

ENERGY OPTIMIZATION PLANS

An aerial night photograph of a wastewater treatment plant. The image shows several large, rectangular clarifiers in the foreground, each illuminated from below with a bright green light. To the left, there are several large, yellowish-white rectangular structures, likely part of the plant's infrastructure. The background shows more of the plant's layout, including walkways and additional equipment, all under the glow of streetlights.

Board of Public Utilities

September 5, 2019

Claire Myers, Energy & Sustainability Representative

EOP GOALS

1. Roadmaps to strategically and systematically optimize energy use in Santa Rosa Water's systems
 - Reduce energy usage, energy costs, and GHG emissions
 - Move towards energy independence
2. Support City Council Goal – Promote Environmental Sustainability: Santa Rosa protects and improves the environment through its policies and actions.

EOP PROCESS

Memorialize

Energy efficiency and renewable energy projects completed to date

Evaluate

Current water systems and practices

Identify

Cost-effective measures to:

- Enhance energy efficiency
- Reduce energy demand
- Increase renewable energy generation

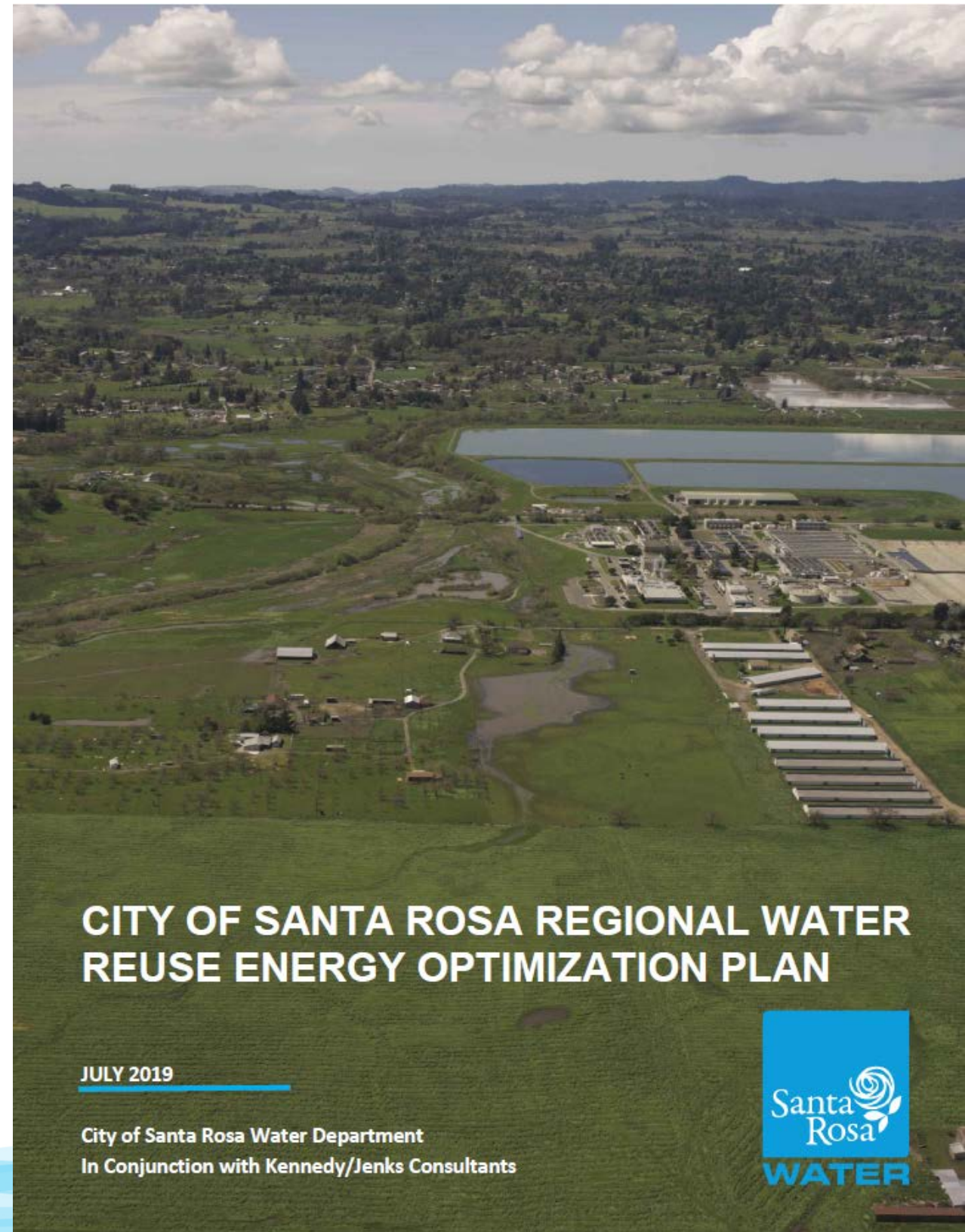
REGIONAL WATER REUSE

4 System Audits

- LTP
- Biosolids/Compost
- Reclamation
- Geysers

5 Deeper Investigations

- Measures:
 - 6 – Pursue
 - 9 – Complete or in Planning
 - 25 – Not Pursue at this Time
 - 21 – Not Recommended



CITY OF SANTA ROSA REGIONAL WATER REUSE ENERGY OPTIMIZATION PLAN

JULY 2019

City of Santa Rosa Water Department
In Conjunction with Kennedy/Jenks Consultants



Regional Water Reuse EOP

Measures to Pursue

EEM 4-1	Restore Pipeline Capacity in portion of Geysers Pipeline
EEM 6-4	Lystek Process
	Evaluate Additional Uses of Waste Heat
EEM 8-12	Upgrade Delta Pump #2
REM 9-4	1 MW Floating Solar Photovoltaic (PV) Installation, Power Purchase Agreement
REM 9-5	Pond Lease for 1 MW Floating Solar Installation



CITY OF SANTA ROSA WATER OPERATIONS ENERGY OPTIMIZATION PLAN

JULY 2019

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WATER OPERATIONS

System Audit

- Water and Wastewater

7 Investigations

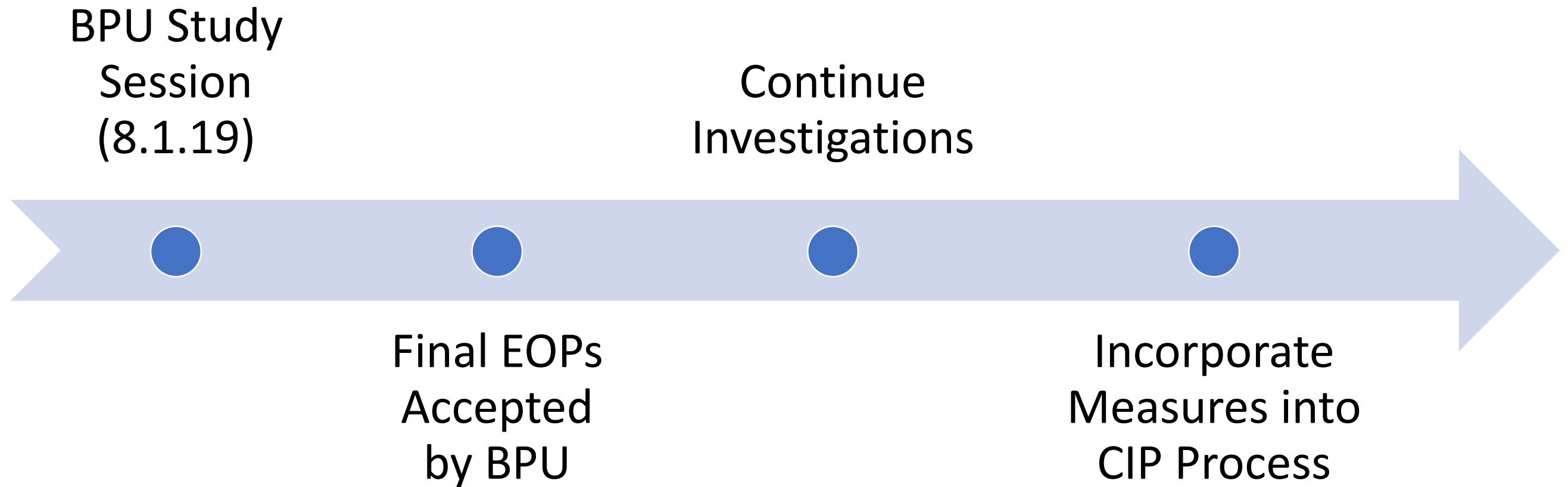
- Measures
 - 10: Pursue
 - 4: Complete or in Planning
 - 4: Not Pursue at this Time
 - 20: Not Recommended

Water Operations EOP

Measures to Pursue

REM 7-1	Own and Operate 134 kW photovoltaic (PV) project on existing waste transfer station
REM 7-2	Own and Operate 320 kW PV project on new carport/truckport structure
REM 7-5	Power Purchase Agreement (PPA) for 320 kW PV project on new carport/truckport structure
REM 7-6	PPA for 1257 kW PV project on new carport/truckport structures
EEM 9-1	Adjust heating program at UFO
EEM 9-2	Adjust cooling program at UFO
EEM 9-3	Test air changes per hour in HVAC equipment
EEM 9-4	Use window blinds to reduce solar gain
EEM 9-5	Investigate natural light options in dark work spaces
EEM 9-7	Educate staff regarding energy reduction

STEPS



IMPACTS OF ACCEPTING EOPS



Fiscal: None



Environmental: Exempt from California Environmental Quality Act (CEQA) as it's not a project. Future projects subject to CEQA review as appropriate.

RECOMMENDATION

It is recommended by the Santa Rosa Water Department that the Board of Public Utilities, by motion, accept the final Energy Optimization Plans for Regional Water Reuse and Water Operations.



QUESTIONS?