Missoula Heat Vulnerability Map - Outline

Questions:

1. Where are people in Missoula most vulnerable to heat?
2. How can this information inform policy, services and planning (including climate change adaptation)

Deliverables:

1. Heat Vulnerability Map
   1. Exposure map
   2. Sensitivity map
   3. Vulnerability index map
2. Policy, service and planning recommendations
3. Public education/outreach component

Heat Vulnerability Map :

1. Exposure - physical exposure to elevated outdoor temperatures.
   1. Surface temperature (more of a response on those - dependant and integrative - other lead to the surface temp.)

Contributing factors

* + 1. Impervious Surface
    2. Proximity to green space
    3. Areas without tree canopy
    4. Building type (height, etc.?)
    5. Roof type/color
    6. Elevation
    7. Aspect
  1. Others? (I’ve seen rented dwellings here commonly. Discuss). Potential that smoke will become a contributing factor. Let’s look at the social/health data first.

1. Sensitivity - individual neighborhood level characteristics that influence coping resources
   1. Low-Income persons
   2. Low-Income persons Age
   3. Housing Costs
   4. Air Conditioning data (portable vs. central units)
   5. Health - (example: heart, asthma, etc.)
   6. Mobility
   7. Energy data? (challenges in getting data): HRDC: LIEAP
   8. Others?
2. Exposure and Sensitivity determine a vulnerability index
   1. What is the index composition and weighting (discussion)
   2. In D.C. the vulnerability index defined three groups
      1. Vulnerable places
      2. Vulnerable people
      3. Vulnerable places and people
3. Potential policy, service and planning recommendations
   1. Enhanced tree canopy
   2. Weatherization subsidy programs
   3. Green and reflective infrastructure
   4. Pervious paving
   5. Enhanced green space
   6. Cooling centers
   7. Development patterns and characteristics
   8. Transportation design

\*How do these recommendations change the vulnerability index. How does it interact with baseline vulnerability index map? Provides great justification for policy adoption and funding.

\*In recommendations, make sure there is a spatial component to the policy piece

\*Do we add Climate Projections (still needs to be decided) - reference Montana Climate Assessment

1. Public Education/Outreach
   1. TBD