Executive Summary

This document is a report prepared under the direction of the Watershed Management Planning Committee (WMPC) of the Upper Gunnison River Water Conservancy District (District) on the first phase of a watershed management planning process in the Upper Gunnison River Basin. The Watershed Management Plan (WMP) is intended to improve water security for all water uses in the Upper Gunnison Basin, by protecting existing uses, meeting user shortages, and maintaining healthy riverine ecosystems in the face of future demands and climate uncertainty, as laid out in Colorado's Water Plan (CWP) and the Gunnison Basin Roundtable's Basin Implementation Plan (GBIP). At the conclusion of the multi-year process, a long-term management plan will be developed locally for the Upper Gunnison Basin as directed by CWP. In this Report, baseline and future needs assessment information has been compiled, identifying the complex interaction between agricultural, domestic, recreational, and environmental uses of water.

For planning purposes, the WMPC has divided the Upper Gunnison River Basin into seven smaller Basins as depicted in Figure 1-1, because each has unique natural and cultural characteristics. This Report addresses three of those seven: Ohio Creek, East River, and Lake Fork of the Gunnison River (Phase I Basins). For each of the Phase I Basins, the WMPC employed a basin coordinator who performed or supervised the field work and stakeholder participation that provided the basis for the assessments and who is principal author of the Report for that basin. Technical input was provided by consultants.

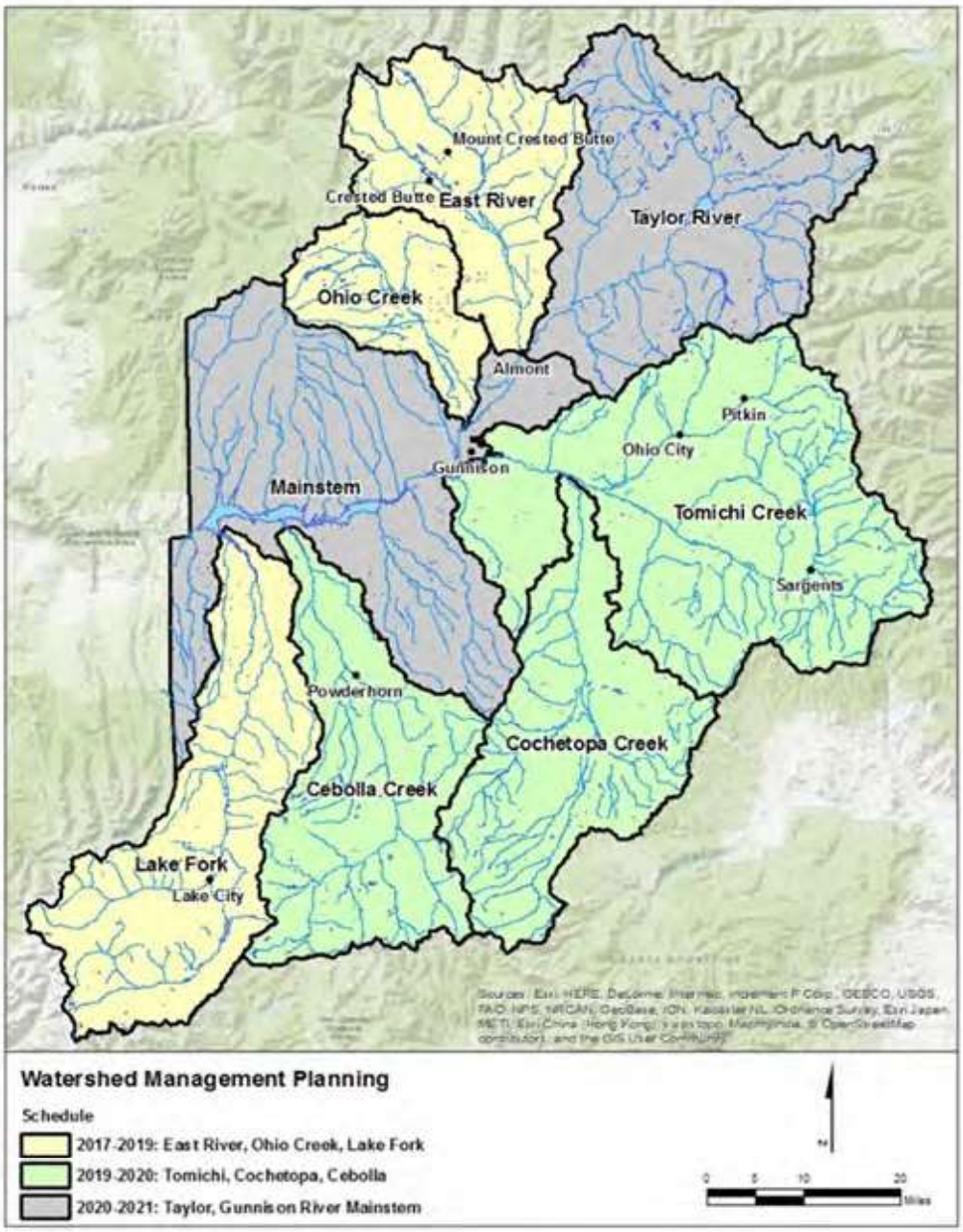

Figure 1-1: Upper Gunnison River Sub-Basins

The introduction in Chapter 1 provides the background and purpose for the Report and a description of the tasks completed by the consultants and basin coordinators.

Chapter 2 provides the legal and regulatory framework for the Report. Chapter 3 identifies environmental issues common to all of the Phase I Basins.

Chapter 4 describes stakeholder engagement in the assessment and planning process.

Chapters 5 through 7 address the Phase I Basins, beginning with an analysis of basin-wide characteristics, including geography and principal land and water uses, to provide a foundation for the data collection and needs assessments that follow. The primary objective of the initial sections of each chapter is to provide a summary of existing water use within the basin, including irrigation, domestic, environmental, and recreational uses, and identify the major challenges for water users.

To understand Basin characteristics, quantify existing water use, and develop a planning model to investigate options to meet stakeholder concerns, the following data assessment was conducted and reported for each of the Phase I Basins:

- Streamflow measurements
- Climate data
- Irrigated acreage
- Water rights
- Diversion records
- Irrigation practices
- Return flow parameters

Beginning with Section 5 in each Chapter, distinct stream reaches within the basin are assessed according to their unique characteristics and issues. The approach to investigating consumptive water needs, environmental and water quality needs, and recreational needs were tailored for each reach. The Report describes the approach to assessing current uses and identifying needs for agricultural, domestic, environmental, and recreational water use. The Colorado Water Conservation Board (CWCB) and the Colorado Division of Water Resources (DWR) have developed and updated the Colorado Decision Support System (CDSS) to aid in water resources planning. These data are accessed through the HydroBase data base maintained by DWR. The data assessment was not only used to understand basin characteristics, it was also used to enhance the CDSS consumptive use model (StateCU) and water rights allocation model (StateMod). StateCU is used to understand the existing crop demands, consumptive use, and shortages outlined in each Chapter. As discussed in more detail in Appendix A, diversion records in the Basin lack the accuracy necessary for model input. Due to this limitation, StateMod was used in a comparative fashion, to understand expected changes in streamflow and existing consumptive use due to proposed projects and operations. The environmental assessment includes stream and riparian characteristics, aquatic life, water quality, existing instream flow water rights, flow limited areas, and environmental flow goals.

Chapter 8 of the Report identifies potential demonstration projects in each Phase I Basin, Chapter 9 describes options for improved water use efficiency.