

ATCHH Fall 2015 Meeting – Seattle, WA.

Monday September 21, 2015

8:00am – 9:30am General Session with Subcommittee on Design

9:45am – 5:00pm ATCHH Business Meeting

1. *Call to Order by Chair Karuna Pujara and welcome to new members Nick Wark (VT), Dave Claman (IA), and Randall Mungo (SC)*

2. *Roll Call & Introductions*

- *Except as noted by an asterisk (*) below, all members of the ATCHH were present (✓) or joined via telecom (⚡):*

NAME	ROLE		STATE	REGION	YEAR
Karuna Pujara	Chair	✓	Maryland	1	2005
Joe Krolak	Secretary	⚡	FHWA	ex-officio	2009
Nick Wark		✓	Vermont	1	2015
Steve Sisson		⚡	Delaware	1	2007
Mike Hogan		✓	Connecticut	1	2012
Rick Renna		✓	Florida	2	2001
Brad McManus		✓	Georgia	2	2014
Randall Mungo		⚡	South Carolina	2	2015
Wesley Peck		✓	Tennessee	2	2012
Rachel Westerfield		✓	Mississippi	2	2012
Ann-Marie Kirsch		✓	Wisconsin	3	2014
Andrea Hendrickson	Past Chair	✓	Minnesota	3	2005
Matt O'Connor		✓	Illinois	3	2001
David Claman		✓	Iowa	3	2015
David Hedstrom		✓	Montana	4	2015
Bill Bailey		✓	Wyoming	4	1994
Lotwick Reese		✓	Idaho	4	1996
Hani Farghaly		✓	Canada	ex-officio	2002
Patricia Bush	AASHTO Liaison				

Guests attending business sessions

- *Dave Henderson: FHWA*
- *Dan Ghere: FHWA*
- *Kornel Kerenyi: FHWA*

Guests attending open sessions

- *Carlos Braceras: SCOD – Chair*
- *Joyce Taylor: SCOD – Vice Chair*

- Rob Effinger: Caltrans – AASHTO Fellow
- Al Hogan: ACPA
- Will Rogers: GAPA
- Fran Vorga: Bentley Systems
- Jake Keller: Parsons Brinkerhoff
- Cassandra Bhat: ICF International
- Mike Savonis: ICF International
- Casey Kramer: Northwest Hydraulic Consultants
- Mike Fazio (by landline): City Engineer Bluffdale, Utah

Technical Committee on Environmental Design members attending joint session with TCHH

- Keith Robinson: Caltrans
- Timothy Stark: WYDOT
- Greg Vitely: IdTD
- Stephan DiLezio: MaDOT
- Keith Harrison: FHWA

Technical Committee on Hydrology & Hydraulics Membership by Region

- *Region 1*
 - **Connecticut, Maine, Maryland, New Jersey, Delaware, Rhode Island, New Hampshire, Vermont, Massachusetts, New York, District of Columbia, Pennsylvania**
 - 4 members
- *Region 2*
 - **Arkansas, Tennessee, Mississippi, North Carolina, Georgia, Kentucky, Virginia, West Virginia, Alabama, Florida, South Carolina, Louisiana, Puerto Rico**
 - 5 members
- *Region 3*
 - **Missouri, Minnesota, Nebraska, Iowa, Ohio, Illinois, Wisconsin, Michigan, Kansas, Indiana**
 - 4 members
- *Region 4*
 - **California, Nevada, New Mexico, Oregon, South Dakota, North Dakota, Utah, Idaho, Texas, Oklahoma, Colorado, Washington, Montana, Arizona, Wyoming, Alaska, Hawaii**
 - 3 members

ACTION ITEM: 1 ATCHH should identify interested candidates for 1 or 2 existing openings in Region 4 and one future opening in both Region 1 and Region 2.

3. SCOD Executive Committee Meeting – ATCHH Chair Pujara reported discussions

- SCOD undergoing major restructuring under new leadership
- Interest in TC Chair to be SCOD member
- Recent loss of Vice-Chair and exiting Chair results in ATCHH leadership open to new members with limited ATCHH experience.
- Chair Pujara agreed to remain for one more year with election of new Vice-Chair.
- Motion to retain current Chair and elect new Vice-Chair by Lotwick Reese, 2nd by Andrea Hendrickson, passed by show of hands.
- Nomination of Mike Hogan as Vice-Chair by Andrea Hendrickson, 2nd by Wesley Peck, passed by show of hands.

****ACTION ITEM: 2**** ATCHH members to lobby their state SCOD voting member and organizational leadership for appointment to their state's non-voting membership on SCOD.

- New SCOD strategic plan for both structure and guidelines to enhance communication and will be meeting with AASHTO Board in Spring 2016 to finalize
- ATCHH Guidelines will need to be revisited for consistency with SCOD.

4. LRFD Work Group

- Discussion on definitions and scour design frequency, scour design flood, and scour check flood - Tabled.
- Change "Flood" to "Flow".
- Should reference to "the engineer" be changed to "bridge owner".
- Change "geotechnical safety factor" to "load and resistance factors".

****ACTION ITEM: 3**** Coordination with SCOBs needed prior to changing some definitions.

- Work Group debating more specific language or generic definitions to allow some flexibility.
- Definition of "temporary structure", what is risk during temporary structure 6 month vs. 2 year time frame.

****ACTION ITEM: 4**** FDOT to provide guidance on establishing risk standard for design of temporary structures.

- Climate Change aspects of LRFD – Tabled.
- Work Group solicits help from veteran members to participate in conference calls.

****ACTION ITEM: 5**** Rework goal spring 2016 and input from any and all ATCHH members welcome.

5. Financial Report

- Due to Vice-Chair resignation, Chair Pujara provided report and explained ATCHH subject to holding remnant funds from biennial NHEC.
- 2014-2015 update to be e-mailed to membership.
- Presently there is a sufficient reserve to cover advance deposits for future meeting.
- Discussion on lack of ATCHH registration funds with continued joint meeting with SCOD and NHEC.

****ACTION ITEM: 6**** Chair Pujara to check with Patricia Bush on IRS compliance limit on account balance.

6. FHWA Update on FFRMS (Joe Krolak via teleconference and power point)

- History of floodplain policy back to 1948 and subsequent Executive Orders.
- Presently work progressing under Executive Office of the President, EO 13690 creates FFRMS and requires “stakeholder input”. (2,700 comments from 500+ stakeholder groups)
- Requires +/- 3 years to go through rule making.
- No change in pipeline projects, proceed until updated FHWA regulations are provided.
- Any questions please contact Joe Krolak for assistance.

7. FHWA Extreme Weather Discussion (Brian Beucler via teleconference)

- Update from recent TRB International Climate Conference.
- NCHRP 1561 can help with clarifications.
- ICC proceedings will be available, registration is free, and it is recommended to pay particular attention to Roger Kilgore’s discussion on updates to HEC 17.
- ATCHH Direction/Action Plan for Leadership on Extreme Weather forthcoming.
- Resolution will be circulated 2 weeks prior to voting.

Tuesday, September 22, 2015

8 am – 5:00 pm

8. FHWA Update – Technology

- Presentation on the state of art hydraulic flume at Turner-Fairbanks Highway Research Center – design construction, & function of sediment transport.
- Introduction to work on Soil Erosion Resistance
- In-situ Scour Testing Devise progress report
- Shallow Foundation Abutment Scour Research and defining Narrow Opening Bridges.

- Three (3) new NHI web based training courses; Hydrology, How to Use Hydraulic Toolbox, and How to Use HY-8.
 - NHI course updates; HEC RAS, SMS with new SRH 2-D software, and Pump Station Design.
 - FHWA video: Federal-aid Essentials; Developing a Risk-Based Scour Program <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?id=111>
- ** ACTION ITEM: 7** Dave Henderson to provide ATCHH members the link to Federal-aid Essentials video.
- Flume demonstration videos under development including roadway grated inlets, open channel hydraulics, culvert hydraulics, and energy dissipator performance.
 - Five (5) pooled fund projects by TFHRC; HY-12 GUI, HY-12 Pump Station Module, Hydraulic Toolbox update, HY-8 low flow addition (AOP), and CFD animations of grate inlets.
 - SRH-2D software update with features for overtopping and pressure flow.
 - Rick Renna provided slide presentation on FDOT issues with drainage structures in vicinity of MSE walls.
 - Discussion on FDOT white paper on climate change.

9. ATCHH Meeting with SCOD Chair and Vice Chair

- ATCHH provided action updates on Hydraulic Manual/Guidelines, LRFD, and Climate.
- SCOD understands ATCHH priority with NCHRP Climate Change and willing to reach out to SCOE and others to support and/or participate.
- Chair Braceras (Utah) reported intent to restructure SCOD which has 150 members, 50 voting members, and 8 Technical Committees.
- Seeking improved oversight and communication with Technical Committees and advancing research proposals.
- Technical Committee chairs membership on SCOD; TC chair as one of State's non-voting members, exception may be TC chair having close working relationship with SCOD voting member from their State which could justify execution of exception.
- Vice Chair Taylor (Maine) to chair a new research selection group consisting of two representatives from each Region.
- New process for research will mirror SCODS where proposals are advanced by the Subcommittee rather than the TC.
- New quarterly conference calls with SCOD Executive Committee and TC Chairs.
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ACTION ITEM: 8 No recent research projects funded; ATCHH should develop new research problem statements.

ACTION ITEM: 9 ATCHH members to initiate discussion within their respective organizations on potential for becoming non-voting SCOD member or topic of close working relationship with voting member (as described above).

** ACTION ITEM:10 ** ATCHH to review and provide feedback on SCOD operating procedures

10. AASHTO SCOD Awards Luncheon

- ATCHH member Steven Sisson, Delaware DOT, was recipient of The Achievement Award – Congratulations from the entire TC!

11. ATCHH Joint Meeting with Technical Committee on Environmental Design

- Introduction of members (see list of meeting guest above).
- Areas of major interest; Stormwater, Design Flexibility (Geometrics), Sustainable Projects, Scope Creep, AOP, and Context Sensitive Solutions.
- Enhanced communication and coordination to share technical expertise.

** ACTION ITEM:11 ** Karuna to provide Maryland's design guide on Stormwater Site Development (Context sensitive) Guide book.

Wednesday, September 23, 2015

8:00 am -5:00 pm

12. SCOD General Session

- ATCHH presentation on Impact of Climate Change and Extreme Weather on Hydraulic Infrastructure by Pujara, Renna, and Henderson (for Krolak).

13. Future ATCHH Meeting (Cynthia Nurmi by teleconference)

- Meet in conjunction with National Hydraulic Engineers Conference August 7 – 12, Portland Oregon vicinity
- Sessions Monday and potential evenings Tuesday & Thursday.
- NHEC coordinators solicited assistance and Hogan, Westerfield, and Claman volunteered.

14. Publications and Documents

- Discussed Climate and application of downscale for use by hydraulic design (roadway drainage).
- Hani Farghaly reported existence of climate adjusted IDF curves with unsupported science and questioned how to communicate warnings against “black box instruments”.
- Kerenyi advised NOAA/ WS is reorganizing and not committing to stationarity updates at this time.
- Big question is “what methodology is used for updates”?
- There is need to have climatologist to collaborate to establish statistical consistency on whether non-stationarity is valid.
- NCHRP Research Project 15-61 “Applying and Adapting Climate Models to Hydraulic Design Procedures” should be published and become basis for future ATCHH work on this topic.

ACTION ITEM: 12 There is need to identify champion from SCOD Regional breakout

sessions. If none are obvious then Pujara will discuss with SCOD Regional Chairs.

15. Reports on SCOD Regional Breakout Sessions

(ATCHH members attended respective SCOD Region)

- Region 1 – Discussion on attrition of staff, employee retention, and recruitment. The topic of conflict between ADA requirements and stormwater drainage was discussed.
- Region 2 – ATCHH was not acknowledged during session. ATCHH member took available open seat and the “SCOD member table” and was asked to move back to audience seating.
- Region 3 – ATCHH members were invited to the “table” and actively engaged in discussion related to Climate, highway runoff spread, and MS4s.
- Region 4 – ATCHH were invited to comment on cost effectiveness of various hydraulic modeling programs.

****ACTION ITEM: 13**** ATCHH needs to obtain concise protocol for attending SCOD Regional Breakout Sessions.

16. Report from ATCHH Chair Breakfast Meeting with SCOD Executive Meeting

- ATCHH Chair Pujara reveals SCOD organization diagram with TC remaining in Design Section.
- SCOD Operational Guidelines have TC Chairs as ex-officio members.
- TC Chair appointed by SCOD or appointed to SCOD by their respected State upon appointment as Chair.
- Exceptions to appointment as TC Chair of non SCOD members on case by case basis with sufficient justification of relationship between ATCHH Chair and respective State SCOD voting member.
- ATCHH membership appointed by SCOD Chair with recommendation from Region.
- ATCHH discussed SCOD draft operating guidelines and provided comments to AASHTO staff.

****ACTION ITEM: 14**** ATCHH Chair to routinely consult with SCOD Chair and Regions to insure prospective TC membership is vetted with appropriate credentials for membership.

Thursday, September 24, 2015

8:00 am – 5:00 pm

17. NCHRP Update – David Reynaud, NCHRP Liaison

- NCHRP 24-20 (02), *Scour at Abutments Continuation* in Draft and at publisher.
- NCHRP 24-36, *Scour at Base of Retaining Walls & Longitudinal Structures*, Univ. Minnesota (Sotiropoulos), final report pending.
- NCHRP 24-37, *Combining Individual Scour Components to Determine Total Scour*, Georgia Tech (Sturm), final report late.
- NCHRP 24-39, *Evaluation and Assessment of Environmentally Sensitive Stream Bank*

Protection Methods, Ayres Associates (Legasse) completion December 2015.

- NCHRP 24-40, *Design Hydrology for Stream Restoration and Channel Stability at Stream Crossings*, Colorado State Univ. (Bledsoe), completion January 2016.
- NCHRP 24-42, *Underwater Installation of Filters Systems for Scour and Other Erosion Control Countermeasures*, Ayres Associates (Clopper) completion September 2016.
- NCHRP 24-47, *Clear-Water and Live-Bed Scour in Long Contractions*, Anticipated.
- NCHRP 20-07/Task 356, *Strategic Plan for Prioritization and Selection of H&H Research Proposals*, presented by Michael Fazio by teleconference, funding increased to \$65K to be initiated in next several months.
- Reynaud offered proposal on "*IMPROVED DESIGN GUIDELINES FOR PROTECTION AGAINST EROSION AT BRIDGE ABUTMENTS AND EMBANKMENTS*" which found no support with ATCHH as there is no justifiable warrant for duplicative effort.

18. Extreme Weather – ICF Presentation (Mike Savonis & Guillaume Mauger)

- *Bridging the Gap From Science to Engineering* (ATCHH member's electronic files)

19. Joint Presentations with SCOD (ATCHH member's electronic files)

- Andrea Hendrickson, *Flash Flood Vulnerability and Climate Adaptation Pilot Project*.
- Casey Kramer, *Addressing Extreme Events at WSDOT and Beyond*.
- Jake Keller *Engineering Assessment Process Used In the Gulf Coast Study, Phase 2*.

20. Fish Passage WSDOT

- Casey Kramer, *Engineering and Regulatory Issues and Solutions* (ATCHH Member's electronic files).

21 Concerns of the States (to be included in Appendix)

Adjourned – Chair Karuna Pujara