



CUAHSI

universities allied for water research

CUAHSI Board Meeting Minutes

July 17-18, 2019

Roll Call

12 members are present, 10 needed for quorum. “X” indicates present

Term expires 12/31/2019

Elizabeth Boyer, Penn State University X (*remotely on 17th*)

Michael Gooseff, University of Colorado X (*remotely on 17th and 18th*)

David Hyndman, Michigan State University X

Holly Michael, University of Delaware X

Al Valocchi, University of Illinois Urbana-Champaign X

Term expires 12/31/2020

John Albertson, Cornell University (*term resigned effective 1-July-2019*)

Amir AghaKouchak, University of California-Irvine X

Jesus Gomez-Velez, Vanderbilt University X

R. Edward Beighley, Northeastern University X

Term expires 12/31/2021

Gordon Grant, Oregon State University (Past Chair) X

Steve Loheide, University of Wisconsin-Madison (Chair Elect) X

Jeanne VanBriesen, Carnegie Mellon University (Chair) X

Gretchen Miller, Texas A&M University X

Alejandro Flores, Boise State University

Greg Characklis, University of North Carolina Chapel Hill X (*remotely after 13:00 on 17th*)

Officers: (term expires 12/31/2020)

Audrey Sawyer, Ohio State University (Treasurer)

Adam Ward, Indiana University (Secretary) X

CUAHSI Staff Present:

Jerad Bales

Martin Seul (by phone during Data Services presentation)

Guests:

Holly Barnard (NSF Hydrologic Sciences)

Minutes prepared by Ward

17-July-2019

08:00 CDT Call to Order

1. Executive Director

a. Update on Renewal

- i. Bales briefly reviewed the terms and conditions of the NSF renewal. He noted two key additions that the Board should be aware of: (1) developing a strategic plan for diversity and inclusion; and (2) developing a strategic plan for increasing usage of CUAHSI data services. Initial drafts are due November 2019.
- ii. Bales presented a brief review of new activities in the next five years (New Grant Activity Crosswalk.pdf), highlighting how these complement existing activities and build upon CUAHSI's strengths. Grant suggested that an explicit linkage to the strategic plan and metrics for success would be useful. Bales responded that he will discuss this during the data services review.

b. Other ongoing projects (Current CUAHSI Projects)

- i. Bales reviewed the portfolio of existing projects (Summary of Currently...pdf). He briefly reviewed each project and their objectives.
- ii. Bales and Barnard led a discussion of interagency agreements with the National Weather Service, their support for the summer institute, and their satisfaction with the progress to-date.
- iii. Bales committed to sharing workshop reports or white papers from various meetings and projects with the Board as they are finalized.
- iv. Gomez-Velez asked if CUAHSI-supported projects advance the organization or are specific to the goals of individual PIs. Bales reported that he is careful to identify projects that build strategically on existing capabilities or advance CUAHSI capabilities in a strategic direction.
- v. Gooseff noted that this list was an impressive advance to the growth of CUAHSI's support across a range of programs and organizations, which was a strategic goal set in 2018.
- vi. Grant asked about the extent to which these projects are aligned with the strategic directions of the organization, or if they are primarily focused on supporting individual PIs in hydrologic science. Bales responded that the combination of staff resources, goals, and the proposals which are pursued

is a balance that must be struck. The discussion considered the balance of research projects vs. educational or engagement opportunities. Bales expressed a desire to broaden CUAHSI's funding base in outreach, education, and engagement.

- vii. Hyndman asked how the amount of funding that comes to CUAHSI is determined for each project. Bales replied that he considers this on a case-by-case basis, depending upon the needs from CUAHSI and opportunities that may result from a collaboration. Bales also noted that funds to CUAHSI are regularly earmarked for participant support as opposed to staff time and effort.
- c. Status on other outstanding proposals (Status of Proposals)
 - i. Bales reviewed proposals that CUAHSI has participated in during 2018 and 2019 (Proposal Summary...pdf), describing the origin, CUAHSI commitment, and status of each proposal. He noted that strategic goals are directly mapped to all proposals.
 - ii. The Board concurred that this is an impressive list of potential partners and was pleased to see a variety of stakeholders and funding sources represented.
 - iii. VanBriesen asked how Bales manages possible conflicts when multiple stakeholders are applying to a competitive process where CUAHSI would be on multiple proposals. Bales replied that he is transparent with all partners so there are no surprises. He also felt CUAHSI could play a supporting role in multiple projects without conflict. The group discussed possible conflict when there is a CUAHSI-led proposal that would compete with those led by individual PIs.
 - iv. Grant noted the breadth of activities in current and pending proposals, and how these proposals might stress CUAHSI's resources or distract from CUAHSI's mission. Bales stressed that he views CUAHSI's position in the community is to be accessible to many stakeholders, leading him to a default position of supporting most inquiries. He noted costs of project management and technical support for any project. He reported the potential need for new staff to help with project management to balance deadlines, commitments, reports, and deliverables to both external partners and for CUAHSI activities.
 - v. The group discussed opportunity costs of pursuing external partnerships, specifically if they are delaying or interrupting core activities. Bales acknowledged this challenge, specifically reporting that user experience and outreach for the data center are always areas for improvement.
 - vi. Michael asked if the funding associated with projects would grow the CUAHSI staff. Bales indicated this was possible, but also reported success in hiring contractors on a temporary basis.

- vii. Beighley asked if CUAHSI has standard costs for partnering on activities. Bales replied that these costs are known within CUAHSI and he has a standard rate.
 - d. Proposed Executive Director Travel
 - i. Bales outlined the following, proposed travel and provided a brief overview of each trip, its justification, and the source of funds for each trip.
 - 1. IHTM Meeting: September 3 – 6, 2019. Washington, DC
 - 2. Sustainability in Urban Systems Workshop; September 9 – 11, 2019. Cincinnati, OH
 - 3. IoW Meeting; October 21 – 23, 2019. Durham, NC
 - 4. AWRA Board Meeting, November 1 – 4, 2019. Salt Lake City, UT
 - 5. AGU Fall Meeting, December 8 - 14, 2019. San Francisco, CA
 - ii. **Motion to approved Bales’ travel as outlined above.**
 - 1. **Motion: Gooseff**
 - 2. **Second: Loheide**
 - 3. **Discussion: (none)**
 - 4. **Vote: Approved (unanimous)**
2. NSF Program Officer Report
 - a. Barnard reported general satisfaction with CUAHSI’s progress in the past year, and with the renewal proposal and plans.
 - b. Barnard led a discussion of the terms and conditions for the award, which were made in direct response to the review of the proposal. She noted these terms were designed to help CUAHSI address questions and critiques that came up through the review process. She highlighted specific changes or additions relative to past awards including:
 - i. Developing a diversity and inclusion plan, and clearly defining the CUAHSI community
 - ii. Developing a data services implementation and outreach plan to accelerate utilization of these services, including bringing new users to the table and defining a suite of metrics to assess performance
 - iii. Revision of a strategic plan before the next proposal cycle
 - iv. Performing a technical review of user experience, usability, and operability issues.
 - c. Grant initiated a discussion of the RFP for a Critical Zone network office.
 - i. Barnard indicated that CUAHSI securing funding sources beyond what the Hydrologic Sciences program can support is a strategic area for growth. She suggested CUAHSI is already effective in data services, education, and outreach that might make the organization competitive.
 - ii. Gooseff, Loheide, and others suggested that CUAHSI provides a large staff and neutral party to perform these functions, as opposed to a small group of PIs at an individual institution. Gooseff and VanBriesen asked about any concerns with CUAHSI expanding from hydrology to more

- broad earth science community support. Bales responded that CUAHSI is already working with critical zone data and a wide range of data types.
- iii. Miller suggested it would be important to integrate other PIs and organizations in this sort of effort, how CUAHSI would bring the existing CZO community into the fold, and the opportunity to expand CUAHSI's community partners in leading a proposal.
 - iv. Barnard noted that existing CZO PIs will likely be competing for the network clusters during the same period.
- d. AghaKouchak asked how the organization would be evaluated in education and outreach. Barnard responded that part of the plans that are due will need to clearly define these metrics, and that those would need to be approved by the NSF Program Officer.
3. CUAHSI – AGU MOA and Joint Hydrologic Science Meeting
 - a. Scott Tyler, president of AGU Hydrology Section, joined the meeting via teleconference for this discussion.
 - b. Bales introduced the concept of an AGU Hydrology Section meeting that would jointly partner the AGU section with other organizations, including CUAHSI and IAHS. He has been in discussion with AGU on this, and reported broad support from the community survey that was conducted. He indicated the need today for direction from the Board to pursue this, actively negotiate with AGU, decline the opportunity, or some other path to proceed.
 - c. VanBriesen asked about other AGU sections that have other separate meetings. Bales and Tyler discussed Ocean Sciences as a primary example, where a joint meeting has been held since 2012, ASLO, and other organizations. Tyler has discussed these with the AGU section presidents and also the executive directors and leadership of smaller organizations, reporting all positive experiences. Tyler indicated this has grown out of the needs of the section, noting that there is not a stand-alone disciplinary meeting which is common to other AGU sections.
 - d. Tyler reported that there is no requirement from AGU to have any partners, nor to have the same partners for each meeting. He expressed a desire for a Spring/Summer 2022 meeting as the first joint meeting. He also reported that there was appreciation for CUAHSI as an existing partner with the Hydrology Section, noting past success in collaboration.
 - e. Valocchi asked if this meeting would cut into attendance of the Fall meeting. Tyler reported that the Ocean Sciences section does see a drop of about 10% in fall meeting abstracts during years with the section-specific meeting.
 - f. Grant asked what specific role CUAHSI would play beyond simply acting as a named partner. Tyler reported he was open for discussion, noting that survey responses indicated a different programmatic structure was of interest to the community, hoping that CUAHSI would contribute ideas and different types of sessions and activities at the meeting.

- g. Hyndman asked why there was a focus on even years. Tyler reported IAHS has an odd-year meeting schedule that they wanted to keep, and that 2022 felt like a reasonable planning horizon for the meeting.
- h. Gooseff asked about compression of the schedule into more competing and overlapping sessions. Tyler intends that the fall meeting will still have its complete slate of business meetings and presentations, and this separate meeting would be independent and have different organization, such as longer talks and panel discussions. He speculated a meeting of perhaps four days in length would be appropriate. Tyler emphasized the goal was not to duplicate the fall meeting, but to design a different meeting experience for attendees.
- i. Hyndman asked about sharing of costs and revenue. Tyler reported that the ocean sciences group splits profits evenly among the three organizations, but formal discussions have not occurred for hydrology. Bales reported that this was his understanding of how revenue would be divided. However, Bales suggested that the division of staff support and those costs would need to be discussed.
- j. VanBriesen asked the directors if they thought the community CUAHSI represents would be interested in this meeting. Hyndman was supportive of this meeting, noting opportunities for early career and student presentations and community building. Miller expressed support from herself and her colleagues, reporting only concerns about logistics of timing and costs rather than presence or absence of the meeting. The Board generally concurred this would be of interest to the community, which they represent.
- k. Grant contrasted the large AGU meetings with the small CUAHSI Biennial, describing the proposed meeting as somewhere between the two. He expressed concern that this would be attended in place of a CUAHSI biennial in tight budgets and schedules. Michael expressed a need to have smaller meetings for the community. The intent would be to hold the Biennial on odd-numbered years, with the joint AGU-CUAHSI meeting occurring on even-numbered years.
- l. The CUAHSI Board of Directors authorizes the Executive Director to sign a Memorandum of Agreement between AGU and CUAHSI on the development of a joint Spring Hydrologic Science Meeting.**
 - i. Motion: Hyndman**
 - ii. Second: Beighley**
 - iii. Discussion: (none)**
 - iv. Vote: Approved (unanimous)**
- m. VanBriesen initiated a discussion about the future of CUAHSI's Biennial meeting, as well as the Hydroinformatics meeting that occurs in alternate years.
 - i. Bales reported that CUAHSI has held one meeting per year for many years. The Hydroinformatics meeting in odd years is a meeting of about 120 attendees with a large amount of travel support provided, noting that the meeting has not grown significantly. The Biennial meeting is held in even years, with a typical attendance of 300 people. Bales reported one possibility in a Spring AGU meeting would be to carve out a day of the

- meeting in which CUAHSI would host invited talks and a format more similar to existing Biennial meetings, or host a series of HydroInformatics sessions and workshops as a “track” within the meeting. Tyler concurred with the high degree of flexibility in planning the meeting.
- ii. Miller endorsed having the Hydroinformatics meeting coupled to the Spring meeting as a way to increase exposure and attendance.
 - iii. AghaKouchak suggested combining the Hydroinformatics meeting with the Biennial as an alternative option.
 - iv. Ward suggested there might be an opportunity to foster a different community, in the same way that CUAHSI fostered the Hydroinformatics community, with some budget.
 - v. Valocchi and others expressed that the Biennial was a positive experience for attendees and the community did not want to see this replaced.
- n. The group discussed potential future locations for meetings, including a space in Sacramento that might be available for a future meeting.
 - o. Grant suggested opportunities for the Biennial to highlight new growth areas as a potential for CUAHSI to remain nimble as new themes and trends emerge.
 - p. VanBriesen expressed concern that the Biennial is attracting the same group of researchers vs. forming an environment that would engage more people and broaden the community. Michael suggested casting a broader net with more open session planning and invitations would help. The group discussed costs to attend meetings and if this limited participation. Using revenue from a Spring AGU meeting to support travel was discussed as an opportunity to broaden attendance. Gomez-Velez reminded the group that meetings held internationally would strain the ability to support travel, challenging success in broadening the community. Grant also noted that federal agency scientists may be limited in their ability to attend multiple meetings.
 - q. Beighley clarified that no decision has been made about the future of the Biennial and Hydroinformatics conferences. VanBriesen noted that the 2019 Hydroinformatics and 2020 Biennial have already been scheduled. Thus, the 2021 meeting would be the first opportunity to adjust current norms. The group generally agreed a combined biennial and hydroinformatics meeting in 2021 was a logical approach.
 - r. Bales expressed concern about having a larger meeting in 2021 in terms of the structure of the CUAHSI budget from NSF.
 - s. **Motion: CUAHSecond: MillerSI will host a combined Biennial and Hydroinformatics meeting in 2021, pending available financial support.**
 - i. **Motion: Gomez-Velez**
 - t.
 - i. **Discussion:**
 1. **Valocchi questioned the availability of funds. Bales responded that will need to be discussed.**
 - ii. **Vote: Approved (unanimous)**

- u. Loheide asked how certain it was that a 2022 AGU Hydrology Section meeting would happen (cosponsored by CUAHSI). Tyler responded that this was highly likely, and he expected this would be successful.
 - v. VanBriesen suggested the Board needs to think critically about 2021 and 2022 plans after Bales completes his negotiations with the other organizations.
4. 2020 Biennial Planning
- a. Valocchi and Michael discussed the timeline for planning past Biennial meetings, noting that planning is a bit behind the past schedule. Key steps for the meeting are to get a planning committee established and begin the process of identifying and inviting keynote speakers, and also organizing who would lead sessions and on what themes within the meeting. Loheide also discussed that Board input has been important in past years, and that this should be advanced during this meeting. All past organizers concurred that CUAHSI staff are excellent in supporting the logistics. Past chairs all confirmed willingness to help.
 - b. VanBriesen reported that Miller and Gomez-Velez were interested in co-chairing the meeting, and she invited others to volunteer if they were interested.
 - c. Beighley suggested that it would be good to have an opportunity for the community to submit talks or plan sessions to help open up the meeting to a broader community.
 - d. Bales suggested that Integrated Hydro-Terrestrial Modeling would be a theme that would resonate with emerging efforts by some communities. Bales also suggested a lecture to be named after Florence Bascom, the first woman to earn a PhD in geology. Finally, he underscored the opportunity to engage primarily undergraduate institutions with this meeting.
 - e. VanBriesen suggested a co-chair who is external to the Board might be a strategic direction. Miller suggested that a person who is an expert in the thematic area selected would be ideal.
 - f. Valocchi challenged the notion of a theme. Michael concurred, noting a theme could feel exclusive to some members. Hyndman suggested, as an alternative, simply having the sessions themed on key areas rather than a meeting-wide theme.
 - g. Loheide suggested highlighting poster presentations, expanding the number of people that would attend. He also suggested a “poster walk” so everyone would have one minute to give a quick introduction to their work and gain visibility.
 - h. Valocchi suggested not having an overarching theme, and instead using groupings of sessions to help organize the meeting. Beighley suggested a theme that communicated CUAHSI’s mission or vision would be helpful. Grant suggested a theme helps the community understand what CUAHSI is paying attention to in the field.
 - i. The group brainstormed several possible themes that would link hydrology to other disciplines and fields of study, including explicitly linking to NSF’s Big Ideas.
 - j. Several themes were suggested related to the NSF definition of Convergence.

- k. Motion to appointing Miller and Gomez-Velez to the planning committee for the 2020 Biennial.**
 - i. Motion: Hyndman**
 - ii. Second: Loheide**
 - iii. Discussion: (none)**
 - iv. Vote: Approved (unanimous)**
- 5. Fall 2019 Meeting
 - a. VanBriesen confirmed CUAHSI meeting for August through December 2019 will be Mondays, 12-1pm Eastern time. ExCom will meet the first week of each month, and then the Board during the 3rd week of each month.
- 6. Activity Review: CUAHSI Water Data Services and Data Services Strategic Plan
 - a. Bales summarized CUAHSI's data services in a short PowerPoint presentation (Data Service...pptx).
 - b. The group discussed the potential of updating the HIS system to a platform hosted by or initially built by a private corporation. Bales received a recommendation from a former staff member, outlining costs, and benefits of this approach, which he will share with the Board. Bales also discussed the need for customization of off-the-shelf software, clarity on data publication, and implications of moving from an open-source to a purchased solution. The group also discussed strategically partnering with other organizations such as the EPA or LTER community to collaborate on either a built or purchased solution. Miller asked if a purchased solution would preclude CUAHSI from providing services to other organizations, as they might prefer to simply buy their own software. Bales indicated that CUAHSI's support and customization would still be a novel and desirable platform. Bales also noted CUAHSI code is open-source and can be used or modified freely by others. Bales expressed a desire to make a decision before 2020.
 - c. The group discussed the metrics that are appropriate to measure success in the data services space. Grant suggested that the metrics are used to envision a narrative of who is doing what with the system. The group brainstormed several metrics about unique users, their frequency of use, which organizations are using the system, and the specific datasets being accessed. Bales solicited input how the most effective ways to drive adoption of CUAHSI services. Grant articulated a desire to collect information about the novel use cases and success stories, toward a vision of how to advertise the opportunities.
 - d. Bales prompted the group with a discussion of desired functionality or data services in the HIS. Beighley suggested a spatially averaged output based on a defined boundary (e.g., a watershed boundary) to complete data reduction on the server and provide an aggregate data set. The group discussed this as the idea of adding value to accessing the data.
 - e. Grant initiated a discussion of continental and global modeling and the role of CUAHSI in providing information to and archiving outputs from these simulations. Bales reported the ARS SWAT model and National Water Model

forecasts are already integrated with HydroShare. The group discussed archiving representative time periods or extreme events that would be useful for assessment of model performance. Bales agreed, noting that this has been implemented for benchmark data sets, including for Hurricanes Harvey, Irma, and Marie.

- f. Barnard noted recurring themes in CUAHSI reviews that need to be addressed in the new award. She specifically highlighted the need to serve the whole hydrologic science community, and demonstrating the added benefit (i.e., return on investment) to the community based on the fraction of the hydrologic science budget that is allocated to CUAHSI.

7. Standing Committee Reports

a. Education & Outreach

- i. AghaKouchak reported a CyberSeminar Series focused on data-driven education is planned for Fall 2019.
- ii. AghaKouchak reported the community is refining the process in evaluation of the pathfinder fellows.
- iii. AghaKouchak discussed possible opportunities for the coming year, including:
 - 1. Adapting the Let's Talk About Water format for classroom use
 - 2. Developing a Hydro-Data Science Certificate to be offered by CUAHSI
 - 3. Forming a faculty mentoring network
- iv. Loheide reported 9 institutions are participating in the CUAHSI Virtual University, with an upcoming onboarding workshop planned in the coming weeks. The group discussed making course materials publicly available, and also noted that any community member could propose a course as a way to gain access to the course for their students.
- v. The group discussed how participation in a workshop, summer institute, or series of courses are recognized by CUAHSI. The discussion also considered if providing credentials is a role for CUAHSI in the community.
- vi. **Action Item: AghaKouchak to task the committee with a more detailed study of the potential for a certificate program.**

b. Instrumentation

- i. Hyndman reported that the Instrumentation Discovery Travel Grants are a key activity of the committee. He reported twenty proposals submitted and five proposals funded, and overall high quality for the proposals.
- ii. VanBriesen reminded the group that students awarded these funds are expected to upload data into the CUAHSI services. Bales reported that CUAHSI staff does follow-up on this. VanBriesen also suggested these students could report out at the Biennial, along with the Pathfinder Fellows, or during the annual membership meeting. The report out by the Pathfinder Fellows has been well received.

- c. Hydroinformatics
 - i. Beighley reported that the Hydroinformatics Fellowship received 20 proposals, of which two were funded. He noted several more were worthy of funding if more support were available. He suggested that funding multiple awards at smaller levels in future years, as some smaller proposals were received that would have benefited from awards in the range of \$1,000, vs. the full award of \$5,000. Most proposals focused on software products as a primary outcome, with the next most common being scientific publications.
8. 2019 Ad Hoc Board Committee Reports
- a. HydroShare
 - i. Bales reported the group met face-to-face in December 2018 and once by phone since that time. He has requested that Tarbotten and Pollak advance this in the coming months, noting the period at and after the HydroInformatics meeting as an ideal time to reinvigorate the committee.
 - ii. The group discussed the role of the committee as a sounding board for the HydroShare team and as a beta testing group. Bales reviewed the charge to the HydroShare committee.
 - b. Diversity, Equity, and Inclusion
 - i. Miller summarized the work of the committee in the past several months. She noted that the group is working on a strategic plan draft to be completed in August 2019. The group is also charged with the development of an implementation plan. She articulated the goal as increasing diversity in members, representatives, and leaders in CUAHSI, and increasing equity and inclusion in CUAHSI's programs and activities. The group is producing a guidance document including best practices for CUAHSI activities. Miller reported the committee is also developing a plan for collection of data from recent past and upcoming CUAHSI activities. Finally, the committee has reviewed initiatives and plans by other, peer organizations and other organizations in the hydrologic sciences. Miller reminded the Board that the work products from the committee are on the Board's shared drive.
 - ii. Bales reported that he discussed this initiative with representatives from NCAR and UCAR to compare efforts and progress.
 - c. **Action Item: Board to review the guidance on charges to committees and procedures that were outlined for committees at an upcoming meeting.**
9. CUAHSI Letters of Support
- a. VanBriesen introduced the topic of CUAHSI writing letters of support for co-signing letters for various activities such as letters articulating positions on political issues. The Board was provided with a summary of various opportunities and risks.

- b. Hyndman suggested that the risk is high if any activity is misconstrued as lobbying, and there is little to be gained.
 - c. Bales estimated that he has been approached twice on these sorts of requests in the past six months.
 - d. Grant discussed if CUAHSI has a role in educating our community about issues vs. advocating for a particular position.
 - e. VanBriesen asked about CUAHSI's role in public comments submitted to executive branch agencies or scientific organizations in contrast to directly lobbying congress.
 - f. Michael differentiated the opinions of individuals from the opinions of an organization. She clarified the difference between indisputable information (i.e., facts) and opinions.
 - g. VanBriesen suggested that scientists can have a role in providing information for policymaking and referred the group to guidance from the AGU on the matter titled "An Overview of Anti-Lobbying Regulations for Federally-Funded Scientists".
 - h. Miller suggested a blanket policy is a bad idea, suggesting the role of the Board is to consider these requests and evaluate them on their merits as a standard operating procedure. VanBriesen indicated that the current procedure has been not to sign without discussion and explicit approval by the full Board, which requires adequate time between the request and the expected response.
 - i. Loheide suggested writing a short statement about the potential risks to the organization that could be in place as a standard response and CUAHSI's standard procedure for this. Bales suggested this should explicitly include that CUAHSI will not engage in any activity that attempts to influence congress.
 - j. Action Item: VanBriesen to draft a policy statement that defines CUAHSI's response to requests, articulates the risks to the organization, and describes options from CUAHSI. The board will consider the policy statement at a fall meeting.**
10. Board Elections
- a. VanBriesen briefly reminded the group that we will be electing 5 new Board members to a term of 3 years, plus filling the final year of a term vacated due to a resignation. The Board should be prepared to plan on committee members, likely recruits, and who might be interested in filling the final year of a Board term. She also would like to have a discussion of board expectations and onboarding, with a goal of identifying what the expectations are to help in the recruitment process.
11. VanBriesen opened the floor for any other business. Hearing none, the meeting was adjourned for the day.

16:46 CDT Adjourned

18-July-2019

08:00 CDT Call to Order

12. Board Discussion of Community / Constituents/ Membership

- a. VanBriesen initiated a discussion of how CUAHSI's membership is defined and if CUAHSI is serving the hydrologic science community. She reported having reached out to several affiliate members to discuss CUAHSI membership, reporting some discussion of financial costs for membership.
- b. VanBriesen noted CUAHSI membership requires a graduate program in hydrology per the bylaws, which means undergraduate-only institutions cannot be full members. Valocchi discussed the origin of this clause as having roots in the research mission of CUAHSI. The group discussed CUAHSI's educational footprint and community tools. Michael and others voiced the view that engaging undergraduate institutions would benefit the organization, and could improve diversity and inclusion for the organization. Many Board members reported active research partners at primarily undergraduate institutions, and also noted these undergraduates ultimately become graduate students and researchers at other organizations. Grant noted that the face of science is more frequently including undergraduate students, noting support for early career students is essential. The board also had broad support for retaining the option of affiliate membership that is a lesser financial burden for organizations for which this is an issue.
- c. Gooseff initiated a discussion of what CUAHSI activities would become available to students at these institutions. For example, would CUAHSI intend to expand into areas like undergraduate-specific travel grants or fellowships. Michael also noted that representatives of new members would be able to serve on the Board and help set direction for the organization.
- d. Bales initiated a discussion around expanding CUAHSI's reach and impact in a broader way, complementing the signal sent by members. Grant also suggested that engagement with federal scientists as a growth area, noting that the "university" in the organization name may be a challenge. Bales reported that the inability for federal scientists to be members or serve on the Board could be an impediment to participation. The group discussed corporate membership options.
- e. VanBriesen also raised the potential that current full members could move to affiliate membership, with the only consequence being the opportunity for Board membership.
- f. VanBriesen summarized the previous discussion as a general support for modifying the requirements for membership to eliminate the requirement for graduate programs, noting that any institution should be able to have any membership.
- g. VanBriesen next initiated a discussion of whether a representative of a corporate member or agency should be able to run for the Board. Beighley was supportive

of any representative having a voice in the organization on the basis of their interest in the organization. Gomez-Velez asked about the future role of international affiliates. Hyndman suggested that funding may be linked to the membership of the organization, and the possible challenge of too much funding being spent outside of the U.S. or on corporate membership. Ward clarified that corporate members do not have any voting in the organization, affiliates and international affiliates have one vote, and full members have three votes.

- h. The group discussed federal agencies and their scientists as potential users of CUAHSI services and a group that would enrich the perspectives in the organization. Grant suggested considering a targeted campaign focused on data archival, accessibility, and continuity services that would benefit from CUAHSI services. He felt there was a large opportunity to serve federal scientists that was currently untapped and focused on the central mission of CUAHSI.
 - i. VanBriesen initiated a discussion of how CUAHSI serves individuals through their careers, beginning in their first year of education and spanning their entire careers. The group discussed opportunities to focus on individuals in addition to institutions to help expand visibility and reach in the community.
 - j. Hyndman suggested an informal effort to engage the membership on discussion of the costs and benefits of a potential change. This would allow dialogue on the issue and build consensus. VanBriesen suggested this could be discussed at AGU Town Hall meetings, at the Biennial meeting, and in other venues to get feedback. Gooseff suggested also getting feedback on the role of agency scientists in the organization.
 - k. The Board will continue to discuss bylaws revision and membership engagement in the upcoming months.
 - l. **Action Item: CUAHSI staff to list lapsed memberships or targets for membership, where Board members will plan to reach out individually in 2019.**
 - m. **Action Item: Include discussion of membership at the AGU Town Hall meeting and the annual membership meeting in 2019.**
13. Fiduciary Responsibilities
- a. Bales briefly reviewed budget-to-actual comparisons for each CUAHSI project, budget justification for the cooperative agreement, and the 5-yr budget for the cooperative agreement. VanBriesen requested information about the categories of spending. Hyndman concurred that a higher-level summary of how funds in translate into staff action and expenditures would help the Board as a basis for discussion about current and future activities of the organization. Bales responded that at least some of this information is in the budget justification that was provided. There was agreement by the Board that it would be helpful to see a higher-level perspective or functional perspective of the spending of the organization. Loheide suggested that the Board has been considering costs and outcomes for individual activities during monthly meetings, and an overall synthesis would be helpful.

- b. Hyndman requested a complete but concise spending plan that summarizes how expenditures support various initiatives within CUAHSI. VanBriesen also indicated a desire for the Board to have an opportunity to see how spending is changing in broad categories or to provide feedback to Bales.
 - c. Bales discussed the complexity that the budget has many moving pieces and projects that fit together, noting that the accounting is separate for the various projects. The group discussed what information and format would be most helpful to the Board and the director.
 - d. **Action Item: VanBriesen, Bales, and A. Sawyer (Treasurer) to collaborate on a revised presentation of the budget for the Board, to be reviewed and approved during Board meetings in 2019.**
 - e. The group discussed the response to the federal shut-down earlier in the year, and responses to any future shut-downs. Bales noted membership funds, a line of credit, and the ability to draw-down funds from NSF are all now options available to CUAHSI in anticipation of a shutdown.
 - f. Loheide asked about a policy of paying rent and computing service costs ahead by a few months to provide some buffer against future funding lapses. Bales said this could be explored.
 - g. **Action Item: The Board directed Bales to investigate alternative lines of credit that may extend the ability of the organization to weather longer shut-downs and at a more favorable interest rate.**
14. 2019 Director Election, Recruitment of Director Candidates, & Recommendations for Nominating Committee
- a. VanBriesen provided a brief overview of the election procedure and norms. Loheide (as chair elect) will chair the Nominating Committee, and the Board needs to identify a second Board member for the committee and a member from the community at large.
 - b. AghaKouchak volunteered to serve on the nominating committee.
 - c. Ward reviewed the Board terms and bylaws, noting that CUAHSI members will need to elect five Board members to 3-yr terms and one Board member to serve the final year of the seat vacated by a Board resignation.
 - d. The group brainstormed several non-Board members for the committee, and also several potential Board members to be recruited. The group encouraged Loheide to consider diversity in both committee members and potential Board members.
 - e. **Action Item: Loheide and AghaKouchak to recruit a third member of the nominating committee and begin the process of recruiting a slate of candidates for the Board election. Board members are encouraged to email suggestions to Loheide and AghaKouchak.**
 - f. VanBriesen initiated a discussion of replacement of the Board seat that was resigned. As a consequence, we need to recruit someone to fill the remainder of the term. This is the first time the organization has faced this sort of decision process. The Board suggested that having a candidate with past experience with CUAHSI would be ideal for a short-term appointment of this sort, but noted that

the position is open to anyone meeting the same qualifications as any other Board member.

- g. The board discussed election procedures, specifically noting (1) the replacement Board seat will be treated separately from the 3-yr term seats, following the same procedures but having a separate vote for that position, and (2) candidates should be nominated for only the 3-yr or 1-yr position, but not both as that could create conflict in election.

15. January 2020 Face-to-face meeting

- a. VanBriesen identified 9-10 January 2020 as the best dates for the meeting based on current members' replies to the poll. Valocchi suggested meeting in Washington D.C. in anticipation of a new program officer being able to attend in person.
- b. Action Item: Bales will work with CUASHI staff to identify a venue in DC and begin organization of the meeting.**

16. Discussion of Critical Zone RFP and CUAHSI

- a. The Board discussed the various activities that might be expected of a coordinating hub for the Critical Zone program and how well these were aligned with the current and future directions of CUAHSI.
- b. Action Item: VanBriesen to coordinate a small group that would advise the Board on the potential of CUAHSI serving as a hub at the ExCom meeting in August 2019. Board members should advise VanBriesen if they want to engage on this issue.**

17. VanBriesen opened the floor for any other business. Hearing none, the meeting was adjourned for the day.

11:10 CDT Adjourned