



Rebecca Coletta, President

Mary Waldron, Executive Director

(508) 583-1833

70 School Street, Brockton, MA 02301

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

**Regional Water Plan  
Steering Committee Meeting  
MINUTES OF THE MEETING  
Wednesday, July 31, 2024, 9:00am**

Location: Old Colony Planning Council, 70 School St, Brockton, MA 02301

Attendees:

<b>Steering Committee</b>	
<b>Organization</b>	<b>Name</b>
Town of Abington	Liz Shea
Town of Avon	Jonathan Beder
Town of Bridgewater	Shane O'Brien
East Bridgewater	John Haines
Easton Department of Public Works	Greg Swan
Town of Kingston	Val Massard (via Zoom)
MA Department of Conservation and Recreation	Jason Duff
MassDEP	Duane LeVangie
MassDEP	Jon Hobill (via Zoom)
Pembroke Water Department	Dan Sullivan
OCPC	Joanne Zygmunt
Town of Plympton	Gavin Murphy (via Zoom)
Town of Plympton	Brian Vasa
Town of Plymouth	Kendra Martin
Watershed Associations	Pine duBois
Watershed Associations	Jimmy Powell (via Zoom)
Town of West Bridgewater	Wayne Parks
Whitman	Davis Lemay

<b>Observers</b>	
<b>Organization</b>	<b>Name</b>
OCPC	George
Cape Cod Cranberry Growers' Association	Brian Wick
EPA	Margherita Prior
MA Division of Marine Fisheries	John Sheppard
Jones River Landing and Historical Society	Mark Guidoboni

<b>Consultants</b>	
<b>Organization</b>	<b>Name</b>
CDM Smith	Grace Houghton
CDM Smith	Kirk Westphal
CDM Smith	Amara Regehr
CDM Smith	Grace Inman
CDM Smith	Kara Rozycki (via Zoom)

## **Minutes:**

- 1) Call to Order, introductions
- 2) Public Comment – none
- 3) Demand Projections Review
  - a) Refresher on CDM Smith Demand Projection and Efficiency Standards
    - i) A reminder was provided that climate projections are used in analysis and monthly ranges will be provided to communities in community specific demand memorandums.
    - ii) A reminder was provided that demand decreases over time are not due to active conservation but passive conservation due to changes in state regulation.
- 4) Long Term Local and Regional Alternatives (see handout)
  - i) MWRA water
    - (1) Concern about feasibility for MWRA to service all OCPC communities (i.e West Bridgewater) but worthwhile keeping as an alternative.
  - ii) Water from Aquaria Desalination Plant
    - (1) Discussion of the challenges of operating a desalination plant such as discharge limits and limited pumping during some periods due to fish migration.
    - (2) Meeting participant brought up that Brockton purchasing the plant might be the most cost-effective option because they have higher principal forgiveness.
    - (3) New suggestions included building a new desalination plant or having the State or County purchases existing plant.

(4) Mayor Robert Sullivan of Brockton stopped by the meeting with DPW Commissioner Pat Hill to discuss Brockton's position. Brockton currently does not know what future will be of the Aquaria Desalination Plant but is open and willing to work with all neighboring communities and MassDEP to find the best path forward. Mayor Sullivan mentioned that the previous Mayor had begun negotiations for the City to purchase the plant, but price was raised and discussions stopped.

iii) Interconnections and Inter-Municipal Agreements (IMA)

(1) Meeting participant brought up recommendation that the final report could include or recommend standardized language for IMA contracts.

b) Develop a Regional Plan for Stormwater Recharge

i) Consensus that that stormwater issues were better handled on a local level and not through a regional master plan.

c) Identification and Removal of Migratory Obstacles

d) New Wells

i) All towns except for Plympton and Whitman should be included in this alternative.

ii) Question on whether this alternative should distinguish between new wells and replacement wells?

e) Access to Clean Water for Private Well Owners through connection to Public Water Supply

i) Discussion on increasing number of residents connecting to public supply as private wells become contaminated.

ii) Question on whether the cost of individual PFAS filters would be greater than the cost of connecting to public supply?

5) Short Term Local and Regional Alternatives

a) Local Demand Management Alternatives were inspired by recommendations from Alliance for Water Efficiency.

i) Discussion of customer-side leak detection devices, resources, and education.

ii) MA grant to help fund rate studies: <https://www.mass.gov/info-details/water-management-act-grant-programs-for-public-water-suppliers#statewide-water-management-act-grant->

b) Regional Demand Management Alternatives

i) Discussion of adding bylaws or workforce education to encourage native landscaping.

ii) Private well use restrictions fall under Board of Health jurisdictions.

c) Supply Management Alternatives

i) Plymouth and Hanson asked to be added to new public wells short-term alternative.

d) Environmental Alternatives (see handout)

6) Public Outreach Update

a) Environmental Roundtable in the afternoon 7/31/2024

**Action Items:**

<b>Assigned to</b>	<b>Action Item</b>
Steering Committee members	Complete weighting worksheet on behalf of your community/organization
CDM Smith	Provide communities with demand Projections and Capacity Memo (by municipality)
CDM Smith	Update the list of alternatives to reflect discussion from this workshop

**Attachments:**

1. Meeting Presentation Slides
2. Meeting Handouts

***Prepared by CDM Smith.***

# Old Colony Planning Council Regional Water Plan


Workshop 5  
Economic Resilience and Sustainable Water Supply

Kirk Westphal, Kara Rozycki, Tarun Gill, and Amara Regehr

July 31, 2024

1

## Agenda

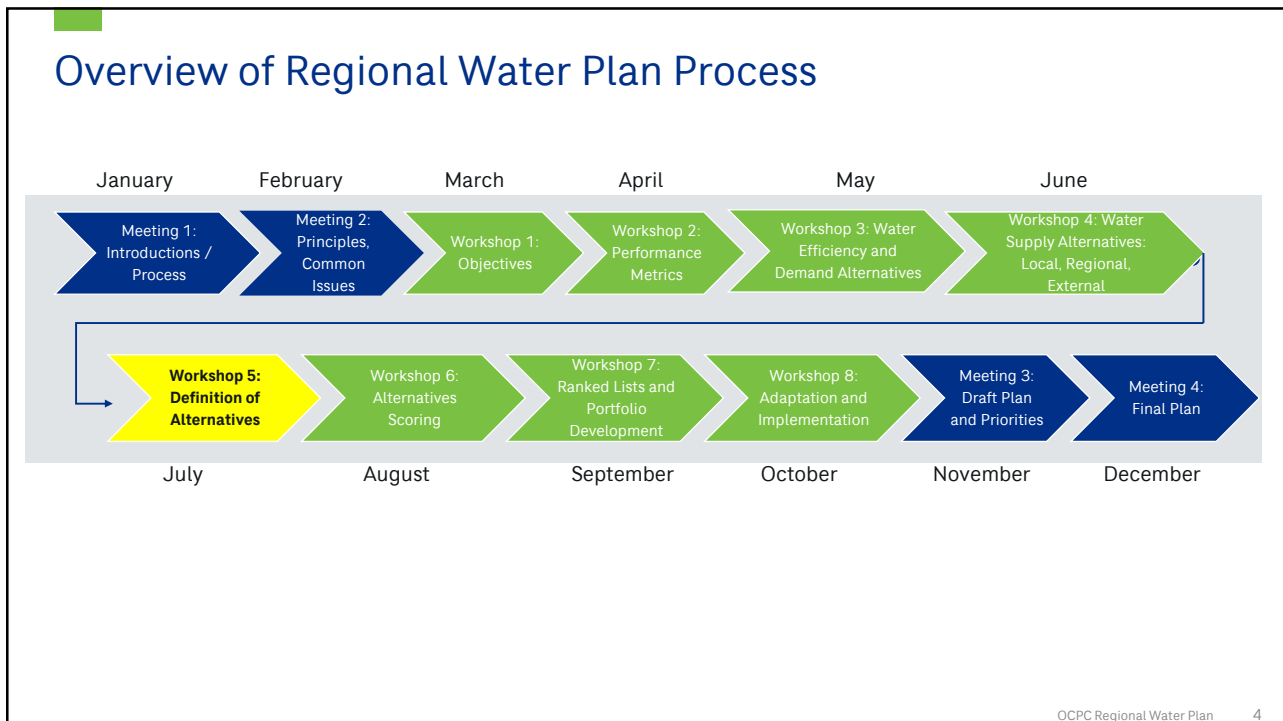
1. Public Comment
2. Demand Projections Review
3. Long Term Local and Regional Alternatives
-  Coffee Break
4. Short Term Local and Regional Alternatives
5. Public Outreach Update

OCPC Regional Water Plan 2

2

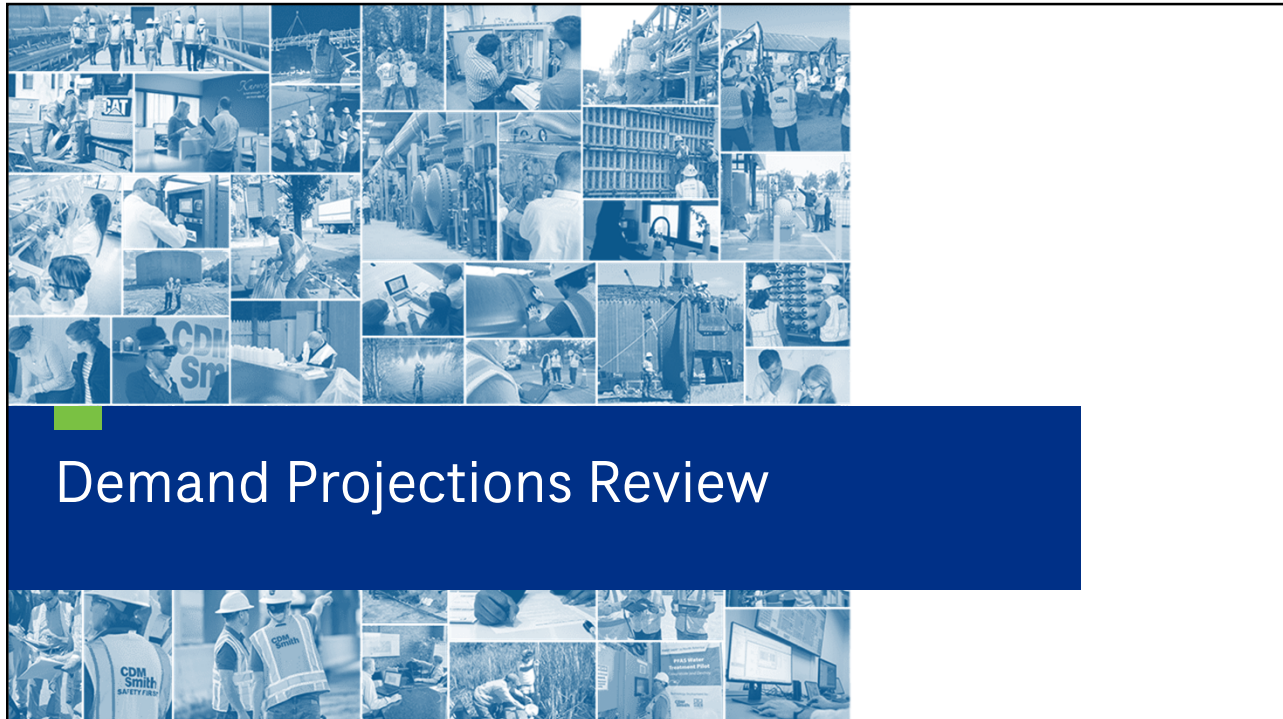


3



4





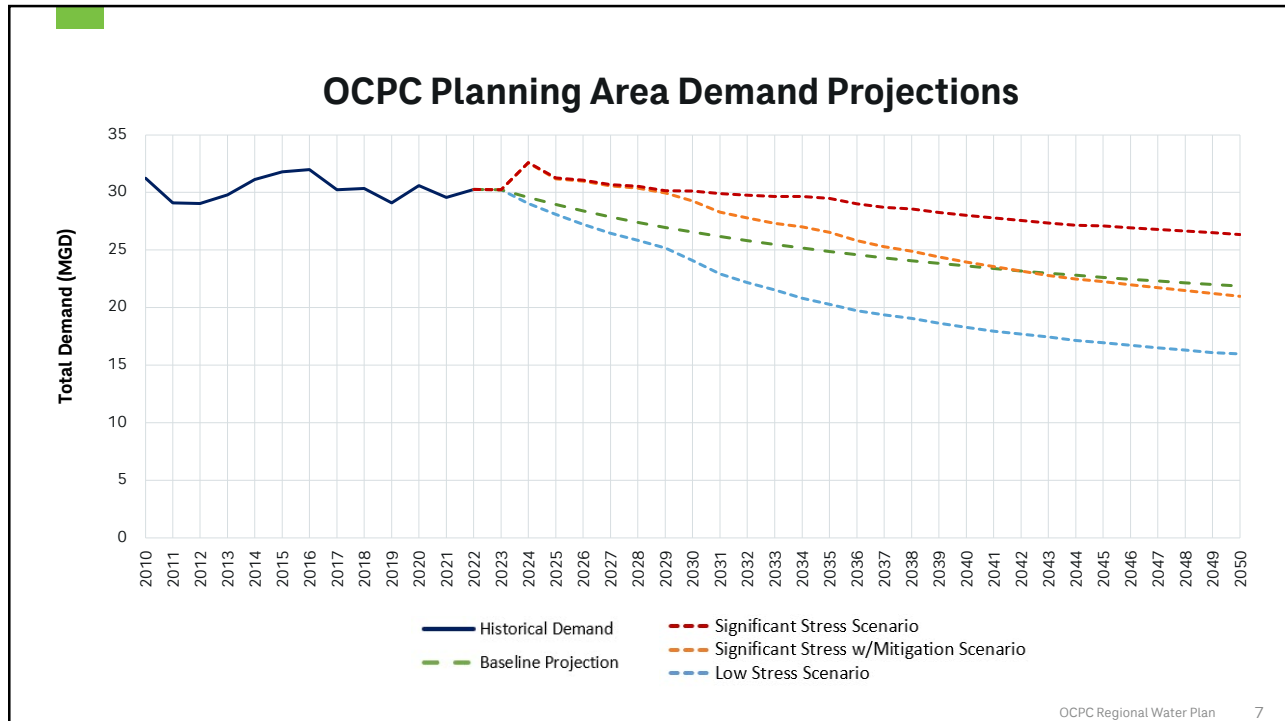
5

### Future Scenarios for Planning

Planning Scenario	Population Growth	Future Climate Change	Water Use Efficiency	Trend in UAW	Private Wells to Public Supply
1. <b>Baseline</b>	Expected	Historical Average	Average increase in efficiency	Historical Average	None
2. <b>Low Stress</b>	Expected	Cool/Wet	Greater than average increase	Decrease	None
3. <b>Significant Stress</b>	10% greater than expected	Hot/Dry	Less than average increase	Increase	100%*
4. <b>Significant Stress with Mitigation</b>	10% greater than expected	Hot/Dry	Greater than average increase	Decrease	100%*

\*100% of private wells from publicly available data. Not a comprehensive list.

6



7

## Indoor Water Use Efficiency Index: Passive Conservation

- **Massachusetts Efficiency Standards**
  - Enacted Jan 1, 2023. Applies to faucets, showerheads, and toilets sold in Massachusetts
  - More stringent than existing Federal standards, results in 22.5% reduction for those end uses
- **Department of Energy (DOE) Standards**
  - Applies to residential clothes washers sold in U.S.
  - Latest standard is approx. 45% more efficient for top loaders and 60% more efficient for front loaders compared to estimated efficiency in 2016\*
- **Flume Water data**
  - Real world water use data for Boston metro area indicates current indoor use of 34 GPCD\*\*
  - OCPC planning area indoor water use is estimated at approx. 46 GPCD, indicating reduction of 12 GPCD (-26%) is obtainable with available fixtures and appliances

\*Based on 2016 Residential End Uses of Water from Water Research Foundation (Project #4309)  
 \*\*Available at: <https://flumewater.com/water-index/>

OCPC Regional Water Plan 8

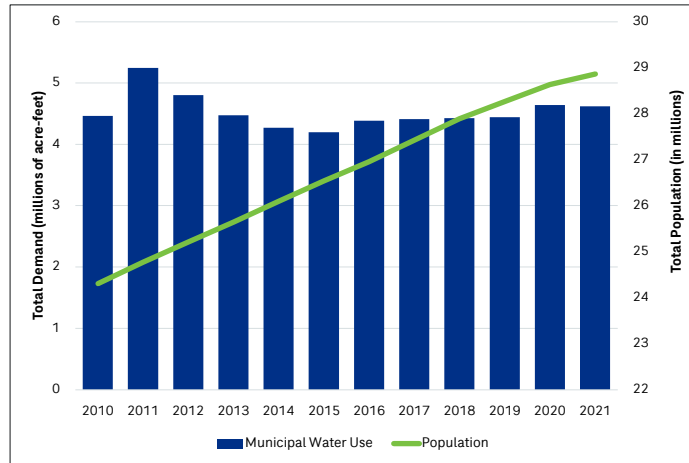
8



## Impact of Passive Conservation on Total Demand

### ■ Example from Texas

- Total municipal use has been **relatively steady** between 2012 and 2021 **despite population increase** of 3.65 million (14.5%)
- **Per capita** demand decreased 16% between 2012 and 2021
- State efficiency standard implemented in **2014** more stringent than Federal standard



Sources: Texas Water Development Board and U.S. Census Bureau

9



## Long Term Local and Regional Alternatives



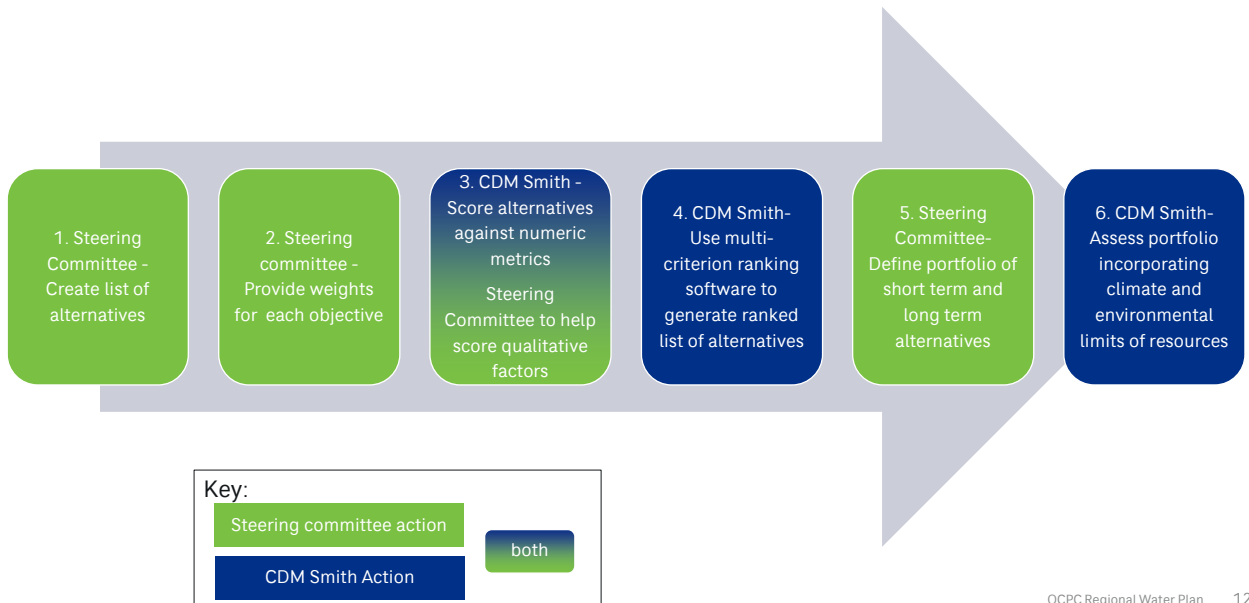
10

## Alternative definition

The potential **actions** that will be evaluated against **metrics**.

11

## Upcoming steps for selection of alternatives



12

## Assessment of Alternatives (Step 3)

### Steering Committee Framework



Reliable  
Municipal Supply



Ecological  
Health



Cost  
effectiveness



Innovation



Fairness



Drinking Water  
Quality



Efficiency and  
Adaptability

13

## Assessment of Alternatives (Step 3)

### Risk Assessment



Provides supply  
redundancy



Reduces climate  
risk



Reduces PFAS risk



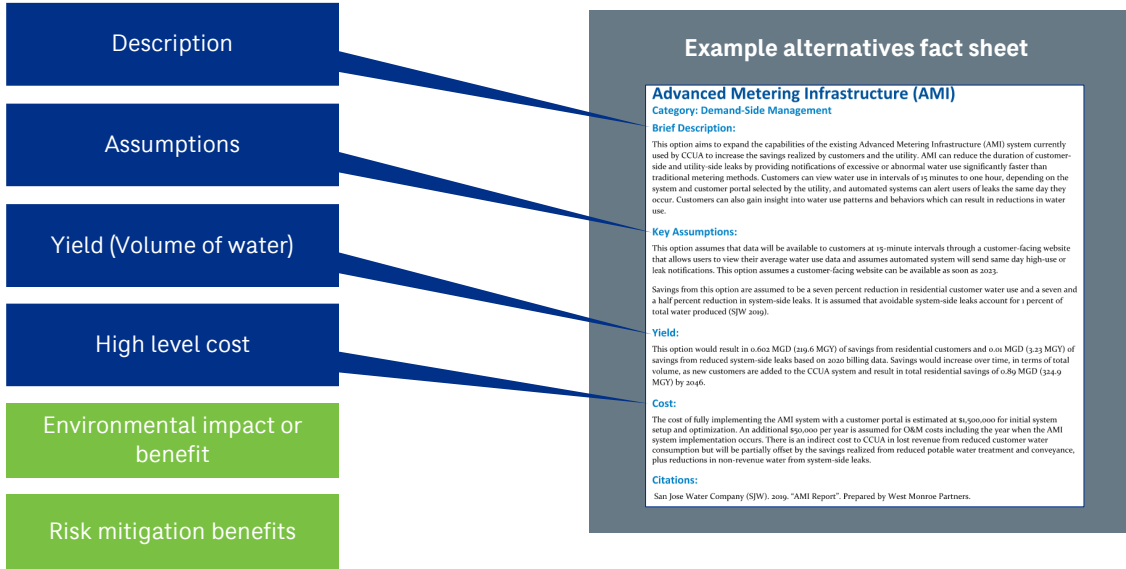
Improves ecological  
health



Provides resilience  
to uncertain growth

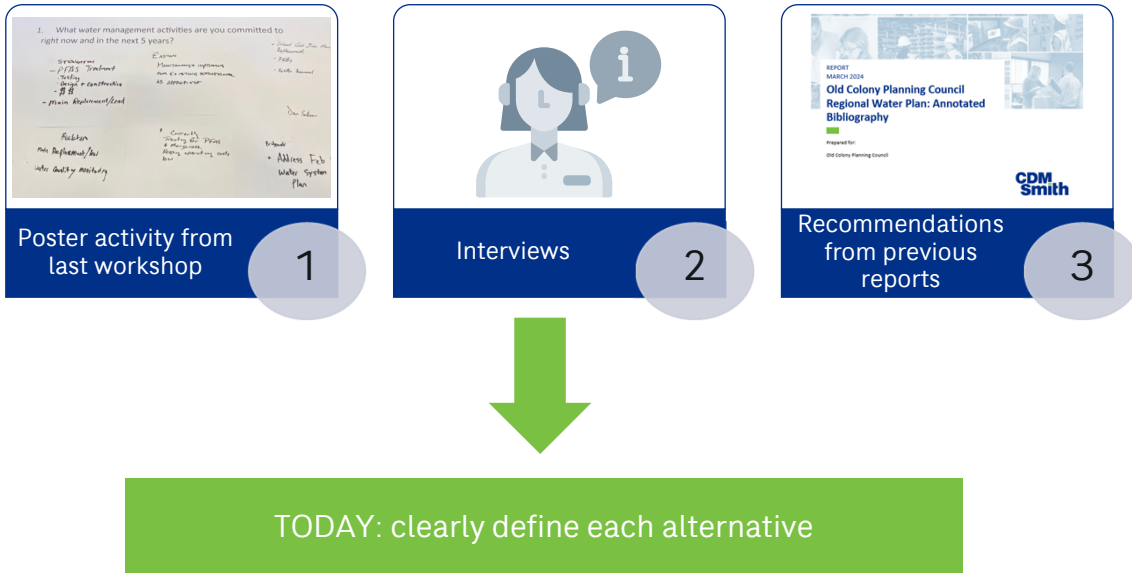
14

## Future Further Development of Alternatives



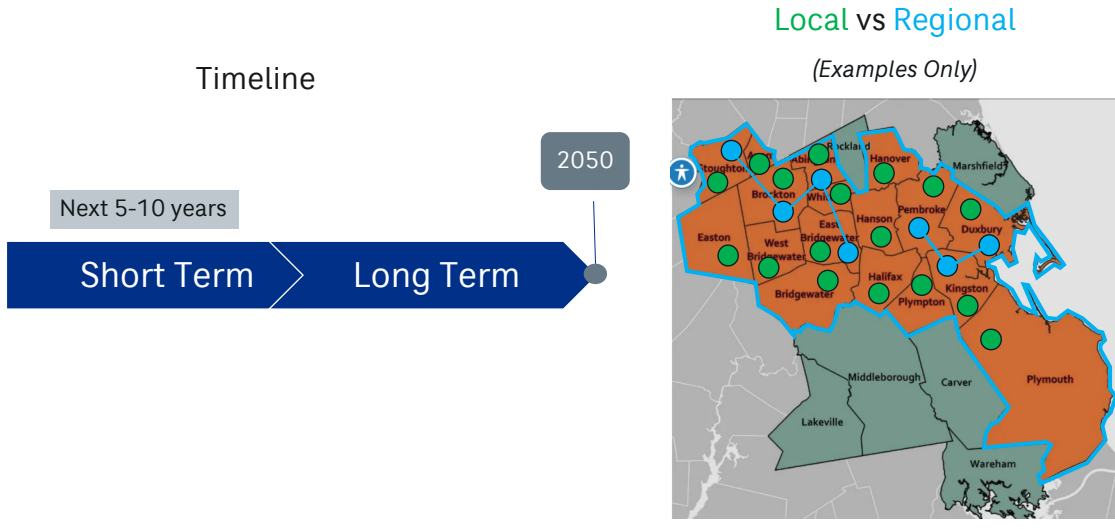
15

## Formulation of alternatives



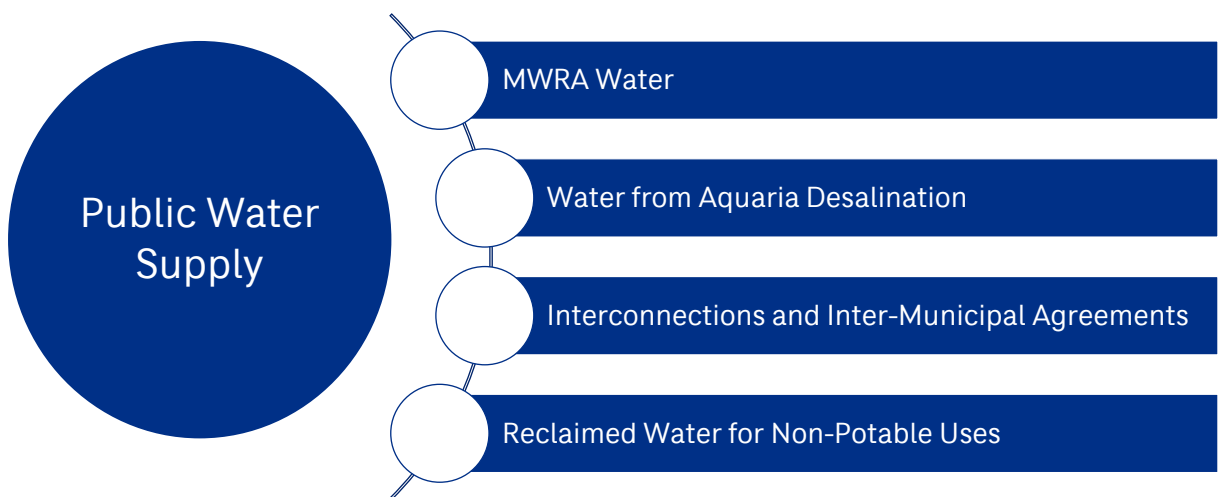
16

### Categorization of alternatives



17

### Long Term Regional Alternatives



18

## Public Water Supply Long Term Regional Alternatives

### MWRA Water

- 1 Entire OCPC Region with Public Water Supply- all but Plympton
- 2 Communities Who Indicated Openness to MWRA- Abington, Avon, Bridgewater, Easton, Pembroke, Plympton, West Bridgewater
- 3 Communities Actively Exploring MWRA Connection- Abington, Avon, Hanover
- 4 Communities neighboring existing MWRA connection (Avon, Easton)

**These are our ideas for MWRA configurations based off of what we have heard, are these the ones that you want to see analyzed?**

19

## Public Water Supply Long Term Regional Alternatives

### Water from Aquaria Desalination

- 1 Brockton purchases plant and provides water to interested communities: Abington, Avon, Bridgewater, Brockton, Easton, West Bridgewater
- 2 Brockton purchases plant and provides water to communities with existing connections: Abington, Avon, East Bridgewater, Halifax, Pembroke, Stoughton, Whitman
- 3 Brockton continues contract with Aquaria and develops cost model with other communities to share water and avoid other capital costs.
- 4 Joint purchase of plant

**These are our ideas for desalination configurations, are these the ones that you want to see analyzed?**

20

## Public Water Supply Long Term Regional Alternatives

- Interconnections and Inter-Municipal Agreements
  - For Abington, Bridgewater, Easton, East Bridgewater, Plympton, Stoughton, West Bridgewater, Avon

OCPC Regional Water Plan 21

21

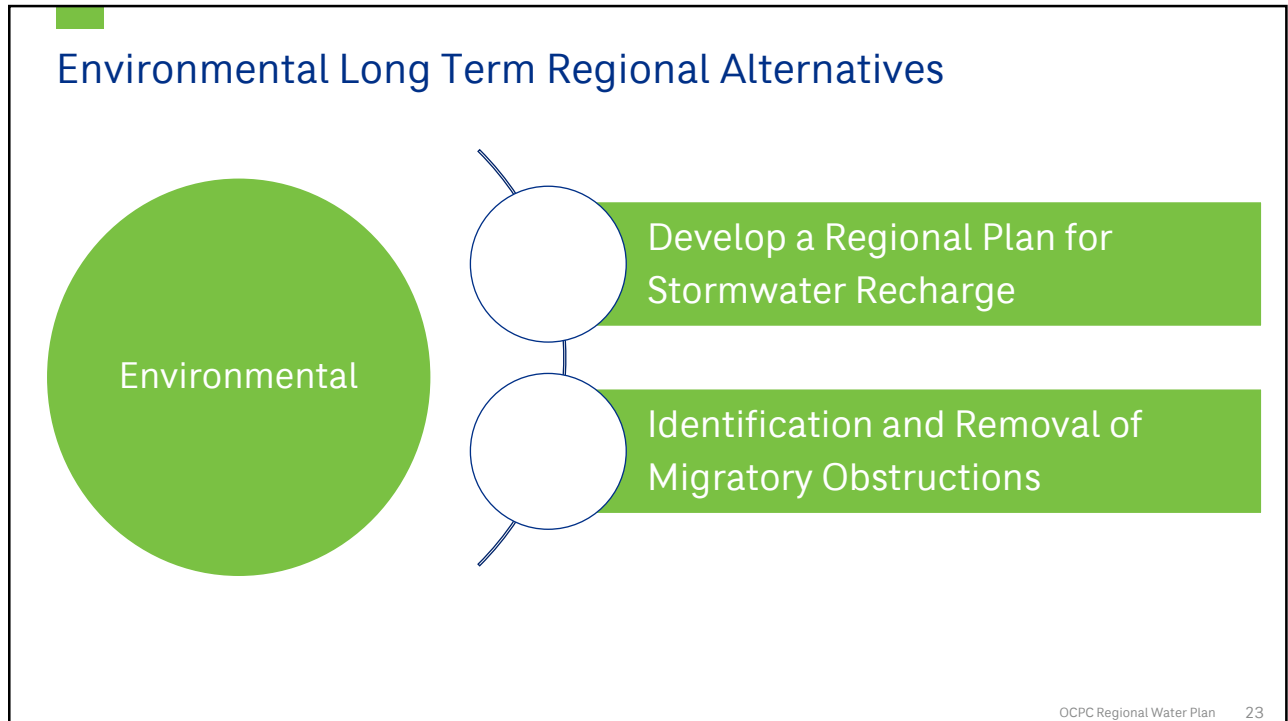
## Public Water Supply Long Term Regional Alternatives

- Reclaimed Water for Non-Potable Uses
  - Bridgewater, Easton, Kingston, West Bridgewater, Agriculture Uses

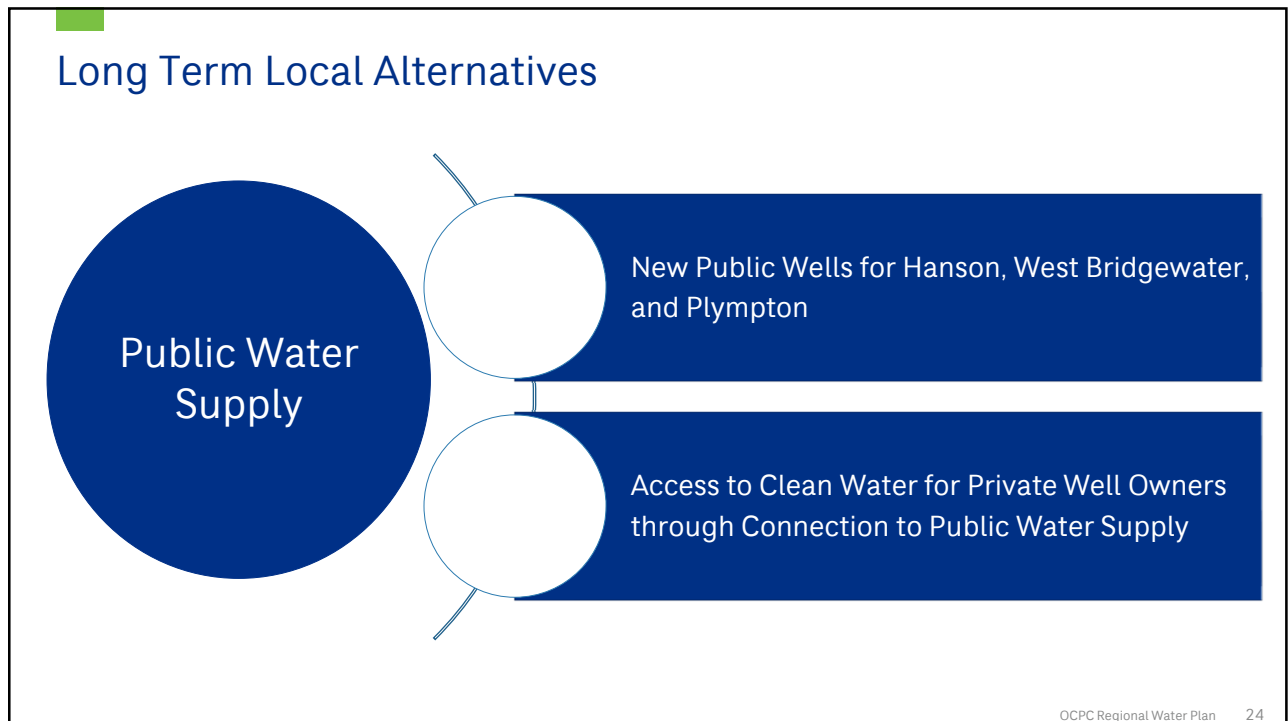
OCPC Regional Water Plan 22

22





23



24



## Coffee Break



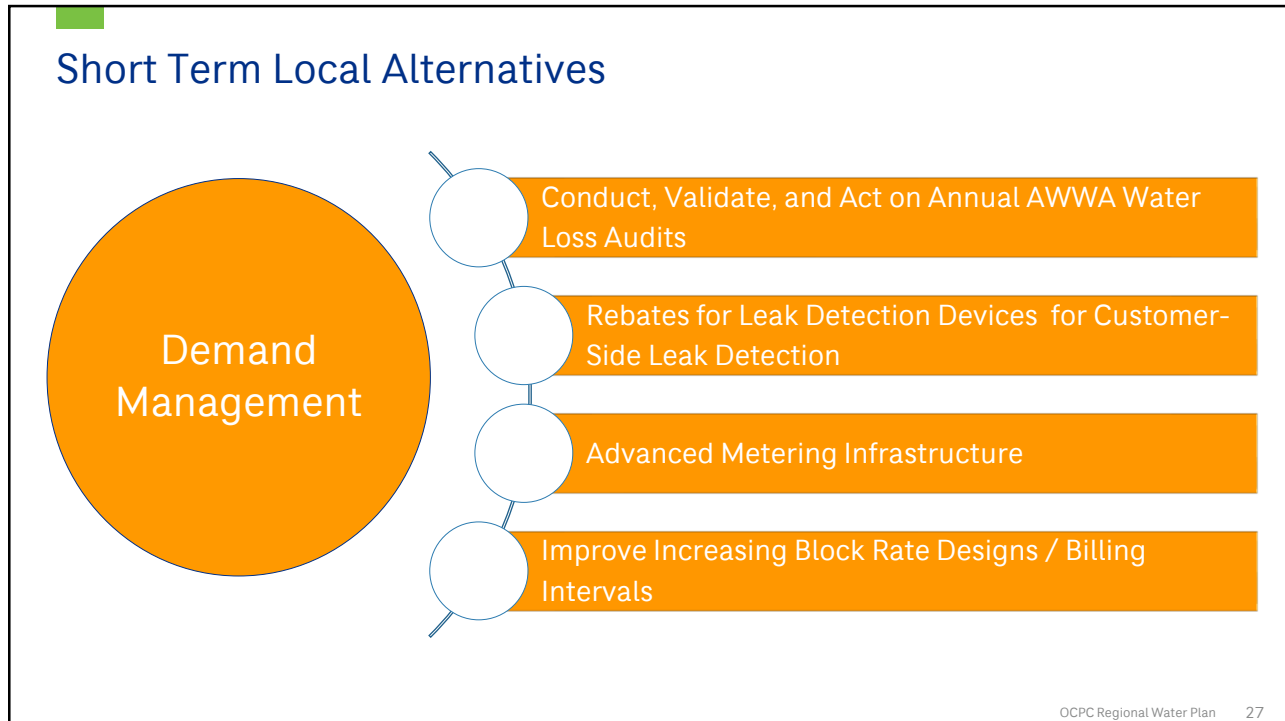
25



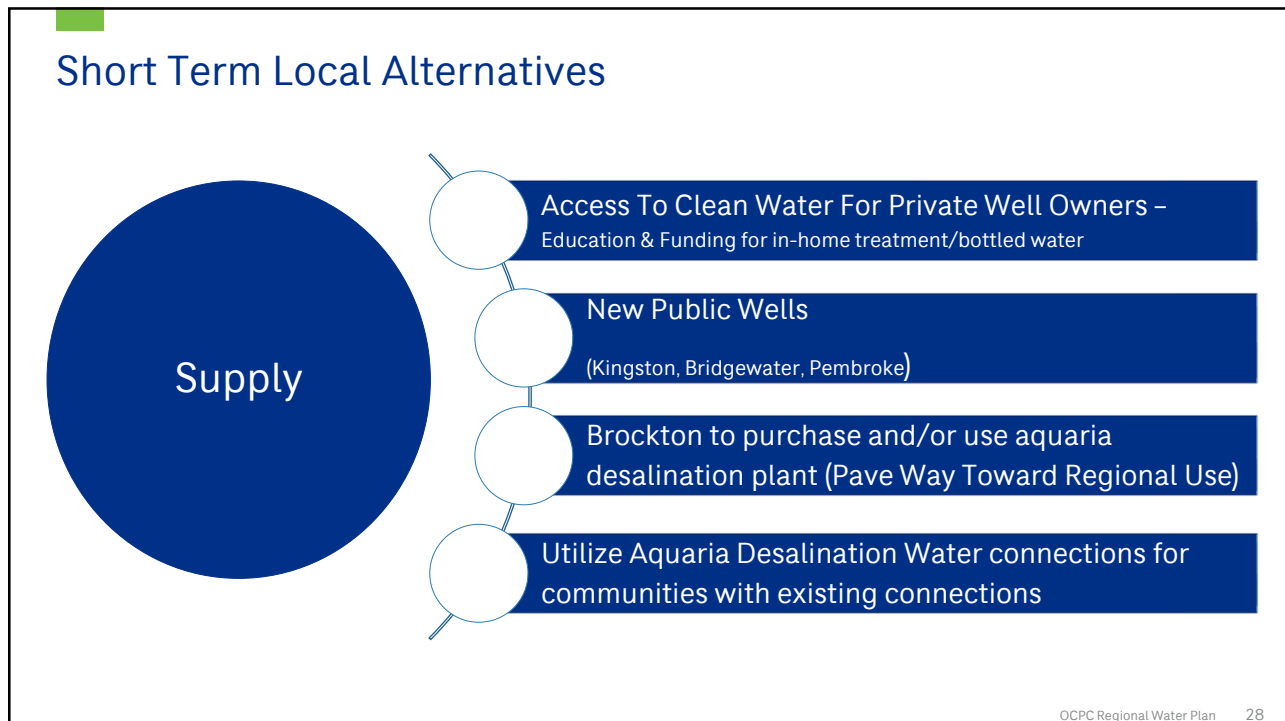
## Short Term Local and Regional Alternatives



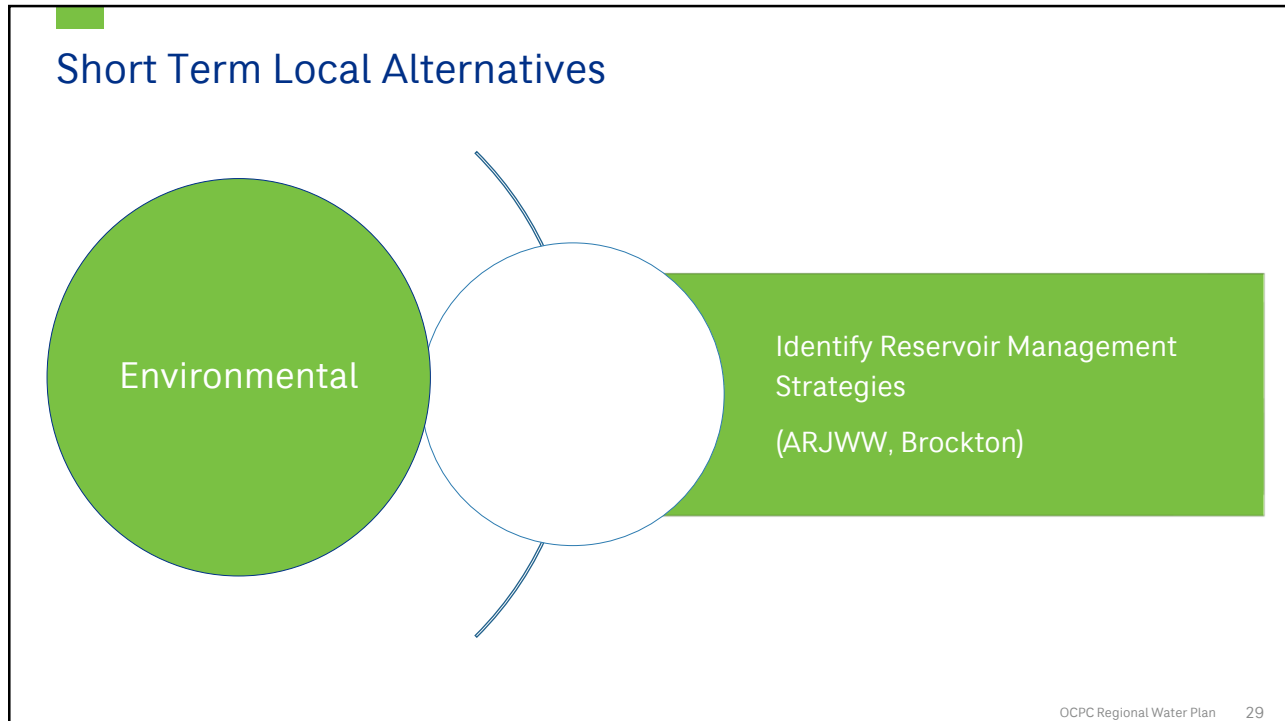
26



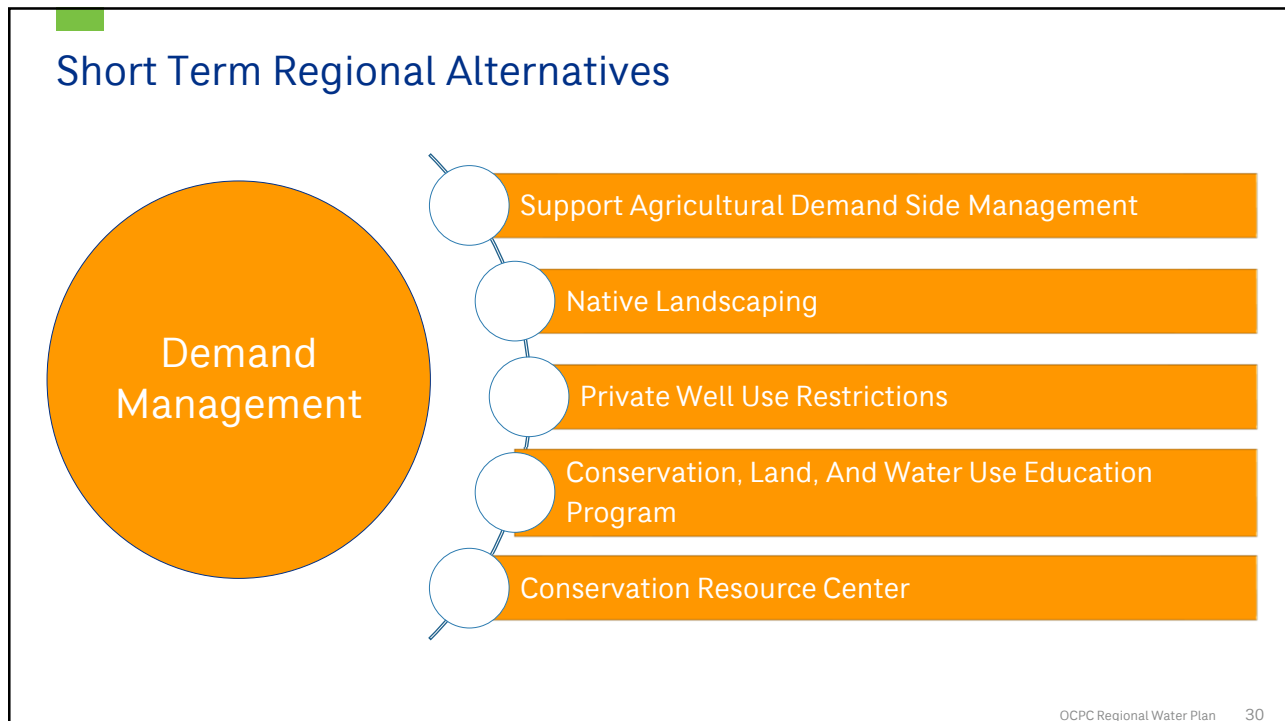
27



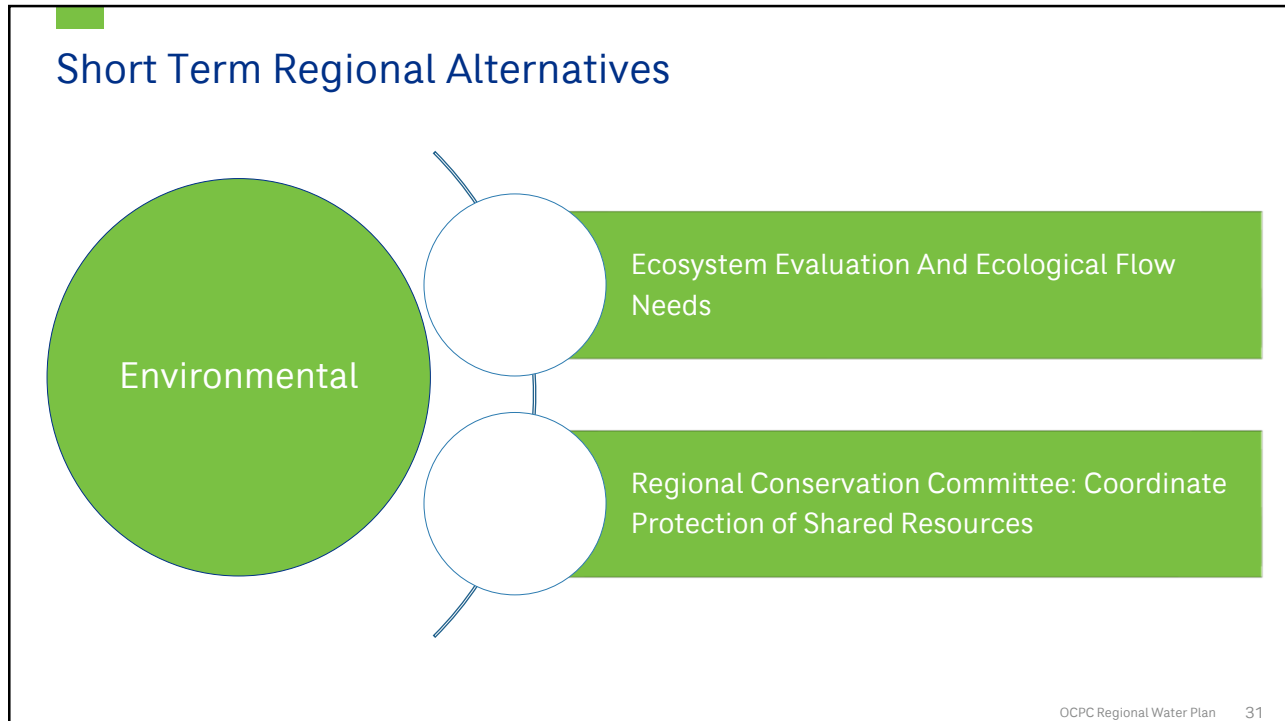
28



29



30



31

- ### Other Recommendations
- Cybersecurity improvements
  - Requirement for diversity/ redundancy of water sources in WMA permits
- OCPC Regional Water Plan 32

32





## Public Outreach Update



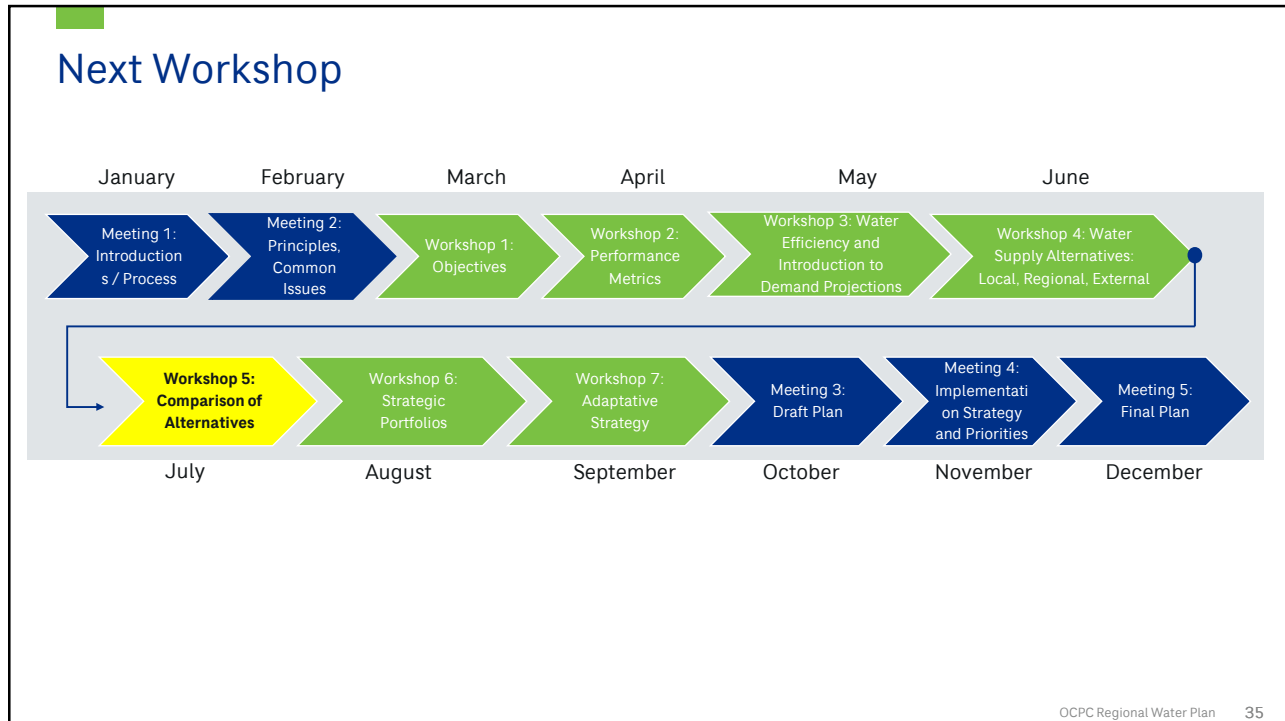
33



## Next Workshop



34



35

### Upcoming Schedule

WHEN	DETAILS
Tuesday, August 27 <sup>th</sup> 9:00 am - 12:00 pm	Workshop 6
Tuesday, September 24 <sup>th</sup> 9:00 am - 12:00 pm	Workshop 7
Tuesday, October 29 <sup>th</sup> 9:00 am - 12:00 pm	Meeting 3
Monday, November 18 <sup>th</sup> 8:00 am - 12:00 pm	Meeting 4
Tuesday, December 10 <sup>th</sup> 8:00 am - 12:00 pm	Meeting 5

OCPC Regional Water Plan 36

36



## Steering Committee Homework

- Scoring objectives and updated metrics
  - Feedback due by 8/7 [rozyckikm@cdmsmith.com](mailto:rozyckikm@cdmsmith.com)
- Demand Projections and Capacity Memo (by municipality)
  - Will be sent via email by end of this week
  - Feedback due by 8/14 [rozyckikm@cdmsmith.com](mailto:rozyckikm@cdmsmith.com)
- Interviews
  - Email Kyle Olsen at RVA ([kolsen@reginavilla.com](mailto:kolsen@reginavilla.com)) if you have not yet scheduled your interview.

37



38

Relevance to Framework	Project Description	Communities/ Stakeholders to whom this could apply	Category	Notes
Long-Term Local Alternatives	Access to Clean Water for Private Well Owners - Connection to Public Water Supply	All	Supply	Kingston currently has a moratorium on new connections
	New Public Wells	Hanson, West Bridgewater, Plympton	Supply	Includes communities not actively pursuing development of new wells but those who have expressed interest in development of new public wells in the long term in previous reports or in interviews.
Long-Term Regional Alternatives	MWRA For Entire OCPC Region with Public Water Supply	Abington, Avon, Bridgewater, Brockton, Duxbury, East Bridgewater, Easton, Halifax, Hanover, Kingston, Pembroke, Plymouth, Stoughton, West Bridgewater, Whitman	Supply	Includes all communities but Plympton.
	MWRA For Communities Who Indicated Openness to MWRA	Abington, Avon, Bridgewater, Easton, Pembroke, Plympton, West Bridgewater	Supply	Includes communities who indicated openness to considering this as a water supply at the last workshop or in interviews.
	MWRA For Communities Actively Exploring MWRA Connection	Abington, Avon, Hanover	Supply	Includes communities who are actively pursuing MWRA connection studies or have previously conducted these studies.
	MWRA for Communities Bordering Existing MWRA Connection (Stoughton)	Avon, Easton	Supply	Avon and Easton border Stoughton which has an existing MWRA connection.
	Aquaria Desalination Under Brockton Ownership For Communities Open To Considering	Abington, Avon, Bridgewater, Brockton, Easton, West Bridgewater	Supply	Includes communities who indicated openness to considering this as a water supply at the last workshop or in interviews.
	Aquaria Desalination Under Brockton Ownership For Communities with Existing Connections	Abington, Avon, Bridgewater, Brockton, Easton, West Bridgewater	Supply	Includes communities with existing connections
	Aquaria Desalination Continues Under Private Ownership with Brockton Supplying Water For Communities Open To Considering	Abington, Avon, Bridgewater, Brockton, Easton, West Bridgewater	Supply	Includes communities who indicated openness to considering this as a water supply at the last workshop or in interviews.
	Aquaria Desalination Under Regional Ownership For Communities Open To Considering	Abington, Avon, Bridgewater, Brockton, Easton, West Bridgewater	Supply	Includes communities who indicated openness to considering this as a water supply at the last workshop or in interviews.
	Expand and/or Rehabilitate Interconnections with Inter-Municipal Agreements	Abington, Plympton, Easton, East Bridgewater, Bridgewater, West Bridgewater, Stoughton	Supply	Includes communities who indicated openness to considering this as an alternative at the last workshop or in interviews.

Relevance to Framework	Project Description	Communities/ Stakeholders to whom this could apply	Category	Notes
Long-Term Regional Alternatives	Reclaimed Water for Non-Potable Uses	Bridgewater, Easton, Kingston, West Bridgewater, Agriculture Uses	Demand	Includes communities who indicated openness to considering reclaimed water for non-potable uses at the last workshop.
	Develop a Regional Plan for Stormwater Recharge	All	Demand, Environmental	Particular benefit for communities who are reliant on groundwater for public water supply:
	Identification and Removal of Migratory Obstructions	Jones River Watershed Association and Taunton River Watershed Association	Environmental	Previous studies have been completed for removal of forges dam in the Jones River watershed. These will be used to help develop alternatives.
	Redundant Water Supply For Agriculture	Agricultural users	Supply	Provide additional water to agriculture users during periods of drought to support resilient farms. This could be through drilling new wells or connection to public water supply.
	Regional PFAS Treatment	All but Plympton	Supply	Includes all communities but Plympton.
Short Term Local Alternatives	Conduct, Validate, and Act on Annual AWWA Water Loss Audits	All	Demand , Maintenance	One regional action that may be included in the final report related to this would be securing funding for a regional training for conducting AWWA water loss audits.
	Rebates for Leak Detection Devices for Customer-Side Leak Detection	All	Demand	More details on detection devices are included in Alliance for Water Efficiency's memorandum titled <i>Recommendations for Water Efficiency in the Old Colony Planning Council's Region</i> . Examples of products include Droplet by Hydrific, Flume, and Flo by Moen.
	Advanced Metering Infrastructure	All	Demand	More information for demand management strategies that can be implemented following AMI, including customer facing portals and leak notification programs, is included in the Alliance for Water Efficiency memorandum on water conservation in the OCPC region.
	Improve Increasing Block Rate Designs	Abington, East Bridgewater, Halifax, Whitman	Demand	Kingston is currently working internally on updating block rates.
	Access To Clean Water For Private Well Owners - Education and Funding Assistance	All	Supply	Towns, potentially through Boards of Health, provide support for private well owners to understand the need for point source treatment and potentially provide information on existing grants for financial assistance to implement treatment.

Relevance to Framework	Project Description	Communities/ Stakeholders to whom this could apply	Category	Notes
Short-Term Local Alternatives	Identify Reservoir Management Strategies	Abington, Brockton	Supply, Environmental	This alternative includes communities in OCPC region that have a reservoir.  This alternative would have to be considered depending on the additional water supply alternatives.
	New Public Wells	Bridgewater, Pembroke, Kingston	Supply	Includes communities actively pursuing development of new wells. New wells expected online within next 5-10 years.
	Brockton to purchase and/or use aquaria desalination plant (Pave Way Toward Regional Use)	Brockton	Supply	Local alternative to pave way for regional use.
	Utilize Aquaria Desalination Water connections for communities with existing connections	Abington, Brockton	Supply	Abington and Brockton have existing connections to desalination plant.
Short-Term Regional Alternatives	Support Agricultural Demand Side Management (research grants)	Agricultural users	Demand	Identify practices and potential funding support for agricultural demand side management practices.
	Ecosystem Evaluation And Ecological Flow Needs	All	Environmental	Goal of establishing minimum flow needs for healthy streams and wetlands. Could focus on site-specific ecology for a water bodie(s) of interest in region.
	Native Landscaping	All	Demand	More use of native landscaping, with need for workforce development with landscapers
	Private Well Use Restrictions	Most	Demand	Limit private well irrigation during droughts. Could be through a mandate from Boards of Health.

Relevance to Framework	Project Description	Communities/ Stakeholders to whom this could apply	Category	Notes
Short-Term Regional Alternatives	Conservation, Land, And Water Use Education Program	All	Demand	Programs for public education
	Regional Conservation Committee: Coordinate Protection of Shared Resources	All	Environmental	
	Conservation Resource Center	All	Demand	Resource center to reduce consumption. Should this be geared towards public utilities.
	Cybersecurity Improvements	All	Maintenance	Could be regional training or resource center