest Priority
- Project Areas are considered relative to each other based on weighted average total risk

PROJECT AREAS TOTAL RISK



TM NO. 6 – PHASING PLAN

Project Rank:

- Cost were assigned to each pipe using the Project 2030 estimating tool (from TM No. 3)
 - Costs are in 2018 dollars
- Cost Profiles were prepared for each Project Area
 - Example for PA-18

Risk Grade	Length (feet of pipe)					Estimated Cost (replacement in 2018 dollars)				
	2040	2050	2060	2070	2080	2040	2050	2060	2070	2080
5	0	0	17	35	35	\$0	\$0	\$12,000	\$24,000	\$24,000
4	0	125	143	125	125	\$0	\$51,000	\$63,000	\$51,000	\$51,000
3	15,379	25,882	29,735	32,546	35,495	\$5,449,000	\$8,722,000	\$9,912,000	\$10,800,000	\$11,721,000
2	9,764	1,656	2,732	1,155	0	\$3,054,000	\$517,000	\$857,000	\$360,000	\$0
1	11,408	8,888	3,924	2,690	896	\$3,575,000	\$2,786,000	\$1,232,000	\$841,000	\$281,000

TM NO. 6 – PHASING PLAN

Project Rank:

- Projects are assigned to an appropriate decade
- Pipes with a Risk Grade of 3 or higher are replaced in the decade the project is scheduled
- Example of projects assigned to the decade ending in 2040:

Project	Est. Cost (2018 \$)
PA-27	\$7,613,000
PA-23	\$13,477,000
PA-26	\$11,471,000
PA-22	\$13,019,000
PA-20	\$2,429,000
PA-18	\$8,773,000
PA-15	\$22,108,000
Total	\$78,890,000

TM NO. 6 – PHASING PLAN

Project Rank:

- Summary Per Decade

Decade Ending	Est. Cost (2018 \$)
2040	\$77,452,500
2050	\$78,890,000
2060	\$79,589,000
2070	\$77,423,000
2080	\$76,118,000
Total	\$389,472,500



Questions on Phasing Plan?



REVIEW OF PROJECT IMPLEMENTATION PLAN

Technical Memo No. 7

Overview

- Asset Management Model Refinement
- Pipe Inspection Including Stream Crossings
- Hydraulic Model Coordination
- Financial Planning
- Public Engagement
- Coordination of Capital Planning with Other Jurisdictions
- Projecting Activity Levels and Resource Needs
- Monitoring of Key Water Utility Management Trends

Project 2030 Preparation (2020 – 2030)

- Perform Field Testing including Stream Crossings
- **Refine Asset Management Model**
- **Coordinate Hydraulic Model**
- Update Financial Plan / Funding Program, including pre-funding
- Continue Public Engagement
- Coordinate Capital Planning with Other Jurisdictions
- **Monitor Key Trends in Water Utility Management**

Refine Asset Management Model

- Clarify Risk Grading
 - Consequence-of-failure refinement to yield more granular results

Consequence of Failure (CF)	
COF #1: Pipe Diameter	20%
COF #2: Pipe Flow	20%
COF #3: Transmission Pipelines	25%
COF #4: Critical Facilities	10%
COF #5: Creek Crossing (Environmental Impact)	10%
COF #6: High Traffic Areas	10%
COF #7: Difficult Access Areas (Backyard Mains)	5%
COF Total	100%

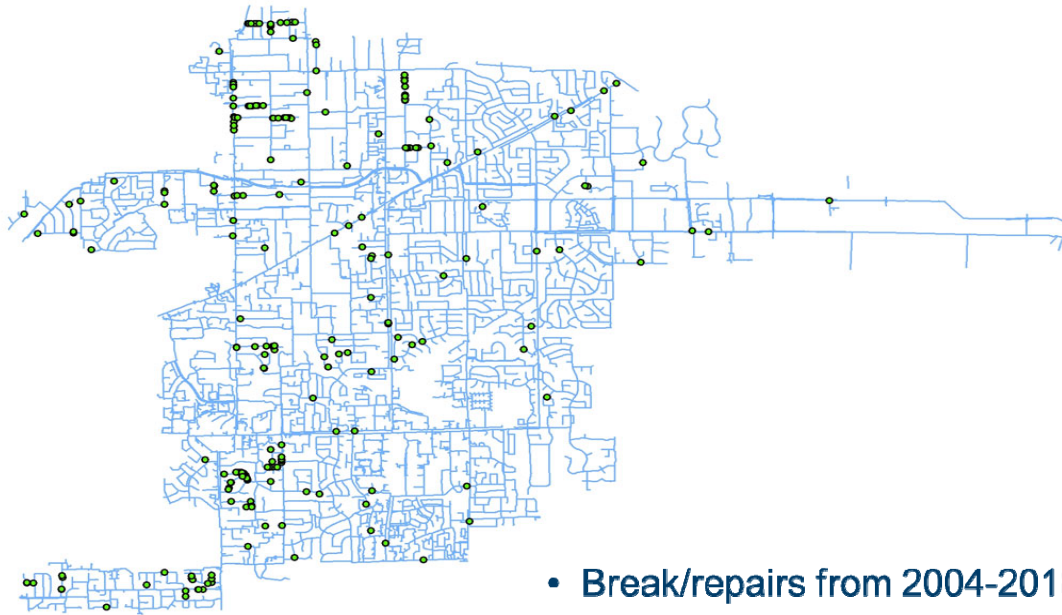
Refine Asset Management Model

- Customize Deterioration Curves by gathering District Specific data
- Recall LOF #2 based on 2012 AWWA data (25% of LOF Score)

<u>Pipe Material</u>	<u>Life Expectancy (Years)</u>
Ductile Iron Pipe (DIP)	60-110
Asbestos Cement Pipe (ACP)	75-105
Steel	95
Polyvinyl Chloride (PVC)	70

Customize Deterioration Curves by gathering District Specific data

- Specific data needed: leaks and breaks LOF #4



- Break/repairs from 2004-2018
- Predictor of future trouble spots

Coordinate with Hydraulic Model

- Asset Management model assesses system condition while the Hydraulic model assesses capacity
- Determine Replacement Size
- Identify Opportunities for Realignment
- Identify Opportunities for Redundancy
- Complete Pressure Reduction Analysis

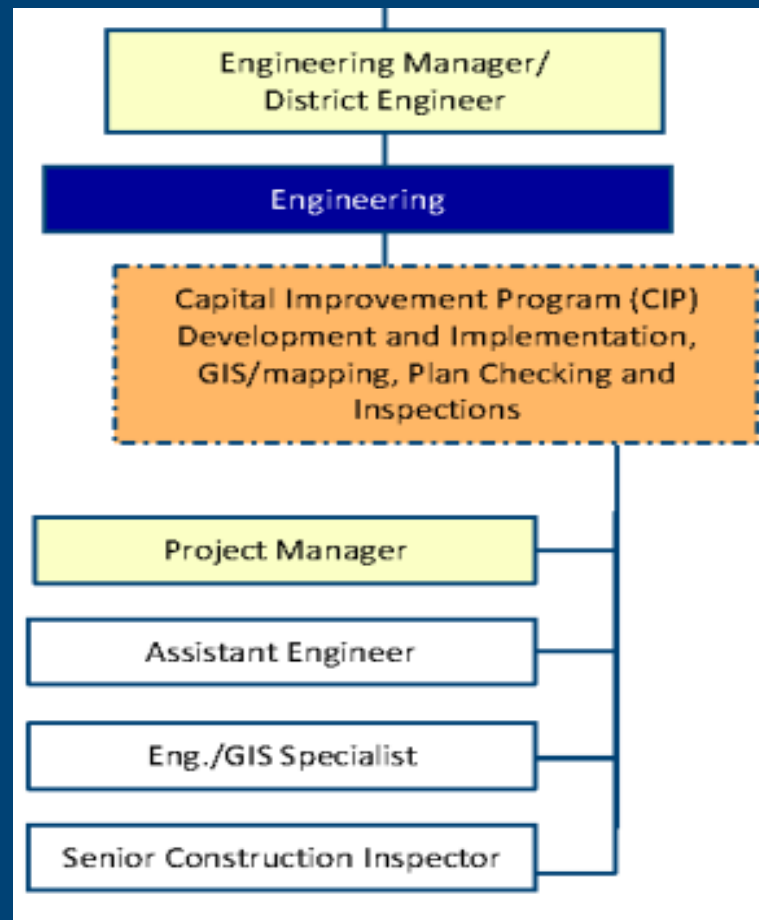
Project Implementation (2030 – 2080)

- Current Level of Main Replacement and Projected Level of Activity
- Resource Capacity Improvements
- Financial Planning and Monitoring
- Public Engagement

Current Level of Main Replacement and Projected Level of Activity

- Current Annual spending on water main replacement is approximately \$2 million
- Projected Annual spending on water main replacement is approximately \$8 million
- Main replacement projects are currently delivered through the Engineering office
- Additional resources will be needed to implement annual spending of \$8 million

Current Organization Chart of Engineering Department:



Resource Recommendations:

- Identify team members impacted
- Shift focus and update job descriptions
- Add additional staff
- Add project control and reporting systems

Financial Planning and Monitoring

- Establish prefunding reserve
- Update financial model assumptions
- Collect project cost data
- Track other metrics
 - Project soft costs
 - Feet of pipe replaced
 - Percentage of system replaced
 - Effort (in hours) for procurement, design, project management and construction inspection

Public Engagement

- Communication centered on project plans and benefits
- Increase public engagement as project activities and planning ramp up
- Establish benchmarks and targets and regularly report progress using dashboards
 - Miles of pipe replaced
 - Miles of pipe in planning
 - Schedule and maps
 - Total spending vs planned
- Plan Emergency Public Engagement

- Monitor Key Trends in Water Utility Management
- Top issues facing water industry

Ranking	Category	Weighted Average	% Ranked Critically Important
1	Renewal and replacement of aging water and wastewater infrastructure	4.59	64
2	Financing for capital improvements	4.44	55
3	Public understanding of the value of water systems and services	4.37	50
4	Long-term water supply availability	4.30	50
5	Public understanding of the value of water	4.26	44
6	Watershed / source water protection	4.17	41
7	Aging workforce / anticipated retirements	4.16	43
8	Public acceptance of future water and wastewater rate increases	4.12	35
9	Emergency preparedness	4.10	34
10	Governing board acceptance of future water and wastewater rate increases	4.09	35

Source: AWWA – 2018 State of the Water Industry

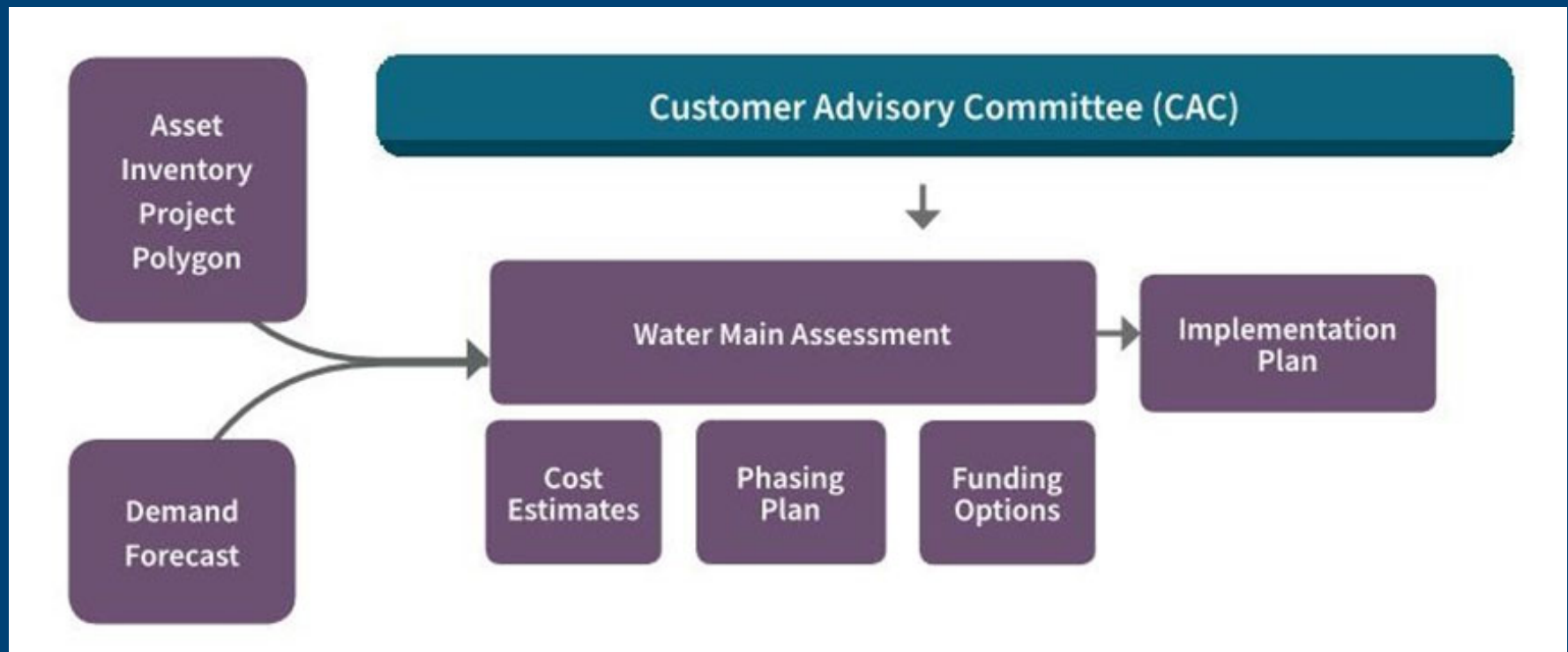


Questions on Implementation Plan?

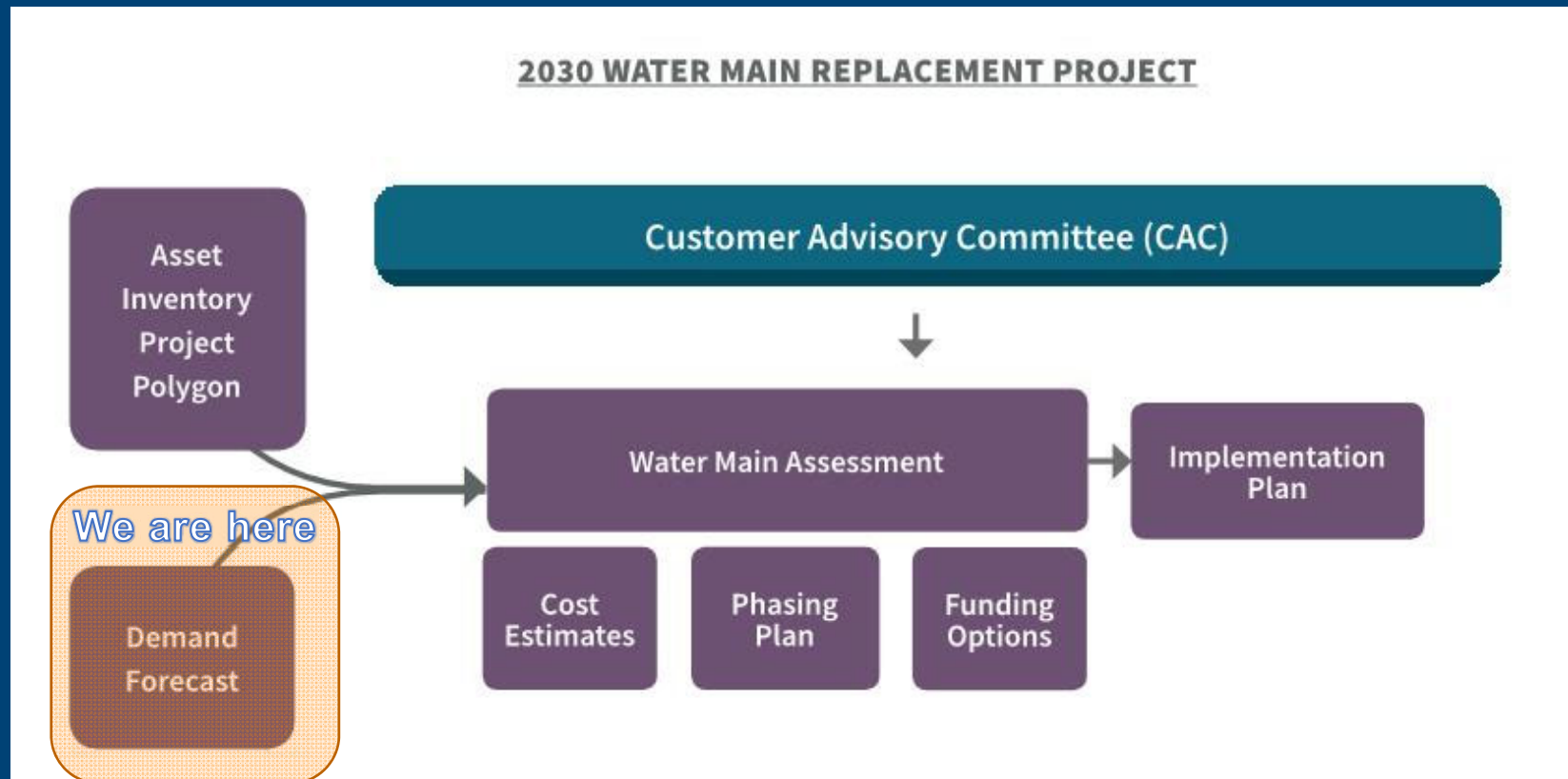


PROJECT 2030 RECAP, INCLUDING RECOMMENDATION TO THE BOARD

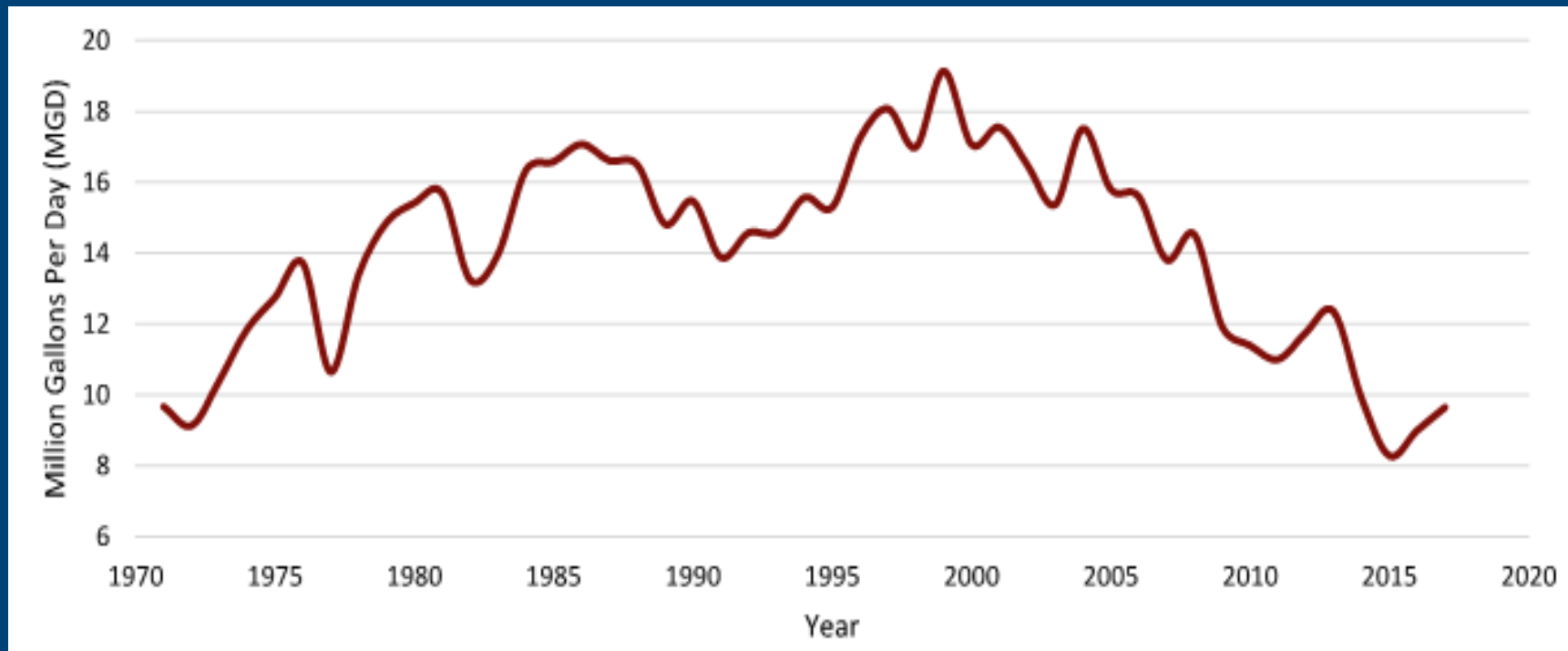
PROJECT 2030 RECAP



WATER DEMAND FORECAST



HISTORICAL WATER DEMAND



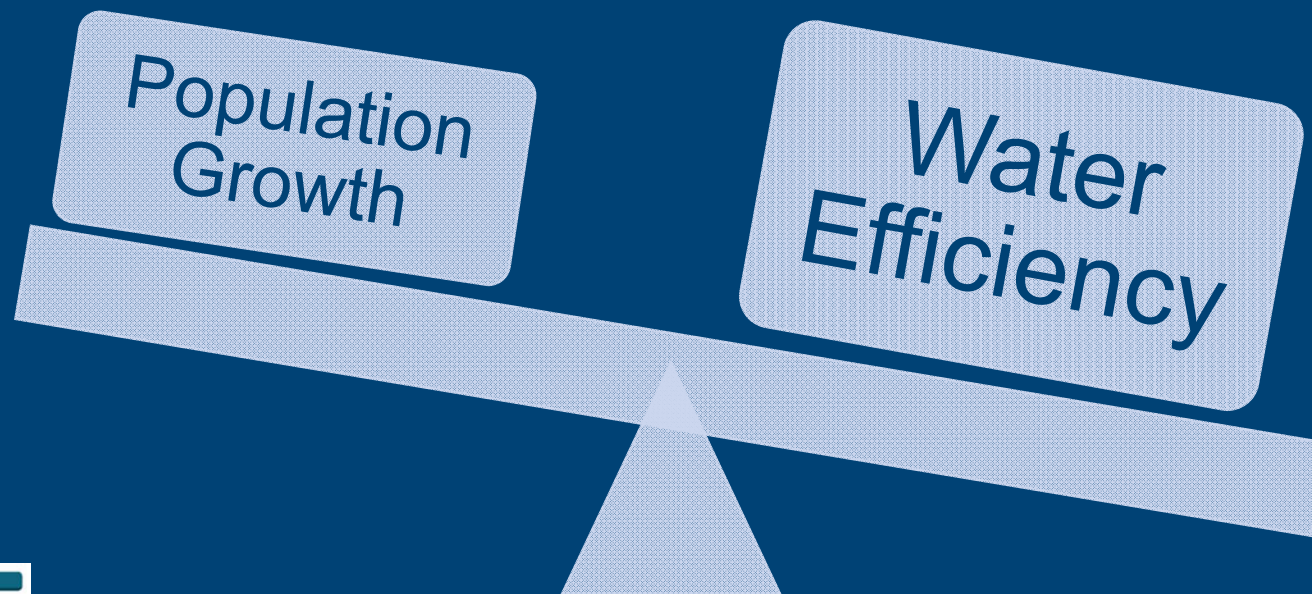
1971 – 9.7 MGD
1999 – 19.1 MGD

2015 – 8.2 MGD
2017 – 9.7 MGD

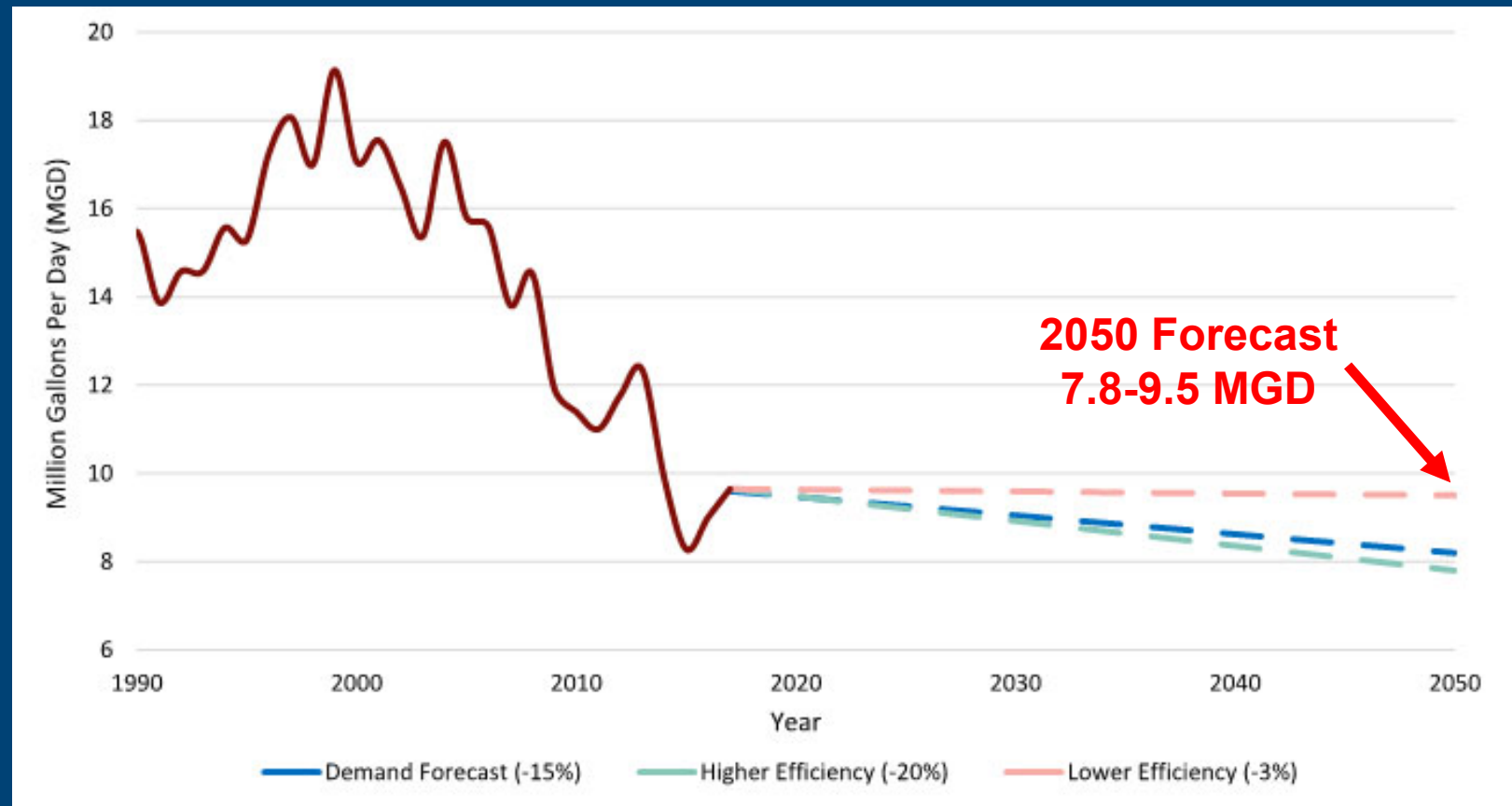




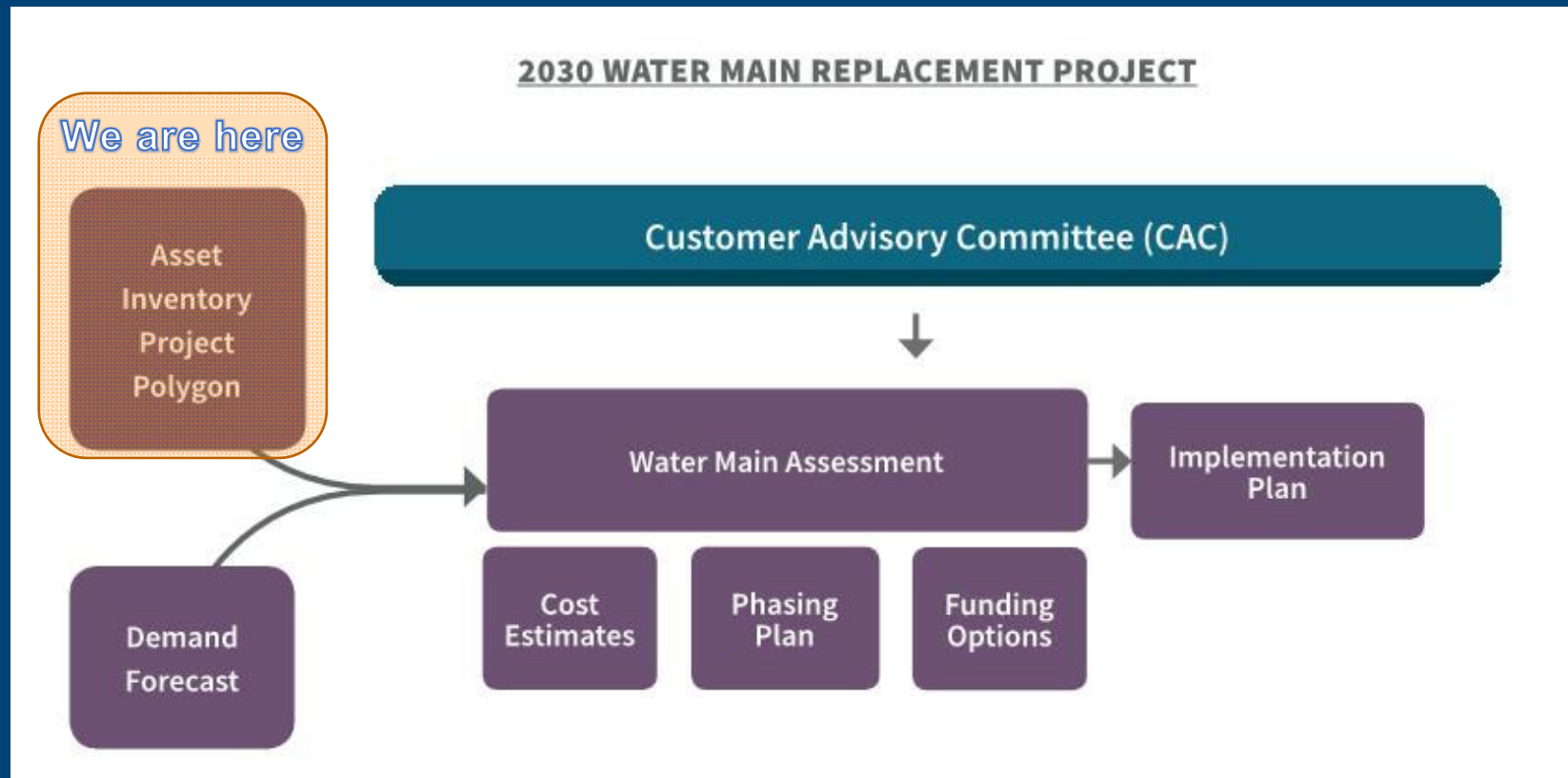
WATER EFFICIENCY MAY OUTWEIGH POPULATION GROWTH



RANGE IN 2050 WATER DEMAND PROJECTIONS



ASSET INVENTORY RESULTS



ASSET INVENTORY

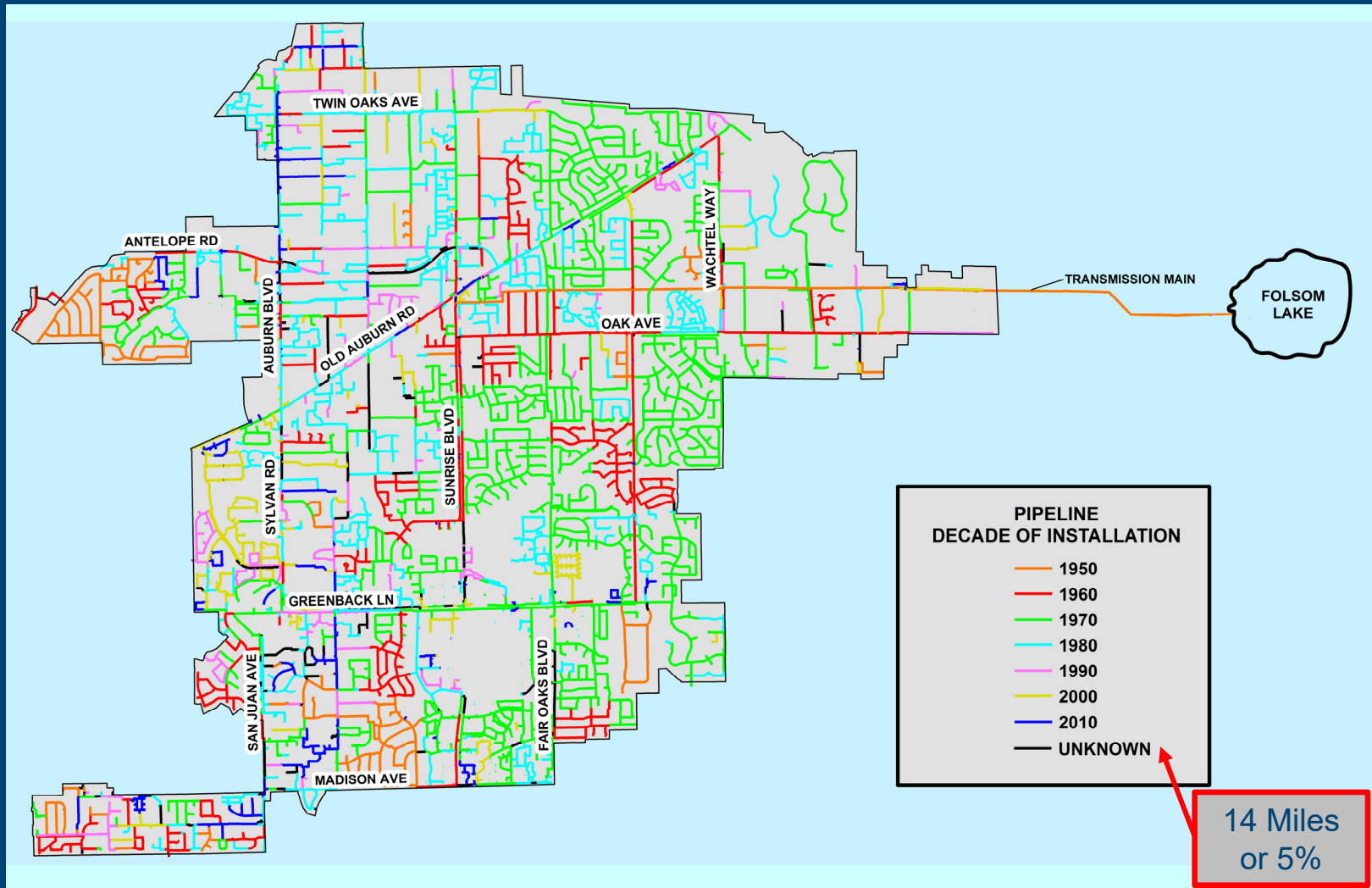
- Goal: Add key data to the District's GIS water facility map
- Tasks:
 - Go through project files
 - Scan documents
 - Data entry into map
 - Decade of Installation
 - Pipe Type
 - QA/QC



PROJECT 2030 WATER MAIN REPLACEMENT

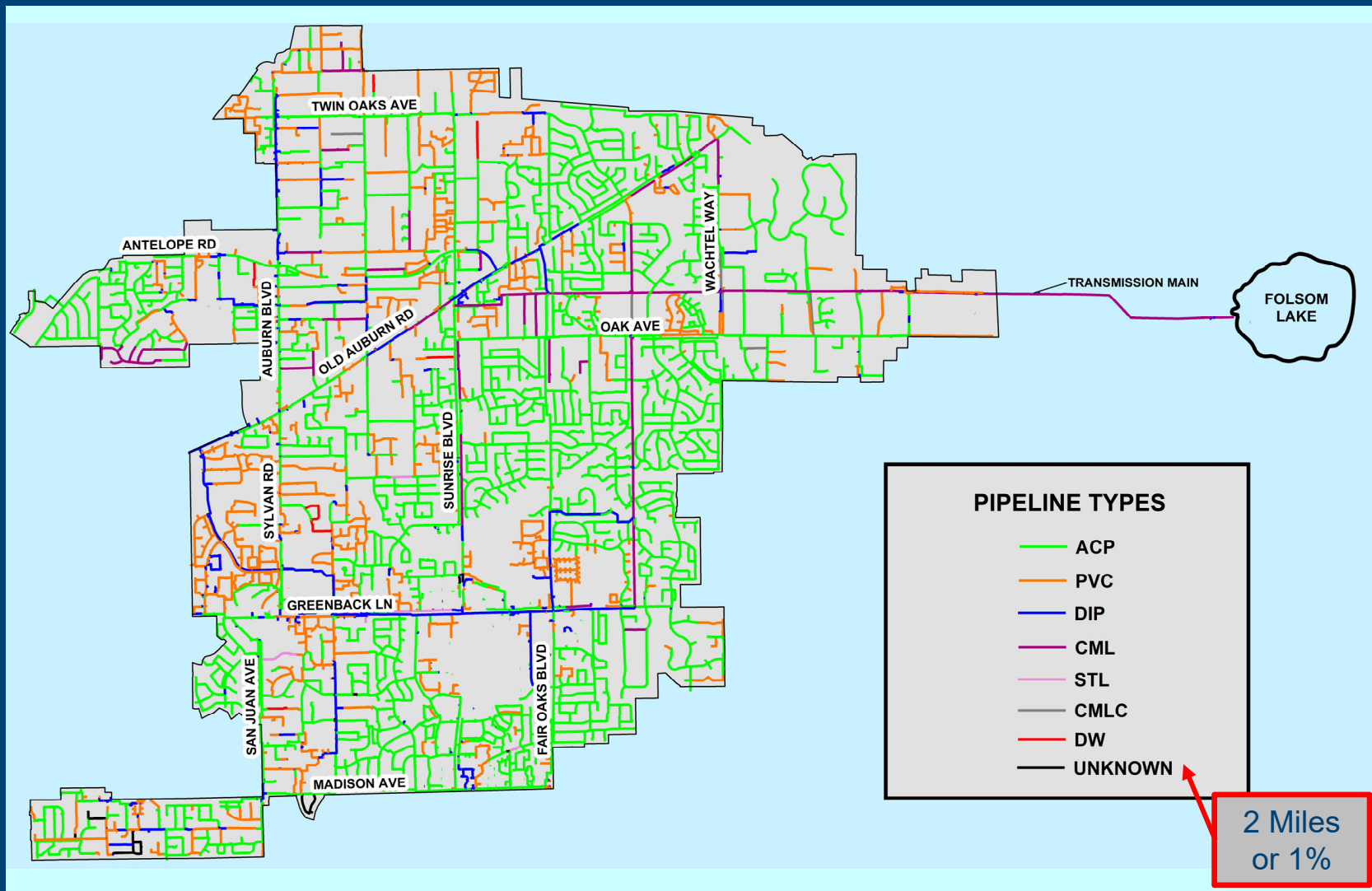


AFTER PIPELINE INVENTORY – DECADE OF INSTALLATION

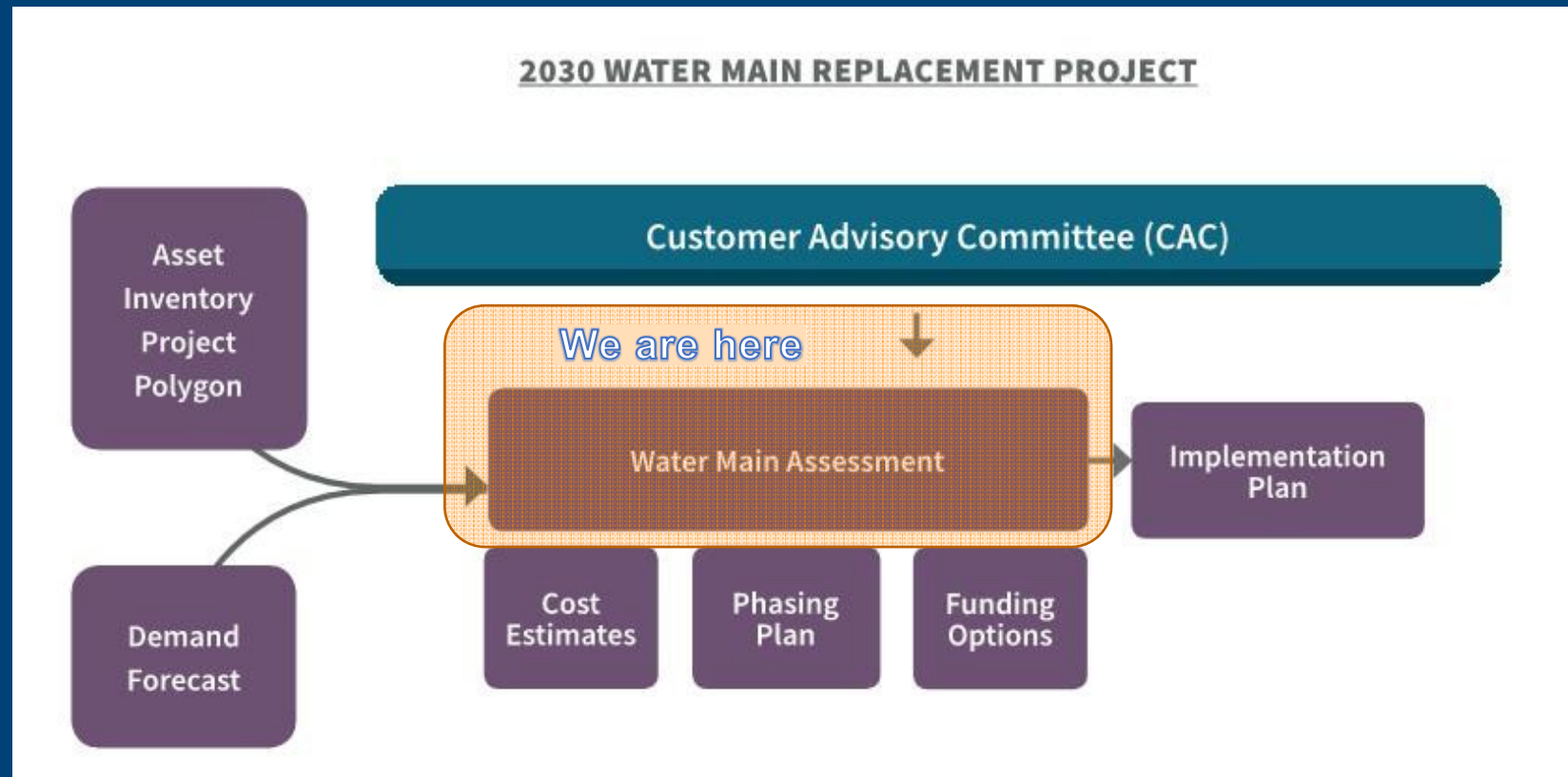




AFTER PIPELINE INVENTORY – PIPE TYPE

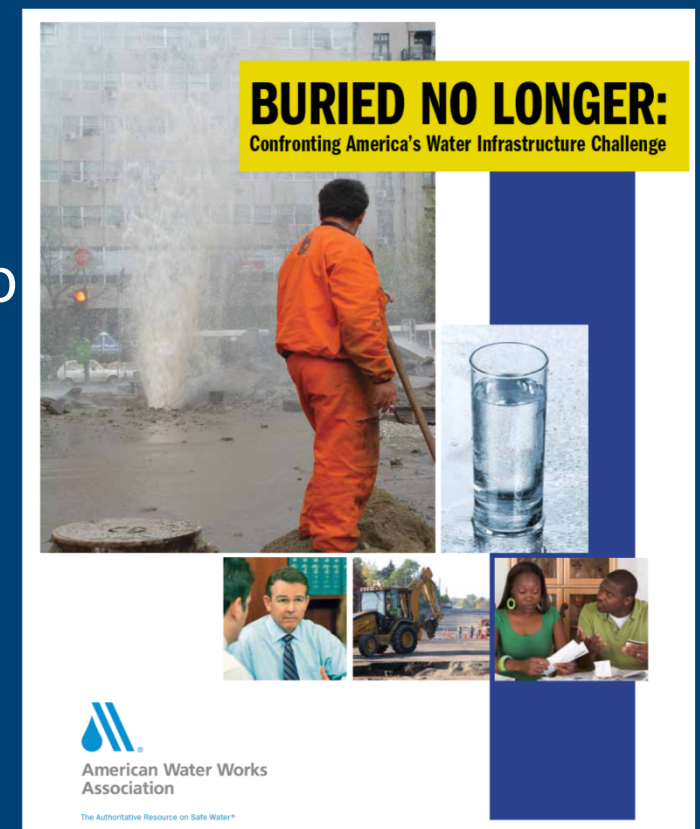


WATER MAIN ASSESSMENT



INFRASTRUCTURE CHALLENGES

- The American Water Works Association (AWWA) has identified aging infrastructure as a nation-wide challenge
- Key Findings by AWWA
 - The Needs are Large
 - Household Water Bills Will Go Up
 - Important Regional Differences
 - Important Differences Based on System Size
 - The Costs Keep Coming
 - Postponing Investment Only Makes the Problem Worse



SUMMARY OF RISK ANALYSIS FOR MAIN REPLACEMENTS

High			
3	3	6	9
2	2	4	6
1	1	2	3
Low			
	1	2	3
	Low		High
	Consequence of Failure		

- Risk Analysis – Computer Software
 - Likelihood of Failure (LOF)
 - Consequence of Failure (COF)
- LOF and COF comprised of multiple factors
- Each LOF and COF factor also gets a weighting factor (% LOF or COF)

Total Risk Score =

$$(\%_{\text{LOF}_1} \times \text{LOF}_1) + (\%_{\text{LOF}_2} \times \text{LOF}_2) + \dots$$

multiplied by

$$(\%_{\text{COF}_1} \times \text{COF}_1) + (\%_{\text{COF}_2} \times \text{COF}_2) + \dots$$





LIKELIHOOD OF FAILURE (LOF)

Likelihood of Failure (LOF)		Consequence of Failure (COF)	
LOF #1: Pipe Age / <u>Survival Probability</u>	50%	COF #1: Pipe Diameter	20%
LOF #2: Pipe Material	25%	COF #2: Pipe Flow	20%
LOF #3: Historical Main Breaks	15%	COF #3: Transmission Pipelines	25%
LOF #4: Creek Crossings (Vulnerability)	10%	COF #4: Critical Facilities	10%
		COF #5: Creek Crossing (Environmental Impact)	10%
		COF #6: High Traffic Areas	10%
		COF #7: Difficult Access Areas (Backyard Mains)	5%
LOF Total	100%	COF Total	100%



CONSEQUENCE OF FAILURE (COF) FACTORS

Likelihood of Failure (LOF)		Consequence of Failure (COF)	
LOF #1: Pipe Age / <u>Survival Probability</u>	50%	COF #1: Pipe Diameter	20%
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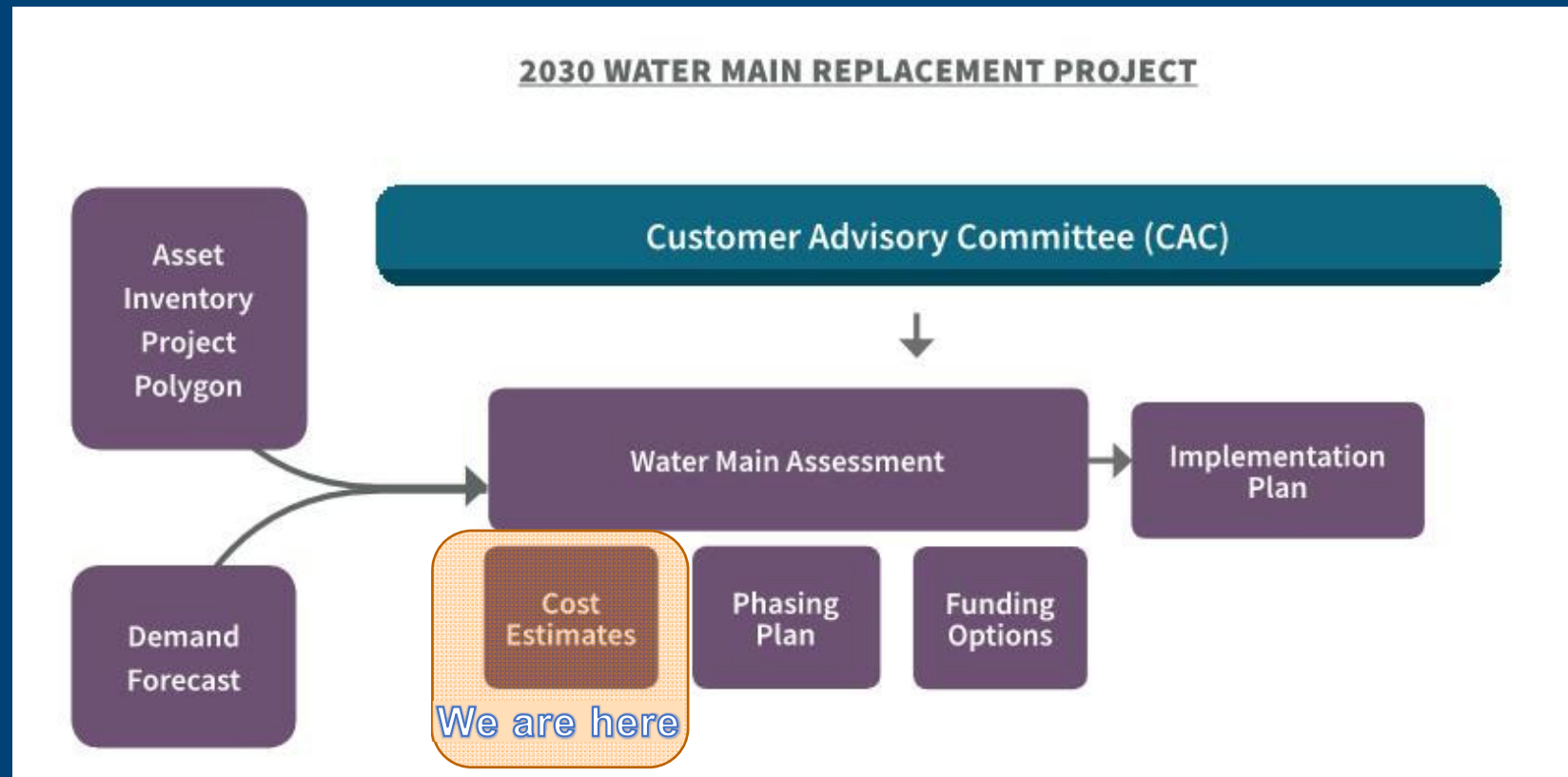


EXAMPLE OF MODEL OUTPUT

$$\text{COF} \times \text{LOF} = \text{TOTAL RISK}$$

ID	COF4 (Interse ction)	COF5 (Interse ction)	COF6 (Intersec tion)	COF10 (DIAMET ER)	COF2 (Intersec tion)	COF12 (Interse ction)	COF11 (Intersec tion)	Consequence of Failure	LOF1 (Ma terial)	LOF4 (Inte rse cti on)	LOF5 (In terse cti on)	LOF6 (FD1 -)	Likelihood of Failure	Total Risk	Normalized Risk	Risk (By Grading)	Diameter	Material	Install Date
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12774	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957
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12776	0	0	0	200	180	250	0	630	75	0	0	400	475	299250	712.92436	4	42	CML	1/1/1957

COST ESTIMATES



REPLACEMENT COST ESTIMATES

Planning Level Cost Estimates include:

- Construction Costs
- Other Project Costs (Soft Costs)

Future Cost Considerations

- Project Specific conditions
- Pipe Rehabilitation Options
- Alternative Pipe Replacement Techniques
- Performed on a project-specific basis





TOTAL PIPELINE REPLACEMENT COSTS

Pipe Classification	Total Miles	Cost (million)
Distribution Mains (≤ 12 inch diameter)	235	\$ 317
Transmission Mains (> 12 inch diameter)	15	\$ 54*
Appurtenances (e.g. fire hydrants, customer service connections)	n/a	\$ 61
Total Construction Cost	n/a	\$ 432
Engineering, Management and Permitting	n/a	\$ 108
Total	250	\$ 540

* Factors affecting higher transmission main replacement unit cost:

- Larger diameter
- Creek crossings
- Difficult access (backyard mains / private easements)





SPENDING OPTIONS

Option	Average Annual Spending (\$2018 million)	Percent per Year	Total Spending by 2080 (\$2018 million)	Calculated Survival Probability in 2060
Option 1 (Baseline)	\$2.0	0.4%	\$100	2.1%
Option 2 (1.5x Baseline)	\$3.0	0.6%	\$150	2.4%
Option 3 (2x Baseline)	\$4.0	0.8%	\$200	3.9%
Option 4	\$6.4	1.2%	\$320	6.4%
Option 5	\$7.8	1.4%	\$390	7.3%
Option 6	\$9.6	1.8%	\$480	8.2%
Option 7 (~5x Baseline)	\$10.2	1.9%	\$510	8.6%

Decreased Likelihood
of Failure



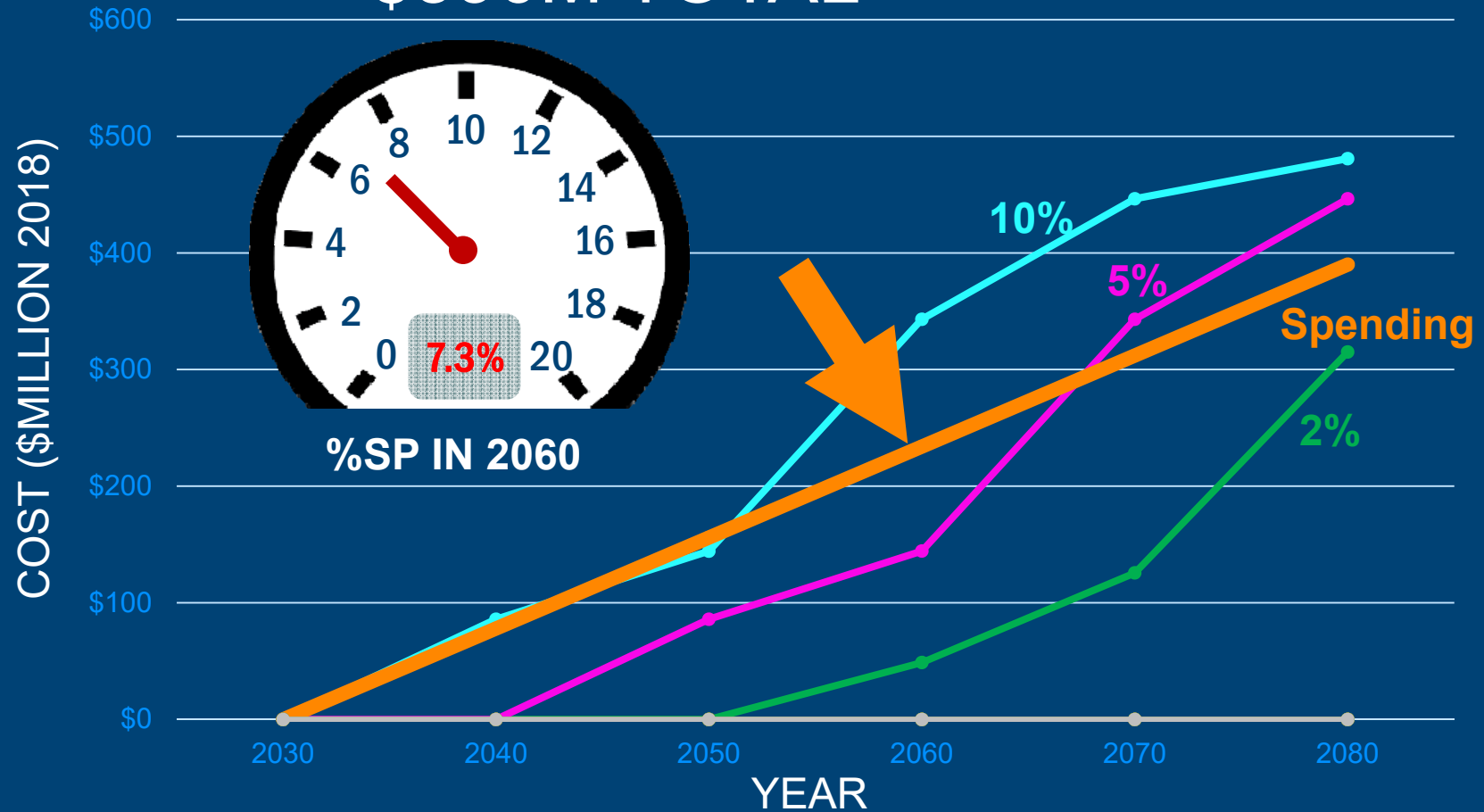
PROJECT 2030 WATER MAIN REPLACEMENT



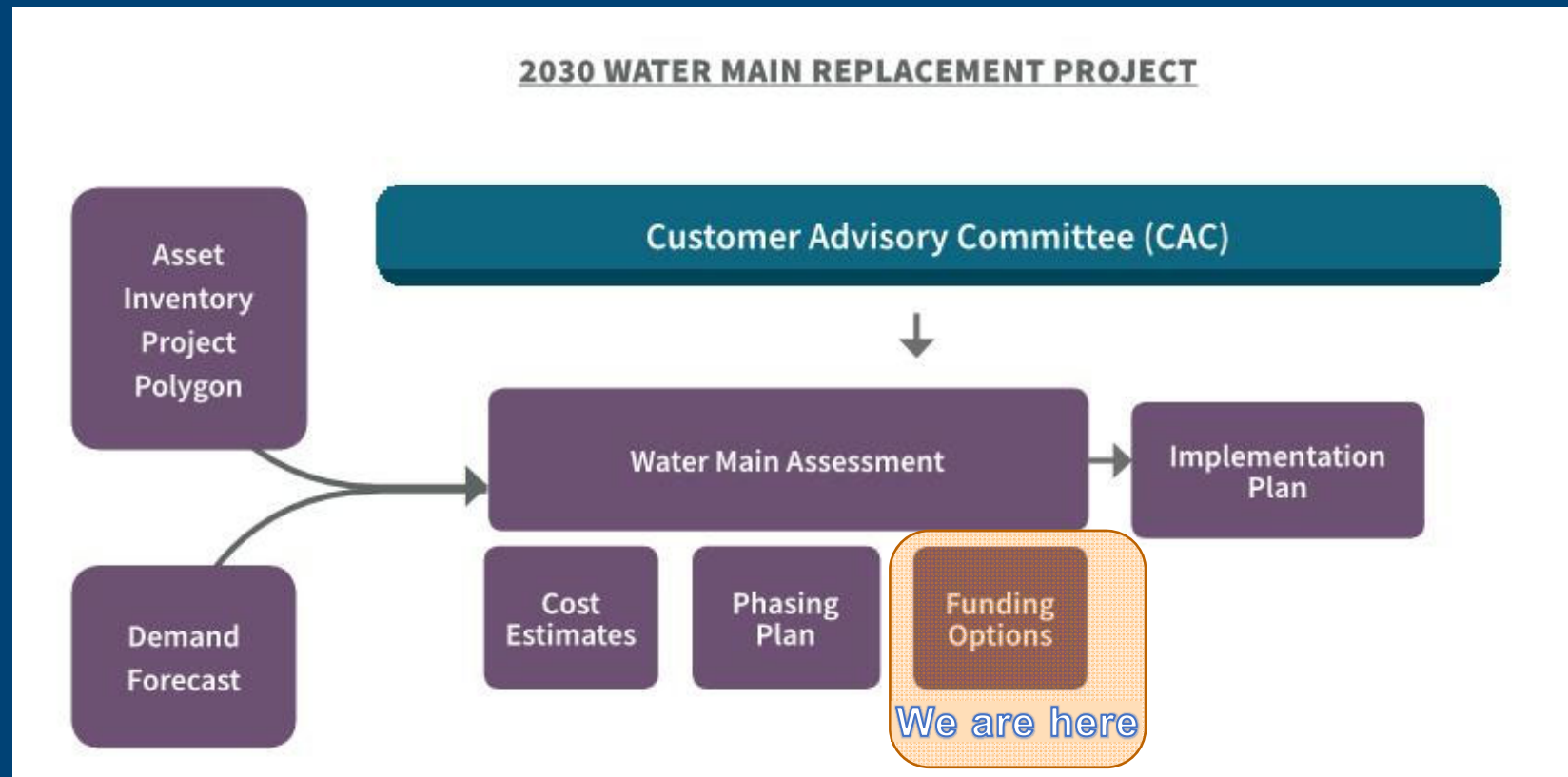
OPTION 5

\$7.8M / 1.4% PER YEAR

\$390M TOTAL



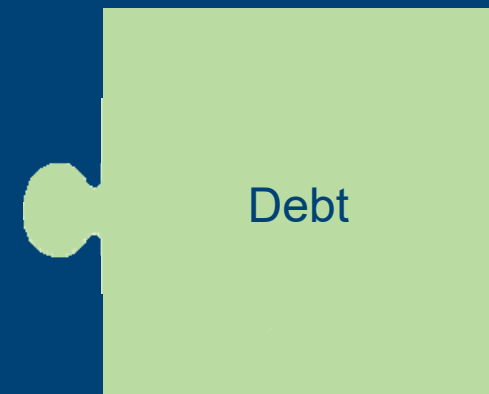
FUNDING OPTIONS



FUNDING



Three Primary Funding Options



Funding Options

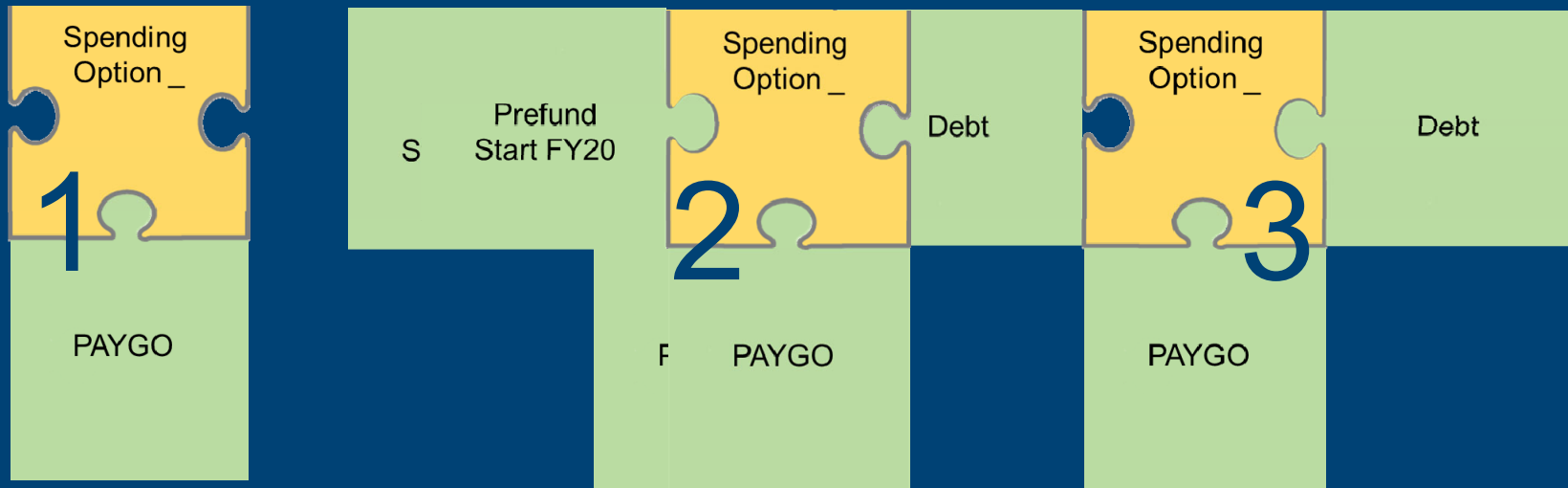
-
- Spending Option _
- PAYGO

```

graph TD
    A[Asset Inventory/Project Polygon] --> D[Water Main Assessment]
    B[Demand Forecast] --> D
    C[Customer Advisory Committee CAG] --> D
    D --> E[Implementation Plan]
    D --- F[Cost Estimates]
    D --- G[Pricing Plan]
    D --- H[Funding Options]
    I[We are here] -.-> H
  
```

FUNDING OPTIONS SCENARIOS

- Funding Variations
 1. No Prefunding; No Debt
 2. Prefunding; No Debt
 3. No Prefunding with Debt
 4. Prefunding with Debt



Funding Options

SPENDING AND FUNDING

Spending	PAYGO	Prefunding	Debt
\$100M; \$2M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$150M; \$3M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$200M; \$4M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$320M; \$6.4M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$390M; \$7.8M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$480M; \$9.6M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
\$510M; \$10.2M / Yr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Generates 21 different spending / funding options





February 26, 2019 Customer Advisory Committee Meeting

Watch





ALTERNATIVES SELECTED FOR FURTHER CONSIDERATION

Alt	Funding Description	Cost 2018\$ (million)	Annual Spending (million)	System Replaced by 2080	Total Votes
4.4	Prefunding, with Debt	\$320	\$6.4	59%	10
5.2	Prefunding, No Debt	\$390	\$7.8	72%	9
5.4	Prefunding, with Debt	\$390	\$7.8	72%	12
6.4	Prefunding, with Debt	\$480	\$9.6	89%	10
7.4	Prefunding, with Debt	\$510	\$10.2	94%	6



SPENDING AND FUNDING

Alternatives	PAYGO	Prefunding	Debt
4.4 \$320M; \$6.4M / Yr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5.2 \$390M; \$7.8M / Yr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.4 \$390M; \$7.8M / Yr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6.4 \$480M; \$9.6M / Yr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7.4 \$510M; \$10.2M / Yr	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- 5 Remaining Alternatives
- All alternatives have prefunding



FOCUSED TABLE DISCUSSION AND VOTING



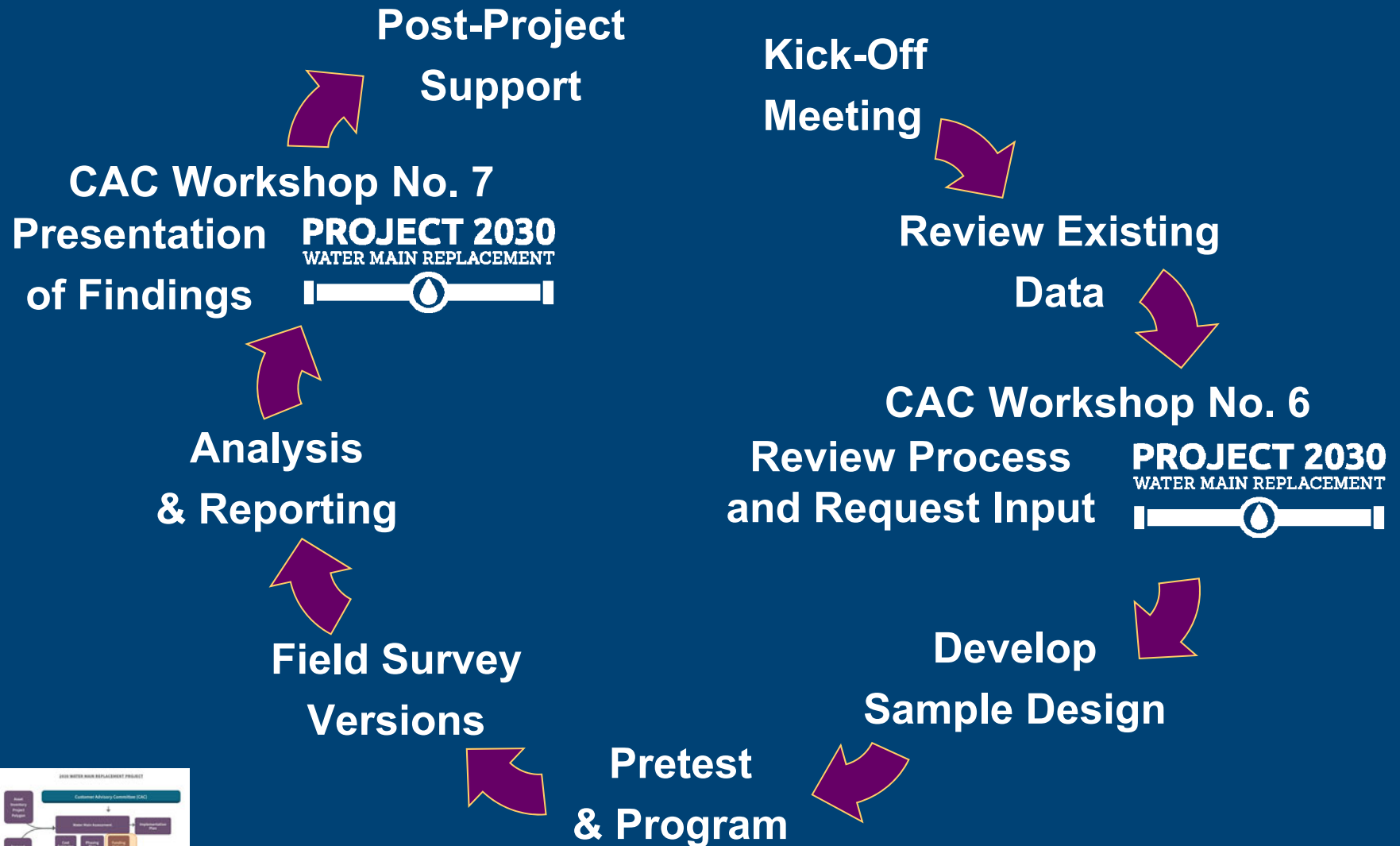


2 ALTERNATIVES SELECTED FOR MARKET RESEARCH

Alt	Funding Description	Cost 2018\$ (million)	Annual Spending (million)	System Replaced by 2080	Total Votes
5.4	Prefunding, with Debt	\$390	\$7.8	72%	11
6.4	Prefunding, with Debt	\$480	\$9.6	89%	8



SURVEY RESEARCH PROCESS





SURVEY SUMMARY & RECOMMENDATIONS

- Base of voter support for a rate/surcharge increase.
- No statistically significant difference between the two options.
- Limited awareness of district among registered voters, although awareness is somewhat higher among the non-voter ratepayer
- Favorability ratios for job performance and management of fiscal resources were good, but again large segments of registered voters do not have any opinion.



VOTING FOR PREFERRED ALTERNATIVE

June 11, 2019 Customer Advisory Committee Meeting



DETERMINE TOP ALTERNATIVE

Alternative	Votes
Alternative 5.4	11
Alternative 6.4	3



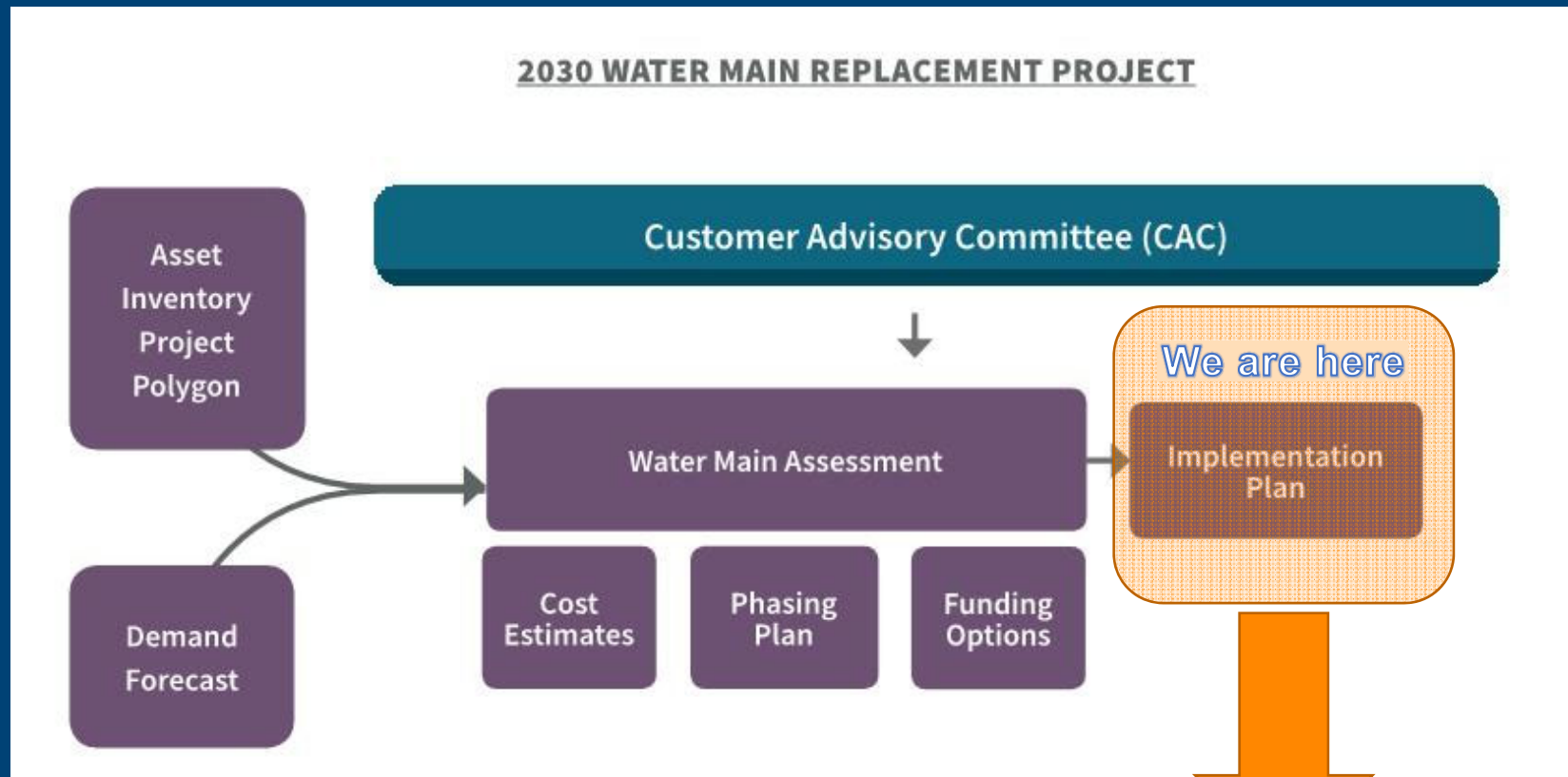
PREFERRED ALTERNATIVE

Alternative 5.4

Funding Description	Cost (2018 \$)	Avg. Annual Spending	Prefunding	Percent Debt	System Replaced by 2080
Prefunding with Debt	\$390 million	\$7.8 million	\$22.5 million	4%	72%



WATER DEMAND FORECAST



NEXT STEPS

- To complete the Project 2030 Study, all technical memos (1 through 7) will be compiled into a final report. Q4 2019
- The public engagement strategy will be completed. Q1 2020
- Detailed funding and expenditure planning, including prefunding. Q1 2020
- Then the full package, along with recommendations from the CAC, will be presented for CHWD Board consideration and possible action



BREAK



METER REPLACEMENT PROGRAM

ACCURACY + EFFICIENCY + TECHNOLOGY



CITY OF
FOLSOM
DISTINCTIVE BY NATURE



TABLE OF CONTENTS

- Background
- Regional Consortium
- Consultant Team
- Project Scope
- Upcoming CAC Meetings/Next Steps

BACKGROUND

- SB 229 (1991): Required meters for new connections
- Central Valley Project Improvement Act (1992/Federal): Required metering of all CHWD connections

BACKGROUND

CHWD residential meter installation program

- (1998 – 2007)

Meter replacement cycle

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

BACKGROUND

- CHWD Strategic Planning Project
- Multi-Agency Advanced Planning Study
- MOU (12 agencies)
- RFP process to select a consultant



CONSULTANT TEAM

Harris & Associates

Isle Utilities

Mason-Smith Success Strategies

Laura Mason-Smith

M.E. Simpson

Raftelis



HARRIS & ASSOCIATES



Eric Vaughan



Ann Hajnosz



Steve Winchester

M.E. Simpson



John
Van Arsdel



Steve Davis



Nicole Kaiser
Isle Utilities



Habib Isaac
Raftelis

CONSORTIUM & CAC

Consortium

CHWD

CAC

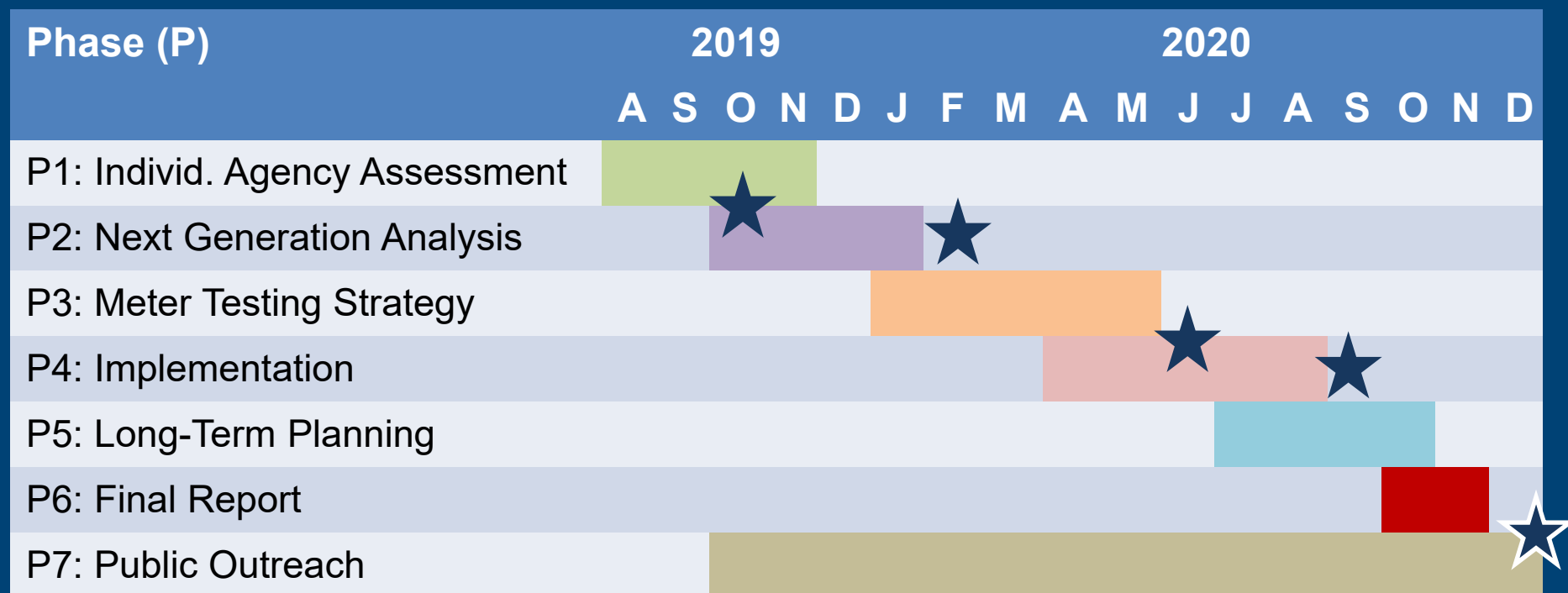


ADVANCED PLANNING STUDY

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

PROJECT SCHEDULE



★ = CAC Meeting

CAC MEETING #1

Wednesday, October 23

- Project orientation
- Current equipment overview **(Phase 1)**
- Consultation on user preferences and new technology options **(Phase 2)**



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

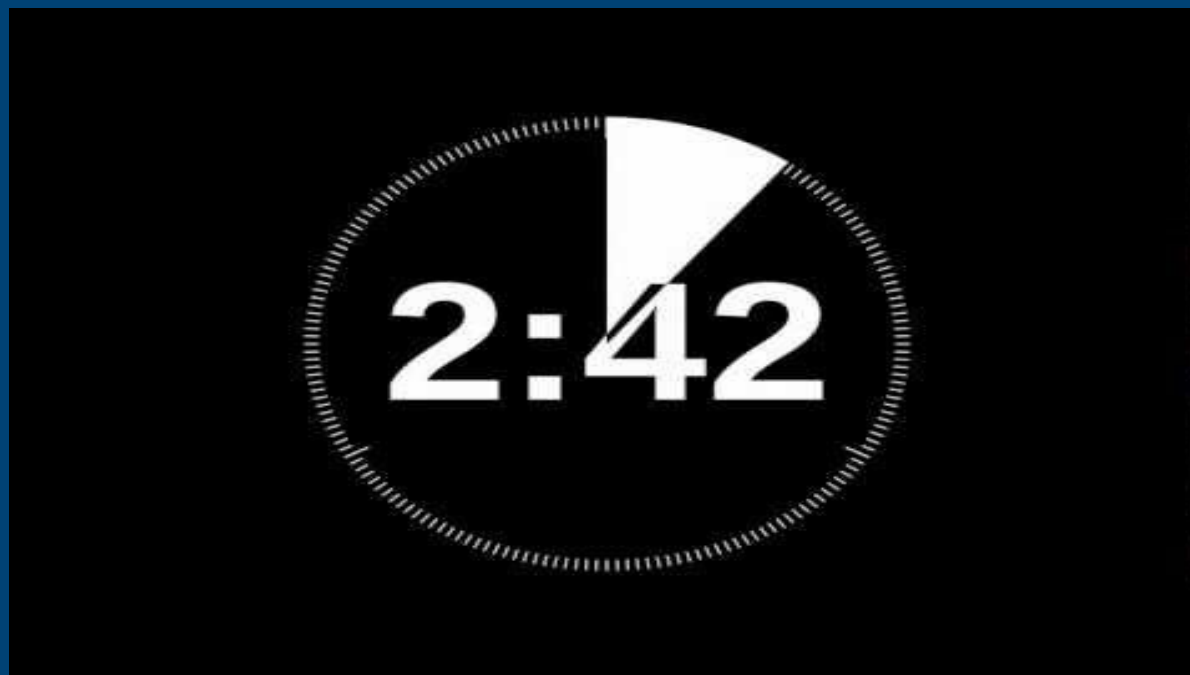
IMPORTANCE OF THE CAC

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



PUBLIC COMMENT

PUBLIC COMMENT



NEXT STEPS

MEETING 1 - METER PROJECT

- **Next Meeting: Wednesday, October 23th, 2019**
 - **Time:** 6:30 pm – 9:15 pm
 - **Location:** Citrus Heights Community Center, Hall A



RETIRING CAC MEMBERS



GROUP PHOTO



VISIT THE CAC WEBPAGE

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



CLOSING