Austin Integrated Water Resource Planning Community Task Force

Packet Index

February 13, 2018

Austin Integrated Water Resource Planning Community Task Force
February 13, 2018 – 4:00 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

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1. **CALL TO ORDER – February 13, 2018, 4:00 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 January 22, 2018 Task Force meeting (5 minutes)

4. STAFF BRIEFINGS, PRESENTATIONS, AND OR REPORTS

a. Presentation on Hybrid Portfolio Scoring- City Staff and Consultant Team (30 minutes)
    i. Task Force Discussion and Input (approximately 1.5 hours)

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

PRESENTATION

Austin WATER

WATER FORWARD
INTEGRATED WATER RESOURCE PLAN

Water Forward Task Force Meeting

February 13, 2018

Agenda

- Meeting Goals and Next Steps
- Presentation of Hybrid Portfolio Scoring
  - Task Force Questions, Discussion, and Input

Meeting Goals and Next Steps

Meeting Goals

- Presentation on hybrid portfolio scoring (20 min)
  - Please limit questions to clarifying questions
- Task Force Discussion (1.5 hours)
- Parking lot for other/future items

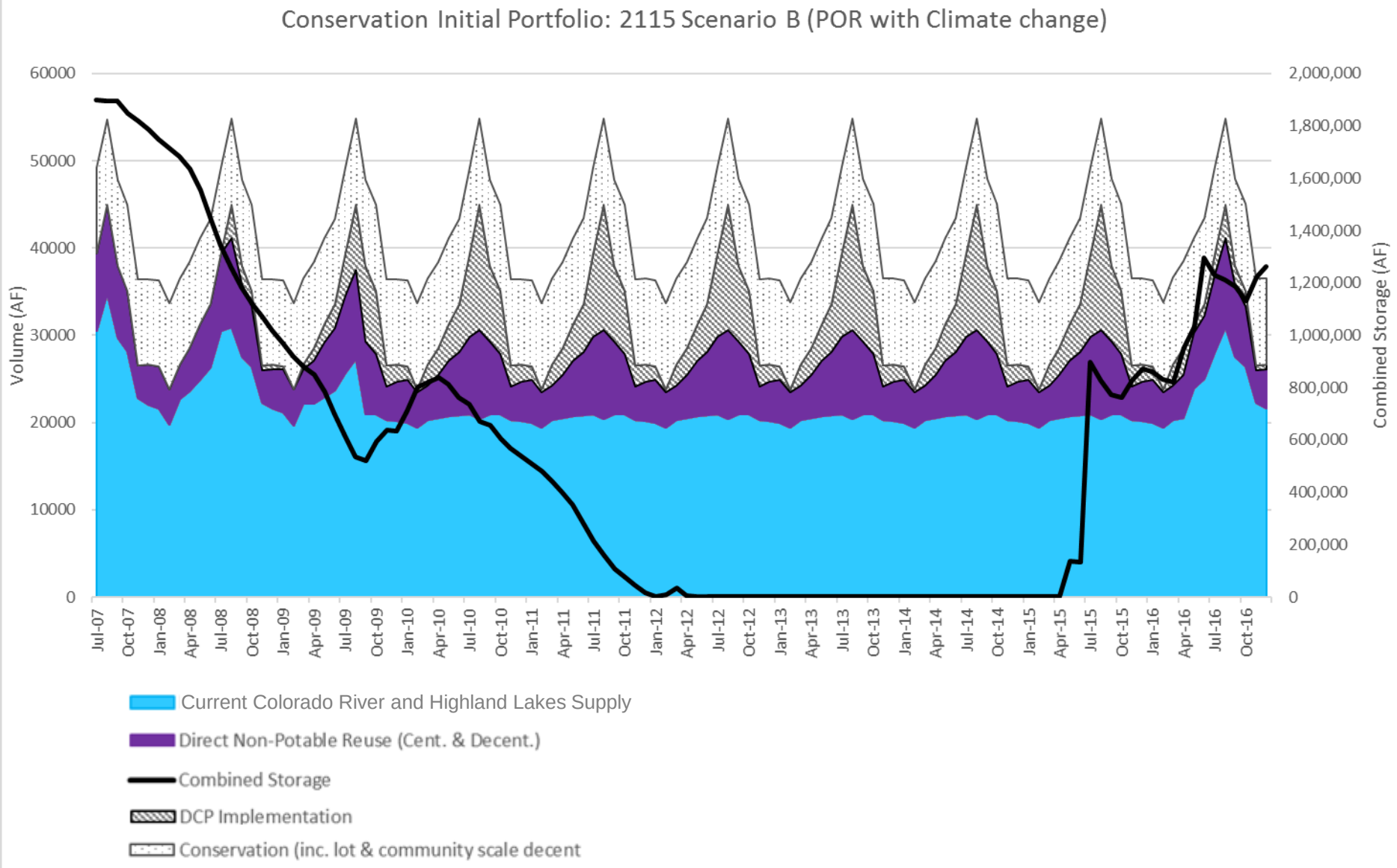
Next Steps

- March 20th Task Force Meeting
  - Presentation of draft plan recommendations
- March 21st Public Workshop
  - Public input on of draft plan recommendations
- April 3rd Task Force Meeting
  - Presentation of revised plan recommendations
- May 1st Task Force Meeting
  - Presentation of draft plan report
- Targeting May 2018 – W/WW Commission Update on final plan recommendations and draft plan report
- June 5th Task Force Meeting
  - Presentation of final plan report
- Targeting June 2018 – W/WW Commission and Council presentation of final plan report

Hybrid Portfolio Scoring Process and Results

Evaluation of Needs

- How are we calculating identified needs?
  - Type 1 – need in an amount equal to estimated savings from Stage 4 Drought Contingency Plan implementation.
  - Type 2 –50% of amount Austin expects to receive from LCRA supply when combined storage in Lakes Travis and Buchanan is extremely low (less than 450,000 acre-feet or about 22% full).
  - Type 3 – amount of additional supply needed above LCRA 325,000 acre-feet contract.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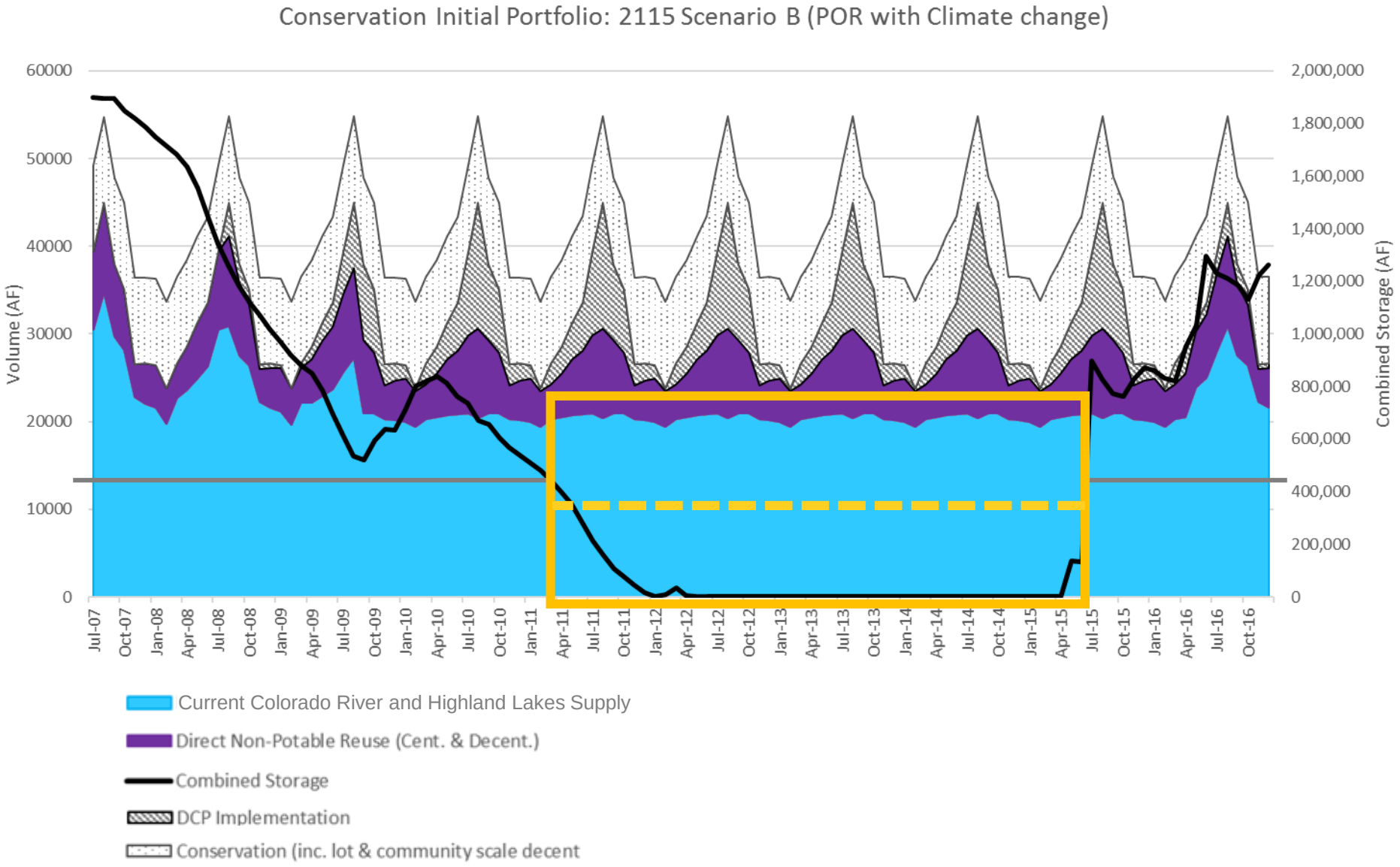
Current Colorado River and Highland Lakes Supply
Direct Non-Potable Reuse (Cent. & Decent.)
Combined Storage
DCP Implementation
Conservation (inc. lot & community scale decent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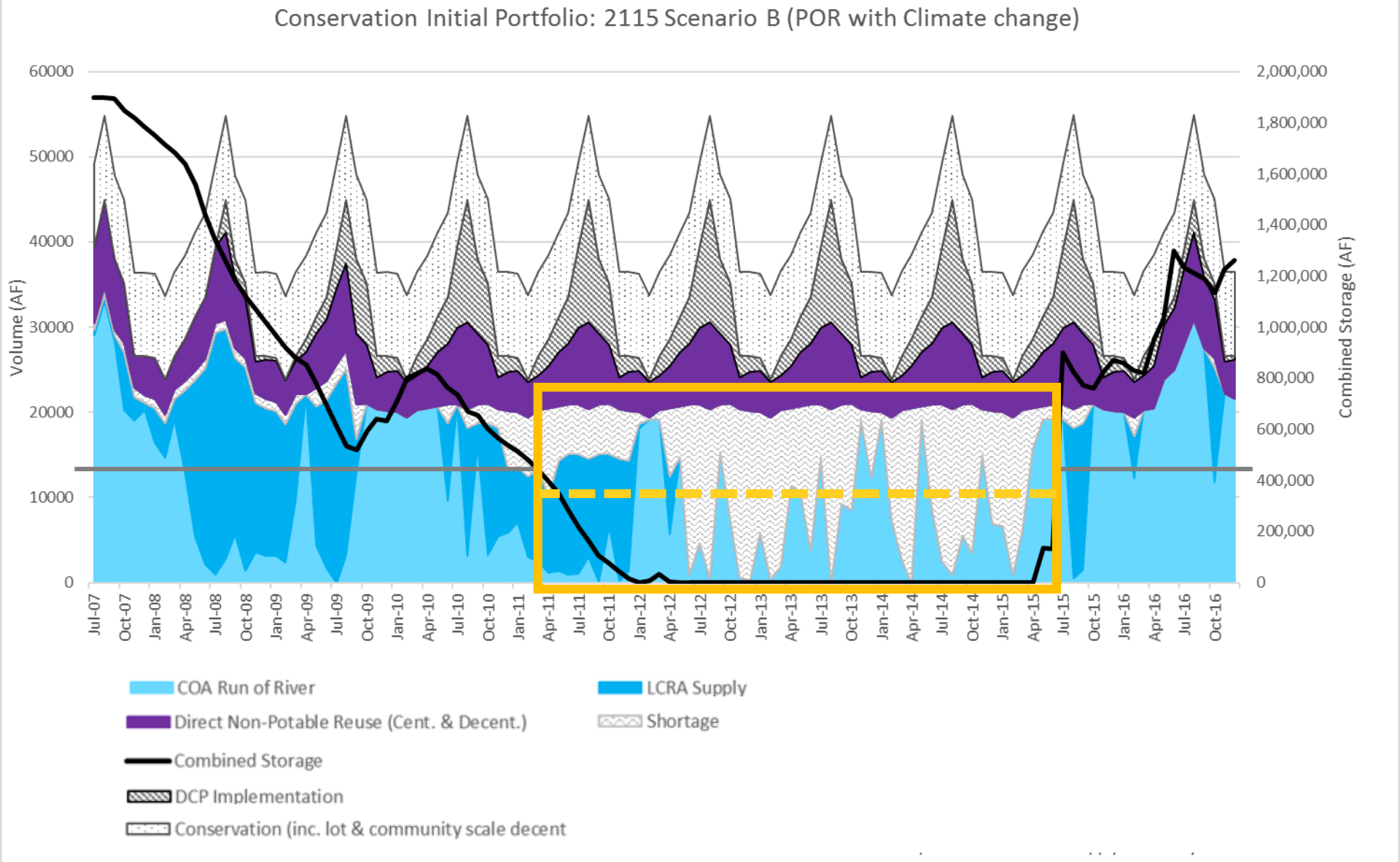
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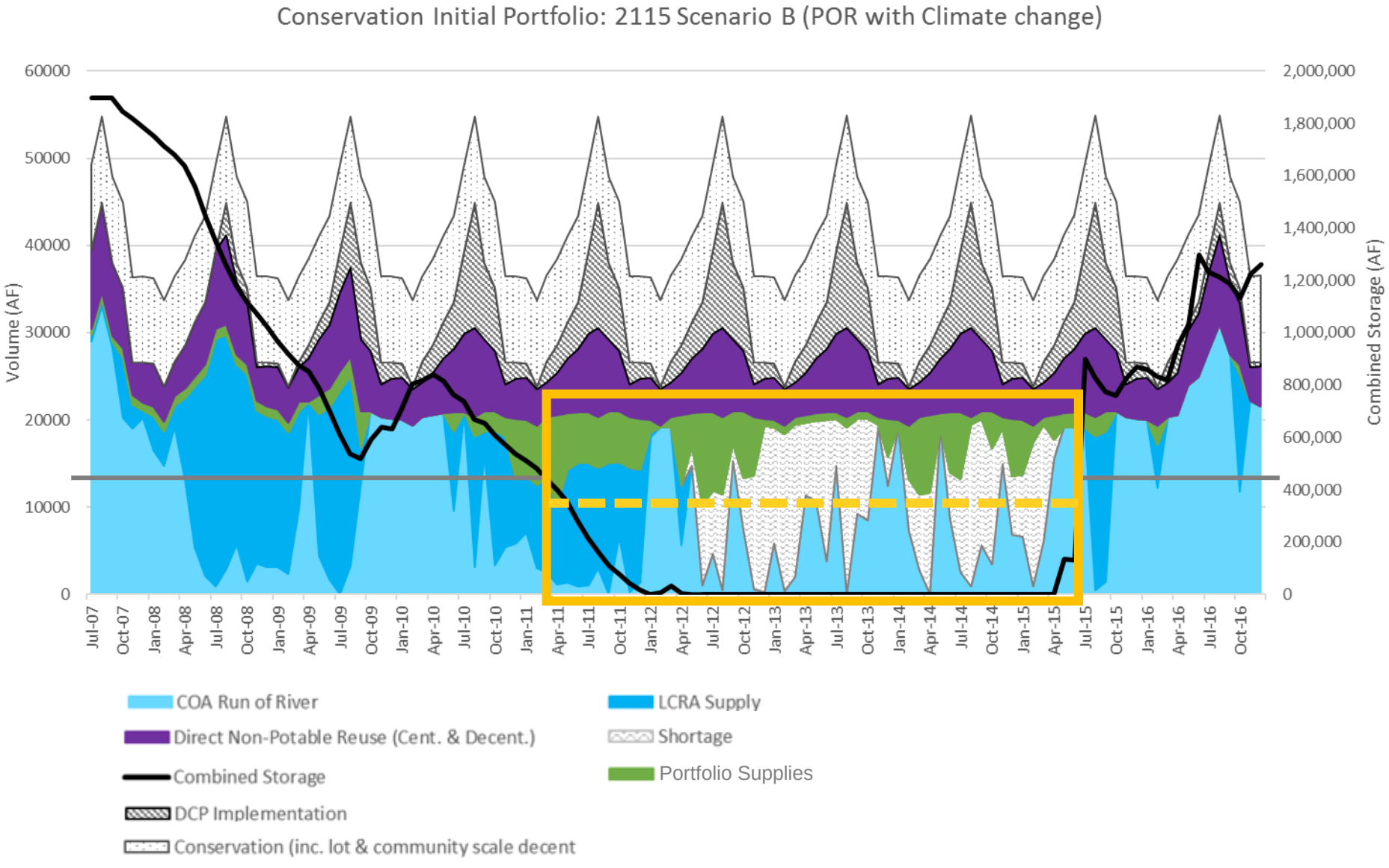
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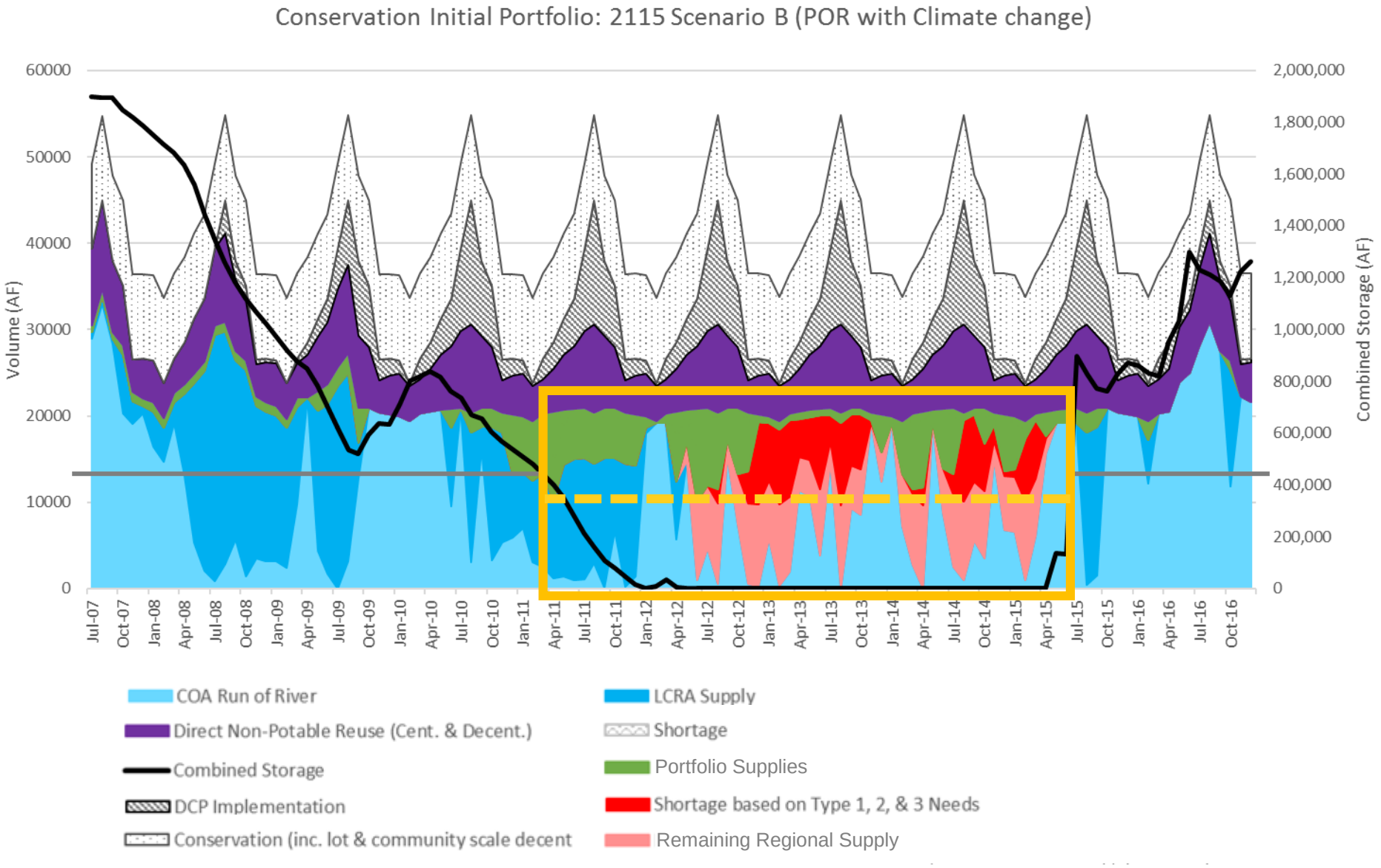
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Remaining Regional Supply

Reliability & Vulnerability Metric Definition

- Reliability Metric
  - Based on Type 1, 2, & 3 Needs
  - Number of months in a simulation without Type 1, 2, or 3 shortages
  - The metric calculation is the geometric mean of the 2040, 2070, and 2115 results for both the period of record and the extended period

- Vulnerability Metric
  - Based on Type 1, 2, & 3 Needs
  - Percent of demand met during worst 12-months of drought for Type 1, 2, or 3 shortages
  - The metric calculation is the geometric mean of the 2040, 2070, and 2115 results for both the period of record and the extended period

Recap of Process

1) Develop initial portfolios to push the bounds of the IWRP objectives in order to more easily see trade-offs
2) Identify opportunities to improve performance of initial portfolios
3) Incorporate Task Force input on development of hybrid portfolios
4) Develop hybrid portfolios that provide greater overall benefits by taking best elements from initial portfolios, recognizing the importance of achieving high reliability, high environmental and social benefits, increased implementation (reduced risk) and within acceptable range of cost-effectiveness

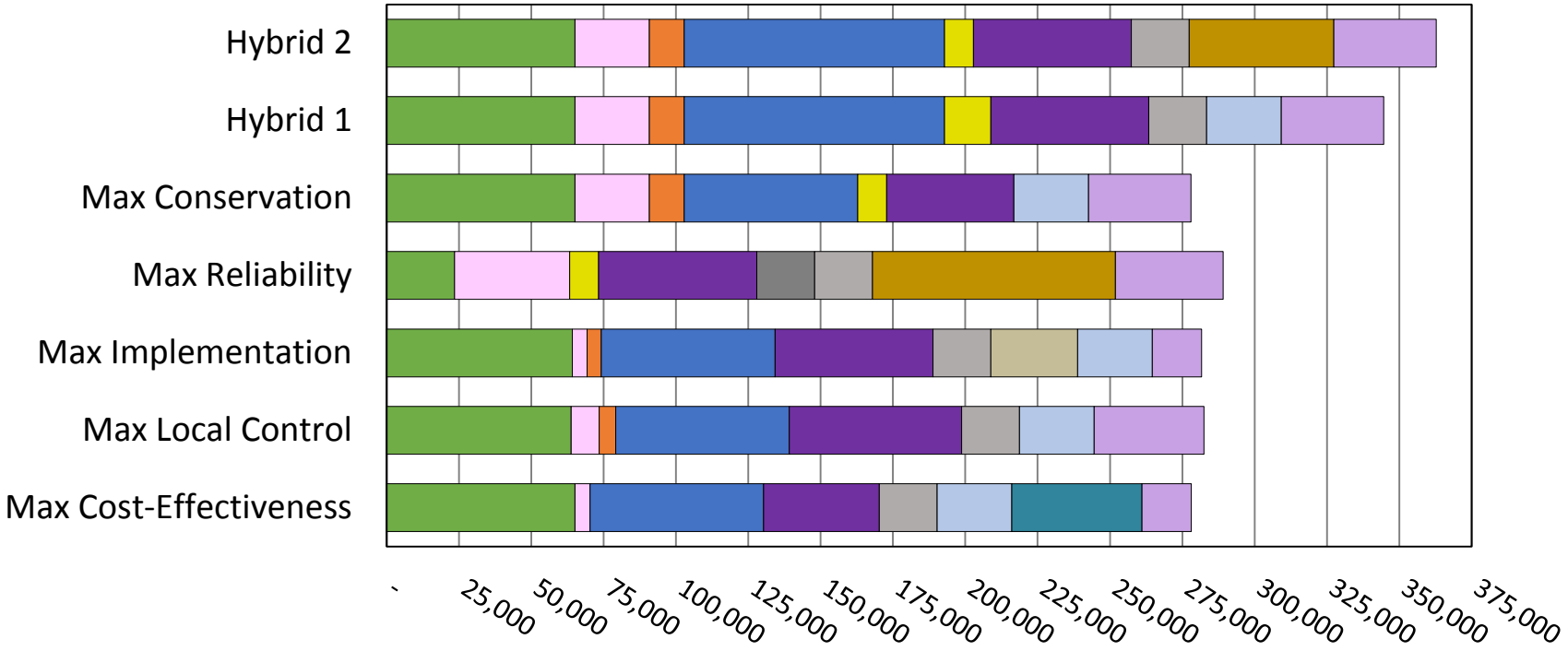
Goals for All Portfolios

- Meet all Type 1, 2, & 3 needs for drought of record (DOR) under period of record with *historical hydrology*. **This was achieved for all Portfolios and thus not used to score Portfolios.**
- Meet most Type 1, 2, & 3 needs for DOR under period of record with *climate changed hydrology*. **Four of the initial portfolios did not achieve this goal.**
- Meeting all Type 1, 2, & 3 needs under drought worse than DOR and extended simulation period with *climate changed hydrology* is a desired outcome, but very difficult and costly to achieve. Nevertheless, Portfolios were tested under this scenario. **Only one of the initial Portfolios came close to this goal (Max Reliability Portfolio).**

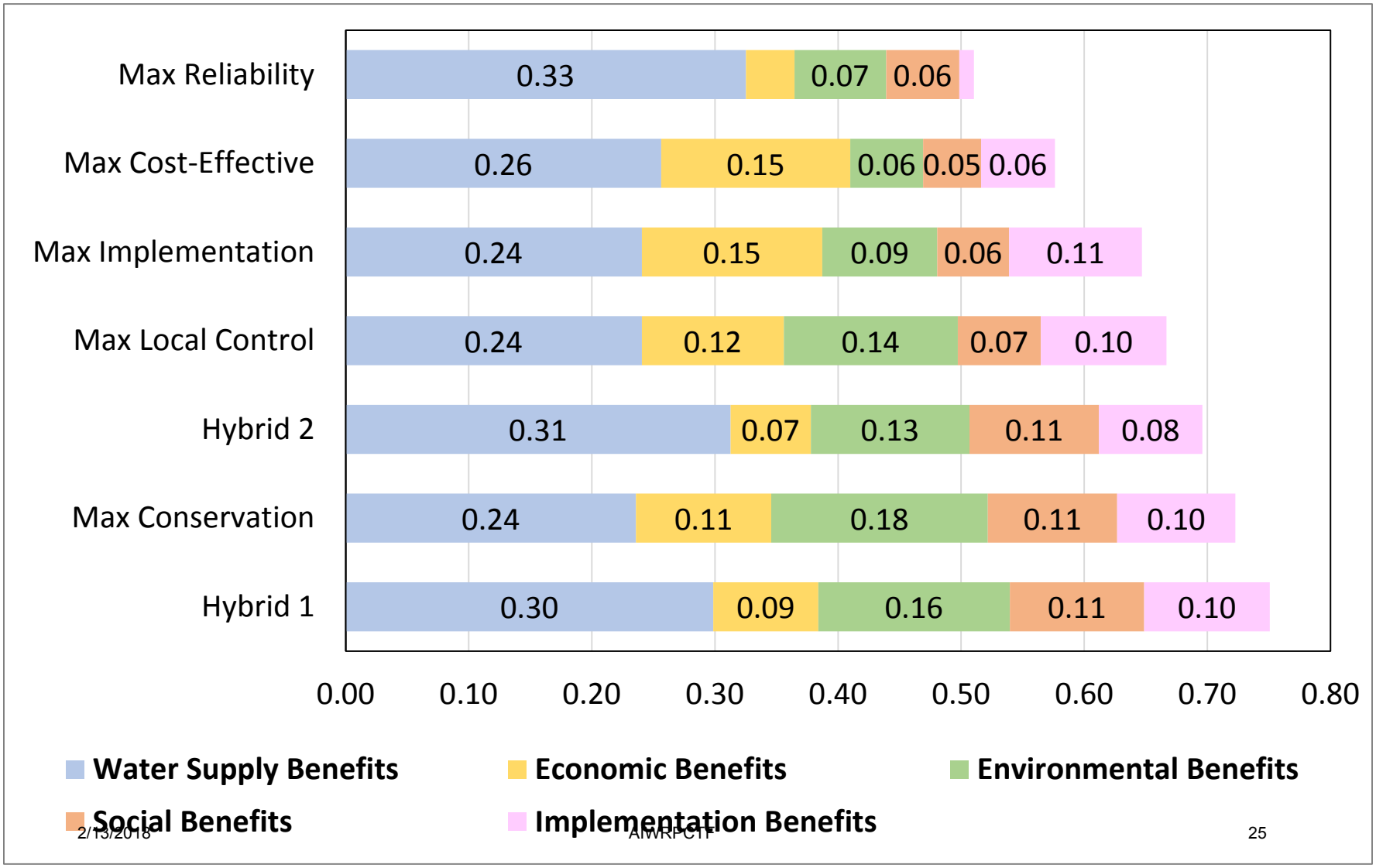
Goals for Hybrid Portfolios

- **Hybrid 1** – Significantly increase ability of *Max Conservation Portfolio* to meet all Type 1, 2, & 3 needs:
  - increase ASR capacity and centralized non-potable reuse, and add indirect potable reuse.
- **Hybrid 2** – Try to maintain ability of *Max Reliability Portfolio* to meet all Type 1, 2, & 3 needs and reduce cost and risk, and increase environmental and social benefits:
  - replace direct potable reuse with larger ASR and decrease size of ocean desalination
  - add additional conservation and lot scale decentralized options

Summary of Portfolios for 2115
(supply capacity in AFY)



Portfolio Ranking



Discussion Goals

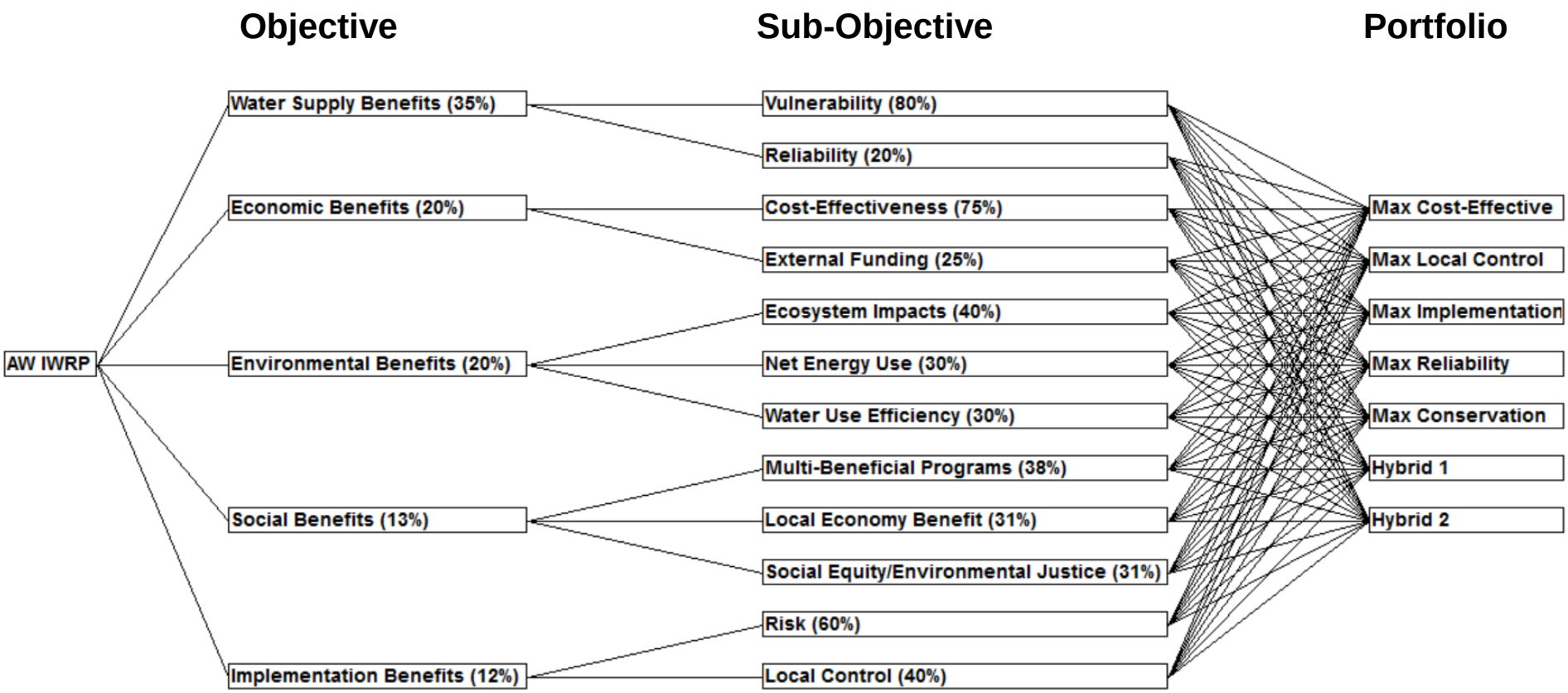
- Discussion on hybrid portfolios

- Parking lot for items not on discussion list
- Will discuss implementation strategy at a future meeting

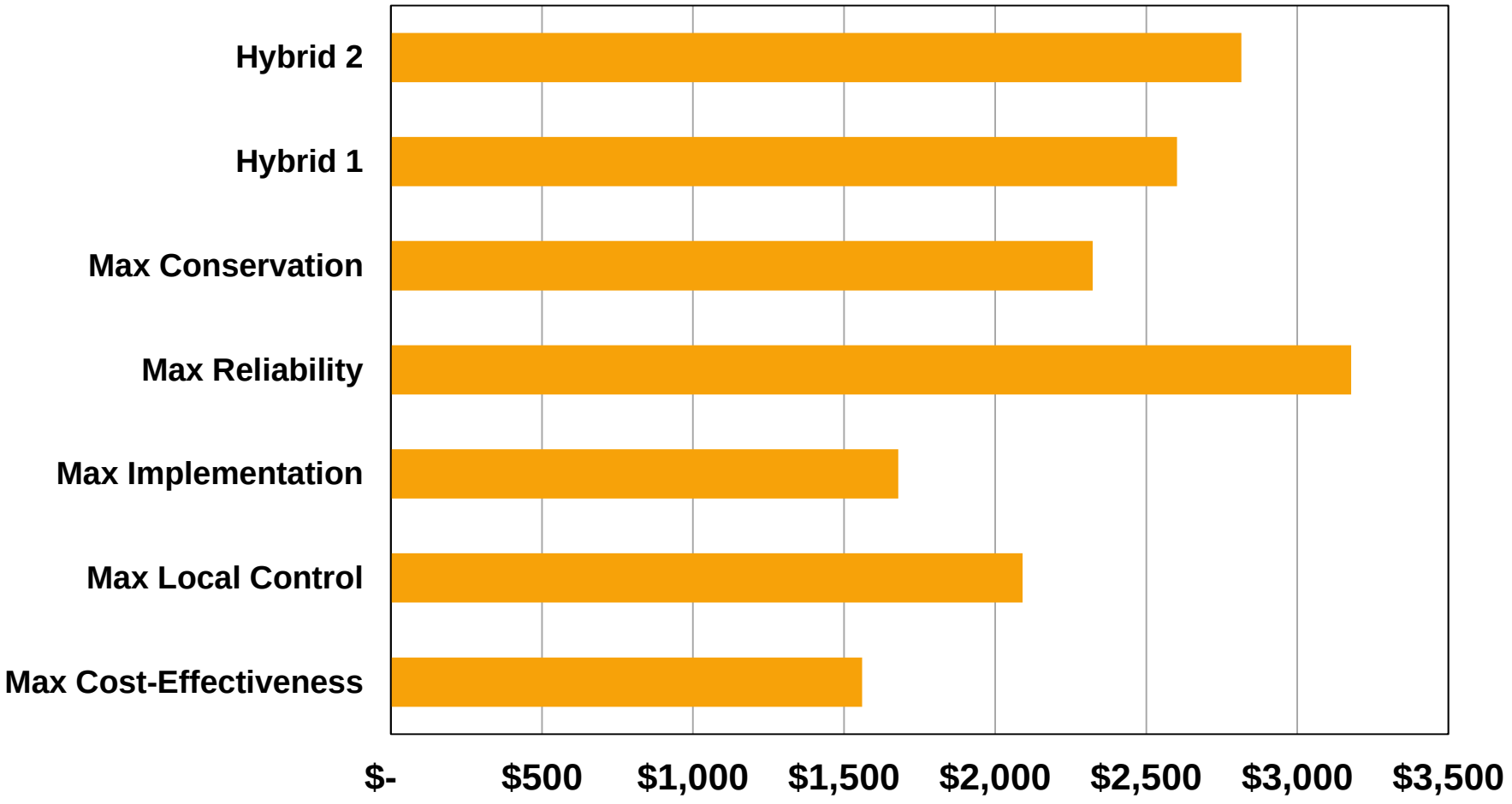
BACKUP MATERIALS

Backup Materials

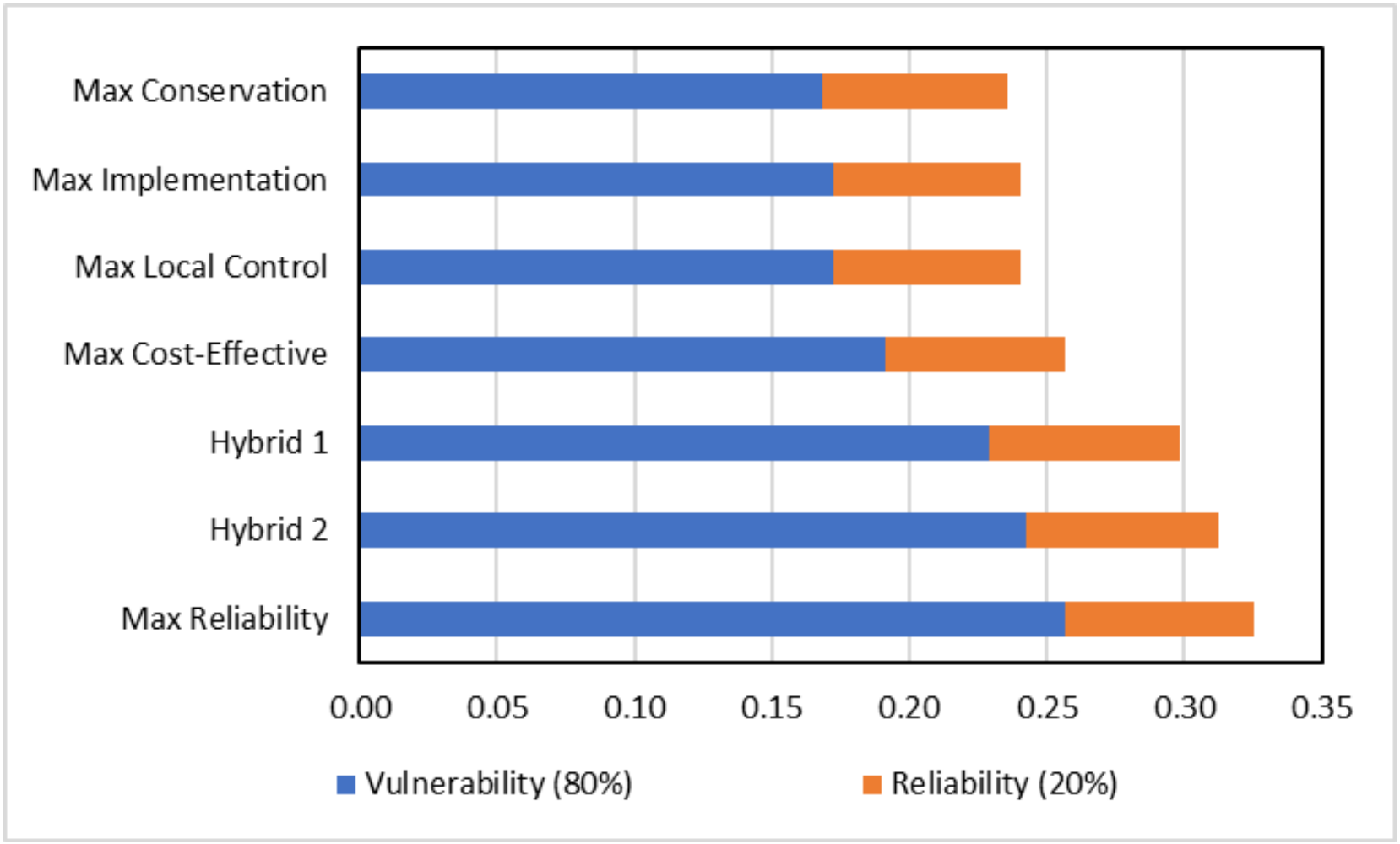
Objective/Sub-Objective Hierarchy



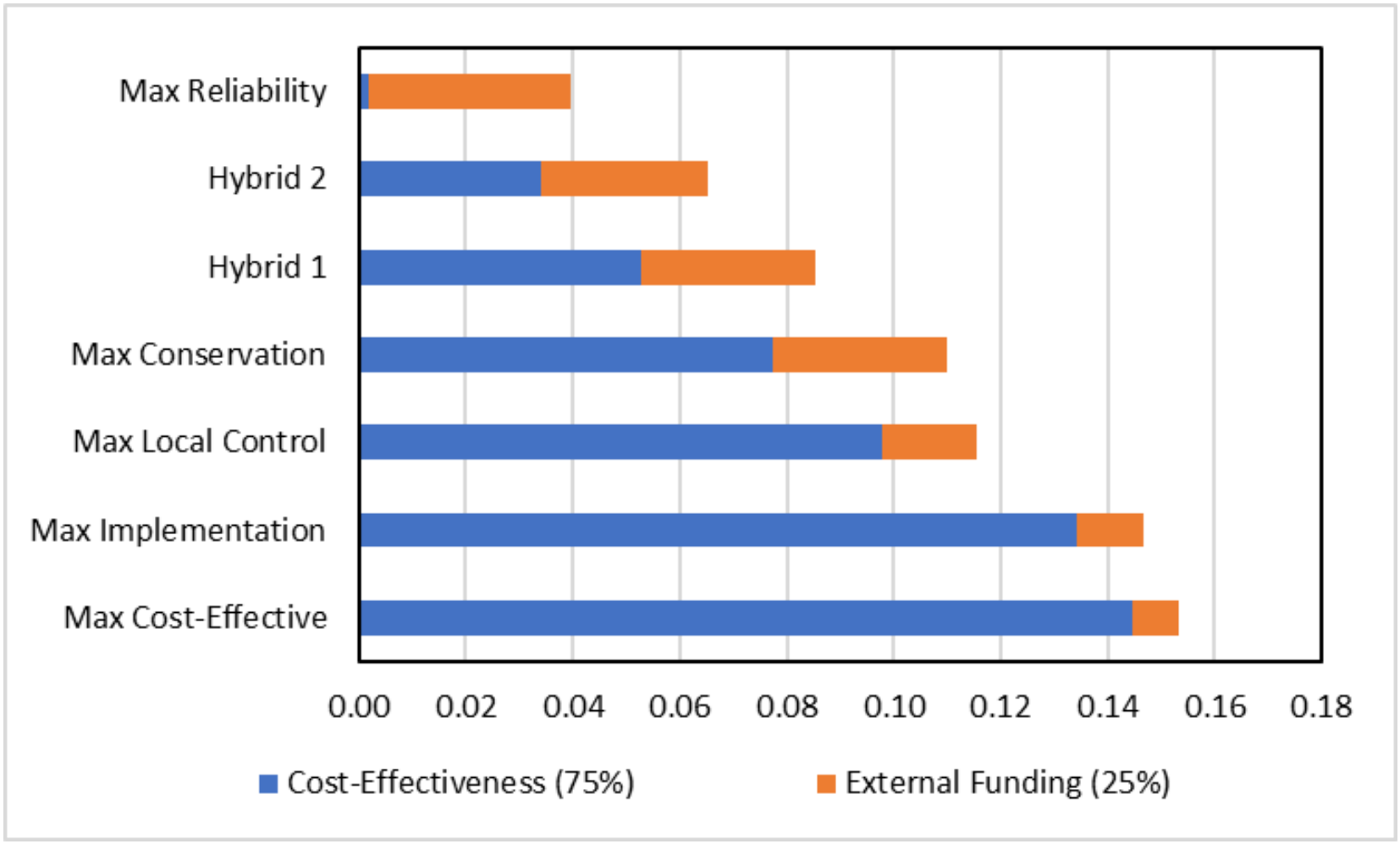
Simplified Levelized Unit Cost ($/AF)



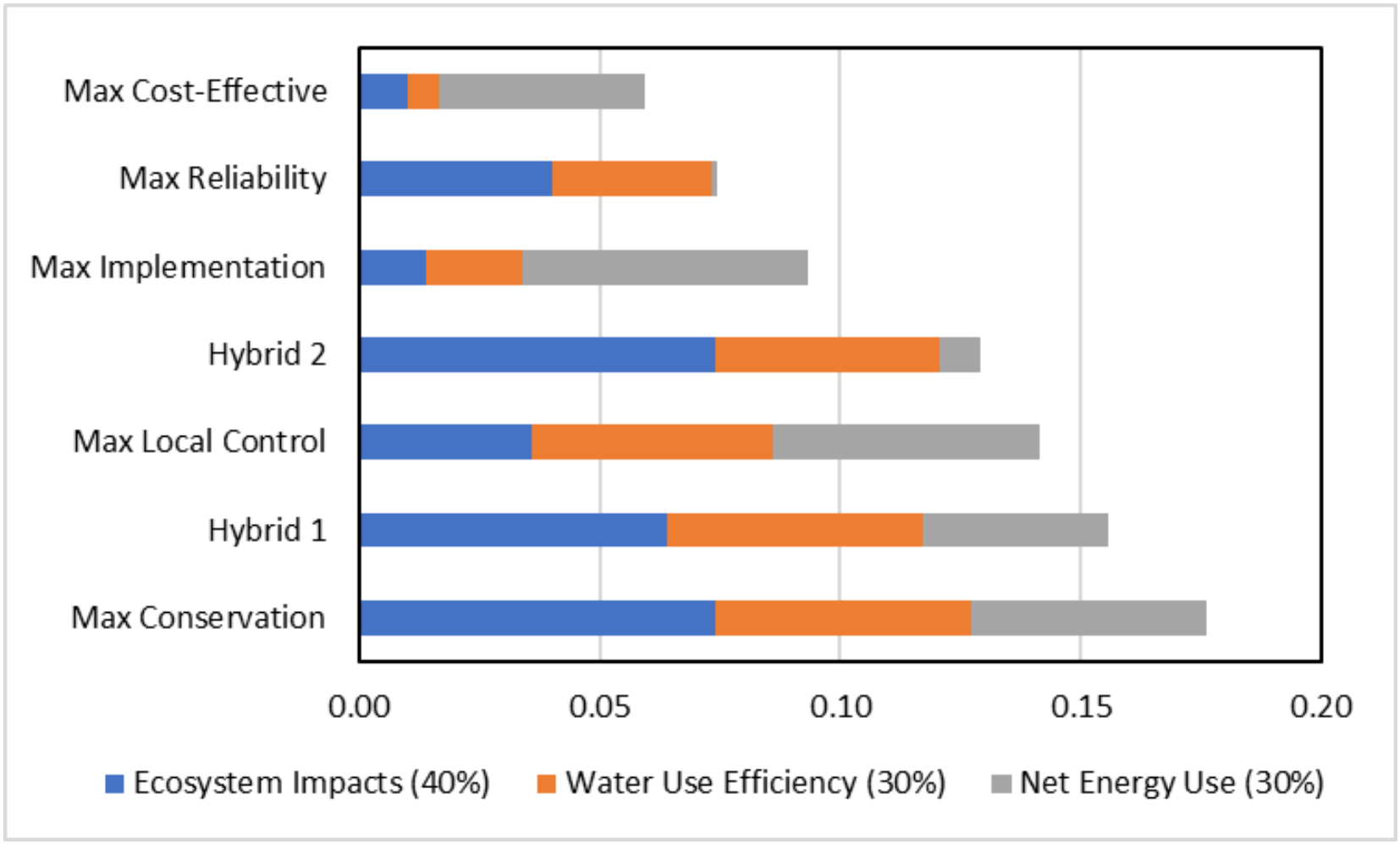
Water Supply Benefits



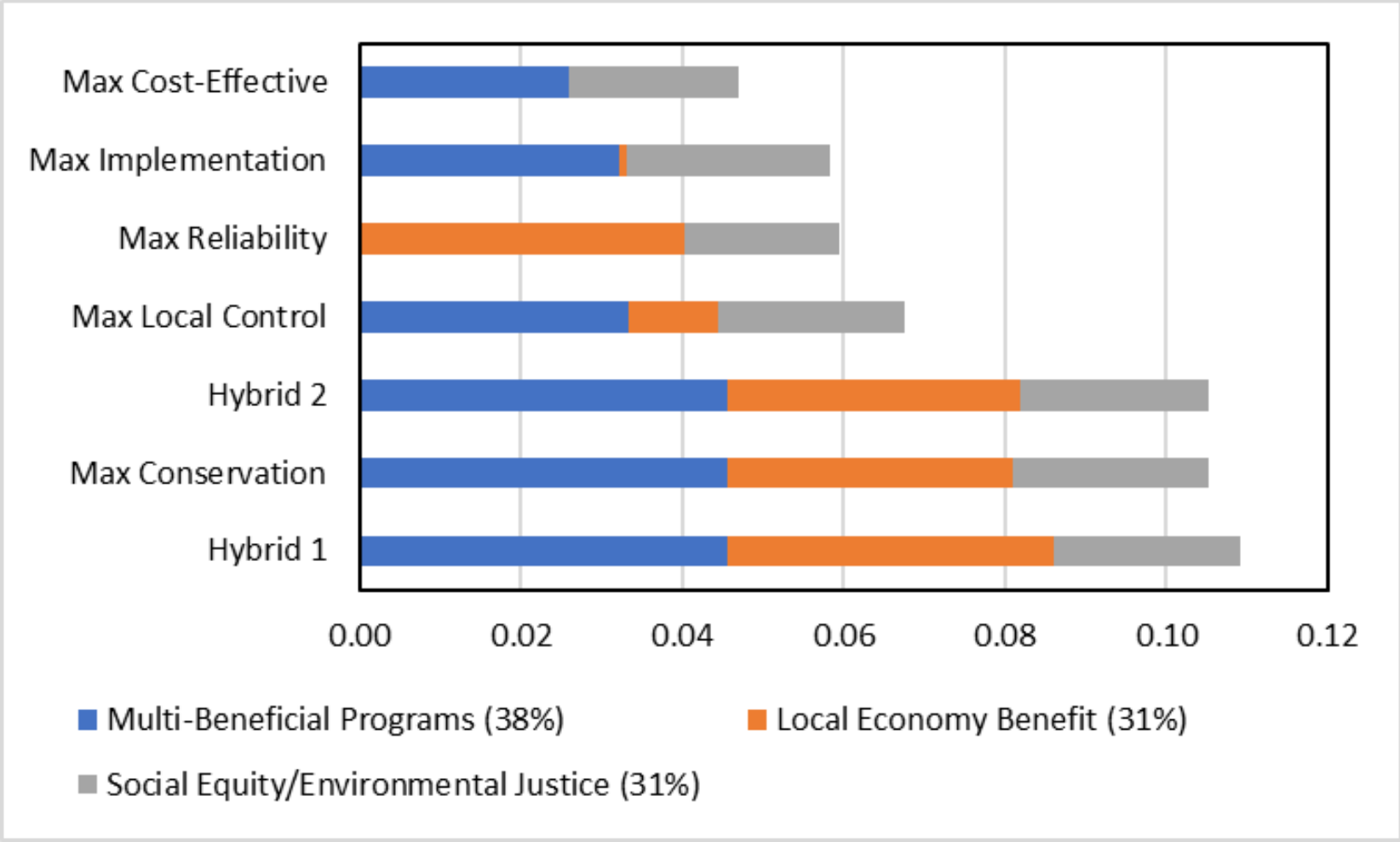
Economic Benefits



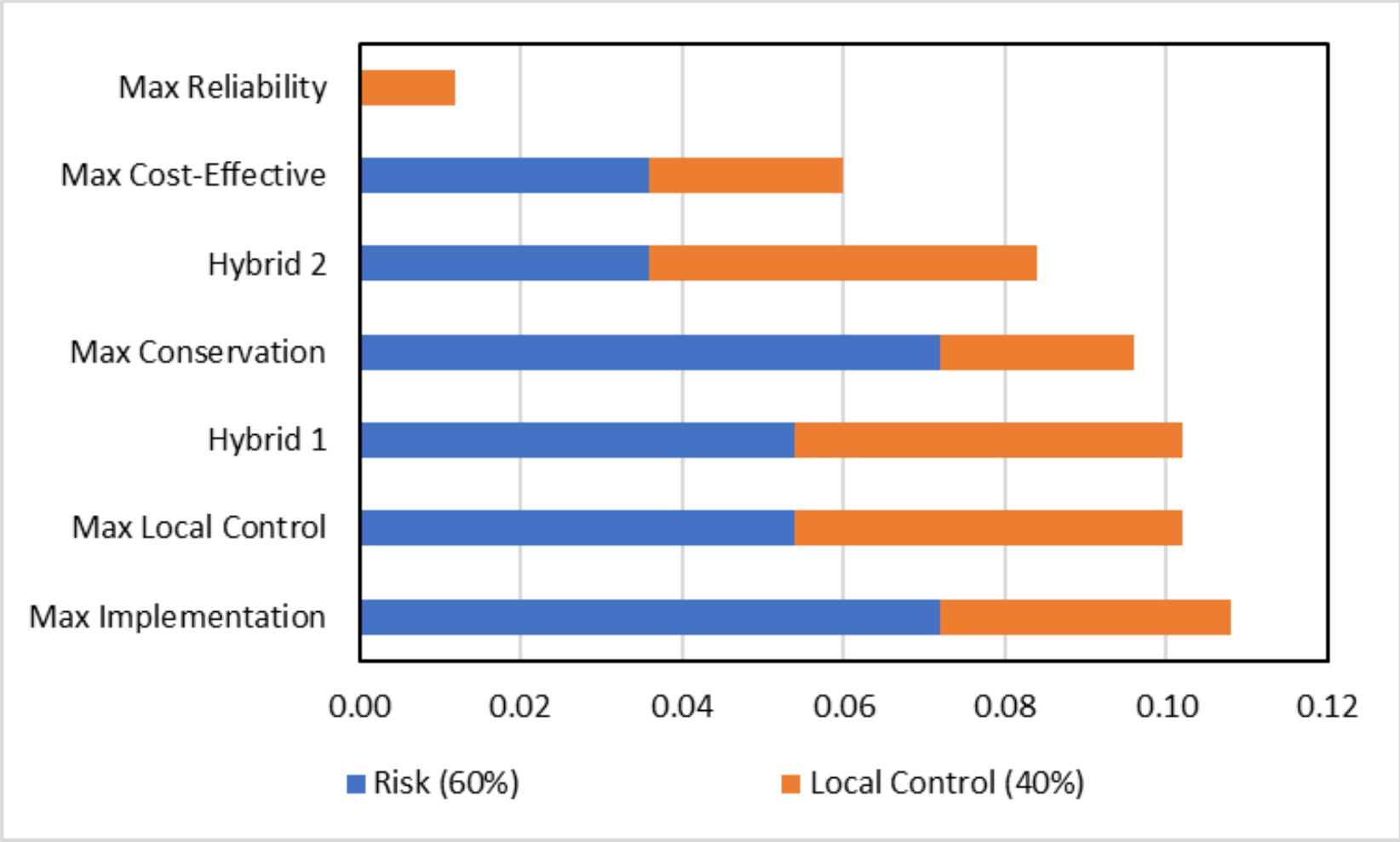
Environmental Benefits



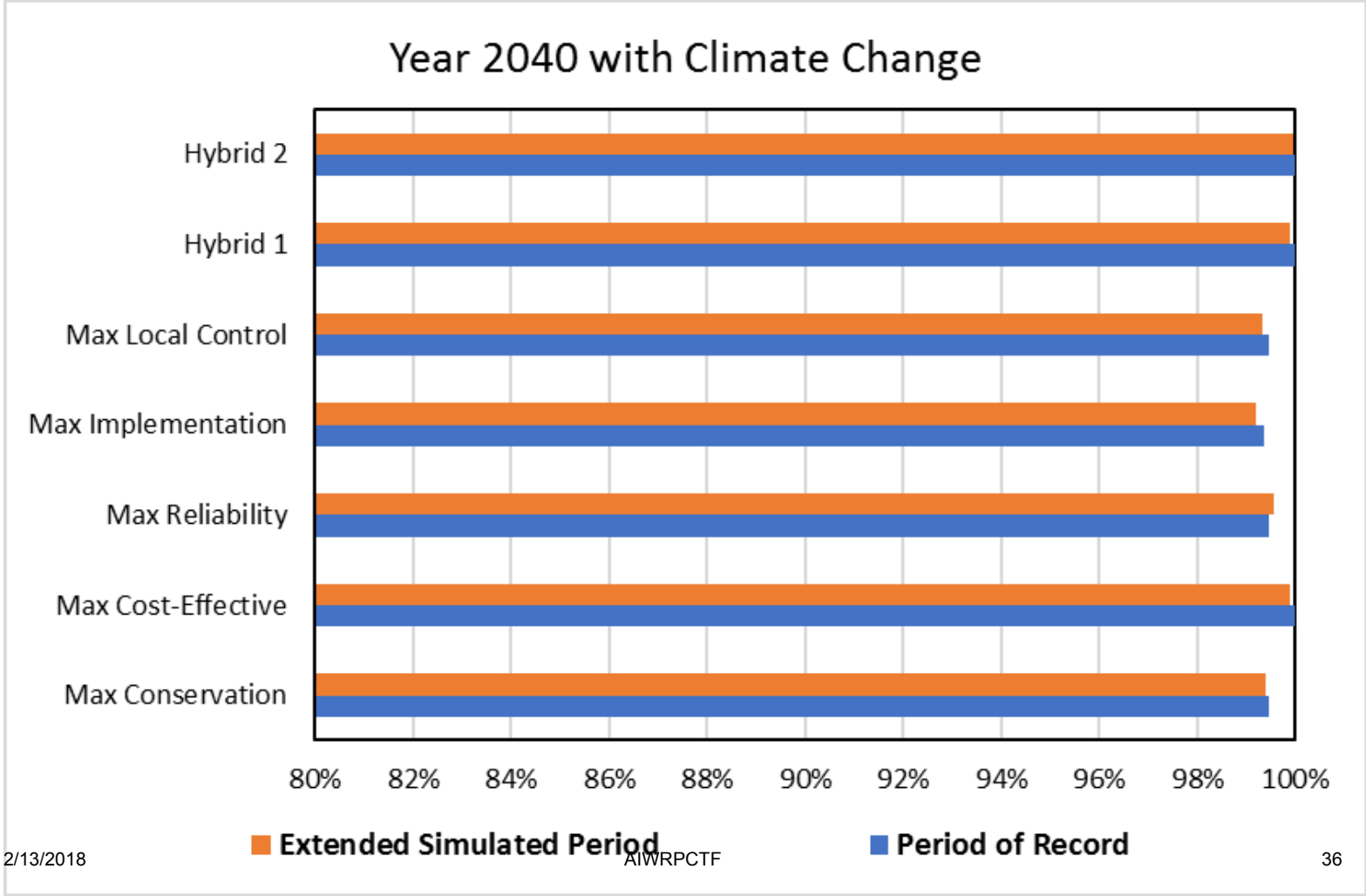
Social Benefits



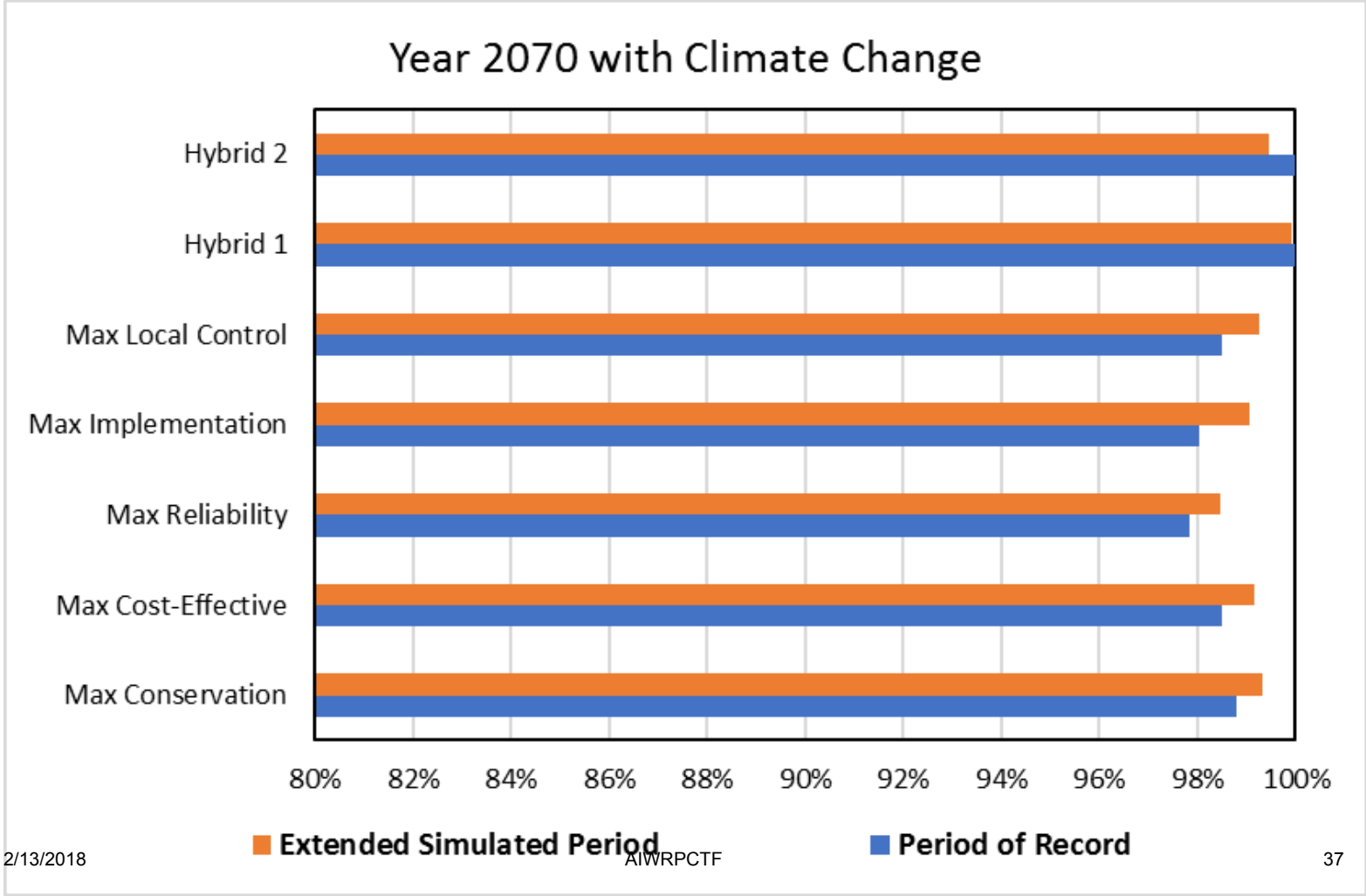
Implementation Benefits



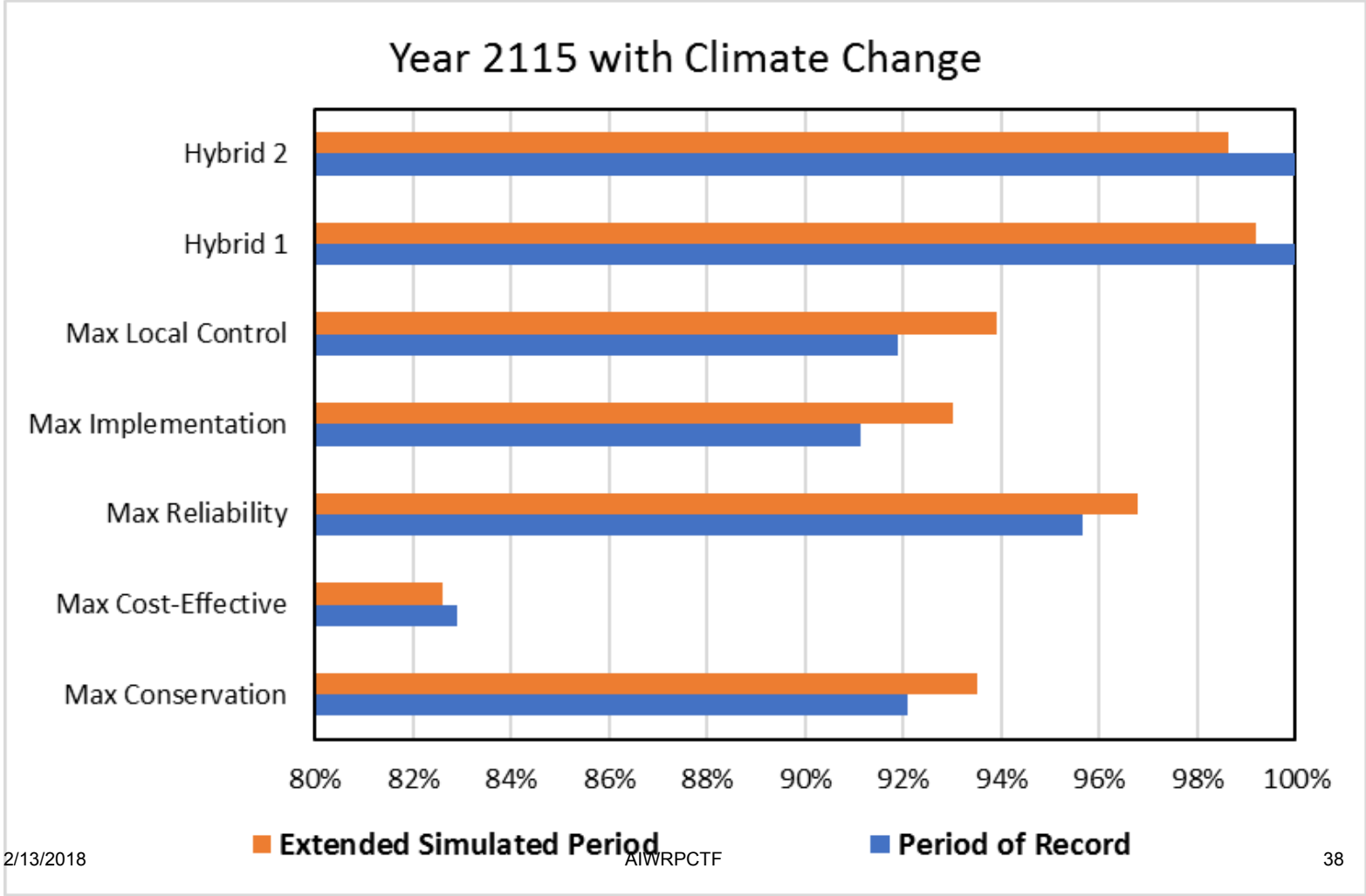
Supply Reliability in 2040
(number of months without Type 1, 2, or 3 shortage)



Supply Reliability in 2070
(number of months without Type 1, 2, or 3 shortage)

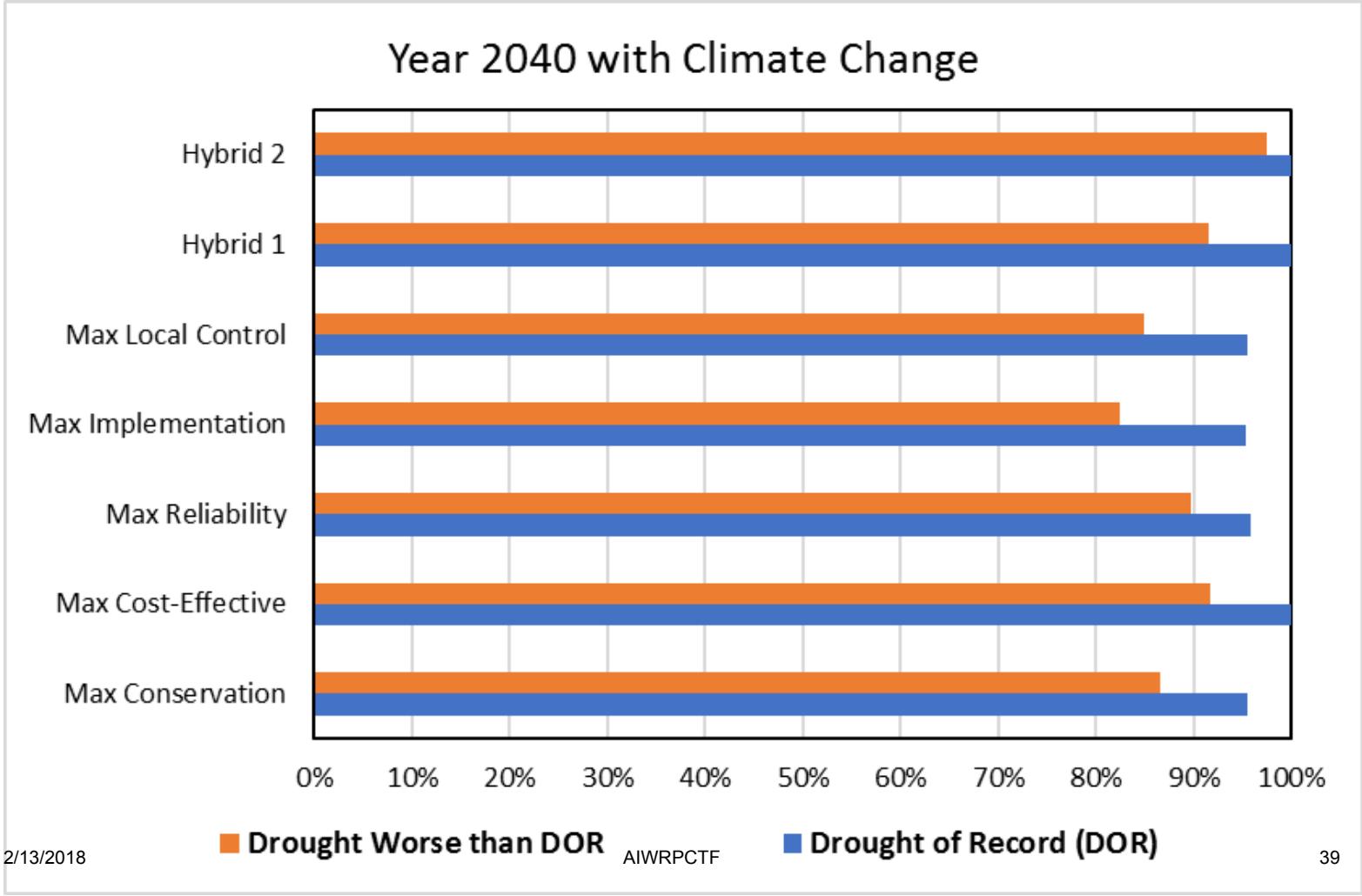


Supply Reliability in 2115
(number of months without Type 1, 2, or 3 shortage)



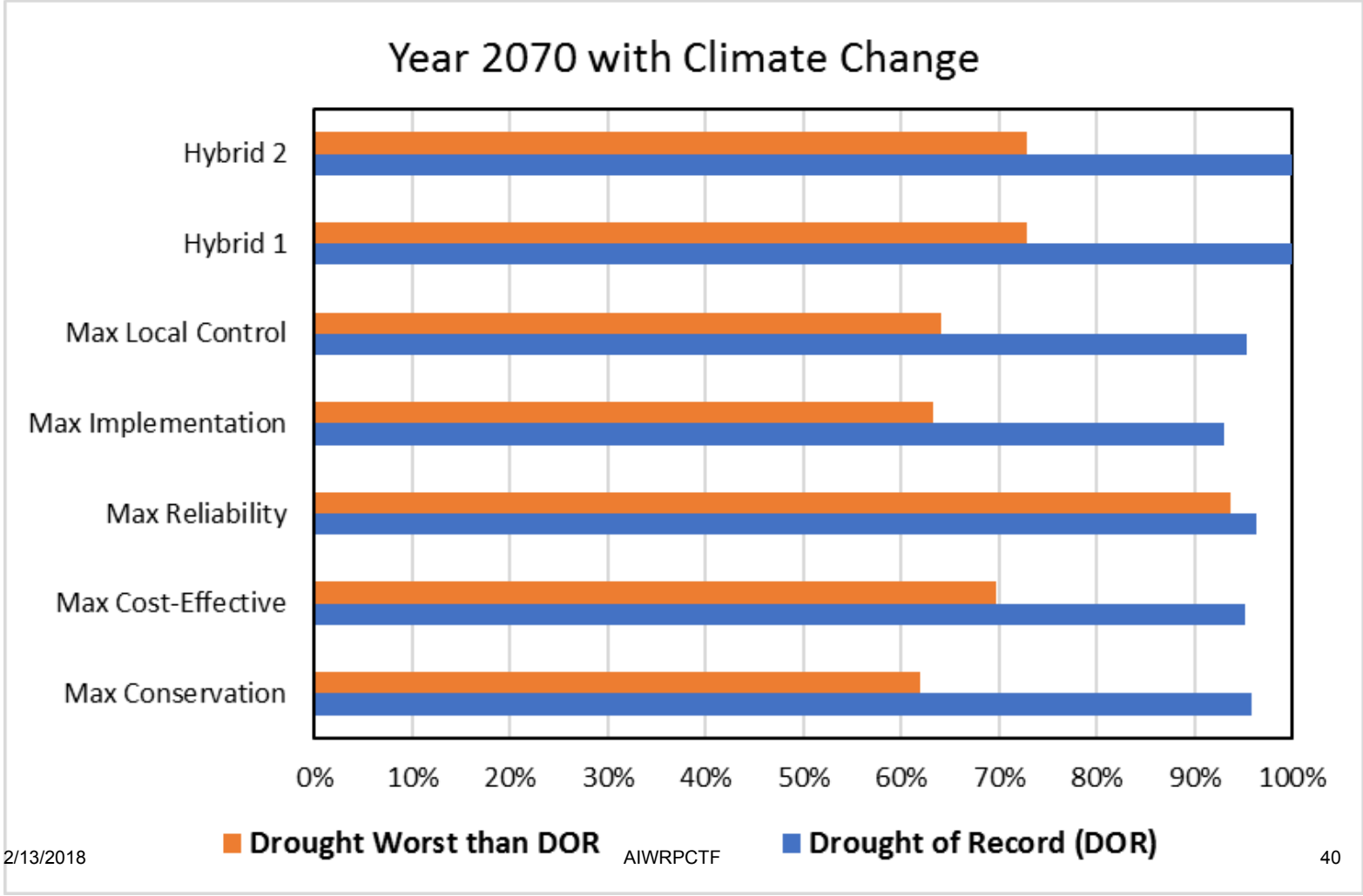
Supply Vulnerability in 2040

(Type 1, 2, & 3 shortages as a percent of during worst 12-months of drought)



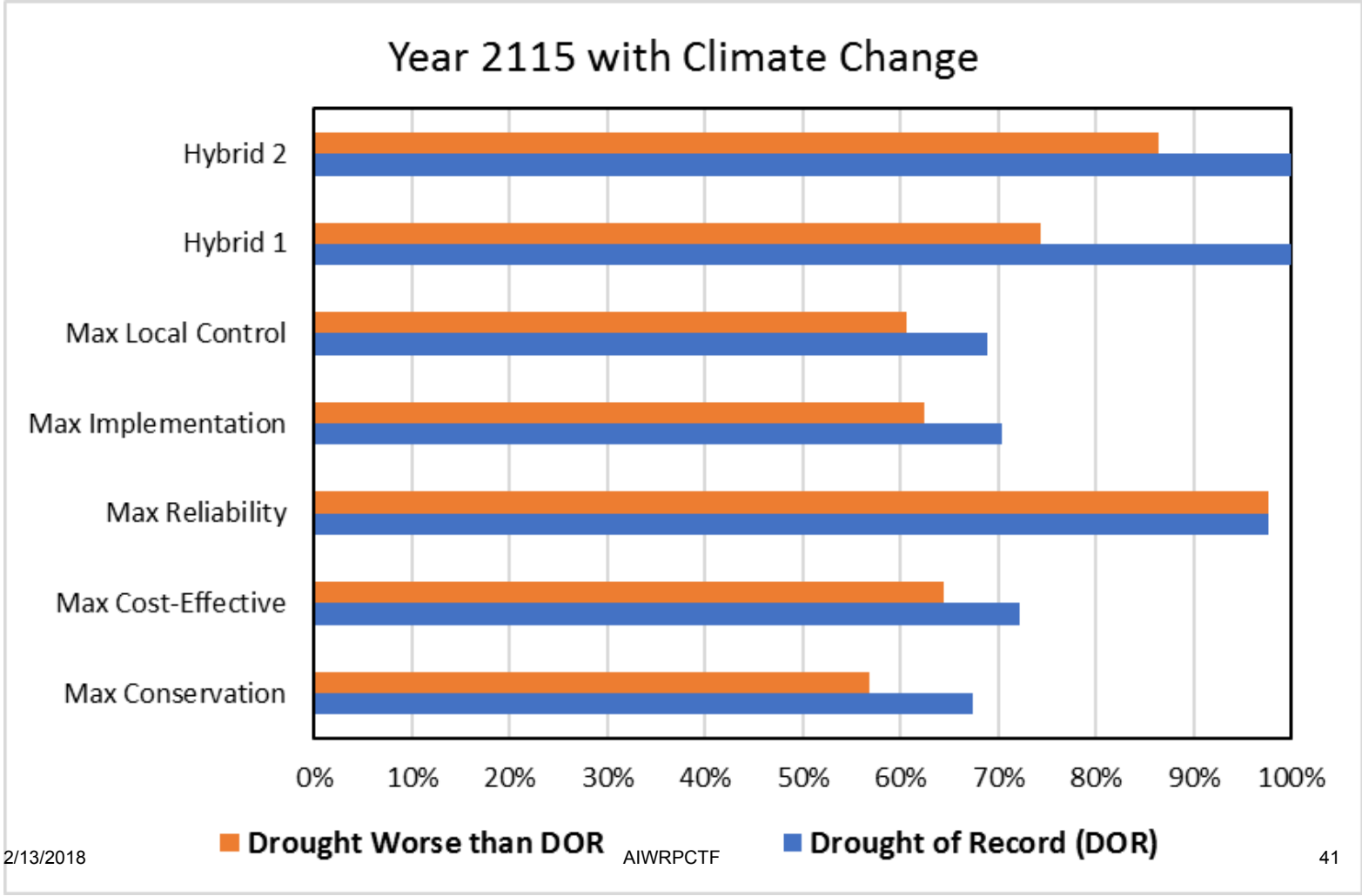
Supply Vulnerability in 2070

(Type 1, 2, & 3 shortages as a percent of during worst 12-months of drought)



Supply Vulnerability in 2115

(Type 1, 2, & 3 shortages as a percent of during worst 12-months of drought)



Performance Metrics (Handout)

Objective	Sub-Objective	Performance Measure	Units	Range	Max Cost-Effective	Max Control	Max Implementation	Max Reliability	Max Conservation	Hybrid 1	Hybrid 2
Water Supply Benefits	Vulnerability	% of Demand Met During 12-Months of Worst-Case Drought	%	0-100	81%	77%	77%	95%	76%	89%	92%
	Reliability	% of Months in Period of Simulation with No Shortages	%	0-100	93%	97%	97%	98%	97%	100%	100%
Economic Benefits	Maximize Cost-Effectiveness	Unit cost as present value sum of lifecycle cost vs water yield provided	$/AF	$1,000 - $4,000	$1,560	$2,091	$1,679	$3,178	$2,323	$2,602	$2,815
	Maximize Advantageous External Funding	External funding score (40%) and developer contribution score(60%)	qualitative	1-5	1.7	2.4	2.0	4.0	3.6	3.6	3.5
Environmental Benefits	Minimize Ecosystem Impacts	Ecosystem impact score	qualiative*	1-5	1.5	2.8	1.7	3.0	4.7	4.2	4.7
	Minimize Net Energy Use	Incremental net change in energy requirement	Millions of kWh/yr	90M - 320M	124.7	66.4	48.0	315.4	97.3	144.4	282.1
	Maximize Water Use Efficiency	Potable per capita water use	gpcd	65-80	81	68	77	73	67	67	68
Social Benefits	Maximize Multi-Benefit Infrastructure/Programs	Multiple benefit score	qualiative*	1-5	3.1	3.7	3.6	1.0	4.7	4.7	4.7
	Maximize Net Benefits to Local Economy	Local economy score	qualitative*	1-5	1.0	2.1	1.1	5.0	4.5	5.0	4.6
	Maximize Social Equity and Enivornmental Justice	Social equity and environmental justice score	qualitative	1-5	3.1	3.3	3.5	2.9	3.4	3.3	3.3
Implementation Benefits	Risk Potential	Risk score	qualitative	1-5	3.0	4.0	5.0	1.0	5.0	4.0	3.0
	Local Control/Local Resource	Local control/resource score	qualitative	1-5	3.0	5.0	4.0	2.0	3.0	5.0	5.0