Prioritized Climate Change Vulnerabilities & Resource Management Strategies

Draft: June 4, 2018

Using DWR's *Climate Change Handbook for Regional Water Planning*, the Climate Change Workgroup developed an analysis of the Region's vulnerabilities. This analysis was the primary activity of the Climate Change Workgroup during their June 2012 workshop. Once vulnerabilities were identified, they were ranked and categorized. Vulnerabilities were categorized into five priority levels: Very High, High, Medium, Low, and Very Low. In order to clarify management strategies that would directly or indirectly reduce these vulnerabilities, they were cross-walked against the resource management strategies (RMS) identified in the *California Water Plan Update 2013* and will be included as part of the *2019 IRWM Plan* (in draft).

Key: ● = directly reduces vulnerability | ○ = indirectly reduces vulnerability or possibly addresses vulnerability depending on project description

IRWM Plan Prioritized Climate Change Vulnerability Issues	**Resource Management Strategies**																													
	Agricultural Water Use Efficiency	Urban Water Use Efficiency	Conveyance – Delta	Conveyance – Regional/Local	System Reoperation	Water Transfers	Conjunctive Management & Groundwater	Desalination – Brackish and Seawater	Recycled Municipal Water	Surface Storage – CALFED	Surface Storage – Regional/Local	Drinking Water Treatment and Distribution	Groundwater and Aquifer Remediation	Matching Quality to Use	Pollution Prevention	Salt and Salinity Management	Urban Stormwater Runoff Management	Agricultural Lands Stewardship	Ecosystem Restoration	Forest Management	Land Use Planning and Management	Recharge Areas Protection	Sediment Management	Watershed Management	Flood Management	Economic Incentives (Loans, Grants, and Water Pricing)	Outreach and Engagement	Water and Culture	Water-dependent Recreation	Water Resources Data Collection, Management, and	Scientific and Technical Water Quality Management	Wastewater Management
Very High																														
Water Supply: Decrease in imported supply	●	●	○	●	○	●	●	●	●	○	○	○	○	●		○	○	○		○	○	●	○	○		○				○
High																														
Water Supply: Sensitivity due to higher drought potential	●	●	○	○	●	●	●	●	●	○	●	○	○	●		○	○	○	○	○	○	○	○	●		○		●		○		○
Water Quality: Increased constituent concentrations					●							●	●	●	●	●	○	●	●	○	●	○	●	●	○	○		●		●	●	●
Flooding: Increases in flash flooding and inundation (extreme weather)				○	○						○						●	○	○	●	●	○	●	●	●	○				●		
Ecosystem/Habitat: Decrease in available necessary habitat			●	●	●		○		○		○				●	○	○	●	●	●	●	●	●	●	○	○		●	○	●	○	
Sea Level Rise: Inundation of storm drains and sewer systems																					●				●	○				●		
Ecosystem/Habitat: Decrease in ecosystem services		○	●	●	●		○						●		○	○	○	●	●	●	●	○	●	●	●	○		●	○	●	●	
Medium																														
Water Demand: Crop demand would increase	●					●	○	●	●		●		○	●				●								○	●	●		●		○

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Water Demand: Industrial demand would increase		●				●	○	●	●		●		○	●											○	●	●		●		○
Water Supply: Decrease in groundwater supply	●	●	●		○	○	●	●	○		○	○	●	○		○	○	○	○	○	○	●		●	○	○				●		○
Water Quality: Increase in treatment cost		○			●		○				○	●	●	●	●	●	○	○	○	○	●	●	○	○		○				○	●	○
Sea Level Rise: Damage to coastal recreation / tourism due to inundation																			●		●		○	●		○		●	●			
Low																																
Water Demand: Limited ability to conserve further	●	●				○		●	●		●		○	●												○	●	●				
Water Supply: Lack of groundwater storage to buffer drought	○	●			●	○	●	○	○	○	○	○	●			○	○				●	●		●	○	○				●		
Water Quality: Increased eutrophication	○				●							●		○	○	●	○	●	○	●	●		●	●		○				●	●	○
Flooding: Increases in inland flooding			●	●	○						○				○		○	○	●	●	●		●	●	●	○				●		
Ecosystem/Habitat: Increased impacts to coastal species			○	○											○		○		●	○	●		○	●		○		●		●	○	
Very Low																																
Water Demand: Limited ability to meet summer demand	●	●	●	●	●	●	●	●	●	●	●	○	○	●		○		○				○				○	●	●				○
Water Supply: Invasive species can reduce supply available					●			○	○		○				○			○	●	●	●	○	○	●		○				●	○	
Water Quality: Decrease in recreational opportunity		○			○						○				○		○		●	○	●	○	○	●	○	○	○	●	●		●	
Sea Level Rise: Decrease in land																			●		●		○	●		○		●				
Sea Level Rise: Damage to ecosystem/habitat																			●		●		●	●		○		●				
Ecosystem/habitat: Decrease in environmental flows	●	●	●	●		○	●	○	○		○			○			○	●	○	●	●		●	●	○	○				●		
Hydropower: Decrease in hydropower potential		○			●	○																				○				●		