



6 | Assessment of System Effects Resulting from Development of Tribal Water

Contents

	<i>Page</i>
6.0	Introduction..... 6-1
6.1	Approach..... 6-1
6.1.1	Colorado River Simulation System 6-1
6.1.2	Five-Step Approach 6-2
6.2	Identify Tribal Water Development Scenarios 6-3
6.3	Develop Metrics to Measure System Effects..... 6-3
6.3.1	Upper Basin Metrics and Analyses..... 6-4
6.3.2	Lower Basin Metrics and Analyses 6-5
6.4	Configure Colorado River Simulation System 6-6
6.5	Develop Modeling Assumptions..... 6-7
6.6	Analyze Results 6-9
6.6.1	Upper Basin Modeling Results 6-10
6.6.2	Lower Basin Modeling Results..... 6-18
6.7	Summary..... 6-25

Figures

- 6-A Conceptual Representation of the Modeling Performed for a Given Development Scenario
- 6-B Annual Inflow into Lake Powell (2017 – 2060)
- 6-C Annual Lake Powell Elevation (2017 – 2060)
- 6-D Upper Basin Percent Shortage of Diversion Requested
- 6-E Annual Lake Mead Elevation (2017 – 2060)
- 6-F Lower Basin Hydrologic Shortage as Percent of Requested Consumptive Use, Observed Natural Flow Water Supply Scenario
- 6-G Lower Basin Hydrologic Shortage as Percent of Requested Consumptive Use, Global Climate Model Water Supply Scenario
- 6-H Lower Basin Non-Tribal Consumptive Use

Tables

- 6-A Metrics for Upper and Lower Basin System Effects Analysis
- 6-B San Juan Basin in Colorado Depletion and Shortage Volumes for Tribal and Non-Tribal Water Users – 2008



6-C San Juan Basin in Colorado Depletion and Shortage Volumes for Tribal and Non-Tribal Water Users – 2012

Appendix

6A Methodology for Conducting San Juan Sub-basin Historical Shortage Analysis