



Colorado's Drought Vulnerability Assessment



COLORADO
Department of Natural Resources

Why is a Vulnerability Assessment Useful?

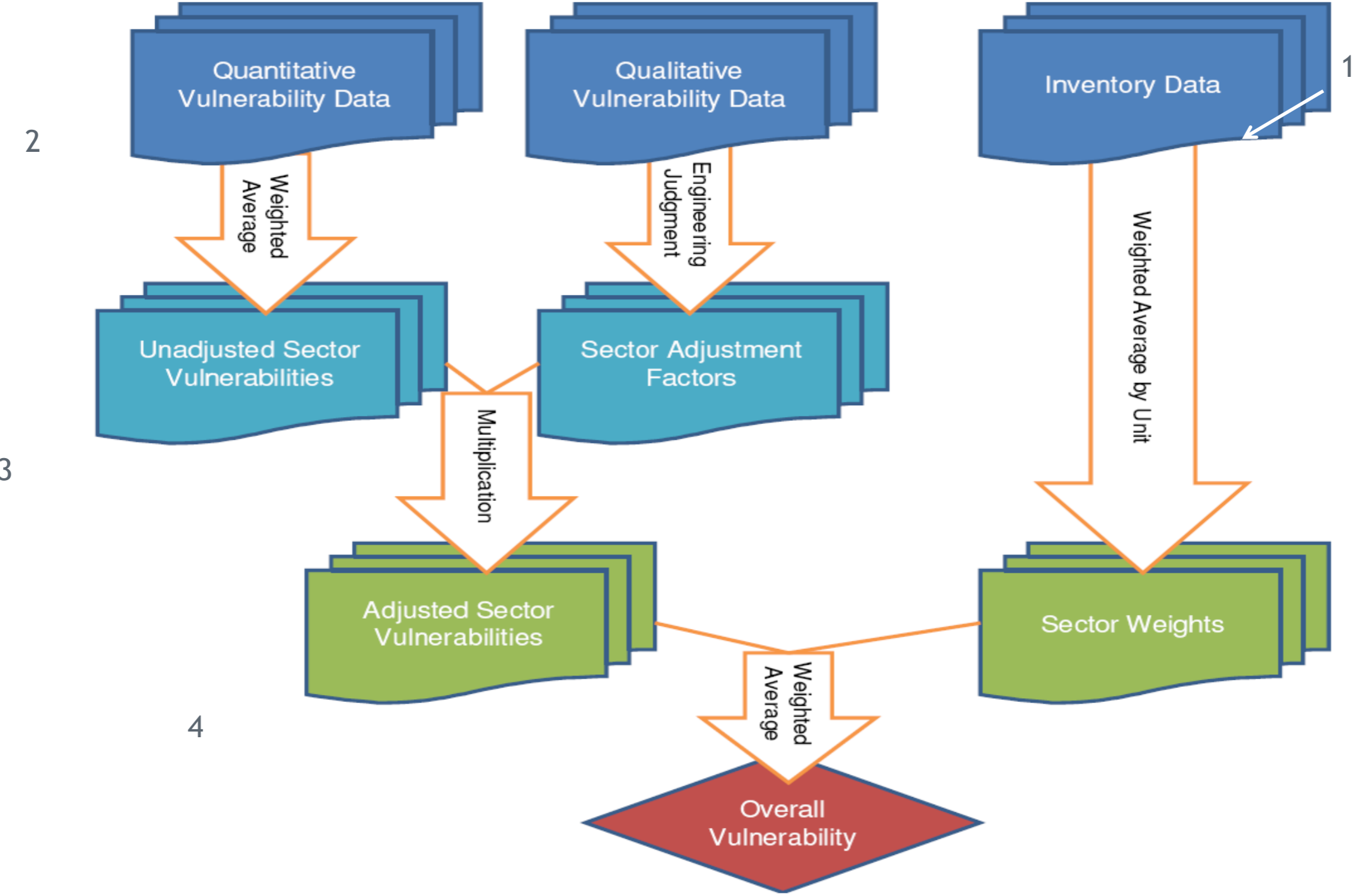
Vulnerability is any susceptibility to injury or damage from hazards.

Vulnerability Assessment is an in-depth analysis of the characteristics to identify weaknesses and lack of redundancy.

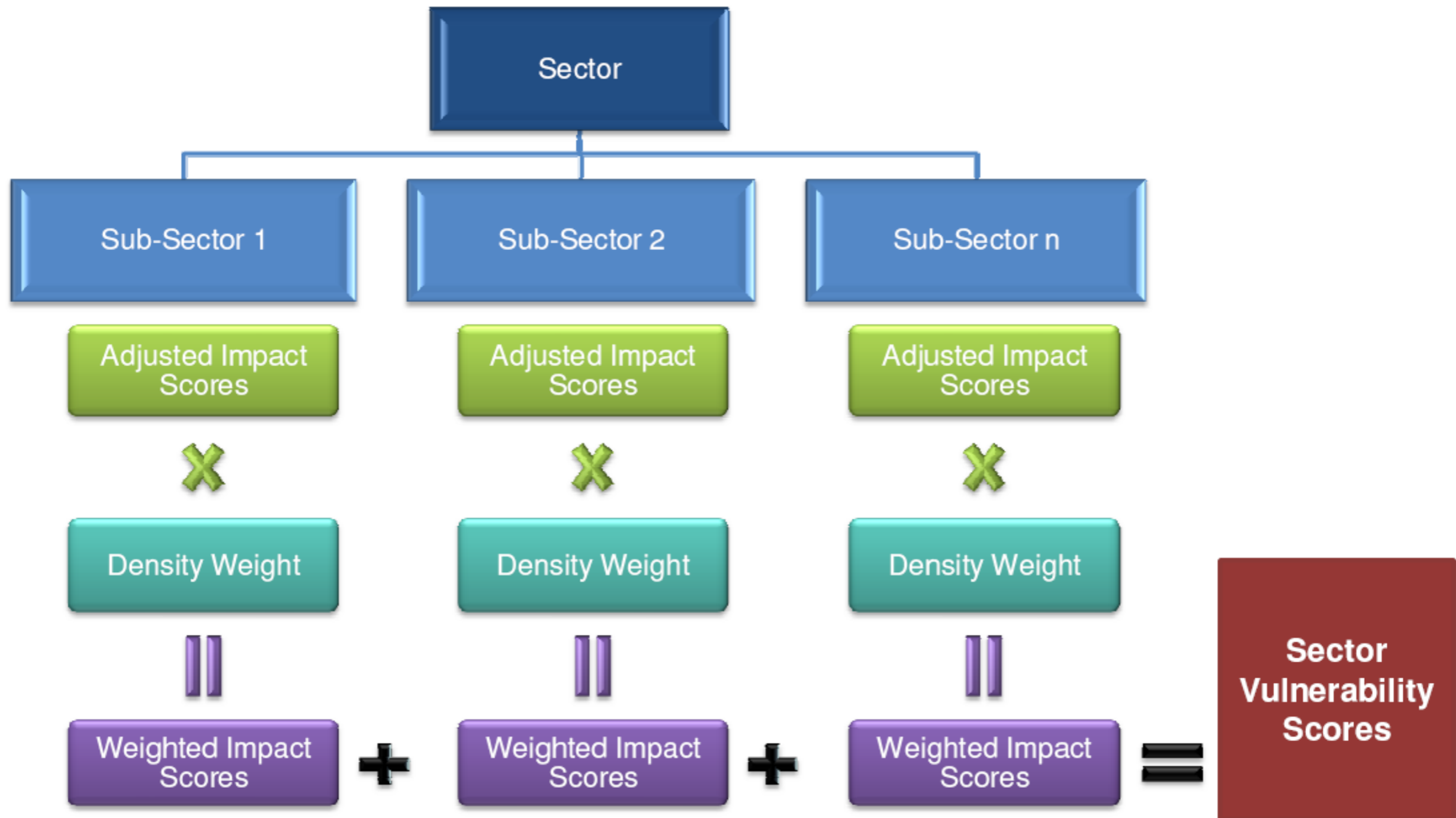
The findings can then be used to determine priorities for mitigations or corrective actions that can be designed or implemented to reduce the vulnerabilities.



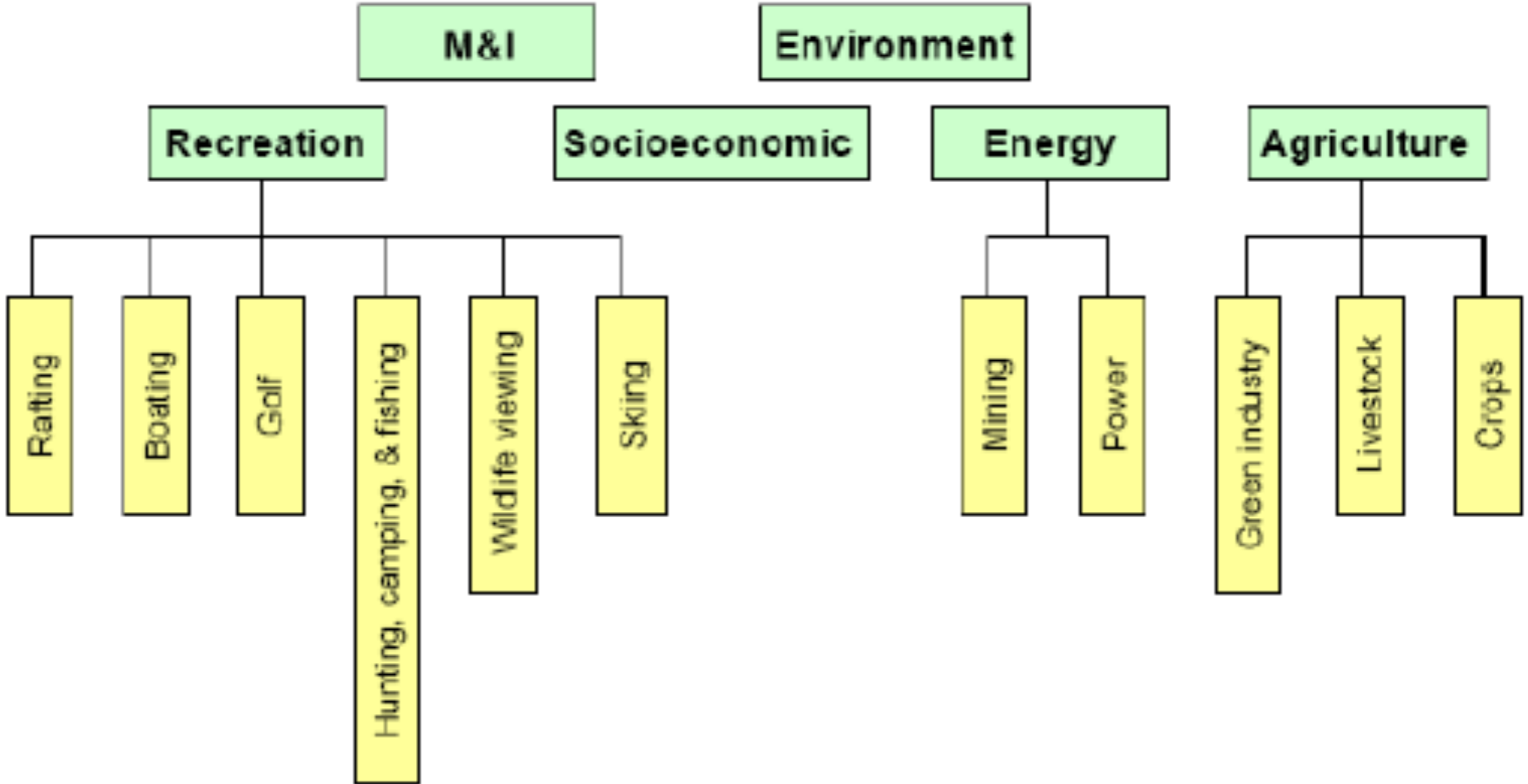
Methodological Framework



Sector Vulnerability Calculations



Sectors and Sub-sectors for Drought Vulnerability Assessment



Impact Metric Results

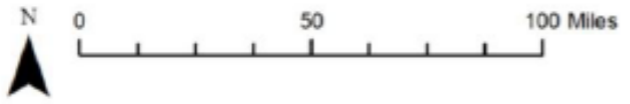
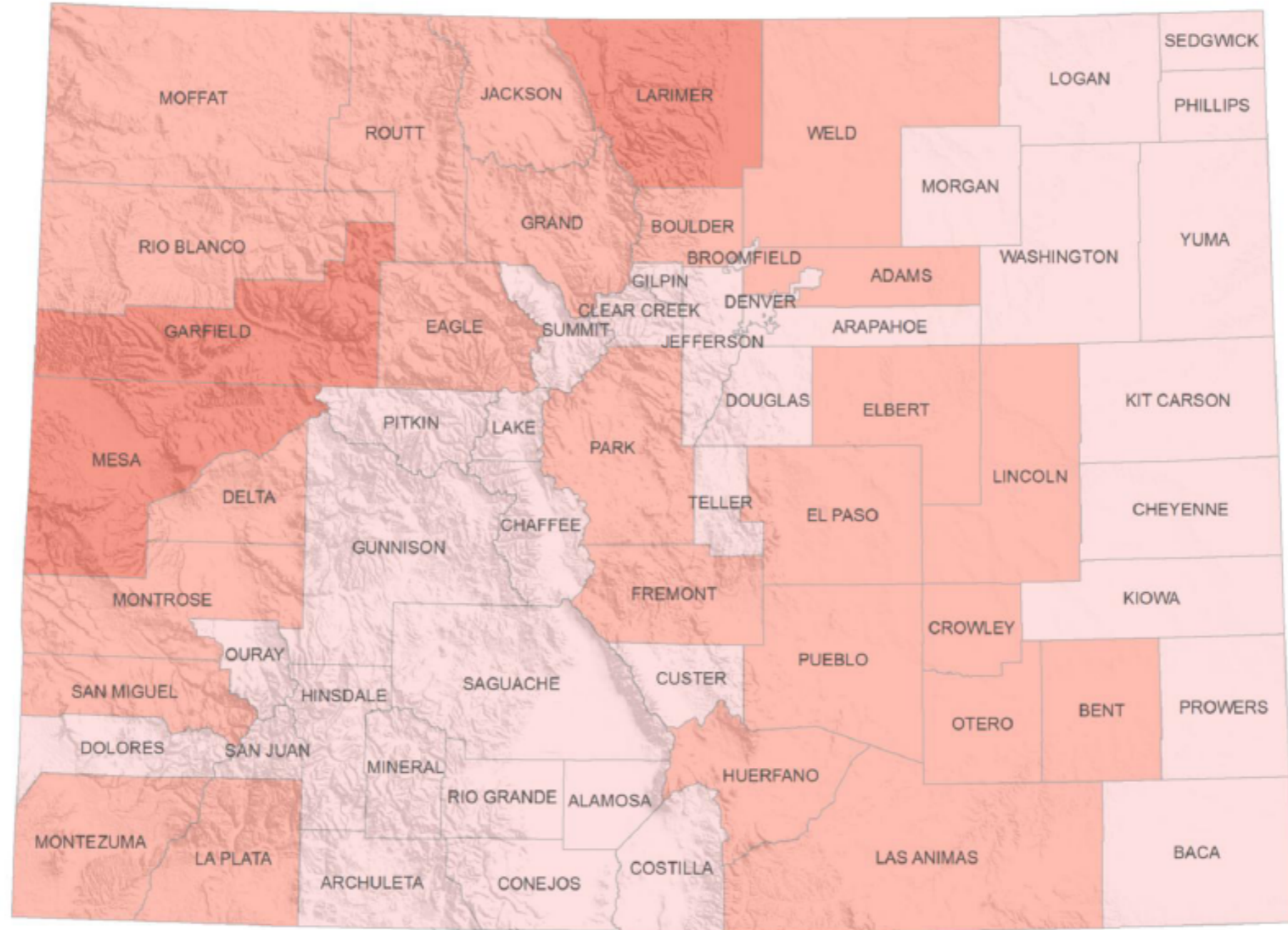
Greater Colorado Springs Area



Environment Impact Metrics

	GAP Stewardship Status	Impaired Reach Length (meters)	Impaired Lake Area (sq km)	Bark beetle aerial extent (acres per county)	Wildfire susceptibility index (ranking)	Sum length (km) of higher order streams	Instream flow rights (adaptive)	OVERALL Vulnerability Ranking
Douglas		L	L		H	L		2
Elbert		H	L	L	L	H	L	2
El Paso			H					3
Fremont	H		L	H	H			3
Pueblo		H	L	L		H	H	3
Teller		L	L			L	H	1

Overall Environmental Vulnerability Scores

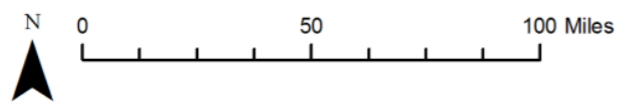
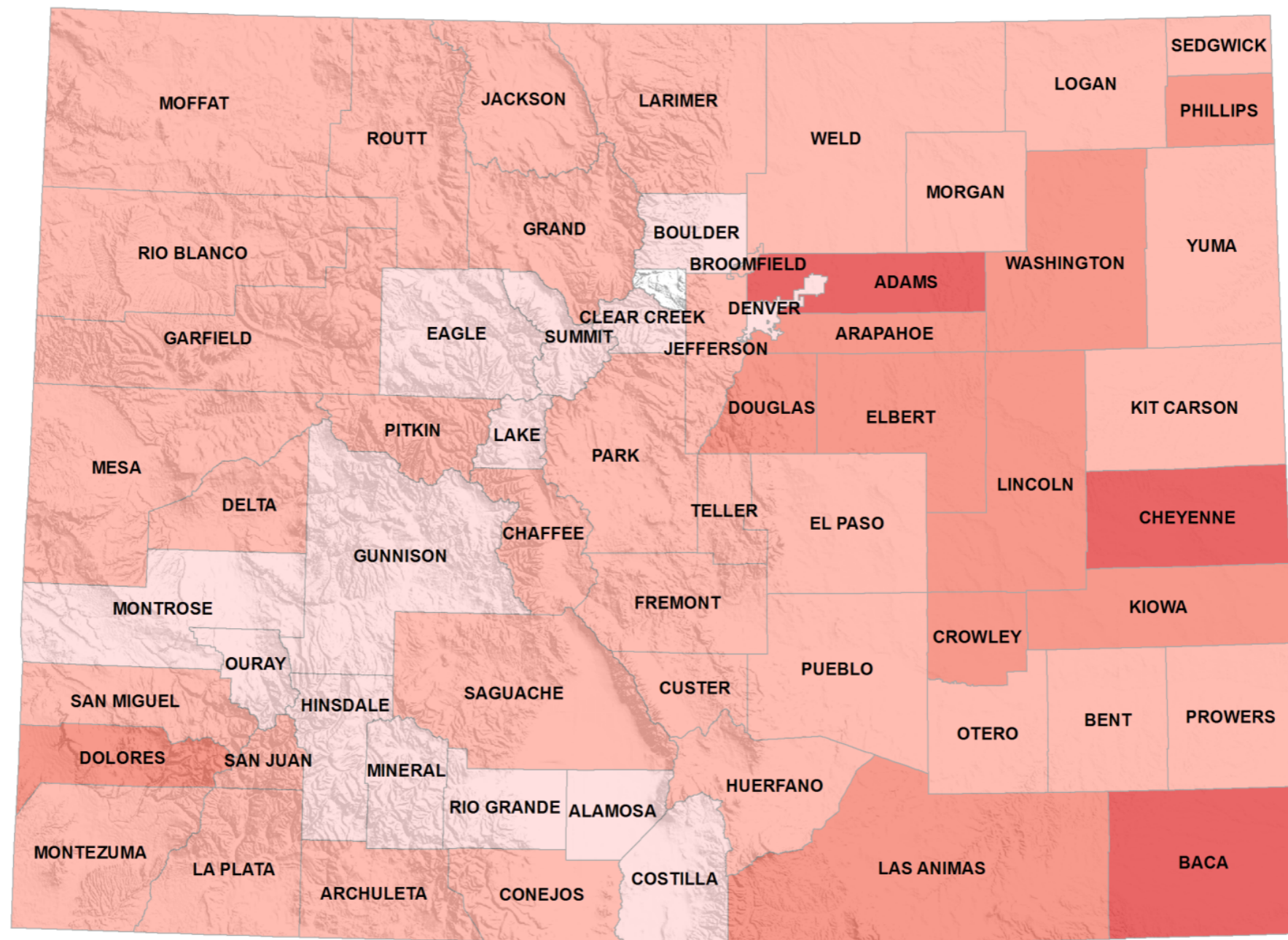


COLORADO
Department of Natural Resources

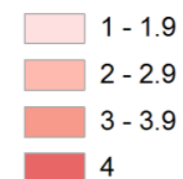
Agricultural Impact Metrics

	Livestock			Crops			
	2010 Livestock Indemnity	Reduction in Herd Size	'01-'09 Avg. # of Dairy Cattle	% Dry land Acreage	2002 Crop Indemnities	Non-insured Assurance Prog. Allotments	OVERALL Vulnerability Ranking
Douglas	L	L	H	H	L		3.6
Elbert	L	L		H		H	3.6
El Paso	L	L	H	H	L	H	2.8
Fremont	L				L		2.3
Pueblo	L	L				H	2.6
Teller	L	L	H		L		2.8

Overall Agriculture Vulnerability Scores



Vulnerability Score



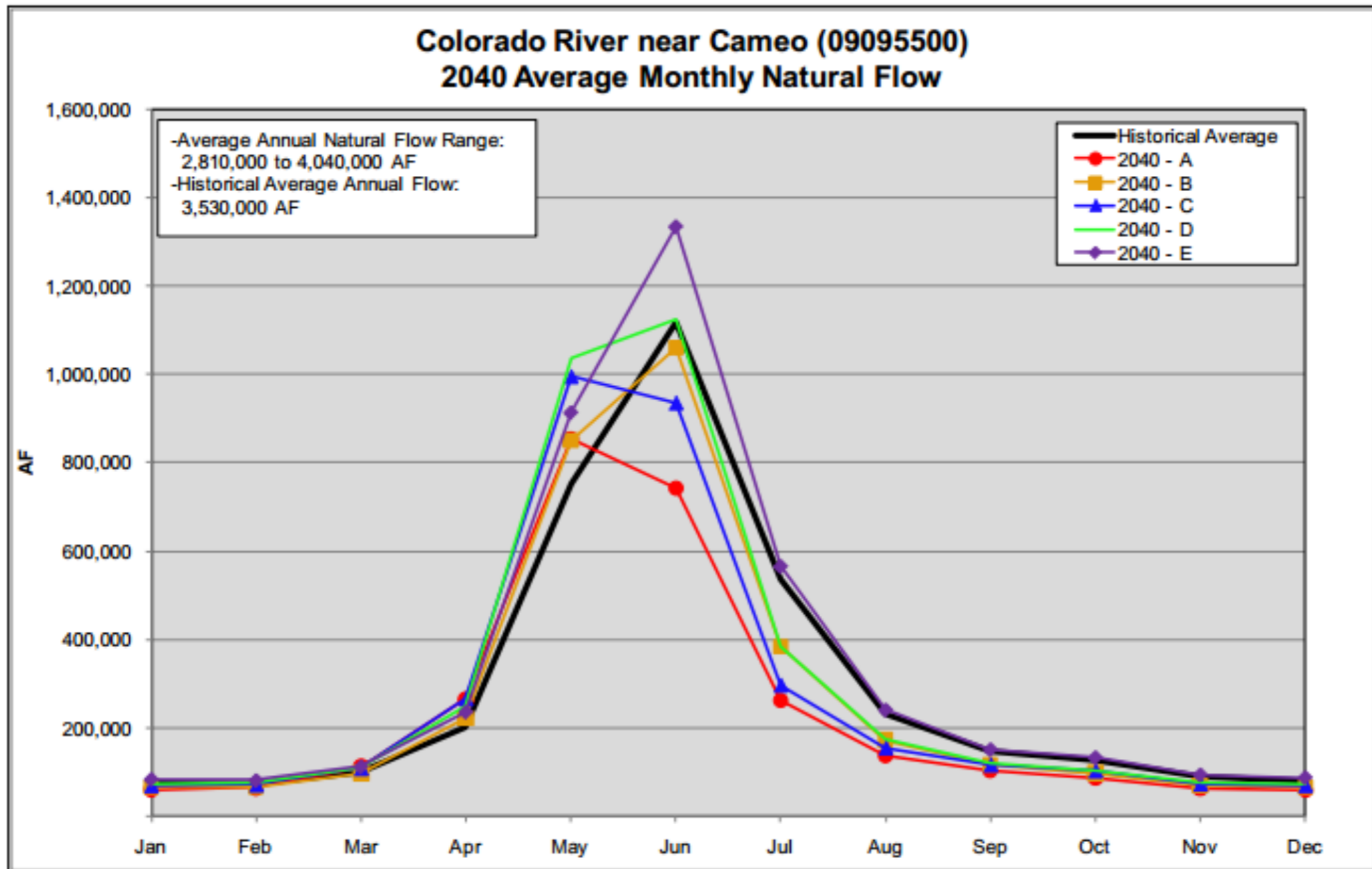


Climate Change

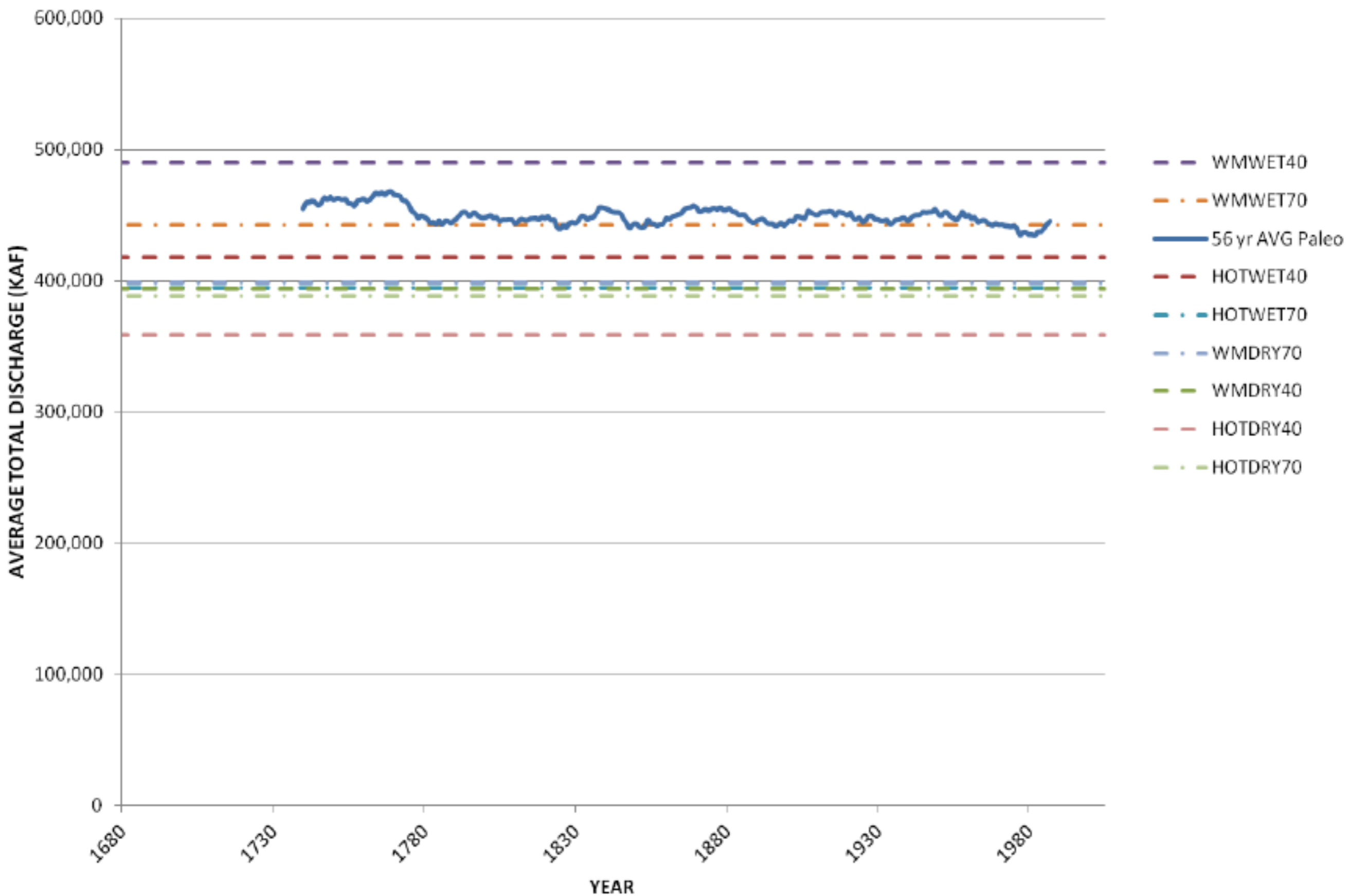


COLORADO
Department of Natural Resources

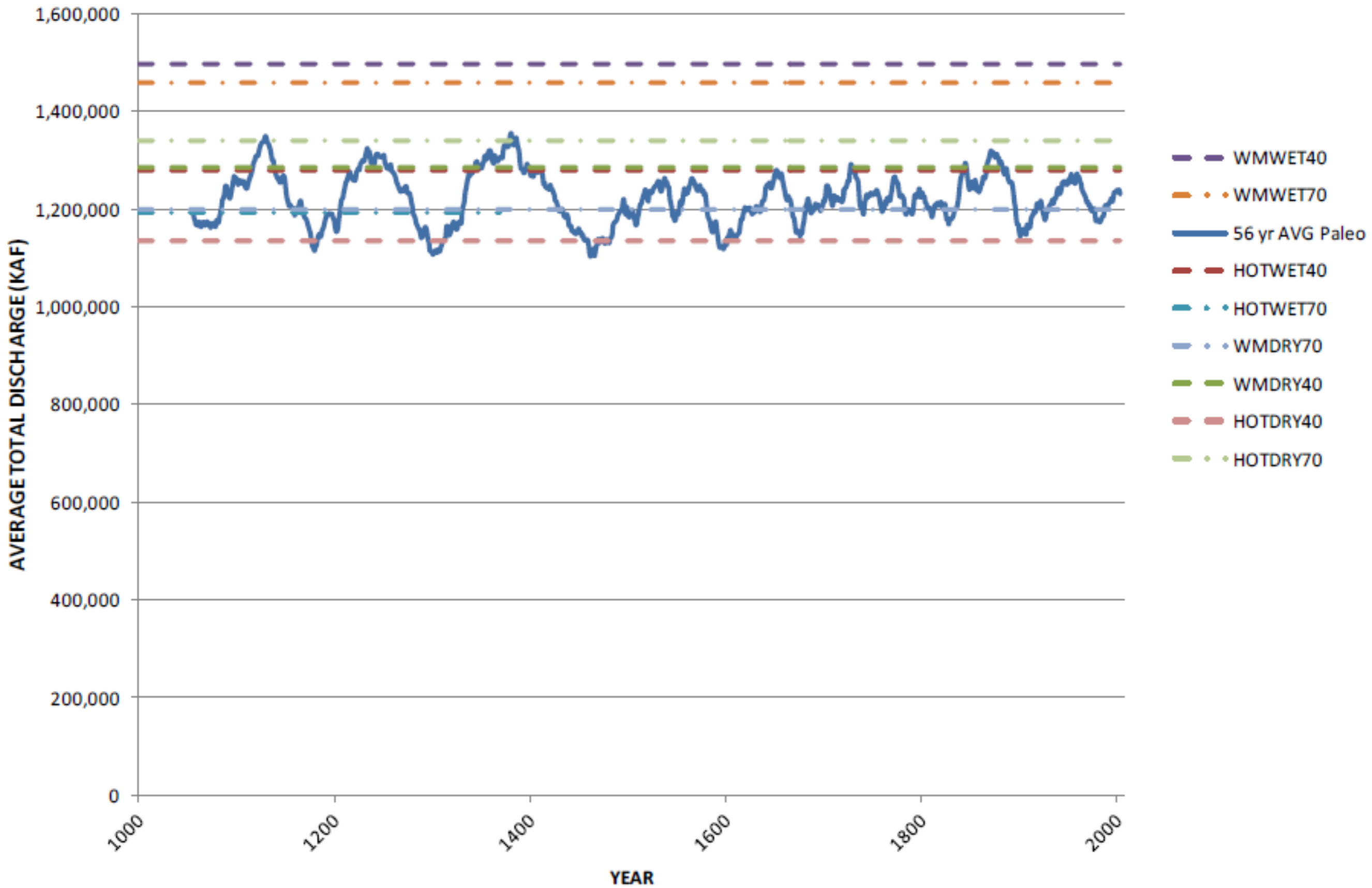
Spell return intervals and average intensities



Arkansas River at Salida 56-Year Average Flow - Paleo Reconstructions and Average Sacramento Projections



Yampa R at Maybell 56-Year Average Flow - Alternate Paleo Reconstructions and Average CRWAS Projections



Role of Climate Change in Long Term Water Planning

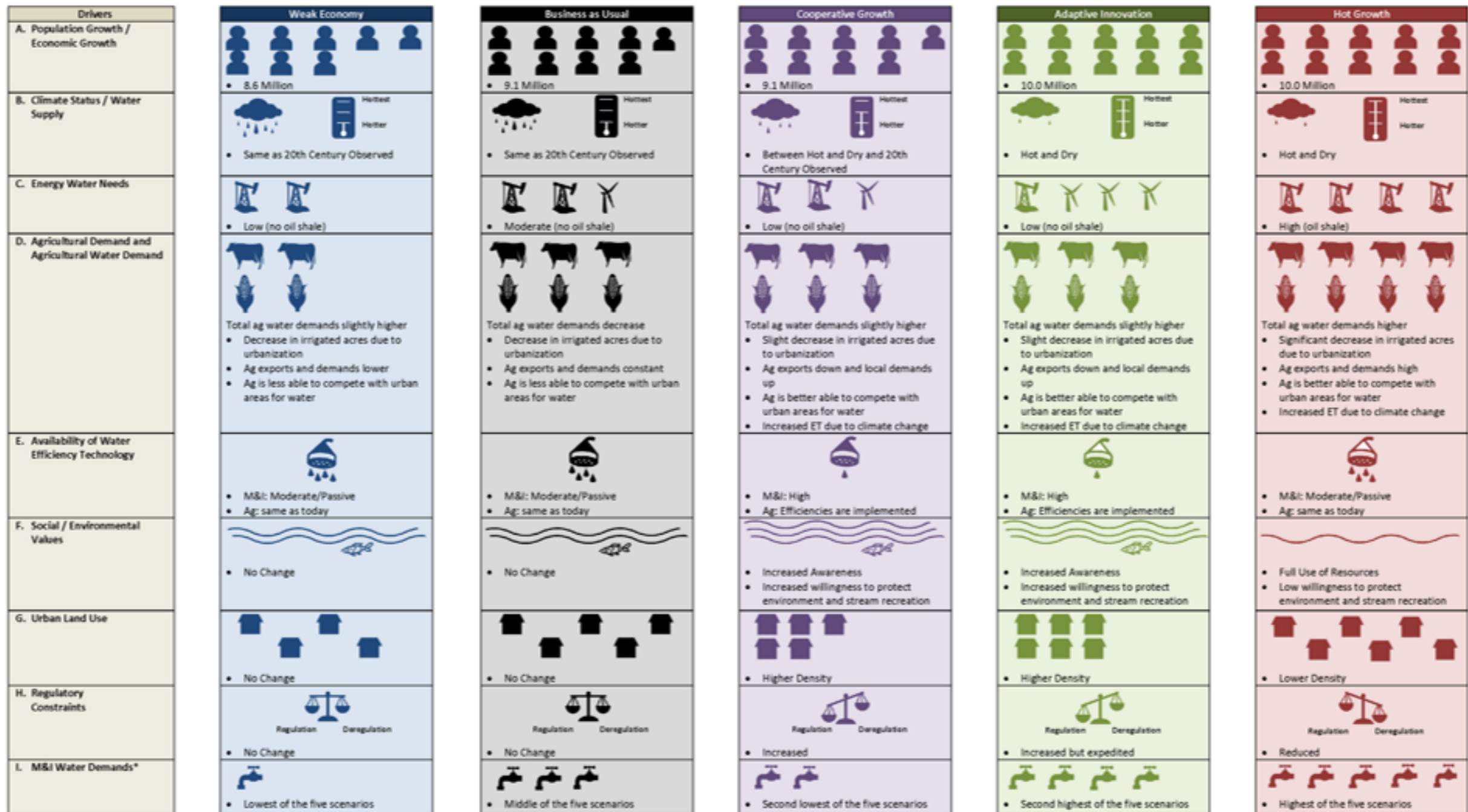
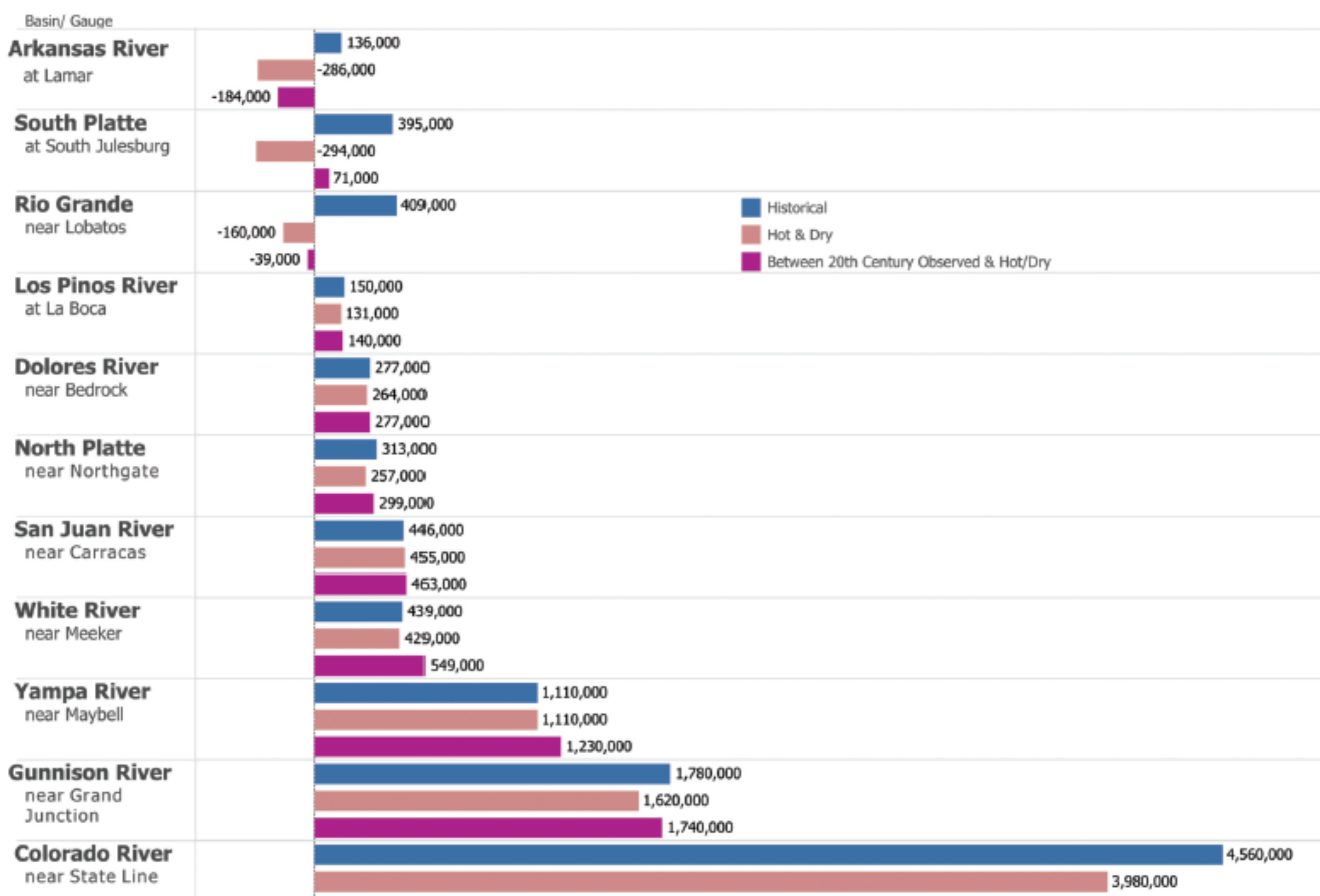


Figure 1. State of Colorado Future Water Supply Scenarios





Questions?

Taryn Finnessey

Colorado Water Conservation Board

303.866.3441 X3231

taryn.finnessey@state.co.us



COLORADO

Department of Natural Resources