Subcommittee on Sedimentation
April 17, 2015 Meeting
Peppermill Resort
2707 S. Virginia Street; Reno, NV 89502, USA
Minutes

Subcommittee on Sedimentation (SOS) Vice-Chair Tim Randle called the meeting to order at 1:00 p.m. PDT. The minutes were prepared by Amanda Cox. Present were:

- Jerry Bernard, retired NRCS, SEDHYD Technical Program Coordinator, Stafford, VA
- Jeff Bradley, President, WEST Consultants representing ASCE, Salem, OR
- Amanda Cox, Chair, Assistant Professor, Missouri Water Resources Research Institute (MWRRI), Saint Louis University, St. Louis, MO
- Jon Fripp, Hydraulic Engineer, National Design, Construction and Soil Mechanics Center, NRCS, Fort Worth, TX
- Marie Marshall Garsjo, retired geologist, Natural Resources Conservation Service (NRCS), Fort Worth, TX; SEDHYD FISC Technical Program Chair
- Doug Glysson, Retired Hydrologist, Office of Water Quality, U.S. Geological Survey (USGS), Reston, VA, SEDHYD Joint Conference Chair
- John R. Gray, Scientist Emeritus, Office of Surface Water (OSW), USGS, Reston, VA
- Meg Jonas, Senior Hydraulic Engineer, Headquarters, U.S. Army Corps of Engineers (USACE), Washington, DC
- Mark Landers, Federal Interagency Sedimentation Project Chief and OSW, USGS, Atlanta, GA
- Eddy Langendoen, Research Hydraulic Engineer, Watershed Physical Processes Research Unit, Agricultural Research Service , Oxford, MS
- Paula Makar, Civil Engineer (Hydraulics), Sedimentation and River Hydraulics Group, Reclamation, Lakewood, CO
- Peter Nelson, Assistant Professor, Colorado Water Resources Research Institute (CWRRI), Colorado State University, Fort Collins, CO
- Tim Randle, Vice-Chair, Manager of the Sedimentation and River Hydraulics Group, Bureau of Reclamation (Reclamation), Lakewood, CO
- Joseph Schubauer-Berigan, Research Ecologist and Chief, Environmental Stressors Management Branch, USEPA, Office of Research and Development, National Risk Management Research Laboratory, Cincinnati, OH
- Bryan Baker, Hydraulic Engineer, U.S. Army Corps of Engineers (USACE), Minneapolis, MN
- Deborah Cooper, via WebEx, Research Hydraulic Engineer, Engineer Research and Development Center, U.S. Army Corps of Engineers (USACE), Vicksburg, MS
- Rollin Hotchkiss, Professor/Department Chair, Brigham Young University, Provo, UT

Minutes from January 2015 SOS Meeting Cox

No comments on meeting notes. Motion to approve minutes made by Mark Landers and second by Meg Jonas. Minutes were approved unanimously.

SEDHYD 2015 Planning Overview Glysson/Bernard/Makar

The SOS recommended creating a standing FISC workgroup that would coordinate with the SOH workgroup. The two workgroups will likely need more face-to-face meetings to plan for the next SEDHYD conference. The following SOS members were identified to participate in the FISC workgroup: Tim Randle, Jon Fripp, Mark Landers, and Meg Jonas. The workgroup should start planning the conference three years ahead of event.

The following is a summary of the SEDHYD 2015 Conference:

The joint conference merged the 10th Federal Interagency Sedimentation Conference and the 5th Federal Interagency Hydrologic Modeling Conference. The Advisory Committee on Water Information (ACWI) is the umbrella for the two subcommittees on Sedimentation and Hydrology who sponsored the conference. The ACWI decided that it would be advantageous for the two conferences to be held concurrently because of the approximate 2/3rds overlap in participants.

Needless to say, the SEDHYD 2015 Conference was historic in that it continued the rich history of these conferences since 1947. Some of the participants have attended and presented papers at as many as six of the last conferences, which are held every four to five years.

240 technical presentations were made, not including 31 poster presentations and 11 computer model demonstrations. Proceedings have been posted but are being revised to correct errata that authors are in the process of submitting. A special reception for young professionals was held, which had about 40 participants. In addition, the conference sponsored a luncheon for students, with brief remarks by some of the hosting agencies about their activities and possibilities for employment.

Three local field trips were offered, two of which did not have registrations fees.

Eleven Short courses were conducted, from one-half day to a full day. These are shown on the sedhyd.org website program. The maximum registration fee for a course was less than $100.

In addition to coordinating the technical program for this joint conference, Jerry Bernard also developed a DVD that has all of the conferences' digital proceedings since 1947. He will be submitting this DVD for posting by the USGS on the Sedimentation Subcommittee's website, once the final proceedings are done.

We had about 400 registrants. We conducted a student paper competition and awarded cash prizes to 1st, 2nd, and 3rd place winners. They were recognized during the Monday evening grand opening event. An after-event questionnaire is going to be distributed to seek feedback to grow the conference for 2019. Additionally, all of the participants will have an opportunity to volunteer to work on the planning of the next joint conference.

The Subcommittees on Sedimentation and Hydrology have formed work groups who will coordinate the planning for the 2019 Joint Conference, which may also be called SEDHYD 2019.

Many people have already expressed interest in volunteering to help plan and coordinate the next conference.

Special kudos go to Claudia Hoeft and Marie Garsjo for their efforts in carrying out reviews of the technical papers. They provided review comments directly to authors and formed a vital interface for the conference, so that they felt they were dealing with people and not just uploading files to a website. The result of their efforts is that we have the most professional set of proceedings ever for these conferences. Incidentally, Claudia is likely to have a major role in planning and coordinating SEDHYD 2019.

Reservoir Sustainability Randle

Tim Randle reported on the momentum that has been gaining since the SOS resolution on reservoir sustainability. Formation of the National Reservoir Sedimentation Team, its first meeting in November 2014, and the short course on Sunday, April 19. George Annandale's keynote speech on reservoir sustainability to the U.S. Society on Dams, April 14 was well received by that organization. Tim Randle has asked the USSD Hydraulics Committee to adopt the SOS resolution.

REServoir SEDimentation Landers/Gray

The USACE had developed an Oracle-based Reservoir Sedimentation Information (RSI) system. They have captured data from the file-maker pro-based RESSED and entered data for many Corps reservoirs. The SOS had planned to have a brief demonstration of this system during our meeting; but scheduling changes made it impracticable. The SEDHYD paper is available here:

USACE RESERVOIR SEDIMENTATION SURVEY DATABASE (RESSED) ORACLE CONVERSION.

Brief excerpts from this paper are:

> The Reservoir Sedimentation Information (RSI) system production site was developed by USACE to provide a comprehensive summary of USACE reservoir conditions. The overarching intent of this system is to store and display reservoir information to assist with evaluation of sedimentation trends and reservoir life expectancy with respect to a changing climate. The initial iteration of this dynamic system focuses on input and display of reservoir metadata. Reservoir information is available for viewing by all users.
>
> Data captured from FMP to Oracle© provides a basic interface to view RESSED data in the CorpsMap©, an enterprise geospatial platform for USACE that is capable of communication with other data platforms.
>
> Testing of the RSI system production site will be initiated by district input of survey and area-capacity data in FY15. The plan is to expand the site to include additional reservoir data as it becomes available, enhance the input tools, and standardize the reservoir data analysis across USACE. The RSI production site will ensure that districts can maintain the most currently

available and consistent data from databases such as RESSED, CWMS, and NID. It does this by using the provided Oracle© interface to view RESSED data in CorpsMap© and as a mechanism for the USACE data platform to communicate with RESSED as well as other data platforms.

The USGS reported that (a) USGS remains committed to RESSED and convinced of its need/relevance; (b) USGS has been working to task a new team to continue the RESSED development.

The SOS moved to reactivate the RESSED workgroup (Tim Randle, John Gray, Mark Landers, Eddy Langendoen, Meg Jonas, Brian Baker, David Stewart, Kate White, Jon Fripp). The group is to meet sometime in May before next June 2015 meeting.

Federal Interagency Sedimentation Project Landers

The FISP Technical Committee is meeting on April 18, 2015 for its Spring meeting.

The ongoing work of the FISP to procure, quality assure, provide, and repair physical sediment sampling instruments and supporting equipment is done primarily at the USGS Hydrologic Instrumentation Facility in Bay St. Louis, MS. A thorough paper on the History of the FISP, including its relation to the SOS, was prepared for SEDHYD by John Gray and Mark Landers and is available at:

http://sedhyd.org/2015/openconf/modules/request.php?module=oc_program&action=view.php&a=&id=206&type=2

The sponsored and in-house research efforts of the FISP are well represented at SEDHYD 2015 in some 16 papers funded by FISP within the last 4 years. These cover research on acoustic surrogates for suspended sediment, bed-load surrogate methods, bed-load sampler evaluations, desiometric methods, computational fluid dynamic modeling of FISP physical samplers, and other topics. The FISP continues to seek to engage with new and existing Federal partners in its mission.

Prospectus 2007 – 2012 update Jonas

Meg Jonas prepared a paper for the SEDHYD 2015 conference that details river engineering research needs for the U.S. Army Corps of Engineers. The paper is available at:

http://www.sedhyd.org/2015/openconf/modules/request.php?module=oc_program&action=view.php&a=&id=274&type=2

The paper can serve as a springboard to initiate discussion of the purpose and responsibility of the SOS.

National Stream Morphology Data Exchange (NSMDE) Cox

Amanda Cox gave a summary of the history of the NSMDE and proposals submitted to obtain funding to work on it. The SOS formed a workgroup in 2009 to investigate the development of a NSMDE. In 2011, the SOS sponsored a workshop in Middleton, Wisconsin that focused on: 1) data exchange scope; 2) data exchange scale; and 3) administration. From the workshop a whitepaper was developed by Matt Collins and published in Eos.

A proposal led my Marian Muste from the University of Iowa was submitted in 2012 to the National Institutes for Water Resources (submitted to their National Competitive Grants Program). The proposal was not funded but received generally good reviews and feedback for improvement. The proposal was revised and submitted again in 2013; however, no funds were available for the NIWR Competitive Grants Program that year. In 2014, the proposal was submitted to the state NIWR, but was submitted late by the state and not considered for funding. The proposal was resubmitted in March 2015 for consideration.

In addition to the NIWR proposals, Amanda Cox led a proposal submission to NASA in 2013 as part of their Research Opportunities in Space and Earth Sciences (ROSES) program. The NASA proposal was not funded but there were suggestions from reviewers to approach the Surface Water and Ocean Topography (SWOT) mission directly for funding.

New Business

MANAGING RESERVOIR SEDIMENTATION Hotchkiss/Jonas

A lot of current research on database development with large amounts of data is happening worldwide using open-source software that is free. World-wide and national Reservoir storage capacity is declining over time due to sedimentation. Disposing of the sediment is a challenge. Sediment cannot be stored in the reservoirs or offsite over the long term and it must eventually go downstream. Further, regulations administered by USACOE and EPA are difficult to comply with. Better cooperation and collaboration between agency regulatory and technical staff could improve the regulatory process. In Febraury 2015, a meeting with EPA and USACOE was held to address the problem with reservoir sedimentation.

The following is list of further information from the SOS discussion:

- Regulations are not administered in a watershed context as it is a stakeholder-dominated process
- 404 Federal permit triggers State 401 permit
- Benefit to containing sediment in reservoir
- People are not used to addressing the problem
- Dam removal examples may be useful
- Case specific analyses needed
- A contaminant problem cannot be released downstream
- Information is needed on type of sediment releases (amount, particle size, contaminants, river transport capacity)
- Education through webinars, short courses, and conferences is needed
- White paper to discuss policy of reservoir sustainability and reservoir operations to implement sustainability
- For EPA, need to relate position to human health and well being
- Look at historical permitting process of dam removal.

Set Date of Spring 2015 Meeting Cox

A Doodle Poll will be setup to identify a date and time in July for the summer SOS meeting.

The meeting was adjourned at 4:30 PDT.