

**Draft Minutes of the Second Annual Meeting of Board of Directors of the Consortium of Universities for the Advancement of Hydrologic Science, Inc.** (Held in Pacific Suite J of the San Francisco Marriott, San Francisco, California on 9 December 2002)

Participating were Representatives Fred Ogden (University of Connecticut), Upmanu Lall (Columbia University), Claire Welty (Drexel University), Jorge Ramirez (Colorado State University), Jeff Dozier (University of California, Santa Barbara), Bob Reedy (University of Texas Austin), Ken Potter (University of Wisconsin), Vijay Gupta (University of Colorado), Witek Krajewski (University of Iowa), Jeff Nieman (Pennsylvania State University), David Chandler (Utah State University), James McNamara (Boise State University), Steve Gorelick (Stanford University), Scott Tyler (University of Nevada Reno), John Wilson (New Mexico Tech.), Greg Pasternak (University of California, Davis), David Montgomery (University of Washington), Markus Hilpert (Johns Hopkins University), Jennifer Jacobs (University of Florida), Jim Shuttleworth (University of Arizona), Frank Schwarz (Ohio State University), Miguel Medina (Duke University), Jim Smith (Princeton University), Robyn Hannigan (Arkansas State University), Tom Meixner (University of California, Riverside), John Selker (Oregon State University), Emi Ito (University of Minnesota), Doug Kane (University of Alaska, Fairbanks), Laura Crossey (University of New Mexico), John Schade (Arizona State University), Chunmiao Zheng (University of Alabama), Bob Holt (University of Mississippi), Tom Piechota (University of Nevada, Las Vegas), Tony Cahill (Texas A&M), Gary Weissman (Michigan State University), Richele Allen-King (Washington State University), Fred Molz (Clemson University), Carolyn Ruppel (Georgia Tech University), Doug Alsdorf (University of California, Los Angeles), Praveen Kumar (University of Illinois), Randy Gentry (University of Tennessee), Alan Robock (Rutgers University), Christine Shoemaker (Cornell University), Kay Brubaker (University of Maryland), Yoram Rubin (University of California, Berkeley), Aaron Packman (Northwestern University), James Famiglietti (University of California, Irvine). Attending but not voting were Marshall Moss and Richard Hooper.

The meeting was declared opened at approximately 7:05pm Pacific Standard Time and a roll was taken, which resulted in 46 Directors and Alternates being present, and thus a quorum of the 68 Directors was achieved.

First item on the agenda was approval of minutes for the two previous board meetings (meetings of 28 May 2002 and 20 August 2002). Fred Molz moved and Praveen Kumar seconded to approve the minutes. The motion passed unanimously.

**Announcements:**

Miguel Medina (Chair of the Nominations Committee) reported that he had received enough ballots for a valid election but that those present who still wished to vote should do so. Miguel also thanked the other Nominating Committee, Claire Welty, Elizabeth Boyer, as well as Steve Burgess, Past Chair of the Nominating Committee, for their contributions.

John Wilson gave a summary of the [State of the Consortium](#), which had been distributed with the agenda for the Board Meeting.

John Wilson announced that the new Executive Director of CUAHSI will be Richard Hooper. Rick comes to us from the USGS, and he announced he was looking forward to working with the consortium.

Claire Welty delivered the [Financial Report](#) to the Board.

### **Establishment of policies**

Establishment of facilities - John Selker moved and Fred Ogden seconded to approve the attached policy on [establishment of facilities](#). Fred Molz noted the built in conflict with how the policy was worded. How do we prevent the initial winner of a facility from being the permanent winner. Marshall Moss noted that the timeline in the policy was needed so that CUAHSI not miss out on opportunities as they arise. Greg Pasternak noted that open competition is essential to the consortium and that the policy did not appear to be strong enough to ensure that all competitions were open and fair. Bob Holt called the question. The motion passed unanimously by acclamation.

Competition for funds – Scott Tyler moved and Frank Schwarz seconded the attached policy on [competition for funds](#). Aaron Packman voiced his opinion that it seemed more like a guideline than a policy. Yoram Rubin questioned how is this open when people can get \$100,000 for any time period. Yoram Rubin moved to table the motion and Caroline Ruppel seconded. The motion to table passed by a majority of the voice vote.

### **Establishment of committees**

Establishment of [Standing Committee on Hydrologic Synthesis](#) - Jorge Ramirez moved and Fred Molz seconded to approve of the formation of the Standing Committee on Hydrologic Synthesis as detailed in the attached documents. The motion passed unanimously by acclamation.

### **Election of Secretary and Executive Committee**

Miguel Medina (Chair of the Nominating Committee) reported that Wendy Graham of the University of Florida had been elected as the new member of the Executive Committee and Doug Alsdorf of the University of California, Los Angeles as the Secretary of the Corporation. Bob Holt moved and John Selker seconded to accept the report of the Committee and direct the Committee to destroy the ballots. The motion passed unanimously by acclamation.

### **Date of the next meeting of the Board of Directors**

Jim Smith moved and John Selker seconded to have the next meeting of the Board of Directors in December of 2003.

### **Other business**

Yoram Rubin moved that the Executive Committee develop a draft amendment to the Bylaws that would establish an internal audit committee as a permanent committee of the Board and for this draft to be presented for consideration of the Membership on or before its next Annual Meeting. Fred Molz seconded. The motion passed unanimously by acclamation.

The meeting adjourned at approximately 9:00 PM PST.

## The State of the Consortium

Consortium of Universities for the Advancement of Hydrologic Science, Inc.  
Annual Report on the State of the Consortium  
John L. Wilson, Chair, Board of Directors  
November 10, 2002

The Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) is coming to the end of its first full year of operation. Less than two years ago a group met at the National Science Foundation (NSF) and resolved to form a University based corporation to pursue an agenda of programs and facilities to support the advancement of hydrologic science. Lead by Roger Bales we wrote a successful proposal to NSF to fund the first two years of our activities and hired Marshall Moss as Executive Director. Dr. Moss saw to our incorporation in the summer of 2001 with thirty-three members. The current officers were elected in December of that year, including Dr. Moss as President, Tom Meixner at Secretary, Claire Welty as Treasurer, Ken Potter as Vice Chair, and Jorge Ramirez, Frank Schwartz and Chris Duffy as members of the Executive Committee (ExCom). Last winter we formed five standing committees to pursue our agenda, and a series of advisory committees to assist with the development of policy. The corporation took control of the NSF grant in the spring, and at the spring Board of Directors meeting Dennis McLaughlin led us to a new, broader mission statement that goes well beyond the development of infrastructure. We are currently interviewing candidates for Executive Director, and shortly hope to hire a business manager and other staff for our Washington Office. Over the last nine months the Consortium has been building a science agenda (see [www.cuahsi.org](http://www.cuahsi.org)) on the foundation laid by the Eagleson Committee's "Blue Book", Vijay Gupta and the WEB report, National Research Committee (NRC) reports, and various articles. Perhaps more importantly we have been building a community. We now have well over sixty member universities.

### **The CUAHSI mission:**

*To foster advancements in the hydrologic sciences, in the broadest sense of that term by*

- *Developing, prioritizing and disseminating a broad-based research and education agenda for the hydrologic sciences derived from a continuous process that engages both research and applications professionals;*
- *Identifying the resources needed to advance this agenda and facilitating the acquisition of these resources for use by the hydrologic sciences community;*
- *Enhancing the visibility, appreciation, understanding, and utility of hydrologic science through programs of education,*

Following in the footsteps of the WEB initiative, we held Town Halls and/or special sessions at every AGU or GSA meeting for the last two years, including last month in Denver. We recently had a special session at the annual UCOWR meeting, and last spring we had one at Hydrology Days in Fort Collins. We put together six regional workshops last winter, and a number of local workshops, attended by several hundred people. These meetings were used to grow our membership and committee service, and to direct our activities. In particular, the regional workshops developed information that was considered by the Standing Committees.

Jim Smith as Chair, and Claire Welty as Vice Chair, led the Standing Committee on Hydrologic Science, drafting a Science White Paper that is serving as the basis for our more integrated

approach to the conduct of hydrologic science. It stresses research at process interfaces within the realm of traditional hydrology as well as the interfaces between hydrology and sister sciences. Larry Band replaced Mark Williams as Chair of the Standing Committee on Hydrologic Observatories. He was recently joined by Fred Ogden as Vice Chair. Their committee has proposed a multi-staged approach to infrastructure development, in which we will first draft a detailed paper prototype of an observatory using a particular basin in the illustration. David Maidment's Standing Committee on Hydrologic Information Sciences, with Vice Chair Wendy Graham, has made the most progress. The committee made a presentation to NSF's Division of Earth Science a month ago that should soon lead to funding of the first of our programs. We recently hired Michael Piasecki to assist this committee in the development of a proposal to NSF. John Selker, Chair, and Witold Krajewski, Vice Chair, led the Standing Committee on Hydrologic Measurement Technology. Their committee has formulated a "One Stop Shopping" approach to instrumentation, training, and support. Robyn Hannigan, Chair, and Mark McCaffrey, Vice-Chair, and their Standing Committee on Education and Outreach recently considered kick-starting their activities by taking on the GLOBE K-12 program, with a CUAHSI proposal to NASA, but withdrew as the effort would have been too much, too soon. Steve Silliman, Frank Schwartz, and Steve Burges chair Advisory Committees. Altogether we have well over one hundred people serving on Standing Committees, and more than twenty on Advisory Committees. We've had many dozens of committee meetings, some in person, but most by conference call. I want to thank the hundreds of participants, especially Ana Barros, David Carlson, Jeff Dozier, David Goodrich, Steve Gorelick, Anton Kruger, Praveen Kumar, Venkat Lakshmi, Upmanu Lall, Dan Larsen, Mark Parlange, Ken Potter, Frank Schwartz, and Laura Toran.

We held a Board of Directors' retreat at Snowbird, Utah in August to review science white papers, with over seventy people attending. The white papers and accompanying contributions to a science synopsis were assembled by the five Standing Committees. White paper review groups led by Martha Conklin, Efi Foufoula, Fred Ogden, Frank Schwartz, and David Tarboton gave particularly helpful critiques. Spurred by contributions at Snowbird we assembled two new standing committees to address additional programs. The Standing Committee on Research Applications is chaired by Tom Piechota, with Vice Chair Allen Bradley, while a Standing Committee on a Synthesis Center is proposed for consideration at this Board of Directors Meeting.

CUAHSI attended and presented at a variety of meetings with sister sciences. A few weeks ago we participated in a meeting on the CLEANER initiative, an NSF Engineering Directorate sponsored attempt to create infrastructure to support environmental engineering and science research. Just before that we were invited to Boulder for an NSF-sponsored conference on Cyberinfrastructure for Environmental Research and Education. In the first week of December we've accepted an invitation to be in Boulder to participate in the American Society of Limnology and Oceanography (ASLO) workshop on their infrastructure initiative. Who represents us at these meetings? It is not only the Officers, but also other members of the Board of Directors and members of our standing committees: UCOWR, Frank Schwartz, Miller, and Marshall Moss; Hydrology Days, Jorge Ramirez; CLEANER, Claire Welty; Cyberinfrastructure, David Maidment, Venkat Lakshmi and Xu Liang; ASLO, John Wilson and Ken Potter. Fred

Ogden is representing us at another Washington meeting later this week.

While the CUAHSI science agenda has developed from the bottom-up, the business side of our consortium will be a top-down organization. We are a non-profit corporation and we have legal and financial obligations to run the consortium as a business. The Board's Executive Committee has proposed a policy that our operations and programs be run professionally, with a chain of command up through the Executive Director and President, who will in turn report to the Board. This policy will be considered at the next meeting of the Board. While Standing Committees will plan, seek funding, coordinate, and provide technical oversight of the programs and facilities under their purview, under the proposed policy they won't run them. The operations will be the responsibility of the paid professional staff of the corporation and its contractors, while the science will be in the hands of the users and Standing Committees.

It is clear from the reviews at the Snowbird Retreat, and other feedback, that many members of the community remained concerned with the evolving CUAHSI science plan, both as represented in the white papers and the synopsis. We on the Executive Committee share that concern. What science should we pursue? Some insist that we take a big picture view, focusing on exciting earth system science, while others want the focus squarely on issues of societal need. It is not a matter of one or the other, we must address both. Society and our sponsors will insist on the latter, while our scientific colleagues and our own curiosity demands that we also examine the former. Our science plan must seamlessly integrate both. To help address these issues, we recently hired Stuart Schwartz to complete and polish the science synopsis. This has been a difficult assignment, partly because he is working with the contributions of literally dozens of people. Were we to have adjourned a small group to a hotel for a week, perhaps we could have completed this assignment sometime ago. Instead, because we have put a premium on community building, this synthesis has been painful. While editing the synopsis Dr. Schwartz has continued to reach out to the community for additional ideas and feedback. The building of our community is ongoing, and will continue through the life of CUAHSI.

We've learned several lessons this last year. First, community building is essential and ongoing. Prior to the "Blue Book" hydrologic science was fractured and fragmented, to borrow a phrase from Marshall Moss. Over the last decade we have been coming together, but we are not yet at the point of thinking about science from a community perspective. The shared, professionally run programs and infrastructure of CUAHSI will be a big change for us, providing dramatic new opportunities but requiring a maturing community outlook. Second, CUAHSI must be inclusive, both in our science planning and in our support of science. Our programs and facilities must be open to all appropriate user groups, and our science planning open to new ideas from the entire spectrum of hydrologic science and its sister sciences. Third, we must have a long term view. Setbacks and disagreements are part of the process, but we must readily move past them. Fourth, agreeing on science themes and important science questions is a never-ending, iterative process. Our current science plan will inevitably evolve into something different, as the science and our abilities improve, and as our sense of community grows. Fifth, our major opportunities for advancing science support, and thus our science, is in infrastructure. While our mission is far broader than infrastructure, it is in infrastructure that we'll first find new money.

A few weeks ago, Marshall Moss, Larry Band and I had an excellent meeting with Margaret Leinen, NSF's Assistant Director for Geosciences. Also attending were Herman Zimmerman, Walt Snyder, and Doug James from the Division of Earth Sciences. We discussed our science and the proposed programs and facilities. We also discussed how one builds a consortium and reviewed the lessons I mentioned above. CUAHSI is now preparing new proposals for an additional five years of core funding (administration, standing committees, etc), for a paper prototype of an observatory, for the beginnings of our information systems components, and for a synthesis center (think tank). If we submit strong scientific and business proposals in these areas I have high expectations that they will be funded. These proposals cover areas of interest to two of the original standing committees, and the new Synthesis Center committee to be approved at the next Board Meeting. Since our meeting with Dr. Leinen I've had detailed discussions with the chairs of two of the other original standing committee on how to advance their agenda toward funding.

For the next few years most if not all of our funding will come through NSF. While we'll look for other funding opportunities it is important that we coordinate our activities so that they remain aligned with the NSF's mission, priorities, and budget. When we propose a program or facility to NSF it is imperative that we have resolved all, or almost all, of the optional issues beforehand. A proposal for a facility, for example, must state not only what the facility will do and why it is needed, but where it will be located. As we will remain an open consortium, in which each of us have an equal opportunity to compete for a program or facility, we must resolve competition prior to submitting to NSF. In short, we'll be writing our own RFP's, with our own evaluation criteria and review panels, to resolve competition for facilities and programs.

On behalf of the Consortium I offer our grateful thanks to the leadership and contributing members of all Standing and Advisory Committees. I thank the members of the Board of Directors for their participation at the Snowbird Retreat, for their contributions to our science plan, and for their attention to CUAHSI business. I especially thank the ExCom members and other officers for all of the many small but time consuming contributions they've made to help move CUAHSI forward, especially for their participation in our weekly conference calls. Fred Spilhaus has been generous with the support from AGU for our business operations and by supplying space for our Washington office. We are especially grateful to our colleagues at NSF, Herman Zimmerman, Walter Snyder, and Doug James, for their encouragement and advice. Finally, I most especially want to thank our President, Marshall Moss, without whom we would still be trying to figure how to organize and incorporate. You have all helped us build a community.

## Financial Report

The Corporation currently has access to two types of financial resources: (1) unrestricted funds derived from Membership fees and interest gained garnered there from, and funds from an NSF award to develop a science plan for the hydrologic science community. This report consists of two parts, each treating one of these resources.

### *a. Unrestricted funds*

## Cash Flow and Net Assets for Unrestricted Funds

### C.Y. 2001

Income:	Membership fees	\$74,000.00	
	Interest	\$ 360.31	
	<b>Total income</b>		<b>\$ 74,360.31</b>
Expenses:	Catering	\$617.91	
	Postage	\$ 7.00	
	Legal & filing fees	\$ 8,000.80	
	Telephone	\$ 1,070.09	
	<b>Total expenses</b>		<b>\$9,695.80</b>
	<b>Net income</b>		<b>\$64,664.51</b>

### C.Y. 2002 (Through 7 November)

Income:	Membership fees	\$50,000.00	
	Interest	\$ 1,746.60	
	<b>Total income</b>		<b>\$ 51,746.60</b>
Expenses:	Catering	\$ 1,423.84	
	Lodging*	\$21,318.22	
	Facilities*	\$ 1,866.67	
	Transcription services*	\$ 395.00	
	Postage	\$ 27.73	
	Legal & filing fees	\$ 60.00	
	Advertising	\$ 344.50	
	<b>Total expense</b>		<b>\$ 25,435.96</b>
	<b>Net income:</b>		<b>\$ 26,310.64</b>

\* Expenses from Snowbird retreat chargeable to the NSF award

**Net assets as of 7 Nov 02:**

Cash on hand	\$	<b>90,975.15</b>
Fees receivable	\$	<b>6,000.00</b>
Award receivable	\$	<b>23,579.89</b>
<b>Total</b>	\$	<b>120,555.04</b>

*b. NSF award*

NSF provided award EAR-0127884 entitled “Infrastructure for the Advancement of Hydrologic Science” to the American Geophysical Union, as the agent for the Consortium because the Consortium had not attained its full legal status at the time of the submittal of the proposal that resulted in the award. The duration of the award is from 1 September 2001 through 31 August 2002, and the funds awarded are as follows:

<b>Fiscal year</b>	<b>Amount</b>
2001	\$145,013
2002	\$394,212
2003	\$139,505
<b>Total</b>	<b>\$678,730</b>

In January 2002, the President of the Corporation (Consortium) entered into negotiations with both NSF and AGU for the transfer of the control of the award from AGU to the Corporation. These negotiations were brought to fruition on 1 June 2002, when formal notification of a request to transfer the award was submitted jointly by AGU and the Consortium to NSF. The requested effective date of that transfer was 1 June 2001. As of that date, all of the FY 2001 funds had been expended, as well as \$59,017 of the FY 2002 funds. Thus, the funds remaining available from the award as of 1 June 2002 were \$474,700.

As of 7 November 2002, the control of the award has not yet been finalized by NSF. During the interim since 1 June 2002, AGU has continued to pay the operating expenses of the Corporation for which the Corporation receives a monthly invoice. To date, the Corporation has received invoices for the four months from June through September 2002 that total \$113,407.58. The Corporation has a verbal agreement with AGU that these invoices will not be payable until the Corporation receives funds from the NSF award.

The hydrologic science community owes AGU a great debt of gratitude for its services to the Corporation both as its agent and as its lender of first resort during the formative years of its existence.

## **Establishment of policies**

*a. Policy on establishment of facilities* The Executive Committee recommends that the following policy be adopted by the Board of Directors:

*Facilities Policy:* It is the policy of the corporation that any arm(s) of the corporation that formally proposes the establishment of a CUAHSI program or facility must first obtain the concurrence of the Executive Committee before the formal proposition is made public. Furthermore, any program or facility established by the corporation ultimately will be operated either by the corporation or by a contractor chosen in an open, competitive process. Where a program or facility is operated by a contractor, the onsite Director of the facility will be an employee of the corporation. During the initial phase of establishing the program or facility, the arm(s) of the corporation that is (are) leading its establishment can propose to the Executive Committee, for its ratification, an interim plan in which the above policy is not followed for good and sufficient reasons. However, the interim plan must demonstrate that, by the end of its term, it leads to fulfillment of the ultimate policy, as stated in the first three sentences of this paragraph, with three years or less being the preferred term of the interim plan, but with a maximum term not to exceed five years.

*b. Policy on competition for funds* The Executive Committee recommends that the following policy be adopted by the Board of Directors:

*Policy on Competition for Funds:* It is the policy of the corporation that any recipient of funds from the corporation of a magnitude exceeding \$100,000 shall be chosen by open competition. Such competitions shall be conducted by persons authorized by the Executive Committee, with assistance by review panels comprised of experts in the area(s) of focus of the award(s). During the initial phase of a program or facility, the corporation may deviate from this policy with good and sufficient reason, as an interim measure, if the Executive Committee approves a plan that justifies the deviations in light of the strong desire of the corporation for transparency and openness in its financial dealings.

## **Establishment of a Standing Committee on Hydrologic Synthesis**

The Executive Committee recommends that the Board of Directors establish a Standing Committee on Hydrologic Synthesis and that the Executive Committee be authorized to select the leadership and the members of such a committee if it is established. A suggested charge to such a Standing Committee is:

*The Standing Committee on Synthesis of Hydrologic Science is responsible to the CUAHSI Board of Directors for assuring that all significant issues pertaining to the synthesis of hydrologic science are brought to the Board's attention with adequate background, context, and recommendations that the Board can endeavor to direct its programs of hydrologic infrastructure to maximize their positive impacts on advancing the science. This committee also is responsible for coordinating its efforts with the other Standing Committees where appropriate and for carrying out other responsibilities as assigned by the Board of Directors or its Executive Committee.*

