CUAHSI Board Meeting Minutes
January 8-9, 2018

Roll Call
- 10-12 members are present, 10 needed for quorum
- "**X**" indicates Director is present

Term expires 12/31/2018
Matt Cohen, University of Florida **X**
David Genereux, North Carolina State University (past Chair) **X**
Gordon Grant, Oregon State University (Chair) **X**
Erich Hester, Virginia Tech
Steve Loheide, University of Wisconsin-Madison **X**
Jeanne VanBriesen, Carnegie Mellon University **X**

Term expires 12/31/2019
Elizabeth Boyer, Penn State University **X (by remote connection, 8-Jan-18 only)**
Michael Gooseff, University of Colorado
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 **X (by remote connection, 8-Jan-18 only)**
Amir AghaKouchak, University of California-Irvine
Jesus Gomez-Velez, New Mexico Technical University **X**
R. Edward Beighley, Northeastern University **X**

Officers & Staff Present: Jerad Bales (CUAHSI), Martin Seul (CUAHSI), Adam Ward (Secretary)

Minutes prepared by Ward

8-Jan-2018

Guests: T. Torgersen (NSF)

9:00 EST   Call to Order

1. Roll call
2. 2018 Budget Request
   a. Bales reviewed Attachments 1-6, pertaining to the 2018 operating budget for CUAHSI. The group reviewed attachments 1 (budget spreadsheet) and 3 (budget justification) in detail. Bales provided an overview of budget scenarios related to changes in funding ranging from -10% to +10% in annual budget.
   b. Bales reviewed the staff support coming from non-NSF funding sources. VanBriesen asked about the stability of non-NSF funding. Bales noted that the funds for the 2018 Summer Institute are already in-hand, and identified no major changes anticipated in the upcoming year as other grants are a small portion of staff salary funding. Hyndman asked about the timeframe to request funds for a 2019 institute. Bales has a meeting scheduled in late January to plan the 2018 activity and will discuss this. He noted that a continuing resolution for the federal budget will likely complicate budgeting for future activities.
   c. Valocchi asked about hiring of a deputy director. Bales reported that he hopes to initiate a search in 2018, pending support for this position in the future Cooperative Agreement from NSF. The goal would be for funds to support Bales and a deputy director as part of the renewal budget. VanBriesen asked about timing of hiring relative to federal budgets. Bales responded that it is important to always think about CUAHSI's funding context of federal operating budget. Bales also clarified that he is comfortable running with current staff until this hire is made.
   d. Grant asked about the balance of carryover funds from past years relative to the scenario planning. Bales responded that the operational plan is for no carryover at the end of Year 5. Grant asked if this was concerning. Bales responded that the only concern would be a gap in funding if a renewal proposal were not timely, for example due to federal budget limitations. Bales reported he plans to actively manage for this potential and communicate closely with the NSF. Loheide asked about the size of the unrestricted funds from membership dues. Bales responded this is at about $150,000, and could be used to buffer against a gap in funding.
   e. Hyndman asked how service provider contracts were estimated for budget scenarios. Seul responded that contracts have been consistent for the past few years and no new contracts were anticipated. As such, he feels the numbers are

2

predictable for planning purposes. Several of the 2017 contracts were reduced because of changes in needs.

f. Grant noted that the current budget does not reflect new funds if they are awarded; he asked how new funds would be expended. Bales reported that increased NSF funds would support specific, ongoing activities. External funds would support additional activities by adjusting staff allocation of duties and/or hiring contractors to complete work.

g. Bales reviewed existing workshops, noting that NASA and WRF-Hydro workshops have been very oversubscribed, and most other workshops have 1-10 participants on a wait list. Details are provided in Supplement 2. Bales discussed the WRF-Hydro class specifically, noting that this is an important step in building a stronger, ongoing relationship between CUAHSI and NCAR.

h. Grant asked how proposals for new short-courses are solicited and decisions are made. Bales noted that proposals are received by CUAHSI, vetted by the education and outreach committee, and presented to the Board. Also, Bales reported that E. Tran (CUAHSI Staff) pays attention to community needs and solicits courses as opportunities come up; courses are also generated organically from the community.

i. The group discussed CUAHSI's communication plan (Attachment 6). Bales noted that CUAHSI is working on branding, consistent messaging, and generation of publicity. He discussed challenges with branding of data services, including HydroShare (which is both a CUAHSI service and research project at Utah State University). In summary, Bales noted that communications need to be intentional and strategic rather than ad-hoc. Bales hopes to implement this plan for a year before expending substantial additional effort to adjust the plan. The group discussed CUAHSI as a go-to organization for hydrological data services, and how this is communicated to CUAHSI members and to the general public.

j. Grant asked if Bales felt the communication plan was sufficient to implement the strategic plan. Bales responded that it is a strong starting point, but acknowledged it is incomplete. Bales has encouraged training amongst CUAHSI staff and empowering CUAHSI staff to move the organization forward.

k. Gomez-Velez asked how the success of existing communication efforts is measured. Bales responded that focusing on quantifiable metrics is a major focus of Bales and J. Pollak (CUAHSI staff) in 2018.

l. Grant reflected on CUAHSI messaging, noting that the diversity of services - such as model workshops, education activities, seminars, training - make CUAHSI highly visible. However, he also noted that this makes it difficult to clearly define a CUAHSI brand. The group discussed using BoD time to discuss CUAHSI goals and services as a series of video interviews. Hyndman suggested that hiring a marketing firm to help develop a short branding video could help. Gomez-Velez suggested targeting undergraduate courses with messaging and services to gain initial market share with future hydrologists.

m. Valocchi asked if hiring a communications consultant or someone to help with business plan development would be worthwhile. Bales responded that a more

immediate need is in organizing the many deprecated, but still existing, web pages as multiple entry points to CUAHSI services and the multiple "HYDRO" names for services.

n. Genereux asked about coordination with N. Chatelier (IBM Service Corps.). Bales responded that coordination has been a challenge with Chatelier and that he has not replied to recent communications from CUAHSI.

o. **Resolution: The CUAHSI Board of Directors concurs with the draft 2018 (CCA Year 5) CUAHSI budget, which currently is in negotiations with NSF, and requests that the Executive Director (1) report back to the Board once the 2018 budget is finalized and (2) report any significant deviations from the planned spending.**
- Motion: Hyndman
- Second: Loheide
- Discussion: Grant clarified that this vote is primarily to endorse that the priorities endorsed in the budget and supporting documents are in line with the priorities of the Board.
- Vote: Approved (unanimous)

3. Nominations
   a. Grant noted that the Board needs to choose a chair-elect.
   b. Grant opened the floor to nominations for CUAHSI chair-elect. Loheide and VanBriesen were nominated. If VanBriesen is elected, one at-large member of ExCom will need to be elected to replace her. Beighley offered interest in an at-large position.

4. NSF Overview and Renewal Process
   a. Grant and Bales led a discussion of how the renewal proposal process will proceed. The group discussed timelines for generating a renewal grant. Bales noted that the past proposals primarily were led by the Executive Director with some involvement of the chairs at the time of development. Bales intends to solicit feedback from the Board, and from selected members of the community, with primary writing responsibilities by Bales. Valocchi suggested reflecting on management reviews and CUAHSI's past responses to help guide proposal writing.

(T. Torgersen joined the meeting)

   b. Torgersen provided a brief overview of ongoing NSF budgets under the continuing resolutions.
   c. Genereux asked about the timeline for CUAHSI's renewal proposal. Torgersen stated that a 6-month period for review and decision-making should be anticipated, consistent with NSF's typical timeline.
   d. VanBriesen asked about how CUAHSI ought to balance community needs with emerging areas of research. Torgersen responded that CUAHSI's funding is based on providing a service to the community that is valuable and necessary. He emphasized data services and management as an important service that CUAHSI

is providing both to the hydrological science community and other programs (e.g., partnerships with other communities, such as the CZOs, national water model).

e. Grant asked about building linkages to other communities as a part of the renewal. Torgersen suggested integration of data streams from other communities into the existing program. Torgersen noted that CUAHSI ought to focus on services for the community that are outside the scope of traditional research proposals. Grant followed up, asking if a proposal should include funds or plans to provide data services and/or other services to a community, for example the Critical Zone community. Torgersen responded that this would be reasonable, noting that CUAHSI funds from hydrologic science were not being used to support other programs. Torgersen suggested that CUAHSI should be aware of opportunities and pursue proposals to respond to other opportunities. Torgersen noted that some of CUAHSI's effort might be well-used to prepare for possible upcoming opportunities.

f. Hyndman asked about the balance of continuing to fund successful elements of CUAHSI in comparison to pursuit of new areas. Torgersen suggested that building upon existing successes would be useful. However, he noted that CUAHSI should have plans for growth and new initiatives that are prioritized. Torgersen suggested identifying "must do" and "want to do" activities.

g. Hyndman asked about a recent dear colleagues letter focused on mid-level science and instrumentation. Torgersen indicated that hydrologic observatories were not ideal for this, noting that "mid-scale science" funding proposals might be interesting. Hyndman asked if there was a timeline for this to move from a dear colleagues letter to a funded proposal. Torgersen indicated this would be budget dependent, but that the effort was well-regarded within the NSF.

h. Grant asked to what extent CUAHSI should consider the NSF's "10 big ideas" in the development of proposals. Torgersen reported that these programs were intended to have foundation-wide appeal, including the idea of "convergence". Torgersen reminded the group that solicitations typically have 90 days of public availability and funds for the current fiscal year must be spent by the end of June 2018.

i. Grant asked about the base of support for CUASHI within the NSF, vs. the perception that CUAHSI is viewed as a "club". Torgersen reflected on the evolution of CUAHSI, noting that broadly-based competitive research grants, such as HydroShare and the National Water Center, help demonstrate that CUAHSI is broad-based and provides important services. These are indicators that the NSF's "seed money" for CUAHSI appears to have been well-spent.

j. Hyndman asked about possible collaboration with the USDA in management of program data. Torgersen reported this has been discussed and encouraged CUAHSI to pursue this opportunity for providing data services. Torgersen noted that budget limitations within any individual program will limit growth, so pursuit of additional funding streams is important for CUAHSI.

k. Grant asked about CUAHSI expanding its view of the community it supports from university members to be more inclusive of federal and state agencies (e.g.,

the USFS). Torgersen responded that the hydrologic sciences community should include hydrologists at many agencies, all of whom require training and data services to serve their functions.

l. Ward asked about closing the loop on data management plans. Torgersen reported that withholding approval of final project reports pending data upload was the only leverage that a program office would have over some data management requirement.

m. VanBriesen asked about alignment of CUAHSI with federal agencies in a strategic way that accounts for public positions by different agencies. Torgersen suggested that making measurements, analyzing measurements, and archiving models and model results were the key activities of the community. He noted the bases for modeling decisions, predictions, uncertainties, and so forth will be necessary. He further emphasized the need for calibration and validation data to be transportable between scales and modeling efforts to optimize larger-scale models and document improvements.

n. Bales asked about the differentiation of the National Water Model vs. modeling within the community, and how CUAHSI should approach this. Torgersen responded that CUAHSI's past experience (CHyMP) noted a community model would be useful, but that it was unclear how it would be managed. Agencies have discussed a framework for a water model such that individuals could adjust "modules" within a model. Torgersen identified distinct purposes for an operational forecasting model from research models. In summary, Torgersen anticipates that there will be multiple models for multiple purposes, and the current Weather Service model is one that is advancing rapidly. Torgersen reflected on the idea that CUAHSI-supported efforts should ideally benefit both the community of researchers and allow the National Weather Service to achieve their objectives.

o. Grant asked about many-agency initiatives (e.g., a "Western Water Initiative"), if they would move forward, and the potential role of CUAHSI in such an effort. Torgersen suggested that such efforts would likely be based around science-informed understanding of a system to meet society's needs. He suggested that the real advance would not be in data collection, but in responding to societal challenges using the best available sciences. Torgersen also suggested a critical analysis of what data streams exist and what data would best advance our knowledge would be important in designing future monitoring efforts.

p. Grant asked about future CUAHSI initiatives that focus on societal problems (e.g., increasing forest fires) vs. traditional CUAHSI initiatives. Torgersen suggested that dealing with emerging issues will likely require policy changes, and that science-informed policy was an important challenge.

q. VanBriesen initiated a discussion of how CUAHSI provides knowledge to policy-makers to make an impact in this space.

r. Grant asked about the relationship between CUAHSI and private industry actors. Torgersen reminded the group that CUAHSI ought to target specific areas that can benefit the community. Leverage of CUAHSI investments would be

inappropriate, however, for CUAHSI to act like a for-profit consulting firm. He suggested that CUAHSI should function to benefit to the community.

    s. Gomez-Velez asked about provision of data or forecasts to policy-makers or non-hydrologists. Torgersen identified a possible use-case of having complete hydrological modeling results available for use without the requirement of having a hydrologist on the project.

    t. Bales asked about hosting fees for large data sets. Torgersen suggested that the cost of providing that service is real, and it would be reasonable to charge some fee to cover expenses for high level users.

    u. Hyndman asked for Torgersen's view of emerging opportunities that may be relevant to CUAHSI. Torgersen suggested that initiatives are the primary mechanism for NSF to test new ideas or develop communities, and traditionally they have resulted in the formation of new programs.

5. CUAHSI Water Data Services Uploader

    a. Seul presented a summary of process related to CUAHSI's data tools (Board winter 2018 Development Update.pptx).

    b. Grant suggested development of a public-facing "dashboard" that would show off data sets, usage, available data, etc. to help convey a high-level scope of what CUAHSI has assembled.

    c. The group discussed development of a "sandbox" where new apps can be tested without extensive vetting. This would be separate from apps that are supported and heavily vetted by CUAHSI staff.

    d. Grant encouraged Seul to visualize the data management cycle for users, and show how different tools work together. A uniform workflow that avoids different names/titles and instead makes a single, seamless process would be easier for new users.

(T. Torgersen left the meeting)

6. Strategic Plan Review and Comment

    a. Bales briefly introduced the strategic planning process, summarizing the July 2017 planning activities and the most recent NSF management review and response (Attachments 8-11). Using these materials, Bales assembled the draft strategic plan that was circulated for review by the Board, including tangible activities for 2018 to lead the direction of the organization.

    b. VanBriesen initiated a discussion of how the strategic plan is operationalized as a business plan. She noted that this document includes high-level goals and some specific tasks, but that the business plan itself would help fill those gaps.

    c. Albertson noted that there is little effort to define the niche that CUAHSI fills and/or the specific needs of the community that CUAHSI addresses.

    d. Cohen noted that the goals and tasks are more specific on some areas relative to others. The group concurred that the educational activities of CUAHSI are not strongly represented in the draft. The group discussed that Goal 3 might encompass education, but agreed that the educational efforts of CUAHSI need to

be more clearly highlighted. VanBriesen suggested education may be cross-cutting, including elements as part of each goal.

e. Bales reported that the strategic plan should help focus CUAHSI efforts rather than being an exhaustive list. Grant noted the strategic plan should help focus the decision-making process as future opportunities arise.

f. VanBriesen noted that one management review comment asked about the relationship between CUAHSI's strategic plan and the NSF GEO strategic plan. Grant noted this alignment is critical, but CUAHSI must have a clearly defined contribution as well.

g. Valocchi suggested Goal 1 of the document is too narrowly focused on being a repository rather than the value-added. The group discussed a fine line between arrogance and aspiration.

h. Michael suggested that longer-term outcomes or aspirational statements for each goal might help communicate the goals, in addition to the 1-yr outcomes currently listed.

i. Loheide suggested the educational efforts are more about "facilitating knowledge exchange amongst community members". This would acknowledge that CUAHSI doesn't house instructors and instead helps make connections between members.

j. Michael suggested that interdisciplinary foci are largely absent from the goals as currently stated.

k. Grant reminded the group that the renewal proposal needs to speak to the science. He asked where the development of new knowledge falls within the scope of CUAHSI. One key element for CUAHSI in the future needs to be a platform for the active interrogation of data (i.e., data synthesis or model-support functions). Seul suggested CUAHSI is a technology partner that supports the community. Michael endorsed this, suggesting that enabling the generation of new knowledge, or advancement of hydrologic science, encompasses both the tools we develop and portfolio of educational activities. Gomez-Velez likened this to synthesis centers.

l. Bales identified an area of traction around the theme of enabling knowledge through community tools and technologies, particularly modeling-based efforts.

m. Hyndman suggested "provide services that enhance scientific advances in hydrologic sciences". Beighley suggested the appropriate training and education, as well as data services, would also be included here.

n. VanBriesen suggested the test of "would we do this without NSF funding?" for each goal, ensuring CUAHSI's strategic plan sets the direction for the organization.

o. The group discussed the need for CUAHSI to strategically pursue being the go-to source for data storage, curation, and analyses. VanBriesen identified multiple user bases including (1) people needing to archive, and (2) data-users who access the information in the repository.

p. Gomez-Velez suggested that reproducibility of field, lab, or model data is an emerging issue in hydrologic science. Bales noted HydroShare allows for reproducible workflows.

q. Bales suggested the key scientific contribution of CUAHSI should be enabling community modeling, which encompasses collaboration on shared data, model development, and model intercomparison. The group discussed the need for data collection, assimilation, and workflows to make uniform data sets accessible is an important component. Beighley indicated that issues of scaling are an increasing challenge for hydrologists, as is transfer of knowledge to locations with less data.

r. Ward initiated a discussion of housing a model forecast benchmarking database, similar to the CMIP5 interface. The group discussed if this would be of interest to the research community. VanBriesen suggested elements of this are included in efforts focused on resilience and sustainability, and noted urban areas are often an area needed for improvement. Hyndman suggested this may be useful to researchers, but could be confusing for a non-expert audience.

s. Grant initiated a discussion about CUAHSI's role in other networks, such as the CZO, LTER, NEON, and similar entities. Grant suggested that CUAHSI could serve a coordinating role amongst networks of networks, particularly led by curation of data. Several board members endorsed this idea. The group discussed ongoing efforts by several other programs, networks, etc. focused on data curation and management.

t. Loheide suggested leveraging ongoing programs, such as WSC or INFEWS, not having any network office for coordination of projects. He suggested CUAHSI could provide some coordination activities for these or similar types of programs, which might include synthesis, workshop, and data management activities.

u. Summary of above discussion:
   i. An additional goal is needed that is specifically oriented toward a strong scientific element
   ii. A better balance is needed between inward- and outward-looking strategy
   iii. CUAHSI's educational activities are not represented in balance with the other goals
   iv. CUAHSI needs to articulate its unique contributions to the community, and confirm alignment with strategic priorities of the NSF

v. What work can be done on the strategic plan and/or renewal proposal to accomplish at this meeting?
   i. Organize as:
      1. Community advancement / services (education)
         a. Education, engagement, outreach
      2. **some intermediate focused on community**
      3. Science advancement / services (data)
         a. Data services, community modeling
      4. Sustainability of CUAHSI (funding and partnerships)
      5. Visibility / reach / reputation (external face of CUAHSI)
   ii. Tasks:
      1. Articulate the sub-goals, activities, metrics, tasks
      2. Submit to Board for review and comment
      3. Revise based on Board comments.

4. Send to a few others, including NSF, in the community for
                comments
             5. Finalize and distribute
   7. Adjournment
       a. Grant opened the floor for any other business. Hearing none, the meeting was
          adjourned for the day.

17:00 EST   Adjourned

9-Jan-2018
8:15 EST   Call to Order

1. Strategic Plan
    a. Grant recapped the discussion of the strategic plan and goal setting, noting that Bales needs a clear statement of goals at the conclusion of the meeting.
    b. The group used a collaboratively-edited google doc to track suggestions from the Board.
    c. The board agreed on the wording of four strategic goals for the organization:
        ● Goal 1: Position CUAHSI as the leading scientific organization for water data and model services
        ● Goal 2: Foster the integration of hydrologic science research and data services into innovative educational and community-building activities
        ● Goal 3: Grow and diversify CUAHSI partners and funding sources to ensure sustainability of services
        ● Goal 4: Increase the visibility, reach, and reputation of CUAHSI in the water community
    d. Bales will revise the draft strategic plan based on the discussion, and anticipates circulating a revised draft to the Board end of February 2018. The group discussed plans to finalize a draft, solicit comments, and finalize the document for the community.
    e. The group discussed the development of a business plan that would detail how the strategic plan is operationalized.
2. Standing Committees
    a. Cohen briefly reviewed the assessment of standing committees completed in 2017 by S. MacKay and M. Cohen (Attachment 12). He presented a series of recommendations to improve the function of standing committees within CUAHSI.
    b. VanBriesen suggested that standing committee chairs be invited to attend a subset of BoD meetings. Cohen suggested this could be at meetings that coincide with the Biennial meetings to take maximum advantage of travel expenses. It was also suggested committees could meet in person at the biennial meetings.
    c. Genereux suggested the charges to standing committees are currently vague and should be revisited. Several board members agreed. The group discussed the balance of specific charges vs. freedom for committees to direct their efforts. The group discussed the role of committees in performing specific functions (e.g., review of proposals), as a critical evaluator of CUAHSI activities and direction, as a sounding board for new ideas, and as a body of volunteers who may wish to pursue committee-generated ideas consistent with CUAHSI's mission.
    d. Bales reported that CUAHSI staff are helping facilitate regular bi-monthly meetings of the committees in 2018. The group discussed that having two Board members as liaisons to each committee was reasonable to help set direction of the committees. The working norms of each standing committee were discussed.

11

Standing committees as leaders of workshops at the Biennial was suggested as a possible additional mechanism to increase engagement.

e. VanBriesen suggested that objectives in the strategic plan could be assigned to committees as one way to spur activity.

f. **Resolution:** The CUAHSI Board of Directors generally concurs with the recommendations regarding Standing Committee effectiveness from Cohen/MacKay. Specifically, the Board of Directors directs that the following actions be implemented: (1) Each SC Chair will serve a 2-year term and be elected by SC members. (2) SC members will serve 3-year, renewable terms. (3) SC members will be recruited by Directors and CUAHSI staff. (4) Each SC will have two Board Liaisons. (5) Each SC will provide a brief report to be delivered to the Board prior to the annual Winter Board face-to-face meeting. CUAHSI staff will provide the SC with report guidelines to include (a) previous year standing committee activities; and (b) standing committee plans for the upcoming year.

    i. **Motion: Accept the resolution as stated above.**

        1. **Motion: Hyndman**

        2. **Second: Michael**

        3. **Discussion:**

            a. The group discussed the specifics to be included in annual reports. The discussion centered on the role of committees as pursuing new ideas vs. evaluation of strategic directions of the organization.

            b. Cohen noted that standing committee charges have not been specifically updated. He proposed that the charges be critically evaluated and updated to reflect the expectations of the Board. VanBriesen suggested this could be tasked to the Board liaisons.

            c. Cohen volunteered to continue efforts to edit the committee charges in collaboration with Bales and standing committee liaisons.

        4. **Vote: Approved (unanimous)**

g. **Motion: Revise the charge to the standing committees to (italicized text):**

    i. *The charge to each CUAHSI standing committee is to make a contribution each year to CUAHSI in the area of purview of the committee. Within that broad charge, the choice each year of the specific contribution to be made is largely up to the committee, subject to some general guidance from CUAHSI (e.g., below) and to specific requests from the board of directors or the executive director. The choice may also depend in part on what contributions were made by the same committee in the previous couple of years. Some examples of contributions (not an exhaustive list) that a standing committee could make in its area of purview are:*

        1. *Review existing CUAHSI and CUAHSI-affiliated projects to determine they are fulfilling CUAHSI's mission as outlined in*

> *CUAHSI's strategic plan. This is something that is likely most
> productive to do about every 3 years or so (not every year).*
>   2. *Generate and evaluate ideas for new CUAHSI activities.*
>   3. *Review, and suggest specific improvements in, current CUAHSI
>   activities.*
>   4. *Help prioritize CUAHSI's activities for the near term and/or long
>   term.*
> ii. *In support of any of its inquiries and activities on behalf of CUAHSI, a
>   standing committee may and probably should request from the executive
>   director qualitative and quantitative information concerning CUAHSI's
>   recent, current, and planned activities in the area of purview of the
>   committee. Each standing committee should also be aware of CUAHSI's
>   strategic plan.*

    iii. Motion: Genereux

    iv. Second: Cohen

    v. Discussion:

       1. The group discussed the logistics of making charges to
         committees, reporting, and the role of the Board in generating
         specific charges to each committee.

       2. Gomez-Velez suggested engaging the committees in longer-term
         planning, in addition to short-term responsiveness, would be of
         value to the Board.

    vi. Vote: Approved (unanimous)

  h. Bales noted that CUAHSI staff would replace the charge to standing committees
on the website with this text. Liaisons will communicate this change to their
respective standing committees.

  i. VanBriesen suggested one charge to all committees should be to generate ideas
for new or expanded activities to be considered for the renewal proposal.

3. CUAHSI Virtual University
   a. Loheide presented a summary of CUAHSI Virtual University activities in 2017
      (CUAHSI VU Year 1 Report_001.pptx).
   b. The group discussed the novelty of this effort and noted its innovative structure as
      a model for delivering high-end training opportunities to our community
      members.

4. Renewal proposal brainstorming
   a. Bales reported an interest in community modeling and data services as a key
      component of a renewal effort. The group discussed this as including the ability
      for community members to execute model ensembles, comparing and contrasting
      to available WRF-Hydro and CSDMS projects. Several members endorsed the
      idea of simplifying the install-compile-execute process that can be challenging on
      local machines. Integration of model code with inputs (from the data center) and
      tracking outputs would be useful, as would the platform for model
      intercomparison. The group discussed potential challenges in existing resources
      that could limit achievement in this area. The group identified the area of

ensemble modeling as a game-changing advance in infrastructure that would transform the field.
   b. The group discussed the current budget and activities. There is a challenge in expanding scope under a flat budget scenario, as existing resources are largely allocated for existing services.
   c. The idea of visioning how CUAHSI could support data from the INFEWS, CNH, SESYNC, and WSC communities was shared. Critical Zone Science opportunities were also discussed. Strategic positioning of CUAHSI to capitalize on different programs was discussed.
   d. Bales requested Board members provide him input on ideas and priorities for the renewal proposal.
5. CUAHSI Biennial Planning
   a. Valocchi reviewed plans for the 2018 Biennial meeting, sharing a draft agenda and list of speakers that was generated by himself, Loheide, and Michael. He provided materials for review to the group in preparation for the meeting.
   b. The group discussed opportunities to engage graduate students in a panel discussion, networking event, professional development opportunities, and similar topics. An early-career faculty event was discussed.
   c. Grant suggested opportunities for external agencies to engage could be considered in the planning process. The group discussed a session focused on different agencies and research networks, with a focus on exposing students to potential career paths. The planning committee will also consider ways to implement mentoring activities.
   d. Valocchi requested nominations for CUAHSI service awards and an annual "water drop" award. He requested nominations, and also requested that CUAHSI staff assemble a list of past award winners.
6. Elections and administrative appointments.
   a. Grant reported that VanBriesen and Loheide were nominated for the position of chair-elect. Votes were cast by secret ballot, counted by Ward and verified by Hyndman. The result of the election is that VanBriesen was elected as the chair-elect of CUAHSI.
   b. Grant opened the floor for nominations for the now-open at-large seat (vacated by VanBriesen) of the executive committee. Loheide and Beighley were nominated. Votes were cast by secret ballot, counted by Ward and verified by Hyndman. The result of the election is that Loheide was elected as an at-large member of the Executive Committee of CUAHSI.
   c. Standing committee liaisons were assigned as follows:
       i. Hydroinformatics: Beighley, Gomez-Velez
       ii. Education and Outreach: Loheide, Cohen
       iii. Instrumentation: Hester, Hyndman
   d. Genereux and Valocchi are actively working on an annual review committee for Bales.
7. Establishment of 2018 BoD and ExCom Meeting Times

a. Board and ExCom meetings through the July BoD at the biennial are slated for Wednesdays, 12:30-1:30 Eastern. The 1st Wednesday of each month will be for the ExCom and 3rd W of each month for the BoD.

8. Approval of Executive Director's Travel
   a. NOAA invited Bales to participate in an advisory committee to their Citizen Advisory Committee as a liaison to the academic community. Bales will attend this in conjunction with travel to the NSF WSC PIs meeting he is already planning to attend.
   b. **Motion to approve travel to the National Water Center, January 30 – February 1 to participate in a meeting of the Citizen Advisory Committee on Water Prediction; travel to be covered by NOAA.**
      i. **Motion: Hyndman**
      ii. **Second: Genereux**
      iii. **Discussion: (none)**
      iv. **Vote: Approved (unanimous)**

9. Adjournment
   a. Grant opened the floor for any other business. Hearing none, the meeting was adjourned.

12:00 EST   Adjourned