



Climate Change Workgroup Meeting No. 3

August 23, 2012 ○ 9:00am - 11:00am

San Diego County Water Authority, Library Conference Room
4677 Overland Avenue, San Diego 92123

MEETING NOTES

Attendees

Linda Flournoy, Planning & Engineering for Sustainability	Sarah Harvey, Equinox Center
Tim Bombardier, SDCWA	Kathy Weldon, City of Encinitas
Anna Lowe, County of San Diego	Leslie Ryan, New School
Goldy Thach, City of San Diego	Lauma Jurkevics, DWR – So. Region
Persephene St. Charles, Dawn Flores, RMC	

1. Meeting No. 3 Objectives

The objectives of this meeting were to:

- Finalize management strategy prioritization
- Discuss potential climate change objective and target language

2. Finalize Management Strategy Exercise

Prior to meeting no. 3, the climate change workgroup was sent a homework exercise in which it was asked to review a list of climate change adaptation and GHG management strategies developed based on the DWR Climate Change Handbook and local climate change planning documents. The group was to review the list, and state whether each strategy was infeasible/irrelevant to the Region, is known to be opposed to in the Region, or should be refined. In addition, the group was asked to add in any strategies that might be missing. The group discussed the results of the management strategy homework exercise, including the following items:

- Results from the homework exercise, including strategies which have been screened out, and strategies that were added
- RMC recommendations to finalize the development of management strategies

- Management strategy list and prioritization

Homework Results

RMC first presented the list of strategies that were screened out according to the homework exercise, which is shown below:

- Agricultural use efficiency
- Irrigated land retirement
- Rainfed agriculture
- Waterbag transport/storage technology
- Precipitation enhancement
- Surface storage – CALFED
- Dewvaporation or atmospheric pressure desalination
- Fog collection
- Matching quality to use
- Forest Management
- Rolling easements
- Expendable/movable structures in risk areas

It was decided by the group that strategies should not be presented as “screened out”, but expressed in the Climate Change Study as “additionally reviewed strategies”, and should include a description of why they were not prioritized in the tier system described below. It was discussed that not screening out strategies will make the IRWM Plan a better resource. Strategies to be moved out of the above list include:

- Agricultural use efficiency: Include under “Treatment and distribution efficiency”
- Forest Management: Include in strategy list in the following two ways:
 - Add strategy “Increase urban forest management”
 - Combine with “Watershed management” to be “Watershed/forest management”
- Rainfed agriculture: Include in strategy list as-is

The group did not have comments on the strategies added to the list, which are those colored red in the attached strategy list.

Recommendations for Finalizing Management Strategies

The group reviewed additional modifications made to the management strategy list by RMC to refine the list, which the group did not have any comments on. These items, applied to the attached strategy list, include:

- Removal of repeated strategies
- Integration of the additional mitigation and adaptation strategies into main categories
- Refinement to achieve consistent level of detail
 - Sea level rise strategies consolidated & refined
 - Mitigation moved to operational efficiency
 - Additional adaptation strategies consolidated

Management Strategy List and Prioritization

The group then discussed RMC’s recommended process for prioritizing the list of management strategies. RMC recommended a strategy that used the following criteria to divide the strategies into tiers:

Tier	Criteria
Tier 1	<ul style="list-style-type: none"> • Considered “no regret” AND mitigates GHGs/is GHG neutral • Addresses the imported water (very high) vulnerability AND mitigates GHGs/is GHG neutral
Tier 2	<ul style="list-style-type: none"> • Included in other local climate change documents AND mitigates GHGs/is GHG neutral • Addresses at least 3 vulnerability areas AND mitigates GHGs/is GHG neutral
Tier 3	<ul style="list-style-type: none"> • Addresses at least 1 vulnerability or mitigates GHGs

The group was asked the below questions in regards to the tiering process and results of applying the criteria to the strategies (attached). Comments made by the group are listed under each question.

a) Do you like the tiering process?

- Consensus was that tiering of the strategies and the criteria used were good, but will need to define the application of the tiers in the Study (e.g. why is Tier 1 the highest?)

b) Do you agree with the Tier 1, 2 and 3 strategies?

- The prioritized strategies list was found to be acceptable, but would require two changes to the strategies currently in the list:
 - Education should be considered a “no regret” strategy, and therefore should be under Tier 1
 - Conveyance – Delta should be removed from the tiering and put in the “additionally reviewed strategies” list

c) Is there anything missing?

- Additional suggested criteria include:
 - Potential for effectiveness or cost/benefit analysis
 - Short term versus long term
 - Distributed versus centralized
 - Micro versus macro benefits
 - Reliability
- It was decided that the above additional suggested criteria do not strictly fall under climate change, and it is assumed that they will be used as part of the overall project prioritization process.

- The Study should include a discussion on how the strategies can be applied at a watershed level or should recommend that strategies should be considered relative to the needs of the watershed.
- d) What should the climate change target and objectives include?
- See next section

3. Discuss Potential Objectives and Targets

The group was unable to discuss this item due to time constraints. RMC will develop objectives and targets recommendations.

4. Summary and Action Items

- RMC to prepare meeting notes for Workshop #3
- RMC to finalize list of prioritized management strategies
- RMC to develop objectives and targets recommendations
- RMC to cancel Workshop #4

Post-Meeting Addendum

In response to the comments and discussions during Workshop #3, the RMC team completed the following items in order to help finalize the management strategies list and prioritization:

- Revised the list of “additional strategies considered” according to comments from the meeting, including the ranking of strategies moved out of the list
- Revised the list of prioritized management strategies relative to comments from the meeting

Revised List of “Additional Strategies Considered”

The below list of “additional strategies considered” was revised from the list presented at Workshop #3 to reflect the comments made during the discussion of screened out strategies (see blue font).

- ~~Agricultural use efficiency~~
- Irrigated land retirement
- ~~Rainfed agriculture~~
- Waterbag transport/storage technology
- Precipitation enhancement
- Surface storage – CALFED
- Dewvaporation or atmospheric pressure desalination
- Fog collection
- Matching quality to use
- ~~Forest Management~~
- Rolling easements
- Expendable/movable structures in risk areas
- ~~Conveyance - Delta~~

Revised List of Prioritized Management Strategies

The below list of prioritized management strategies was revised from the previous list presented at Workshop #3 to reflect the comments made during the discussion of screened out strategies (see blue font). Also attached is a revised version of the handout showing the score summary of each strategy.

Tier 1 Management Strategies	
Reduce Water Demand	Urban water use efficiency
Reduce Water Demand	Crop idling for water transfers
Reduce Water Demand	Education
Reduce Water Demand	Gray water use
Reduce Water Demand	Rainfed agriculture
Improve Operational Efficiency/Transfers	Conveyance – Delta
Improve Operational Efficiency/Transfers	Conveyance - Regional/local
Improve Operational Efficiency/Transfers	System Reoperation
Increase Water Supply	Conjunctive Management & Groundwater Storage
Increase Water Supply	Recycled Municipal Water
Improve Water Quality	Drinking Water Treatment and Distribution
Improve Water Quality	Groundwater/Aquifer Remediation
Improve Water Quality	Pollution Prevention
Improve Water Quality	Salt and Salinity Management
Improve Water Quality	Urban Runoff Management
Improve Flood Management	Flood Risk Management
Practice Resource Stewardship	Agricultural Lands Stewardship
Practice Resource Stewardship	Economic Incentives (Loans, Grants, Water Pricing)
Practice Resource Stewardship	Ecosystem Restoration
Practice Resource Stewardship	Land Use Planning and Management
Practice Resource Stewardship	Recharge area protection
Practice Resource Stewardship	Water-dependent recreation protecton
Practice Resource Stewardship	Watershed/Soils/Forest management
Practice Resource Stewardship	Water-dependent cultural resources and practices preservation
Practice Resource Stewardship	Increase urban forest management
Sea Level Rise	Building water facilities in coordination with land use/SLR planning

Tier 2 Management Strategies	
Improve Operational Efficiency/Transfers	Conduct emissions inventory and target
Improve Operational Efficiency/Transfers	Increase use of renewable energy sources
Increase Water Supply	Surface Storage - Regional/local
Improve Flood Management	Protective Infrastructure
Improve Flood Management	Sediment Management
Sea Level Rise	Protect water facilities through the relocation or removal of vulnerable structures
Sea Level Rise	Protect resources and facilities by constructing seawalls or levees
Sea Level Rise	Protect/restore/create coastal wetlands

Tier 3 Management Strategies	
Reduce Water Demand	Water meters installation
Improve Operational Efficiency/Transfers	Treatment and distribution efficiency
Improve Operational Efficiency/Transfers	Water Transfers
Improve Operational Efficiency/Transfers	Localized Treatment
Improve Operational Efficiency/Transfers	Shift water use to off-peak hours
Improve Operational Efficiency/Transfers	Optimize Sewer Systems
Increase Water Supply	Desalination (Seawater or Brackish Groundwater)
Increase Water Supply	IPR/Reservoir Augmentation

Management Strategies	Strategy Tier	Context		Vulnerability Adaptation Score			Mitigation Score
		No Regret	City/County CAP	Highest Vulnerability Issue Priority	Number of Issue Areas Addressed	Issue Areas (WD=Water Demand, WS=Water Supply, WQ=Water Quality, FC=Flood Control, HAB=Habitat Protection, SLR=Sea Level Rise, HY=Hydropower)	Number of Mitigation Issues Addressed
Reduce Water Demand							
Urban water use efficiency	Tier 1	Yes	Yes	Very High	4	WD, WS, WQ, HAB	2
Crop idling for water transfers	Tier 1			Very High	4	WD, WS, WQ, HAB	1
Water meters installation	Tier 3			Medium	2	WD, HAB	2
Education	Tier 1	Yes	Yes	Very High	4	WD, WS, WQ, HAB	3
Gray water use	Tier 1			Very High	4	WD, WS, WQ, HAB	2
Rainfed Agriculture	Tier 1			Very High	2	WD, WS	2
Improve Operational Efficiency/Transfers							
Conveyance - Regional/local	Tier 1	Yes		Very High	4	WD, WS, FC, HAB	2
System Reoperation	Tier 1	Yes		Very High	4	WS, WQ, FC, HAB	2
Water Transfers	Tier 3			Very High	2	WS, WQ	-2
Localized Treatment	Tier 3			Medium	1	WQ	2
Shift water use to off-peak hours	Tier 3			High	2	WD, WS	2
Optimize Sewer Systems	Tier 3			Very High	0		2
Conduct emissions inventory and target	Tier 2		Yes	n/a	0		2
Treatment and distribution efficiency (urban and agricultural)	Tier 3			Medium	0		2
Increase use of renewable energy sources	Tier 2		Yes	n/a	0		2
Increase urban forest management	Tier 2			High	3	WS, WQ, FC	1
Increase Water Supply							
Conjunctive Management & Groundwater Storage	Tier 1	Yes		Very High	3	WD, WS, WQ	0
Desalination (Seawater or Brackish Groundwater)	Tier 3			Very High	2	WD, WS	-2
Recycled Municipal Water	Tier 1	Yes		Very High	3	WD, WS, WQ	2
Surface Storage - Regional/local	Tier 1			Very High	5	WD, WS, WQ, FC, HY	1
IPR/Reservoir Augmentation	Tier 3			Very High	3	WD, WS, WQ	2
Improve Water Quality							
Drinking Water Treatment and Distribution	Tier 1	Yes		Very High	2	WS, WQ	0
Groundwater/Aquifer Remediation	Tier 1			Very High	2	WS, WQ	0
Pollution Prevention	Tier 1	Yes		High	2	WQ, HAB	2
Salt and Salinity Management	Tier 1	Yes		High	1	WQ	2
Urban Runoff Management	Tier 1	Yes		Very High	4	WS, WQ, FC, HAB	3
Improve Flood Management							
Flood Risk Management	Tier 1	Yes		High	5	WQ, FC, HAB, SLR, HY	1
Protective Infrastructure	Tier 2			High	3	WQ, SLR, FC	0
Sediment Management	Tier 2			High	3	WQ, FC, HAB	0
Practice Resource Stewardship							
Agricultural Lands Stewardship	Tier 1	Yes		High	3	WD, WS, WQ	3
Economic Incentives (Loans, Grants, Water Pricing)	Tier 1			Very High	7	WD, WS, WQ, FC, HAB, SLR, HY	3
Ecosystem Restoration	Tier 1	Yes		High	5	WS, WQ, SLR, FC, HAB	1
Land Use Planning and Management	Tier 1	Yes		High	6	WD, WS, WQ, SLR, FC, HAB	1
Recharge area protection	Tier 1	Yes		Very High	5	WD, WS, WQ, FC, HAB	1
Water-dependent recreation protecton	Tier 1	Yes		Medium	3	WD, WQ, SLR	1
Watershed/Soils/Forest Management	Tier 1	Yes		High	6	WD, WS, WQ, FC, HAB, HY	1
Water-dependent cultural resources and practices preservation	Tier 1	Yes		n/a	1	HAB	0
Sea Level Rise							
Protect water facilities relocation or removal of vulnerable structures	Tier 2		Yes	High	2	SLR, FC	0
Protect resources and facilities by constructing seawalls or levees	Tier 2		Yes	High	4	WQ, FC, SLR, HAB	0
Building water facilities in coordination with land use/SLR planning	Tier 1	Yes	Yes	High	4	WD, WQ, SLR, FC	0
Protect/restore/create coastal wetlands	Tier 2		Yes	High	4	WQ, FC, SLR, HAB	1