

1.0 INTRODUCTION, SCOPE OF WORK AND BACKGROUND INFORMATION

1.1 Introduction

The City of Fort Lupton (City) most current Master Plan for their Water, Wastewater and Storm Drainage Utilities was completed in November 1999. Since that time, many of the improvements recommended in the 1999 Master Plan have been completed. As such, the 1999 Master Plan has limited value. Additionally, the City is on the verge of experiencing rapid population growth due to increasing development and other interests in and surrounding the community. Along with this rapid growth will come an increased demand on all the City's infrastructure including "wet" (water, wastewater and storm drainage) utilities and the accompanying "dry" (cable television, gas, electric, etc.) utilities. Accordingly, the City desired addressing their future needs to be proactive related to future growth.

This Utilities Master Plan (Master Plan) will serve as a planning tool that will guide the development of capital improvement programs and expansion of the City's utilities. Three planning periods have been evaluated including short term (5 years), mid-term (20 years) and "build-out" demand conditions. These planning periods are associated with anticipated service to specific areas – herein referenced as Utility Service Areas (or USA). For example, existing utility services are referenced as USA 2007, growth anticipated over the next five (5) years will be listed as USA 2007-2012 and growth anticipated over the next twenty (20) years will be listed as USA-2007-2027.

1.2 Scope of Work

Clear Water Solutions Inc. (CWS) was contracted by the City to assist with the development of this Master Plan, which includes an evaluation of the City's existing infrastructure, as well as planning for the infrastructure needs of the City in the future. This analysis included evaluating the existing water, wastewater and storm drainage systems (i.e. wet utilities), as well as providing perspective related to future needs of dry utilities and how those needs might best be met in coordination with the future needs of wet utilities.

The future population growth and distribution patterns utilized for this study were taken from planning documents completed by Civil Resources and Foresee Consulting - in conjunction with the City's Planning Department. The population projections and associated demands in conjunction with the anticipated location of growth from those planning efforts provide the foundation for the development of the future water, wastewater and storm drainage infrastructure.

Numeric models were created for the water and storm drainage systems in order to analyze the existing infrastructure, as well as to serve as tools in determining an effective staging of system improvements as the City looks towards build-out of each respective utility. A similar spreadsheet based model was also created for analyzing the trunk sanitary sewers.

Demand factors for both planning and design purposes have been developed and are presented in this report. Planning level cost estimates have also been developed for the recommended improvements. The build-out planning periods are based on conceptual growth and the accompanying costs are reflective of the projects unknowns at this planning level and should be reevaluated prior to undertaking any project.

1.3 Background Information

Background information was provided by the City's Planning Department, GIS Department, and OMI. Design criteria from the Colorado Department of Public Health and Environment, Ten State Standards, the North Front Range Water Quality Planning Association and the City Standards and Specifications for Design & Construction of Public Improvements were utilized in the preparation of this Master Plan.