NOAA's List of Coastal Counties

(Special Projects Office)

Introduction

The NOAA Watershed-Based Coastal Counties are counties that meet one of the following criteria: 1) at least 15 percent of a county's total land area is located within the Nation's coastal watershed; or 2) a portion of or an entire county accounts for at least 15 percent of a coastal cataloging unit. Any U.S. county that meets these criteria is classified as coastal. This is the list of coastal counties that NOAA recommends for the Bureau of the Census' *Statistical Abstract* publication series.

The revised list (2012) indicates that there are 678 coastal counties in the United States. In 1990, these counties accounted for almost 54 percent of the Nation's population and 25 percent of the land area. If Alaska is excluded, the proportion of the U.S. land area classified as coastal decreases to 17 percent.

How was this List Developed?

This list was developed using a two-step process. The first step identified those counties that had at least 15 percent of their land area in the coastal watershed. The second step identified those counties that accounted for at least 15 percent of a coastal cataloging unit. This was done only for counties that bisected the coastal watershed, but had less that 15 percent of their total land area in the coastal watershed.

The intent of the second step was to identify those counties that, although not having at least 15 percent of their total area within the coastal watershed, still have a large land area within a coastal watershed. For example, the portion within the coastal watershed for several bisected counties is larger than the total size of many coastal counties that are entirely within the coastal watershed. This allowed for these counties to be included in the NOAA set of coastal counties. The process used to identify these counties is outlined below:

Step 1. Coastal Counties that have 15% of more of their Total Land Area in the Coastal Watershed (666 counties).

1) Counties that bisected or were entirely within the coastal watershed were identified.
2) The land area was calculated for each county.
3) The coastal watershed land area was calculated for each bisected county.
4) The percentage of a county's total land area within the coastal watershed was calculated. This figure was determined by dividing the county's coastal watershed land area by its total land area. If a county's land area fell entirely within the coastal watershed, the value was 100 percent. If the coastal watershed covered only part of the county, the value was less than 100 percent.
5) All counties were checked against hard-copy maps (showing counties and coastal watersheds) to determine if they were entirely within, or bisected by, the coastal watershed boundary.

6) Any county that had at least 15 percent of its land area in the coastal watershed was identified as being coastal.

Step 2. Coastal Counties that Comprise at Least 15% of Coastal Cataloging Unit's Land Area (6 counties).

1) Counties that bisected the coastal watershed and had less than 15 percent of their land area in the coastal watershed were identified.
2) The coastal cataloging units that were identified.
3) The amount of land area in each coastal cataloging unit was calculated (although most coastal cataloging units are located entirely within the coastal watershed, only the area of the cataloging unit within the coastal watershed was determined).
4) The amount of land area where the counties and cataloging units overlapped was calculated.
5) The proportion of a cataloging unit's land area within this polygon was calculated.
6) If any portion of a county accounted for at least 15 percent of a coastal cataloging unit, the county was identified as being coastal.

Development of Land Area Estimates

All county boundary files were derived from the U.S. Geological Survey's (USGS)1:2,000,000 DLG-3 data series. All watershed boundaries were derived from the USGS 1:500,000 hydrologic map series. After combining these two geographies, area calculations from the ARC/INFO Geographic Information System were used to derive the county, coastal watershed, and cataloging unit land area figures.

Because of the difference in scales between the two map series, the percent of county land within the coastal watershed or a coastal cataloging unit is less accurate than using the same scale for both. For example, in some cases the county boundary is the same as the coastal watershed boundary, but, because of the difference between two scales, they do not show a perfect match. However, the estimates are considered to be acceptable for the purposes of developing this list of coastal counties.

What is a Coastal Watershed or a Coastal Cataloging Unit?

The **coastal watershed** is composed of all lands within Estuarine Drainage Areas (EDAs) or Coastal Drainage Areas (CDAs) in NOAA's Coastal Assessment Framework. EDAs and CDAs are individual coastal watersheds that border the coast of the contiguous United States, not including Alaska or Hawaii. No portion of the U.S. coastline in excluded.

An EDA is defined as that part of an estuary's entire watershed that empties directly into the estuary and, for each river in the estuary's watershed, includes the downstream-most USGS cataloging unit in which the head of tide is found. CDAs are defined as that component of an entire watershed that meets these three criteria: 1) it is not part of any one of the 102 EDAs; 2)it drains directly into an ocean, an estuary, or the Great Lakes; and 3) it contains the downstream-most cataloging unit in

which the head of tide is found (in the Great Lakes, tide refers to meteorologically created tides).

A **coastal cataloging unit** is a drainage basin that falls entirely within or straddles an EDA or CDA. Typically, most EDAs or CDAs are composed of several complete cataloging units (drainage basins).

Why use the 15 Percent Rule?

The **15-percent rule** was selected as an appropriate level for capturing counties with a significant impact on coastal and ocean resources. According to this rule, a county is coastal if: 1) at least 15 percent of its total land area is within the coastal watershed; or 2) a portion of or its entire land area accounts for at least 15 percent of a coastal cataloging unit. For example, counties with at least one-third to one-quarter of their land area in the coastal watershed obviously have a large impact on coastal resources. However, counties that only have a small percentage of lands within the coastal watershed have a much smaller impact. Indeed, their impact may be inconsequential. Consequently, the 15-percent rule separates these two groups of counties.

Exceptions to the General Rule

There are a few exceptions to these rules. Cook and Lake Counties in Illinois, as examples, do not meet the 15 percent rule for a coastal watershed or a coastal cataloging unit. They do, however, border directly on Lake Michigan, so NOAA has included them in the coastal watershed county set.

There are three other instances where single counties were designated as noncoastal because they did not meet the "15% critieria", but they are completely surrounded by coastal watershed counties that do meet the "15% criteria". In these three instances - Allan Parish, LA, Highlands, FL and Greene, NC - these counties were included in NOAA's coastal watershed county suite.

NOAA also prior 2012 did not include Alaska or Hawaii in its Coastal Assessment Framework. However, in 2012 the shoreline-adjacent USGS 8-digit Hydrologic Cataloging Units for these two states were included. Therefore, all counties (boroughs and census areas in Alaska) that directly border the coastline in these states are included here. As a result, all five of Hawaii’s counties, and 25 of Alaska’s areas, are found in NOAA’s final set of coastal watershed counties.

NOAA also identified the approximate inland boundary of Alaska’s coastal watershed in Alaska. This boundary was used to determine the status of interior boroughs/census area. The interior boroughs/census areas that were excluded fell outside of the coastal watershed.

All counties (or county equivalents) in all 5 territories (American Samoa, Guam, Northern Marianna Islands, Puerto Rico, and U.S. Virgin Islands) are considered coastal watershed counties.

Regions

The Atlantic region includes counties from Maine to Florida located within, or bisected by, the portion of the coastal watershed that drains into the Atlantic Ocean. This means that several coastal counties in Georgia, and in Florida, are included in the Atlantic region. The Gulf of Mexico region extends from Florida to Texas. The Pacific region includes California, Oregon, Washington, Alaska, and Hawaii. The Great Lakes region includes counties in all states bordering the Great Lakes. One of Pennsylvania's 13 coastal counties, and 21 of New York's 39 coastal counties, are included in this region.

Several of Florida's coastal counties occur in both the Atlantic and Gulf of Mexico portions of the coastal watershed. Each county has been classified according to the region in which the greatest proportion of its coastal watershed land area lives. For example, 60 percent of a county's land area may drain into the Gulf of Mexico, with the remaining 40 percent draining into the Atlantic. This county would, therefore, be classified as being in the Gulf of Mexico Region.