



# Lake Munson Mortality Project

John Stainbrook

Ali Bell

Terry Ryan

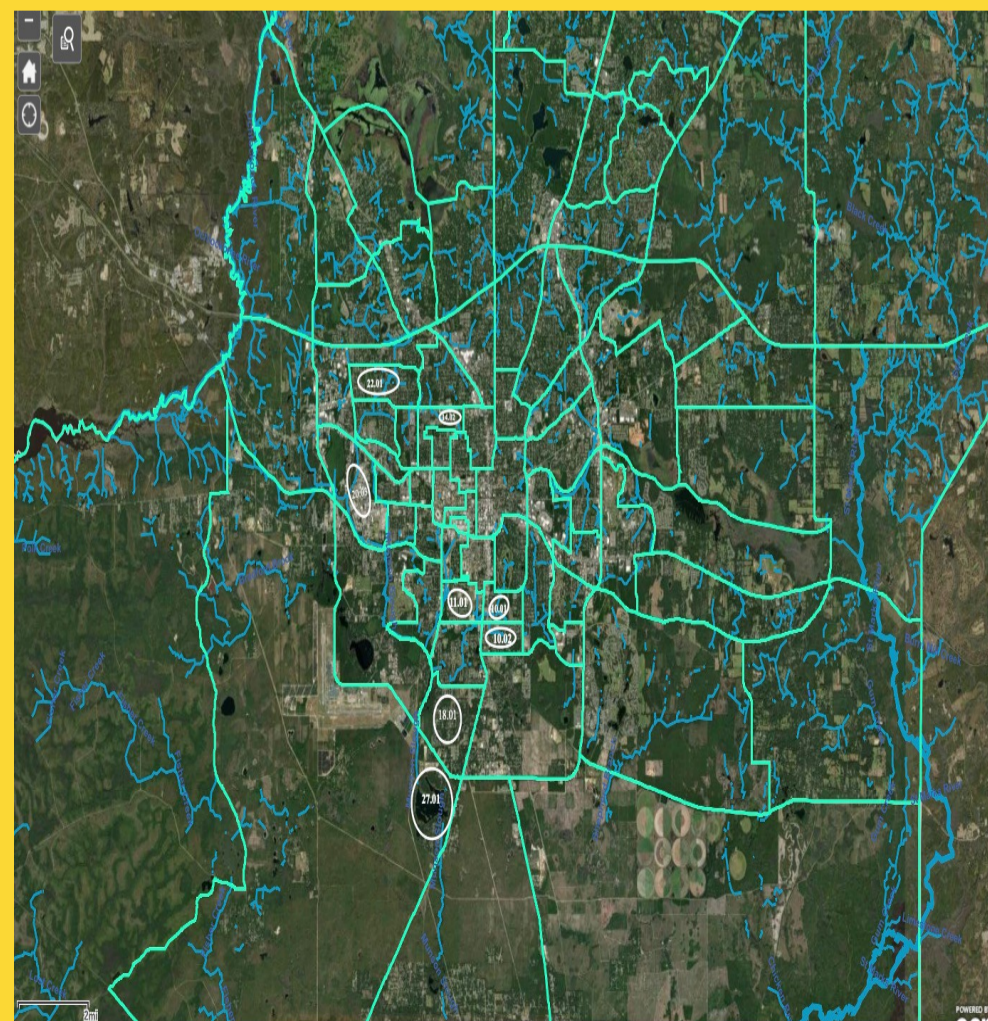


## Abstract

Lake Munson has been a polluted body of water for more than 100 years, the people living in the area have noted complications and disease arising from their proximity to the lake since this time. Using data tabulated from Florida Health and Charts, along with supporting socioeconomic databases, research was conducted to ascertain the validity of these claims. Census Tracts 27.01, 18.01, 11.01, 10.01, 10.02, 22.01, 14.02, and 20.03 had the lowest life expectancy figures in Leon County from 2015-2019 ranging from 67.10 to 72.90 years and averaging 70.26 years (Leon County Average: 79.6 years). Utilizing a T test for significance, the 8 life expectancies were lower than the Leon County Average to a degree of high statistical significance, ( $p=0$ ,  $n>50$ ). Five of these eight directly encompass Lake Munson and the Munson Slough: 27.01, 18.01, 11.01, 10.01, and 10.02. Census tracts 22.01, 14.02, and 20.03 do not directly surround Munson and the Munson Slough, however census tracts 20.03 and 14.02 have extremely high poverty rates of 64.20% and 64.80% respectively. The poverty rate for the remaining 6 census tracts are not as high, ranging from 19.30% to 41.70% and averaging 32.50% (Leon County Average poverty rate: 22%). These results seem to support our initial hypothesis that the pollution of Lake Munson is affecting the life expectancy of those living in the aforementioned-census tracts

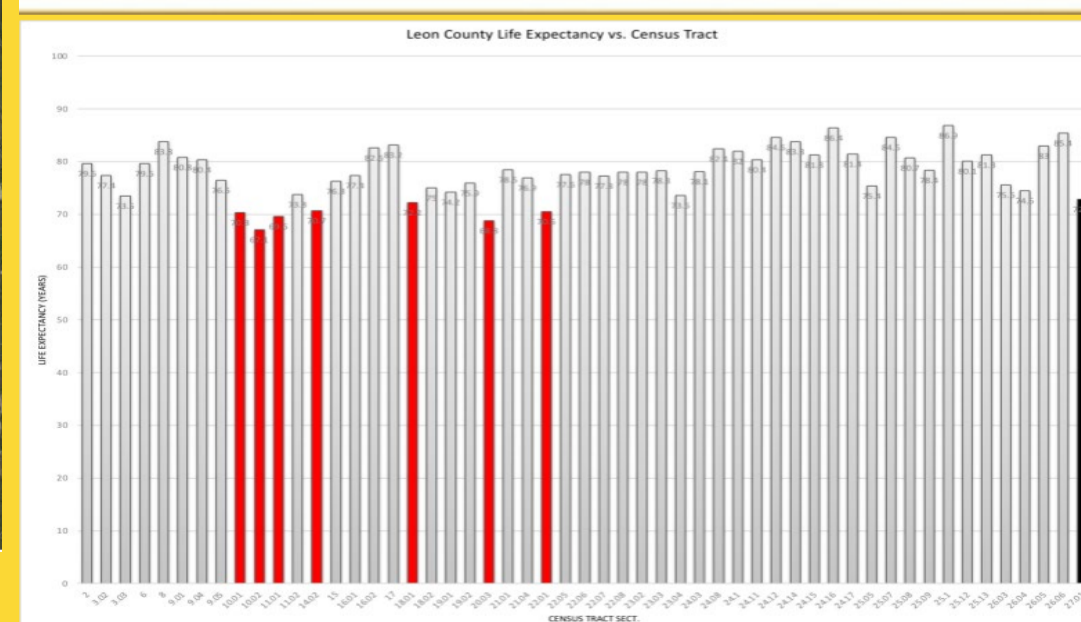
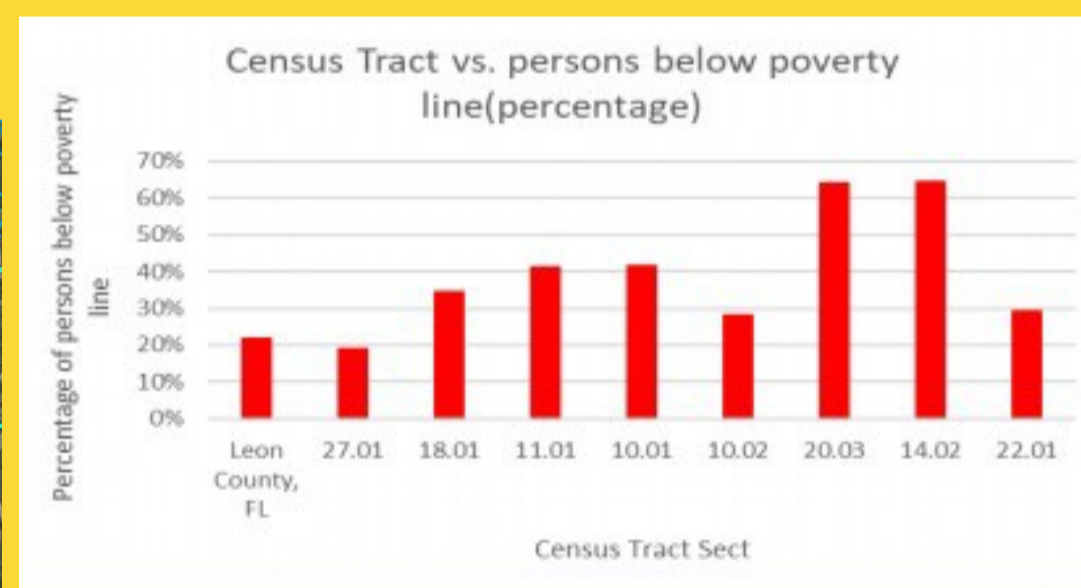
## Methods

- Techniques
- Collected quantitative data
  - Utilized FL Health and Charts database to collect life expectancy data by census tract in Leon County
  - Utilized Census Reporter to collect socioeconomic data on relevant census tract tracts in Leon County
- Participants
- Population study
  - 2015-2019
  - Wide range ages and both male and female
- Data Organization & Data criteria
- Excel - graphs, charts, and collecting data
  - Organized data by census tracts
  - FL Health and Charts



## Results

We have come to a few conclusions that have raised our interests in census tracts 27.01, 18.01, 11.01, 10.01, 10.02, 20.03, 14.02, 22.01. We have gathered that these eight census tracts have the lowest life expectancy in Leon County based off the 5 year, 2015-2019, FL Health and Charts website. Five of these eight tracts are locationally related to Lake Munson and the Munson Slough. The life expectancy of each of these eight census tracts is significantly lower to a high statistical degree ( $p=0$ ,  $n>50$ ) than the average for Leon County. Three of the eight lowest life expectancy census tracts do not directly surround Lake Munson and only partially surround the Munson Slough, however utilizing a two tailed p test for significance, two of those three have a statistically significant higher percentage of persons below the poverty line than the average of Leon County (~64.2% and 64.8%,  $p=0$ ,  $n>50$ ). Further, of the 5 locationally related census tracts to Lake Munson and the Munson Slough, only two have a statistically significantly higher persons below the poverty line to the Leon County average. (41.4% and 41.7%). (Leon County Florida, person below poverty line 22%). We aim to interview a local resident of Lake Munson who believes that Lake Munson has impacted her and her family's health and a negative way. Also, we intend on completing surveys at the Lake Munson boat ramp to gather more information.



## Discussion

- Our results point towards a locational relationship of the lowest life expectancy in Leon and Wakulla County to Lake Munson
- Further studies of socioeconomic data indicate that for the relevant census tracts to Lake Munson that at least this factor is not playing a significant role in the lowered life expectancy of the area
- Also, two out of the three none locationally relates census tracts among the top eight lowest life expectancies in Leon County had some of the highest poverty rates in all of Tallahassee
- Only one of the eight lowest life expectancy census tracts can not be potentially explained by these two factors of Lake Munson and socioeconomic data alone

## Future Work

Future work can be done to survey the residents of Lake Munson as our research has unofficial accounts that the pollution of the Lake has adversely affected the health of the residents in the area. Further research in can be conducted, in phase two, to determine why census tract 22.01, 14.02, and 20.03 have such low life expectancy rates.

## References

*FLHealthCHARTS*. FLHealthCHARTS.gov: Home. (n.d.). Retrieved March 7, 2022, from <https://www.flhealthcharts.gov/charts/default.aspx>

*Profile*. Census Reporter: Making Census Data Easy to Use. (n.d.). Retrieved March 7, 2022, from [https://urldefense.com/v3/https://censusreporter.org/;!!Epnw\\_ITfSMW4!7lWoJ5g2MRvLR\\_V2UzgYupyI3\\_Hi7O9kLYRS-IGQLCKqZIXmpSDBSYzIkdidCSfthxS\\$](https://urldefense.com/v3/https://censusreporter.org/;!!Epnw_ITfSMW4!7lWoJ5g2MRvLR_V2UzgYupyI3_Hi7O9kLYRS-IGQLCKqZIXmpSDBSYzIkdidCSfthxS$)

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## Acknowledgements

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