Introduction

The first billion-dollar disaster of 2011 was a large winter storm that impacted the central, eastern, and northeastern states, with total losses greater than $1.8 billion.

Groundhog Day Blizzard

Spring-Fall 2011, drought and excessive heat created major impacts across Texas, Oklahoma, New Mexico, Arizona, southern Kansas, and western Louisiana. The total number of disasters approached $10 billion.

Tropical Storm Lee

Tropical Storm Lee poured huge amounts of water on top of the already saturated Northeast and again inundated many inland cities, causing at least 21 deaths and more than $1 billion in damages.

Hurricane Irene

Hurricane Irene, as it moved northward along the East Coast of the United States from the Caribbean Sea through New England, brought tremendous rainfall and wind and caused at least 45 deaths and more than $7.3 billion in damages.

Extreme Weather 2011

On January 19, 2012, NOAA announced two additional severe weather events that reached the $1 billion damage threshold, raising 2011’s billion-dollar disaster count from 12 to 14 events, and classified 2011 as a year of climate extremes in the United States.

Billion-dollar Disasters of 2011

Summary

To date, NDPS has generated more than 33 (1979 – present) years’ data. These quality-controlled, spatially and temporally consistent, terrestrial hydrological data could play an important role in characterizing the spatial and temporal variability of water and energy cycles and, thereby, improve our understanding of the land-surface-atmosphere interaction and the impact of land-surface processes on climate extremes. Using NDPS’s Primary Forcing and MOSaic model data, four of the 2011 billion-dollar-weather/climate disasters are illustrated. Eight NDPS data show very well the major characteristics of these extreme events, spatially and temporally. NDPS-1 data is an excellent data source for case studies of extreme events. NDPS data are accessible from the Hydrology Data and Information Services Center (HDISC) at the NASA GES DISC, http://disc.gsfc.nasa.gov/hydrol.