



WATER FORWARD
INTEGRATED WATER RESOURCE PLAN

Austin Integrated Water Resource Planning Community Task Force

Packet Index

September 12, 2017

<u>Item</u>	<u>Page</u>
Agenda	2
Minutes	5
Presentation	7
Public Outreach Summary – Summer Series and Public Workshop #4	31



Austin Integrated Water Resource Planning Community Task Force
September 12, 2017 – 6:00 p.m.
Waller Creek Center, Room 104
625 East 10th Street
Austin, Texas 78701

For more information go to:
[Austin Integrated Water Resource Planning Community Task Force](#)

AGENDA

Voting Members:

Sharlene Leurig - Chair	Marianne Dwight	Sarah Richards
Jennifer Walker – Vice Chair	Diane Kennedy	Lauren Ross
Todd Bartee	Perry Lorenz	Robert Mace
Clint Dawson	Bill Moriarty	

Ex Officio Non-Voting Members:

Austin Water: Greg Meszaros
Austin Energy: Kathleen Garrett
Austin Resource Recovery: Sam Angoori
Neighborhood Housing and Community Development: Rebecca Giello
Office of Innovation: Kerry O'Connor
Office of Sustainability: Lucia Athens
Parks and Recreation: Sara Hensley
Watershed Protection: Mike Personett

1. CALL TO ORDER – September 12, 2017, 6:00 p.m.

2. CITIZEN COMMUNICATION

The first 10 speakers signed up prior to the meeting being called to order will each be allowed a three-minute allotment to address their concerns regarding items not posted on the agenda.

3. APPROVAL OF MEETING MINUTES

- a. Approval of the meeting minutes from the August 1, 2017 Task Force meeting (5 minutes)

4. STAFF BRIEFINGS, PRESENTATIONS, AND OR REPORTS

- a. Preliminary Portfolio Themes Discussion - City Staff and Consultant Team (30 minutes)
 - i. Task Force Discussion and Input
- b. Conceptual Portfolio Development Process - City Staff and Consultant Team (30 minutes)
 - i. Task Force Discussion and Input
- c. Preliminary Subobjectives Performance Metrics and Revised Weighting Discussion - City Staff and Consultant Team (30 minutes)
 - i. Task Force Discussion and Input

5. SUBCOMMITTEE REPORTS

6. VOTING ITEMS FROM TASK FORCE

7. FUTURE AGENDA ITEMS

8. ADJOURN

Note: Agenda item sequence and time durations noted above are subject to change.

The City of Austin is committed to compliance with the American with Disabilities Act. Reasonable modifications and equal access to communications will be provided upon request. Meeting locations are planned with wheelchair access. If requiring Sign Language Interpreters or alternative formats, please give notice at least 2 days (48 hours) before the meeting date. Please call Austin Integrated Water Resource Planning Community Task Force, at 512-972-0194, for additional information; TTY users route through Relay Texas at 711.

For more information on the Austin Integrated Water Resource Planning Community Task Force, please contact Marisa Flores Gonzalez at 512-972-0194.

MINUTES



The *Austin Integrated Water Resource Planning Community Task Force* convened in a Special Called Meeting on July 11, 2017 at Waller Creek Center, Conference Rm 104, 625 E 10th Street, in Austin, Texas.

Members in Attendance:

Sharlene Leurig - Chair	Diane Kennedy	Sarah Richards
Jennifer Walker – Vice Chair	Robert Mace	Todd Bartee
William Moriarty	Clint Dawson	

Ex-Officio Members in Attendance:

Greg Mezaros, Kathleen Garrett, Mike Kelly (standing in for Mike Personett)

Staff in Attendance:

Daryl Slusher, Kevin Critendon, Teresa Lutes, Marisa Flores Gonzalez, Joe Smith, Ginny Guerrero, Mark Jordan, Shannon Halley, Drema Gross, Rick Coronado

Additional Attendees:

Ryan Brotchie, Kate Williams, Tina Petersen, Chris Kurtz, Peter Mayer, Erik Andersen, Gian Villarreal, Ron Anderson, Rebecca Batchelor, Katelyn Boisvert

1. CALL TO ORDER

Sharlene Leurig, Chair, called the meeting to order at 4:12 p.m.

2. CITIZEN COMMUNICATION: GENERAL

None

3. APPROVAL OF MEETING MINUTES

The meeting minutes from the July 11, 2017 Austin Integrated Water Resource Planning Community Task Force regular meeting were approved on Member Mace’s motion and Member Kennedy’s second on an 8-0-0-3 vote with Members Dwight, Lorenz, and Ross absent.

4. STAFF BRIEFINGS, PRESENTATIONS, AND/OR REPORTS

- a. Presentation on demand management options characterization was provided by Peter Mayer, Water DM and Ryan Brotchie and Kate Williams, GHD. This presentation was followed by a Task Force discussion including questions and answers.
- b. Presentation on supply options characterization was provided by Chris Kurtz and Tina Petersen, CDM Smith. This presentation was followed by a Task Force discussion including questions and answers.

5. SUBCOMMITTEE REPORTS

None

6. VOTING ITEMS FROM TASK FORCE

None

7. FUTURE AGENDA ITEMS

None

Chair Leurig adjourned the meeting at 6:20 pm.

PRESENTATION



Water Forward Austin's Integrated Water Resources Plan Task Force Meeting

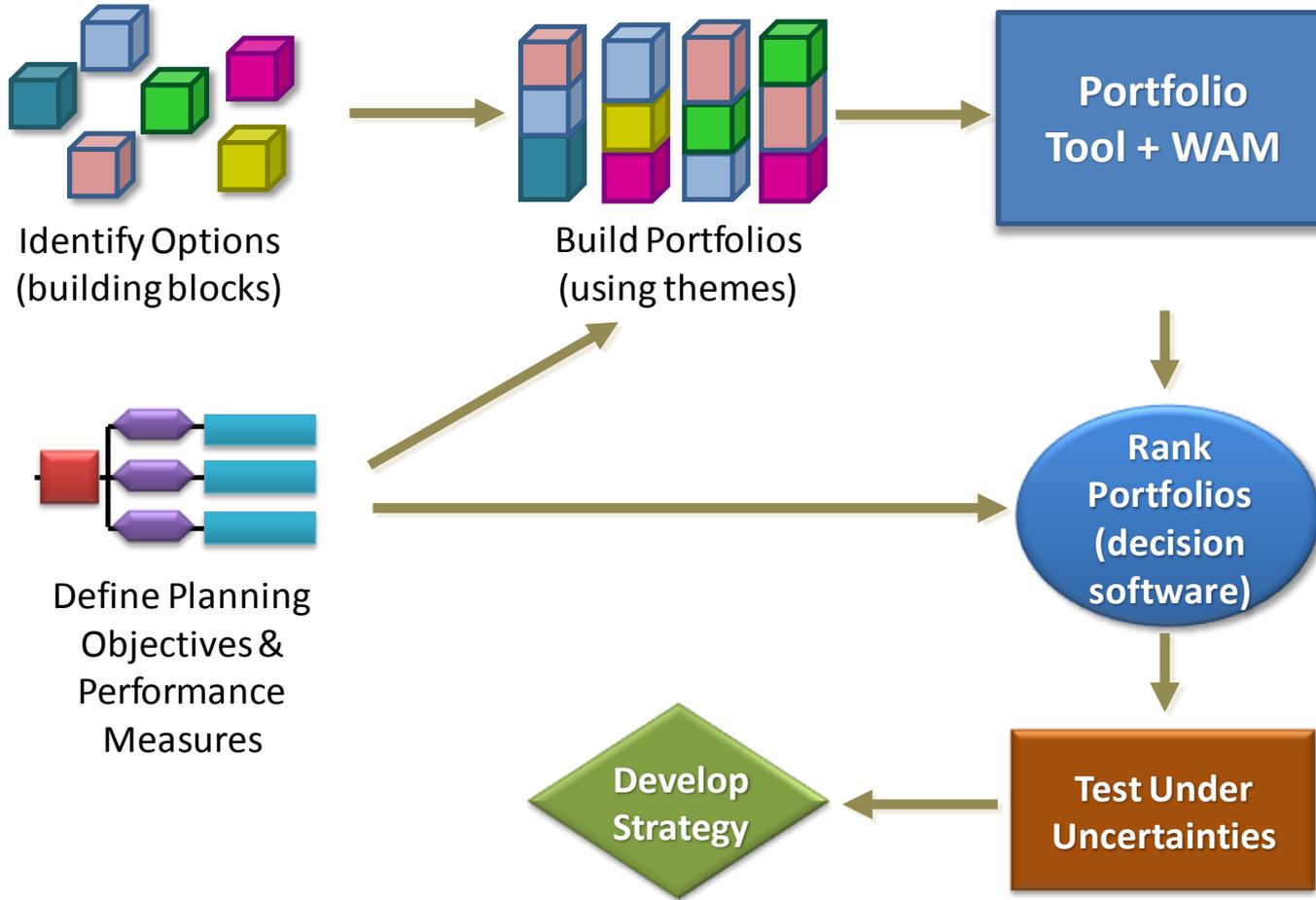
September 12, 2017

Conceptual Portfolio Development Process and Themes

Task Force Meeting Timeline

- September 12th TF meeting
 - Conceptual Portfolio Development Process
 - Sub-objectives Performance Measures and Weighting
 - Preliminary Portfolio Themes Discussion
- October 12th TF meeting (proposed date)
 - Initial Portfolio Themes and Composition
- November 7th TF meeting
 - Initial Portfolio Scoring
- December 5th TF meeting
 - Public Input Report Out
 - Continued Discussion of Initial Portfolio Scoring
- February 6th TF meeting (subject to change)
 - Draft Hybrid Portfolio Scoring
- March 6th TF meeting (subject to change)
 - Draft Plan Recommendations

Building Integrated Portfolios



Operationalizing Water Needs Assessment

- Required before Portfolios can be assembled
- Based on several supply shortage types:
 - 1) Managing Risk Associated with Drought Conditions Triggering Prolonged Prohibition on Outdoor Water Use (COA DCP Stage 4) – as remaining in this emergency situation for a prolonged period could put undo hardship on water customers, quality of life, and economy
[this can be a combination of demand-side management and supply options]
 - 2) Managing Risk Associated with Extremely Low Highland Lake Levels - Mitigating for when combined Highland Lake levels are extremely low due to prolonged droughts, which coupled with little to no run of river supply means AW could have no “wet water”
[this would need to be new water that can be introduced into AW’s water supply system that could readily meet potable water demands]
 - 3) Managing Risk Associated with Needs Above the Current LCRA Contract - Addressing water demands that exceed current LCRA contract of 325,000 acre-feet per year (AFY) [this can be either demand-side management and supply-side options]

Modeling for Refined Needs Assessment

- Based on WAM modeling results
- Run for two scenarios, both with climate change (using ensemble of CMIP5 RC8.5:
 - 1) Period of Record (using 1940 to 2015)
 - 2) Drought Worse Than The Drought of Record (re-sequenced hydrology with 10,000 simulations)
- The storage in Highland Lakes is used to trigger and estimate the amount of supply need for **Type 1** shortage (storage at 450,000 and below); and **Type 2** shortage (storage below 450,000)

Needs For Building Initial Portfolios

Summary Table

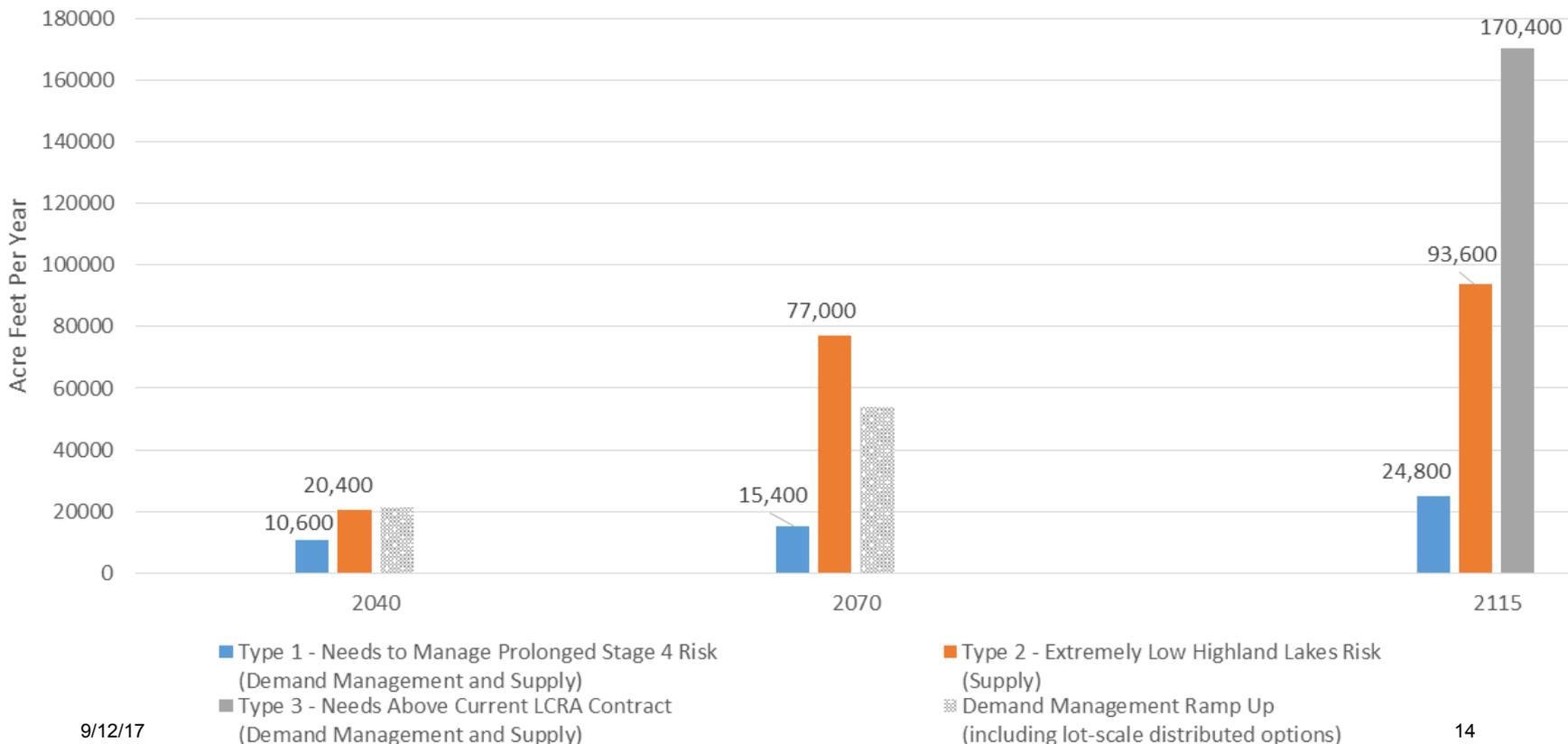
Although the POR scenario shows no supply need, the DWDOR scenario shows needs in 2020 that could be used to develop 2020 portfolios.

	2020	2040	2070	2115
Type 1 - Needs to Manage Prolonged Stage 4 Risk (Demand Management and Supply)	0	10,600	15,400	24,800
Type 2 - Extremely Low Highland Lakes Risk (Supply)	0	20,400	77,000	93,600
Type 3 - Needs Above Current LCRA Contract (Demand Management and Supply)	TBD	TBD	TBD	170,400
Total Water Needs	0	31,000	92,400	288,800

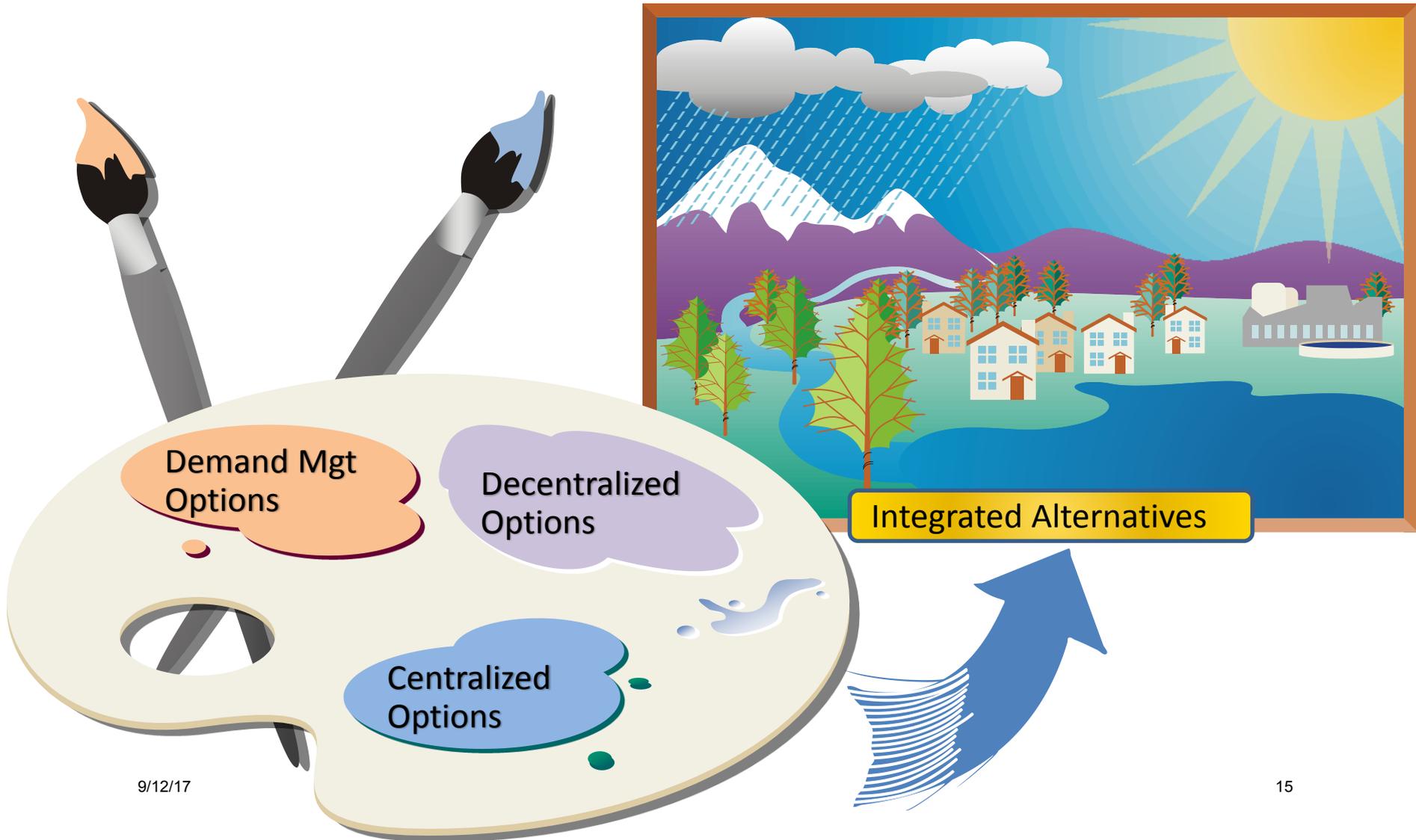
Needs For Building Initial Portfolios Summary Graph

Although the POR scenario shows no supply need, the DWDOR scenario shows needs in 2020 that could be used to develop 2020 portfolios.

Needs For Building Initial Portfolios
Summary



Creating Integrated Portfolios

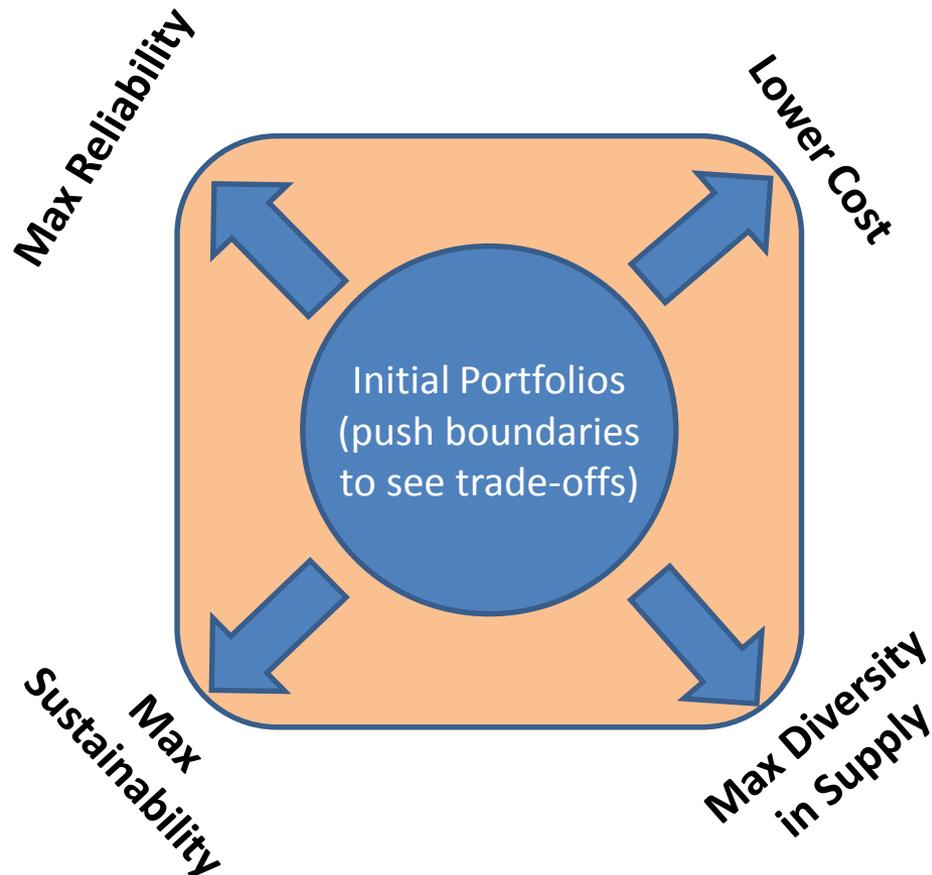


Portfolio Tool Overview

- Each demand-side management option (16) and supply-side option (14) are summarized in terms of:
 - Average demand reduction or supply yield
 - Unit cost
 - Resiliency and implementation challenges
- Options can be selected to develop portfolios, with the intent that, at a minimum, the maximum water need for POR with climate change is met over time
- Output from tool feeds into WAM for more detailed modeling to determine reliability metrics for portfolio ranking

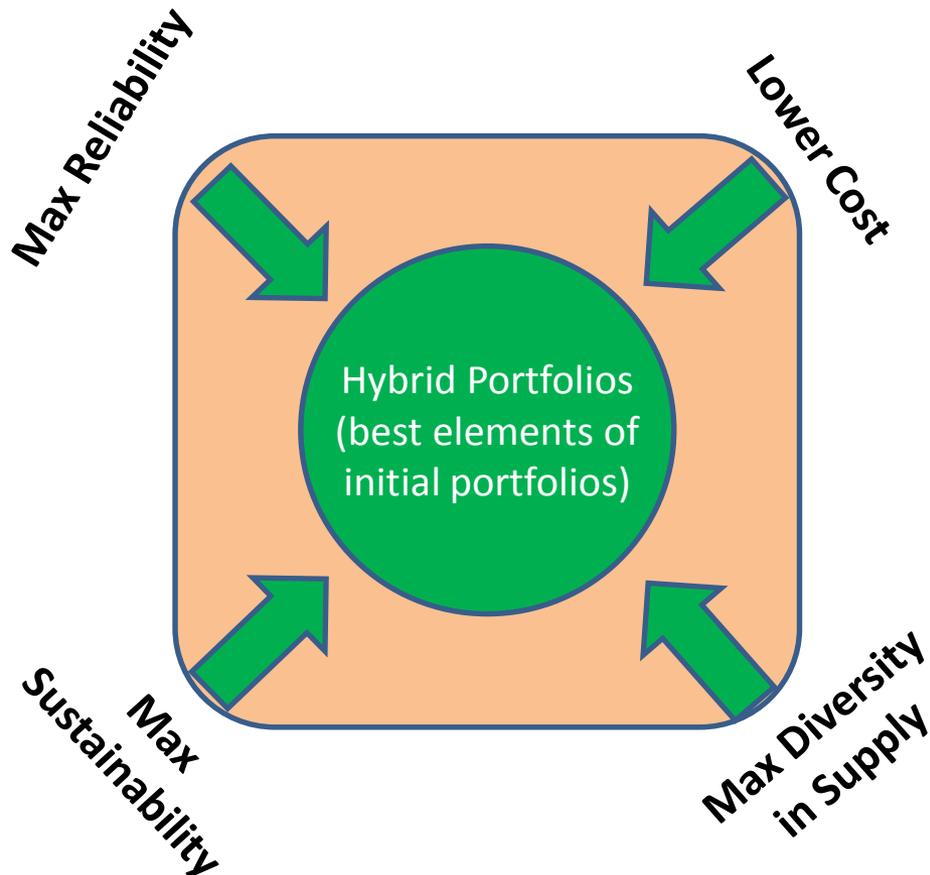
Building Initial Portfolios

- Designed to push boundaries, so trade-offs can easily be seen (e.g., What is the cost of achieving maximum reliability? or What is the social benefit of maximizing supply diversity?)

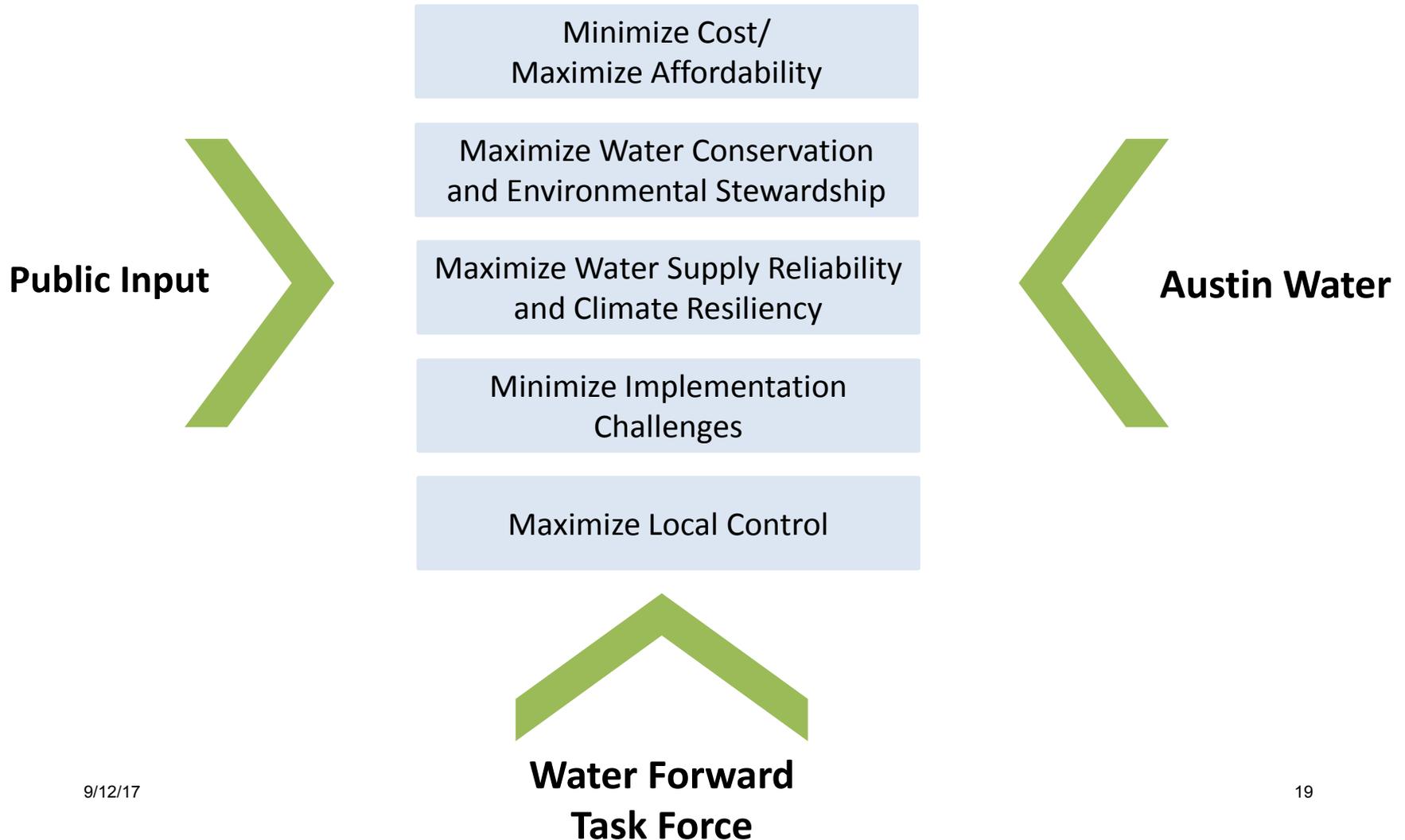


Building Initial Portfolios

- This process of “pushing boundaries” for initial portfolios, allows us to better develop hybrid portfolios that take best elements and create super-performing portfolios



Draft Initial Portfolio Themes



Portfolio Tool Demo

Next Steps

- Receive Task Force Input on Themes
- Finalize Portfolio Tool
- Draft Initial Portfolio Composition

Questions and Discussion

Preliminary Sub-objectives Performance Metrics and Revised Weighting

Sub-objectives Performance Measures

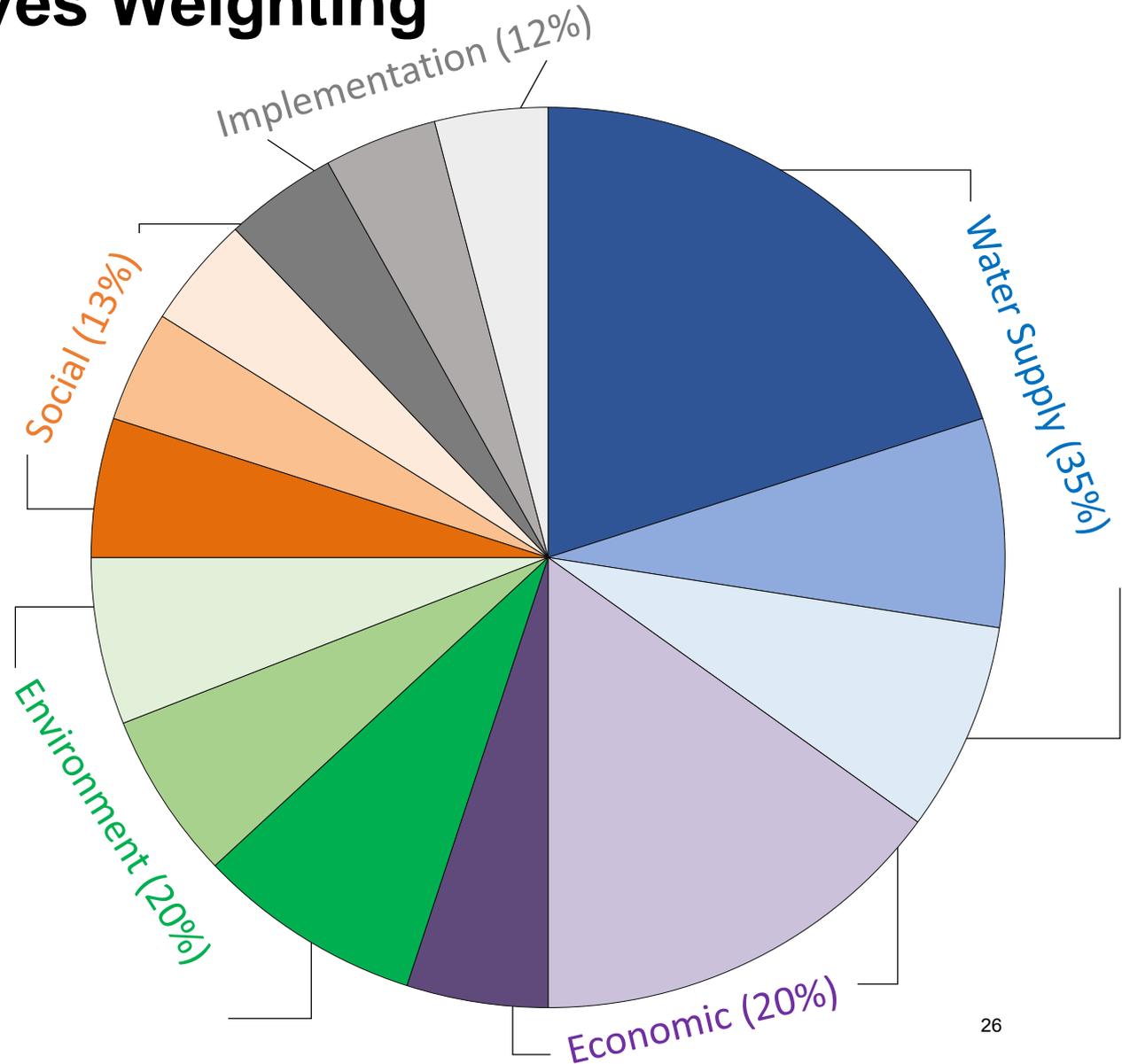
Primary Objective	Original Objective Weight	NEW Objective Weight	Sub-Objective	Defining Question	Performance Measure	Original	NEW
Water Supply Benefits	30%	35%	Maximize Water Reliability	How does the portfolio perform in terms of how often is there a shortage and how large is the shortage under various hydrologic conditions, including climate change scenarios?	Percent of time a shortage occurs and the cumulative shortage for a design drought based on WAM modeling results	15%	20%
			Maximize Local Control	To what extent does AW have control over the quantity and storage of water and operation of options (especially during drought periods) included in the portfolio?	Proportion of total supply yield from locally controlled sources	7.5%	7.5%
			Maximize Supply Diversification	How many independent water supply and demand-side management options above a minimum yield threshold are included in the portfolio?	# of supply/demand-side management sources (above minimum yield threshold)	7.5%	7.5%
Economic Impacts	20%	20%	Maximize Cost-Effectiveness	What is the total capital (construction) and operations/maintenance costs of all projects/programs in the portfolio over the lifecycle, divided by the sum of all water yield produced by the portfolio?	Unit cost (\$/AF) expressed as a present value sum of all costs over the lifecycle, including utility and customer costs.	15%	15%
			Maximize Advantageous External Funding	Does the portfolio have an opportunity for advantageous external funding from Federal, State, local, and private sources?	External Funding Score (1-5), where 1 = low potential and 5 = high potential	5%	5%
Environmental Impacts	20%	20%	Minimize Ecosystem Impacts	To what extent does the portfolio positively or negatively impact receiving water quality (e.g., streams, river, lakes), terrestrial and aquatic habitats throughout Austin, and net streamflow effects both upstream and downstream from Austin?	Ecosystem Impact Score (1-5), where 1 = high combined negative impacts and 5 = high combined positive impacts	8%	8%
			Minimize Net Energy Use	What is the net energy requirement of the portfolio, considering energy generation?	Incremental net change in kWh	6%	6%
			Maximize Water Use Efficiency	What is the reduction in potable water use from water conservation, reuse and rainwater capture for the portfolio?	Potable per capita water use (gallon/person/day)	6%	6%
Social Impacts	15%	13%	Maximize Multi-Benefit Infrastructure/Programs	To what extent does the portfolio provide secondary benefits such as enhanced community livability/beautification, increased water ethic, ecosystem services, or others?	Multiple Benefits Score (1-5), where 1 = low benefits and 5 = high benefits	5.25%	5%
			Maximize Net Benefits to Local Economy	To what extent does the supply reliability and water investments of the portfolio protect and improve local economic vitality, including permanent job creation?	Local Economy Score (1-5), where 1 = high negative impact and 5 = high positive impact	5.25%	4%
			Maximize Social Equity and Environmental Justice	To what extent does the portfolio support social equity and environmental justice, with emphasis on underserved communities? (see accompanying reference slide)	Social Equity and Environmental Justice Score (1-5), where 1 = significant support and 5 = minimal support	4.5%	4%
Implementation Impacts	15%	12%	Minimize Implementation Challenges	What implementation challenges will the portfolio face in terms of public acceptance, regulatory approval, and legal/institutional barriers?	Implementation Uncertainty Score (1-5), where 1 = high combined challenges and 5 = low combined challenges	5.25%	4%
			Maximize Scalability	To what extent can the portfolio be incrementally sized over time in terms of supply capacity and demand management?	Scalability Score (1-5), where 1 = small incremental sizing potential and 5 = high incremental sizing potential	5.25%	4%
			Minimize Technical Feasibility Challenges	To what extent does the portfolio rely on emerging and/or unproven technologies?	Technical Feasibility (1-5), where 1 = high reliance on emerging or unproven technologies and 5 = low reliance on emerging or unproven technologies	4.5%	4%

Social Equity Performance Measure

- Common principles:
 - Communities should not bear a disproportionate burden of environmental impacts
 - Communities should have access to environmental benefits
 - There should be equitable or even distribution of services across different geographic locations (spatial equity)
 - Fairness between present and future generations (intergenerational equity)

Draft Objectives Weighting

- Supply Reliability
- Local Control of Supply
- Diversity of Supply
- Cost Effectiveness
- External Funding Potential
- Ecosystem Impacts
- Net Energy Use
- Water Use Efficiency
- Multi-benefit Solutions
- Local Economy Benefits
- Social Justice
- Implementation Challenges
- Scalability of Projects
- Technical Challenges



Next Steps

- Receive Task Force Input on Sub-objectives Weightings
- Finalize Sub-objectives Weightings and Performance Measures

Questions and Discussion



BACKUP MATERIALS



Water Forward

Austin's Integrated Water Resource Plan

Outreach Summary

September 12, 2017



Summer Series - Feedback Overview

Water Supply Reliability

- Important to plan for droughts worse than what we've seen
- Prioritize basic indoor needs and outdoor needs to maintain tree canopies and water efficient landscapes (high value needs)
- Implement a mix of larger and smaller scale strategies

9/12/17

Cost and Affordability

- Water should be affordable across all socio-economic groups to meet basic indoor needs
- Discourage high outdoor or inefficient water use
- Stretch current supplies – the cheapest water is the water we have now
- Make judicious incremental investments

Conservation of Resources

- Use strategies like reuse and storage at larger and smaller scales
- Continue education and outreach for all potential strategies
- Encourage landscapes that can thrive in today's climate and in potentially drier future conditions

Environmental Stewardship

- Implement strategies that can help to mitigate stormwater quality or quantity issues
- Consider environmental impacts of strategies
- Evaluate potential impacts to the Colorado River

32

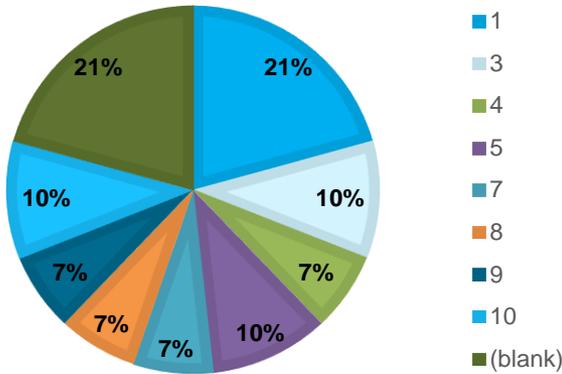
Summer Series - Attendees

Event Location	No. of Attendees
District 1 – Windsor Park Branch Library	8
District 2 – Southeast Branch Library	1
District 3 – Ruiz Branch Library	4
District 4 – Little Walnut Creek Branch Library	4
District 5 – Manchaca Branch Library	7
District 6 – Spicewood Springs Branch Library	3
District 7 – Milwood Branch Library	3
District 8 – Hampton Branch Library	6
District 9 – Twin Oaks Branch	7
District 10 – Old Quarry Branch Library	6
Total	49

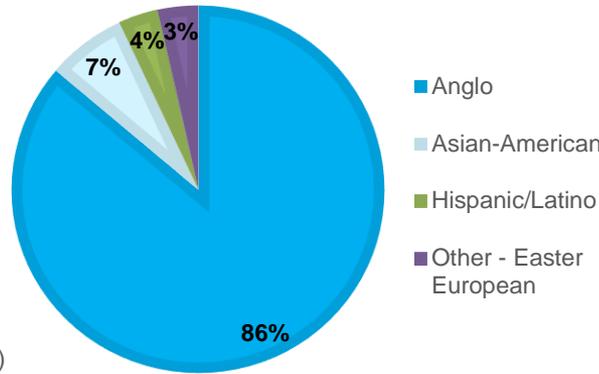
Summer Series – Demographics Summary

Total Demographics forms received - 29

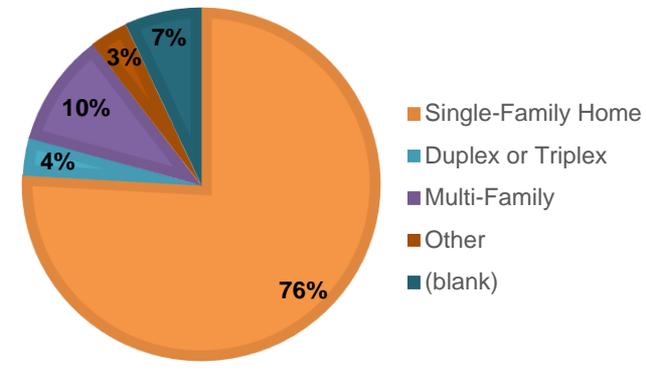
COUNCIL DISTRICT



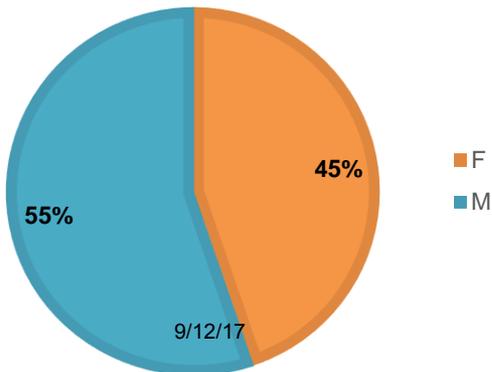
RACE/ ETHNICITY



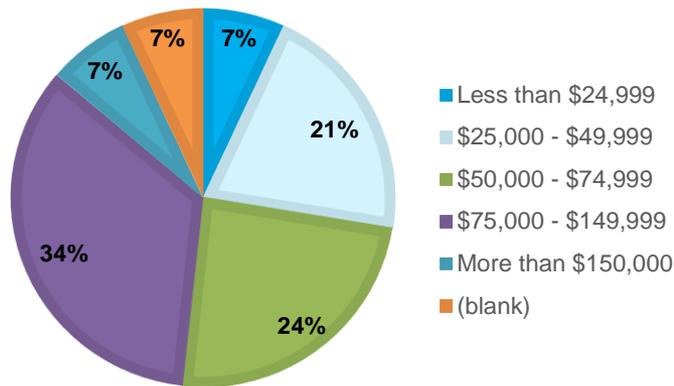
DWELLING TYPE



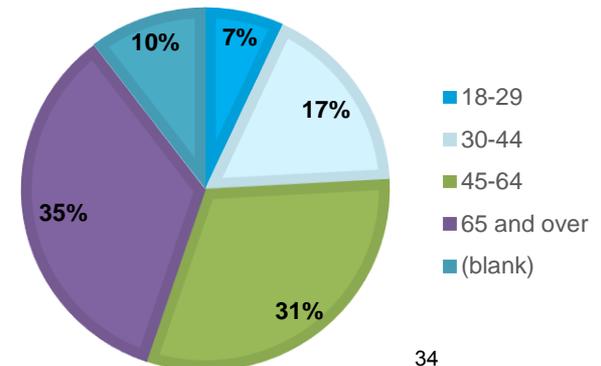
GENDER



HOUSEHOLD INCOME



AGE



Workshop 4 - Feedback Overview

Water Supply Reliability

- Maintain water supply for basic needs
- Regional planning approach
- Diversify water supplies
- Timing is important in planning for the future
- Pay attention to climate change

Cost and Affordability

- Secure future water supply opportunities
- Use incentives for low cost onsite options
- Provide information on billing and education on drought restrictions
- Use rates to help meet planning objectives

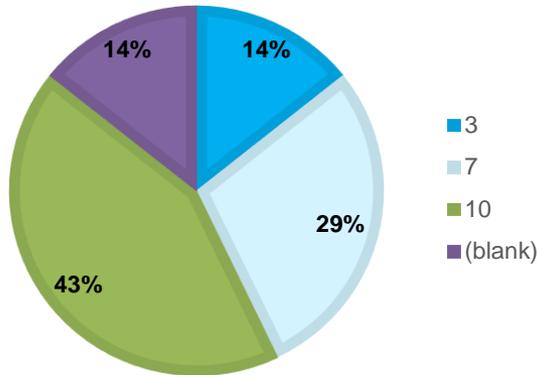
Conservation of Resources & Environmental Stewardship

- Have a holistic approach to conservation that considers ecosystem services and social equity
- Continue education and outreach for all potential strategies
- Encourage alternative water options

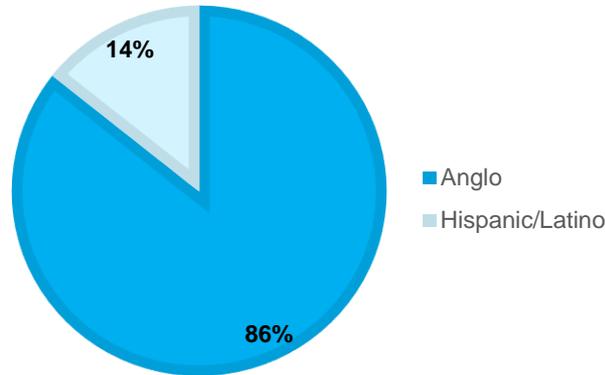
Demographics Summary – Workshop #4

Total attendees – 25, Total demographic forms received - 7

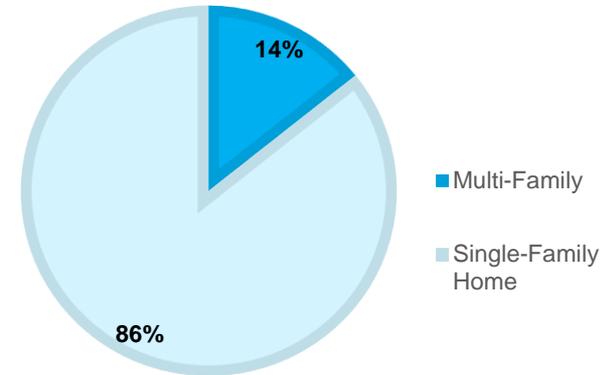
COUNCIL DISTRICT



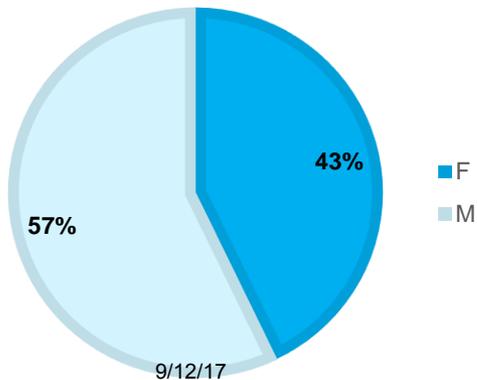
RACE/ETHNICITY



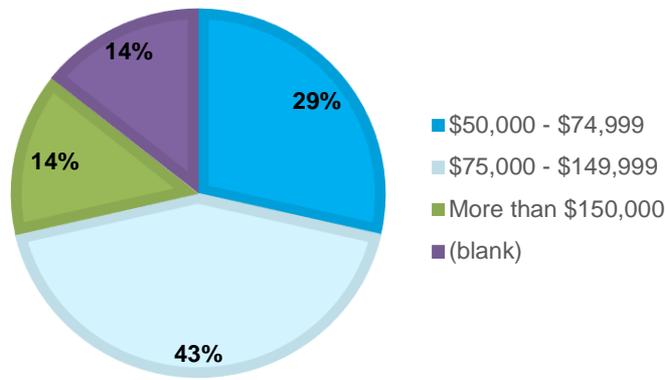
DWELLING TYPE



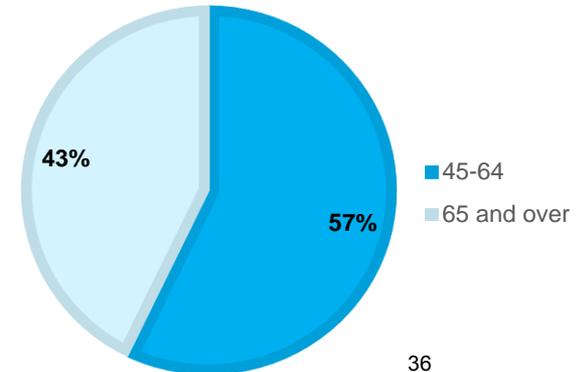
GENDER



HOUSEHOLD INCOME



AGE



9/12/17