



ATTACHMENT 1: SCOPE OF WORK

Capital Region Transportation Sector Urban Heat Island Mitigation Project

RFP Issued: November 8, 2018

Proposals Due: December 13, 2018, 5:00 PM PDT

Task 1: Project Initiation and Management

Task 1.1: Initial Meeting with Caltrans

SMAQMD is responsible for this task.

Task 1.2: Contract with Sub-Applicant

SMAQMD is responsible for this task.

Task 1.3: Request for Proposals and Contracting with Consultants

LGC is responsible for this task.

Task 1.4: Project Kickoff Meeting

Consultant will participate in kickoff meeting after they are selected.

Task 1.5: Project Management

SMAQMD is responsible for this task.

Task 1.6: Technical Advisory Committee

Consultant will participate in quarterly meetings of the technical advisory committee that has been established for this project. LGC, with support from SMAQMD, will convene the committee. Participants include Caltrans staff, SACOG, SMUD, cities and counties in the SACOG region, and other stakeholders with expertise in the transportation, land use and community development, public health, and other relevant sectors. The committee will provide guidance and input throughout the duration of the project duration on the development of the Regional Heat Pollution Reduction Plan, assessment of UHI mitigation measures, and prioritization of transportation infrastructure, corridors, and projects.

Task	Deliverables
1.1	<i>Meeting notes summary</i>
1.2	<i>Copy of executed subcontract</i>
1.3	<i>Copy of procurement procedures and executed consultant contracts</i>

1.4	<i>Meeting agendas; meeting note summaries; participant lists</i>
1.5	<i>Meeting notes</i>
1.6	<i>Meeting agendas; meeting note summaries; participant lists</i>

Task 2: Community Outreach and Engagement

Task 2.1: Community Engagement Plan

LGC is responsible for this task.

Task 2.2: Community Engagement

LGC is responsible for this task.

Task 2.3: Community Priorities Report and Map

LGC is responsible for this task.

Task	Deliverables
2.1	<i>Community Engagement Plan; notes from listening sessions; summary of literature review</i>
2.2	<i>Workshop agendas; workshop notes; participant lists</i>
2.3	<i>Community Priorities Report; Community Priorities Map</i>

Task 3: Advanced Urban Heat Island Effect Analysis

Task 3.1: Land-use and land-cover analysis

Altostratus, Inc. (Technical Consultant) is responsible for this task.

Task 3.2: Observational data preparation

Altostratus, Inc. (Technical Consultant) is responsible for this task

Task 3.3: Base atmospheric modeling and model performance evaluation

Altostratus, Inc. (Technical Consultant) is responsible for this task

Task 3.4: Atmospheric modeling of scenarios and mitigation measures under the current climate scenario

Altostratus, Inc. (Technical Consultant) is responsible for this task

Task 3.5: Atmospheric modeling of scenarios and mitigation measures in the future climate

Altostratus, Inc. (Technical Consultant) is responsible for this task

Task 3.6: Develop Urban Heat Island Analysis Report

Altostratus, Inc. (Technical Consultant) is responsible for this task

Task	Deliverable
3.1	<i>Summary of land-use and land-cover analysis</i>
3.2	<i>Summary of data analyzed</i>
3.3	<i>Reference-state modeled meteorology for current climate</i>
3.4	<i>Atmospheric modeling of current climate and current land-use and land-cover; characterization of mitigation measures; scenarios for current climate</i>
3.5	<i>Atmospheric modeling of future climate and future land-use and land-cover; scenarios for future climate</i>
3.6	<i>UHI Analysis Report; GIS or Google Earth data; datasets</i>

Task 4: Regional Transportation Database

Task 4.1: Compile existing transportation plans and projects

The Consultant will work with SMAQMD to secure and assemble existing GIS datasets and project location information for currently approved and pending transportation corridors and projects in participating jurisdictions, including new road construction, maintenance and repairs, public transit infrastructure work, and other existing opportunities into which UHI mitigation work can be incorporated.

The consultant will also work to identify transportation plans, design processes and guidelines and codes that can be updated to better address heat risks, vulnerabilities, and mitigation strategies, as well as community priorities identified in Task 2.

The consultant will also conduct a thorough review of project scopes to identify specific vulnerabilities to heat and opportunities to include mitigation measures and address community concerns.

Task 4.2: Assess electric vehicle ownership and infrastructure projections

SMAQMD is responsible for this task.

Task 4.3: Develop Regional Transportation Database and Map

The Consultant will develop a Regional Transportation Database and GIS or Google Earth map and engage SMAQMD, SACOG and its member jurisdictions, SMUD, and the Capital Region Climate Readiness Collaborative to ensure that all transportation plans and projects are incorporated into the database.

Task	Deliverable
------	-------------

4.1	<i>List of transportation projects and plans compiled</i>
4.2	<i>Summary of electric vehicle scenarios and their impacts and vulnerabilities to heat</i>
4.3	<i>Regional Transportation Database; GIS or Google Earth Map</i>

Task 5: Regional Heat Pollution Reduction Plan

Task 5.1: Draft Regional Heat Pollution Reduction Plan

Using UHI modeling results from Task 3 provided by Altostratus and Community Input from Task 2 provided by LGC and SMAQMD, the Consultant will identify priority areas for UHI mitigation and identify the combination of mitigation measures and implementation scenarios that would maximize cooling effectiveness.

The Consultant will combine UHI modeling results with the Regional Transportation Database (Task 4) to identify priority transportation projects for UHI intervention and other transit routes, stations, and active transportation corridors at great risk from the UHI effect.

The Consultant will draft a Regional Heat Pollution Reduction Plan with input from project partners and other key stakeholders that will include:

- UHI modeling results and recommendations to be incorporated into transportation plans, design guidelines, and codes;
- Specific UHI mitigation measures for priority roads and transportation projects that are identified as heat sources;
- Specific UHI mitigation measures for priority transit stations and along active transportation corridors to reduce heat exposure of passengers and users;
- Input from community members (Task 2) to inform priority areas.
- Recommendations for developing future electric vehicle charging stations along key heat corridors;
- Recommendations to remove barriers to and accelerate solar PV shading for parking lots; and
- Priority streets for complete street design implementation.

Task 5.2: Finalize Regional Heat Pollution Reduction Plan

The Consultant will finalize the Regional Heat Pollution Reduction Plan by incorporating feedback from the Technical Advisory Committee; ensuring the integration of priorities from disadvantaged communities and alignment with State initiatives and priorities including the General Plan Guidelines, Safeguarding California and other State adaptation strategies; and designing and publishing the final Regional Heat Pollution Reduction Plan.

Task	Deliverable
5.1	<i>Draft Regional Heat Pollution Reduction Plan</i>
5.2	<i>Final Regional Heat Pollution Reduction Plan</i>

Task 6: Integration and Dissemination of Project Results

Task 6.1: Develop targeted recommendations for local jurisdictions

The Consultant will develop targeted recommendations and template language to facilitate the incorporation of UHI mitigation measures into local jurisdictions' planning processes and design guidelines for future transportation projects and road maintenance and repair work, as well as transportation plans and codes; for existing transit stations and active transportation corridors; and in the planning and design process for future transit stations and alternative transportation routes, prioritizing needs of disadvantaged communities.

In addition, the Consultant will integrate modeling results on electric vehicle deployment and UHI mitigation benefits into SMAQMD's ZEV Readiness Plan, quantifying benefits of EV deployment scenarios and identifying priority locations for EV charging infrastructure. In partnership with SMAQMD and SACOG, the Consultant will meet with local jurisdictions to present recommendations and to identify implementation timelines.

Task 6.2: Develop Project Summary Report

LGC is responsible for this task.

Task 6.3: Hold webinar and one in-person event

LGC is responsible for this task.

Task 6.4: Develop case study for ICARP

LGC is responsible for this task.

Task	Deliverable
6.1	<i>Targeted local jurisdiction recommendations and template language</i>
6.2	<i>Project Summary Report</i>
6.3	<i>Webinar; participant list</i>
6.4	<i>Case study for ICARP</i>

Task 7: Administration

Task 7.1: Invoicing

Consultant will be responsible for submitting all invoices and supporting materials on time, abiding by LGC and SMAQMD's process and timeline.

Task 7.2: Reporting

Consultant will be responsible for submitting all progress reports on time, abiding by LGC and SMAQMD's process and timeline.

Task	Deliverable
<i>7.1</i>	<i>Quarterly invoices to Caltrans</i>
<i>7.2</i>	<i>Quarterly reports for Caltrans</i>