



## MODELING LAB ACTION TEAM MEETING

August 28<sup>th</sup>, 2012 10AM – 3PM

Virginia Institute of Marine Science (VIMS)  
Director's Conference Room, Waterman's Hall

<http://www.chesapeakebay.net/calendar/event/18504/>

### Participants

Mark Bennett – USGS	Gary Shenk – EPA/CBPO	Lewis Linker – EPA/CBPO	Theo Dillaha – VA Tech	Kevin Sellner – CRC/STAC
Marjy Fredrichs – VIMS	Dave Montali – WV DEP	Don Weller – SERC	Rick Luettich – UNC	Howard Townsend – NOAA/NMFS
Claire Welty – USACE	Ted Tesler – PA DEP	Larry Band – UNC	Heather Cisar – USACE	Amanda Pruzinsky – CRC/CBPO

### Action Items

- Amanda Pruzinsky sent out a doodle poll for the next Modeling Lab Action Team meeting. The next meeting will be a 2 hour conference call. Please fill out the doodle by COB September 7<sup>th</sup>, 2012.
- MLAT members have until COB September 14<sup>th</sup>, 2012 to respond to the minutes.
- MLAT members should continue to send revisions and suggestions for Modeling Lab Principles to Mark Bennett (cc Amanda Pruzinsky).
- MLAT members should review “US IOOS Coastal and Ocean Modeling Testbed” (2012) [http://www.chesapeakebay.net/channel\\_files/18504/terms\\_of\\_reference\\_testbed\\_072712\\_na.pdf](http://www.chesapeakebay.net/channel_files/18504/terms_of_reference_testbed_072712_na.pdf)

### Minutes

#### Welcome/Introductions and Goals of the Meeting – Mark Bennett

- Howard Townsend – When MLAT presents to the Management Board will a few Modeling Lab scenarios be presented or just one?
  - The Modeling Laboratory Principles should be the same, but the scenarios could be different. The principles that MLAT comes up with during this meeting will be revisited many times throughout this process. The goal is to present one scenario, but MLAT may also end up presenting the majority opinion and also some minority opinions. A schedule will be planned during the next MLAT meeting in

order to make sure there is progress for the newly decided May 31<sup>st</sup> deadline to have a draft recommendation for the Management Board.

## **Discussion of Existing Modeling Labs**

### **Existing Modeling Programs: CMAS & WIRADA – Larry Band**

Larry Band presented on the structure, function, and governance of CMAQ and WIRADA (Water Informatics Research and Development Alliance).

For more information this presentation is available at:  
[http://www.chesapeakebay.net/channel\\_files/18504/cmas\\_wirada.pdf](http://www.chesapeakebay.net/channel_files/18504/cmas_wirada.pdf)

### **Questions and Discussion**

- Larry Band – For the Modeling Lab, this team must determine what the core needs are and where that funding is coming from.
- Gary Shenk – Is CMAS independently funding development?
  - Larry Band – Projects are funded independently, but EPA uses the yearly conference to determine which ones they will use. There must be a formal external advisory committee or central agency organization to make these types of decisions. CBP will want to involve states and regulated industries.
- Mark Bennett – Is operations and research and development co-located?
  - Larry Band – No, but there are major areas.
- Gary Shenk – It is interesting to note that WIRADA is a national model, but the size of their problem is similar to the size of our problem.
  - Population of 17.5 million in the Chesapeake Bay Watershed and 22 million in Australia.

### **Rick Luettich**

Rick Luettich presented on the structure, function, and governance of the IOOS/SURA model testbed. The presentations were followed by a discussion by the group on lessons to be learned from these examples.

For more information this presentation is available at:  
[http://www.chesapeakebay.net/channel\\_files/18504/luettich\\_cb\\_ml\\_talk\\_08282012\\_\(1\).pdf](http://www.chesapeakebay.net/channel_files/18504/luettich_cb_ml_talk_08282012_(1).pdf)

## Questions and Discussion

**ACTION:** Review “US IOOS Coastal and Ocean Modeling Testbed” (2012)  
[http://www.chesapeakebay.net/channel\\_files/18504/terms\\_of\\_reference\\_testbed\\_072712\\_na.pdf](http://www.chesapeakebay.net/channel_files/18504/terms_of_reference_testbed_072712_na.pdf)

- Mark Bennett – What organization is the operational entity of the IOOS/SURA Coastal Ocean Modeling Testbed?
  - Rick Luetlich – There are many organizations including but not limited to NOAA, NSPET, USACE, USGS, and US Navy.
  - Lewis Linker – Are these organizations also funding?
  - Rick Luetlich – No, but that is the goal. One of the challenges is engaging the organizations enough to receive consistent funding.
- Kevin Sellner – The CBP Modeling Lab will be management based.
  - Rick Luetlich – It should enrich the communication between the science and the management.

## Guiding Principles Discussion

The group began to frame what a Modeling Lab for the Chesapeake Bay Program will look like. The discussions points are below and the Principles discussed during this meeting are found on the last page of these minutes.

- Dave Montali – Consensus for the Modeling Lab could mean a high percentage instead of everyone agreeing.
- Ted Tesler – Keep in mind that the adoption of a Modeling Lab takes away funding from implementation.
- Ted Tesler – Consider real time model or a cloud system.
  - Incorporation of large and small scale data.
  - More accessible to the public.
- Ted Tesler – Suggestion: Limit number of principles to 5 or less. Will enable adaptive management to be more effective.

- Mark Bennett – 5 principles may not be enough.
- Dave Montali – Must be able to maintain funding.
  - Mark Bennett – Need a central funding source.
- Kevin Sellner – Research should be sustainable.
- Mark Bennett – Currently, the Modeling Team covers operations of the model.
- Lewis Linker – Development in the Watershed and Estuarine Model is not currently happening.
- Lewis Linker and Mark Bennett – Funding source will change the scope of the model.
- Theo Dillaha – Purpose of the Modeling Lab should be to improve the science at the Chesapeake Bay Program. This will allow the stakeholders to become involved and place bounds on the scope of the Modeling Lab.
- Gary Shenk – Operations need to be connected to the Chesapeake Bay Program and Office.
  - Theo Dillaha – EPA is responsible for the runs.
  - Ted Tesler – There is concern about the separation of power.
  - Kevin Sellner – This only refers to the operation of the model. In this case, the model would already be chosen through research and development and just the runs are operated at CBP.
  - Kevin Sellner – Lee reported to STAC that the Modeling Workgroup will begin to discuss operations of the model.
- Gary Shenk – The Modeling Lab should have transferability.
  - Theo Dillaha – If the science of the model is sound it should also be transferable.
  - Kevin Sellner – This will depend on where we are seeking funding from.
  - Mark Bennett – The Modeling Lab should be constructed to allow for other organizations to become incorporated.
- Gary Shenk – Act of Congress or not?
  - Kevin Sellner – This will become clear with further discussion of the Modeling Lab.

- Theo Dillaha – Who is invested and who will be asking questions?
  - Mark Bennett – There will need to be some governing body to organize and prioritize.
  - Gary Shenk – In all 3 cases presented at this meeting, the funding agencies were organizing and prioritizing with recommendations from an advisory board.
  - Kevin Sellner – Use the co-op with an advisory board as an example. The states and the other stakeholders should be incorporated in this group.
- Kevin Sellner – Independent reviews of the Model.
  - Theo Dillaha – How do reviews turn into operations? What governance do they report to?
- Kevin Sellner – Focus on refinement of the model, but scientific research should be of publishable quality.
  - Don Weller – Goal should be to publish.
  - Gary Shenk – Publication should not be a requirement, but it should always be strived for.
- Mark Bennett – The Modeling Lab Action Team must further discuss the possible separation of the research and development components.
  - Kevin Sellner and Marjy Fredrichs – Research and development should work together from the start.
  - Kevin Sellner – The states would be incorporated into the advisory committee to help prioritize.
  - Don Weller – If there are separate budgets, the governance should be in charge of continuing both.
  - Claire Welty – Research and development should be tied together.
- Model Lab components: Operations, Research and Development, Advisory Committee, Outreach (training, conferences, independent reviews)
  - Amanda Pruzinsky – It could be helpful to have a training video in order to make operating the community model easier and allow people to have something to refer back to. Running the model is not something that can be learned in a short training session and even so questions still come up later. The documents are

helpful, but not the easiest to understand for people that do not work with the model every day.

- The Modeling Lab Action Team will address final governance of the Modeling Lab.

### **Next Meeting**

The next meeting will be a 2 hour conference call during the last two weeks of September. A doodle poll was sent out.

Deadline: May 31<sup>st</sup>, 2013 Draft recommendation for the Management Board

Topics:

- Timeline for interim products
- Continue discussion of principles

Comments for the meeting minutes should be sent to Amanda Pruzinsky by September 14<sup>th</sup>, 2012.

## Modeling Laboratory Principles

*Note: These principles are tentative. MLAT will continue to discuss and revise them over the next few months. MLAT members are encouraged to send suggestions to Mark Bennett (cc Amanda Pruzinsky).*

- 1) Consider the cost effectiveness of the Modeling Lab – Always keep cost in mind
- 2) Sustainable funding
- 3) Research, development, and operations must all be addressed
  - a. Clear budgeting between the three components
  - b. These three components do not necessarily need to be physically located in the same place, but must have regular communication
  - c. Research and development is management focused
  - d. Operations need to be connected to the Chesapeake Bay Program and Office
- 4) Open source (and modular?)
- 5) Purpose of the Modeling Lab should be to improve the science at CBP
- 6) Regional focus with the ability to expand
- 7) Scientific research must be of publishable quality
- 8) Model input and other Modeling Lab data should be tracked and openly distributed (with meta data according to current standards)
- 9) Relevant in the future and incorporates adaptive management
- 10) Consider both regional and local issues
- 11) Transparency and communication should be considered in development and operations
  - a. Timely documentation
  - b. Communication includes introductory documentation and programs
  - c. Training
- 12) Incorporate post doc programs