* **Life Table Calculation**
  + **createPopData\_for\_ltmaker.R**
    - Produces state, county, and MSSA-level population data which are then used in “ltmaker.R” to calculate life tables
    - Inputs:
      * lhj-population-ars-le.RDS - DOF LHJ level population data dating back to 2000
        + 2000-2009: California and Counties Population by Age, Race/Hispanics, and Gender: 2000-2010 - <https://dof.ca.gov/forecasting/Demographics/estimates/>
        + 2010-2019: Complete State and County Projections (Table P-3) - <https://dof.ca.gov/forecasting/demographics/Projections/>
      * nxMSSA.RDS - Last year's MSSA-level population data file
        + Aggregations of Census Tract pop data pulled from ACS 5-year surveys, using Table B01001 (don’t have under 1 year olds broken out) - <https://data.census.gov/table/ACSDT5Y2019.B01001?q=b01001>
        + Currently using last year’s MSSA population estimates (2019 ACS 5Y) for current year
        + 2007-2017 MSSA Pop pulled by Ethan (0.CCB/myUpstream/lifeTables/dataIn/acs5\_mssa.dta)
        + 2018-2019 pulled by CCB Data Team using the standard pullACS function
        + 2020- data are actually 2019 ACS 5Y estimates since we have not yet switched to the new 2020 census tract boundaries
      * Census tract population (to be added)
        + Most likely ACS. SEER?
    - Outputs:
      * nxCounty.RDS - Contains every year(2000-)-county-sex(including total)-race(including total)-ageGroup combination
      * nxState.RDS - Contains every year(2000-)-state-sex(including total)-race(including total)-ageGroup combination
      * nxMSSA.RDS - Contains every year(2007-)-MSSA-sex-race(including total)-ageGroup combination
      * Census tract level population (to be added)
  + **ltmaker-Jaspo.R**
    - Produces life tables at multiple geographic levels, by various demographic characteristics, and for several year groupings.

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| --- | --- | --- | --- |
| **geo** | **years** | **agegroups** | **by-characteristics** |
| state | 1,3,5 | 0, 1-4, 5(5)85, 199 | GEOID, sex (incl. Total), race (incl. Total) |
| county | 1,3,5 | 0, 1-4, 5(5)85, 199 | GEOID, sex (incl. Total), race (incl. Total) |
| MSSA | 5 | 0(5)85, 199 | GEOID, sex (incl. Total) |

* + - Inputs:
      * nxCounty.RDS - Contains every year(2000-)-county-sex(including total)-race(including total)-ageGroup combination
      * nxState.RDS - Contains every year(2000-)-state-sex(including total)-race(including total)-ageGroup combination
      * nxMSSA.RDS - Contains every year(2007-)-MSSA-sex-race(including total)-ageGroup combination
      * Census tract level population (to be added)
      * ccb\_processed\_deaths.RDS - semi-processed, record-level death data created further upstream; Contains death data from 2000-
      * Linkage
        + ageChop.R - loads in standard custom function to cut age into age groups
        + trt10mssa13.dta - 2010 TIGER/LINE census tracts to 2013 MSSAs linkage file
        + countycfips.dta - county name to county FIPS linkage file
    - Outputs:
      * LTciState.RDS - full life tables at state level
      * LTciCounty.RDS - full life tables at county level
      * LTciMSSA.RDS - full life tables at MSSA level
      * Full life tables at census tract level (to be added)
      * e0ciState.RDS - life expectancies at birth at state level
      * e0ciCounty.RDS - life expectancies at birth at county level
      * e0ciMSSA.RDS - life expectancies at birth at MSSA level
      * life expectancies at birth at census tract level (to be added)
    - Functions for life table calculation
      * doLTChiangCI: function to calculate a life table
      * calcLT: function that removes stratas that don’t meet criteria, then calls doLTChiangCI
  + **life\_table\_PHE.R**
    - lt\_phe: function to create life table based on Public Health England (PHE)’s methodology in the [PHEindicatormethods](https://www.rdocumentation.org/packages/PHEindicatormethods/versions/2.0.2/topics/phe_life_expectancy) package
* **Small Area Estimation**