Contents for Science Hub site at https://doi.org/10.1088/1748-9326/acadf5

This site provides the county-specific results that directly support the tables and figures in the paper "Population in floodplains or close to sea level increased in US but declined in some counties—especially among Black residents", as well as results that were generally summarized in that paper. Here we also list the input data and more detailed block-level results available upon request from EPA.

Available on this Site

Population_trends_in_hazard_zones_aggregated_results.zip—Spreadsheets showing county- or state-specific results used to create the tables in the paper.

state_results.zip—spreadsheets with state-by-state results for populations below 3, 2, 1, and 0 meters, and within the A, x500, and V zone floodplains for 1990, 2000, 2010, and 2020.

county_results.zip—spreadsheets with state-specific worksheets showing population below one meter, three meters, or the 100-year floodplains for each county within the state.

Supplemental_Tables_portrait.pdf—This file has 42 table, of which 28 provide state-by-state results, 6 county results, and 8 nationwide results related to disproportionate impacts. The county tables only include those counties where by some metric the impact is greatest.

Supplemental_Tables_landcape.pdf—15 tables, of which 11 provide county-specific results on apparent emigration from floodplains or land vulnerable to sea level rise, and 4 provide nationwide summary statistics on disproportionate apparent emigration. The county tables only include those counties where by some metric the impact is greatest.

***thematic-maps-sea-level-rise-flood-Black-His*panic.pdf**–Supplemental Thematic County Maps with frames that show the contiguous United States (with or without Hawaii), the Southeastern United States, and the Northeastern United States, that cover the following topics:

- *Change in Population Vulnerable to Sea Level Rise by County*—15 maps showing population below 1 meter or 3 meters, for Black, Hispanic, and total population.
- *Apparent Migration into and out of Land Vulnerable to Sea Level Rise by County*—8 maps showing apparent migration into land below one meter.
- *Change in Population Below One Meter by County Caused Solely By Sea Level Rise*—3 maps
- *Change in Floodplain Population by County*—6 and 3 maps showing migration into and out of the 100-year and 500-year floodplains, respectively

- *Ratios of Disproportionality by County*—13 maps showing that in most counties, the fraction of Black or Hispanic residents that reside in land below one meter both declined between 1990 and 2020, and is less than the fraction of all residents below one meter.
- *Magnitude of the Extent to Which Black Residents Inhabit Land Vulnerable to Sea Level Rise*—6 maps show how many more or (usually) less Black residents live below one meter than would be the case if Black people and non-Black people were equally likely to live below one meter.

Data Available on Request.

The data of this site are aggregated to the state or county level, though the analysis was conducted at the Census block level. The block-level results and intermediate geospatial results are several hundred gigabytes of data, making it too large for this site. They are available from EPA's Climate Science and Impacts Branch. Please email kolian.michael@epa.gov, bakansckas.lisa@epa.gov or Martinich.jeremy@epa.gov and ask for access to the SharePoint folder … CSIB Archive\PublicAccessData\Titus_ERL_2023.

Below is a summary of the data on that SharePoint site …PublicAccessData\Titus_ERL_2023

…Maps\QC_Elevation_Maps—County-scale maps showing elevations of land close to sea level relative to mean spring high water, with a tidal-wetlands overlay.

…\Maps\thematic_maps--Thematic County Maps with frames that show the contiguous United States (with or without Hawaii), the Southeastern United States, and the Northeastern United States, that cover the following topics:

…\Key_Results\MHHW_elevation—30 meter grid of elevations relative to sea level for the tidal epoch of 1983 to 2001; elevation masks identifying land below 0, 1, 2, and 3 meters (MHHW) for the years 1990, 2000, 2010, and 2020.

…\Key_Results\\Population_by_Census_Blocks_Close_to_Sea_Level—(1) csv files for each state for each of four years in which each line represents a census block with some dry land below three meters. For each block, columns include the block areas, number of buildings, and footprint area of buildings in the entire block and below each of the four elevation contours; (2) geodatabase of polygon feature classes of the dry land portions of census blocks below 3 meters relative to contemporaneous mean higher high water for the four census years. Attribute table was the source for the aforementioned csv files.

…\Key_Results\\Population_by_Census_Blocks_in_Mapped_Floodplains—(1) csv files for each state for each of four years in which each line represents a census block with some dry land in a floodplain. For each block, columns include the block areas, number of buildings, and footprint area of buildings in the entire block within the A-zone, X500-zone, V-zone, and land protected by a dike or levee. (2) geodatabase of polygon feature classes of the dry land

portions of census blocks below 3 meters relative to contemporaneous mean higher high water for the four census years. Attribute table was the source for the aforementioned csv files

…\Key_Results\\Tables_and_Maps_Results_By_State_or_County–Separate subfolders for the low land and floodplain analyses, Each of those subfolders contain more than 10 sub-subfolders that each provide spreadsheets and thematic maps with results at the state or county level of aggregation. Each of these sub-subfolders provide details for a different question, e.g., the number of Black residents below one meter (with sea level defined either based on a fixed level or including sea level rise). Results generally are provided for alternate density assumptions and counting the population of blocks that are entirely below a given elevation.

…\Input_Data\wetlands – Geodatabases with (1) the NWI wetlands data used in the analysis, (2) wetlands reclassified into four categories (tidal open water, nontidal water, tidal wetlands, nontidal wetlands) and (3) dissolved into a wetlands-water mask.

..\Elevations_relative_to_NAVD – A simplified version of the NOAA lidar and USGS elevation data with separate regional rasters.

…\Input_Data\Likelihood_of_Shore_Protection_from_ERL_2009 – Raster and polygon shore protection likelihood data from an EPA study that mapped local planner expectations of the likelihood that coastal areas would be protected from rising sea level from Massachusetts to South Florida.

…\Input_Data\Sea_Level–Raster data showing (a) the difference between mean high higher water and NAVD in coastal areas, which is needed to calculate elevation s relative to sea level; (b) the rate of sea level rise in coastal areas, which is needed to calculate elevations relative to sea level for a given year.

…\Data_for_duplicating_the_Analysis\wetlands–files used for processing wetlands.

…\Data_for_duplicating_the_Analysis\VDatum–Files used for converting NOAA Vdatum data to a raster surface of the elevations of sea level relative to NAVD.

…\Data_for_duplicating_the_Analysis\Population_of_Lands_Close_to_Sea_Level –Various geodatabases which were intermediate calculations in the analysis of populations close to sea level.

…\Data_for_duplicating_the_Analysis\Population_of_Floodplains – Various geodatabases which were intermediate calculations in the analysis of populations in floodplains.