

Table 8. Selected basin characteristics, their definitions, and datasources.[DD, decimal degrees; ft, feet; in, inches; mi, mile; mi², square miles]

Basin characteristic	Units	Definition	Datasource
Mean Elevation	ft	The average elevation in the basin.	US Geological Survey, 2007, National Elevation Data Set (NED)
Drainage area	mi ²	Published values of surface drainage area for each basin in the study.	Hayes and others, 2006
Basin slope	(ft/mi)	The average slope of the basin from upland to outlet.	US Geological Survey, 2007, National Elevation Data Set (NED)
Perimeter	mi	The length of the basin boundary.	US Geological Survey, 2007, National Elevation Data Set (NED)
Latitude	DD	The east-west coordinate at the centroid of the basin boundary.	US Geological Survey, 2007, National Elevation Data Set (NED)
Longitude	DD	The north-south coordinate at the centroid of the basin boundary.	US Geological Survey, 2007, National Elevation Data Set (NED)
Elevation	ft	The distance above sea level associated with the center point of the watershed polygon.	US Geological Survey, 2007, National Elevation Data Set (NED)
Basin relief	ft	The difference between maximum and minimum elevation within the basin.	US Geological Survey, 2007, National Elevation Data Set (NED)
Valley length	mi	The length of the main valley within the basin.	US Geological Survey, 2007, National Elevation Data Set (NED)
Channel slope	ft/mi	The slope of the main channel within the basin.	US Geological Survey, 2007, National Elevation Data Set (NED)
Elevation at 10 percent	ft	The distance above sea level associated with the main channel at 10 percent of the basin drainage area from the outlet.	US Geological Survey, 2007, National Elevation Data Set (NED)
Elevation at 85 percent	ft	The distance above sea level associated with the main channel at 85 percent of the basin drainage area from the outlet.	US Geological Survey, 2007, National Elevation Data Set (NED)
Stream length	mi	Length along the main channel from the outlet to the basin divide.	US Geological Survey, 2006, National Hydrography Dataset
Forest	percent	Fraction of basin land area classified as forest.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Urban	percent	Fraction of basin land area classified as urban area.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Agriculture	percent	Fraction of basin land area classified as agricultural land.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Wetland	percent	Fraction of basin land area classified as wetland.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php

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Basin characteristic	Units	Definition	Datasource
Water	percent	Fraction of basin land area classified as surface water.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Grass	percent	Fraction of basin land area classified as grassland.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Bare	percent	Fraction of basin land area classified as exposed soil.	Homer and others, 2004, http://www.mrlc.gov/nlcd.php
Basin area in Coastal Plain physiographic region	mi ²	Area within the Coastal Plain physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Piedmont physiographic region	mi ²	Area within the Piedmont physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Blue Ridge physiographic region	mi ²	Area within the Blue Ridge physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Valley and Ridge physiographic region	mi ²	Area within the Valley and Ridge physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Appalachian Plateaus physiographic region	mi ²	Area within the Appalachian Plateaus physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Mesozoic Basins physiographic region	mi ²	Area within the Mesozoic Basins physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in water	mi ²	Area covered in surface water.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Coastal Plain physiographic region	percent	Percent of the basin within the Coastal Plain physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Piedmont physiographic region	percent	Percent of the basin within the Piedmont physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Blue Ridge physiographic region	percent	Percent of the basin within the Blue Ridge physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Valley and Ridge physiographic region	percent	Percent of the basin within the Valley and Ridge physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Appalachian Plateaus physiographic region	percent	Percent of the basin within the Appalachian Plateaus physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in Mesozoic Basins physiographic region	percent	Percent of the basin within the Mesozoic Basins physiographic region.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Basin area in water	percent	Percent of basin area covered in surface water.	Fenneman and others, 1946; Mixon and others, 1989; Dicken and others, 2005
Mean annual precipitation	in.	Mean annual precipitation falling on the basin, averaged over the whole basin.	PRISM Climate Group, 2007; Paybins, 2008

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Basin characteristic	Units	Definition	Datasource
Mean January-February-March precipitation	in.	Mean January-February-March precipitation falling on the basin, averaged over the whole basin.	PRISM Climate Group, 2007
2-year 24-hour precipitation intensity	in.	Basin average rainfall at the 24-hour 2-year recurrence interval.	National Oceanic and Atmospheric Administration 2007; Paybins, 2008
Basin area with 0% impervious surface	percent	Percent of the basin coded as 0 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 1-5% impervious surface	percent	Percent of the basin coded as 1 to 5 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 6-10% impervious surface	percent	Percent of the basin coded as 6 to 10 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 11-25% impervious surface	percent	Percent of the basin coded as 11 to 25 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 26-50% impervious surface	percent	Percent of the basin coded as 26 to 50 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 51-75% impervious surface	percent	Percent of the basin coded as 51 to 75 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 76-100% impervious surface	percent	Percent of the basin coded as 76 to 100 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 0% impervious surface	mi ²	Area within the basin coded as 0 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 1-5% impervious surface	mi ²	Area within the basin coded as 1 to 5 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 6-10% impervious surface	mi ²	Area within the basin coded as 6 to 10 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 11-25% impervious surface	mi ²	Area within the basin coded as 11 to 25 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 26-50% impervious surface	mi ²	Area within the basin coded as 26 to 50 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 51-75% impervious surface	mi ²	Area within the basin coded as 51 to 75 percent impervious.	Yang and others, 2002; Homer and others, 2004
Basin area with 76-100% impervious surface	mi ²	Area within the basin coded as 76 to 100 percent impervious.	Yang and others, 2002; Homer and others, 2004