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Gulf Model Analysis for Dec. 6 Hypoxia Task Force

Rob Magnien - NOAA Federal <rob.magnien@noaa.gov> Fri, Nov 4, 2016 at 1:06 PM
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Dear Katja, Dubravko and Rob,

As you know, we are hoping that the 3D time variable models for the Gulf that you operate will help us to gain insights on the hypoxic zone in 2016 even though we weren't able to conduct our regular mid-summer cruise this year. These insights could include, but are not limited to:

1. An estimate of the 2016 mid-summer areal extent "snapshot" of hypoxia that is comparable to the annual monitoring of the zone over time.
2. An estimate of all the area that was affected by hypoxia, which is not comparable to #1 but may be very important to know. For example, it could help to better understand the magnitude of impacts on benthic communities that may not be able to recover during the summer even if hypoxia is only transient in a particular area.
3. Increased understanding of the dynamics of hypoxia under conditions that existed in 2016. My understanding is that there was more fresh water at the surface, increasing stratification, and that temperatures were higher. This may be particularly important to know since this is the likely trajectory under climate change scenarios.
4. Insights on some of the most critical needs for monitoring/observations in order to continue to calibrate and verify these models.
5. An understanding of oceanographic conditions that preceded that die-off at Flower Garden Banks that could help to determine the cause of that event.

As Alan and Dave discussed with Katja at the end of Sept, and I previewed with Dubravko and Rob on our site visits earlier in Sept, I will have a half hour slot on the upcoming Hypoxia Task Force (HTF) Public Meeting in New Orleans at the beginning of December to showcase the modeling work. Whereas a complete analysis may not be doable by that time, Katja (along with Dubravko and Rob) thought that you could generate at least a preliminary picture of 2016 hypoxia ("Teaser Hindcast").

In preparing for the meeting, I wanted to check in with all of you to see what you could contribute at this time, along the lines of the 5 items above and perhaps something beyond these that would also be of interest to the HTF (e.g. maybe the response of the zone to extra loading of freshwater and nutrients off of Texas). This is a public audience so we will need to keep the scientific details to a minimum and use a lot of eye candy; the latter should certainly not be a problem with all of the great model output I have seen to date. We also need to have some bottom line messages that speak to the management interests of the HTF and the public.

At this time I need your early input on what you think you can contribute in final form by Nov. 28 since they want the PowerPoint at the end of that week and I'll need to consolidate everyone's input and pass it around among us to finalize. **If you can get to me by COB this Mon, Nov 7 just a preliminary list of the 5 or 10 visuals and information pieces that you have now or think you will have by the 28th, that would be great.** If you need a little more time, let me know. From this information I can generate a consolidated first draft outline and get that back out to all. This will just be the first flush and we can continue to iterate on the presentation for the rest of the month.

I would also like one or more of you to help make the actual presentation. I guess this would be easiest for Dubravko since he is close by but I wanted to put that out there to all of you. I'm not sure I would be able to come up with travel funds. And, even if I could, I'm not sure it makes sense to travel a long distance for a 20 min presentation. Since they are doing a webinar of the meeting it may even be possible to do something remotely and I can check on that.

Looking forward to your input and further discussion on all of this,
Rob

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