

United States Society on Dams



Collaborative Management of Integrated Watersheds

30th Annual USSD Conference
Sacramento, California, April 12-16, 2010



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Hosted by
Bureau of Reclamation

On the Cover

Folsom Dam is on the American River about 20 miles northeast of Sacramento, California. The dam was designed and built by the Corps of Engineers and transferred to Reclamation for operation and maintenance in 1956. The dam is a concrete gravity structure 340 ft high and impounds a reservoir of a little more than one million acre-ft. A Joint Federal Project is underway to address flood and dam safety issues.

U.S. Society on Dams

Vision

To be the nation's leading organization of professionals dedicated to advancing the role of dams for the benefit of society.

Mission — USSD is dedicated to:

- Advancing the knowledge of dam engineering, construction, planning, operation, performance, rehabilitation, decommissioning, maintenance, security and safety;
 - Fostering dam technology for socially, environmentally and financially sustainable water resources systems;
 - Providing public awareness of the role of dams in the management of the nation's water resources;
 - Enhancing practices to meet current and future challenges on dams; and
 - Representing the United States as an active member of the International Commission on Large Dams (ICOLD).
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Copyright © 2010 U.S. Society on Dams
Printed in the United States of America
Library of Congress Control Number: 2010923820
ISBN 978-1-884575-51-8

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FOREWORD

Included on this CD are papers presented during the **30th USSD Annual Meeting and Conference**, held April 12-16, 2010, in **Sacramento, California**. Abstracts of each paper are presented in a separate book.

The theme of the 30th USSD Conference was *Collaborative Management of Integrated Watersheds*. The Conference technical program was organized by several USSD Committees under the leadership of **Kenneth A. Steele**. The Conference theme reflects the need for enhanced collaboration and integration among the disciplines, facilities and institutions engaged in providing water resources and caring for our watersheds.

The Conference, Workshops and Field Tours provided a forum for dam engineers, owners, operators, environmental managers, and interest groups to share and discuss best practices and new technologies in design, construction, seismic aspects, hydrology and hydraulics, safety, security and risk management for levees, concrete dams and embankment dams. Special emphasis was placed on planning, environmental issues and dam decommissioning. A special technical session addressing ongoing modernization projects at Folsom Dam provided a comprehensive preview of a Conference field tour to the Dam.

The papers included in the Proceedings were selected from abstracts submitted in response to a Call for Papers, and included both oral and poster presentations. Authors include specialists with broad experience from government agencies, utilities, academia, water districts, consulting firms and private industry.

The Conference Organizing Committee extends thanks and appreciation to the Host of the 30th Annual Meeting and Conference, the **Bureau of Reclamation**, and to **Gary J. Egan**, Reclamation's coordinator for the Conference, who also arranged the study tour to Folsom Dam.

Special thanks are also extended to the Committee Members who selected the abstracts and reviewed the technical papers, and to the authors who prepared the papers included in the Proceedings.

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