California 4th Climate Change Assessment
Preparing Public Health Officials for Climate Change – A Decision Support Tool

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About Four Twenty Seven

- Award-winning climate risk and adaptation consultancy
- Our mission: catalyze climate adaptation by enabling organizations to make smarter decisions through data-driven insights and solutions.
- Previous climate-health work:
  - White House Climate Data Initiative: Heat & Social Inequity Index
  - Healthcare Without Harm: Resilient Hospital Dashboard
  - City of San Francisco: Flood Vulnerability: Health-Focused Assessment (April 2016)

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Project Partners

- **Public Health Institute**
  - An independent, nonprofit organization committed to the development, implementation, and management of public health programs.

- **Argos Analytics**
  - California-based climate data services provider.

- **Habitat Seven**
  - Climate-focused software development and design studio (National Climate Assessment, IPCC, Risky Business Project, etc.)
Why Improve Heat Wave Outlooks?

Existing heat tools are insufficient

- Forecasting
  - NWS only issued six heat alerts out of 19 heat health events (HHE) recorded between 2000 and 2009 (Guirguis et al., 2014).
  - Heat wave thresholds (absolute or percentile) are applied universally
  - Few probabilistic outlooks past 14+ days

- Decision-making
  - Limited context for decision-making around targeted interventions (e.g., socioeconomic and medical vulnerability)
  - Interface and visualizations are not user-friendly

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Goals for the Decision-Support Tool

- Provides actionable information for a range of users:
  - short-term intervention and emergency preparedness
  - long-term policies and planning consideration;

- Supports all of California’s regions and includes warnings and alerts that capture local climate variability;

- Includes contextual layers of social and heat vulnerability and highlights key equity issues across geographies;

- Provides climate and weather data at a resolution as granular as needed

- Is user-friendly and provides valuable information that can be easily interpreted and analyzed.
Scope of Work & Timeline

April-Sept 2016
- Task 1: Conduct Needs Assessment
  - Identify information gaps and user needs to inform tool specifications
  - Create User Group

Oct-Dec 2016
- Task 2: Determine Tool Specifications
  - Determine suitable data parameters
  - Develop use case
  - Draft data architecture

Jan-April 2017
- Task 3: Integrate and Analyze Data
  - Integrate NOAA/NWS forecasts
  - Incorporate climate scenarios and contextual layers

March-June 2017
- Task 4: Develop Software
  - Develop functional, effective, user-friendly interface
  - Establish automatic data feeds

Summer 2017
- Task 5: Deliver and Report
  - Support deployment of tool at local level
  - Summarize findings in article for Fourth Climate Assessment
Next Steps

- We welcome questions, feedback and input

- Follow up meetings: milestone briefings
  - Late fall 2016 (User Needs and Tool Specs)
  - Summer 2017 (Tool Demo)
  - Late 2017 (Article overview on key lessons learned)

- CA Climate Science Symposium and CA Adaptation Forum
  - Information sharing and outreach – Long Beach, September 6th-8th, 2016
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