



## Hurricane Gustav and Energy Infrastructure - Early Open Thread

Posted by [Nate Hagens](#) on August 27, 2008 - 12:08pm

Topic: [Supply/Production](#)

Tags: [chuck watson](#), [hurricane gustav](#), [infrastructure damage](#), [methaz](#), [original](#), [shut-in production](#) [[list all tags](#)]

**(Welcome: we are now on a later and more updated thread, which can be found here: <http://www.theoil Drum.com/node/4478> NB: you may want to just go the front page (it will be post #1 or #2) to get to the most recent thread: <http://theoil Drum.com> ...)**

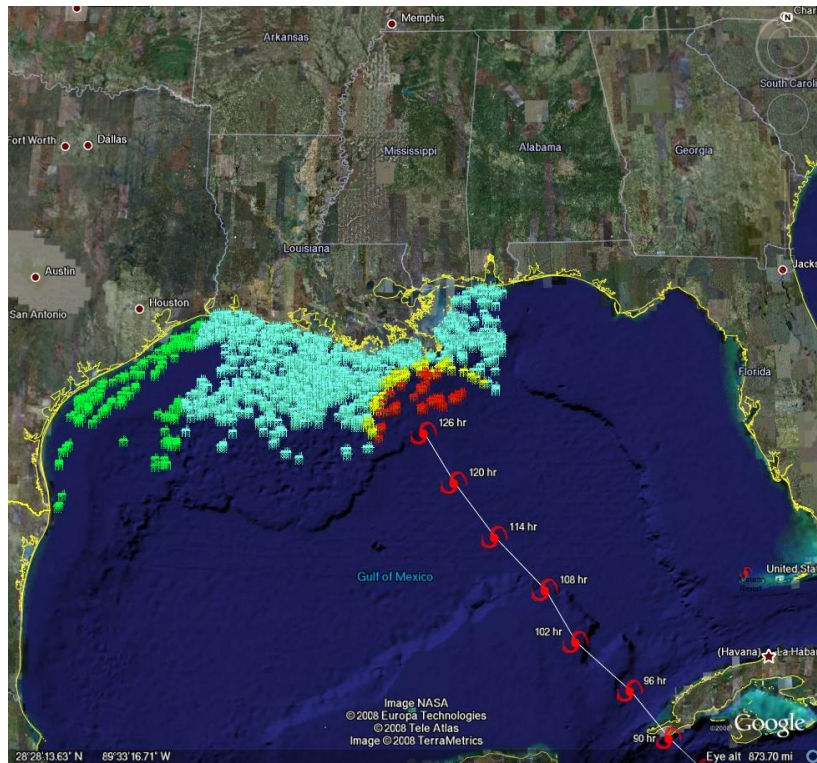
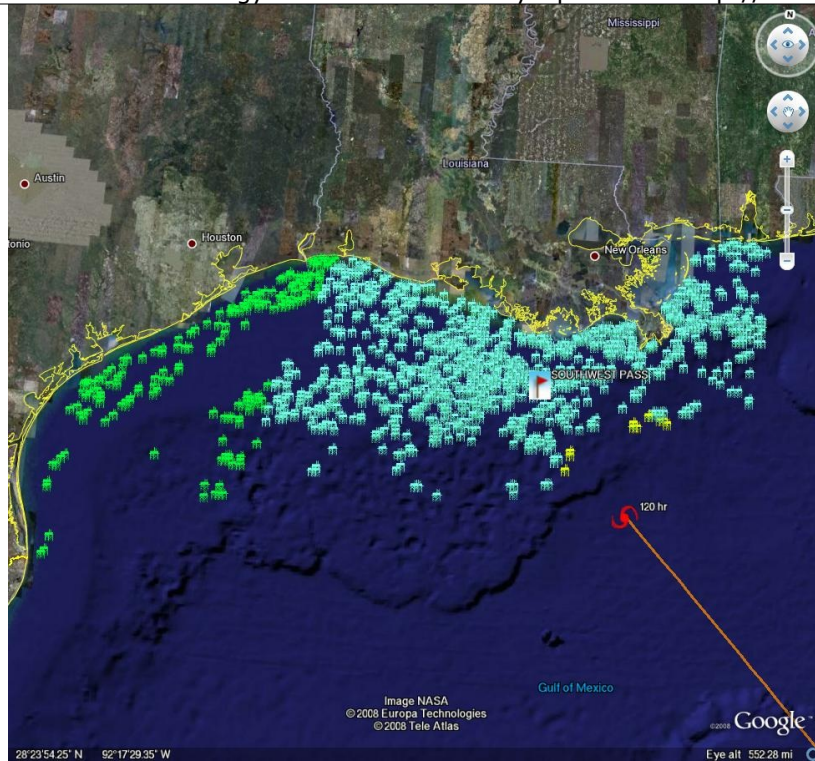
By now most people know that by this weekend there will likely be a hurricane spinning its way somewhere in the Gulf of Mexico. This open thread outlines the initial analysis by [Chuck Watson/KAC/UCF](#) and some resources on GOM oil and gas infrastructure. (*We will try and update this with new graphs and forecasts as long as this storm is considered a threat to energy infrastructure*)

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From [KAC/UCF google earth link](#)



From Chuck Watson:

Both GFDL and HWRP (which will replace GFDL) are showing fairly explosive amplification in the mid Gulf. Even the official forecast is now showing damage to the OCS facilities, and GFDL is showing Katrina-like long term disruption. None of the official tracks are onshore yet, but our in-house runs out to 180 hrs are showing hits to refineries and pipelines, as well as knocking SPR off line for a couple weeks as well. Of

course, estimates beyond 72 hours are more "possible scenarios" than real forecasts, and a little wobble one way or the other makes a big difference in damage, but Gustav is starting to get scary.

The Gulf of Mexico represents about 25% of overall US production, or represents 10% of US Oil usage. (\*Ed. Note - I believe Nat Gas is about 13-14% of US production)

Using the 6Z 27 Aug GFDL run, we are showing some facilities off line until early December. The total loss is 12% of Gulf oil production between now and the end of the year (126 days). Interestingly, NG isn't so much of a hit - only a 5% loss of the remainder of the year's production.

I asked Chuck Watson what the odds were that this storm wouldn't even make it to the Gulf as a strong hurricane this was his reply:

20% chance it stays as a high TS/low Cat1 due to interactions with Cuba, crosses the northern Yucatan, then across the southern Gulf as a weak system.

20% chance it tracks across eastern Cuba, never really gets it together and stays weak cat1 or lower up the west coast of FL (Fay like track).(this is my current favorite scenario for some reason)

30% chance it follows the current guidance and stays below cat 3.

30% chance it follows current guidance, amplifies, and is cat 3 or higher.

100% chance we're probably wrong . . .;-)

We are still 4-5 days out from a potential US landfall so uncertainty is high, though given the stakes, Gustav is becoming kind of a binary event. Chuck has put together a dynamically updating page that will reflect the latest damage models/forecasts at this link: [KAC/UCF models](#).

On current track, which the weather geeks (and I use the term "geek" in kinship...) at <http://easternuswx.com> and [Jeff Masters at WU](#) say is too early to say for sure, but this could do a lot of damage.

## **PRODUCTION/INFRASTRUCTURE MAPS AND REFINERY INFORMATION**

We have accumulated resources from previous hurricanes below, but we'd like to find updated materials if you know of them. Recent refinery maps, recent rig maps in the gulf, recent gas fields, SPR facilities, the Intercoastal Canal, pipeline stations and transfer points, etc., etc. Leave links in the comments please.

Also, here's the EIA's [Alabama](#), [Louisiana](#), [Mississippi](#), and [Texas](#) Resources pages. They will also likely come in handy. Also, here's a [link to the national page](#).

[Here's another good resource for infrastructure maps and such. \(scroll down a bit\)](#)

[Here's a map from CNN with large and small refineries laid out.](#) (though it is an old storm track)

[Very detailed piece by RIGZONE on rigs and other infrastructure in the area.](#) (thanks mw)

[Here's a flash graphic of the oil refineries and rig maps, emphasizing Beaumont and Galveston's importance.](#) Click on oil production. Note the many rigs on the east side of the storm that will get the brunt of the damage from the NE quad of the storm...hence the high long-term GOMEX oil production damage estimates below.

[And Here's the probably the best MMS map I could find. Very detailed and lots of interesting stuff. \(VERY big .pdf warning\)](#)



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