E. ENDNOTES

[i] During the development of this Plan Update, Assistant Project Manager T. Andrew Joyner, Ph.D., took a position as Assistant Professor of Geosciences at East Tennessee State University (ETSU). As a way to model the kind of civic–government engagement and awareness this Update hopes to foster, Dr. Joyner hosted a map competition among the students in his Cartography and Geographic Information Systems course (GEOG 2500) at ETSU. Students made a number of different maps (including state reference, average precipitation, flood zone, levee district, hurricane damage, flood vulnerability, and dam location maps), and the State Hazard Mitigation Planning Committee (SHMPC) adjudicated the competition, selecting a total of seven maps for inclusion in the Plan Update. The winners are named in the captions of their winning maps.

[ii] Vega, Grymes, Rohli 133.

[iii] 2010 Census.

[iv] United States Census Bureau Press Release, May 17, 2012 (http://www.census.gov/newsroom/releases/archives/population/cb12-90.html).

[v] The article may be accessed online (http://gis.cdc.gov/grasp/svi/A%20Social%20Vulnerability%20Index%20for%20Disaster%20Management.pdf).

[vi] §201.4(c)(2) of the Code of Federal Regulations (CFR).

[vii] Karl et al. 112.

[viii] "Effects of drought on groundwater resources," *The USGS Water Science School* (ga.water.usgs.gov).

[ix] NCDC, "Climate of 2011-July:U.S. Palmer Drought Indices," National Climatic Data Center, http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/palmer.html#drought.

[x] Keim et al 2011.

[xi] Heat Wave Brochure (NOAA, FEMA, American Red Cross).

[xii] (source: http://www.nws.noaa.gov/om/hazstats.shtml)

[xiii] Vega, Grymes, Rohli 53.

[xiv] Thomas R. Karl, Jerr M. Meilillo, and Thomas C. Peterson, eds. Global climate change impacts in the United States, U.S. Global Climate Change Research Program (New York: Cambridge UP, 2009), 112.

[xv] Global Climate Change 2009 Report.

[xvi] Kunkle et al. 2013.

[xvii] NCDC 2010.

[xviii] FEMA, "National Flood Insurance Program - summary of coverage," Federal Emergency Management Agency, http://www.floodsmart.gov/floodsmart/pdfs/NFIP_Summary_of_Coverage.pdf.

[xix] Vega, Grymes, Rohli 76.

[xx] NWS, "National Weather Service Glossary".

[xxi] ASFPM, "Reducing flood losses: is the 1% chance (100-year) flood standard sufficient?," Washington D.C.: Assocation of State Floodplain Managers, 2004.

[xxii] Source: FEMA. The SFHA includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V.
[xxiii] Kunkel et al. 2013 and CPRA 2012 Master Plan.
[xxiv] Kunkel et al. 2013.
[xxv] All information comes from the NWS 2011 Flood Loss Report.
[xxvi] NCDC.
[xxvii] GOHSEP, 2011.
[xxviii] GOHSEP, Technical Publication 008: Repetitive Flood Loss Data Management, July 24, 2007.
[xxix] All top paid claims are established as such for all recorded history, as based on recent data.
[xxx] Vega, Grymes, and Rohli 121.
[xxxi] The Beaufort Wind Scale also provides guides for the appearance of wind effects on sea, as well.
[xxxii] http://www.nssl.noaa.gov/primer/lightning/ltg_climatology.html
[xxxiii] Per the National Lightning Safety Institute for the period 1999-2008.
[xxxiv] NCDC Storm Event Database.
[xxxv] Source: University of Louisiana, Monroe. http://www.ulm.edu/~pani/wx_hail.htm.
[xxxvi] Jensenius, Jr., John S. A Detailed Analysis of Recent Lightning Deaths in the United States (http://www.lightningsafety.noaa.gov/resources/RecentLightningDeaths.pdf)
[xxxvii] 2010 U.S. Census
[xxxviii] Vega, Grymes, Rohli 151, 164.
[xxxix] Waterspouts tend to die out faster and usually cause relatively little damage if they move to land because the relatively cool water surface provides less buoyancy (and thus weaker vortices) than a the hotter land surface would provide a land-based tornado. But tornadoes that form on land and then move to water are much more dangerous. On April 8, 1993, a waterspout that formed near Grand Isle moved over the island, leading to 3 deaths and 39 injuries (Vega, Grymes, Rohli 158).
[xl] Vega, Grymes, Rohli 170.
[xli] Vega, Grymes, Rohli 170.
[xlii] Vega, Grymes, Rohli 170.
[xliii] Source: NCDC.
[xliv] Vega, Grymes, Rohli 170.
[xlv] Vega, Grymes, Rohli 198.
[xlvi] Hurricanes can spawn an astonishing number of tornadoes. In 1967, for instance, Hurricane Beulah hit Texas with 115 observed tornadoes (Vega, Grymes, Rohli 157).
[xlvii] SCIPP, SurgeDat.
[xlviii] "Inland Strikes" are defined by a storm striking another state's coast before moving into Louisiana.
[xlix] Direct and indirect.
[l] Vega, Grymes, Rohli 260.
[li] *The Federal Response to Hurricane Katrina Lessons Learned*, February 2006 and FEMA News Release 1603-414, March 23, 2006.
[lii] Louisiana Family Recovery Corps fact sheet, August 28, 2007, citing Federal Emergency Management Agency (FEMA) and Louisiana Recovery Authority (LRA) data.

[liii] Vega, Grymes, Rohli 259.
[liv] Vega, Grymes, Rohli 268.
[lv] It was later downgraded to a Category 3 hurricane.
[lvi] Vega, Grymes, Rohli 269.
[lvii] Vega, Grymes, Rohli 271–72.
[lviii] Vega, Grymes, Rohli 273.
[lix] National Climatic Data Center, 2010.
[lx] NCDC, 2011.
[lxi] NCDC, billion-dollar events.
[lxii] NCDC, 2012.
[lxiii] Bell et al. 2012 and Knutson et al. 2010.
[lxiv] Vega, Grymes, Rohli 188.
[lxv][lxv] Vega, Grymes, Rohli 187.
[lxvi] Vega, Grymes, Rohli 187.
[lxvii] Vega, Grymes, Rohli 56.
[lxviii] Vega, Grymes, Rohli 188–89.
[lxix] Subsidence is not specific to the coast, but it has its greatest impact there.
[lxx] "What's Causing the Crisis?" Coastal Protection and Restoration (coastal.louisiana.gov).
[lxxi] Restore or Retreat, restoreorretreat.org/why-restore/facts-and-figures/.
[lxxii] Source: http://news.nationalgeographic.com/news/2005/09/0919_050919_katrina_delta.html
[lxxiii] Source: http://farm2.staticflickr.com/1260/742099393_250e72716f_o.gif
[lxxiv] Parris et al. 2012. "Global sea level rise scenarios for the United States National Climate Assessment."
[lxxv] R. K. Dokka, "Modern-Day Tectonic Subsidence in Coastal Louisiana," *Geology*: 34, 2006.
[lxxvi] It is estimated by the Dam Safety Coalition that $10.1 billion is needed to address the nation's most critical dams. Needed repairs to publicly owned dams are estimated at $5.9 billion.
[lxxvii] Source: http://www.la.nrcs.usda.gov/programs/Watershed%20Programs/watershed_rehabilitation_louisiana.html
[lxxviii] "Isaac, threat of dam failure prompts mandatory evacuation near Tangipahoa River," *Times-Picayune*
[lxxix] Ruth Ingram, "Emergency crews stabilize, monitor dam at Percy Quin," *Clarion Ledger*
[lxxx] http://www.agiweb.org/environment/karstmap.pdf
[lxxxi] Source: History Channel.
[lxxxii] David Mitchell, "Residents spend year watching, waiting, worrying," *The Advocate* 8 Aug. 2013.
[lxxxiii] Source: http://jonathanturley.org/2013/09/01/buyou-corne-sinkhole-a-growing-enviornmental-disaster-in-louisiana/.
[lxxxiv] Source: Department of Culture, Recreation, and Tourism (http://crt.state.la.us/hp).
[lxxxv] Floods Insurance Study, City of Slidell, Louisiana (Community number 220204); Federal Emergency Management Agency; April 21, 1999.

[lxxxvi] See §201.4 of the Code for all federal requirements regarding State Mitigation Plans.
[lxxxvii] See Louisiana Revised Statutes §214.1(E).