Subcommittee on Sedimentation Teleconference Meeting Minutes

August 24, 2016

1:00 to 2:30 PM, EDT; 12:00 noon to 1:30 PM, CDT
11:00 AM to 12:30 PM, MDT; 10:00 AM to 11:30, AM, PDT

Roll Call

Subcommittee on Sedimentation (SOS) Chair, Tim Randle, called the meeting to order and began with a roll call of member organizations.

Organization	Contact	Mailing Address
ARS-USDA	Eddy Langendoen	Agricultural Research Service; United States Department of Agriculture; Watershed Physical Processes Research Unit; 598 MC ELROY DRIVE Oxford, MS 38655
ASCE	Jeff Bradley	American Society of Civil Engineers; West Consultants, Inc., 2601 25th St. SE Suite 450, Salem, OR 97302
BLM-DOI	David Hu	Bureau of Land Management, 20 M Street South East Washington D.C. 20003-3503
BLM-DOI	Bob Boyd	Bureau of Land Management, Denver Federal Center Building 50
CUAHSI	Marian Muste	IIHR-Hydroscience & Engineering, University of Iowa , 302E Maxwell C. Stanley Hydraulics Laboratory, Iowa City, IA 52242-1585
CWRRI	Peter Nelson	Colorado Water Resources Research Institute, Colorado State University; 1372 Campus Delivery, Fort Collins, Colorado 80523-1372
FERC	absent	Federal Energy Regulatory Commission, Division of Hydropower Licensing, 888 First St. NE, Washington, D.C., 20426
FHWA-DOT	Absent	Federal Highway Administration, Central Federal Lands Division, 12300 West Dakota Ave., Suite 340, Lakewood, CO 80228
FS-USDA	Dan Cenderelli	U.S. Forest Service, Fluvial Geomorphologist/Hydrologist, National Stream and Aquatic Ecology Center
FS-USDA	Steven Yochum	U.S. Forest Service, Hydrologist, Watershed, Fish, Wildlife, Air, & Rare Plants, National Stream and Aquatic Ecology Center
MWRRC	absent	Missouri Water Resources Research Center, Saint Louis University, Parks College of Engineering, Aviation and Technology, 3450 Lindell Blvd, Saint Louis, Missouri 83103
NMFS-NOAA	Matt Collins	NOAA Fisheries, 55 Great Republic Drive Gloucester, MA 01930-2276
NPS-DOI	Mike Martin	National Park Service, 1201 Oakridge Drive Suite 250, Fort Collins CO 80526
NRCS-USDA	Jon Fripp	National Resources Conservation Service, NDCSMC, 501 W. Felix St., Fort Worth, TX 76115
NRCS-USDA	Jo Johnson	National Resources Conservation Service, 12th and Independence Ave, SW, Room 6137, Washington, DC 20250
OSM-DOI	Absent	Office of Surface Mining
Reclamation-DOI	Tim Randle (Chair)	Bureau of Reclamation, PO Box 25007, 86-68240, Denver CO 80225
TVA	Dara Parker	Tennessee Valley Authority, Dam Safety Governance & Oversight, WT 10C-K, 400 W. Summit Hill Dr., Knoxville, TN 37902
UCOWR	Vacant	Universities Council on Water Resources
USACE-DOD	Meg Jonas (Vice Chair)	U.S. Army Corps of Engineers, Headquarters USACE, CECW-EC, 441 G Street, NW, Washington, DC 20314-1000

Organization	Contact	Mailing Address
USEPA	Joseph Schubauer-Berigan	U.S. Environmental Protection Agency, Office of Research and Development , 26 W. Martin Luther King Drive, Cincinnati, OH 45268
USGS-DOI	Mark Landers	U.S. Geological Survey, Georgia Water Science Center, 1770 Corporate Drive, Suite 500, Norcross, GA 30093
USGS-DOI	Molly Wood	U.S. Geological Survey, Office of Surface Water, 230 Collins Rd, Boise, ID 83702

Minutes from the past meetings (December 1-2, 2015, April 20, 2016, and May 6, 2016) were approved by previous email vote and posted to the SOS website.

Work Group Reports:

SEDHYD 2019 Planning Work Group

Tim Randle

The request for conference proposals (RFP) has been drafted and review comments have been incorporated. A few more comments may be received later. The next step is to develop the list of cities where the RFP will be sent. Jennifer Bountry found a website to help identify cities. For the 2015 SEDHYD Conference (originally planned for 2014), RFPs were sent to New Orleans, Tucson, Reno, and Las Vegas. Selection criteria for the evaluation of proposals will need to be developed. The goal is to have a hotel selected and contracted signed by July 2017.

Subcommittee member Input:

- Convene the conference in a place with a major airport to keep the travel costs low.
- Convene the conference in a place with sediment issues:
    - Kansas City, MO with field trips to see Missouri River channel-bed degradation, Missouri River Recovery Program, and reservoir sedimentation problems at Tuttle Creek Lake and Perry Lake.
    - Seattle, WA with field trips to Elwha River and other Olympic Mountain rivers.
    - San Antonio, TX. No specific sediment issues were identified, but there would be lots of hydrology issues.
- The conference will be held sometime between March 4 and July 26, 2019, excluding the weeks before and after Easter (April 15-26), before and after Memorial Day (May 20-31), the week of Independence Day (July 1-5). We may want to avoid competition with the 2019 ASCE-EWRI conference. Convening the conference in either March or April would have fewer conflicts with field work.

Work Group on Reservoir Sedimentation and Sustainability

Tim Randle

The next workshop of the National Reservoir Sedimentation and Sustainability Team (NRSST) is planned for October 18-19, 2016 in Lakewood, CO. For the workshop last year (October 20-22, 2015), the Subcommittee authorized spending up to $6,000 to reimburse the travel costs of non-federal participants and to pay for the meeting room. Meg Jonas made a motion for the Subcommittee to again authorize spending up to $6,000 to reimburse the travel costs of non-federal participants and to pay the meeting room for the October 18-19, 2016 workshop. The motion was seconded by Jon Fripp and passed without dissent.

Tim Randle reviewed the draft outline for the NRSST White paper entitled “Reservoir Sedimentation: Building a Legacy of Sustainable Water Storage Reservoirs.” The intended audience for this paper is

policy makers who can make decisions about reservoir sediment management. This would be intelligent people who likely do not have expertise in sediment.

Work Group on Environment and Infrastructure — Tim Randle

The work group in Environment and Infrastructure was inspired to focus on ways to make infrastructure more compatible with the environment (reduce or avoid impacts) and how to make infrastructure more resilient to changing river conditions. For example, more bridges fail due to stream erosion rather than any other cause. In many locations, infrastructure is aging and will need to be repaired, replaced, or relocated. This will be an ideal time to reevaluate infrastructure through river corridors.

This new workgroup has already met twice by conference call, they developed a rough outline for a white paper, and they have made writing assignments. This paper is expected to be 15-20 pages long and is intended for an audience of policy makers who can make decisions about infrastructure through river corridors. These policymakers are not expected to have expertise in sediment.

Subcommittee members discussed several examples. The Elwha River near Port Angeles, WA was threatening Olympic Hot Springs Road, but funding only seemed available for emergency repair rather than proactive actions to prevent the emergency. Perhaps future funding policies can allow for proactive actions rather than just in-kind replacement. Meg Jonas encouraged the work group to look for examples where proactive actions were taken (e.g., levee setback along the Missouri River after the 2011 flood). Matt Collins mentioned that Vermont has been identifying channel migration zones where human development would be discouraged. Marion Muste mentioned the "room for river" reports from Europe. "Freedom space for rivers" in the Province of Quebec, which is a channel migration zone concept. Bob Boyd mentioned the Truckee River as a positive example. Tim Randle mentioned an example in South Korea where a stream that had become an open sewer and covered with a highway was restored resulting in improved water quality and aquatic habitat, high visitor use, and increased property values. Dan Cinderelli mentioned the numerous examples along the Colorado Front Range where roads were upgraded or relocated and stream-crossing structures were enlarged following damage by floods in 2013.

Mark Landers said that USGS is evaluating the FHWA 20-year old guidance. Molly Wood mentioned that Kathryn (Katie) Lee just left the USGS to work for FHWA and that she has a good sediment background.

Work Group on Climate and Sediment — Matt Collins

The Climate and Sediment work group met for the first time on August 23, 2016 and there appears to be interest from about 10 members. The first meeting focused on narrowing the very large topic of climate and sediment to provide the most value to the Subcommittee. After much discussion, the work group decided to focus their efforts on providing support to other Subcommittee work groups where changes in climate should be considered (e.g., Reservoir Sedimentation and Sustainability; Infrastructure and Environment). For example, Vermont has documented greater sediment yields for the same rainfall storms due to increased antecedent moisture conditions.

Subcommittee members liked this proposed focus for the Work Group on Climate and Sediment. Leaders from the other work groups will send Matt Collins outlines for papers or reports that they are working on and suggestions as to where they need help with climate change.

Matt Collins reported that the Climate and Sediment Work Group plans to meet next at the end of September and develop a charter statement and discuss the mechanics of how to best support and interface with the other Subcommittee work groups.

SOS Dam Removal Guidelines — Tim Randle

Tim Randle and Jennifer Bountry have been working on sediment analysis guidelines for dam removal since their first workshop in 2008. These guidelines have evolved over the years with information gained from experience and from publications on the removal of the Elwha River dams, Condit Dam, and other much smaller dams. They plan to complete a peer-review ready draft by December 2016. They are looking for external reviewers as well as committee members.

Meg Jonas suggested including examples of removing dams on Little Conestoga Creek, Lancaster County, PA and removing Embrey Dam on the Rappahannock River in Fredericksburg, VA.

Federal Interagency Sedimentation Project — Mark Landers

The Federal Interagency Sedimentation Project (FISP) is continuing to provide approved sediment sampling equipment for Federal agencies through the Hydrologic Instrumentation Facility. They also are funding small research projects, including three being funded in the current fiscal year.

The FISP and USGS (and other member agencies of the SOS) have worked over the last several years to develop operational methods and guidance for computing sediment concentration and load from acoustic backscatter data. Continuous suspended sediment concentration and load can provide much more accuracy and sediment process information than occasional discrete measurements. Acoustic surrogates of sediment could leverage data from acoustic velocity meters being used at hundreds of sites daily for discrete discharge measurements, and at over 400 sites with in-situ acoustic Doppler velocity meters. Acoustic instruments also are more robust and measure a much larger volume than optical instruments. The USGS has just published a Techniques and Methods Manual titled: *Sediment Acoustic Index Method for Computing Continuous Suspended-Sediment Concentrations* (available at: http://dx.doi.org/10.3133/tm3C5). Methods and progress in this effort are also available at the website for the Sediment Acoustic Leadership Team at: http://water.usgs.gov/osw/SALT/. Real-time sediment data are being provided by these methods at several sites; and hopefully these data will provide better information to address bigger issues.

The studies currently being funded by FISP include:

- Testing the hydraulic efficiency of pressure difference bed load samplers while varying mesh size and type
- Calibration of four bed load samplers
- Investigation of sound propagation and flow-induced noise in gravel-bed streams for Sediment-Generated Noise (SGN) measurement

National Stream Morphology Data Exchange Proposals

Eddy Langendoen and Matt Collins

Eddie Langendoen has assumed leadership of the group working toward a National Stream Morphology Data Exchange. Molly Wood is trying to promote a geomorphic database internally within USGS. Standards would be developed for metadata.

Prospectus Update — Meg Jonas

Representatives of Subcommittee organizations previously provided a description of their sedimentation activities during the meeting on May 6, 2016. These activities are described in the meeting minutes, which are posted on the SOS website. These activities will serve as basis for the next Subcommittee prospectus.

Meg Jonas is working to revive the Notes on Sedimentation Activities within USACE. Guidance for this effort is being revised and funding has been requested for FY-2017. The Notes on Sedimentation Activities used to be standard for all the Subcommittee member agencies; they were reported annually and published by the USGS. They are still needed and should be much easier to produce now than in the pre-digital era.

Sedimentation notes could be posted on the SOS website and made searchable. The notes could include keywords, abstracts, photos, citations, web links, and points of contact.

More about the Notes on Sedimentation Activities will be discussed during the next meeting (November 15, 2016).

Next Meeting

The next in-person meeting is scheduled for fall 2016 in Washington D.C. (subsequently scheduled for Tuesday, November 15, 2016). Meg Jonas volunteered to host the meeting at the U.S. Army Corps of Engineers Headquarters. A field trip will be planned for Wednesday, November 16.

Other New Business

None

Meeting Adjourned