

BOARD REPORT

Committee Name: Monitoring of Dams and Their Foundations

Submitted by: Georgette Hlepas, PhD, PE

Report Date: 30 April 2021

Committee Mission/Purpose

The Monitoring of Dams and Their Foundations Committee supports and promotes the advancement of the state-of-the-practice in the fields of instrumentation and performance monitoring of dams. The Committee discusses technical issues, develops guidelines and publications, presents workshops, and generally promotes the advancement and optimization of monitoring techniques.

The Committee membership includes professionals from: (1) government or private organizations that own and operate dams, (2) government organizations that regulate dam owners, (3) consulting engineers that provide engineering services to dam owners, and (4) suppliers that provide equipment used in the instrumented or visual monitoring of dams. The effectiveness of the committee efforts are enhanced by the diverse backgrounds, experiences, and perspectives of the various Committee members.

2020 Goals/Accomplishments (March 2020-April 2021)

- Published “O&M of an Instrumentation System” in January 2021
- Provided reviewers and planners for the 2021 Conference Papers
- Provided technical input on ICOLD TCBS Technical Committee on Dam Surveillance White Paper
- Held Quarterly Meeting: 1/20/21, 10/7/20, 6/11/20, 3/12/20,
- Continued work on 2 additional white papers
 - Fully grouted Piezometers
 - Seismic Instrumentation of Dams
- Held Education & Training Webinar Event:
 - 4/21/21 – InSAR Webinar Presentation (through Education and Training Committee)
- Held Committee Educational Webinar Events
 - 2/26/21 - Experience from Distributed Fibre Optic Measurements in Embankments.
 - 1/14/21 - Youghioghney River Dam and its instrumentation
 - 12/17/20 – Instrumentation and Threshold Webinar event (2hr)
 - 11/20/20 – Guajataca Instrumentation
 - 10/9/20 – Bluestone Dam – effects on anchoring uplift
 - 6/25/20 – Bolivar Dam Instrumentation
 - 5/8/20 – Libby Dam Slope Stability
 - 4/16/20 – Isabella Dam Instrumentation Case Study
 - 3/2/20 - Blakely Mountain Webinar

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- Held Fall 2020 Instrumentation and Monitoring Workshops
 - Topic 1: Planning an Instrumentation Program – Tuesday 11/10, 10-12 CT
 - Topic 2: Installation of Dam Monitoring Instrumentation – Thursday 11/12, 10-12 CT
 - Topic 3: Threshold Values and Action Levels – Tuesday 11/17, 10-12 CT
 - Topic 4: Evaluation of Data – Thursday 11/19, 10-12 CT

2021 Goals

- Continue Quarterly Meetings and Information Sharing/Networking with each other
- Engage Early Career Professionals More
- Hold Fall 2021 Workshop
 - Proposed Topic: Automation and Risk informed Monitoring (Brandon Lanthier Lead)
- Hold Additional Education and Training Webinar Events (Hlepas Lead Coordinator)
 - 22 July 2021 - Data Acquisition and Visualization 10 AM – 12PM MT

Description: This webinar presentation will focus on data acquisition from the field, general considerations for efficient data collection/transfer/storage. Once that data is collected, visualization is key, and there will be discussions on how to transform that data to useable information for evaluation and communication.
 - 22 August 2021 - Instrumentation Data Analysis Tips and Tricks 10 AM – 12 MT

Description: This webinar presentation will focus on how to analyse the data from instrumentation to understand project performance. It will highlight common errors and misunderstandings to be avoided as well as how to identify concerning data.
 - Training on our completed White Papers
 - Others: TBD
- Provide Reviews for USACE guide specs and Manuals
- Continue Work on White Papers
 - Dewatering Guidance – New Start, Richard Bird is the lead
 - Fully grouted Piezometers – Ongoing, Pierre Choquet is the lead
 - Seismic Instrumentation of Dams – Ongoing, Ali Ebrahimi is the lead

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What do you need to accomplish your 2021 goals?

- Continued support from USSD for virtual Share site for information sharing
- Additional membership engagement - Larger pool of volunteers to help complete tasks
- Support for webinar event coordination
- Support for membership attraction and maintenance of information
- Support for advertisement of events