



CUAHSI
universities allied for water research
CUAHSI Board Meeting Minutes
January 4-5, 2011, Washington, DC

**Notes for the meeting are recorded by the CUAHSI secretary (Chris Graham) as representation of the discussion topics and point and are not the opinion of the secretary

Roll Call (Chris Graham, Secretary)

- 13 members are present, needed 10 for quorum
- “X” indicates director is present

Term expires 12/31/2011

Larry Band - University of North Carolina - Chapel Hill X
Jay Famiglietti, University of California – Irvine X
Tissa Illangasekare - Colorado School of Mines X
Jennifer Jacobs - University of New Hampshire X
Scott Tyler - University of Nevada - Reno (phone after 2.30 on Jan 4, all day Jan 5)

Term expires 12/31/2012

Robyn Hannigan – University of Massachusetts-Boston X
Carol Johnston – South Dakota State University X
Witold Krajewski – University of Iowa X
Larry Murdoch – Clemson University X
Aaron Packman – Northwestern University X

Term expires 12/31/2013

David L. Freyberg, Stanford University ([Education & Outreach](#) Liaison) (phone after 2.30 on Jan 4, after 1.00 on Jan 5)
Bryan McGlynn, Montana State University X
Jim McNamara, Boise State University ([Observations](#) Liaison) X
Todd Rasmussen, University of Georgia X
Ying Fan Reinfelder, Rutgers University X

Officers Present: Jennifer Arrigo (CUAHSI), Chris Graham (Penn State University), Richard Hooper (CUAHSI), Yoori Choi (CUAHSI), Rina Schumer (DRI)

Others:

Tuesday, January 4

- 8:30 Call to Order (Murdoch)
 - Introduction of members and staff
 - Election of Secretary and Treasurer
 - Treasurer
 - Unanimous
 - Secretary
 - Unanimous
 - Overview of meeting
 - Prioritize year 3 activities in face of possible budget constraints
 - Review of previous activities
- Approval of Minutes (12 01 2010) (?)
- 8:40 Positioning CUAHSI for Renewal at end of current Cooperative Agreement (Hooper)
 - Background: Year 2 Cooperative Agreement activities (Annual Report)
 - Hooper expects that everyone has read
 - Background: Year 3 Base Request and Additional Funding Requests
 - CUAHSI is in year 3 of 5 year project
 - HIS ends December 11
 - Year 3 budget = \$1.29 million (1.37 last year)
 - Anticipate 10% budget reduction
 - Request bottom up funding review
 - Torgersen: (NSF) requests strategic plan (with funds) over budget request
 - Illangasekare relates personal experience with budget cuts
 - Need to show how CUAHSI activities enhance PI science
 - Hannigan encouraged face to face talks with NSF
 - Dichotomy between need for
 - Packman clarifies goal of CUAHSI
 - Band asks 10% off CUAHSI year 2 budget, or 10% off year 3 proposal.
 - Hooper clarifies that there is no budget goal, but a bottom up review is needed
 - Discussion
 - Need to prioritize activities.
 - Hooper presents pie chart with expenditures (excluding fixed labor costs)
 - Background: Carry-over funding from Year 1 and Year 2 (Hooper)
 - \$69,000 in direct funds (\$115,000 gross funds)
 - Does not include unspent CHyMP funds
 - Review of funding (Hooper)
 - Community outreach
 - Compensation for chairs (\$30,000)
 - Costs of board meetings
 - Publication of synthesis reprints

- CUAHSI at meetings (AGU, GSA, EGU, NABS/ASLO, EWRI, staff trips to TBD meetings)
 - Fall AGU reception
 - Dahlem Conference
 - CUAHSI data services
 - Software liscence
 - Staff trips
 - Publications
 - HIS standing committee
 - CHyMP
 - Year 2 funds
 - Instrumentation Activities
 - Subcontract (Ferre)
 - Workshops
 - Committee physical meeting
 - Education outreach
 - Pathfinder awards
 - Cyber seminars
 - Committee meeting
 - Jacobs asks for slides with sections and funds
- 9:30 Instrumentation Activities and possibilities
 - Node model
 - PI led proposal, where they request CUAHSI assistance to make equipment available to community
 - 3 nodes currently
 - Geophysics with Ferre
 - CUAHSI provides travel grants for geophysicists to check if applicable
 - Pay Ferre to attend meetings to encourage
 - CTEMPS with Selker and Tyler
 - No formal memorandum
 - CUAHSI advertises service
 - McNamara cautions about determining when credit is due to CUAHSI
 - Mobile radar (Krajewski)
 - Still in development
 - Krajewski describes process of getting funding for project with assistance of CUAHSI
 - Extended discussion on how to encourage use of nodes
 - Hooper suggests that CUAHSI creates list of interested parties without funds
 - Packman suggests that CUAHSI acts as scheduler for equipment

- Illangasekare suggests that CUAHSI needs to let people know that they need travel funds for deployment to include at the time of proposal writing
- Hooper suggests that CUAHSI needs to inform community that service exists with details on how to include in proposals and costs etc...
- Famiglietti encourages advertising (field campaigns etc...)
- Krajewski believes that the community knows about equipment.
- Jacobs suggests it may be cost barrier reducing demand, as CTEMPS is booked solid
- Famiglietti suggests that interest is greater in geophysical community on working with hydrologists than vice versus
- McNamara suggests that research budget better spent improving geophysics than encouraging use
- Band describes tension between users and providers
- Jacobs suggests that 3 nodes are very different models that need to be analyzed by committee to plan future.
- Packman suggests carefully worded recommendations to NSF
- Band suggests proof of concept of node system.
- Jacobs asks role of board vs. committee re this discussion
- Hooper suggests 2 methods for node promotion
 - Advertise existing nodes
 - CUAHSI implements (or encourages PIs to) proof of concept of methods
- Hooper encourages tabling discussion to committee.
 - Murdoch suggests that ad-hoc or existing committee needs to investigate how to pitch to NSF.
 - Packman suggests we charge committee to develop group to propose funds for node implementation.
 - Hannigan reports on Instrumentation Committee perspective
 - Committee would like to focus on new technology
 - Packman, Bond and Krajewski asked to write 2 page white paper to instrumentation committee by Murdoch
- Conclusions (Murdoch):
 - Need better advertizing / education of equipment and services
 - Possible white paper to instrumentation committee
- 10:20 HIS Status and HydroDesktop demonstration
 - Project is coming to end, and CUAHSI is moving to hosting / service of HIS
 - Purposes of HIS
 - Host data to meet NSF data availability requirements
 - Both raw data and data themes
 - Includes publications, cleaned data,

- Data discovery – get all data in one location for easier access
 - Description of HIS (Hooper)
 - Uses web languages
 - 3 components (fix this part)
 - Server
 - HydroServer (raw data at USGS, universities etc...)
 - Client
 - HydroDesktop
 - Compiler
 - HydroCatalog
 - Examples
 - Ontology project (Hooper)
 - HydroDesktop
 - Portal to data
 - Open source project
 - Description of use
 - Describes standards based model
 - Everyone is independent
 - EPA, AGU, NSF on board
 - 20-30 university sites submitting
 - No custom programming needed for users
 - Each service is fully self describing
 - CUAHSI needs only maintain entry points
 - Data ingestion and publication model
 - CUAHSI's role
 - Ease inputting of data
 - Archiving
 - Publication
- 10:55 Break
- 11:10 Plans for HIS for year 3
 - Need senior software engineer to clean up code, and integrate 3 components
 - Also need consultation due to range of experience needed
 - This person would deliver implementation plan
 - \$100,000 needed
 - Agreed to in concept by NSF
 - Users conference
 - Expose community to service
 - Requested funds from NWS and EPA
 - OGC contract for concept design survey
 - Basis for best practices document by EPA, BOM (Aus), etc...
 - Require \$40k from CUAHSI
 - Remove custom programming to fix fetching problem
 - Eases scaling problem as HIS becomes more popular
 - Configures and maintains standard configuration

- Provides interoperability of databases
 - Packman asks how we help, and why we are not funded
 - Hooper explains that this is concept for larger group to implement / extend
 - Fills gap between research and application
 - 2 year project
 - First step towards implementation of data standards
 - Open door to OGC to represent University community
 - Senior Software Engineer to development implementation plan
 - 2 options
 - \$200k to hire fulltime engineer (+\$20k for consultation)
 - Dan Ames available for sabbatical (Hooper)
 - \$60-80k to buy time
 - Jacobs and Packman noted that \$900K/yr will be available in 2012 and where does that money go. Because NSF has already invested \$4.5M, CUAHSI should ask for full amount(\$200K) and not give reduced cost option NSF has already put in \$4.5 million, will likely support additional.
 - Discussion of Krajewski's (Hydro Nexrad) data service program
 - Needs hosting, has already been developed
 - Packman suggests that CUAHSI needs methodology to efficiently move proposals through
 - Need CUAHSI policy (proposal process) for funding items like Hydro Nexrad
 - Need agreement with NSF for fast tracking funds for such projects
- 12:05 CHyMP (Murdoch and Famiglietti)
 - \$45k in funds
 - Meeting in March Planned
 - Produce implementation plan
 - White paper
 - Concept, implementation plan, structure meeting
 - Rewritten after March meeting
 - Provide basis for March meeting
 - Target is early February to meeting participants
 - Description of CHyMP project to date
 - 2007
 - 3 workshops planned (25, 50 people in first 2)
 - 3rd workshop pushed to 2011 due to diversion to strategic plan
 - Lessons from first meetings
 - No need to rebuild platforms
 - National water model
 - Need to create benchmarks / best practices
 - Proposed to standardize hydrologic modeling

- Need to accelerate development of models
 - Includes
 - Numeric solvers
 - Methods to share codes
 - Standardize interfaces so researchers can share methods
 - Computational infrastructure for running code
 - Set up geometry / discretize / solvers / boundary conditions, etc...
 - Flexible
 - Packwood encourages a precise and clear delineation of expectations and deadlines of CHyMP project – avoid overselling
 - Packwood and Krajewski offer to evaluate CHyMP plan
 - Hooper: Need to dispel community concern about “national model”
- 12:35 Lunch
- 1:20 Dahlem Conference (Band)
 - Discussion of proposal to eliminate Dahlem conference (McNamara referencing discussion of ExCom meeting)
 - Money was allocated for it.
 - Conference has been shopped around
 - There appears to be interest
 - Steve Running, Jacobs, Band on committee
 - Concept: Extreme hydrologic predictions of AR5 climate models
 - Hooper: Suggests shopping conference idea around to other agencies
 - Band – CUAHSI proposal for conference
 - Meets NSF suggestion that CUAHSI uses different types of meetings
 - Illangasekare suggests that biennial meets some of needs
 - General discussion of impact of removal of Dahlem conference on budget
 - Johnston: benefit of Dahlem is book. Will that be possible with biennial
 - Band and Jacobs: special issue of journal
- 1:20 Framing the Discussion: What do we want to achieve by the end of the Cooperative Agreement?
 - How do we prioritize this year’s activities to achieve that goal?
 - Murdoch: CUAHSI has one goal of being a operational service
 - Other model: CUAHSI as idea incubator
 - Illangasekare: Do we have support of NSF?
 - Hooper: Unknown
 - NSF wants input on hydrological sciences from CUAHSI
 - Hydrology is difficult for NSF officers because it is everywhere, and nowhere
 - Famiglietti: CUAHSI should embrace hydrology’s diversity
 - Packman: CUAHSI is natural organization to address this diversity
- 1:40 Corporate Operations
 - 2009 A-133 Audit (see report)
 - No findings
 - Low risk auditee

- Clean bill of health
- Murdoch: What is role of treasurer?
 - Hooper: Accounting system keeps track of monthly budgets of projects. Treasurer monitors budgets, has access to all records, authorizes staff to write checks to Hooper
- Year 1 Management Review (see report) and preparation for Year 3 Management Review
 - Strategic plan (done)
 - Metrics (as part of strategic plan)
 - Diversity of BoD (addressed with increased reps)
 - Improve use of standing committees (done)
 - Use ad hoc committees (increased currently)
 - Codify rules from SAC (not done)
 - Succession plan (see below)
 - Document business procedures (to be completed soon)
 - Product related deliverables (partially done, as addressed in annual report)
 - Implications of operational facility (addressed with implementation plan)
 - Implications of MREFC (moot)
 - Split office (see draft report)
 - Improve diversity of leadership (addressed with increased membership)
 - Improve involvement of early career (not done)
 - Formalize mechanize for user feedback (see below in discussion)
 - Broaden funding base (see below in discussion)
- Report from Succession Ad Hoc Committee (Murdoch)
 - Chaired by Ken Potter, Steve Burgess and Larry Murdoch
 - Specified in bylaws
 - Planned succession
 - Nomination committee proposes candidates
 - May need to amend bylaws to create search committee
 - Unplanned succession
 - Based on IRIS plan
 - Specifies duties for different officers if President is incapacitated
 - Largely chair and program manager
 - Still needs documents describing operational procedures (in prep currently)
 - Need approval of succession plan from board for submission to management review.
 - Planned vote for tomorrow
 - Need measures to orderly transition if President / Executive Director quits or is fired.

- Consider fixed term contract with President / Executive Director with severance plan
 - Committee will go forward with plan for contract with President / Executive Director
 - Report from Split Office Ad Hoc Committee (Famiglietti)
 - Committee: Famiglietti, Potter and Stieglitz
 - Evaluated split office performance
 - Plan was approved by executive committee
 - Recruitment of Corporate Affiliates (Hooper)
 - Development of Marketing Materials
 - Pro bono opportunity for preparing brochures for recruiting corporate affiliates.
 - Ad Hoc committee to recruit corporate affiliates
 - Hannigan
 - Will ask Ken Potter, Paul Kirshen, Jay Day (Riverside Technology), Sorab Panday (AMEC)
 - Engagement with NSF: Role of Board and Officers (Hooper and Murdoch)
 - When at NSF, board members are encouraged to talk about CUAHSI
 - Continued regularly scheduled meetings between chairs and NSF directors, etc...
 - Open to board
 - Good feedback
 - Broadening Funding Base
 - NASA NEWS Proposal?
 - Hooper requests help from Famiglietti and Jacobs in application
 - NOAA HMT West
 - Full American River Basin
 - Rain / snow transition zone / cold season precipitation
 - Getting data into HIS as encouragement for NOAA using HIS
 - EPA or DOE??
 - Hooper needs ideas for interaction with both
 - Private Industry (Murdoch)
 - Ala Canadian Water Network
 - Ad hoc community on broadening funding base
 - Tyler, Rasmussen, McNamara, Band
 - Disposition of Senior Advisory Council
 - Tyler: Need to include senior members of NSF / science committee
 - Hooper: smaller council would be preferable
 - Ad hoc committee to determine Council for this year
 - Famiglietti, Band, McGlynn, Illangasekare
- 3:10 Community Engagement
 - Debrief from Town Hall—impressions of the Board

- McNamara: Board needs to be introduced / have name tags
 - Misc: Boring, Poor flow between guests, too long relative to published schedule
 - Packman: should not be a business meeting
 - Tyler: should emphasize contribution to community
 - Murdoch: Feedback on strategic plan – increase in membership will cause chaos and dilution of services.
 - Hooper: Positive feedback in increased membership
 - Tyler: Heard concern regarding CUAHSI’s service to the community
 - Response to new dues structure at Town Hall (Tyler)
 - Majority felt it was small sum, and would pay out of personal budgets
 - Tyler feels that this makes CUAHSI a group of individuals rather than universities
 - CUAHSI has sufficient reserves to wait another year before new dues scheme.
 - Hooper: need \$30k to float
 - Tyler proposes suspension of dues until 2012.
 - Hooper: Small cost is intentional so not burdensome
 - Band: NSF management committee recommends CUAHSI has additional funds in case of break in funding
 - Johnston: Some universities will not produce these funds
 - McNamara: Suggests extended grace period until funding improves for universities
 - Motion to postpone due levying: Tyler
 - Second: McNamara
 - Discussion: None
 - In favor: (4) Tyler, Yin, McNamara, Hannigan
 - Against: (10)
 - Motion Fails
- 3:50 Break
- 4:10 Paul Houser, GEWEX TRACE (TRACE Prospectus)
 - Background of TRACE
 - Asking for buy in from CUAHSI (and other groups)
 - Goals
 - Improve regional scale climate predictions
 - Understanding and predicting extremes in water cycle
 - Predecessors
 - GSIP merged with GAP
 - CPPA
 - GEWEX mission
 - *To observe, understand and model the hydrological cycle and energy fluxes in the Earth's atmosphere and at the surface.*
 - Vision and scope of GEWEX

- TRACE activities
- Partnerships / Disciplines / Activities
 - In Canada, US, Mexico
- Workshop, April 18-20 in Maryland
- Passed out prospectus
- Discussion opened to CUAHSI board
 - Famiglietti: Reminds of CHyMP – wonders how to get more involvement
 - Hooper: How do we get dialogue across scales, and how do we share expensive data?
 - Famiglietti: Getting data sets into one place would be great way to get groups together – this is something CUAHSI could help.
 - Houser: GEWEX has had discussions on scope and interdisciplinary nature of TRACE. Decided North America (rather than continental US). Undecided how much to expand beyond hydrological science (include oceanography, etc...)
 - Hooper: Possible field campaign?
 - Reinfelder reinforces connection to CHyMP
 - Famiglietti: Experimentation
 - Packman: Encourages board support
 - Houser: Official support from CUAHSI would be helpful
 - Krajewski: Encourages removal of Experiment from TRACE
 - Hauser: there is a field experiment component
 - Famiglietti: Is this thought of as a synthesis?
 - Hauser: Yes
 - Murdoch: Should send proposal / prospectus to standing committees
- Open call for attendance at workshop in April
- 5:00 Community Engagement (continued)
 - Mechanisms for community engagement
 - Mechanism for community to submit ideas to CUAHSI
 - Proposal:
 - Send announcement
 - Indicate what are appropriate activities
 - Ask community to submit 2 page proposals for activities
 - Standing committees evaluate
 - Board evaluates and prioritizes
 - Attempt to better incorporate CUAHSI membership in activities
 - Packman: Do committees decide, or board?
 - Band: Committees advise, board decides
 - Hooper: Concerns are managing expectations and funding appropriate activities.
 - Packman: Should both encourage new ideas, as well as fully back some existing projects

- Band and Murdoch: Can not be a formal proposal
- Krajewski: Do we have defined responsibilities of representatives? Could we encourage idea creation as one of the responsibilities?
- McGlynn and Packman: Could be informal, but needs to be an encouragement for idea generation, not seen as a lack of ideas from CUAHSI
- Murdoch: Need a mechanism for representatives to be able to present ideas to board.
- Packman: Every idea needs to be responded to so the community feels attended to.
- Hooper: Ideas should be tied to lines on the strategic plan
 - Packman: Not necessary
- Jacobs and Packman: Do CUAHSI need new items? CUAHSI has plenty to do as is.
- McGlynn: Need to emphasize projects that CUAHSI can assist with, and not add another level of bureaucracy
- Hooper and Murdoch will put together proposal
- Timeline Recruitment of new representatives
 - CUAHSI HQ role
 - Targeted recruitment by Directors/Representatives
 - Hooper: Should CUAHSI go for representatives that have been funded by different organizations, other political considerations? Should CUAHSI aim for disciplinary diversity?
 - McNamara: Should avoid top down dictation of members.
 - McGlynn: This is possible opportunity to promote disciplinary diversity
 - Packman: 2 strategies: Ask reps to be more engaged and recruit members outside of reps (using advertising in EOS, etc...)
 - McNamara: Who will decide reps if more than 3 are interested?
 - Hooper: The universities
 - Murdoch: Each board member will contact 8 reps and ask for reps
 - McGlynn: Great opportunity for interaction of board with members
 - Ad Hoc Committee (?)
 - No action
- Standing Committees
 - Charges for the current year
 - January or February 2011 arranging conference calls for all standing committees

- Encourage committees to read strategic plans and think on what action items are needed and priority for year 4
 - New standing committee on Diversification?
 - Tabled for later meetings
- 5:40 Nominations for Chair Elect and At-Large
 - Liaison for Research Application Committee
 - Nominated:
 - Todd Rasmussen
 - Chair Elect
 - Nominated:
 - Jacobs (nominated by Hannigan, second by Illangasekare)
 - Krajewski (nominated by McNamara, second by Band)
 - Hannigan (nominated by Band, second by Packman)
 - At large members for Executive Committee
 - Nominated:
 - Jacobs (nominated by Hannigan, second by Illangasekare)
 - Krajewski (nominated by McNamara, second by Band)
 - Hannigan (nominated by Band, second by Packman)
- 5:50 Weekly and July meetings
 - Meeting time undecided for board and ExCom meetings
 - Hooper will create Doodle poll
 - July board meeting
 - Likely in Boston
 - Send in requests for times
- 5:50 Adjourn/Reception

Pushed

- 11:10 HydroDesktop Demo
 - Pushed to after lunch
 -

Wednesday, January 5

- 8:00 Breakfast
- 8:30 Election of Chair-Elect/At-Large ExCom members
- 8:40 Minutes approval
 - Motion to approve: Johnston
 - Second: Jacobs
 - Discussion: None
 - Approval: Yes
- 8:41 Succession plan approval
 - Motion to approve: Johnston
 - Second: Packman
 - Discussion: Missing line at end of document will be filled in? (Answer – yes, with location of files)
 - Approval: Yes
- 8:45 Election of chair
 - Jacobs withdraws
 - Hannigan and Krajewski statements
 - Election
 - Krajewski is elected as chair elect
- 8:50 Election of at large Executive Committee
 - Additional nominations due to Jacobs withdrawal
 - McNamara (nominated by Hannigan, seconded by)
 - Packman (nominated by Murdoch, seconded by Illangasekare)
 - Statements by McNamara, Packman, Hannigan
 - Election
 - Hannigan is elected as at large Executive committee member
- 9:00 Big Picture: Principles for prioritization (Hooper)
 - Discussion of funding priorities
 - Compensation for chairs (\$40k)
 - \$10k for chair elect, \$20k for chair, \$10k for past chair
 - Board agrees that this is a necessary and reasonable amount for the time commitment of chairs.
 - Board meetings and director travel (\$54k)
 - Publications of CD with synthesis (\$10k)
 - Pushback from NSF on CUAHSI involvement with non-CUAHSI grant
 - Discussion of whether this is good return on investment
 - Provides better dissemination of community activities
 - CD publication will be supplemented with web presence
 -
- 9:30 Moving HIS to Operational Status (Maidment)
 - Description of HIS goals and current status
 - All goals are met to some extent
 - Lessons learned

- Simpler, standards based method available
 - Enormous amount of data, needs to be well organized to be useful
- Working group is currently developing standards for water data
- Sensor Observation Service
 - Also developing standards for hydro data
 - Includes result, units, timestamp, etc...
- Water agencies on board
 - USGS, Storet, states, NWIS
- CUAHSI Ontology would allow for searching of both discrete spatial objects with time series and continuous space time arrays.
- CZO data is incorporated into HIS and harvested by HydroDesktop
 - Jacobs asked for clarification on meaning of “harvesting”
 - Manual transfer of data from CZO network to network office at San Diego
- HydroDesktop in classroom
 - Successfully used in undergraduate class
- Presentation of HIS to subcommittee on Water Availability and Quality on Jan 19
- Krajewski: What is the cost?
 - \$400k year to maintain San Diego office, envision \$900k in future
 - 4-5 staff members with specialized skills
- Maidment envisions CUAHSI focusing on hosting / assisting academic data publication / cataloging, with another group focused on federal data (once HIS is implemented)
- OGC Subcontract
 - Hooper – why should we pay for this?
 - Maidment: to prime pump before federal involvement and greater financial support by agencies
 - One goal is development of timeline for development of final implementation
 - Supported by Jun and NSF
- Pros and cons of professional software engineer (\$200k) vs. Dan Ames (\$80k)
 - Maidment: great faith in Ames, no opinion on which is better
 - Hooper: choice is between focusing on getting plan assembled (Ames) vs. permanent employee of data center (new engineer)
 - Reinfelder: Can we ask for both?
 - Hooper: advises against
 - New engineer gives better long term continuity, while Ames has better sense of the community
- User Conference
 - Proposed for Utah 2011
- 10:50 Big Picture: Principles for prioritization continued (Hooper)
 - Discussion of funding priorities

- CUAHSI presence at meetings
 - Method for reaching out to outside committees
 - Suggestions of meetings for CUAHSI presence
 - NABS
 - ASLO
 - Soil Science Society
 - ESA
 - Create blurb for members / board for talking points at meetings
- Fall AGU reception (\$18k)
 - Need better advertising opportunities
 - H section of AGU newsletter
 - Gilbert Club (for earth surface group)
 - Biogeology section
- Community Specialty Conference (\$40k)
 - Theme: Role of water on climate change
 - Approach: Incorporate AR5 into HIS for community discussion
 - Suggestion to either look for outside funding or combining with biennial if need room in budget
 - If independent funding, may lose some control or reduce CUAHSI funding.
 - Need to get clarification from NSF on CUAHSI role in proposing conferences.
 - Need to articulate CUAHSI contribution to meeting that would not be addressed with normal NSF funding
 - Band will write up concept of conference
- CUAHSI Data Services (\$200k)
 - Funding for software engineer to put together plan for data center and help facilitate HydroDesktop development and implementation
 - Includes \$20k for consulting
 - Need to justify staff position with metrics of success (i.e. hits to website, data downloads)
 - First step towards implementing CUAHSI data center
 - Open vote for whether establishing data center is important for CUAHSI future
 - 12 yes
 - Need to emphasize to NSF both benefits of continuing along this path, as well as consequences of not.
- CHyMP (\$40k)
 - Carry over
 - Builds on data services
 - Meets CUAHSI mission

- Appropriate level of investment
 - Instrumentation: HGP Node (\$40k)
 - Integration with surface Earth (geophysics) / IRIS PASCAL
 - Establishment of deployment pool
 - Field demonstration
 - Coordinated deployment of Nodes to site where implementation can be leveraged with existing infrastructure
 - Instrumentation: Hands on workshops (\$5k)
 - Training and demonstrating demand for instrumentation
 - Pathfinder Awards (?)
 - Travel awards for graduate students
 - Need to review description of grants and advertizing
 - 14-16 applications
 - ½ interesting and in spirit of goals of program
 - Committee will write report on status of program
 - Physical meetings of the standing committees
 - Cyber seminars
 - Big bang for buck
 - Jacobs will send schedule to Conrad
- 12:00 Nominations of Chair of Biennial
 - Jacobs nominates McNamara
 - Hannigan seconds
 - Vote for McNamara as chair
 - McNamara is elected as chair of the biennial
 -
- 12:05 Prioritization of Year 3 activities (Electronic Voting)
 - No action
- **NSF Joins (Tom Torgersen, Bob Dietrich, Richelle Allen-King)
- 12:00 Lunch
- 1:00 Discussion of Strategic Planning
 - Introduction of board and staff to NSF
 - Review of CUAHSI activities for 2010
 - Development of strategic plan (Band)
 - Band, Packman, Murdoch and Famiglietti
 - Mandate from management review 3 years prior
 - Includes
 - Growth plan
 - Future activities
 - Mechanisms to appeal to broader science community
 - Translational component
 - Restructuring representative body
 - Action items

- Budget (year 3 request)
- Torgersen: Strategic plan covers enough area that CUAHSI can listen to community and communicate to NSF, and vice versus. CUAHSI focuses on watersheds as a common spatial framework
- Murdoch: CUAHSI would like to continue formal meetings with NSF
 - Torgersen agrees.
 - Murdoch suggests incorporating additional groups in formal meetings
 - Torgersen suggests a mixture of meetings to ease communication
 - New leadership team at NSF results in good timing for increased CUAHSI interactions with NSF.
- Murdoch: What can CUAHSI do for NSF?
 - Torgersen: Does expanded membership lead to expanded committees to address breadth of issues in front of water community
 - Provide input by participating in SEES (?) initiative and representing hydrologic community
 - Band: How do you envision CUAHSI role in applying for grants, etc...
 - Packman: Would it be better for CUAHSI to apply for grants or to take a more streamline approach through directorate?
 - NSF needs to consult managers of activities for their recommendations.
 - Dietrich: Encourage application for SEES RCNs. Includes money for workshops
 - Submit workshop proposals to regular program
 - Hooper: Often unclear when CUAHSI should present ideas to NSF
 - How far should CUAHSI develop ideas?
 - Unclear when appropriate for CUAHSI to have significant role
 - Torgersen: Unclear as much of this has not been tried before
 - Dietrich: Research = PIs, while Infrastructure, community ideas = CUAHSI
 - Encourage discussion during NSF CUAHSI meetings
 - Torgersen: Talk to congress reps about importance of water
- Murdoch: Transition of HIS from research project into infrastructure
 - Need to assess viability of implementation
 - Torgersen: Yes – HIS is a valuable tool for individual PIs data management plan
 - CUAHSI will post templates for data management
 - Dietrich: Anticipate confusion among PIs, reviewers on needs for data management plans
 - NSF has FAQ site for data management plans

- <http://www.nsf.gov/bfa/dias/policy/dmpfaqs.jsp>
 - NSF is supportive of becoming operational at reasonable cost.
 - Dietrich: Think beyond immediate task of transitioning HIS, also think about next steps in terms of research to advance data driven interdisciplinary science
 - Hooper: Education on use of HydroDesktop / metadata is needed
- Murdoch: CHyMP effort is progressing
- Murdoch: Presents year 3 budget request
 - Base request (\$1.27 million)
 - Community outreach
 - Community Special Conference
 - Torgersen: Could be added later or requested independently
 - Torgersen: This needs to be fleshed out, currently is under-described in report. An informal report would allow Torgersen to provide guidance on funding
 - Data Services (HIS)
 - Software Engineer as mechanism to move HIS to operational service.
 - Will both assess viability of implementation and begin implementation
 - Torgersen: This makes sense. Encourages to bring in outside experts (Russ XX) for help in implementation
 - Description in annual report is adequate for this proposal
 - Software engineer will provide continuity during implementation
 - Hire is time sensitive as HIS project is coming to a close
 - CHyMP
 - Torgersen: Need more information on White Paper
 - Instrumentation
 - Torgersen: Understands that this project was underutilized due to spin up. This is some source of concern.
 - Torgersen: Concern that a node will be proposed, not this (specific) node. Committee should evaluate community needs and ensure next node is carefully chosen
 - Education outreach
- Torgersen: Budget is in flux
 - Hooper: what is next step

- Torgersen and Allen-King: Will sit down with report (from Hooper) with Lina to make strategic decisions. Would like prioritized list of action items and backup documents are needed.
- Hooper and Band: Staff time allocation is dependent on funding allocation.
- Torgersen: NSF supports mission and implementation of CUAHSI.
- Packman: Tasks presented are to be thought of as auxiliary, and not core CUAHSI functions.
- Murdoch: Activities are not binary – most can be reduced in size
- Torgersen: Not all components presented in Year 3 plan can be funded
 - Allen-King: In report, indicate both priorities and items that can be scaled down.
 - Dietrich: Present prioritized budget, prioritized budget minus 5, 10, 20%.
- 2:00 Goals for Year 3 (under uncertain financial conditions)
- 3:00 Adjourn