

# Introduction

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## 1.1 Purpose and Need

This master plan evaluates existing and future stormwater drainage needs in the City of McMinnville and establishes a plan to implement recommended necessary improvements. This plan updates the *City of McMinnville Storm Drainage Master Plan* (CH2M HILL and David J. Newton Associates, Inc., 1991) to address recent growth in the community and relevant regulatory developments.

More specifically, this plan presents the results of the analysis of the existing drainage system, establishes performance criteria, and identifies specific improvements designed to relieve existing problem areas or potential future problem areas. The plan also recommends standards for the design of stormwater conveyance facilities.

## 1.2 Goals and Objectives

The goals and objectives of the master plan are as follows:

- To provide for the orderly provision of drainage service within the City:
  - By identifying existing drainage facilities that will cause problems in the future as flows increase due to anticipated development in the watershed
  - By providing specific localized recommendations in areas where unique drainage situations exist
  - By providing guidelines for storm drainage facility planning within development sites
- To provide for adequate protection from the risk of flooding:
  - By identifying areas that experience unacceptably frequent flooding and by planning phased improvements to alleviate those conditions
  - By evaluating the adequacy of the existing major crossings of Cozine Creek for events up to and including the 50-year events
  - By providing drainage system capacities commensurate with the risk of failure of those facilities from capacity exceedance
- To optimize the efficiency of existing drainage facilities:
  - By preserving significant existing flood storage areas
  - By preserving potential flood storage areas that can significantly reduce the cost of downstream drainage improvements

- To provide for adequate storm water quality:
  - By considering probable future stormwater quality regulations and by implementing measures that may reduce the long-term cost impact on the City and its residents
  - By adopting practical and cost-effective standards for the enhancement of stormwater quality as appropriate
  - By adopting measures to minimize erosion within the watershed
  - By retaining natural creek drainageways to the extent practical rather than replacing them with piped storm drain systems
- To provide for the construction of a “maintainable” system:
  - By establishing appropriate standards for the construction of public drainage facilities
  - By identifying drainage alignments that are outside of existing public rights-of-way
- To provide drainage guidelines that are easily administered:
  - By providing clear capacity standards for drainage system improvements that are required for both onsite and public storm drainage improvements
  - By providing clear standards for detention and retention of stormwater
  - By providing clear descriptions of necessary storm drainage improvements
  - By estimating the total cost of drainage improvements required during the build-out of the urban growth area and the anticipated phasing required for those improvements

## 1.3 Intended Readers

This master plan was written for the following target audience:

- Managers and staff of City of McMinnville to document the overall plan, continue providing reliable service, meet regulatory requirements, protect the public, protect the environment, and support the long-term goals of the community
- Members of the public to provide a better understanding of City of McMinnville services and responsibilities, ongoing operations and maintenance activities, facility condition and recommended concepts to meet current and future needs and requirements
- Subsequent engineering design teams for successful project implementation

## 1.4 Organization of This Document

For continuity, this master plan is generally organized to match that of the previous *City of McMinnville Storm Drainage Master Plan* (CH2M HILL and David J. Newton Associates, Inc., March 1991).