

Mapping justice in East Boston and Revere

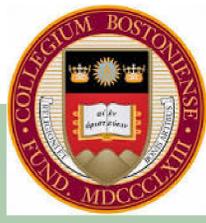
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Mapping and Justice in East Boston and Revere

BC GIS Contest, 2015

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Abstract

Community-Based Organizations in East Boston (Casa El Salvador) and Revere (Women Encouraging Empowerment) collaborated with BC's Center for Human Rights and International Justice to learn more about how Latino families use languages (Spanish and English) and access services. Thematic and content analyses of interviews with parents and children guided our construction of four maps from US Census 2000 and 2010 data. These maps illustrate areas across the state with high minority, non-English speaking, and lower-income populations known as Environmental Justice (EJ) Populations. Massachusetts recognizes EJ Populations as crucial for decision-making. Compared to Revere's, East Boston's EJ Populations are closer to services. Revere EJ Populations are newer to Revere. Both EJ Populations are targeted by predatory lending.

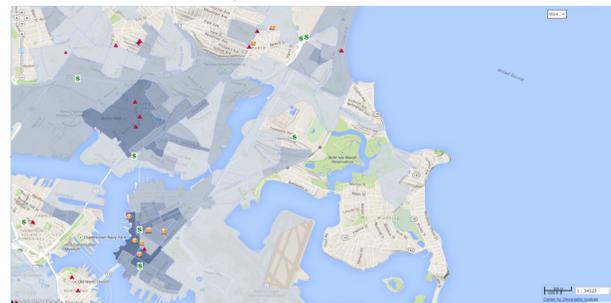
Legend for all maps

LEGEND	
MassGIS Data - Acute Care Hospitals	+
Hospitals No ER	+
Emergency Rooms	+
Major teaching hospital	+
Trauma Hospital	+
English classes Boston Revere	📖
Community Health Centers	🏠
Check Cashing and Pay Day Loan Boston area	🏠
MassGIS Data - 2000 U.S. Census - Environmental Justice Populations	🏠
MassGIS Data - 2010 U.S. Census - Environmental Justice Populations	🏠

Methods for mapping

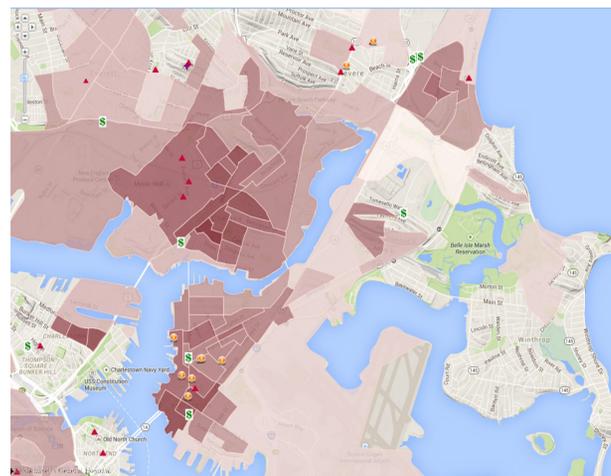
1. Identified EJ data from Mass GIS website and from custom Google Maps (for East Boston and Revere English classes).
2. Used criteria from the Executive Office of Energy and Environmental Affairs to determine EJ populations.
3. Converted data from Mass GIS into shapefiles. Imported data into WorldMap, creating styles to reflect EJ criteria
4. Rendered EJ criteria into layers with GIS

Linguistic isolation



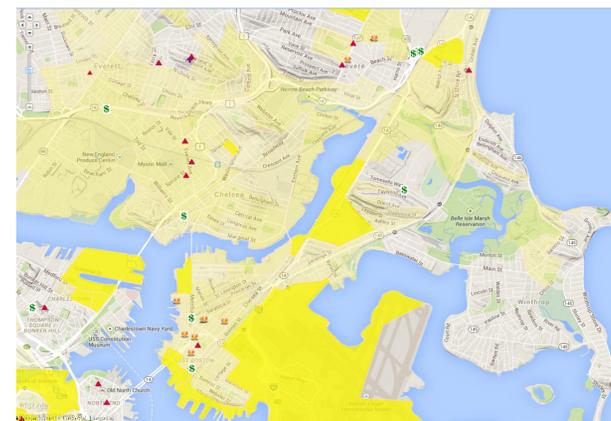
Blue represents households with limited English proficiency, also known as linguistic isolation. No people over 14 in these households speak English 'very well'. Darker areas are have higher concentrations of such households.

Racial ethnic minority



Red represents households with racial ethnic minority status. Darker represents more non-White and non-Latino families.

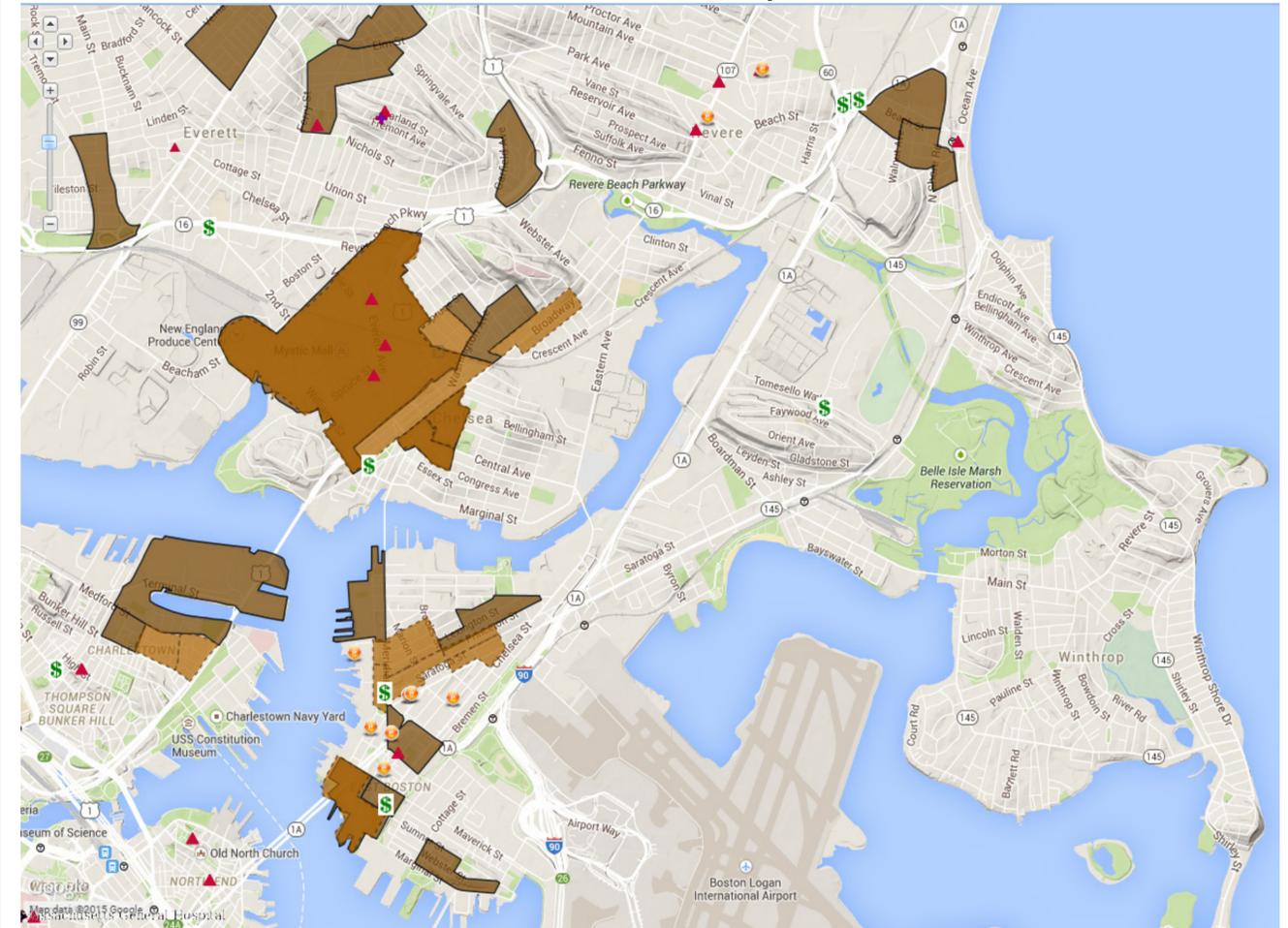
Lower income



Yellow represents households with income that is 65% that of the Massachusetts median household income. Darker means more lower-income households.

Coloring Justice

Environmental Justice Populations



Massachusetts defines EJ criteria as Census Block Groups with households with greater than 25% minority, 25% linguistic isolation, and household income less than or equal to 65% of state median household income. Lighter brown is US Census 2000 data and darker brown is US Census 2010 data.

Access

Compared to Revere, more English classes and health services offered in East Boston are within EJ populations. East Boston has multiple EJ populations for both 2000 and 2010, though data suggest these populations have moved over time. East Boston has more EJ Populations than Revere, suggesting more families struggle with accessing services in English. Revere's EJ populations are newer and are not as near services that may benefit them.

Both East Boston and Revere EJ populations live near institutions that engage in predatory lending (e.g., pawn shops, check-cashing locations). These establishments' proximity to lower-income and linguistically isolated families warrants further attention.

References

1. <http://worldmap.harvard.edu/maps/6557/info/>
2. <http://www.mass.gov/eea/grants-and-tech-assistance/environmental-justice-policy.html>
3. http://worldmap.harvard.edu/data/geonode/english_classes_boston_revere_0g6
4. <https://github.com/cga-harvard/cga-worldmap/blob/master/license.txt>
5. <http://www.bc.edu/centers/humanrights>
6. <http://www.weewomen.org/>
7. <https://es-es.facebook.com/CasaElSalvadorEnNuevaInglaterraPaginaOficial>

Colophon

- Maps were generated using Harvard WorldMap, free open source GIS online tool.
- KML files for access data (English classes/predatory lending) were generated with Google My Maps.
- KML to shapefile conversion used Zonum's Kml2Shp Online tool.

Future Work

- Data from 2015 to document EJ population changes and account for recent developments in East Boston
- Data from 2000, 2010, 2015 for Chelsea Massachusetts
- Include public transit and health provider data for East Boston, Chelsea, Revere