

# CHAPTER 1

## OVERVIEW OF HANDBOOK

### 1.1 Purpose

The National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS) has a responsibility to provide flood forecasts and warnings in support of its primary mission of protecting life and property. A basic tool in providing local flood warning capabilities is the local flood warning system (LFWS). Communities can facilitate the NWS in this objective by implementing the LFWS in coordination with NWS hydrologic programs.

The purpose of this Handbook is to provide Federal, state, county, and local governments, as well as the private sector, with a basic understanding of LFWSs and the types and levels of assistance that are available to implement such systems. This document addresses the range of the LFWS—from a simple inexpensive but effective manual flood forecast table to a slightly more complex flash flood alarm system to a computer-driven system usually referred to as an automated LFWS.

### 1.2 Contents

This Handbook provides a multitude of information associated with automated LFWSs including discussions on the different types of LFWSs and Federal agencies that provide assistance to communities who are establishing local flood warning programs. The Handbook contains 12 chapters and 2 appendices.

Chapter 2 presents a brief history of floods in this United States. Chapter 3 talks about mitigating flood damages through structural and nonstructural methods. Chapter 4 discusses using economic, hydrologic, and sociopolitical cost-benefit analyses to determine whether the LFWS might be a solution to a community's flood problem. Chapter 5 describes the types of LFWSs, and Chapter 6 tells how to get a flood warning system in place. Chapter 7 outlines standards that will make the systems compatible with NWS procedures and equipment. Chapters 8 and 9 address a community's response plan of action and the community rating system and flood insurance program. Chapter 10 describes NWS software that is available for flood warning systems. Chapter 11 addresses the roles that some agencies have in flood warning programs, and Chapter 12 references selected materials and identifies participants in the flood warning program. Appendix A provides sample Memorandums of Understanding (MOU) for both automated and manual LFWSs, and Appendix B contains a sample Flash Flood Manual that a community might use for forecast procedures.