

PNAS

www.pnas.org

Supplementary Information for

The concurrent decline of soil lead and children's blood lead in New Orleans

Howard W. Mielke, Christopher R. Gonzales, Eric T. Powell, Mark A.S. Laidlaw,
Kenneth J. Berry, Paul W. Mielke Jr. and Sara Perl Egendorf

Howard W. Mielke

Email: hmielke@tulane.edu

This PDF file includes:

Fig. S1. GIS kmx.

Fig. S2. Kriged Soil Pb surveys 2001 and 2017 "cover art."

Dataset S1 with legend

Fig. S1 view of SPb and BPb spatial patterns in New Orleans

The spatial patterns of SPb and BPb in New Orleans can be visualized in the kmz file named: Mielke et al. 4-23-19 NOLA 2 Pb surveys of soil & children.kmz. The file can be downloaded at: <http://tinyurl.com/yybt78eb>

The kmz file is opened on Google Earth Pro, ESRI's ArcGIS Earth, or other software.

Google Earth Pro can be downloaded at:

<https://www.google.com/earth/versions/>

ESRI's ArcGIS Earth can be downloaded at:

<https://www.esri.com/en-us/arcgis/products/arcgis-earth>

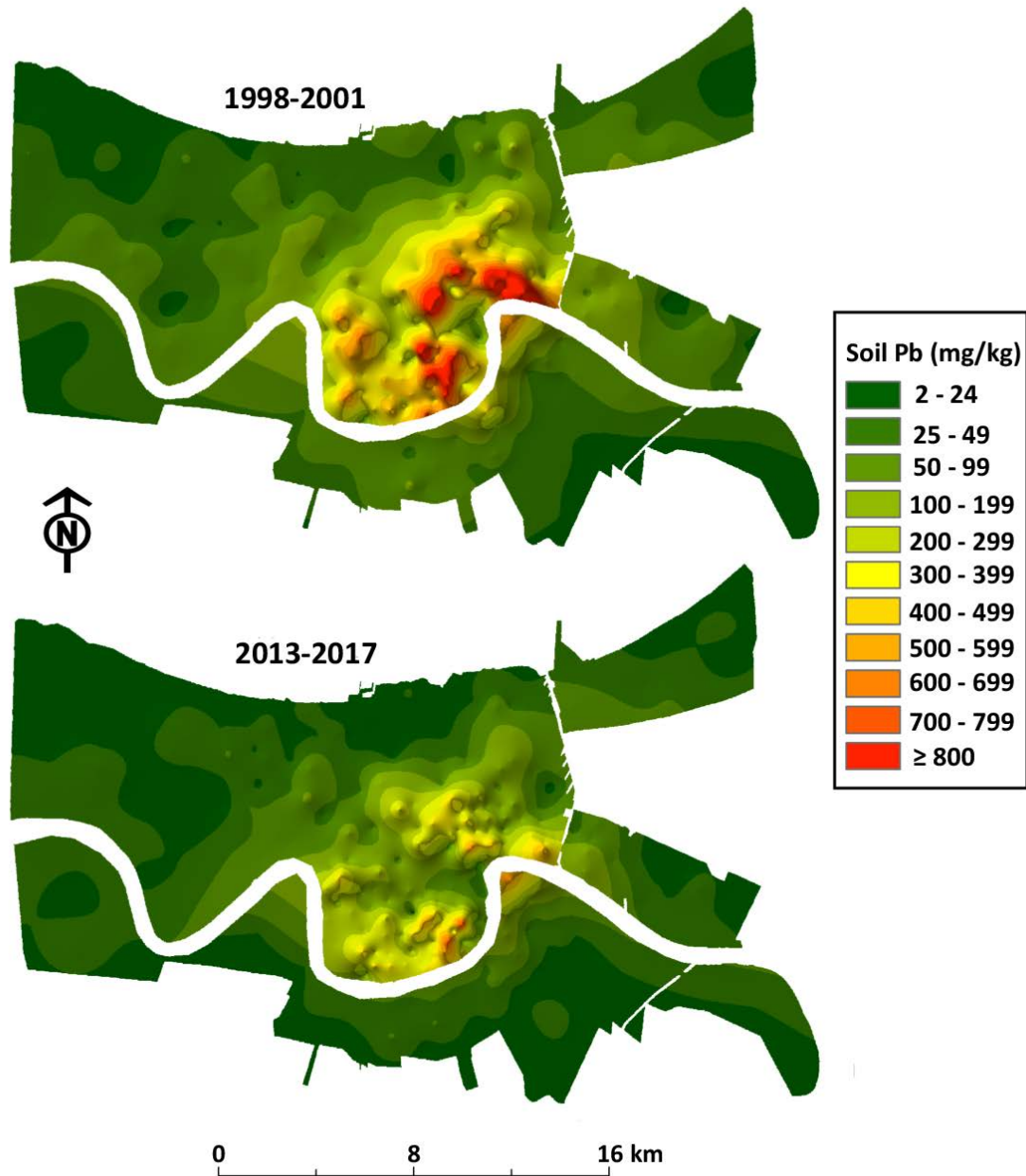
The SPb data from 2001 and 2017 and BPb data from 2000-2005 and 2011-2016 for metropolitan New Orleans residential communities are included.

The kmz file has eight layers (from top to bottom):

- Extent of Hurricane Katrina/Rita flooding is the top layer.
- One layer is the 2001 SPb sample locations for metropolitan New Orleans.
- One layer is the 2017 SPb sample locations for metropolitan New Orleans.
- The census tract layer summarizes all survey data for SPb and BPb in 274 census tracts.
- Place the cursor on any one of the 287 census tracts and a dropdown table appears. When the mouse is pointed on a census tract of the 274 census tracts with complete data, tables show SPb results for the 2001 and 2017 surveys, and BPb data for 2000-2005 and the 2011-2016 surveys.
- Two layers are the kriged data maps of the SPb surveys.
- One layer is the legend for the two maps.

Dataset S1 PNAS_MS_Soil & Health.xlsx. Soil Lead and Children's Health. See Attached Excel file and the legend for each of the columns.

Fig. S2 Kriged Soil Pb surveys 2001 and 2017 “cover art”



The image shows kriged Pb results in New Orleans from topsoil surveys conducted during 1998-2001 and 2013-2017. Children’s blood Pb results were obtained from 96% of these communities. We present decreases in environmental Pb associated with declining children’s blood Pb and illustrate the importance of soil as an exposure pathway.