

Draft Bulletin Workshop

Sediment Bypassing and Transfer

ICOLD Technical Committee on
Sedimentation of Reservoirs

28 May 2022



Workshop Outline

- I. Welcome, Opening Statements (Teal)
- II. Purpose of Bulletin (Teal)
- III. Sediment Bypassing (Sumi, Auel, Boes, Baumer)
 - A. Connectivity
 - B. Design
 - C. Tunnel Hydraulics and Sediment Transport
 - D. Operation and Maintenance
 - E. Case Studies
- IV. Sediment Transfer (Detering, Jacobsen)
 - A. Methods
 - B. Design
 - C. Case Studies
- V. Questions, Discussion (Teal)

Contributing Committee Members

- **Martin Teal (USA –Chair)**
- **Christian Auel (Germany – Vice Chair)**
- **Andrea Baumer (Switzerland)**
- **Robert Boes (Switzerland – coopted)**
- **Michael Detering (Germany - coopted)**
- **Kwansue Jung (Korea)**
- **Christophe Peteuil (France)**
- **Devendra Sharma (India)**
- **Kees Sloff (Netherlands)**
- **Tetsuya Sumi (Japan – coopted)**

New Bulletin Purpose

- Sediment management essential for sustainability of reservoirs
- Mature methods well understood but newer methods are not
- Need for design guidance and documented experience
 - Sediment Bypass Systems
 - Sediment Transfer Systems
- Looking for any additional comments on draft as the committee finalizes this bulletin

Bulletin Outline (1)

- I. Introduction
- II. Sediment Yield
 - A. Sediment Production, Transport, Prediction
- III. Sediment Connectivity
 - A. Morphological & Ecological Effects
- IV. Sediment Bypass Design
 - A. Bypass Design
 - B. Tunnel Hydraulics and Sediment Transport
 - C. Abrasion Prediction
 - D. Abrasion Resistant Materials
 - E. Invert Maintenance and Refurbishment
 - F. Design Recommendations
 - G. Real Time Operation of Bypass Systems
 - H. Monitoring & Efficiency
 - I. Case Studies

Bulletin Outline (2)

V. Sediment Transfer

- A. Hydrosuction
- B. Continuous Sediment Transfer
- C. Sediment-Water Mixtures in Pipelines
- D. Design Recommendations
- E. Case Studies

VI. Closure

VII. Bibliography





Questions?