

**Forecast Ecosystem Conditions in Gulf of Mexico OCS Habitats  
Using Coupled Modeling and Climate Scenarios**

**Quarterly Report (Y3Q1 – Sep 1-Dec 31, 2018)  
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This quarterly report is filed per requirements of BOEM-NRL IAA # M16PG00027 with respect to our research project focused on climate-scale ocean model simulations for the Gulf of Mexico. The focus of this study is to forecast, through year 2050, marine ecosystem conditions in the Gulf of Mexico (GoM) using RCP climate scenarios prescribed by the NCAR CESM Large Ensemble (LE) atmospheric forcing.

**1. WORK ACCOMPLISHED**

Nothing to report this quarter besides the generation of preliminary analyses and animations generated from the two long term control simulations. A change of BOEM COR has occurred and the new BOEM COR was briefed on the project.

**2. PROBLEMS**

Had security and certificate issues deploying the project web page. It is expected that these problems will be fixed and the project web page released next quarter.

**3. PLANNED ACTIONS FOR NEXT QUARTER**

Continue analysis of long term runs and start configuring sensitivity simulations.

**4. BUDGET**

\$280K has been received (Y1:\$80K, Y2:\$80K, Y3:\$120K).

Expenditures: ~\$43K year to date.