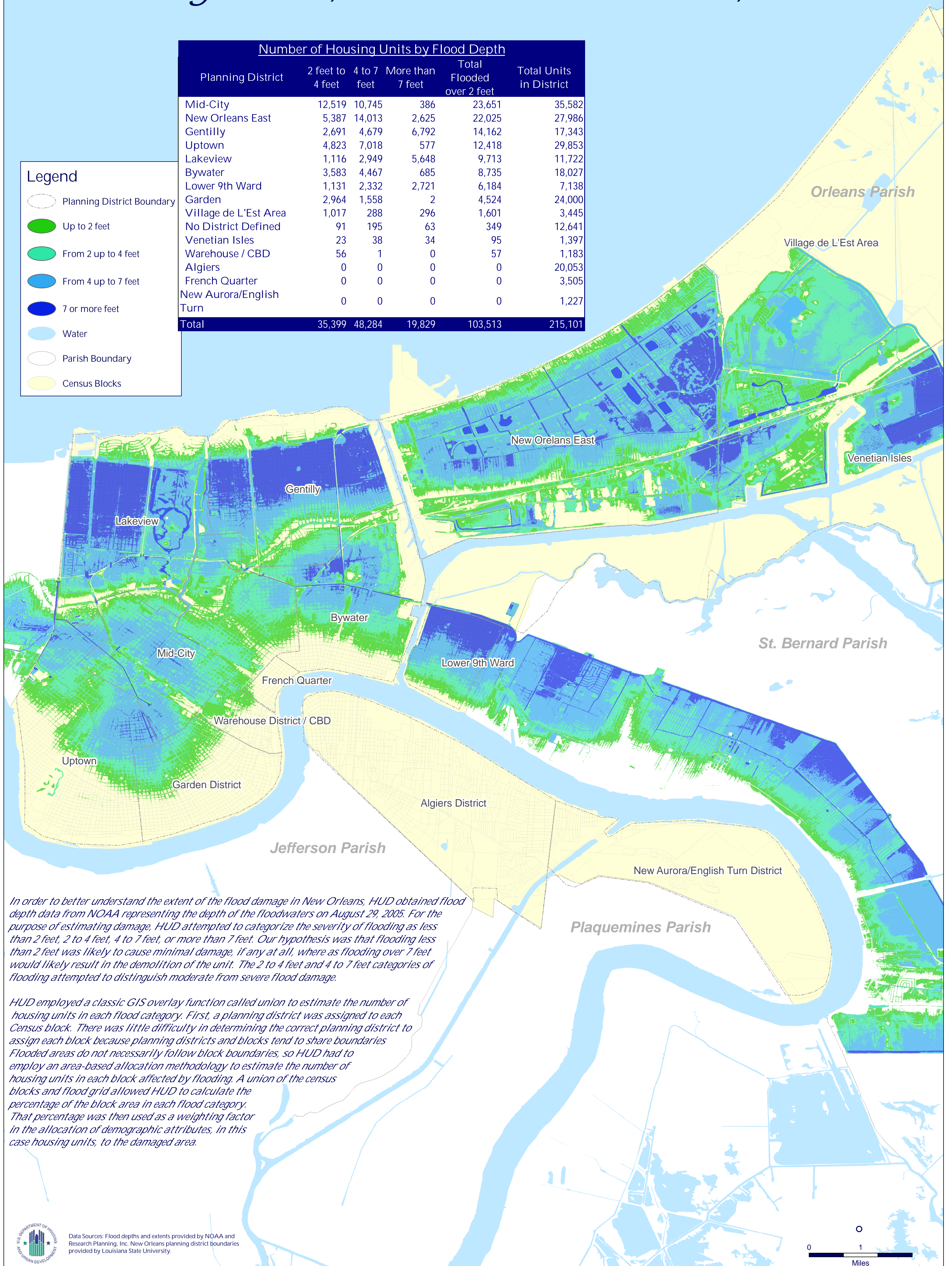


# Extent and Depth of Flooding August 31, 2005 Orleans Parish, LA

| Number of Housing Units by Flood Depth |                  |               |                  |                           |                         |
|--|------------------|---------------|------------------|---------------------------|-------------------------|
| Planning District                      | 2 feet to 4 feet | 4 to 7 feet   | More than 7 feet | Total Flooded over 2 feet | Total Units in District |
| Mid-City                               | 12,519           | 10,745        | 386              | 23,651                    | 35,582                  |
| New Orleans East                       | 5,387            | 14,013        | 2,625            | 22,025                    | 27,986                  |
| Gentilly                               | 2,691            | 4,679         | 6,792            | 14,162                    | 17,343                  |
| Uptown                                 | 4,823            | 7,018         | 577              | 12,418                    | 29,853                  |
| Lakeview                               | 1,116            | 2,949         | 5,648            | 9,713                     | 11,722                  |
| Bywater                                | 3,583            | 4,467         | 685              | 8,735                     | 18,027                  |
| Lower 9th Ward                         | 1,131            | 2,332         | 2,721            | 6,184                     | 7,138                   |
| Garden                                 | 2,964            | 1,558         | 2                | 4,524                     | 24,000                  |
| Village de L'Est Area                  | 1,017            | 288           | 296              | 1,601                     | 3,445                   |
| No District Defined                    | 91               | 195           | 63               | 349                       | 12,641                  |
| Venetian Isles                         | 23               | 38            | 34               | 95                        | 1,397                   |
| Warehouse / CBD                        | 56               | 1             | 0                | 57                        | 1,183                   |
| Algiers                                | 0                | 0             | 0                | 0                         | 20,053                  |
| French Quarter                         | 0                | 0             | 0                | 0                         | 3,505                   |
| New Aurora/English Turn                | 0                | 0             | 0                | 0                         | 1,227                   |
| <b>Total</b>                           | <b>35,399</b>    | <b>48,284</b> | <b>19,829</b>    | <b>103,513</b>            | <b>215,101</b>          |

## Legend

-  Planning District Boundary
-  Up to 2 feet
-  From 2 up to 4 feet
-  From 4 up to 7 feet
-  7 or more feet
-  Water
-  Parish Boundary
-  Census Blocks



In order to better understand the extent of the flood damage in New Orleans, HUD obtained flood depth data from NOAA representing the depth of the floodwaters on August 29, 2005. For the purpose of estimating damage, HUD attempted to categorize the severity of flooding as less than 2 feet, 2 to 4 feet, 4 to 7 feet, or more than 7 feet. Our hypothesis was that flooding less than 2 feet was likely to cause minimal damage, if any at all, whereas flooding over 7 feet would likely result in the demolition of the unit. The 2 to 4 feet and 4 to 7 feet categories of flooding attempted to distinguish moderate from severe flood damage.

HUD employed a classic GIS overlay function called union to estimate the number of housing units in each flood category. First, a planning district was assigned to each Census block. There was little difficulty in determining the correct planning district to assign each block because planning districts and blocks tend to share boundaries. Flooded areas do not necessarily follow block boundaries, so HUD had to employ an area-based allocation methodology to estimate the number of housing units in each block affected by flooding. A union of the census blocks and flood grid allowed HUD to calculate the percentage of the block area in each flood category. That percentage was then used as a weighting factor in the allocation of demographic attributes, in this case housing units, to the damaged area.



Data Sources: Flood depths and extents provided by NOAA and Research Planning, Inc. New Orleans planning district boundaries provided by Louisiana State University.

