ASCE STANDARD ASCE/EWRI 33-09

American Society of Civil Engineers

Comprehensive Transboundary Water Quality Management Agreement

With Guidelines for Development of a Management Plan, Standards, and Criteria

Published by the American Society of Civil Engineers

Library of Congress Cataloging-in-Publication Data

Comprehensive transboundary water quality management agreement : with guidelines for development of a management plan, standards, and criteria.
p. cm.
Includes bibliographical references and index.
ISBN 978-0-7844-1019-6
1. Water quality management—Law and legislation—United States. 2. Regional planning—Law and legislation—United States. 3. Interstate agreements—United States. I. American Society of Civil Engineers.

KF3790.C66 2009
346.7304'691—dc22

2009021830

Published by American Society of Civil Engineers
1801 Alexander Bell Drive
Reston, Virginia 20191
www.pubs.asce.org

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ISBN 13: 978-0-7844-1019-6
Manufactured in the United States of America.

16 15 14 13 12 11 10 09 1 2 3 4 5

STANDARDS

In 2003, the Board of Direction approved the revision to the ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by the Society. All such standards are developed by a consensus standards process managed by the Society's Codes and Standards Committee (CSC). The consensus process includes balloting by a balanced standards committee made up of Society members and nonmembers, balloting by the membership of the Society as a whole, and balloting by the public. All standards are updated or reaffirmed by the same process at intervals not exceeding five years.

The following standards have been issued:

ANSI/ASCE 1-82 N-725 Guideline for Design and Analysis of Nuclear Safety Related Earth Structures

ASCE/EWRI 2-06 Measurement of Oxygen Transfer in Clean Water

ANSI/ASCE 3-91 Standard for the Structural Design of Composite Slabs and ANSI/ASCE 9-91 Standard Practice for the Construction and Inspection of Composite Slabs

ASCE 4-98 Seismic Analysis of Safety-Related Nuclear Structures

Building Code Requirements for Masonry Structures (TMS 402-08/ACI 530-08/ASCE 5-08) and Specifications for Masonry Structures (TMS 602-08/ACI 530.1-08/ASCE 6-08)

ASCE/SEI 7-05 Minimum Design Loads for Buildings and Other Structures

SEI/ASCE 8-02 Standard Specification for the Design of Cold-Formed Stainless Steel Structural Members

ANSI/ASCE 9-91 listed with ASCE 3-91

ASCE 10-97 Design of Latticed Steel Transmission Structures

SEI/ASCE 11-99 Guideline for Structural Condition Assessment of Existing Buildings

ASCE/EWRI 12-05 Guideline for the Design of Urban Subsurface Drainage

ASCE/EWRI 13-05 Standard Guidelines for Installation of Urban Subsurface Drainage

ASCE/EWRI 14-05 Standard Guidelines for Operation and Maintenance of Urban Subsurface Drainage

ASCE 15-98 Standard Practice for Direct Design of Buried Precast Concrete Pipe Using Standard Installations (SIDD)

ASCE 16-95 Standard for Load Resistance Factor Design (LRFD) of Engineered Wood Construction

ASCE 17-96 Air-Supported Structures

ASCE 18-96 Standard Guidelines for In-Process Oxygen Transfer Testing

ASCE 19-96 Structural Applications of Steel Cables for Buildings

ASCE 20-96 Standard Guidelines for the Design and Installation of Pile Foundations

ANSI/ASCE/T&DI 21-05 Automated People Mover Standards—Part 1

ANSI/ASCE/T&DI 21.2-08 Automated People Mover Standards—Part 2

ANSI/ASCE/T&DI 21.3-08 Automated People Mover Standards—Part 3

ANSI/ASCE/T&DI 21.4-08 Automated People Mover Standards—Part 4

SEI/ASCE 23-97 Specification for Structural Steel Beams with Web Openings

ASCE/SEI 24-05 Flood Resistant Design and Construction

ANSI/ASCE/SEI 25-06 Earthquake-Actuated Automatic Gas Shutoff Devices

ASCE 26-97 Standard Practice for Design of Buried Precast Concrete Box Sections

ASCE 27-00 Standard Practice for Direct Design of Precast Concrete Pipe for Jacking in Trenchless Construction

ASCE 28-00 Standard Practice for Direct Design of Precast Concrete Box Sections for Jacking in Trenchless Construction

ASCE/SEI/SFPE 29-05 Standard Calculation Methods for Structural Fire Protection

SEI/ASCE 30-00 Guideline for Condition Assessment of the Building Envelope

SEI/ASCE 31-03 Seismic Evaluation of Existing Buildings

SEI/ASCE 32-01 Design and Construction of Frost-Protected Shallow Foundations

ASCE/EWRI 33-09 Comprehensive Transboundary Water Quality Management Agreement

EWRI/ASCE 34-01 Standard Guidelines for Artificial Recharge of Ground Water

EWRI/ASCE 35-01 Guidelines for Quality Assurance of Installed Fine-Pore Aeration Equipment

CI/ASCE 36-01 Standard Construction Guidelines for Microtunneling

SEI/ASCE 37-02 Design Loads on Structures During Construction

CI/ASCE 38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data

EWRI/ASCE 39-03 Standard Practice for the Design and Operation of Hail Suppression Projects

ASCE/EWRI 40-03 Regulated Riparian Model Water Code

ASCE/SEI 41-06 Seismic Rehabilitation of Existing Buildings

ASCE/EWRI 42-04 Standard Practice for the Design and Operation of Precipitation Enhancement Projects

ASCE/SEI 43-05 Seismic Design Criteria for Structures, Systems, and Components in Nuclear Facilities

ASCE/EWRI 44-05 Standard Practice for the Design and Operation of Supercooled Fog Dispersal Projects

ASCE/EWRI 45-05 Standard Guidelines for the Design of Urban Stormwater Systems

ASCE/EWRI 46-05 Standard Guidelines for the Installation of Urban Stormwater Systems

ASCE/EWRI 47-05 Standard Guidelines for the Operation and Maintenance of Urban Stormwater Systems

ASCE/SEI 48-05 Design of Steel Transmission Pole Structures

ASCE/EWRI 50-08 Standard Guideline for Fitting Saturated Hydraulic Conductivity Using Probability Density Functions

ASCE/EWRI 51-08 Standard Guideline for Calculating the Effective Saturated Hydraulic Conductivity

CONTENTS

FOREWORD

The Board of Direction approved revisions to the ASCE Rules for Standards Committees to govern the writing and maintenance of standards developed by ASCE. All such standards are developed by a consensus standards process managed by the ASCE Codes and Standards Committee. The consensus process includes balloting by a balanced standards committee and reviewing during a public comment period. All standards are updated or reaffirmed by the same process at intervals between five and ten years.

The provisions of this document are written in permissive language and, as such, offer to the user a series of options or instructions, but do not prescribe a specific course of action. Significant judgment is left to the user of this document.

The purpose of the *Comprehensive Transboundary Water Quality Management Agreement with Guidelines for Development of a Management Plan, Standards, and Criteria* (the Agreement) is to provide a framework that riparian governments could adopt or modify for comprehensive water quality planning and management of shared water resources. This Agreement and its appendices are based on the concept of shared sovereignty. It is appropriate only for those situations in which sovereign governments, hereafter called Parties, are prepared to manage their portion of shared water resource together with their neighbors and when the Parties show an interest in improving the quality of the water resource.

The Agreement is extensive and considers many aspects of planning and management of water resources. Parties agree to restrict practices to the reasonable use of water and provide sufficient data to the other Parties to verify beneficial use. The Agreement suggests that information acquisition costs be apportioned so that data collection, environmental assessment, and inventories of basin water user efforts should be systemic in nature and integrated across the basin.

The Agreement is based on the elements of Model C, Comprehensive Management Agreement Relating to the *Shared Use of Transboundary Water Resources, Model Water Sharing Agreements for the Twenty-First Century* (Draper 2002), which is based on the Delaware River Basin Compact (DRBC 1961), and its amendments. The Delaware Compact has been successful in resolving interstate conflicts over the water rights and water quality management of the basin between and among the States of New York, Pennsylvania, New Jersey, and Delaware. Commentary in this Agreement is based on the *Comprehensive Transboundary International Water Quality Management Agreement*, ASCE/EWRI Standard 33-01, published in 2001.

The intent of this Agreement is to be sufficiently flexible for use across borders of sovereign governments in a variety of geopolitical settings. Article 2 lists major definitions and general provisions for the document. Defining the terms avoids the need to include similar language at numerous points throughout the Agreement. Many definitions were taken from *The Regulated Riparian Model Water Code* (ASCE 2003).

Blanks _____ within the text are used to allow a reader to insert names or material appropriate for a particular set of Parties. Numbers underscored (20) within the text refer to sample agreements derived from other cases throughout the world. Some subarticles are optional and have been labeled accordingly.

The ASCE/EWRI Border International Water Quality Standards Committee (BIWQ SC) is a Committee within the Standards Development Council (SDC) of the Environmental and Water Resources Institute (EWRI) of the American Society of Civil Engineers (ASCE). Committee members who have attended one or more meetings and/or voted on one or more ballots regarding the Agreement are listed below in alphabetical order. Those Committee members are as follows: Raymundo Aguirre, Fernando Cadena, Rongqiu Cai, Robert T. Chuck, Fadi G. Comair, Harold J. Day, Stephen E. Draper, John H. Easton, David J. Eaton—Chair, Thomas G. Gebhard, Jr., Carolyn E. Gerwe, Ramakar Jah, Kathlie Jeng-Bulloch, Conrad G. Keyes, Jr.—Past Chair, Mark W. Killgore—Secretary, April Lander, Elizabeth Lien, John P. McCullough, Daene C. McKinney, David H. Merritt, Percival A. Miller—Vice Chair, Stephen Niemeyer, Bernardino Olague—Treasurer, Jeroen Olthof—Representative to the EWRI SDC, Jim Stefanov, Gerald Sehlke, Mike Stenstrom, D. Rick Van Schoik, and Peter R.B. Ward.

This BIWQ SC reports to the Environmental and Water Resources Institute's Standards Development Council. The EWRI SDC and the ASCE Codes and Standards Committee have approved the balloting process according to the ASCE Rules for Standards Committees that have been established in agreement with the American National Standards Institute.

This standard has been prepared in accordance with recognized engineering principles and should not be used without the user's competent knowledge for a given application. The publication of this standard by ASCE is not intended to warrant that the information contained therein is suitable for any general or specific use, and ASCE takes no position respecting the validity of patent rights. The user is advised that the determination of patent rights or risk of infringement is entirely his/her own responsibility.