

EXECUTIVE SUMMARY

This Water Master Plan (WMP) was developed for the Board of County Commissioners, El Paso County officials and staff, developers, citizens, and water providers within the County for the purpose of identifying and addressing water supply issues earlier in the land use entitlement process. This WMP contains information to: better understand the present conditions of water supply and demand; identify efficiencies that can be achieved; and encourage best practices for water demand management through the comprehensive planning and development review processes. This WMP is an element of the overall County Master Plan.

Implementing this WMP will help ensure that land use decisions are based on balancing efficient use of limited water supplies with the water needs of current and future residents. The WMP should also be used to promote cooperation among water supply entities in the County with respect to water planning efforts.

The State of Colorado adopted *Colorado's Water Plan* in December 2015, which identifies goals, objectives, and critical actions needed to ensure that Colorado can maintain our state's values related to water into the future.

El Paso County includes approximately 70 water providers and over 21,300 permitted groundwater wells. Much of the County has a semi-arid climate, with high elevations to the west, and the Palmer Divide running along the northern part of the County. Sloping hills direct the majority of the rainfall and snowmelt runoff in a south and southeast direction. The County only has two major streams: Monument Creek with headwaters within the Palmer Divide range; and Fountain Creek with headwaters in Teller County. These creeks join in Colorado Springs and flow on to Pueblo County where Fountain Creek joins the Arkansas River.

Rural subdivisions in El Paso County generally rely on individual domestic or household wells for their water, while suburban and urban developments are typically served by centralized water and sewer services provided by a Colorado Revised Statutes Title 32 special district or a municipality.



El Paso County with a view of Pikes Peak





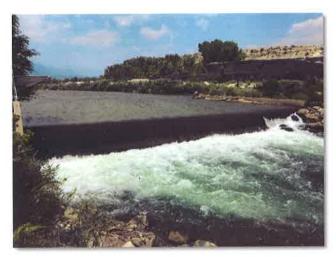
PUBLIC ENGAGEMENT

In developing this WMP, the Forsgren team reached out to the public through multiple methods, including a web-based program, MetroQuest. Through MetroQuest, the public shared their ideas and concerns regarding water supply strategies and other water-related concerns. The website had over 1,000 visits with a total of 378 responses, providing important feedback from the public regarding water issues in the County. A public open house was held on October 25, 2018 to further engage the public and to answer questions.

WATER SERVICE PROVIDERS

Water service providers were contacted regarding their water supplies and demand commitments to serve their customers. The data collected from the water providers was categorized based on

supply and demand locations. For the purposes of this WMP, the County was divided into eight sub-regional areas to analyze current supplies versus current demands, and future demands for the years 2040 and 2060. Results of those analyses are shown in Section 5 of this plan. As water demands increase each year, additional supply sources will need to be acquired to meet those demands. This WMP recognizes that many water providers will need to start incorporating renewable water sources into their portfolios. Some water providers have already begun this process of bringing in renewable water from outside their service areas for their customers.



Arkansas River Diversion Structure near Salida, CO

WATER SUPPLIES

Several different types of water supplies are being used by water providers in the County. Those types are classified as: native renewable water, imported renewable water, designated basin groundwater, and Denver Basin groundwater. The majority of water providers in unincorporated areas rely on Denver Basin aquifers for their supply, which are generally nonrenewable sources. With the exception of Colorado Springs Utilities and their project partners, water providers in the County are relying on 85% supply from Denver Basin and designated basin groundwater.

Although most water providers have sufficient "paper" water rights, economic pumping rates dictate the amount of groundwater that can be withdrawn. A water provider may not be able to economically pump to the limits that their paper water rights indicate. In some cases, there may not be enough reliable "wet water" to serve the buildout of development in specific service areas over the long-term.





PROJECTED WATER SUPPLY NEEDS

Comparing the current water supplies to future projected demands quantifies the water supplies that will need to be added to water supply systems throughout the County. Section 5 identifies the projected needs for the 2040 and 2060 horizons. Water providers will acquire and connect additional supplies incrementally as demands continue to grow. Water providers across the County are implementing water efficiency measures to "do more with less," including use of tiered rate schedules for their customers, and promotion of water-conscious landscaping. Water reclamation or reuse can also help extend supplies for many water providers. But ultimately, a number of water providers will need to diversify their supply portfolios with additional renewable water sources. They can then rely heavily on those limited supplies during wet and average precipitation years, and supplement with drought-proof Denver Basin supplies in drier years.

REGULATORY AMENDMENTS

With the purpose of encouraging water efficiency, conservation and the introduction of additional renewable water supplies to meet projected demands in the County, regulatory amendments are recommended. El Paso County implemented a 300-year water supply subdivision regulation for Denver Basin groundwater in 1986, with the intent, at least in part, of

encouraging land developers to bring in additional renewable water sources. But land development continues to occur primarily where Denver Basin water rights can support the water demands of the development.

The WMP project team recommends that the County complete a more detailed analysis of the 300-year rule and available groundwater supplies, possibly leading to revision of this regulatory requirement. Regulatory amendment to the landscaping standards is also recommended to afford more flexibility with landscaping plans, created by a professional landscape architect, as a means of encouraging water conservation.



Drought-resistant landscaping



TABLE OF CONTENTS

1. INTRODUCTION

- 1.1 Background
- 1.2 Master Plan Purpose

2. PUBLIC ENGAGEMENT

- 2.1 Steering Committee
- 2.2 Survey and Website: MetroQuest
- 2.3 Public Meetings
- 2.4 Analysis

3. WATER SERVICE PROVIDERS

- 3.1 County Regions
- 3.2 Municipalities
- 3.3 Special Districts and Private Corporations/Water Providers

4. WATER SUPPLIES

- 4.1 Native Renewable Water
- 4.2 Imported Renewable Water
- 4.3 Designated Basin Groundwater
- 4.4 Denver Basin Groundwater
- 4.5 Water Quality

5. PROJECTED WATER SUPPLY NEEDS

- 5.1 Water Demands
- 5.2 Projected Growth Areas
- 5.3 Water Supplies
- 5.4 Need Analysis
- 5.5 Exempt and Non-exempt Wells

6. "CLOSING THE GAP"

- 6.1 Water Efficiency
 - a) Best Practices
 - b) Effectiveness





c) Landscaping Standards

6.2 WATER REUSE

- a) Types of Water Reuse
- b) Current Reuse
- c) Planned Reuse

6.3 REGIONAL WATER SUPPLY PLANS

- a) Fountain Valley Authority
- b) Southern Delivery System
- c) Pikes Peak Regional Water Authority Water Infrastructure Plans
- d) Widefield Aquifer
- e) Emergency Connections

6.4 RENEWABLE WATER DEVELOPMENT

- a) 300-year rule
- b) Imported Water
- c) Alluvial Storage (Upper Black Squirrel Creek Basin)

7. IMPLEMENTATION

- 7.1 Entitlement Process
- 7.2 Grants
- 7.3 Summary of all Goals and Policies

APPENDIX

- A. County Land Development Code Water Supply Standards
- B. Landscaping information from other Cities and Counties
- C. Colorado Department of Local Affairs (DOLA) Available Financial Assistance
- D. References
- E. Water Providers' Informational Spreadsheet
- F. A 300-Year Water Supply Requirement One County's Approach
- G. Water Providers' Survey
- H. Glossary

