

Flexible-Membrane Covers and Linings for Potable-Water Reservoirs

AWWA MANUAL M25

Third Edition



American Water Works Association

MANUAL OF WATER SUPPLY PRACTICES-M25, Third Edition

Flexible-Membrane Covers and Linings for Potable-Water Reservoirs

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Chapter 1

Introduction

PURPOSE AND SCOPE

This manual is intended to serve as a technical reference guide in designing, installing, operating, and maintaining reservoirs using flexible-membrane materials for linings and floating covers. Source information was gathered by reviewing and collecting the experience of designers, manufacturers, and owners of flexible-membrane products that were introduced to the water industry in the early 1950s.

This manual is not intended to be a design handbook or the equivalent of an AWWA standard. Rather, it should serve as a technical reference document to be used in conjunction with AWWA D130, *Standard for Flexible-Membrane-Lining and Floating-Cover Materials for Potable Water Storage*, which was first approved for publication in January 1987.

Information in this manual may not apply to all types of installations or materials. In applying specific recommendations, the user must assume responsibility for accommodating a specific set of conditions.

DESCRIPTION OF FACILITIES

Flexible-membrane linings and floating covers can be incorporated into many types of water-storage facilities, both new construction and rehabilitated structures. Some typical examples of facilities include

- **An earthen reservoir for storage of untreated or raw water.** A flexible lining used in this type of installation is normally intended to minimize water losses due to seepage. In arid regions, a flexible-floating cover might be installed to reduce water loss due to evaporation, as well.
- **An earthen reservoir for storage of potable water.** Such a facility might be located at a water treatment plant or within a distribution system.