1145-92-632   **Brian R Powers*** (`brpowers@asu.edu`), College of Integrative Sciences and Arts, Arizona State University, 7271 E Sonoran Arroyo Mall, Mesa, AZ 85212-6415, and **Xuetao Lu** and **Steven Saul**. *Avoiding Surprises: Understanding the Impact of the Deepwater Horizon Oil Spill on the Decisions of Fishers and the Management of Fisheries in the Gulf of Mexico using an Agent-Based Moel.* Preliminary report.

Fisher decision making can influence the effectiveness of management measures and dictates the spatial and temporal locations of fishery-dependent observations. In many stock assessments observations from fishers are used to infer the abundance of fish populations. The Deepwater Horizon oil spill disrupted the livelihoods of many fishers causing them to modify their operations (i.e. alter fishing locations, target species, gear used, etc.). This re-tasking had a direct effect on fishing catch and effort in 2010, and perhaps beyond, if modified behaviors were maintained in years subsequent to the spill. Not properly accounting for such changes in fisher behavior and operations can lead to stock assessments and management advise that are incorrect. This project builds on an existing spatially explicit, agent-based bioeconomic model that currently represents some commercial fishery species and the fleets on the West Florida Shelf in the Gulf of Mexico. This project extends the geographical scope of the current model to the entire Gulf of Mexico, to include additional fish species. Data provided by the National Marine Fisheries Service will be used to parameterize the expanded model. (Received September 11, 2018)