



## The NASA Surface Water Working Group

February 7, 2003

Dear Working Group Members

It is my pleasure to update you on the state of our working group. I would like to first acknowledge the truly outstanding efforts of Dennis Lettenmaier, Charlie Vörösmarty, and Charon Birkett for helping to keep the working group in operation. I heavily rely upon them for a host of working group responsibilities! Please note that this letter is available on our working group web page at: [www.swa.com/hydrawg/](http://www.swa.com/hydrawg/), click on the “letters” button. Given the prominence that the web page has taken, I also very sincerely appreciate Dave Emmitt’s hosting of our home page at Simpson Weather Associates.

### **Accomplishments:**

A primary concern that I have had for our working group over the past year has been the establishment of our hydrologic science goals, beyond those iterated in the white paper (see our web page and click “publications”). These goals need to be embedded in our thinking as well as in the mindset of our colleagues. I am pleased with the progress we have made this year as we took the following steps:

- (1) In April 2002 we mailed our unsolicited renewal proposal to Jared Entin, the Terrestrial Hydrology Program (THP) Manager at NASA HQ. I am pleased to announce that THP has decided to fund our efforts for the next two years (2003-2005), as requested. Feel free to review this proposal and provide commentary; please download it from our web page (click on the “proposals” button). In fact, we should all thank Jared for ensuring progress for our working group through this award. This proposal details a number of hydrologic questions that remain unanswered because of the lack of discharge measurements.
- (2) In November 2002, we conducted our fourth working group meeting. This meeting focused on discussions of possible hydrologic science goals. Combined with technology discussions that were common at previous meetings, I believe we now have a balance.
- (3) Based on discussions from the November 2002 meeting, we sent a letter to NASA HQ on January 8, 2003. This letter provided the key science and application questions that our working is attempting to answer. Please download the letter from our web page (click on the “letters” button). I encourage you to review the references in both the proposal and the letter to HQ; I am always open to new suggested readings that will advance our thoughts.
- (4) In December, 2002 we presented an abstract at the Fall AGU meeting in an invited talk in Venkat Lakshmi’s session (click on the “presentations” button). I thank Venkat for this invitation because the session was well attended and I received valuable comments from participants.

A second concern of mine has been the promotion of our group such that we increase the number of *active* participants. Clearly, NASA will not ultimately launch a satellite for a limited group of researchers, rather we need to continuously update our colleagues so that they also want to facilitate our goals. Thus, we have taken the following promotional steps:

- (5) The working group web page plays an important and reoccurring role for us. I am making certain that all correspondence is maintained through the web page to provide a constant focal point for our group. In nearly every email, letter, and presentation, I call the viewers attention to [www.swa.com/hydrawg/](http://www.swa.com/hydrawg/).
- (6) In January 2003, we officially elected to name our working group “The NASA Surface Water Working Group”. The renaming process took two steps. First, we were informally known as the “HydrASat Working Group”. This name did not convey our scientific focus and implied that we had already decided on a mission concept. Second, we decided to follow the naming convention of THP’s other working groups on soil moisture and cold land processes by adopting “River and Wetland Processes NASA Working Group”. However, this name inadvertently implied that we excluded lakes and reservoirs. I trust that our new name is inviting to all researchers interested in the land surface branch of the global water cycle.
- (7) A raised level awareness for the working group has also been established through emails with leaders of other groups concerned with hydrologic questions. For example, we are now well known with CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc; [www.cuahsi.org](http://www.cuahsi.org)) because I am their newly elected secretary. As CUAHSI is quickly growing through its well funded NSF base, I hope to have a broad audience for our goals. We are also very much on the agenda of PUB, the Prediction in Ungaged Basins project of IAHS (International Association of Hydrological Sciences; [www.cig.enscm.fr/~iahs/](http://www.cig.enscm.fr/~iahs/) ). Dennis Lettenmaier has been invited by PUB leaders to give a talk on our working group during a special session at the Spring EGS-AGU-EUG meeting in Nice, France.

However, I do not want the technology issues to become idle. Thus, I am pleased that Charon Birkett has taken the lead in organizing our liaison with the ICESat team ([icesat.gsfc.nasa.gov/](http://icesat.gsfc.nasa.gov/)) through her contact with Dave Harding at NASA-GSFC. Indeed, Dave has become a welcomed member of our group and has ensured our correspondence with Bob Schutz, the GLAS leader (GLAS is the lidar altimeter onboard ICESat). Charon, Dennis, and Dave Emmitt all helped to select about half a dozen river, wetland, and lake targets for ICESat during its calibration/validation, 8-day repeat cycle, period from February to April, 2003. These targets will help us to determine technological questions such as cloud penetration, off-nadir returns, height sensitivity, and spatial resolution.

### **The Future:**

We have a number of short term and longer term goals for the working group that will be used to further our science agenda, promote our group to colleagues, and bring a focus to the technology issues.

- (8) In the short term (next two months) we will need to meet with NASA HQ personnel to ensure that our science goals become a part of future NRAs, thus providing us with funding opportunities to advance our research goals. For example, I truly want the next THP NRA to have paragraphs indicating the need for modeling studies and technological advances commensurate with both our renewal proposal and the letter we mailed to HQ. These meetings at HQ will also emphasize our longer term goals such that they become a constant in the science and technology planning processes of ESE.

- (9) Another short term goal is the submission and publication of the draft EOS manuscript (click on the “publications” button). Hopefully, the article will be printed on the front page, thus raising the awareness of the working group to many readers!
- (10) We also have several talks and hosting of special sessions at upcoming national meetings. Next week, Dennis and I will give a talk at the national AMS meeting in Long Beach; in March, Laura Hess will present our working group at the AAG meeting in New Orleans (Association of American Geographers); and Dennis and I will host a special session on remote sensing of rivers and wetlands at the April EGS-AGU-EUG meeting in Nice, France. This session has been joined with the GRACE session hosted by Jay Famiglietti and Isabella Velicogna.
- (11) A very important future goal is the establishment of our field program. Other NASA THP working groups have successfully used field programs to develop technology and to provide feedback necessary for refining observable hydrologic parameters. At the November 2002 working group meeting, we created a field committee responsible for outlining potential field campaigns. Please feel free to participate with the committee by emailing with them (click on the “field programs” button).
- (12) Finally, we will need to have another working group meeting, perhaps in the Summer. I would like the field committee and its outline to be the focus of this meeting, so they can look forward to hearing from me soon!

I trust this “State of the Working Group” letter has been informative and I truly do welcome your commentary on future directions. I believe we are a growing, but strong group, with a very positive future and hope that you will participate in this bright future. Please feel free to email or call me.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Alsdorf' with a stylized flourish at the end.

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