

# GULFNet RTN: Louisiana's Real-Time Network (RTN)

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# Special Challenges of Doing GPS in Louisiana

1. *Climate*
2. *Geology*
3. *Monumentation*
4. *Dealing with the NSRS*
5. *\$\$\$*

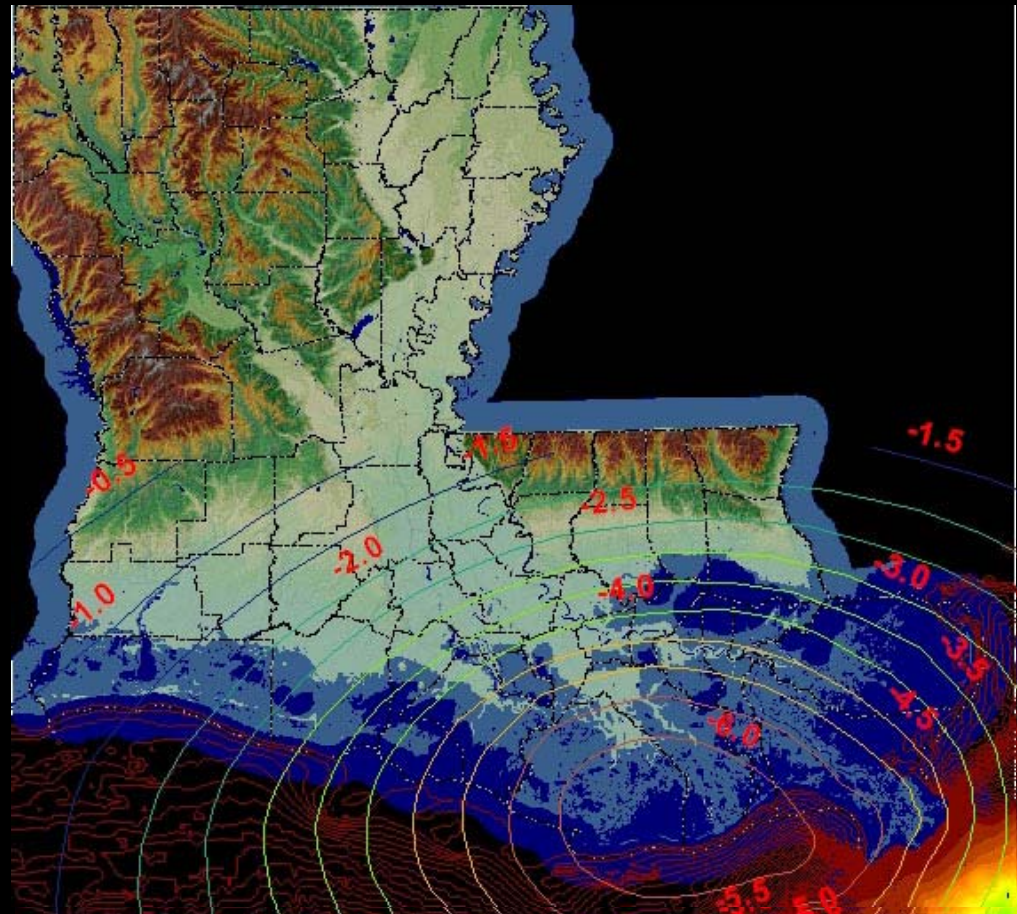
# Climate Challenge

- Louisiana is humid.
- Much of what we know about GNSS was learned in arid to semi-arid climates.
- Summer afternoons are not a good time for GNSS.



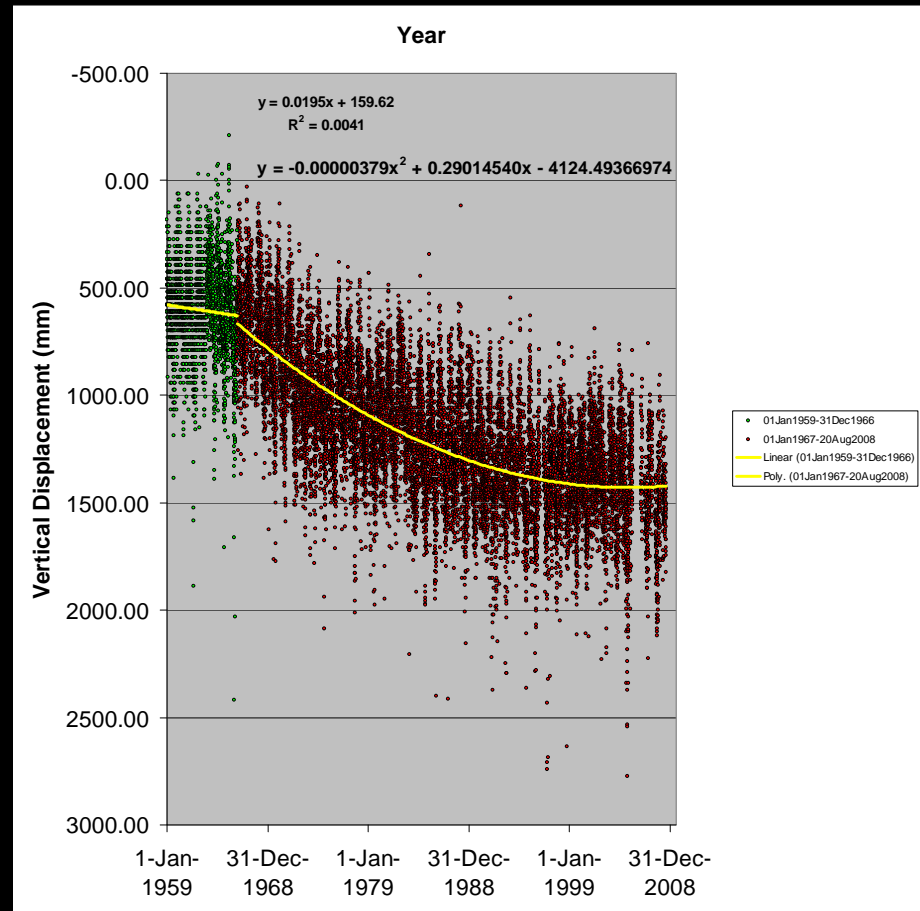
# Geology Challenge

- Louisiana landscape is dynamic.
- Subsidence!
- Access to the NSRS is a moving target:  
2004.65, 2006.81
- Concepts such as HTDP and VTDP are misleading.



# Monumentation

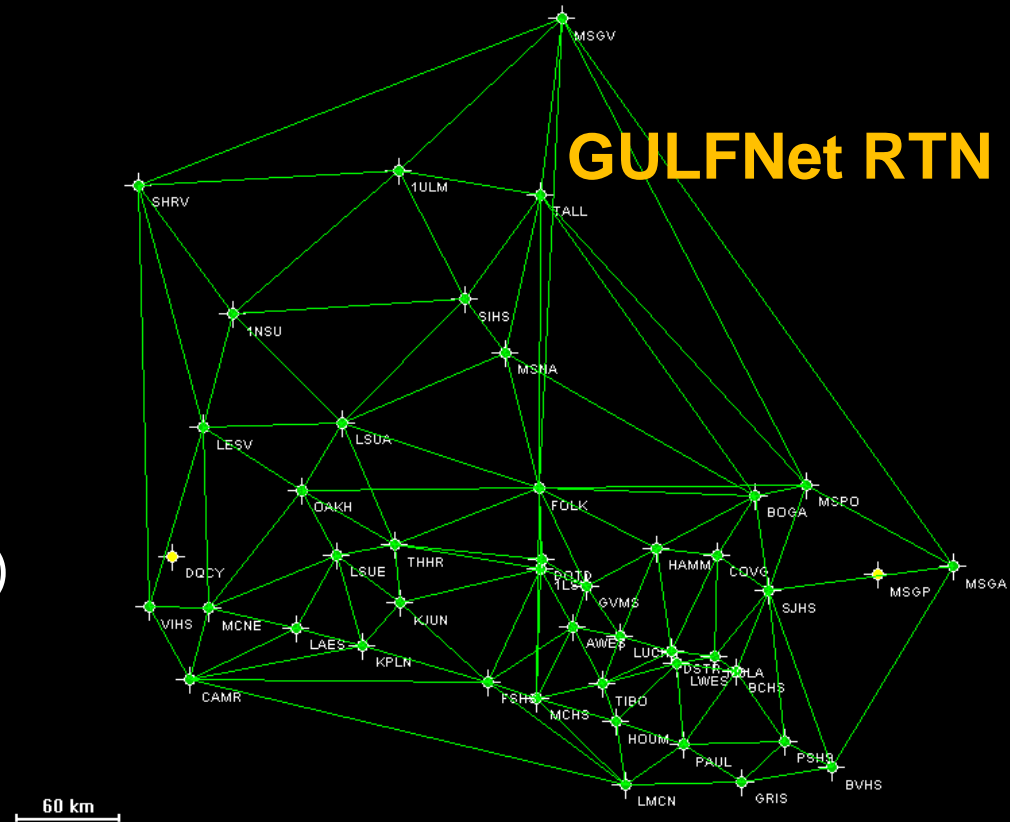
- Monument stability is a myth everywhere. Everything moves!
- South Louisiana is mud and muck.
- Masonry buildings founded on deep piles work best.
- Integrity monitoring is critical.



**Paris Road Bridge  
on Interstate 310**

# Dealing with the NSRS

- 1/2 of our stations are National CORS. CORS is on a 2002 epoch. Users expect that VRS solutions will equal OPUS solutions. We have better coordinates than NGS.
- With site calibration, 1 cm (horizontal) and 2 cm (vertical) is possible anywhere in Louisiana.
- New NGS geoid model will allow for 2 cm (vertical).



# RTN Real-Time Network Based on Trimble VRS technology

“Positioning anywhere,  
any time”



*Kinematic mode:*  
 $\pm 0.3$  ft (1 sec.)



Cellular device to  
connect user to  
Internet and LSU  
GULFNet RTN



*Relative vertical:*  
 $\pm 2$  cm (3 min.)

Native output in “CORS 2002” but can easily  
be put in 2004.65 context through calibration.



# \$\$\$

## ■ Economic reality:

- The National CORS network in Louisiana is funded by federal grants and \$\$ derived from the RTN.
- Federal funding for geodetic control has not and is not a priority within the federal government or within NOAA. Maybe this will change.
- The State has no interest or \$\$ in creating yet another layer of bureaucracy.
- An RTN paid for by users who value it is the key to maintaining the National CORS network in Louisiana.

## ■ The bottom line:

- No money, no RTN, no CORS.
- Call Tony Cavell at 225-LSU-4-LSU for more information. Or visit

[www.c4g.lsu.edu](http://www.c4g.lsu.edu)

# GULFNet Testimonials

- Gary Caldwell of Bryant Hammett & Associates, LLC:  
“We have cut our surveying time on several projects by as much as 70%; thus allowing our crews to do more projects; thus increasing company profits... We are certainly pleased and appreciate the technical support and service that we’ve received from you and the LSU Center ...”
- Carl Jeansonne of Baton Rouge Land Surveying, Inc.:  
“It’s a no-brainer! You get the increased efficiencies and confidence for a fraction of the cost of even an entry-level field hand . It doesn’t take any business sense to figure that one out.”
- Royce McLin of McLin and Associates:  
“GPS as never been so easy. I’ve been in the business of surveying for 30 years... If you’re interested in the “bottom line” for your business, you can’t go wrong with GULFNET ... Try GULFNET you won’t regret it ever; in fact, you’ll wonder how you ever worked without it.”
- Jimmy Chustz of Chustz Surveying, Inc.:  
“For less than \$20 a day how can you go wrong? You get a tie to the National CORS and a base station that follows you around!”

Questions ?