



626 Wilshire Boulevard
 Suite 1100
 Los Angeles, CA 90017
 213.599.4300 phone
 213.599.4301 fax

esassoc.com

Eastern Municipal Water District (EMWD): Climate Action Plan

Project Understanding and Proposed Work Plan

Environmental Science Associates (ESA) is pleased to present Eastern Municipal Water District (EMWD) with this proposal to develop a climate action plan (CAP) that provides a roadmap for reducing greenhouse gas (GHG) emissions in line with the State of California’s climate stabilization goals, provides potential California Environmental Quality Act (CEQA) clearance for EMWD’s future capital investment projects, and strengthens EMWD’s position to secure grant funding.

EMWD provides domestic and agricultural water, wastewater collection and treatment service, and recycled water in a 555 square mile area with a population of approximately 700,000 in western Riverside County.

EMWD has publicly reported the GHG emissions associated with its operations since 2006, starting with the California Climate Action Registry (CCAR) for calendar years 2006 – 2009, and subsequently The Climate Registry (TCR) for Calendar Year 2016. A summary of EMWD’s publicly reported GHG emissions is provided in Table 1.

**TABLE 1
 EMWD PUBLICLY REPORTED GHG EMISSIONS**

Sector	2006 CCAR	2007 CCAR	2008 CCAR	2009 CCAR	2016 TCR
Core Inventory (Scopes 1 and 2)					
Scope 1 - Mobile	3,010	3,296	3,429	2,901	2,621
Scope 1 - Stationary	30,016	31,419	27,978	27,267	20,191
Scope 1 - Process				1,105	
Scope 2 - Electricity	32,411	38,181	27,487	25,300	28,126
Subtotal	65,437	72,896	58,894	56,573	50,938
Additional Reporting					
Scope 1 - Stationary biomass					9,401
Scope 3 - biosolids hauling	918	967	746	2,210	2,333
De minimis				1,075	
Subtotal	918	967	746	3,285	11,734

NOTES:

^a CCAR = California Climate Action Registry.

^b TCR = The Climate Registry

EMWD has developed several energy and sustainability programs that are relevant to this scope of work, including electrification of gas engines, conversion of heavy-duty fleet vehicles to natural-gas power, installation of solar photovoltaic energy (solar PV) systems, and utilization of digester gas (biogas) from its regional water reclamation facilities as a renewable energy source to power engines that would normally be powered by natural gas. In addition, EMWD has a Rideshare Program, which provides rewards and incentives to staff who commute to work by carpooling or by means other than driving a personal vehicle.

Integration with WRCOG's CAPtivate Project

To enhance its effectiveness as a plan to reduce GHG emissions, ESA will develop EMWD's CAP in coordination with the regional climate action plan currently being updated by Western Riverside Council of Governments (WRCOG), known as CAPtivate. CAPtivate's overall objective is to create more livable, equitable, and economically vibrant communities through the reduction of GHG emissions. To date, substantial progress has been made by WRCOG, including baseline GHG inventories for all 18 member cities and the County of Riverside, a regional GHG emissions target, a suite of local and regional GHG reduction measures for incorporation into local CAPs, a Subregional CAP document, a monitoring tool that incorporated public health and resiliency metrics, and various levels of commitment by the member jurisdictions to develop local CAPs and implement the program's GHG reduction measures. In addition, WRCOG has taken great strides to integrate public health and social equity into its CAPtivate framework, creating a multi-objective planning framework that emphasizes the sustainability and public co-benefits of implementing emissions reduction strategies.

ESA is currently assisting WRCOG in updating its CAPtivate program, including updates to the community GHG inventories to a more current year (2018), updating GHG targets for future years that align with State GHG reduction targets (i.e., 2030 and 2050), and developing implementable strategies for reducing emissions over time. The update to CAPtivate (CAPtivate 2.0) includes local measures to conserve water and reduce the energy associated with its delivery and distribution, as well as reducing emissions associated with treating wastewater and its byproducts. Coordination with the CAPtivate 2.0 project offers EMWD the opportunity to align with regional emissions forecasts and reduction targets, create synergies with CAPtivate's water-related GHG reduction strategies, and implement and leverage WRCOG's wider efforts to advance sustainability in the region.

Work Plan

ESA will prepare a CAP for EMWD to reduce the GHG emissions associated with its operations, including emissions from EMWD's building energy use, stationary source fuel combustion (i.e. for on-site fossil-fueled generators), use of electricity by pumps and water/wastewater treatment equipment, wastewater treatment processes, vehicle fleet, solid waste generation, and facility water consumption. The general scope of work for the EMWD CAP will include the following components:

1. **Review and consolidate GHG Inventories:** ESA will calculate emissions associated with EMWD's operations for a recent inventory year for which activity data is available (e.g. 2016) using the Local Government Operations Protocol and the latest emission factors.
2. **Forecasts and Targets:** ESA will forecast EMWD's operational emissions for 2030 and 2050 using growth parameters representing EMWD's future operations to serve a growing population and economy. ESA will then recommend long-term GHG reduction targets for EMWD operations for 2030 and 2050,

consistent with state GHG targets as expressed in Senate Bill 32 (SB 32) and the Governor's Executive Order S-03-05 – i.e., statewide reductions of 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, respectively. Recommendations will consider costs and operational impacts.

3. GHG Reduction Measures: ESA will incorporate existing state and regional programs, policies, actions, and plans related to EMWD operations such as the Renewables Portfolio Standard (RPS), Title 24 energy standards, the State's vehicle fuel efficiency standards, and other measures in CARB's 2017 Scoping Plan. We will also incorporate existing EMWD operational strategies that affect GHG emissions. ESA will evaluate options for reducing GHG emissions, such as building energy efficiency upgrades, rooftop solar, water conveyance, water treatment infrastructure improvements, biogas capture and reuse, waste reduction and recycling, and telecommuting programs.
4. Monitoring Plan and Tracking Tool: ESA will prepare an implementation and monitoring plan, as well as a tracking tool, for EMWD to monitor and track the progress of CAP implementation.
5. CAP Document: ESA will prepare a CAP document to include the GHG inventory and forecast, future targets, GHG reduction measure recommendations, implementation details for these measures including monitoring and performance indicators, and detailed appendices with technical details about methods and assumptions used to quantify emissions.
6. Meetings and Project Management: To keep the project on track ESA will host a monthly teleconference with EMWD, and attend at least three (3) in-person meetings at the EMWD office in Perris at key junctures in the schedule.
7. Optional Task - CEQA: ESA will prepare the appropriate environmental review document needed for EMWD to adopt the CAP.

These tasks are described in more detail below.

Task 1 – Review and Consolidate GHG Inventories

ESA will consolidate EMWD's existing inventories into an Excel workbook for comparing emissions over time and identifying opportunities for reducing emissions from the various sectors (i.e., fleet vehicles, buildings, lighting, solid waste disposal, refrigerants, and water and wastewater treatment processes). Results will be summarized in a memo that includes a trends analysis of existing inventories (2006 through 2016) and identifies to the extent possible the drivers behind the trends (e.g., growth or contraction in services, investments in equipment and technology, regulatory changes, climatic conditions, differences in methods and datasets, new emission factors, etc.). This analysis will be useful for identifying opportunities for GHG reduction and assessing the feasibility of reaching future targets.

Task 1 Deliverables:

- Excel sheet with consolidated inventories
- Inventory analysis memo summarizing trends and emission reduction opportunities

Task 2 – GHG Forecasts and Targets

ESA will assist EMWD in developing growth projections for its operations and its customer base for the years 2030 and 2050, and in forecasting the GHG emissions associated with that growth under “business-as-usual” (BAU) conditions. ESA will adjust the BAU emissions forecasts to account for the expected impacts of foreseeable federal, state, and regional actions, based on the latest information from the California Air Resources Board (CARB) and the 2017 Climate Change Scoping Plan. State measures to be quantified include mandates for renewable energy, waste diversion, electric vehicles, vehicle efficiency, and water conservation, among others. Regional Measures include the Regional Active Transportation Program, SCAG’s 2016 RTP/SCS, regional electric vehicle infrastructure development, and transit expansions.

ESA recommends that EMWD set GHG reduction targets for 2030 and 2050 that align with statewide reduction goals as represented by SB 32 (40 percent below 1990 levels by 2030) and by Executive Order S-03-05 (80 percent below 1990). Setting targets consistent with these goals is a key step toward meeting the requirements of CEQA Guidelines section 15183.5 (b) for a qualified CAP, which may allow EMWD to streamline CEQA analysis of its future capital improvement projects by assessing project consistency with the measures and performance standards in the CAP.

Task 2 Deliverables:

- Excel sheet with BAU forecasts for 2030 and 2050
- Memorandum with proposed 2030 and 2050 targets for the EMWD CAP

Task 3 – GHG Reduction Measures

ESA will evaluate a range of feasible measures for reducing EMWD’s emissions, starting with EMWD’s existing programs related to energy and fuels, transportation, waste management, and water conservation. In developing the draft CAP measures, ESA will draw on tools, ideas and experience from many sources, including ICLEI, the US Conference of Mayors Best Practices for Climate Protection, CoolCalifornia.org, CAPCOA, and our experience developing CAPs for government agencies in California and beyond. In particular, we will draw from best practices put forth in exemplary CAPs designed to achieve deep GHG reductions associated with water agencies and other public agencies. We will consider programs and policies that are both wholly under EMWD control and those that are regional in nature, and that would require collaboration with other jurisdictions and regional organizations.

For the WRCOG CAPtivate 2.0 project, ESA is organizing a half-day workshop sometime in late 2019 or early 2020 to bring cities and stakeholders together to assess opportunities and constraints for reducing emissions in the region. ESA recommends that EMWD participate in this workshop to represent the region’s water and wastewater sectors and to help strengthen synergies between EMWD’s CAP and the CAPtivate 2.0 program.

Task 3 Deliverables:

- Memo of proposed state, regional (WRCOG), and EMWD measures for inclusion in the CAP, including estimates of GHG reduction potential and synergies with the CAPtivate 2.0 program.
- Excel workbook of GHG reduction measure calculations.

Task 4 – Monitoring Plan and Tracking Tool

ESA will provide EMWD with a customized GHG emissions monitoring tool for tracking the reductions achieved by the CAP. The tool will be intuitive, easy to use, well-organized, and easily accessible to EMWD staff with

limited or no technical background. It will have a broad progress dashboard with visually compelling figures and graphics to clearly illustrate the progress of CAP on a measure-by-measure level. The dashboard will include tables, figures, and summary graphics that can be used in the progress report and presentation templates to indicate progress toward EMWD's 2030/2050 targets, GHG reductions achieved to date, and progress on key performance indicators.

Task 4 Deliverables:

- Draft and Final Updated CAP Implementation and Monitoring Tool
- Draft and Final Progress Report and Presentation Template

Task 5 – CAP Document

ESA will develop a Draft CAP that clearly communicates EMWD's goals and strategies for reducing GHG emissions to the public and other stakeholders. It will combine and consolidate all technical components, including the existing inventories, the 2030 and 2050 BAU forecasts, the 2030 and 2050 targets, GHG reduction estimates for state, regional, and local measures, and the key performance indicators and tracking parameters developed for the monitoring tool. A summary of our proposed outline is presented below.

- **Chapter 1: Introduction** – The introduction will include a summary of the latest climate change science, a summary of current regulations, and discussion of state and regional policies affecting GHG emissions. It will include a synopsis of EMWD's current sustainability and GHG reduction efforts, EMWD's vision and objectives related to climate change and emissions reduction, and the benefits the CAP provides to EMWD, the region, and its customers.
- **Chapter 2: Emissions Inventory, BAU Forecasts, and GHG Reduction Targets** – This chapter will summarize the existing GHG inventories and the emissions trends identified in Task 1, and describe the primary drivers or reasons behind the trends. The chapter will include BAU forecasts for 2030 and 2050 and present EMWD's GHG reduction targets for 2030 and 2050.
- **Chapter 3: GHG Reduction Measures and Actions** – Chapter 3 will present the estimated GHG emission reduction estimates for the state, regional, and EMWD measures included in the CAP, for both 2030 and 2050. Chapter 3 will also describe how the WRCOG CAPtivate project relates to the EMWD CAP and where there are synergies with CAPtivate's GHG reduction measures.
- **Chapter 4: Implementation and Monitoring** – Chapter 4 will present an implementation framework for the CAP, including performance indicators for the measures to be implemented by EMWD. The chapter will describe the key steps needed for implementation, identify anticipated financing and budgeting needs, and describe a timeline for implementation of key measures.
- **Appendices** – The Appendices will include technical details such as details from existing inventories, and the methods, and assumptions underlying GHG reduction measure calculations.

Task 5 Deliverables:

- Draft and Final CAP Document; delivered as electronic files

Task 6 – Meetings and Project Management

ESA recognizes the importance of effective project management in successfully delivering work products on time and within budget. Project manager Jeff Caton will oversee and deliver the scope, schedule, budget, and quality performance of this contract. Jeff will make use of ESA's project management tools to monitor, manage, and report on contract performance, including monthly job cost summaries by project and task, and regular

updates to project and task schedules for the project. He will tailor a project communication protocol that meets the needs of EMWD's project manager, including monthly conference calls and monthly progress reports. Our ongoing team communication and attention to scope control will keep the project on track and aligned with objectives.

ESA trains and cultivates project management skills as a standard part of our internal training and career development programs. Our project management team is supported by a number of effective project management tools, including our in-house accounting technology (Deltek), which enables the tracking of project labor and expenses at any desired level of detail; project and task-level budget tracking spreadsheets; workload projection tools; and scheduling tools, including Microsoft Project, to report on current project status, as well help quickly identify the need for any schedule or budget adjustments.

ESA maintains strict adherence to our QA/QC methodology for all ongoing projects. Our coordinated review and response process provides a system of checks and balances to ensure quality work products that are thorough, technically and procedurally adequate, and easy to understand. When subconsultants are responsible for work products, ESA requires that they conduct their own QA/QC; subconsultants' work products will then also be subject to ESA's QA/QC before delivery to the WRCOG, including review by the project manager and senior-level technical staff as needed.

ESA can use several types of electronic file sharing services including our own "DeliverIt" service for secure web-based file sharing and transmission. These strategies help to minimize communication costs, version control issues, and paper waste by providing a central location for related project information. We also offer the Cisco WebEx videoconferencing service, which provides a media-rich meeting environment as a substitute for in-person meetings, which helps save time and expense related to travel.

Over the duration of the project, ESA foresees the need for monthly teleconference call and the following in-person meetings with EMWD:

- Project kick-off meeting
- Discuss potential GHG reduction measures (Task 3 deliverable)
- Present and discuss Draft CAP (Task 5 deliverable)

Task 6 Deliverables:

- Monthly project team conference calls
- Monthly progress reports
- Three (3) in-person meetings as described above

Optional Task 7 – CEQA

ESA understands that EMWD seeks to develop a "qualified" CAP that has the benefit of providing programmatic CEQA clearance of GHG emissions for future capital improvement projects associated with its operations. This clearance can help reduce barriers to development by streamlining the CEQA process. When a project is consistent with a CAP that satisfies the criteria in CEQA Guidelines Section 15183.5(b)(1), a lead agency may also presume that the project's GHG emissions are less than significant. This method of streamlining is a way for lead agencies to reduce project-level environmental review by relying on robust evaluation at the programmatic level.

ESA will prepare the appropriate CEQA document to allow adoption of the CAP. At this juncture, ESA anticipates that the appropriate CEQA document for the CAP will be a Negative Declaration. However, ESA recommends evaluating the need for CEQA as the goals, targets, and GHG reduction measures are established in Tasks 2 and 3, and provide a scope and fees for this task at that time.

Project Schedule

Figure 1 depicts ESA’s proposed schedule to conduct the scope of work over a period of 12 months (excluding CEQA). The schedule includes monthly project management meetings. ESA can adjust the schedule to suit the needs of EMWD.

Figure 1: CAPtivate 2.0 Project Schedule

TASK	Project Month	1	2	3	4	5	6	7	8	9	10	11	12
1	Review and consolidate GHG Inventories												
2	GHG Forecasts and Targets												
3	GHG Reduction Measures												
4	Monitoring Plan and Tracking Tool												
5	CAP Document												
6	Meetings and Project Management												

For reference, ESA is scheduled to deliver the following workshops and key milestone deliverables under a contract with Western Riverside Council of Governments (WRCOG) for their Climate Action Plan update:

- September 2019: Stakeholder engagement plan
- February 2020:
 - Revised GHG inventories and forecasts for 19 member jurisdictions
 - Planning Directors Workshop #1 – Regional GHG reduction strategy/CEQA
- May 2020: Draft GHG reduction measures;
- June 2020: Planning Directors Workshop #2 – GHG tracking and monitoring tool
- August 2020: Draft Subregional CAP 2.0 and Monitoring Tool

Project Cost

ESA’s estimated cost to complete the scope of work presented herein is summarized in Table 2.

Table 2: ESA Cost Estimate to Develop EMWD Climate Action Plan

<i>ESA Employee Name</i>		Heidi Rous: Project Director	Jeff Caton: Project Manager	Brian Schuster, Lead Analyst	Tim Witwer, GHG Analyst	Breanna Sewell, GHG Analyst	Graphics, Layout and Word Processing	ESA Labor & Expenses Subtotal	
<i>ESA Title</i>		Director III	Director III	Managing Associate II	Associate II	Associate I	Technician III		
Task #	Task Name/Description	\$240	\$220	\$200	\$120	\$105	\$125		
1	Review and Consolidate GHG Inventories	1	4	8	16	16	-	\$ 6,320	
2	GHG Forecasts and Targets		2	4	8	4		\$ 2,620	
3	GHG Reduction Measures	1	16	32	48	24	2	\$ 18,690	
4	Monitoring Plan and Tracking Tool	-	4	16	32			\$ 7,920	
5	CAP Document	1	20	32	24		16	\$ 15,920	
6	Meetings and Project Management	2	24	16	8			\$ 9,920	
Labor hours and cost		4	64	96	112	24	18	\$ 61,390	
Direct Expenses (travel and materials)									\$ 1,200
Total cost estimate									\$ 62,590