

NTHMP Grant Semi-Annual Progress Report

NOAA Grant Award Number: **NA13NWS4670014**

Period of performance (start date to end date of entire grant): September 1, 2013 – August 31, 2015

Award reporting period (date range): February 1, 2015 – August 31, 2015

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Instructions: add rows to the table below as needed to complete reporting on all tasks awarded. Fill in all cells within the table. Make sure that task titles match the current Project Narrative for this grant.

Task #	Task title	Progress made during this reporting period	Challenges and successes	% of total task completed
1	<i>Perform inundation studies for Virginia Beach, VA, Savannah, GA and Jacksonville, FL</i>	List of completed inundation studies based on NGDC DEM's changed to Virginia Beach, VA, Cape	Work for the entire East Coast region has been slowed by the decision to reduce the size of the CVV source, which acts	133% (after change in list and increase in number of studied DEM's)

		Hatteras, NC, Myrtle Beach, SC and Savannah, GA. Reports and maps are in draft form for inspection by state agencies	as the “design” event for most of the region. This step was taken after discussions at the summer NTHMP MMS meeting in August 2014, which also involved Eric Geist of USGS	
2	<i>Perform inundation studies for Miami Beach and Palm Beach, FL:</i>	Source parameters for SMF events on Great Bahama Bank determined in joint work with group at U. Miami	The DEM for the Miami Beach, FL not available until early 2015, work on this case is continuing.	75% (work on West Bahama Bank landslides still incomplete).
3				

General comments from recipient about progress during this reporting period:

The planned work for this period was adjusted to account for the unavailability of planned DEM’s for southern Florida, which became available in late 2014 and early 2015. The work plan was adjusted to cover regions with existing NGDC tsunami DEM’s.

A list of mapped regions and a list of draft maps for each region follows. These will be made available publically on line on the NTHMP website and at <http://www.udel.edu/kirby/nthmp/> as they are approved by constituents.

1. Virginia Beach, VA DEM (Tehranirad et al, 2015b)
 - a. False Cape,VA
 - b. Virginia Beach,VA
 - c. Norfolk,VA
 - d. Hampton,VA
 - e. Portsmouth,VA
 - f. Cape Charles City,VA
2. Cape Hatteras, NC DEM (Tehranirad et al, 2015c)
 - a. Hatteras,NC
 - b. Ocracoke,NC

- c. Salvo,NC
 - d. Stumpy Point,NC
 - e. Engelhard,NC
3. Myrtle Beach, SC DEM (Tehranirad et al, 2015d)
- a. Myrtle Beach,SC
 - b. Windy Hill Beach,SC
 - c. Garden City,SC
 - d. Pawley's Island,SC
4. Savannah DEM (Tehranirad et al, 2015e)
- a. Saint Elena Island,GA
 - b. Hilton Head Island,GA
 - c. Savannah,GA
 - d. Tybee Island,GA
 - e. Ossabaw Island,GA
 - f. Saint Catherine Island,GA

PUBLICATIONS AND PRESENTATIONS DESCRIBING FY13 WORK

- Grilli, A and Grilli, S. T., 2013a. Modeling of tsunami generation, propagation and regional impact along the upper US East Coast from the Puerto Rico Trench. Research Report No. CACR-13-02, Center for Applied Coastal Research, University of Delaware.
- Grilli, A. and Grilli, S. T., 2013b. Far-field tsunami impact on the US East Coast from an extreme flank collapse of the Cumbre Vieja volcano (Canary Islands). Research Report No. CACR-13-03, Center for Applied Coastal Research, University of Delaware.
- Grilli, A. and Grilli, S. T. 2013c. Modeling of tsunami generation, propagation and regional impact along the upper US East Coast from the Azores convergence zone. Research Report No. CACR-13-04, Center for Applied Coastal Research, University of Delaware.
- Grilli, S. T., O'Reilly, C. and Tajalli Baksh, T., 2013. Modeling of SMF tsunami generation and regional impact along the upper US East Coast. Research Report No. CACR-13-05, Center for Applied Coastal Research, University of Delaware.
- Grilli, S. T., O'Reilly, C., Harris, J. C., Tajalli Bakhsh, T., Tehranirad, B., Banihashemi, S., Kirby, J. T., Baxter, C. D. P., Eggeling, T., Ma, G. and Shi, F., 2014 "Modeling of SMF tsunami hazard along the upper U. S. East Coast: Detailed impact around Ocean City, MD", *Natural Hazards*, **76**, 705-746, [doi:10.1007/s11069-014-1522-8](https://doi.org/10.1007/s11069-014-1522-8)

- Schnyder, J. S. D., Kirby, J. T., Shi, F., Tehranirad, B., Eberli, G. P., Mulder, T., Ducassou, E. and Principaud, M., 2013, "Potential for tsunami generation by submarine slope failures along the western Great Bahama Bank", *6th Int. Symp. on Submarine Mass Movements and their Consequences*, GEOMAR, Kiel, September 23-25.
- Schnyder, J. S. D., Kirby, J. T., Shi, F., Tehranirad, B., Eberli, G. P., Mulder, T. and Ducassou, E., 2013, "Potential for tsunami generation along the western Great Bahama Bank by submarine slope failures", Abstract NH41A-1689, *AGU Fall Meeting*, San Francisco, December.
- Tehranirad, B., Harris, J. C., Grilli, A. R., Grilli, S. T., Abadie, S., Kirby, J. T. and Shi, F., 2015a, "Far-field tsunami hazard on the western European and US east coast from a large scale flank collapse of the Cumbre Vieja volcano, La Palma", *Pure and Applied Geophysics*, published online 21 July 2015, [doi:10.1007/s00024-015-1135-5](https://doi.org/10.1007/s00024-015-1135-5)
- Tehranirad, B., Kirby, J. T., Callahan, J. A. and Shi, F., 2015b, "Tsunami Inundation Mapping for Virginia Beach, VA NGDC DEM" Research Report No. CACR-15-11, Center for Applied Coastal Research, University of Delaware.
- Tehranirad, B., Kirby, J. T., Callahan, J. A. and Shi, F., 2015c, "Tsunami Inundation Mapping for Cape Hatteras, NC NGDC DEM" Research Report No. CACR-15-12, Center for Applied Coastal Research, University of Delaware.
- Tehranirad, B., Kirby, J. T., Callahan, J. A. and Shi, F., 2015d, "Tsunami Inundation Mapping for Myrtle Beach, SC NGDC DEM" Research Report No. CACR-15-13, Center for Applied Coastal Research, University of Delaware.
- Tehranirad, B., Kirby, J. T., Callahan, J. A. and Shi, F., 2015e, "Tsunami Inundation Mapping for Savannah, GA NGDC DEM" Research Report No. CACR-15-14, Center for Applied Coastal Research, University of Delaware.