Sustainability Roadmap 2024-2025 Department of State Hospitals

Sustainability Master Plan
and Biennial Progress Report on Legislative Sustainability Mandates and the Governor's Sustainability Goals for California State Agencies

Department of State Hospitals

Gavin Newsom, Governor

December 2025

Department of State Hospitals

Sustainability Road Map 2024-2025

Primary Author(s)

Pang Her
Associate Construction Analyst

Ricardo Reilova
Associate Construction Analyst

Krystle Rosario
Associate Governmental Program Analyst

Kavitha Nadar
Staff Service Analyst

Antonio Leaks
Associate Governmental Program Analyst

Nathan Alteza
Associate Governmental Program Analyst

Richard Camacho
Facilities & Construction Manager

Robert Horsley
Chief Operating Officer

Sean Hammer
Deputy Director of Administrative Services

Brandon Price
Chief of Hospital Services

TABLE OF CONTENTS

EXECUTIVE SUMMARY

The Department of State Hospitals (DSH) is pleased to present the Department's "2025 Sustainability Roadmap" which outlines the Department's initiatives to fulfill the goals set forth in Executive Orders (EOs) B-29-15, B-18-12, and B-30-15, B-37-16, and B-16-12 during the 2023-2024 period. This roadmap highlights DSH's commitment to reducing environmental impacts while striving for operational excellence.

DSH manages the nation's largest inpatient forensic mental health hospital system. The mission of DSH is to provide evaluation and treatment in a safe and responsible manner, by leading innovation and excellence across a continuum of care and settings. DSH oversees five state hospitals (Atascadero, Coalinga, Metropolitan, Napa, and Patton). The department is responsible for the daily care of over 7,400 patients. In fiscal year (FY) 2023-24, DSH served over 14,000 patients, with 9,510 served across the state hospitals. With nearly 13,000 employees located across its Sacramento headquarters and five hospitals throughout the state, every team member's effort supports the provision of mental health treatment in a continuum of treatment settings while maintaining the safety of patients, employees, and the public. The five state hospitals are comprised of over 6.2 million square feet of building space on 1,726 acres of land with most of the infrastructure being more than 60 years old.

DSH has several deferred maintenance needs and projects, which include necessary repairs or replacements of generators, lighting, water pipes, HVAC systems, interior upgrades and complete roof replacements, all aimed at addressing the decline of its aging infrastructure. As outdated buildings are replaced and renovations take place, new constructions will prioritize sustainability and durability, adhering to strict building systems commissioning standards and employing contemporary design and construction practices.

In terms of project initiatives, DSH has successfully completed three Energy Service Company (ESCO) projects, four solar projects, and three EV projects, with plans to expand its EV initiatives alongside four ongoing construction projects. The department continues to collaborate with the Department of General Service (DGS) on two remaining ESCO projects and three solar projects, projected to generate 13 megawatts of renewable energy upon completion. These solar initiatives will feature battery storage systems and are currently in the early development stages for locations including Coalinga, Metropolitan, and Patton. Additionally, DSH is partnering with local utility companies to enhance EV charging infrastructure at Metropolitan and Patton, aiming to add approximately 60 new charging ports to the existing total of 309 ports across all hospitals.

DSH hospitals operate continuously, using service vehicles daily for tasks like transporting patients to medical and court appointments. In its sustainability efforts, DSH has approved the acquisition of 11 hybrid SUVs for the Fiscal Year 2024-25 Fleet Acquisition Plan, providing a fuel-efficient, low-emission option that meets law enforcement needs. To improve efficiency, DSH has implemented telematics to monitor usage patterns of combustion engines and electric vehicles, extending their lifespan and reducing maintenance costs. Additionally, DSH plans to install electric vehicle charging stations throughout the hospital to support the integration of zero-emission vehicles in line with current Executive Orders and mandates.

DSH has undertaken significant initiatives to enhance energy efficiency across its five hospitals, focusing on reducing plug load and overall energy consumption. This has been accomplished through the strategic installation of various energy-saving technologies, including solar photovoltaic (PV) that harnesses solar energy, upgrades to LED lighting systems, and the modernization of Heating Ventilation and Air Condition (HVAC) equipment in multiple buildings. By implementing conservation practices and replacing outdated HVAC systems, DSH has demonstrated the effort and commitment to sustainability and operational efficiency.

DSH's decarbonization strategy centers on a thorough evaluation of existing building data, energy consumption patterns, and benchmarking insights to guide project decisions effectively. The primary emphasis is on launching energy efficiency initiatives designed to significantly reduce overall energy usage and carbon emissions. Once these measures are in place, the focus shifts to electrification projects aimed at minimizing or eliminating gas usage. The pathway to carbon neutrality also includes the integration of renewable energy projects and strategies for procuring clean power. In line with California's Senate Bill 100, which mandates that energy suppliers deliver 100% carbon-free electricity by 2045, and Senate Bill 1020, requiring state agencies to obtain 100% carbon-free power by 2035.

Sustainable water management is central to DSH's mission, emphasizing fiscal and environmental stewardship in its conservation efforts. DSH is dedicated to enhancing water efficiency by optimizing surface runoff, collecting rainwater, and conserving treated domestic water for essential operations. Additionally, it aims to improve water efficiency in existing structures through maintenance and retrofitting, while promoting education on the benefits of proactive water conservation.

DSH has three LEED-certified buildings and is committed to ensuring that all future major projects comply with LEED and CalGreens standards. The Facilities Planning,

Construction and Management (FPCM) team collaborates closely with the architecture and engineering team to ensure that both renovations and new constructions adhere to relevant codes and sustainable practices. Key design initiatives focus on enhancing natural daylighting, utilizing recycled materials, and incorporating green products and furnishings, all while meeting anti-ligature requirements in patient areas. Additionally, the hospitals prioritize health and safety by maintaining clean HVAC systems, controlling pests, and using environmentally friendly cleaning products whenever possible.

Waste management is a huge ongoing effort for DSH. Each hospital is equipped with dedicated waste management teams responsible for overseeing these initiatives, and all staff members are trained in recycling and waste prevention. Individual hospitals also have their own waste management procedures and protocols that they abide by. Although the volume of waste has increased in recent years mainly due to the surge and ongoing construction projects, DSH continues to minimize its waste disposal goals by partnering with DGS and external waste handlers to ensure proper recycling and disposal of materials.

DSH implements Environmentally Preferable Purchasing (EPP) by embedding it into our procurement framework, focusing on products that minimize environmental and health impacts. DSH adheres to the DGS "Buying Green Guide" and utilizes designated EPP contracts, which include products that have been pre-evaluated for their environmental benefits.

The roadmap reaffirms DSH's commitment to sustainability despite the challenges of aging infrastructure and the demands of 24/7 operations. Through energy upgrades, renewable energy projects, fleet improvements, strengthened water and waste initiatives and other efforts, DSH has made measurable progress. Moving forward, the department will continue prioritizing modernization, decarbonization and sustainable design to meet state mandates and ensure a resilient, efficient future for the hospitals and communities it serves.

Signature

Brandon Price
Chief of Hospital Services

CHAPTER 1 - CLIMATE CHANGE ADAPTATION

Department Mission and Climate Change Adaptation

The Department of State Hospitals (DSH) continues to incorporate diverse strategies and plans to lessen its environmental impact and adapt to a changing climate. Currently, the Department is undertaking significant projects aimed at reducing energy and water consumption, as well as greenhouse gas emissions across all five hospitals.

All DSH facilities must maintain stable indoor temperatures ranging from 78 to 80 degrees Fahrenheit for patients. Heat rises and elevated temperatures can impact the patient treatment and housing buildings and disrupt treatment plans that involve outdoor activities. To address these risks and other related issues, DSH continues to work DGS and other utility/energy companies on several energy retrofit projects along with demand response across all hospitals. These initiatives encompass, but are not limited to, the replacement of boiler systems, HVAC units, chillers, shade structures, lighting, solar, and battery storage.

Climate Change Risks to Facilities

Climate Change Risk Process:

Due to climate change, temperatures are expected to increase. As a result, facilities will experience higher maximum temperatures and increased minimum temperatures. DSH has identified opportunities to formulate policies that will mitigate the impacts on the facilities, as well as enhance maintenance and operational strategies.

DSH goals for 2023-2024 were aimed to continuously improve energy savings and power reliability at all facilities to reduce the impact of seasonal heat waves as below:

- Enrolled facilities in demand response programs for energy reduction and savings during severe heat waves.
- Implemented energy efficiency measures campus-wide by replacing older existing roofs and roof equipment with new roofs and equipment.
- Implemented projects and efforts to upgrade the hospitals, including utility infrastructure and generator capacity.

- Implemented studies of additional solar canopies with battery storage at Coalinga, Metropolitan and Patton hospitals.
- Replaced outdated evaporating cooling systems with energy efficient HVAC units.
- Discussed with DGS the possibilities of adding microgrids and other distributed energy resources that can improve reliability and resilience to the facilities.

Assessing Risk from Changing Extreme Temperatures:

Table 1.1: Top 5-10 Facilities that Will Experience the Largest Increase in Extreme Heat Events

Facility Name	Extreme heat threshold (EHT)°F	Average # of days above EHT (1961-1990)	Average # of days above EHT (2031-2060)	Change from Historical to projected average # of days above EHT (2031-2060)	Avg. # days above EHT (2070-2099)	Change from historical to projected average # of days above EHT (2070-2099)
DSH-A	93.7	4.4	22.1	17.6	46.4	41.9
DSH-C	105.6	4.4	28.5	24.1	57.2	52.8
DSH-M	98.3	4.5	11.6	7.1	26.5	22.0
DSH-N	99.1	4.4	12.3	7.8	22.2	17.8
DSH-P	102.4	4.4	28.7	24.3	50.7	46.2

Table 1.2a: Top 5-10 Facilities Most Affected by Changing Temperature – Annual Mean Max. Temp

Facility Name	Historical Annual Mean Max. Temp. (1961 – 1990)	Annual Mean Max. Temp. (2031 – 2060)	Change from Historical to Annual Mean Max. Temp (2031-2060)	Annual Mean Max Temp. (2070-2099)	Change from Historical to Annual Mean Max. Temp (2070-2099)
DSH-A	71.2	75.7	4.5	79.1	7.9
DSH-C	77.8	82.5	4.8	86.2	8.4

DSH-M	76.0	80.4	4.4	84.0	8.0
DSH-N	71.9	75.9	4.0	79.4	7.5
DSH-P	76.4	81.8	5.4	85.4	9.1

Table 1.2b: Top 5-10 Facilities Most Affected by Changing Temperature - Annual Mean Min Temp

Facility Name	Historical Annual Mean Min. Temp. (1961 – 1990)	Annual Mean Min. Temp. (2031 – 2060) °F	Change from Annual Mean Min. Temp (2031-2060)	Annual Mean Min. Temp. (2070-2099) °F	Change from Annual Mean Min. Temp (2070-2099)
DSH-A	42.7	46.8	4.1	50.2	7.5
DSH-C	49.4	53.8	4.3	57.4	8.0
DSH-M	54.4	58.6	4.2	62.4	8.0
DSH-N	45.9	49.9	4.0	53.6	7.7
DSH-P	48.8	54.0	5.3	58.2	9.4

Assessing Risk from Heating Degree Days (HDD) and Cooling Degree Days (CDD)

Table 1.3a: Top 5-10 Facilities that will be Most Impacted by Projected Changes in Heating Degree Days (HDD)

Facility Name	Heating Degrees 1961-1990	Average Modeled Heating Degrees (year), 2031-2060	Change in Heating Degree Days Historical to Mid-Century	Average Modeled Heating Degrees (year), 2070-2099	Change in Heating Degree Days Historical to End-Century
DSH-A	3218.0	2095.7	N/A	1537.4	-1680.6
DSH-C	2426.3	1608.4	N/A	1178.8	-1247.5
DSH-M	1187.8	540.6	N/A	273.3	-914.6
DSH-N	2730.1	1849.1	N/A	1344.6	-1385.4
DSH-P	2255.2	1288.5	N/A	839.2	-1416.0

Table 1.3b: Top 5-10 Facilities that will be Most Impacted by Projected Changes in Cooling Degree Days (CDD)

Facility Name	Cooling Degrees 1961-1990	Average Modeled Cooling Degrees (year), 2031-2060	Change in Cooling Degree Days Historical to Mid-Century	Average Modeled Cooling Degrees (year), 2070-2099	Change in Cooling Degree Days Historical to End-Century
DSH-A	278.3	880.3	602.1	1408.5	1130.2
DSH-C	1915.1	2945.4	1030.4	3669.1	1754.0
DSH-M	1268.6	2392.2	1123.5	3266.5	1997.8
DSH-N	504.3	1250.2	745.9	1894.0	1389.6
DSH-P	1370.1	2562.7	1192.6	3330.4	1960.3

Reporting Narrative on Tables 1.3a and 1.3b: HDD and CCD

A Heating Degree Day (HDD) refers to the number of degrees that a daily average temperature falls below a specified reference temperature, which serves as an indicator for when heating is necessary. In contrast, a Cooling Degree Day (CDD) indicates the number of degrees that a daily average temperature surpasses a reference temperature.

Given that DSH facilities operate around the clock every day of the year, ensuring sufficient power to maintain all systems in safe and continuous operation is of utmost importance. During periods of extreme heat, DSH must focus on keeping indoor temperatures at or below the required maximums. Medications need to be stored at room temperature (approximately 78-80 degrees Fahrenheit), food must be kept cool when stored and warm when served, and outdoor activities for both patients and employees must be carefully planned in anticipation of extreme weather conditions.

On older campuses such as DSH-Napa, certain buildings are equipped with outdated and inefficient HVAC systems, resulting in uncomfortable indoor temperatures during warmer days or months. Should a system fail or struggle to maintain adequate temperatures, the indoor climate may become unsafe for both employees and patients.

DSH-Coalinga and DSH-Patton are projected to have the highest average annual temperatures. DSH-Patton is particularly susceptible to temperature fluctuations due to its Urban Heat Island (UHI) effect. As natural land and vegetation are replaced by buildings, roads, and other infrastructure, urban

heat islands develop, causing urban areas to experience higher temperatures compared to the surrounding rural areas.

Plan to Mitigate HDD and CDD

Planning Outline: PO1:a: Plan for Top 5-10 Facilities HDD and CDD Mitigation

Facility Name	Abbreviated Mitigation Plan 2030
DSH-A	SEE NARRATIVES BELOW
DSH-C	SEE NARRATIVES BELOW
DSH-M	SEE NARRATIVES BELOW
DSH-N	SEE NARRATIVES BELOW
DSH-P	SEE NARRATIVES BELOW

Planning Narrative on PO1:a: Mitigate HDD and CDD

DSH plans to employ the following infrastructure solutions at each facility to reduce energy consumption and protect the health and safety of all employees and patients:

    - Continue enrollments in demand response program to alleviate energy consumption to the grid during energy emergency events.
- Energy efficiency measures campuswide by replacing older existing roofs with new cool roofs.
- Implement efforts to evaluate each of the five campuses, including utility infrastructure and generator capacity.
    - Install statewide solar canopies and battery storages to help with energy load and usage during peak hours.
    - Replace outdated evaporating cooling systems with energy efficient HVAC units.
- Collaborate with DGS Sustainability team on the possibility of adding automatic thermostat projects to allow the hospitals an easier way to maintain, manage and control heating and cooling on site for all buildings.

Several points listed above are in planning or development stages at one or more hospitals. For example, there are Solar, Electrical Vehicle Supply Equipment (EVSE) and ESCO projects at all five hospitals to address the HVAC and energy efficiency issues. Multiple roof, HVAC, and air handler replacement projects are in the design or construction phase.

Aside from infrastructure implementation, the hospitals also have heat and emergency operation plans (EOP) along with the new Energy Emergency Action Pan (EEA) to mitigate and educate employees on how to respond to the risk of energy emergencies, heat, wildfires and other disasters. There are procedures in

place to help identify hospital's risks, inform employees of what to do in the event of an emergency, cover risk prevention, what to do in case of an emergency and who needs to be notified.

Assessing Risk from Urban Heat Islands

Table 1.3: Facilities in Urban Heat Islands

Facility Name	Located in an Urban Heat Island (Yes or No)	sq. ft. of Surrounding Hardscape or Pavement if greater than 5000 sq. ft.
DSH-A	No	NO DATA
DSH-C	Yes	NO DATA
DSH-M	Yes	NO DATA
DSH-N	No	NO DATA
DSH-P	Yes	NO DATA

Reporting Narrative on Table 1.4: Urban Heat islands

Urban Heat Islands (UHI) are areas with localized spikes in temperature. These often lead to increased pollution, energy demand, and can have negative impacts on human health. UHIs occur during the hot summer months in areas with higher percentages of impervious surface and less vegetation. Largely focused in areas with large parking lots, and dense development with lower tree density and shading. UHI can be mitigated (i.e., reduced) through tree planting and other greening measures, cool roofs (e.g., lighter roofing materials that reflect light), cooler pavements, and other measures.

Planning Outline for Urban Heat Islands Mitigation:

Planning Outline: PO1:b: Plan for Urban Heat Islands Mitigation

Facility Name	Mitigation or Plan	Est. Implementation Date
DSH-A	ESCO, Solar , EVS, Demand Response (DR)	In process.
DSH-C	ESCO, Solar , EVS, DR, Battery Storage	ESCO and EVS completed prior to 2024. Demand response currently in enrollment. The rest are in process.
DSH-M	ESCO, Solar , EVS, DR, Battery Storage	Demand response enrolled in 2024. The rest are in process.

DSH-N	ESCO, Solar , EVS, DR, Battery Storage	All completed prior to 2025.
DSH-P	ESCO, Solar , EVS, DR, Battery Storage	In process.

Planning Narrative for PO1.b: Urban Heat Islands Mitigation

DSH-Coalinga, Metropolitan, and Patton, the three hospitals located in an UHI, are engaged in various projects that are either in the design or construction phase, aimed at mitigating the effects of high heat on patients and operations.

DSH-Coalinga has successfully completed the installation of a solar and EVSE project. The hospital is currently collaborating with DGS Sustainability Team to implement additional solar canopies equipped with battery storage to enhance energy savings. These initiatives will facilitate energy storage during peak demand and allow for energy discharge during off-peak times. The installation of both solar panels and battery storage will occur simultaneously. DGS is actively coordinating with the solar provider regarding incentives and conducting an interconnection study with PG&E.

DSH-Metropolitan is undertaking several shade structure projects across various patient care and housing facilities. These structures will provide shade to outdoor spaces, reducing heat absorption from sunlight and creating cooler environments. Additionally, the hospital is working on a green space project that is still in the early study and design phase. The introduction of more plants and vegetation will contribute to lowering surface and air temperatures by offering shade and cooling through the process of evapotranspiration. The hospital is also conducting studies for solar, battery storage, and EVSE projects.

DSH-Patton is implementing several strategies to reduce heat absorption. The installation of a cool roof on the EB building has been completed, and designs for adding cool roofs to other buildings are currently in progress, which will minimize energy absorption and help lower building temperatures. The hospital is also exploring a new solar project alongside battery storage. Furthermore, additional EVSE installations are being coordinated with Southern California Edison (SCE) as well.

Assessing Risk from Changes in Precipitation

Table 1.4: Top 5-10 Facilities that will be Most Impacted by Projected Changes in Precipitation

Facility Name	Annual Mean Max. Precip. (1961 – 1990) (in/yrs.)	Annual Mean Precip. (2031 – 2060) (in/yrs.)	Percent Change by mid-century	Annual Mean Precip. (2070 – 2099) (in/yrs.)	Percent change by end of century	Extreme Precip (1961-1990) (in/day)	Extreme Precip (2031-2060) (in/day)	Extreme Precip (2070-2090) (in/day)
DSH-A	23.6	27.4	0.2	30.0	0.3	6.9	6.9	9.3
DSH-C	6.8	7.5	0.1	8.4	0.2	2.1	2.2	2.7
DSH-M	13.7	14.8	0.1	16.3	0.2	4.6	5.0	6.2
DSH-N	23.6	27.8	0.2	31.0	0.3	6.0	5.3	7.1
DSH-P	19.3	20.0	>0.1	21.4	0.1	6.3	6.7	8.0

Reporting Narrative on Table 1.5: Precipitation Impacts

Changes in seasonal precipitation patterns influenced by a shifting climate, as illustrated in Table 1.5, are expected to lead to significant weather changes, including unanticipated rainfall and rising temperatures, which will heighten the risk of droughts and/or floods. Additionally, this will result in the deterioration of building structures due to their age and inefficiency. The condition of some of the Department's older buildings is likely inadequate to endure floods or intense rainfall without suffering damage or degradation. Several of these older buildings are currently closed. Furthermore, the hospitals house server rooms, electrical distribution systems, and mechanical equipment that are susceptible to damage from water intrusion. Throughout the campuses, a considerable portion of utilities—water, sewer, gas, chilled water, and steam distribution—are located underground, and their services may be affected and/or rendered inaccessible due to flooding.

Planning Outline to Mitigate Precipitation Changes

Planning Outline PO1:c: Plan for Top 5-10 Facilities Most Impacted by Projected Changes in Precipitation

Facility Name	Extreme Precipitation (2030) Plan or strategy
DSH-A	Low maintenance/ vegetative coverage of bare soil for stabilization, use of permeable paving, use natural infrastructure options (bioswales, retention ponds,

	wetlands, permeable paving, etc.). Utilize onsite wells. Reduce pollutants.
DSH-C	Modular wetlands/ bioswales basins for filtering stormwater for irrigation/ recycling water usages. Low maintenance groundcover plants. Feasibility study of utilizing wastewater for irrigations. Reduce pollutants.
DSH-M	Low maintenance groundcover plants. Modular wetlands/ bioswales basins for filtering stormwater for irrigation/ recycling water usages. Irrigation upgrade and system modulization. Reduce pollutants.
DSH-N	Open drainage channels design, bioswales, water efficient landscaping, repair and update irrigation systems and expand use of reclaimed water. Reduce pollutants.
DSH-P	Low maintenance vegetative groundcover plants. Modular wetlands/ bioswales basins for filtering stormwater for irrigation/ recycling water usages. Irrigation system upgrade to water conserving system. Storm water capture and recycle water usages. Utilize onsite wells. Rainwater diversion. Reduce pollutants.

Planning Narrative on PO1.c: Precipitation Changes Mitigation Plan

Except for DSH-Coalinga, other hospitals' infrastructures are over 60 years old. DSH is actively working on various projects aimed at reducing the risks associated with heavy rainfall events. These projects involve adding or modifying storm drainage systems to channel rainwater towards open or landscaped areas. The Department has also completed an assessment of the current state of utilities, roads, and buildings. It explores strategies to protect all server rooms and electrical/ mechanical services across all facilities by enhancing flood mitigation efforts and relocating essential utilities from below-grade and ground floor areas whenever feasible. The analysis also considered the modification of existing infrastructures to meet code requirements. Renovating historical buildings on the premises will present additional challenges.

Assessing Risk from Sea Level Rise

Table 1.5: All Facilities at Risk from Rising Sea Levels

Facility Name	Tide Chart Region	2050 Water Level (ft)	Exposed in 2050? (y/n)	2100 Water Level (ft)	Exposed at 2100? (y/n)
DSH-A	N/A	N/A	N/A	N/A	N/A
DSH-C	N/A	N/A	N/A	N/A	N/A
DSH-M	N/A	N/A	N/A	N/A	N/A
DSH-N	N/A	N/A	N/A	N/A	N/A
DSH-P	N/A	N/A	N/A	N/A	N/A

Reporting Narrative on Table 1.6: Sea Level Rise Impacts

No facilities at risk.

Planning Outline to Mitigate Sea Level Rise Impacts

Planning Outline PO1:d: Planning for Sea Level Rise impacts Mitigation

Facility Name	Tide Chart Region	Plan 2030?
DSH-A	No Data	No Plan
DSH-C	No Data	No Plan
DSH-M	No Data	No Plan
DSH-N	No Data	No Plan
DSH-P	No Data	No Plan

Planning Narrative on PO1.d: Sea Level Rise Impact

No facilities at risk.

Assessing Risks from Wildfire

Wildfire Threats by Fire Hazard Severity Zone

Table 1.6: Top 5-10 Facilities Most at Risk to Wildfire Threats by Fire Hazard Severity Zone

Facility Name	Fire Hazard Severity Zone Designation (low, medium, high, very high)
DSH-A	Medium
DSH-C	Low

Facility Name	Fire Hazard Severity Zone Designation (low, medium, high, very high)
DSH-M	Low
DSH-N	High
DSH-P	Medium

Reporting Narrative on Table 1.7: Assessing Facilities most at Risk to Wildfire Threats by Fire Hazard Severity Zones

According to the National Interagency Fire Center, California is the most susceptible to wildfire risks in the United States. In August 2020, the state experienced one of its largest wildfires, which burned nearly 319,935 acres and forced thousands of residents to evacuate. The Palisades Fire earlier this year also destroyed more than 23,400 acres of land across Southern California. The table above shows which DSH facilities are more likely to be more at risk for wildfire.

Three out of five hospitals are in areas prone to wildfires. These fires are uncontrollable, lethal, and present a serious threat to state hospitals. Beyond the destruction of buildings, wildfire smoke can be carried by the wind, posing a danger to both hospital staff and patients. Unlike many state departments that operate from standard office buildings classified as Business (B) occupancies, DSH facilities also include Institutional (I) occupancies. This distinction increases risks, particularly during emergencies or evacuations. In such scenarios, patients with critical health conditions are at higher risk.

Wildfire Threats as Measured by Impacts from Previous Wildfire Events

Table 1.7: Facilities Impacted by Previous Wildfire Events (Last 20 Years) [1]

Facility Name	Impact Category ChooseActual Fire Damage	Year of Impact	Fire Name
DSH-A	N/A	N/A	N/A
DSH-C	Smoke Exposure	2006 2020 2024	Almazon Fire, Mineral Fire, Coalinga Fire
DSH-M	Smoke Exposure	2025	Palisades Fire

1 California Historic Fire Perimeters

Facility Name	Impact Category ChooseActual Fire Damage	Year of Impact	Fire Name
DSH-N	Smoke Exposure	2017 2018 2020	Atlas Fire, SYAR Fire, Glass Fire, Tubbs Fire
DSH-P	Smoke Exposure	2020 2025	Easton Fire, Palisades Fire, Line Fire

Reporting Narrative on Table 1.8 Wildfire Threats as Measured by Impacts from Previous Wildfire Events.

Over the past two decades, the history of wildfires near DSH's facilities indicates that the primary impact faced by these facilities has been smoke exposure. While there has been no spread of wildfires in or around the vicinity, the presence of smoke can lead to adverse health effects for patients, particularly for forensic patients who may already have underlying health issues.

For instance, the recent Palisades fire, despite being miles away from both Metropolitan and Patton state hospitals, has restricted activities for patients and staff due to the smoke that has drifted in. To ensure the health and safety of patients, outdoor activities may be suspended because of nearby wildfire smoke.

Planning Outline PO1:e: Plan for Mitigating Wildfire Risk for Top 5-10 Facilities Most at Risk

Facility Name	Plan 2026-2030
DSH-A	Emergency Operations Plan (EOP), Emergency Business Continuity Plan (EBCP)
DSH-C	Emergency Operations Plan (EOP), Emergency Business Continuity Plan (EBCP)
DSH-M	Emergency Operations Plan (EOP), Emergency Business Continuity Plan (EBCP)
DSH-N	Emergency Operations Plan (EOP), Emergency Business Continuity Plan (EBCP)
DSH-P	Emergency Operations Plan (EOP), Emergency Business Continuity Plan (EBCP)

Planning Narrative on PO1.e: Mitigating Wildfire Risk for Top 5-10 Facilities Most at Risk

Table 1.8 indicates that most hospitals are at risk of wildfires. DSH has taken steps and developed plans to mitigate emergencies such as wildfires across all hospitals. DSH has emergency operation plans (EOP) and EBCP. The EOP outlines the roles during the mitigation, preparedness, response, and recovery stages of an emergency incident. The EBCP provides detailed site-specific procedures on how hospitals will maintain operations during an emergency or recovery disaster. Furthermore, there is the Energy Emergency Action Plan (EEA) designed to help manage power surges to the grid.

To address the growing threat of wildfires and their effects, strategies such as the removal of dead trees, regular underbrush clearing, and consistent cleaning of HVAC systems have been implemented. Plant Operations staff also maintain warehouses stocked with N-95 masks, which are distributed during periods of high smoke pollution. The hospitals also obtained air purifiers and deployed them when needed. Both DSH-Atascadero and DSH-Napa feature significant fire breaks that separate the main facilities from vulnerable areas. Many hospital structures and patient zones are built with concrete, brick, or other non-flammable materials. Ongoing and future initiatives will ensure that fire-resistant materials are utilized in repairs, retrofits, and new constructions.

Understanding Climate Risk to Planned Facilities

Tables 1.8: a-g: Climate Risks to New Facilities

a.1Annual Mean Max. Temperature

Facility Name	Historical Annual Mean Max. Temp. (1961 – 1990)	Annual Mean Max. Temp. (2031 – 2060)	Change from Historical to Annual Mean Max. Temp (2031-2060)	Annual Mean Max Temp. (2070-2099)	Change from Historical to Annual Mean Max. Temp (2070-2099)
DSH-A	71	76	4	79	8
DSH-C	78	83	5	86	8
DSH-M	76	80	4	84	8
DSH-N	72	76	4	79	7
DSH-P	76	82	5	85	9

a.2 Annual Mean Min. Temperature

Facility Name	Historical Annual Mean Min. Temp. (1961 – 1990)	Annual Mean Min. Temp. (2031 – 2060) °F	Change from Annual Mean Min. Temp (2031-2060)	Annual Mean Min. Temp. (2070-2099 °F	Change from Annual Mean Min. Temp (2070-2099)
DSH-A	43	47	4	50	8
DSH-C	49	54	4	57	8
DSH-M	54	59	4	62	8
DSH-N	46	50	4	54	8
DSH-P	49	54	5	58	9

b. Annual Mean Max. Precipitation

Facility Name	Annual Mean Maximum Precipitation (1961 – 1990) (in/yr.)	Annual Mean Precipitation (2031 – 2060) (in/yr.)	Extreme Precip (1961-1990) (in/day)	Extreme Precip (2031-2060) (in/day)
DSH-A	24	27	7	7
DSH-C	7	8	2	2
DSH-M	14	15	5	5
DSH-N	24	28	6	5
DSH-P	19	20	6	7

c. Largest Increase in Extreme Heat Events

Facility Name	Extreme heat threshold (EHT) °F	Average number of days above EHT (1961-1990)	Average number of days above EHT (2031-2060)	Increase in number of days above EHT
DSH-A	94	5	22	17
DSH-C	106	5	29	24
DSH-M	98	4	11	7
DSH-N	99	5	12	7
DSH-P	102	4	29	25

d. Sea Level Rise

Facility Name	Area (California Coast, San Francisco Bay, Delta)	Sea Level Rise 0.0 m	Sea Level Rise 0.5 m	Sea Level Rise 1.0 m	Sea Level Rise 1.41 m
DSH-A	N/A	N/A	N/A	N/A	N/A
DSH-C	N/A	N/A	N/A	N/A	N/A
DSH-M	N/A	N/A	N/A	N/A	N/A
DSH-N	N/A	N/A	N/A	N/A	N/A
DSH-P	N/A	N/A	N/A	N/A	N/A

e. Wildfire Risks by Fire Hazard Severity Zone

Facility Name	Current Fire Hazard Severity Zone (low, medium, high, very high)
DSH-A	Medium
DSH-C	Low
DSH-M	Low
DSH-N	High
DSH-P	Medium

f. Facilities Impacted by Previous Wildfire Events (Last 20 Years)

Facility Name	Impact Category Choose an item.	Year of Impact	Fire Name
DSH-A	N/A	N/A	N/A
DSH-C	Smoke Exposure	2006 2020 2024	Almazon Fire, Mineral Fire, Coalinga Fire
DSH-M	Smoke Exposure	2025	Palisades Fire
DSH-N	Smoke Exposure	2017 2018 2020	Atlas Fire, SYAR Fire, Glass Fire, Tubbs Fire
DSH-P	Smoke Exposure	2020 2025	Easton Fire, Palisades Fire, Line Fire

g. Risk from Heating Degree Days/Cooling Degree Days [2]

Facility Name	Heating/Cooling Degree Days (1961-1990) (HDD/CDD)	Heating/Cooling Degree Days (2031-2060) (HDD/CDD)
DSH-A	71	76
DSH-C	78	83
DSH-M	76	80
DSH-N	72	76
DSH-P	76	82

Reporting Narrative for Tables 1.9a-g: Understanding Climate Risks to Planned Facilities

The data presented in the tables above offers significant insights for all five DSH facilities. According to the information, climate changes are anticipated to impact all five locations, with certain hospitals being more vulnerable to risks than others. DSH is actively planning renovations and new constructions to enhance the care provided to our patients and staff, while also fostering a more sustainable and energy-efficient environment across all five hospitals.

The information above will aid DSH in organizing operational and maintenance schedules, as well as in developing procedures and protocols for managing HVAC systems, energy storage initiatives, and phased power shut-downs during demand response events and Flex-Alerts. DSH's strategy to integrate renewable energy sources and energy storage will further ensure that the hospitals remain functional during severe weather conditions or high-demand periods.

All plans and actions must prioritize the health and safety of patients, and due to the type I occupancy, the regulatory requirements for hospitals are more rigorous than those for residential or commercial buildings. Additionally, there are historical structures that may hinder or complicate the Department's efforts to achieve zero net energy or LEED certification. These challenges are some of the obstacles the Department must navigate to successfully plan for the impacts of a changing climate.

2 Climate data can be found at the Environmental Protection Agency (EPA) website from the interactive map ArcGIS - Heat Waves and Climate Change Indicators: Heat Waves | US EPA

Understanding the Potential Impacts of Facilities on Communities

Reporting on Facilities located in Disadvantaged Communities

Table 1.9: Facilities Located in Disadvantaged Communities

Facility Name	CalEnviroScreen Score	Located in a disadvantaged community? Yes/No
DSH-A	N/A	No
DSH-C	75	No
DSH-M	N/A	Yes
DSH-N	N/A	No
DSH-P	N/A	No

Planning Narrative for table 1.10: Facilities in Disadvantaged Communities

Based on the table above and information from CalEnviroScreen, DSH-Metropolitan is the sole hospital located in a disadvantaged area. Its central position in Norwalk makes it a vital employment hub for both local and nearby communities. Nevertheless, the local community does not receive health services or other social services by DSH, as DSH is statutorily required to exclusively serve patients committed to its inpatient mental health hospital system. DSH-Metropolitan has established mutual aid agreements with local city and county partners to aid under certain conditions.

The Department will maintain its focus on the well-being of its patients and employees during emergency or traumatic events, as well as disaster situations. DSH patients are accommodated in secure facilities. Following catastrophic events, mutual assistance and outreach will be offered to the community, as circumstances allow.

New Facilities and Disadvantaged Communities and Urban Heat Islands

Table 1.10: New Facilities and Disadvantaged Communities and Urban Heat Islands

Facility Name	Located in a Disadvantaged Community (yes/no)	Located in an urban heat island (yes/no)
DSH-A	No	No (Heat Island index=0)

DSH-C	No	Yes (Heat Island index=730)
DSH-M	Yes	Yes (Heat Island index=9,197)
DSH-N	No	No (Heat Island index=352)
DSH-P	No	Yes (Heat Island index=38,575)

Planning Narrative on Table 1.11: New Facilities and Disadvantaged communities and Urban Heat islands

NO NEW FACILITIES IN DISADVANTAGED COMMUNITIES AND OR URBAN HEAT ISLANDS.

Metropolitan is the only hospital located in a disadvantaged community. Though there are three current facilities located in urban heat island, there are no new facilities.

Integrating Climate Change into Department Funding Programs

Table 1.11: Integration of Climate Change into Department Planning

Name of Plan	Have you integrated climate?	Is a plan in progress?	If no, or in process, when will it be integrated?
Five Year- Capital Outlay Plan	Yes	Yes	
Infrastructure Master Plan	Yes	Yes	
Statewide Water Management	Yes	No	Pending program availability.
Demand Response Program	Yes	Yes	
Decarbonization	Yes	Yes	
Energy Emergency Action Plan	Yes	Yes	
Microgrids	Yes	No	DSH has inquired DGS of interest and waiting for

			availability of funds/ grants.

Reporting Narrative for Table 1.12: Integrating Climate Change into Department Planning Process

Adaptation strategies are incorporated into each DSH's Capital Outlay renovation, alteration, special repair, and enhancement of existing structures

The Department intends to engage in the Statewide Water Management program and the implementation of microgrids to upgrade its aging sewer and grid systems to the extent grants or funding become available.

In 2024, the department enrolled Napa and Metropolitan state hospitals in a demand response program to help reduce stress on the grids during energy events. Additionally, the Energy Emergency Action Plan (EEA), mandated by DGS, was created to support the demand response initiative. For this year's roadmap, the department is collaborating with Glumac on decarbonization efforts aimed at significantly lowering carbon footprints.

Climate change presents a threat to DSH's aging buildings and infrastructure. The expenses related to updating all campus buildings and systems to meet current code standards are likely to be impractical, considering the aging infrastructure and the challenges of executing multiple projects simultaneously. DSH has an existing framework to assist the Directorate, California Health and Human Services Agency, and the Department of Finance in identifying the most effective course of action for DSH.

California's Climate Adaptation Strategy delineates the priorities and measurable actions necessary for adapting to climate changes. It emphasizes six key priorities that should guide all resilience efforts in California:

- Strengthen Protections for Climate Vulnerable Communities
- Bolster Public Health and Safety to Protect Against Increasing Climate Risks
- Build a Climate Resilient Economy
- Accelerate Nature-Based Climate Solutions and Strengthen Climate
- Make Decisions Based on the Best Available Climate Science
- Partner and Collaborate to Leverage Resources

The adaptation is mandated by Assembly Bill 1482. This will enable further coordination and integration approaches to building climate resiliencies throughout the facilities at DSH.

Community Engagement and Planning Processes

Table1.12: Community Engagement and Planning Processes

Name of Plan	Does this plan consider impacts on vulnerable populations? Yes/No	Does this plan include coordination with local and regional agencies? Yes/No	Does this plan prioritize natural and green infrastructure? Yes/No
DSH Sustainability Road Map	Yes	Yes	Yes
Five-year Capital Outlay Plan	Yes	Yes	Yes
Energy Emergency Action Plan	No	Yes	Yes
Demand Response	Yes	Yes	Yes

Reporting Narrative for Table 1.13: Community Engagement and Planning Processes

COMMUNITY ENGAGEMENT AND PLANNING PROCESS ACHIEVED.

Climate Change Implementation Planning in Funding Programs

Table1.13: Climate Change Implementation Planning in Department Funding Programs

Name of Grant or Funding Program	Have you integrated climate change into program guidelines? (Yes/No)	If no, Date it will be integrated?	Does this Funding Program consider impacts on vulnerable populations? (Yes/No)	Does this Funding Program include coordination with local and regional agencies? (Yes/No)
Solar and Battery	Yes	(currently working with	Yes	Yes

Storage Self-Generation Incentive Program (SGIP)		DGS and Forefront on battery storage projects)		
Community Microgrid Program	No	Inquired with DGS	Yes	N/A
EV Charge Ready Programs with Southern California Edison (SCE)	Yes	Ongoing	Yes	Yes

Reporting Narrative for Table 1.14: Climate Change Implementation Planning in Funding Programs

No grant or other funding provided.

The grant programs listed above are those that DSH is exploring to seek funding through as individual projects arise that are in line with the grant purpose, or as funding is made available to start or augment existing projects.

Measuring and Tracking Progress

Reporting Narrative on Measuring and Tracking Progress

The climate impacts that pose the greatest concern for DSH facilities are rising temperatures and increased precipitation. Due to climate change and unpredictable weather patterns, these factors can lead to significant damage and safety risks.

DSH has integrated climate change policies into its infrastructure investments and projects. The FPCM team at DSH is actively working to incorporate the climate change adaptation plan into its Capital Outlay and Deferred Maintenance/Special Repair projects. Future DSH Budget Packages (BP) and Studies will incorporate natural and green infrastructure solutions in all upcoming projects. There is potential for current ESCO projects to be expanded to include smart thermostats and Building Management or Automation Systems (BMS or BAS), enabling automated control and monitoring of various building systems

such as HVAC, lighting, and access controls to effectively observe and track facility operations.

DSH's has completed an analysis of the current conditions of utilities, roads, and buildings. Additionally, DSH assessed options to protect all server rooms and electrical/mechanical services across all facilities by implementing enhanced flood mitigation strategies and relocating essential utilities from below-grade and ground floor areas.

The team is working collaboratively with DGS sustainability team and other stakeholders to implement additional projects that will help tackle climate change and provide all hospitals with sustainable measures to follow to reduce energy usage.

CHAPTER 2 - ZERO-EMISSION VEHICLES

Department Mission and Fleet

This Zero Emission Vehicle (ZEV) Report and Plan demonstrate the progress the Department has made toward meeting the Governor's sustainability goals related to ZEVs. This report identifies successful accomplishments, ongoing efforts, outstanding challenges, and future plans.

DSH hospitals operate on a 24/7 basis. Service vehicles are utilized daily for a variety of needs including, but not limited to, patient transport to off-site medical and court appointments and plant operations. The majority of DSH's fleet assets are utilized for short trips within the facility or law enforcement patrol resulting in idle time and low mileage with a need for little major maintenance and repairs. DSH's statewide fleet consists of sedans, vans, pickup trucks which range from light duty, medium duty and heavy duty, SUVs, electric carts, and pursuit-rated sedans/SUVs.

The typical usages for DSH's fleet assets include, but are not limited to, the following:

- Facility maintenance and operations

- Motor pool services
    - Food delivery
    - Laundry and patient property
    - Patient transportation to and from court and medical appointments
    - Patient transportation to approved discharge locations and treatment centers upon their release from the facility
    - Employee transportation

- Hospital police services
    - First responders
    - Security patrol
    - Transport of patients to the local jail and court ordered appointments

DSH-Atascadero is a 621-acre facility originally built in 1954 with a variety of terrain types. Vehicles are subject to terrain such as asphalt, concrete, dirt roads, paved, and un-paved roadways while traveling on grounds. Most employee driven vehicles are used throughout the day for short trips to travel within the grounds or within the vicinity of Atascadero. However, patient transportation vehicles travel distances as far as 550 miles round trip when driven to surrounding DSH

facilities. DSH-Atascadero is currently planning to install 17 level 2 port chargers on its facility. The project is currently in design with DGS.

DSH-Coalinga is a 304-acre facility originally built in 2005 located in a remote rural area, making travel and transportation a key element to their operational success. Fleet vehicles encounter a variety of surfaces on-site including black top, concrete, dirt roads, asphalt, paved, and un-paved roadways. Although, the majority of DSH-Coalinga fleet stay on grounds or used within the vicinity of Coalinga, patient transportation vehicles are used to travel longer distances for a longer period. Patients are transported in modified security fleet transportation vans for medical services and court appointments in outlying areas which exceed typical battery electric vehicle ranges of 60-80 miles per charge. DSH-Coalinga just recently finished installation of a total 36 level 2 ports chargers at its facility.

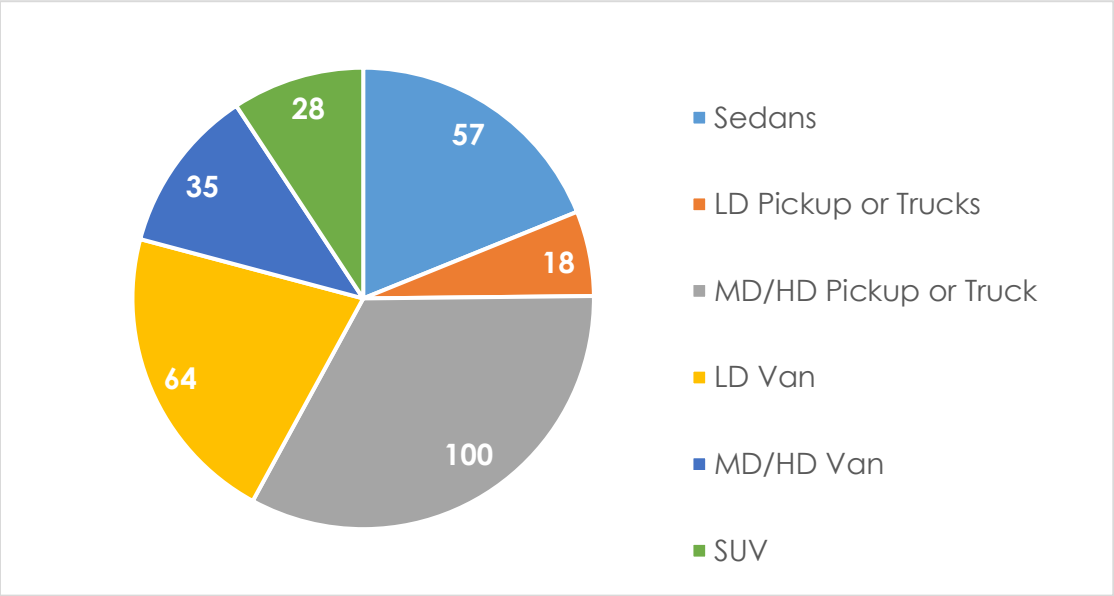
DSH-Metropolitan is a 160-acre facility originally built in 1916 located in an urban area in Southern California. Vehicles on site are driven on the same terrain and are used in a consistent manner as other locations. Currently, DSH-Metropolitan has 16 EV charging stations installed on campus with current projects in design to install another 130 level 2 ports chargers.

DSH-Napa has approximately 2,200 acres of wild land areas which employees are tasked with maintaining, patrolling, and providing emergency services for, along with 150 acres of improved areas, including Camp Coombs and the adjoining Skyline Park. Additionally, vehicles are also subject to terrain which ranges from asphalt, concrete, dirt roads, paved, and un-paved roadways while traveling on grounds. Although some land is developed with concrete and asphalt, most outlying areas are rugged and in a natural state, which requires the availability of durable off-road vehicles. DSH-Napa just recently finished installation of 50 level 2 ports charger total near the new main kitchen and at the admin south parking lot area.

DSH-Patton is a 275-acre facility located in San Bernardino County, roughly 65 miles from DSH-Metropolitan and provides law enforcement related services to local communities in the event of emergencies. DSH fleet vehicles are subject to terrain such as asphalt, concrete, dirt roads, paved, and un-paved roadways while traveling on grounds. Vehicles are used for a minimum of five workdays per week for short trips within the facility and surrounding areas of Patton. DSH-Patton is currently planning to install a total of 76 level 2 ports charger at its facility. The project is currently in design with Southern California Edison (SCE) and DGS.

Composition of Vehicle Fleet

Graph 2.1: 2024 Composition of Vehicle Fleet



Fuel Types

Reporting on Total Fuel Use by Fuel Type.

Table 2.1: Total Fuel Purchased in 2023/2024

Year	Fuel Type (Gallons) Diesel	Fuel Type (Gallons) Gasoline	Fuel Type (Gallons) Renewable Diesel
2023	12,413	93,356	0
2024	14,783	98,242	0

Reporting Narrative on Table 2.1: Fuel Type Selections

DSH hospitals have a fleet consisting of Gasoline, Diesel, Electric, and one Hydrogen powered vehicle. The decision on which fuel DSH hospitals use is based on a variety of reasons; gasoline and diesel-powered assets are typically reserved for heavy-duty applications and long-distance travel due to their higher energy density and range. Meanwhile, electric power is favored for shorter-range tasks, where it offers lower emissions and quieter operation. The above table consists of data from fuel purchased via the WEX Fleet Fuel Card as well as fuel that is stored on-site. Although discussion of the adoption of hydrogen as a fuel source have occurred, there is a lack of hydrogen fueling stations located near any DSH hospital thus limiting the access to the alternative fuel source.

Planning Narrative on Table 2.1: Fuel Type Selections

DSH will continue matching fuel types to operational needs while prioritizing near-term petroleum reduction. Light-duty, short-range, and stop-and-go use cases will be prioritized for battery-electric and plug-in hybrid adoption, while higher-load and long-range assignments will retain conventional fuels until suitable ZEV replacements and charging coverage are available. Telematics data and WEX/on-site fuel records will guide route and duty-cycle selection for ZEV candidates and right-sizing actions.

Where diesel remains necessary for mission reliability, DSH will assess renewable diesel supply feasibility and engine/warranty compatibility to reduce lifecycle emissions without disrupting critical services. Hydrogen will be monitored for future feasibility, recognizing current fueling access constraints near DSH hospitals.

Rightsizing the Vehicle Fleet

Teleworking, Mission Changes, and Technology Changes

Reporting Narratives on Teleworking, Mission Changes, and Technology Changes

Telematics is a method for monitoring vehicle use using Global Positioning Systems (GPS) and on-board diagnostics. Telematics provides valuable information that often results in fuel savings, opportunities for future ZEV adoption, and improved vehicle utilization. Telematics is especially important for verifying that plug-in hybrid vehicles are maximizing the use of electric fuel rather than gasoline. The real-time insights provided by telematics allow fleet managers to make informed decisions on integrating ZEVs into their fleet which in part contributes to a greener and more sustainable form of transportation. With the implementation of Telematics, DSH's Fleet and Asset Management Section (FAMS) is working on finalizing Policy Directive (PD) 2701 to provide employees with instructions in management of Telematics.

DSH's core mission and 24/7 care operations remain unchanged; fleet utilization continues to center on patient movement, hospital police services, facilities operations, and first-response activities across varied terrains. Where applicable, administrative telework has modestly shifted some daytime trip demand without reducing essential on-site services. A majority of DSH's employees require onsite work based on providing care and treatment to over 5,500 patients daily.

Technology changes have advanced fleet efficiency and ZEV readiness. Telematics enables monitoring of utilization, idling, safety behaviors, and plug-in hybrid electric usage, providing the data foundation for ZEV siting, right-sizing, and

fuel management improvements. DSH's Fleet and Asset Management Section (FAMS) is finalizing Policy Directive 2701 to operationalize statewide telematics program governance and staff instructions.

Telematics

Telematics Implementation Status

Reporting Narrative on Telematics Implementation Status

Upon completion, PD 2701 – Telematics will formalize program operations, roles, and reporting to drive safety, cost savings, and ZEV integration decisions.

DSH has worked with RMJ Technologies to purchase and install a total of 321 telematics devices at all five DSH hospitals. There are 54 remaining devices and DSH is in the process of scheduling with RMJ Technologies to complete installations by September 2025.

Planning Narrative for Telematics Data

Telematics data will be used to monitor safe vehicle operation as well as cost savings resulting from better fuel efficiency and maintenance. DSH is in the process of completing Policy Directive 2701 – Telematics, which will operationalize the DSH Statewide Telematics Fleet Monitoring Program. It will also provide staff with instructions in the management of telematics to ensure safety and cost savings on vehicle maintenance.

Existing Fleet Description

Light Duty Fleet Vehicles

DSH hospitals operate on a 24/7 basis. Light duty service vehicles are utilized daily for a variety of needs, including but not limited to patient transport to off-site medical and court appointments. The majority of DSH's fleet assets are utilized for short trips within the facility or law enforcement patrol resulting in idle time and low mileage with a need for little major maintenance and repairs. DSH's Light-Duty statewide fleet consists of sedans, vans, pickup trucks, SUVs, electric carts, and pursuit-rated sedans/SUVs.

Typical usage for DSH's light-duty fleet assets include, but are not limited to, the following:

- Facility maintenance and operations
- Motor pool services
  - Food delivery
  - Laundry and patient property
  - Patient transportation to and from court and medical appointments
  - Employee transportation
- Hospital police services
  - First responders
  - Security patrol
  - Transport of patients to the local jail and court ordered appointments

Vehicles operated on various types of terrain, which include, but are not limited to, the following:

- Asphalt
- Concrete
- Dirt roads
- Paved and un-paved roadways

Reporting On Total Miles Traveled

Table 2.2 Total Miles Traveled

Year	2019	2020	2021	2022	2023	2024
Miles Traveled	1,654,549	1,075,202	1,352,985	1,247,405	1,375,972	1,296,544

Reporting Narrative on Table 2.2: Total Miles Traveled

DSH hospitals do not have a set standard amount of yearly miles traveled for its light duty fleet given that the vehicles are utilized for patient and employee transportation, which is dependent on operational needs.

DSH hospitals are actively implementing a range of strategies to reduce the total number of miles traveled such as using telematics to optimize transportation routes to minimize unnecessary mileage and improve fuel efficiency. Additionally, DSH hospitals are encouraging carpooling among employees to reduce the number of individual cars traveling. These combined efforts reflect the commitment to reducing DSH's environmental footprint, cutting operational

costs, and promoting sustainable transportation practices within the department.

Reporting On Miles Per Gallon

Table 2.3 Light-Duty Miles per Gallon

Year	2019	2020	2021	2022	2023	2024
MPG	12.14	10.64	8.01	9.14	10.3	11.9

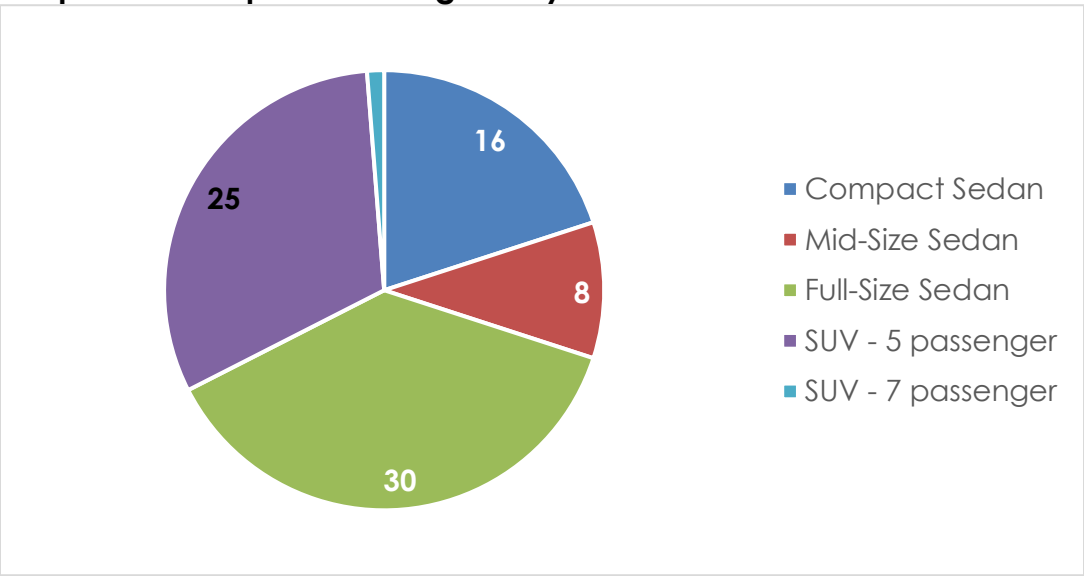
Reporting Narrative on Table 2:3: Miles Per Gallon

Per Executive Order B 16-12, ZEV Purchasing Requirements for FY 24-25 have increased to 50% for light duty vehicles. DSH is currently implementing multiple EV projects and striving to modernize its fleet, which will help increase the miles-per-gallons fuel usages for vehicles. It is important to note that Zero Emission Vehicles (ZEVs) are not tracked via MPG, as their fuel consumption differs from traditional vehicles. Instead, ZEVs are monitored based on their days used to avoid skewing data on DSHs total miles per gallon consumed.

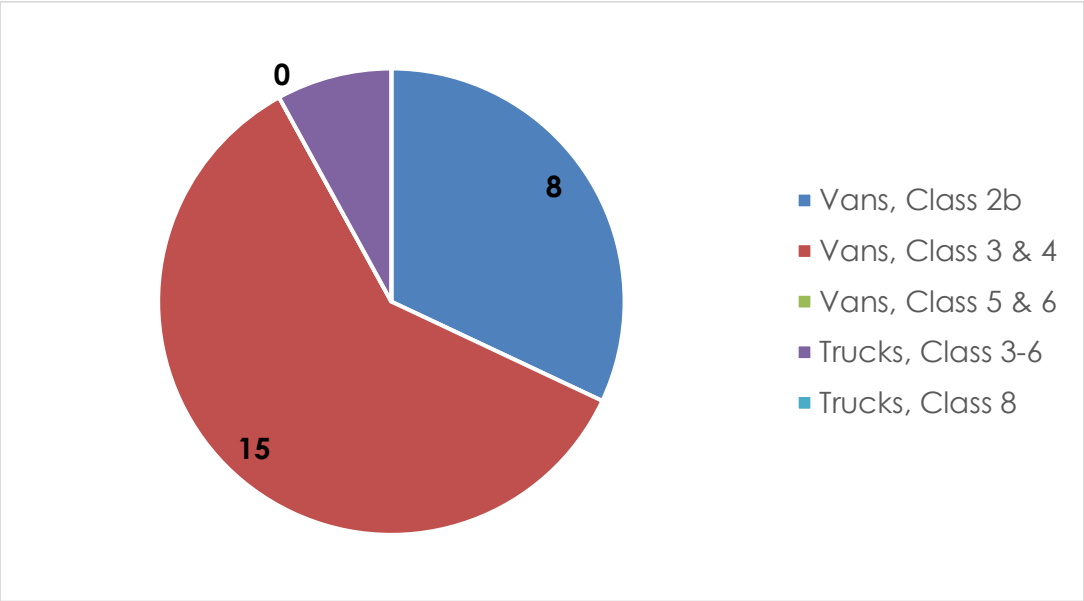
The total average miles per gallon of DSH fleet from 2019 – 2024 was calculated by collecting the fuel consumption data of over 500+ vehicles and equipment. This approach involved summing up the total fuel consumed by each asset and then finding the average miles per gallon across the entire fleet and equipment.

Composition of Light Duty Vehicle Fleet

Graph 2.2: Composition of Light Duty Vehicle Fleet



Medium and Heavy-Duty Fleet Vehicles



Incorporating ZEVs into the State Fleet

Light-Duty ZEV Adoption

Table 2.4 Light Duty Vehicles in Department Fleet Currently Eligible for Replacement

Vehicle Type	Sedans	LD vans	LD Pickups	SUVs, 5 passengers	SUVs, 7 passengers	SUVs, 8 passengers	Total
# of Vehicles eligible for replacement	**11**	**10**	**2**	**4**	**0**	**0**	**27**

Table 2.5 Plan for Light Duty ZEV Additions to the Department Fleet

ZEV Category	21/22	22/23	23/24	24/25	25/26
Battery Electric Vehicle (BEV)	0	10	4	2	N/A
Plug-in Hybrid Vehicle (PHEV)	0	1	0	1	N/A
Fuel Cell Vehicle	0	0	0	0	N/A
Percent of total purchases	0	76%	57%	9%	N/A
Required ZEV Percentage	**35%**	**40%**	**45%**	**50%**	**55%**
Total number of ZEVs in Fleet*	**0**	**18**	**32**	**N/A**	**N/A**

Reporting Narrative for Table 2.5: Light Duty ZEV Additions to the Department Fleet.

DSH hospitals light duty zero emission vehicles play a crucial role in several areas. Battery electric vehicles (BEVs) are ideal for short-distance patient and employee transportation within the facility grounds, ensuring quiet, emission-free traveling. Plug-in hybrid electric vehicles serve well for off-site patient transportation to medical and court appointments, offering extended range compared to BEVs while still benefiting from lower emissions during shorter trips. All fleet assets are driven by DSH hospital employee which range from public safety to plant operations employee. Although DSH has one hydrogen powered vehicle within its fleet, the Department has halted from purchasing more due to the challenges that arise in terms of lack of charging infrastructure on site and near each of the DSH hospital facilities. Currently, there are no vehicle classes missing within the Department needing to conduct state functions.

Medium- Heavy-Duty ZEV Adoption

Medium and Heavy-Duty Vehicles in Department Fleet currently Eligible for Replacement

Table 2.6 MD/HD Vehicles in Department Fleet Currently Eligible for Replacement

Vehicle Type	Vans, Class 2b	Vans, Class 3 & 4	Vans, Class 5 & 6	Trucks, Class 3-6	Truck, Class 8	Total
# of Vehicles Eligible for Replacement	8	15	0	2	0	25

Table 2.7 Planned Medium/Heavy Duty ZEV Additions to the Department Fleet

Table Header Format	21/22	22/23	23/24	24/25	25/26
Battery Electric Vehicle (BEV)	0	5	6	3	N/A
Plug-in Hybrid Vehicle (PHEV)	0	0	0	0	N/A
Fuel Cell Vehicle	0	0	0	0	N/A
Percent of total purchases	**0**	**44%**	**16%**	**9%**	**N/A**
Total number of ZEVs in Fleet	**0**	**3**	**14**	**17**	**N/A**

Reporting Narrative for Table 2.7: Medium-Heavy Duty ZEV Adoption

Daily operations for medium- and heavy-duty vehicles are critical to operations especially when it comes to transporting patients or groups of more than five. The use of medium- and heavy-duty vehicles at the hospitals range from:

- Emergency Response Vehicles: Ambulances and fire trucks provide emergency services at hospital facilities and surrounding areas in accordance with mutual aid agreements
- Facility Operations: Food delivery, laundry, mail, and patient property
  - Patient Transportation: Transportation of patients by CDCR or Department of Protective Services (DPS) to local jails, medical, legal, and court-ordered appointments
  - Plant Operations: Mobile services to provide air conditioning, plumbing, electrical repairs, construction, landscape, and facilities maintenance in employee - and patient occupied areas.

Challenges with use of medium- and heavy-duty ZEVs include but are not limited to:

- Range limitations: Drivers must calculate how far the medium- and heavy-duty ZEVs are able to take them on a single round-trip.
- Inability to install necessary EV charging infrastructure: Installation of EV charging infrastructure at the domicile site is not feasible and/or there is no publicly available infrastructure in the area that could be accessed to support the vehicles.

Planning Narrative for Table 2.7: Medium-Heavy Duty ZEV Adoption

DSH will sequence medium- and heavy-duty ZEV (MD/HD ZEV) adoption to match mission-critical duty cycles while safeguarding continuity of patient care, plant operations, and emergency response. Initial ZEV deployments will target depot-based, predictable routes (e.g., food service, laundry, patient property, facilities support) that stage on campus and can reliably dwell for charging between shifts. These use cases are already performed with MD/HD assets and present the lowest operational risk for first deployments.

Near-term focus is on site readiness and route preparation rather than volume purchases: (1) complete EVSE planning and construction where needed to support Medium Duty/Heavy Duty (MD/HD) charging; (2) use telematics to confirm candidate routes by daily mileage, idle time, payload, and dwell windows; and (3) establish operator/maintenance training and safety procedures. This staged approach addresses current challenges cited in the reporting narrative (range margins and limited off-site infrastructure) by concentrating on on-campus loops with reliable, facility-based charging.

Where mission requires longer-range or specialized public-safety platforms (e.g., ambulances, fire apparatus, long-range transports), DSH will continue to rely on compliant ICE/hybrid solutions until ZEV options meet performance and infrastructure needs.

Take-Home Vehicle Fleet Status

Table 2.8 Take-Home Vehicle Fleet Status

Vehicle Type	Sedans	LD Pickup or Trucks	MD/HD Pickup or Truck	LD Van	MD/HD Van	SUV
Totals	9	0	1	0	0	8

Reporting Narrative on Table 2.8: Take-Home Vehicle Fleet

DSH does not operate a general take-home vehicle program; any home-storage assignment is limited to public-safety functions. During the reporting period, no non-public-safety take-home assignments were authorized, and DSH has not issued home-storage permits for ZEVs. The only approved home-storage vehicles remain ten gas-powered public-safety units that meet special performance requirements and fall under the applicable exemptions.

Planning Narrative on Table 2.8: Take-Home Vehicle Fleet

DSH does not operate a general take-home vehicle program; any home storage is limited to public-safety functions with special performance requirements. Accordingly, DSH will maintain a "no take-home" posture for non-public-safety assignments and will continue to evaluate exceptions strictly under existing public-safety criteria. If future public-safety home storage requests arise, approvals will align with statutory and policy exemptions and will incorporate cost, security, and response-time justifications.

Planning Narrative for Integrating ZEVs into Take-Home Vehicle Fleet

DSH does not operate a general take-home program; any home-storage assignment is limited to public-safety functions. Currently, DSH has not issued home-storage permits for ZEVs. The only vehicles approved for home storage are gas-powered units with special performance requirements necessary for public safety and welfare and recognized under statewide exemptions.

All public-safety home-storage approvals will continue to align with applicable exemptions and guidance (CVC §21055; DGS MM 16-07; SAM §4121.4). The next steps planned include monitoring market availability of pursuit-rated and emergency-response ZEVs, coordinating with DGS on EVSE expansion at secure facilities to support off-shift recharging, and drafting a narrowly scoped take-home ZEV pilot protocol (eligibility, charging/reimbursement, data reporting, and performance gates) for executive review when conditions warrant.

Planning Narrative on Integrating the Take-Home Vehicle Program with Telework

Because DSH does not maintain a general take-home program, integration with telework is not applicable for non-public-safety roles. Should the limited public-safety home-storage need be approved, the assignment will not be telework-driven; it will be based on emergency response, security, and evidentiary considerations, and managed under the public-safety exemption framework. Any such assignments would follow PD 2701 telematics governance for accountability and utilization oversight.

Planning Narrative on Integrating the Take-Home Vehicle Program with Emissions Reduction Strategies

Currently, DSH has not issued home storage permits for ZEV vehicles and does not plan to in the near future. The only vehicles DSH has approved for vehicle home storage permit certification are gas vehicles that have special performance requirements necessary for the protection of public safety and welfare that are exempted from these mandates (Executive Order B-16-12 ZERO EMISSION PURCHASING MANDATE – 4121).

Planning Narrative for Integrating ZEVs into Take-Home Vehicles

DSH does not have a take-home program given take home vehicles are specific to public safety functions.

ZEV Public Safety Exemption

Reporting Narrative for ZEV Public Safety Exemption

DSH DPS law enforcement pursuit-rated vehicles are exempt from EO B-16-12 goals pursuant to:

- 165 California Vehicle Code section:
  - All DSH peace officers are appointed pursuant to Chapter 4.5, section 830 PC et. al. Specifically, 830.3(v)PC and 830.38 PC.

- 21055 California Vehicle Code:
  - Driven in response to emergency calls.
  - Pursuit of suspected/actual law violators.
  - Provides fire suppression and medical aid (fire services).
  - All vehicles are equipped with solid, forward facing red lights and sirens.

- DGS Management Memo 16-07 – Zero-Emission Vehicle Purchasing and Electric Vehicle Service Equipment Infrastructure Requirements:
    - DSH law enforcement qualifies as an exempt state law enforcement agency per Policy Overview, Item #5, Special Performance Requirements, as per SAM section 4121.4.

DSH DPS law enforcement operations have the following types of public safety vehicles:

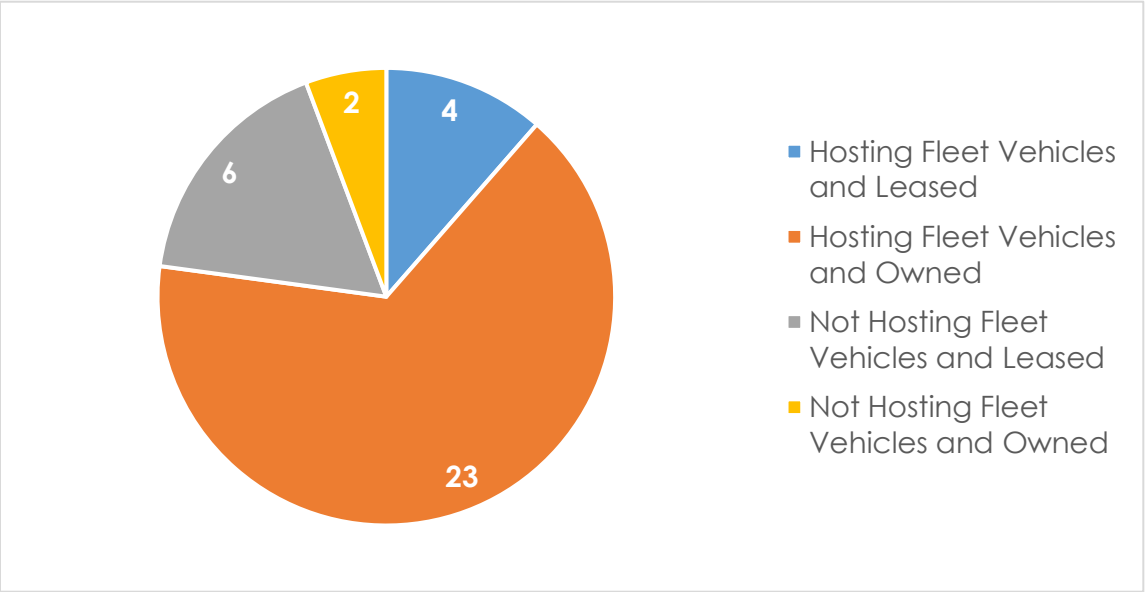
- Patient Transportation Vehicles (long range - 50+ mile round trips)
- DPS marked patrol vehicles
- Fire Engines
- Fire Chief vehicles (emergency response equipped)
- Detective vehicles
- Canine Transport vehicles
- Ambulances

Planning Narrative for ZEV Public Safety Exemption

DSH recognizes the importance of transitioning towards more environmentally friendly vehicles. However, one current challenge DSH encounters is the unavailability of zero emission pursuit rated and fire safety vehicles for purchase within the market. Despite this limitation, DSH is committed to work towards sustainability and has received approval to purchase 11 Hybrid Sport Utility vehicles on the Fiscal Year (FY) 2024-25 Fleet Acquisition Plan (FAP). These hybrid vehicles offer a more fuel-efficient and lower-emission alternative while still meeting the requirements of law enforcement functions.

Department's Parking Facilities

Graph 2.3: Parking Facilities



Reporting Narrative on Graph 2.4: Parking Facilities

There are parking lots located across all hospital campuses, in close proximity or next to each building. Parking lots and stalls have been designated for visitors, employees, and fleet with some spaces being dual use. Depending on the location, some are available for use by employees and/or fleet vehicles. For example, at DSH-Metropolitan, there is a visitor parking lot in front of the visitor center. Employee parking is often spread throughout campuses and fleet parking locations are often identified by signs.

DSH does not offer public/host parking as all DSH facilities are closed campus and require full-time, on-site escorts given the secure nature of the facility to treat forensic patients. DSH does not differentiate between leased and owned parking spaces, as parking is limited. Parking throughout DSH facilities are scarce and do not necessarily support the logistical layouts of services performed across the facilities.

Reporting on Status of EVSE Projects

Table 2.9 : High Priority EVSE Projects

Facility Name	Total Parking Spaces	Existing L1 Charging Ports (2024)	Existing L2 Charging Ports (2024)	Existing L3 Charging Ports (2024)	Total Charging Ports (2024)	EV Charging Ports Needed by 2026
DSH-Atascadero	**36**	**0**	**10**	**0**	**10**	**N/A**
DSH-Coalinga	**72**	**0**	**8**	**0**	**8**	**N/A**
DSH-Metropolitan	**100**	**0**	**14**	**0**	**14**	**N/A**
DSH-Napa	**260**	**0**	**0**	**0**	**0**	**N/A**
DSH-Patton	**152**	**0**	**5**	**0**	**5**	**N/A**
Total	**620**	**0**	**37**	**0**	**37**	**N/A**

EV Charging Site Assessments

Reporting on 2024 Facility Site and Infrastructure Assessments

Table 2.10 EV Charging Infrastructure Site Assessments Conducted

Facility Name	L1 EVSE Project Assessments	L2 EVSE Project Assessments	L3 EVSE Project Assessments	Entity that Conducted the Site Assessment
DSH-Atascadero	**0**	**0**	**0**	DGS/ SCE
DSH-Coalinga	**0**	**0**	**0**	DGS/ SCE
DSH-Metropolitan	**0**	**171**	**0**	DGS/ SCE
DSH-Napa	**0**	**0**	**0**	DGS/ SCE
DSH-Patton	**0**	**76**	**0**	DGS/ SCE
Total	**0**	**247**	**0**	

Planning Narrative on Table 2.10: EVSE Construction Plan

DSH will continue to work with DGS and the Department of Finance (DOF) on all future projects to incorporate implementation of Electric Vehicle Supply Equipment (EVSE) standards and other infrastructure needs, which will assist DSH in meeting future goals. Currently there are two ongoing assessments/projects for EV infrastructures at each hospital. DSH-Napa was recently completed and DSH is working with DGS and BTC Power to install EV Connect data for reporting. These EV projects are often led and managed by DGS with exceptions to design being

done by Southern California Edison (SCE) or outside stakeholders in contract with DGS. During the study and design phase, DSH provides input to DGS and the assigned design team to help successfully implement the project.

DSH EV chargers are used by state fleet and state employees' vehicles. EV chargers are purchased and installed by the hospitals as well as the DGS Office of Sustainability Transportation Unit. Although maintenance is limited on these charging units, DSH employees are responsible for the upkeep and repair of the equipment after the equipment warranty expires.

On-going EVSE Charging Operations and Maintenance

Public EV Charging Policies

Reporting Narrative on Public EV Charging Policies

Public charging policy not required or in place.

Planning Narrative on Public EV Charging Policies

Public charging policy is not required or in place.
DSH does not offer public charging for EVs and there are no plans to allow access to the public given the secure nature of DSH's facility.

Employee EV Charging Policies

Reporting Narrative on Employee EV Charging Policies

The Policy Directive and Operating Procedures are currently under review by executive management.

Planning Narrative on Employee EV Charging Policies

DSH does not currently have a policy in place for Employee Fleet EV charging. There are signs posted at most of the hospitals for maximum time allowed per charger. The reporting of energy use is tracked through the EV Connect application on a cloud-based system. From those reports, DSH will closely monitor

energy consumption and work with the DGS Sustainability team to determine if and when a charging policy will be developed and implemented.

Fleet EV Charging Policies

Reporting Narrative for Fleet EV Charging

The Policy Directive and Operating Procedures are currently under review by executive management.

Planning Narrative for Fleet EV Charging

DSH does not have a policy in place for Fleet EV charging. The reporting of energy use is tracked through the EV Connect application on a cloud-based system. From those reports, DSH will closely monitor energy consumption and work with the DGS Sustainability team to determine when the charging policy will be developed and implemented.

Hydrogen Fueling Infrastructure

Planning Narrative for Hydrogen Fueling Infrastructure

DSH has no plans to install hydrogen fueling infrastructure at its facilities. However, DSH is considering how fueling and electrical infrastructure is built into the scope of future facilities projects, accounting for growth and compliance with future demand. Discussions with the California Department of Transportation (CalTrans) regarding shared infrastructure for hydrogen fueling will continue to be evaluated.

CHAPTER 3 – ENERGY

Department Mission and Building Infrastructure

Reporting Narrative for Department Mission and Building Infrastructure:

The Department of State Hospitals (DSH) maintains a built infrastructure to fulfill its mission of providing evaluation and treatment to individuals with serious mental health needs. DSH operates five hospitals across California, located in diverse climates and regions, encompassing more than 6.2 million square feet of building space on 1,726 acres of land. This portfolio includes 675 structures dedicated to patient care, administrative functions, and facility support. These facilities include treatment units, medical and forensic buildings, central utility plants, kitchens, laboratories, water treatment systems and housing structures.

The most energy-intensive processes at DSH rely primarily on purchased electricity and natural gas to operate heating, ventilation, and air conditioning (HVAC) systems, as well as medical operations. In addition, hospitals depend on specialized systems such as boilers, chillers, medical equipment, food service operations, and water treatment systems that consume significant amounts of energy to sustain 24/7 patient care.

Nearly 98% of DSH facilities are state-owned and operated, with less than 2% leased. The department monitors and evaluates energy use to identify opportunities for greater efficiency, reduce operational costs, and align with California's Sustainability and Greenhouse Gas (GHG) reduction goals. DSH's long-term goals include advancing renewable energy integration, achieving measurable reductions in energy intensity, and modernizing central plants and aging infrastructure to improve resiliency. In support of statewide policy, the department also seeks to expand Zero Net Energy (ZNE) strategies, increase Electric Vehicle (EV) infrastructure, and pursue carbon neutrality in alignment with California's climate action targets. These efforts underscore DSH's commitment to sustainability while maintaining safe, reliable, and cost-effective operations that support uninterrupted patient care.

Total Grid-Purchased Energy

Table 3.1: Total Grid-Purchased Energy 2023 and 2024

Purchased Energy	2003 Baseline Quantity	Units	2023 Quantity	2024 Quantity	% Qty. Change 2003-24
Electricity	49,279,583	kWh	54,134,147	52,940,626	7%
Less EV Charging	-	kWh	-	-	No Baseline
Less Renewable Energy Generated and used onsite	-	kWh	-	11,843,165	No Baseline
Natural Gas	5,877,559	therms	5,392,613	5,496,454	-6%
Propane	-	gallons	3508	2606	No Baseline
Fuel Oil	-	gallons	1,304	11,068	No Baseline
Steam	-	pounds	0	0	0%
Chilled H2O	-	kBtu	0	0	0%
TOTALS*	**755,897,837**	**kBtu Site**	**724,467,349**	**691,635,353**	**-9%**

*Totals of grid-purchased energy not including on-site renewable generation

Department Energy Use

Reporting High Energy Use Facilities

Table 3.2: Facilities with Largest 2024 Energy Consumption

	Facility Name	Floor Area (ft^2)	Site Energy (kBTU)	Source Energy (kBTU)	Source EUI (kBTU/ft^2-yr)
Owned	NAPA STATE HOSPITAL	1,643,756	296,706,215	347,672,565	212
	PATTON STATE HOSPITAL	1,315,245	131,954,210	237,073,289	180
	ATASCADERO STATE HOSPITAL	865,452	125,773,921	199,091,548	230
	METROPOLITAN STATE HOSPITAL	1,214,474	112,322,398	217,813,526	179
	COALINGA STATE HOSPITAL	1,164,768	105,696,366	208,969,642	179
Leased	**N/A**	N/A	N/A	N/A	N/A
	Total for Facilities in this Table	**6,203,695**	**772,453,111**	**1,210,620,571**	**---**
	Total for all Department Facilities	**6,203,695**	**772,453,111**	**1,210,620,571**	**---**
	Percent of Totals	**100%**	**100%**	**100%**	**---**

Energy Efficiency Solutions for Largest Energy Using Buildings

Planning Outline PO3a: Planning for Facilities with Largest Energy Use

Facility Name	Proposed Energy Efficiency Solutions
NAPA STATE HOSPITAL	Electrification Study in progress ESCO, Solar PRV and EV Charging projects completed
PATTON STATE HOSPITAL	ESCO and EV Charging projects in progress Electrification Study in progress Potential Solar project in process with DGS
METROPOLITAN STATE HOSPITAL	EV project in Construction phase Solar project in proposal with DGS

Facility Name	Proposed Energy Efficiency Solutions
	ESCO project completed
ATASCADERO STATE HOSPITAL	ESCO project in progress Electrification Study in progress EV Charging project completed
COALINGA STATE HOSPITAL	ESCO project in progress Complete EV project Solar projects in proposal with DGS

Planning Narrative for PO3a: Building Energy Efficiency

DSH is prioritizing Planning Outline 3a (PO3a) by focusing on facilities with the highest energy use where modernization and efficiency upgrades will yield the greatest benefits. The key strategies include optimizing central plant operations, retrofitting aging mechanical and electrical infrastructure, and advancing renewable energy initiatives such as solar generation and battery storage. DSH faces several challenges in meeting its energy reduction goals. The challenges include aging infrastructure and high-energy intensity systems, while historic buildings and strict code requirements limit modernization options, and the operational demands of 24/7 patient care further constrain opportunities for upgrades. By concentrating on the most energy-intensive facilities, DSH can direct investment towards projects that enhance reliability, support patient care, and advance progress towards ZNE goals.

Future site upgrades are outlined in DSH's Five-Year Infrastructure Plan, which serves as both a short-and long-range framework for Capital Outlay and Deferred Maintenance or Special Repair projects, along with planning schedules and associated funding requirements. In parallel, Energy Service Company (ESCO) projects are underway or completed across all five hospitals, with additional energy efficiency measures identified through preliminary assessments.

Highlighted below are selected projects across the hospitals that will advance energy efficiency and long-term savings:

DSH - Atascadero:

- **Air Handler and Roof Replacement**:
  - Upgraded roof insulation reduces building energy consumption and carbon emissions
  - Replacement of aging HVAC systems with high energy efficient HVAC systems
- **ESCO Energy Retrofit**:

- Adding electrical generation capacity with waste heat from generators to supply a significant portion of the campus heating needs
- Replace existing steam boilers with fluid heaters to drive unfired steam generators
- Implementing energy efficient LED lighting

DSH - Coalinga:

- **Solar and Battery Storage**:
  - Decrease energy use from solar energy generation
  - Store power during peak hours and offload energy during non-peak hours
- **Shade Structures**:
  - Expand shaded areas and outdoor storage
  - Create cooler outdoor spaces during summer heat
- **EV Chargers:**
  - Supports electric vehicle use
  - Reduce carbon footprint

DSH - Metropolitan:

- **EV Chargers:**
  - Supports electric vehicle use
  - Reduce carbon footprint
- **Employee Park**:
  - Develop well vegetated landscape areas for employees
  - Help to lower heat and reduce overall ambient temperature from hardscape areas

DSH - Napa:

- **Electrification Budget Study**:
  - Evaluates transitioning the hospital away from steam-based systems
  - Reduce carbon emissions and improve overall campus energy efficiency

- **Courtyard Shade Structure:**
- Deflect solar radiation providing additional shaded areas to patients

DSH - Patton:

- **ESCO Energy Retrofit**:

- Upgrades lighting across the campus from incandescent, fluorescent, and HID lamps to energy efficient LEDs
- Adding Variable Frequency Drives (VFDs) to Air Handler Units
- Modify damper configurations to switch from a constant to a variable air volume system integrated with Building Management Systems (BMS)

➢ **EV Charging Stations:**

- Installs a total of 76 EV chargers across campus parking lots M and K with 36 chargers at Lot M and 40 chargers at Lot K
- Support clean transportation and reduce carbon footprint

Due to their scale, cost, and complexity, of most major renovation and construction projects, DGS is the state entity responsible for managing the work efforts. Conversely, minor special repair and improvement projects will be retained by DSH under the purview of on-site facilities management and maintenance staff to ensure continuity and accountability.

Zero Net Energy (ZNE)

Reporting on Existing Building ZNE

Table 3.3 Zero Net Energy Buildings

Status of ZNE Buildings	Number of Buildings	Floor Area (ft^2)	% of Building Area
Buildings Completed and Verified	0	0	0%
Building in Design or Under Construction	0	0	0%
Building Proposed for Before 2025 (but not in design or construction)	0	0	0%
Totals for ZNE Buildings by 2025	0	0	0%
Totals for All Department Buildings by 2025	0	0	0%
% ZNE by 2025	0%	0%	0%

Reporting Narrative for Table 3.3: Zero Net Energy Status of Existing Buildings

In alignment with Executive Order (EO) B-18-12, all new buildings, major renovations, and build-to-suit leases over 10,000 square feet are required to obtain Leadership in Energy and Environmental Design (LEED) Silver certification or higher, while projects under 10,000 square feet must comply with applicable CALGreen Tier 1 standards. Additionally, all state buildings over 50,000 square feet are required to achieve LEED for Existing Buildings: Operations & Maintenance (LEED EBOM) and meet an Energy Star rating of 75 to the maximum extent cost-effective. Meeting these requirements, as the cost of compliance often exceeds the expense of designing, constructing, and operating new sustainability-focused buildings.

DSH is working collaboratively with DGS and energy partners to advance ZNE goals. However, due to existing building conditions, historic structures, and implementation schedules, the Department was not able to meet the 50% requirement for 2025. Many facilities are subject to stringent code requirements related to preservation and safety, which extend renovation timelines and affect progress towards energy targets.

Planning Narrative of Table 3.3: Zero Net Energy Buildings

To address these compliance challenges, DSH is partnering with DGS, JCCA, and other agencies to plan and implement sustainability goals across all five hospitals. In collaboration with the DGS Sustainability Team, the department continues to advance energy saving initiatives. Over the past several years, DSH has achieved significant reductions in energy consumption through system upgrades, improved building controls, and optimized operational practices. Several facilities have also installed on-site renewable energy systems that directly offset purchased electricity. These energy efficiency improvements and renewable generation efforts allow certain buildings to approach, and in some cases, meet the criteria for ZNE performance.

New Construction Exceeds Title 24 by 15%

Table 3.4: New Building Construction Exceeding Title 24 by 15%

New Buildings Exceeding Title 24 by 15%	Number of Buildings	Floor Area (ft^2)
Completed Since July 2012	3	69,400
Under Design or Construction	0	0
Proposed Before 2025	N/A	N/A

Reporting Narrative of Table 3.4 New Building Construction Exceeding Title 24 by 15%

NO NEW CONSTRUCTION.

Planning Narrative for Table 3.4 New Building Construction Exceeding Title 24 by 15%

NO NEW CONSTRUCTION PLANNED.

DSH Five-Year Infrastructure Plan:
Four of the five DSH hospitals are between 66 and 145 years old and, although they have undergone periodic repairs, few buildings have been upgraded to contemporary standards since their original construction. Many facilities require the replacement of failing systems and the installation of new equipment to ensure the safety and well-being of patients and staff.

The historical designation of several structures further complicates demolition and major renovations. In addition, critical infrastructure including domestic water, electrical, and sewer systems remain outdated and in need of comprehensive upgrades. To address these challenges, DSH has projects contained within its FY 24-25 and FY 25-26 five-year Capital Outlay plan aimed at modernizing essential infrastructure while maintaining operational continuity and safety:

- **DSH-A Sewer and Wastewater Treatment Plant**
  This project will provide upgrades to the sewer collection system, installation of a screening system (Headworks), and connection to the City of Atascadero's wastewater treatment system. DSH-A's existing Wastewater Treatment Plant (WWTP) currently serves approximately 1,150 patients and approximately 2,000 employees. DSH-A has not made significant improvements to its sewer collection and WWTP since its commissioning in the early 1950's. After a condition assessment of the WWTP and analysis of the new Central Coast Regional Water Quality Control Board (CCRWQCB)

General Order for Waste Discharge Requirements (WDR), it was determined the existing 70-year-old WWTP treatment processes will not comply with the mandates of the new WDR. Other WWTP deficiencies include improper flow rates, complicated by inadequate treatment capabilities. This project is currently in the working drawings phase.

- **DSH-C Hydronic Loop Repairs**

  This project replaces the severely corroded and deteriorated existing below-grade hydronic loop piping system with a completely new hydronic loop. The degrading pipelines are caused by the corrosive grounds. The new hydronic loop will provide a complete distribution loop, connecting to six (6) existing buildings and nine (9) existing, below-grade points of connection. The work also includes demolition, soil compaction, material testing, asphalt, welding, inspections, and all other elements to complete the project. This project is currently in the construction phase.

- **DSH-M Central Utility Plant Replacement**

  This project will replace the existing CUP located at DSH-M that presently supplies steam for hot water and central heating, as well as chilled water for air conditioning, to 32 patient housing and administrative buildings. DSH retained an architecture and engineering firm to determine the best alternative for replacement of the aging and obsolete CUP. The study identified a centralized option for providing new plant equipment that will significantly improve the efficiency and resiliency of the hot and chilled water generation and distribution systems. This project will allow the hospital to move away from steam generation and will be replaced with hot water boilers with the infrastructure to support. This project is currently in the working drawings phase.

- **DSH-M Fire Waterline Connection to Water Supply**

  This project will provide the volume of water required for the fire sprinkler system to comply with current fire code requirements. During the construction of the Central Kitchen (c. 2010) the State Fire Marshal found that the old existing water storage tanks did not meet the National Fire Protection Association (NFPA) requirements, specifically neither tank had an NFPA 22 compliant outlet with anti-vortex plate. The replacement of the existing northerly 750,000-gallon steel tank with a new 1,000,000-gallon dedicated fire water storage tank will allow the hospital to meet NFPA 22 fire flow requirements. This project is currently in the working drawings phase.

- **DSH-N Electrical Infrastructure Upgrade**

  This project will upgrade the electrical distribution infrastructure with a 12kV distribution system, which includes replacement of the existing Pacific Gas and Electric (PG&E) transformers, substation, utility feeder lines, facility transformers, switchgear, and installation of new generators. This project is necessary to meet the electrical demand of day-to-day operations, and to support future campus improvements. The project is currently in the preliminary plans phase.

- **DSH-P Fire Alarm System Upgrade**

  This project will remove and replace obsolete Fire Alarm Control Panels (FACP) and associated components in four patient-occupied buildings at DSH-P. The existing fire alarm systems are not serviceable and have reached the end of their usable life. The four buildings (30, 70, U, and EB) house the majority of DSH-P's patients and contain satellite kitchens, dining rooms, medical and dental clinics, therapeutic areas, offices, and nursing stations for staff. This project will enable DSH-P to bring the existing fire alarm systems into compliance with regulatory requirements. This project is currently in the working drawings phase.

Beyond major Capital Outlay projects, DSH has advanced energy efficiency through ESCO initiatives, solar generation, EV infrastructure, LED lighting, photovoltaic panels, and upgraded HVAC systems across all hospitals.

To further reduce reliance on grid energy, additional conservation measures have been integrated into daily operations. These include:

- Installing occupancy sensors where feasible
- Procuring ENERGY STAR-rated equipment in line with Environmentally Preferable Purchasing (EPP) principles
- Maintaining standardized temperature set points of 68°F in winter and 78°F in summer
- Maintenance staff routinely inspect ducts, air-filters, and related hardware to optimize system performance, while EMS are utilized where it is possible to provide efficient cooling
- Monitor water temperatures closely to maintain hot water systems between 105-120°F per licensing standards
- Inspect boilers annually for compliance
- Setting monitors and printers to auto-sleep to reduce energy use
- Requiring all new IT infrastructure projects to comply with Energy Efficient Ethernet standards.

Existing Buildings Energy Efficiency

Reporting on Energy Efficiency for Existing Buildings

Table 3.5: Department-Wide Energy Trends (if available)

Year	Floor Area (ft^2)	Total Source kBTU Consumption	Department Average EUI (Source kBtu /square foot)
Baseline Year 2003	6,195,651	1,964,389,686	317
2013	5,946,694	2,121,993,298	357
2014	6,304,403	1,615,375,644	256
2015	6,414,664	1,627,196,231	254
2016	6,414,664	1,162,564,235	181
2017	6,195,651	1,195,523,486	193
2018	6,195,651	1,568,160,775	253
2019	6,195,651	1,307,736,924	211
2020	6,195,651	1,409,100,520	227
2021	6,195,651	1,189,400,745	192
2022	6,195,651	1,184,277,573	191
2023	6,195,651	1,169,927,481	189
2024	6,203,695	1,210,549,148	195
% Change 2003-2024	**0 %**	**-38%**	**-38%**

Reporting Narrative for Table 3.5: Department-Wide Energy Trends

In 2024, DSH experienced an increase in Energy Use Intensity (EUI), reversing the downward trend observed in previous years. The higher EUI is primarily attributed to aging infrastructure, the continuous operational demands of 24/7 patient care, and delays in major modernization projects, all of which place additional loads on building systems. Additionally, the purchase and use of fuel oil during this period contributed to the overall rise in energy consumption.

Despite these challenges, overall electricity costs remained steady or decreased due to offsetting Solar generation, targeted retrofit measures and lower demand charges. Observed savings reflect the combined impact of ESCO projects, EV infrastructure, and other efficient initiatives. Peak demand was reduced or stabilized through central plant optimization, advanced controls, and load-shifting strategies. Despite rising utility rates, overall electricity costs remain steady or decreased due to offsetting solar generation and lower demand charges. GHG emissions fell in parallel with reduced grid reliance, while the new load from

EV charging at some campuses, were effectively managed through scheduling and solar integration, demonstrating continued progress towards energy efficiency goals.

Planning Narrative for Table 3.5: Department-Wide Energy Trends

The DSH Energy Use Plan outlines several strategies to further reduce total energy consumption and EUI, including targeted retrofits, solar PV expansion, EV infrastructure integration, central plant optimization, advanced controls, and load-shifting measures. The next step is to develop a comprehensive implementation plan that prioritizes these strategies, establishes performance targets, and identifies funding pathways. This plan is expected to be completed in the near future to guide campus-wide energy efficiency improvements.

Energy Savings Projects

Table 3.6: Summary of Energy Savings Projects 2023-2024

Year Funded	Estimated Energy Savings (kBTU/yr.)	Floor Area Retrofit (sq. ft.)	Percent of Department Floor Area
2017	108,391,105	2,180,697	35%
2018	78,743,177	1,643,756	27%
2019	27,055,662	1,164,768	19%
2020	12,480,812	1,214,474	20%
Total	**226,670,756**	**6,203,695**	**100%**

Reporting Narrative for Table 3.6 Energy Savings Projects 2022-2024

DSH actively prioritizes energy efficiency initiatives in support of the Governor's sustainability objectives. Over the past five years, DSH has conducted several energy audits and surveys across its facilities to identify opportunities for energy conservation and efficiency improvements. These efforts have been coordinated with DGS and contracted with ESCO.

The following is a summary of the energy surveys conducted on Department-owned buildings:

- Napa State Hospital Energy Audit (2018): Comprehensive assessment to identify energy conservation opportunities. The audit report was shared with the hospital in 2023.

- Comprehensive Energy Audits (2019-2020): Facility-wide evaluations across all DSH hospitals in collaboration with DGS and ESCO to assess energy usage and identify potential areas for efficiency improvements.
- DSH Sustainability Roadmap Reports (2020-2022): Periodic surveys and progress report guiding energy efficiency and sustainability measures

Planning Narrative for Table 3.6 Energy Savings Projects 2022-2024

All DSH's sustainability projects including ESCO, EV and Solar initiatives are overseen by the DGS Office of Sustainability. ESCO projects are underway or completed, whereas the EVs and Solar projects are at various stages, including completion, design or implementation. Furthermore, DSH is exploring participation in Demand Response programs, such as those offered by PG&E's microgrid systems, to further optimize energy performance across its campuses. These comprehensive sustainability efforts reflect DSH's commitment to reducing energy consumption, minimizing carbon emissions, and promoting long-term environmental stewardship.

Demand Response (DR)

Participating in DR Utility Programs & Participating in DR Events

Table 3.7 : Demand Response (DR) Program Participation

Demand Response	Total Number of Buildings	Total Nominated Reduction (kW)	Total Curtailment in 2023 (kW)	Total Curtailment in 2024 (kW)
Enrolled with Enersponse	2	155.5	N/A	124.29
Participate in DR	1	155.5	N/A	124.29
Participate in ADR	0	N/A	N/A	N/A
Total Participating (DR/ADR)	1	155.5	0	124
Enrolled in DR/ADR in 2025	3			
Under Construction or Renovation during 2025	5			
Ineligible to participate	1			
Entire Agency's Building Portfolio	5			

Reporting Narrative for Table 3.7: Demand Response (DR) Program Participation

Out of the five hospitals, one facility has actively participated in a Demand Response program, achieving a curtailment of 124kW. Currently, two hospitals are enrolled in Enersponse programs, creating additional opportunities for load shed and energy savings. The total potential load shed is projected at approximately 248-250 kW, assuming similar performance levels. As additional facilities implement Demand Response strategies, the department anticipates further reduction in peak demand, supporting both operational efficiency and alignment with statewide energy reduction goals. Buildings with higher load-shed potential were not enrolled in DR programs due to operational constraints, infrastructure limitations, and program eligibility requirements, ensuring patient care and safety were not compromised.

Planning Narrative for Table 3.7: Demand Response (DR) Program Participation

DSH is expanding its participation in utility Demand Response (DR) programs as part of its broader energy management strategy. These programs provide an opportunity to reduce peak electricity demand, generate cost savings, and contribute to statewide grid reliability. Additional facilities are being evaluated for inclusion. Strategies include HVAC adjustments, lighting reductions, and central plant optimization. By aligning demand response with energy efficiency, renewable generation, and microgrid initiatives, DSH aims to increase load shed capacity, capture financial incentives, and advance California's clean energy goals.

DSH has been consulting with utility providers, including PG&E, and exploring the potential implementation of microgrids. A microgrid is a localized network of interconnected loads and distributed energy resources designed to manage electricity demand and reduce peak consumption. Microgrids can also store power from the grid, providing hospitals with a reliable backup source of energy during outages caused by storms, blackouts, or other emergencies. This approach enhances both energy resilience and operational sustainability across DSH facilities.

The next step towards implementing microgrids at each hospital is to conduct detailed studies of electrical loads and existing grid infrastructure, in coordination with DGS and the appropriate utility provider, such as PG&E, which offers microgrid demand response programs. A feasibility study or audit will be required at each campus to determine whether the existing grid can support the integration of a microgrid. DSH has initiated contact with PG&E and is awaiting further information and coordination. In parallel, Electrification Studies are underway at Napa and Patton which will provide valuable data and

guidance to support the feasibility and future implementation of microgrids across DSH facilities.

Renewable Energy

Existing Building On-Site and Offsite Renewable Energy (Includes Operational, Under Construction and Proposed Construction)

Table 3.8: 2024 On-Site and Off-Site Renewable Energy

Status	Number of Sites	Capacity (kW)	2024 Power Generation (kWh)	Percent of Total Annual Power Use
On-Site Renewables in Operation or Construction	4	4	7,433,898	6.6%
On-Site Renewables Planned	0	0	0	0.0%
On-Site Renewables Totals	4	4	7,433,898	6.6%
Department-Wide Total Energy Use (kWh equivalent)	-	-	112,638,919	
Off-Site Renewable Totals	0	0	0	0.0%
Off-Site Renewables Planned	0	0	0	0.0%
Off-Site Renewables Combined Current & Planned	0	0	0	0.0%
Current Combined On-Site and Off-Site Renewable Energy	**4**	**4**	**7,433,898**	**6.6%**
Additional Planned On-Site and Off-Site Renewables	0	0	0	0.0%

Reporting Narrative for Table 3.8: On-Site and Off-Site Renewable Energy

At DSH, most of the buildings are aging facilities, creating challenges for implementing both on-site and off-site renewable energy solutions. Nevertheless, the department has undertaken significant efforts and made meaningful progress by installing solar, battery storages and expanding EV infrastructure across all hospitals making on-site renewable installations a more practical and immediate solution to help lower GHG emissions. DSH's renewable energy include but not limited to availability of suitable off-site locations for large scale generation, high costs associated with land acquisition, regulatory and permitting complexities, and integration challenges with existing hospital infrastructure and utility grids.

Planning Narrative for Table 3.8, for all Existing Building Renewable Energy

All DSH hospitals have ongoing ESCO projects, encompassing HVAC system retrofits, LED lighting upgrades, and other targeted energy efficiency measures. These initiatives collectively contribute to reduction of energy consumption and advancement of broader sustainability goals across all campuses.

DSH is committed to achieving 100% renewable energy procurement by 2035. Each hospital is already equipped with on-site solar generation, EV infrastructure and ongoing ESCO efforts. To meet this ambitious goal, efforts are also underway to implement battery storage at select hospitals to optimize on-site renewable energy use. In addition, the department is collaborating with utility providers, DGS and energy efficiency vendors to conduct energy audits and identify further opportunities for system upgrades and renewable integration. To support long-term planning, the department continues to track energy production from both existing and future solar installations.

Monitoring-Based Commissioning (MBCx)

Table 3.9: Current & Potential MBCx Projects

Facility	Building Name	Floor Area (sq. ft.)	MBCx Capable, Difficult, or No EMS	MBCx Projected Start Date	MBCx Projected Cost ($ if known)
DSH	**ATASCADERO STATE HOSPITAL**	865,452	MBCx Capable	In Progress	N/A
DSH	**COALINGA STATE HOSPITAL**	1,164,768	No EMS	In Progress	N/A

Facility	Building Name	Floor Area (sq. ft.)	MBCx Capable, Difficult, or No EMS	MBCx Projected Start Date	MBCx Projected Cost ($ if known)
DSH	**METROPOLITAN STATE HOSPITAL**	1,214,474	MBCx Capable	In Progress	N/A
DSH	**NAPA STATE HOSPITAL**	1,643,756	MBCx Capable	In Progress	N/A
DSH	**PATTON STATE HOSPITAL**	1,315,245	No EMS	In Progress	N/A
Totals		**6,203,695**			**$-**

Reporting Narrative for Table 3.9: MBCx Status of Buildings

Although DSH-Atascadero, DSH-Metropolitan and DSH-Napa can implement Monitoring-Based Commissioning (MBCx), the systems are not yet in place due to the need for initial capital investment, integration complexities with existing building automation systems, limited technical staff resources for continuous monitoring and analysis, and potential disruptions to hospital operations during installation.

Planning Narrative for Table 3.9: MBCx Status of Buildings

DSH has implemented Building Management Systems (BMS) in most facilities with buildings over 5,000 square feet. Several ESCO projects also incorporate the installation or upgrade of Building Automation System (BAS) and BMS as parts of their scopes. For instance, DSH-Napa has upgraded subcomponents of its Energy Management System (EMS) through ESCO initiatives. These systems equate to the Monitoring-Based Commissioning (MBCx) which can help to facilitate the operations and tracking of energy performances and benchmarking reports. DSH has expressed interest to the DGS Sustainability team in exploring the potential implementation of an Automated Building Management System (ABMS) to enhance operational efficiency and support energy conservation efforts.

Building Controls

Reporting on EMS/BMS/Controls Building Capability

Table 3.10: Building Controls

Equipment Controls	% of Buildings Controlled Remotely Offsite	% of Buildings with Controls Onsite	% of Total Buildings
Atascadero State Hospital:			
Lighting	0	20%	20%
HVAC: EMS/BMS	0	60%	60%
HVAC: Smart Thermostats	0	0	0
Other: _____	0	0	0
Coalinga State Hospital:			
Lighting	0	98%	98%
HVAC: EMS/BMS	0	98%	98%
HVAC: Smart Thermostats	0	0	0
Other: _____	0	0	0
Metro State Hospital:			
Lighting	0	0%	0%
HVAC: EMS/BMS	0	60%	60%
HVAC: Smart Thermostats	0	0	0
Other: _____	0	0	0
Napa State Hospital:			
Lighting	0	5%	5%
HVAC: EMS/BMS	0	1.5%	1.5%
HVAC: Smart Thermostats	0	2.5%	2.5%
Other: _____	0	0	0
Patton State Hospital:			
Lighting	0	100%	100%
HVAC: EMS/BMS	0	4.2%	4.2%
HVAC: Smart Thermostats	0	0	0
Other: _____	0	0	

Reporting Narrative for Table 3.10: Building Controls

DSH has installed BMS systems in most facilities with buildings over 5,000 square feet. Overall, facilities are proficient in operating these systems, though occasional issues arise with sensor failures, controllers, or detectors not performing as intended. As part of the DGS ESCO project, several BMS, EMS and BAS are in the process of discussion for replacement, upgrades or new installation.

Facilities without these control systems are generally older or historically significant buildings where such modifications are not feasible.

Planning Narrative for Table 3.10: Building Controls

DSH is developing processes to track and document its equipment controls to support accurate future reporting. This initiative includes assessing existing infrastructure, piloting upgrades at select campuses, and standardizing compatible platforms to ensure consistent and efficient operations. DSH has expressed interest to the DGS Sustainability team in exploring the potential implementation of an Automated Building Management System (ABMS) to enhance operational efficiency and support energy conservation efforts.

Energy Reduction Strategies - Best Management Practices (BMPs)

Planning Narrative for Energy Reduction Strategies in Department Buildings Best Management Practices (BMPs)

DSH is committed to reducing energy consumption across its facilities through the implementation of proven Best Management Practices (BMPs). Despite the challenges posed by aging infrastructure, DSH continues to invest in energy reduction initiatives to align with State's sustainability goals. Each hospital operates 24/7 to provide patient care, which places significant energy demands on limited infrastructure. To address these needs, DSH is collaborating with hospitals, DGS, and utility partners to implement strategies to upgrade the existing grids and interconnections. Current efforts include the implementation of battery storage projects in collaboration with DGS to reduce on-site peak loads.

In addition, a Power Purchased Agreement (PPA) has been executed for Coalinga State Hospital to expand renewable energy procurement. This project is presently in the conceptual design phase, representing an initial step towards increasing the hospital's clean energy capacity. Strategic energy curtailment practices are also being utilized to support more effective power management across facilities.

CHAPTER 4 - DECARBONIZATION

Department Mission and Decarbonization Efforts

DSH manages five forensic hospitals across California, encompassing nearly 600 buildings that operate 24/7. Over the years, the department has actively pursued energy efficiency initiatives aimed at achieving net-zero carbon emissions by 2035. Key efforts include the completion of three LEED-certified buildings, the initiation of electrification studies at three hospitals, and the retrofitting of roofs, HVAC, and lighting systems. Additionally, DSH has procured ZEVs for its fleet, installed solar PV systems and EV chargers at four hospitals, and collaborated with energy consultants like Glumac to formulate a comprehensive decarbonization plan. Furthermore, two sites have been enrolled in a Demand Response Program, with plans to enroll the remaining three hospitals. DSH remains committed to reducing energy consumption and decarbonizing its facilities, anticipating significant reductions in greenhouse gas emissions by 2035 through ongoing projects and major renovations subject to the availability of resources.

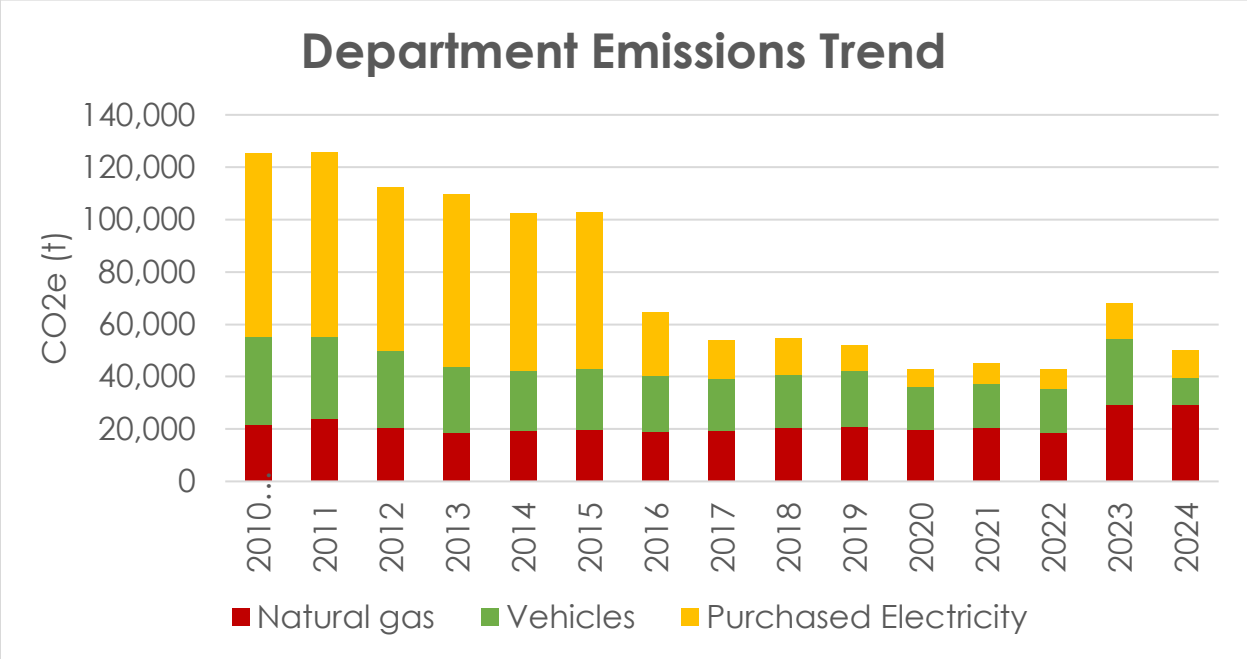
Greenhouse Gas Emissions

Table 4.1: GHG Emissions since 2010 (Metric Tons)

Emissions Source	Natural gas	Vehicles	Purchased Electricity	Total
2010 Baseline	21,556	33,588	70,272	125,416
2011	23,962	31,380	70,225	125,567
2012	20,587	29,461	62,340	112,388
2013	18,516	25,251	65,778	109,545
2014	19,233	23,165	59,956	102,354
2015	19,741	22,954	59,870	102,565
2016	18,996	21,460	24,234	64,690
2017	19,210	19,901	14,570	53,681
2018	20,361	20,533	13,956	54,850
2019	20,841	21,533	9,717	52,091
2020	19,906	16,214	6,938	43,058
2021	20,231	17,264	7,622	45,117
2022	18,662	16,871	7,196	42,729
2023	29,360	25,115	13,641	68,116

2024	29,251	10,328	10,522	50,101
Percent Change since Baseline	**36%**	**-69%**	**-85%**	**-60%**

Graph 4.1: GHG Emissions since 2010



Planning Narrative for Current GHG Reduction Goals and 2035 Reduction Goals Strategies

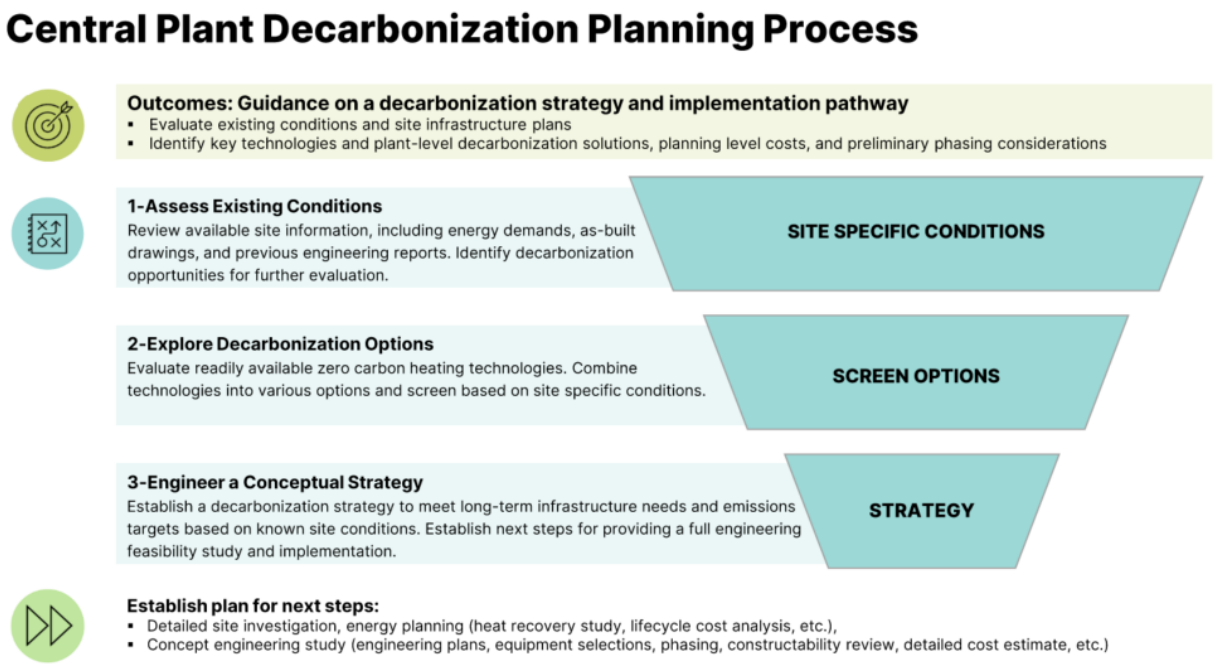
The data presented in the table and graph above demonstrate that DSH has made significant strides in reducing both electricity consumption and vehicle emissions since 2010. Nevertheless, a notable challenge persists in the effort to decrease natural gas usage, which remains a substantial component of the energy supply for the hospitals. Facilities like Napa, established in 1875, are particularly reliant on steam and gas for their operations, making it difficult to implement reductions in gas consumption. The age and infrastructure of such hospital complicate the transition away from gas, as it serves as the primary energy source that powers the entire facility. While DSH is committed to sustainability, the historical reliance on natural gas poses a formidable obstacle in achieving current reductions in energy usage.

The data indicates that DSH's natural gas consumption continues to account for the largest source of emissions. Last year shows an increase of 36% compared to 2010 baseline year. This year, with Glumac's assistance in formulating a decarbonization strategy, DSH plans to consider the CUP and electrification recommendations from the study. The aim is to integrate these measures into existing projects or develop them as standalone initiatives, while also planning for future studies in collaboration with our retained architecture and engineering team. In addition, the department continues to conserve energy through DR events, procure ZEV, and pursue efforts to reach ZNE.

Department's Decarbonization Approach

DSH's strategy for decarbonization involves a comprehensive analysis of current building data, energy consumption metrics, and benchmarking information to inform project decisions effectively. The initial focus is on implementing energy efficiency initiatives aimed at significantly lowering overall energy use and carbon emissions. Following these measures, electrification projects are prioritized to minimize or phase out the use of gas. In addition to these efforts, the roadmap to achieving carbon neutrality incorporates renewable energy projects and strategies for sourcing clean power. Notably, California's Senate Bill 100 mandates that energy suppliers provide 100% carbon-free electricity by 2045, while Senate Bill 1020 requires state agencies to secure 100% carbon-free power by 2035.

To meet the goal of net-zero carbon emissions by 2035, DSH must actively pursue renewable energy and clean power initiatives. The department has already partnered with the DGS sustainability team to implement ESCO, solar installations, and EV charger projects across all five hospitals. Additionally, there is a keen interest in exploring automatic building control systems and microgrid technologies. Ongoing projects, such as the replacement of the Central Utility Plant (CUP) at Metropolitan, will further contribute to carbon reduction efforts. Furthermore, current electrification studies at Atascadero, Napa, and Patton represent significant advancements in DSH's decarbonization journey. Below is a decarbonization process diagram outlined by Glumac for DSH's CUPs.



Existing Conditions Assessment

Napa State Hospital is the largest contributor to total DSH emissions, accounting for 37% of the emissions recorded over the past year among the five hospitals. Notably, natural gas is responsible for approximately 69% of the emissions generated by the department. Coalinga State Hospital, while exhibiting the highest electricity consumption, demonstrates the lowest natural gas usage, primarily due to the presence of an onsite heat recovery chiller. The natural gas-consuming equipment across all five hospitals includes a variety of systems such as boilers, cogeneration units, furnaces, rooftop units (RTUs), unit heaters, wall-mounted systems, and water heating systems (WHS).

The gas-powered equipment is distributed throughout the facilities, with the most significant units situated in the central plant buildings. Many of the hospital buildings are supported by central heating and cooling plants, which provide essential services such as space heating and, in some cases, domestic water heating, cooling, or process load management through heat exchangers. In facilities with independent space conditioning systems, standalone water heating systems are typically employed. Additionally, all sites have process loads, including kitchen and laundry operations, with some locations equipped with dedicated process equipment, while others rely on steam or hot water supplied by the CUP.

Carbon Inventory Worksheet

Planning Narrative for Carbon Inventory Worksheet

DSH has completed its Carbon Inventory Worksheets for all five hospitals. This will aid the department with its study, analysis and steps in achieving decarbonization.

Owned Building Inventory

Table 4.1 Option A: Baseline Building Inventory – Owned Facilities

Property Name	Building Count	Total Square Footage	Typical Fossil Fuel Consuming Equipment	Total Property Emissions (MTCO2e)
NAPA STATE HOSPITAL	184	1,614,974	Kitchen Laundry Process	15,208
PATTON STATE HOSPITAL	162	1,365,009	Kitchen Laundry Process	6,878
ATASCADERO STATE HOSPITAL	111	1,423,290	Kitchen Laundry Process	6,262
METROPOLITAN STATE HOSPITAL	132	1,265,288	Kitchen Laundry Process	6,192
COALINGA STATE HOSPITAL	60	1,153,461	Kitchen Laundry Process	5,002

[Optional] Leased Building Inventory

Table 4.2: Baseline Building Inventory – Leased Facilities

Building Name	Lessor Agency	Leased Square Footage	Natural Gas Consuming Equipment
Napa Warehouse	N/A	1,700	N/A
Napa – California Conservation Corps (CCC)	N/A	2,450	N/A
Napa – Camp Coombs Storage Bldg	N/A	320	N/A
Napa – CCC Hot house	N/A	4,196	N/A
Napa – CCC Lath House	N/A	1,774	N/A
Napa – Child Care	N/A	1,518	N/A
Metropolitan – Direct Construction Unit (DCU) Storage	N/A	707	N/A
Napa – Garage Res. 03A	N/A	185	N/A
Napa – Leased Office/ Bldg 1	N/A	23,000	N/A
Napa – Leased Bldg 10	N/A	1,600	N/A
Napa – Leased Bldg 11	N/A	6,700	N/A
Napa – Leased Bldg 12	N/A	1,700	N/A
Napa – Leased Bldg 13	N/A	3,800	N/A
Napa – Leased Bldg 14	N/A	5,100	N/A
Napa – Leased Bldg 15	N/A	2,200	N/A

Leased facilities at hospitals, such as Napa, operate under specific lease agreements that detail the obligations of the lessee. These agreements typically specify whether the lessee is responsible for directly paying for utilities like electricity and water to the local utility provider, often through a submeter, or if these costs are included in the lease and covered by DSH. If DSH is accountable for covering the expenses, the energy usage will be reflected in the monthly invoices, allowing the department to monitor and evaluate consumption patterns. Additionally, DSH remains committed to overseeing and enhancing all its facilities, including those under lease agreements.

Central Utility Plant and Energy Intensive Operations Inventory

Table 4.3: Central Utility Plant Inventory

Existing Plant Type	Property Name	Connected Building Count	Natural Gas Consumption (Therms)	Fuel Oil Consumption (kBtu)	Total Carbon Emissions (CO_2e)
Steam/CHW	Atascadero State Hospital	21	738,728	0	42,671
HHW/CHW	Coalinga State Hospital	39	412,450	0	26,794
Steam/CHW	Metropolitan State Hospital	9	598,507	0	36,955
Steam	Napa State Hospital	120	2,639,802	0	140,474
Steam	Patton State Hospital	8	633,840	0	34,634

As mentioned earlier, among the five hospitals, Napa is the highest energy consumer, primarily due to its age and old infrastructure that requires significant improvement. The facility's reliance on steam for power generation contributes substantially to its carbon footprint. In contrast, Coalinga, being the newest hospital, demonstrates the lowest energy consumption, benefiting from a more robust infrastructure and newer energy efficiency systems.

Decarbonization Measures

Building Electrification Measures

Electrifying the CUP is the most impactful approach for reducing consumption The recommended measures for DSH based on Glumac's decarbonization report are as follow:

- Identify central heating system downsize opportunities
- Reset heating hot water supply temperatures in existing buildings
- Perform an engineering feasibility study for hot water transition
- Complete any follow-on analysis from the engineering study
- Electrify space and domestic water heating
- Decarbonize remaining process steam loads

DSH has already started electrification studies for three hospitals. All three are in progress to develop into projects in the future.

Table 4.4: Building Electrification Measure Summary

Project Type	Project Count	Fossil Fuel Savings (kBtu)	Electricity Savings (kWh)	Emissions Savings (MTCO2e)	Utility Cost Impact ($)
Process- Kitchen Electrification	189	81,300,000	10,582,000	2,219	$1,593,000
Process – Heat Pump Dryer	193	35,420,000	3,818,800	1,124	$444,000
Retrocomissioning	80	2,500,000	3,427,600	811	$1,092,900
HVAC – Air to Water Heat Pump	57	9,590,000	767,700	357	$11,900
DHW – Hybrid Heat Pump WH	187	9,200,000	694,400	354	$38,000

DHW – Air to Water Heat Pump WH	109	8,500,000	639,500	326	$7,400
HVAC – Heat Pump RTU	97	8,100,000	826,300	269	$82,700
HVAC – Split System	75	7,000,000	708,800	231	$47,400
Lighting Upgrades	39		1,320,400	67	$340,600
HVAC – Elec. Infrared Heater	26	1,700,000	205,700	51	$17,700
HVAC – Through Wall Heat Pump (PTHP)	34	700,000	74,900	24	$8,800
Process – Pool Electrification	1	360,000	37,200	12	$1,600
DHW – Domestic WH Efficiency Upgrade	4		7,600	1	$2,000
DHW-Instantaneous Electric Resistance Heater	5	700	200	0	$30
Total	**1,097**	**164,390,000**	**13,600,200**	**5,800**	**$793,300**

CUP Electrification Options

Based on Glumac's study of all five central plants at the hospitals, the recommended strategies are:

- Replacing existing boilers with ground source heat pump with electric resistance boilers as backup.

- Optimize energy efficiency where possible by using heat recovery chillers or TES storage.
- Minimize impact to existing infrastructure, like existing piping distribution, by utilizing cascade heat pumps.

DSH has initiated several efforts related to electrification prior to Glumac's study, including ongoing electrification studies at Napa, Atascadero, and Patton that commenced before 2025. Additionally, Metropolitan is currently in design of their renovation of the CUP, which involves complete replacement of the existing systems and units. There are also ongoing replacements and upgrades of boilers, HVAC, lighting, fixtures and other units throughout the facilities. While Glumac's recommendations indicate that DSH is progressing in the right direction, there remains a significant journey ahead in the decarbonization process. DSH will continue to commit to advancing energy efficiency and reducing carbon emissions.

Table 4.5: CUP Measure Summary

Property Name	Recommended Strategy	Fossil Fuel Savings (kBtu)	Electricity Savings (kWh)	Emissions Savings (MTCO2e)	Utility Cost Impact ($)
DSH-A	Heat Recovery Chiller + Ground Source Heat Pump + Thermal Energy Tank	30,500,000	2,292,000	1,200	$249,900
DSH-C	Heat Recovery Chiller + Ground Source Heat Pump + Thermal Energy Tank	18,900,000	1,149,000	800	$170,400
DSH-M	Heat Recovery Chiller + Ground Source Heat Pump + Cascade Heat Pump + Thermal Energy Tank	18,000,000	871,000	800	$400

DSH-N	Heat Recovery Chiller + Ground Source Heat Pump + Thermal Energy Tank	20,500,000	877,000	900	$364,500
DSH-P	Heat Recovery Chiller + Ground Source Heat Pump + Cascade Heat Pump + Thermal Energy Tank	37,700,000	1,613,000	1,700	$31,900

Building Energy Efficiency Measures

DSH's three energy efficient measures highlighted on Glumac's report are Retro-commissioning (RCx), lighting LED and DHW hybrid heat pumps. The measures outlined are either in progress or under consideration for the majority of ESCO projects and those related to deferred maintenance or special repair projects.

Retro-commissioning (RCx) is a structured approach aimed at assessing and enhancing the operational efficiency of existing buildings, particularly focusing on HVAC systems. The process is undertaken to address issues that may arise over time, such as the deterioration of equipment, shifts in building usage, or initial settings that were not properly configured. RCx entails a comprehensive evaluation of HVAC systems, which includes functional testing and data collection to pinpoint inefficiencies and malfunctions. Following this assessment, RCx offers tailored recommendations for optimizing system performance, which may involve adjustments to controls, schedules, or equipment. By refining system operations, RCx contributes to decreased energy consumption, reduced operating costs, and enhanced comfort for occupants.

LED lights are highly energy-efficient, consuming less energy than traditional incandescent bulbs. They also emit minimal heat, enhancing safety and efficiency compared to their incandescent counterparts. LED lights are also known for their durability, being resistant to vibrations and impacts, which makes them suitable for various environments. The energy efficiency and longevity of LEDs contribute to reduced energy consumption and waste, making them an environmentally friendly choice.

A DHW hybrid heat pump is a domestic hot water solution that integrates a conventional electric water heater with a heat pump. This combination enhances energy efficiency by primarily relying on the heat pump for most hot

water production, while the electric heating elements serve as a backup during peak demand or when additional heating is necessary. Traditional electric water heaters operate by using electric resistance elements, which can consume a significant amount of energy.

Table 4.6: Energy Efficiency Measure Summary

Project Type	Project Count	Fossil Fuel Savings (kBtu)	Electricity Savings (kWh)	Emissions Savings (MTCO2e)	Utility Cost Impact ($)
RCx	80	2,494,000	3,427,588	811.51	$1,094,726
Lighting LED	39	0	1,320,354	262	$340,579
DHW Hybrid HP WH (EFF)	4	0	7,569	1.5	$1,952

Decarbonization Action Plan

DSH is committed to achieve an overall net-zero carbon operation for its stationary assets by 2035. Actions have been split into short-term, mid-term and long-term plans to align with existing infrastructure conditions, deferred maintenance plans, and five-year infrastructure plans.

Short-Term Actions (2026–2030)

- Continue with studies and conceptual planning of electrification at Atascadero, Napa and Patton hospitals.
- Continue design development for Metropolitan's CUP Replacement project.
- Complete remaining ESCO projects at Atascadero and Patton.
- Conduct pilot Retro-Commissioning (RCx) process to identify and optimize building controls, prioritizing distribution centers.
- Look into piloting Coalinga for micro-grid study.
- Consideration of adding building automation systems (BAS).
- Develop monitoring protocols for utility bills, particularly for sites with hybrid heat pump water heaters.
- Continue five-year infrastructure plan projects.

Mid-Term Actions (2031–2035)

- Continue through design with electrification studies.

- Metropolitan's CUP project complete construction phase.
- Implement automated building control systems if current controls are pneumatic, to improve operational efficiency.
- Expand RCx projects to maximize emissions reductions and utility cost savings.
- Continue collaboration with utility providers to leverage incentives and grid modernization programs.
- Explore options for on-site renewable energy installations
- Continue to update five-year infrastructure plan projects.

Long-Term Actions (2035 and Beyond)

- Maintain carbon neutrality through ongoing monitoring, maintenance, and upgrades of electrification and efficiency systems.
- Evaluate and pilot emerging technologies such as advanced heat pumps, thermal storage, or onsite renewable energy integration.
- Update decarbonization plans in alignment with evolving state policies and technological advancements.
- Continue to update five-year infrastructure plan projects.

The goal of electrifying all facilities presents several challenges, particularly due to the limitations of existing infrastructure in most hospitals, which may not handle the increased electrical loads required for a complete transition from steam and gas to electricity. This shift entails substantial costs and necessitates significant upfront investment. Additionally, the presence of needing to maintain services to patients systemwide. With limited swing spaces available, requires careful consideration and extensive planning.

Decarbonization Action Plan Implementation

Table 4.7: Decarbonization Strategy Summary

Project Type	Project Count	Emissions Savings (MTCO2e)	Timeline
ESCO	5	N/A	Short-term: Complete remaining projects by 2030

Electrification	3	N/A	Long-term: Studies are ongoing for 3 hospitals.
Lighting Upgrades	39	67	Mid-Term: Ongoing and effort will continue during major renovations through 2035.
BAS/ BMS Controls	5	N/A	Mid-Term: Suggested by DGS.
HVAC – Elec. Infrared Heater	26	51	Mid-term: Proposed by Glumac.
HVAC – Through Wall Heat Pump (PTHP)	34	24	Mid-term: Proposed by Glumac.
CUP Electrification	5	N/A	Long-term: Proposed by Glumac.
DHW – Domestic WH Efficiency Upgrades	4	1	Mid-term: Proposed by Glumac.
DHW – Instantaneous Elect. Resist. Heater	5	0	Mid-term: Proposed by Glumac.

Pilot and Priority Projects

The focus on decarbonization emphasizes the ongoing electrification studies and the CUP replacement project at DSH, which are expected to significantly contribute to carbon reduction. However, these major initiatives are long-term and will not enter the design or construction phases in the immediate future. In pursuit of carbon neutrality by 2035, DSH has been implementing smaller-scale measures, such as replacing incandescent lights with LEDs, upgrading building controls, and replacing HVAC systems. These short-term efforts are essential for laying the groundwork for DSH's broader decarbonization strategy.

The department's long-term plans consider significant renovations, such as the demolition or renovation of certain buildings to meet LEED and sustainability standards, with some projects extending beyond 2035. Additionally, smaller-scale initiatives, like the installation of BAS and the replacement of outdated HVAC units, are being considered as short- to mid-term projects. DGS is currently exploring the integration of BAS into existing ESCO projects or potentially launching a new initiative across all hospitals, contingent on program funding. Ongoing replacements of chillers and boilers at most hospitals are also in progress, with some expected to be completed by 2035, while others will continue beyond that timeline.

The short-term project is expected to be completed by 2035; however, mid to long-term initiatives will require more time for DSH to achieve due to various challenges outlined in previous sections. Table 4.9 below illustrates a timeline proposed by Glumac for the decarbonization of the CUPs, which are the primary source of carbon emissions.

Table 4.8: Pilot and Priority Projects for Initial Implementation

Project	Description	Timeline
Decarbonize CUP	Identify central heating system downsize opportunities. Conduct thorough campus heating load studies prior to electrification projects.	1-2 Years
	Reset heating hot water supply temperatures in existing buildings. Pilot HW reset study for 1 building to establish standard SOOs for wider deployment. Integrate heating hot water temperatures resets in ongoing projects. Ongoing RCx to further improve building operations and efficiency.	1-2 Years

	Perform an engineering feasibility study for hot water transition. Include detailed site investigation and energy planning (heat recovery, lifecycle cost analysis, etc.). Develop conceptual plans, equipment, phasing, review and cost estimates.	1-2 Years
	Complete and follow-on analysis from engineering study. Perform a geothermal heating feasibility study to understand soil properties and heating capacity potential. Increase electrical capacity at the CUP.	3-5 Years
	Electrify space and domestic water heating. Renovate CUP with electrified heating systems based on findings and study. Electrify domestic water boilers with heat pumps or other available technologies.	5+ Years
	Decarbonize remaining process steam loads. Install electric point of use equipment for kitchen, laundry, and cooling equipment that uses steam. Alternatively, install an electric steam boiler. Consider electric steam heat pumps if technology becomes market ready.	5+ Years

Project Funding and Incentives

Table 4.9: Funding Opportunity Summary

Project Type	Applicable Funding Mechanisms	Potential Utility Incentives
Electrification Studies	Capital Outlay Funding	N/A
CUP Renovations	Capital Outlay Funding	N/A
ESCO (lighting retrofits, HVAC replacement, control upgrades, etc.)	GS $Mart Loan	N/A
Five-Year Capital Outlay Projects	Capital Outlay Funding	N/A

CHAPTER 5 - WATER EFFICIENCY AND CONSERVATION

Department Mission and Water Use

Sustainable water management practices strategically align with DSH's strategic goal of operational excellence as fiscal and environmental stewardship objectives drive internal water conservation priorities. The built infrastructure of the five hospitals facilities encompasses roughly ±2,600 acres of land and ±6.6 million gross square feet of space in 675 buildings.

Continuous improvement of water efficiency programs including development of strategies to maximize use of surface run-off, collection of rainwater, and preservation of treated domestic water for critical campus uses is a continuous goal for DSH. In addition, DSH continues to improve water efficiency in existing buildings through maintenance and retrofits, and by providing education and awareness on the need and benefits of proactive water conservation.

Over the past five years, California has experienced considerable variability in precipitation, characterized by alternating periods of heavy rainfall and drought. For instance, during the 2024-2025 water year (October 1,2024 – September 30,2025) it has been marked by stark contrasts, illustrating two extremes. The state experienced pronounced northwest-south divide, with some regions facing prolonged dry periods, while others were impacted by intense atmospheric river events that brought heavy rainfall. This variability underscores the complex and often contrasting climate conditions that have characterized this period. 2022-2023 water year saw significant rainfall in certain regions, whereas 2020 and 2021 were notably dry. These significant fluctuations in annual precipitation highlight why California must be ready to handle either a flood or a drought in any given year.

Water conservation is essential. The EOs and SAM sections cited previously illustrate the interdependencies between water use, energy consumption, climate change and landscaping. By adopting a holistic water-planning approach, a well-crafted water strategy can not only meet organizational requirements but also deliver substantial value to the organization and surrounding communities.

Reporting on Total Purchased Water

Table 5.1: Total Purchased Water

Purchased Water	2023 Quantity (Gallons)	2024 Quantity (Gallons)	2023 Cost ($/Year)	2024 Cost ($/Year)
Potable	**359,054,100**	**375,572,200**	$2,017,194.04	$2,466,261.28
Recycle Water	**3,951,210**	**2,974,255**	$8,731.93	$6,892.10
TOTAL	**363,005,310**	**378,546,455**	**$2,025,925.97**	**$2,473,153.38**

3 *DSH records the cost water in Energy Star – Water Costs Recorded for all Hospitals.*

Reporting Narrative on Table 5.1: Total Purchased Water

The data referenced in the table indicate that in 2024, DSH purchases more potable water than in 2023, while spending less on recycled water, DSH also increased overall water usage due to ongoing improvement projects, expanding patient populations, and sustained infection control measures in response to the end of COVID-19 state of emergency. Additionally, both DSH-Atascadero and DSH-Coalinga have infrastructure projects that require increased water usage during its implementation, water testing and construction phases of the project.

DSH has been diligent in its efforts to conserve water usage at its facilities by using low flow fixtures and appliances where possible, through continued installation of new plumbing technologies in all renovated and new construction projects, and through prompt repair of building leaks.

There are factors that drive the increase of cost for total purchased water in California 2024 compared to 2023 include, rising costs of operations and maintenance, wholesale water rate increases, impact of drought and conservation and meeting regulatory requirements can increase the cost of total purchased water. The data shows that DSH is implementing water efficiency measures, which include installation and use of the following:

- High efficiency, low-flush urinals and toilets
- Efficient low-flow shower heads
- Proactive leak detection and repairs
- Localized Subsurface Irrigation
- Drip irrigation with smart controllers
- Shut off timers and with faucets equipped with shutoff nozzles

3 DSH records the cost water in Energy Star – Water Costs Recorded for all Hospitals.

Planning Narrative on Table 5.1: Total Purchased Water

All showers are equipped with timers to help with water reduction, and shower heads include a flow restrictor installed by the manufacturer. Aerators are also in use to control the amount of water that flows through the tap without affecting the water pressure in employee areas. However, aerators cannot be installed in patient areas due to ligature risk to patients. Aerators present a ligature risk because they can serve as anchor points for a cord, rope, or ither material a patient may use to inflict self-harm. Anti-ligature fixtures are designed to have smooth, non-protruding surfaces that deter the creation of such attachment points. Removing aerators is necessary safeguard to mitigate the risk of self-harm and meet essential safety and regulatory requirements in patient care settings. Anti-ligature items are currently being installed in patient areas as following the guidelines and requirements from the Joint Commission.

Reporting on Properties with Largest Purchased Water Use per Capita per Day.

Table 5.2: Properties with Purchased Largest Water Use Per Capita

Building Name	Area (sq. ft.)	Ave. Daily Building Occupants	Total 2024 Gallons	Total 2024 Irrigation in Gallons (if known)	Gallons per Capita/Day
ATASCADERO STATE HOSPITAL	903,748	903,748	65,012,000	0	72
COALINGA STATE HOSPITAL	1,200,512	1,164,768	58,575,200	0	50
METROPOLITAN STATE HOSPITAL	1,218,276	1,214,474	59,702,700	0	49
NAPA STATE HOSPITAL	1,565,915	1,643,756	89,238,200	2,974,255	52
PATTON STATE HOSPITAL	1,307,200	1,315,245	103,044,100	0	78
Total for Buildings in This Table	6,195,651	6,241,991	375,572,200	2,974,255	60
Total for All Department Buildings	6,195,651	6,241,991	375,572,200		60
% of Totals	100%	100%	100%		100%

Reporting Narrative on Table 5.2: Properties with Largest Water Use Per Capita

As referenced in Table 5.2, DSH is committed to advancing water stewardship across its facilities. All hospitals equip fixtures with low-flow appliances wherever feasible and continually persuade upgrades to plumbing and technology in all renovations and new construction projects.

Planning Narrative on Table 5.2: Properties with Largest Water Use Per Capita

Relevant strategies to minimize water use across DSH's built environment focus on the design, implementation, and evaluation of facilities and outdoor water efficiency practices and equipment such as the following:

- Water Management
- Proactive leak detection and repair
- Landscape practices
- Specialty use buildings, including patient treatment and housing facilities, central utility plants, laundry facilities, and main kitchens

Reporting on Properties with Largest Landscape Area Irrigated with Purchased Water

Table 5.3: Properties with Largest Landscape Area Irrigated with Purchased Water

Facility Name	Landscape Area (ft^2)
Atascadero State Hospital	903,748
Coalinga State Hospital	1,190,689
Metropolitan State Hospital	1,233,932
Napa State Hospital	1,565,915
Patton State Hospital	1,307,200
Total Landscaping area for Facilities in This Table	**6,201,484**
Total Landscaping for All Department Facilities	**6201484**
% of Totals that is large landscape	**100%**

Reporting Narrative on Table 5.3: Properties with Largest Landscape Area Using Purchased Water

NAPA STATE HOSPITAL USES RECYCLED WATER FOR ALL LANDCAPING, ALL OTHER HOSPITALS USE PURCHASED WATER.

Planning Narrative on Table 5.3: Properties with Largest Landscape Area Irrigated with Purchased Water

ATASCADERO, COALINGA, METROPOLITAN, AND PATTON STATE HOSPITAL DO NOT HAVE TURF GRASS.

Reporting on the Department's Purchased Water Use Trends from 2010 to Present

Table 5.4: Department-Wide Purchased Water Use Trends

Year	Total Occupancy /year	Total Amount Used (Gallons/year)	Percent Change From 2010 Baseline	Per capita Gallons per person per day
Baseline Year 2010	15715	519,807,124		90.62227851
2018	15715	451,973,891	-13%	78.79634953
2019	15715	477,993,596	-8%	83.33258008
2020	15715	544,146,454	5%	94.86555538
2021	15715	502,299,680	-3%	87.5700609
2022	15715	472,515,992	-9%	82.37762403
2023	15715	363,005,310	-30%	63
2024	15715	378,546,455	-27%	66
2025 Goal	15715	**465,059,619**	-11%	81

Reporting Narrative on Table 5.4: Purchased Water Use Trends from 2010 to Present

As referenced in Table 5.4, DSH has been diligent in its efforts to conserve water usage at its facilities by ensuring water fixtures are equipped with low flow appliances where possible, by striving to continue installing new plumbing technologies in all renovated and new construction projects and promptly repairing building leaks.

Planning Narrative on Table 5.4: Purchased Water Use Trends from 2010 to Present

DSH strives to be within baseline goal. Overall water use fluctuates, with notable dips in 2018 and a rebound in 2020 due to Covid but broader trends show improving efficiency relative to 2010 baseline. Per-capita consumption stays roughly between the high 70s and mid-90s gallons per person per day, reflecting both behavioral changes and efficiency measures. The 2025 goal signals an ongoing effort to reduce usage further through conservation. Leak management and infrastructure upgrades.

Reporting on Table 5.5 Total Purchased Water Reductions from 2010 to Present

Table 5.5: Total Purchased Water Reductions Achieved in Gallons

2010 Baseline totals (Gallons)	2023 Totals (Gallons)	2024 Totals (Gallons)
519,807,124	363,005,310	378,546,455
+ or -Gallons Compared to Baseline Year	-156,801,814	-141,260,669
Department- Wide Reduction as a % from 2010 baseline	-30%	-27%

Reporting Narrative on Table 5.5: Purchased Water Use Trends from 2010 to Present

MANDATED WATER REDUCTION GOALS ACHIEVED.

Planning Narrative on Table 5.5: Purchased Water Use Trends from 2010 to Present

MANDATED WATER REDUCTION GOALS ACHIEVED.

Department Indoor Water Use

Fixtures and Water Using Appliances Needs Inventories

Reporting on Building Indoor Water Fixtures and Water Using Appliances Needs

Table 5.6: Building Indoor Water Fixtures and Water Using Appliances Needs Inventories Summary

Toilets to be replaced	Urinals to be replaced	Faucet aerators to be replaced	Showerheads to be replaced	Clothes washers to be replaced	Garbage disposals to be replaced	Pre-rinse valves to be replaced
1027	0	873	286	0	0	0

Reporting Narrative on Table 5.6: Indoor Building Water Fixtures and Water Using Appliances Needs

As a result of the DSH hospital-wide building inventory, a total of 2,186 items were identified to be replaced. These items identified are part of the statewide anti-ligature project which aligns with the department's goal to reduce water consumption by means of irrigation measures, low flow fixture installation.

Planning Narrative on Table 5.6: Indoor Building Water Fixtures and Water Using Appliances Needs

DSH has a Statewide anti-ligature project that entails replacing indoor water fixtures to reduce water waste and provide safety for the patients at each facility. The project is managed by an Associate Construction Analyst who partners with each hospital Chief of Plant Operations to conduct monthly meetings to discuss the quantity, needs, replacement of the equipment and appliances. Currently, DSH is progressing, and project is on schedule to replace the indoor building water fixtures to maintain water conservation requirements.

Water Conservation and Water Efficiency Projects for Purchased Water

Reporting on Current Indoor Water Efficiency Projects 2020- Present

Table 5.7: Summary of Current Indoor Water Efficiency Projects Completed 2020-Present or In Progress

Completed Projects per Year	Water Saved (Gallons/yr.)	Number of Indoor Water Efficiency Projects Completed	Cost Savings per Year
2022	N/A	No Projects Completed	N/A
2023	N/A	No Projects Completed	N/A
2024	N/A	No Projects Completed	N/A

Reporting Narrative on Table 5.7 Current Indoor Water Efficiency Projects 2020-Present

NO COMPLETED PROJECTS.

Planning for Future Indoor Water Efficiency for the Next 5 Years- Building Priority Projects

NO COMPLETED PROJECTS.

Planning Outline PO5:a: Building Indoor Water Efficiency Priority Projects for the Next 5 Years

Building Name	Type of Project	Est Water Savings	Est. Start Date
DSH-C	Hydronic Loop	≈39-150 thousand gallons per year	10/1/2025 Estimated Construction Date

Planning Narrative for PO5a: Future Indoor Water Efficiency - Building Priority Projects

DSH-Coalinga is currently in the Working Drawings Phase to design and install a hydronic loop replacement. The project entails a new installation of a new hot water supply, return system, and associated valves, fittings, and expansion looks for the hospital. The hydronic loop replacement is estimated to save thousands of gallons per year. All other facilities have no reported projects in the pipeline.

General Water Management

Reporting Narrative on General Water Management BMP

Developing Best Management Practices (BMPs) statewide are ongoing to establish and maintain building water use efficiency. Water management plans are in place or are being finalized at all DSH facilities. These plans will ensure consistent water quality testing.

BMPs not only save water and energy, but they perform an important safety role as well. Having appropriate water meters, leak detection processes, and routine maintenance following manufactures instructions as required by these BMPs, avoid costly repairs and accidents.

Planning Narrative on General Water Management BMP

GENERAL WATER MANAGEMENT BMP ACHIEVED

Leak Detection and Repair

Reporting Narrative on Leak Detection and Repair BMP

At DSH, the facilities are reliant on a work order system and staff reporting of Any leaks, pools of water and follow appropriate protocols to report to local Plant Operations when repairs issues arise. The Plant Operation teams at each hospital often conduct building inspection walks, checkups, and provide maintenance and preventative measures for safety.

Planning Narrative on Leak Detection and Repair BMP

At DSH, all five hospitals have a Plant Operations Team and some assigned Property Building Managers who complete routine walkthroughs that monitor and inspect the following:

- Surface water is investigated, excavated and repairs are performed.
- Condensate is chemically measured for hardness indicating a leak in the closed loop hydronic systems, provoking heat exchanger investigation.
- Monitor close loop chemicals for fluctuation. This is an indicator of lost water.
- Reports on water leaks such as fixtures are received either through the work order management system or a phone call to the work order desk.
- Cooling towers are visited weekly at a minimum for spray or any other leakage.
- Monthly water consumption is reviewed relative to previous month(s). Investigation is performed to add normal water consumption.

Kitchen Water Conservation

Reporting Narrative on Kitchen Water Conservation BMPs, Fixtures

Kitchen Water Conservation initiatives are similar to leak detection and repair BMP as they are performed by the same Plant Operations Team.

- Surface water is investigated, excavated and repairs are performed.
- Condensate is chemically measured for hardness indicating a leak in the closed loop hydronic systems, provoking heat exchanger investigation.
- Monitor close loop chemicals for fluctuation. This is an indicator of lost water.
- Reports on water leaks such as fixtures are received either through the work order management system or a phone call to the work order desk.
- Cooling towers are visited weekly at a minimum for spray or any other leakage.
- Monthly water consumption is reviewed relative to previous month(s). Investigation is performed to add normal water consumption.

Planning Narrative on Kitchen Water Conservation BMPs, Fixtures

- Each hospital Plant Operations Team investigates surface water, excavates, and repairs are performed.
- Condensate is chemically measured for hardness indicating a leak in the closed loop hydronic systems, provoking heat exchanger investigation.
- Reports on water leaks such as fixtures are received either through the work order management system or a phone call to the work order desk.
- Cooling towers are visited weekly at a minimum for spray or any other leakage.
- Monthly water consumption is reviewed relative to previous month(s). Investigation is performed to add normal water consumption.

Laundry Facilities Water Conservation

Reporting Narrative on Laundry Facilities Water Conservation BMPS

- DSH Hospital laundry is partially processed on-site, with majority outsourced to California Prison Industry Authority (CalPIA) for cleaning and subsequently returned to the facilities.
- Water temperatures are maintained at appropriate levels, and washer is operated only when at optimal capacity to minimize water waste.

Planning Narrative on Laundry Facilities Water Conservation BMPS

Each hospital follows standard BMP measures such as setting water level and water temperature appropriate to the loads. Prior to every clothing/linen being laundered, they can use washing machine settings to determine water temperature, cycle time, and the water level is determined by cycle set for laundering. *Water temperature and cycle time follow H&S Code Title 22 recommendations.

Department Total Nonpurchased Water Excluding Water Reuse or Recycling

Reporting on Total Nonpurchased Water Excluding Water Reuse or Recycling

DSH uses non-purchased water in its daily operations. DSH-Atascadero is the only hospital that sources its water from their four domestic wells.

Table 5.8: Department-Wide Nonpurchased Water Use

Year	Groundwater Basin(s) Name	Number of Domestic or Irrigation Wells	Groundwater Use in Gallons	Surface Water Use in Gallons	Total (Gallons/ Year)
Baseline Year 2020	No Data	No Data	No Data	No Data	No Data
2023	No Data	No Data	No Data	3,209,704 (DSH-C)	3,209,704 (DSH-C)
2024	No Data	No Data	No Data	66577236 (DSH-C)	66,577,236 (DSH-C)

Reporting Narrative for Table 5.8: Nonpurchased Water Excluding Water Reuse or Recycling

As reflected in Table 5.8, DSH-Atascadero relies entirely from its on-site ground water well for their water. It is also noted that DSH-Atascadero consumed less water in 2024 compared to 2023. DSH-Atascadero uses less water in the winter months as well as the other hospitals, due to the colder environment, reducing the need to water the lawn and plants. As a public water provider, DSH-Atascadero must comply with special federal regulations, and as of this report, it complies. Water Provider Information Located here.

Planning Narrative on Table 5.8: Nonpurchased Water Excluding Water Reuse or Recycling

In the event nonpurchase water is unavailable, DSH-A would find other sources of water and would utilize water supply from the City of Atascadero. Currently, DSH and DGS are in the preliminary plans phase of DSH-A Wastewater Treatment Plant Renovation Project. This project includes designing a new screening system and connection to the city of Atascadero's wastewater treatment system along with other upgrades.

Reporting Narrative for Nonpurchased Water Use Trends Excluding Water Reuse or Recycling

DSH-Atascadero's nonpurchase water trend is showing an approximate 23.9% decrease since 2020 and continues through 2024, driven by water conservation measures across the facility. DSH-A has reported that they have repaired and relined a big water reservoir and have a restorative project in place to prevent leaks in water storage tanks.

Planning Narrative on Nonpurchased Water Unavailability.

DSH-Atascadero is the only hospital out of the five that utilizes non-purchased water for day-to-day operations. There are no additional initiatives beyond on-going efforts to install water-reducing appliances and fixtures.

Department Water Energy Nexus Reporting

Reporting on Annual Amount of Boiler Makeup Water Used

Table 5.9: Annual Amount of Boiler Makeup Water Used

Boiler Water Use	Year 2023	Year 2024
Amount of water used for makeup (gallons)	19,051,214	18,620,704
Amount of water currently reused. (gallons)	3,606,180	3,939,760
Remaining additional water suitable for other purposes (gallons)	N/A	N/A
Totals for all facilities	22,657,394	22,560,464

Reporting Narrative on Table 5.9: Boiler Water Reuse Opportunities

BOILER WATER REUSE ACHIEVED.

Planning Narrative on Table 5.9: Boiler Water Reuse Opportunities

BOILER WATER REUSE ACHIEVED.

Reporting Narrative for Boiler Efficiency

Facilities Operations limits steam boiler blows down to once-a-day vs once a shift and is proactive in reducing the number of times the boilers have to be drained and refilled. We accomplish this by maintaining idle boilers in wet layups and rotating each boiler and keeping the boilers warm for quick introduction of steam should the need arise.

Planning Narrative for Boiler Efficiency

DSH currently does not have a boiler efficiency plan. DSH will work with individual facilities plant operations teams to develop a boiler efficiency plan that will entail current performance of boiler including fuel quality, operating data and losses to help propose specific data points for improvement.

Reporting on Cooling Towers' Water Use

Table 5.10: Cooling Tower Water Use

Cooling Tower Water Use	Year 2023	Year 2024
Amount of Water Used for Make-up (Gallons)	1,904,602	1,804,835
Totals for all Facilities	1,904,602	1,804,835

Reporting Narrative on Table 5.10: Cooling Tower Water Use.

The table above reflects the comparison between 2023 and 2024. It is reported that in 2024, DSH decreased the amount of water used for cooling tower water use, with a difference of ≈99,767 gallons. DSH-Coalinga (2023: 4,602 gallons and 2024: 4,835 gallons) and DSH-Metropolitan (2023: 1,900,000 gallons and 2024: 1,800,000) were the facilities that reported their data. The cooling tower water is used to remove heat from industrial processes, HVAC system and other large facilities by absorbing heat from equipment and releasing it into the atmosphere through evaporation.

Planning Narrative on Table 5.10: Cooling Tower Water Use.

DSH will continue to evaluate energy/water savings and efficiency opportunities for all hospitals. The facilities will conduct detailed water audits and use benchmarking tools such as ESPM (Energy Star Portfolio Manager) to compare performance and analyze data from monitoring equipment.

Reporting Narrative on Cooling Tower Water Reuse.

COOLING TOWER WATER REUSE ACHIEVED

Planning Narrative on Cooling Tower Water Reuse

COOLING TOWERS WATER USE EFFICIENCEY ACHIEVED

Reporting Narrative on Cooling Tower Efficiency

COOLING TOWERS WATER USE EFFICIENCEY ACHIEVED

Planning Narrative for Cooling Tower Efficiency

The future installation of an automated blowdown control system allows for active monitoring of the boiler conductivity and optimizes the volume of blowdown based on fluctuating steam loads. A well-designed automated blowdown system is expected to reduce boiler water consumption while maintaining reliable boiler performance. Additionally, maximizing condensate

return, by returning pressurized condensate will reduce the flash losses and increase the overall water savings. Improved Insulation of the return piping, heat exchangers will also minimize water loss. The planned installation of pretreatment equipment will alter or remove the minerals in the make-up water can significantly reduce the required blowdown and the consumption of water. Examples of this equipment include softeners, de-alkalizers, de-ionizers and reverse osmosis units (ROs).

DSH is also looking into installing equipment necessary to return more condensates such as new modern steam traps or repairing any failures in the existing condensate return lines that are leading to condensate losses. Replace boilers with high efficiency boilers or replace the Steam Plant with remote localized instant hot water generators.

Reporting on Boiler Needs Inventories Summary

Table 5.11: Summary of 2024 Boiler Needs Inventory

Number of meters to purchase and install	Water Treatment to Install, Repair, or Upgrade	Other
DSH-C: 3	Water Treatment Done In-House as Needed	N/A
DSH-N: 0	No Boiler Water Treatment Needs	N/A

Reporting Narrative on Table 5.11: Boiler Needs

DSH-C and DSH-N are the facilities that provided inventory data at this time. DSH-C reported three meters to be purchased and replaced and that water treatment is completed in-house as needed. DSH-N reported that they do not have plans to purchase or install boilers.

Planning Narrative on Table 5.11: Boiler Needs

NO BOILER WATER TREATMENT NEEDS

Reporting on Cooling Systems Equipment Needs Inventory Summary

Table 5.12: Summary of 2024 Cooling System Needs Inventory

Equipment Needed	Equipment Totals for all Facilities
Meters	No Data
Water Treatment	No Data
Other	No Data

Reporting Narrative for Table 5.12: Cooling Systems Needs

DSH-Metropolitan has a Central Utility Plant Replacement (CUP). For this project they are not planning on replacing the domestic water meters. They plan on removing the existing water treatment at the central utility plant and putting in localized treatment for each system. They will also be removing the large cooling towers and thermal storage tank. The new cooling tower is being installed in the walled in yard attached to the CUP.

Planning Narrative for Table 5.12: Cooling Systems Needs

In May 2022, DSH-Coalinga upgraded their chillers only condenser upgrade remains. At DSH-Patton, seven cooling towers have been replaced due to deterioration; two additional towers require replacement. DSH-Metropolitan has two cooling towers, and one is currently out of commission, while the other is running but both will need to be replaced.

Reporting on Efficiency Projects for Boilers and Cooling Systems 2020-Present

Table 5.13: Summary of Efficiency Projects for Boilers and Cooling Systems

Year Completed	Water Saved (Gallons/yr.)	Number of Completed Projects	Number of Projects in Progress
2013	N/A	0	0
2016	N/A	0	0
2019	N/A	0	0
2025	N/A	0	0

Reporting Narrative on Table 5.13: Efficiency Projects for Boilers and Cooling Systems

DSH-C currently has ongoing ESCO projects. They include renovations to the chillers, HVAC and refrigeration.

Planning Narrative for BMPs for Building Boilers and Cooling Systems

DSH's ESCO projects will contribute to the best management practices (BMPs) across all hospitals by assessing water use and identifying and analyzing all water intensive processes for potential efficiency improvements.

DSH will evaluate water-saving operational and maintenance actions, as well as retrofit and replacement options for these equipment types.

Department Outdoor Water Use:

Reporting on Outdoor Irrigation Hardware Inventory

Table 5.14: Summary of 2024 Outdoor Irrigation Hardware Needs Inventory

Irrigation Hardware Type	Total Hardware
Separate meters or sub-meters	1 main
Irrigation controllers required with weather or soil moisture adjustment and flow sensing capabilities	55 (DSH-C:15 & DSH-M:40)
Backflow prevention devices	144 contracted out
Flow sensors to be purchased and installed	N/A
Automatic rain shut-off devices	143 (DSH-C:15, DSH-P:88 & DSH-M:40)
New pressure regulators	15
New hydrozones	0
New valves	25
Filter assemblies	15
Drip irrigation emitters	100
Booster pumps	4
Rotary nozzles or other high efficiency nozzles	100

Reporting Narrative for Table 5.14: Outdoor Irrigation Hardware Needs

The data provided for Table 5.14 are primarily from DSH-C except for the following:

Irrigation Controllers required weather or soil moisture adjustment and flow sensing capabilities: DSH-M requested for 40 out of the 55 total count (DSH-C: reported 15).

Automatic rain-shut off devices: DSH-C: 15, DSH-M:40 and DSH-P:88, total of 143.

Planning Narrative for Table 5.14: Outdoor Irrigation Hardware Needs

DSH follows CCR Title 23 Division 2 Chapter 2.7 refers to the **California Model Water Efficient Landscape Ordinance (MWELO)**. This regulation establishes standards for planning, designing, installing, maintaining, and managing water-efficient landscapes in new construction and rehabilitated projects to conserve water and protect water resources. It includes requirements for landscape

design, irrigation systems, water use calculations, and maintenance DSH facilities, where appropriate, replaced the landscape with native plants and ground covered with desert rock, as well as using water as follows:

- Traffic patterns are clearly identified with use of drought tolerant plants and ground covering to reduce the use of water.
- DSH is in the process of performing an irrigation audit that includes reviewing the following items:
    - Inspection of irrigation systems
    - System test with distribution uniformity
    - Precipitation rates
    - Deficiencies in the system
    - Preparation of an irrigation schedule to shut down the system during precipitation.
- All facilities, except for DSH-Coalinga, use recycled water provided by the local Water District for landscape watering. DSH-Coalinga replaced ground covering with desert rock. Plants were reduced and converted to drought tolerant species. DSH-Napa uses limited amounts of recycled water.
- Backflow prevention devices are maintained and inspected annually.
- Inspections for leaks in the irrigation systems, run-offs, standing water, and over/under usage are monitored daily.
- Facility landscapes are maintained by in-house personnel.
- Drought tolerant plants and/or climate appropriate plants meet the water ranking of low or very low per the region requirements established by the California Department of Water Resources
- DSH follows the amount of annual applied water established by the Public Utilities requirements for new landscape projects or replanting. The answers to the following bullet points comprise the narrative for Irrigation Hardware Needs.
- DSH uses the Water Use Classification of Landscape Species (WUCOLS) when selecting plants based on the region and water needs.

Reporting on Outdoor Irrigation Hardware Water Efficiency Projects

Table 5.15: Summary of Outdoor Hardware Water Efficiency Projects Completed 2020 -Present or In Progress

Year Completed	Water Saved (Gallons/yr.)	Completed Hardware Water Efficiency Projects	Hardware Water Efficiency Projects in Progress
NO CURRENT PROJECTS		0	0
2020	5,000	0	0
2021	100,500	0	0
2023	25,000	0	0

Planning Narrative for Table 5.15: Irrigation Hardware Water Efficiency Projects

UPGRADES TO IRRIGATION HARDWARE ACHIEVED.

Reporting Narrative on Irrigation Hardware Maintenance BMPs

At DSH each facility has a plant operations team along with groundskeeping staff who routinely check on irrigation hardware maintenance as needed and through regular inspections. They implement BMPs that include documentation, proactive maintenance to minimize water waste and extend equipment life. Key practices include keeping up an up-to-date system map and PM log. Regularly inspect valves, protect and insulate piping and maintain sprinkler heads and emitters for proper spray patterns and uniformity. Monitor water quality, filter as needed and perform routine leak detection and seasonal tasks like winterization. Documentation and record keeping of maintenance ant water usage are essential for early problem detection and continuous optimization.

Reporting on Living Landscape Inventory

Table 5.16: All Facilities with Living Landscape >500 Square Feet

Facilities with Landscape >500 Sq.	Total Turf (sq. ft.)	Number Of Historic Sites Or Memorials	MWELO Landscape Area (sq. ft.)	Climate Appropriate Landscape Area (Sq. Ft.)	Groundwater Basin Name	Irrigation Source is Groundwater (Yes or No)	Irrigation source is Surface Water (Yes or No)
DSH-C	5,500	0	1,500	4,000	City of Coalinga	Yes	No

Reporting Narrative on Table 5.16: Living Landscape Inventory

DSH-C is the only hospital that has installed turf and is participating in Model Water Efficient Landscape Ordinance (MWELO). At this time, the other facilities do not have any living landscape or plan on installing turf on their premises.

Reporting on Living Landscape Upgrades for the Next 5 Years

Planning Outline PO5:b: Planned Projects for Living Landscape Upgrades for the Next 5 Years

Landscape >500Sq. ft.) Facility Name	Replace Turf (Sq. ft.)	MWELO landscape area Upgrade (sq. ft.)	Climate appropriate landscape Upgrade area (sq. ft.)	Date for Achieving Upgrades
5 Facilities	**3,306,497**	**TBD**	**TBD**	**TBD**

Planning Narrative on PO5.b Living Landscape Upgrades for the Next 5 Years

DSH facilities have projects in development and will need to secure funding in order to achieve MWELO standards by aligning site analysis, target setting, and integrated design ensuring irrigation efficiency and plant choices meet code requirements. The plan establishes water budgets, compliant controlled technologies, and documentation strategies with phased milestones.

Planning Narrative for Remaining non MWELO Compliant Living Landscape Upgrades

DSH aims to preserve as many living landscapes as possible at each facility,

recognizing that plants and trees help keep nearby areas cooler. The department will maintain safe greenery and pursue opportunities for landscape and irrigation projects.

Reporting on Living Landscape Water Efficiency Projects 2020 – Present

Table 5.16: Summary of Completed Living Landscaping Water Efficiency Projects

Year Completed	Est. Annual Water Savings (Gallons/yr.)	Sum of MWELO Landscape installed (Sq.Ft.)	Sum of Climate Appropriate Landscape Installed (Sq.ft.)
2013	10000	35	50
2016	100500	150	225
2018	20000	250	250

Reporting Narrative on Living Landscape BMPs

DSH-P is the only facility that has reported a recently completed efficiency project for their Patton Museum, Residence 5. The data show a consistent commitment to MWELO compliant design, with a planned landscaped area of 1,200 square feet and climate-appropriate planning that maintains a minimum annual water savings target of 900 gallons alongside a drainage and irrigation conscious approach.

Planning Narrative on Living Landscape BMPs

LIVING LANDSCAPE BMPS ACHIEVED.

Reporting on Large Living Landscape Inventory (>20,000 sq. ft.)

Table 5.17: Large Landscape Inventory (>20,000 sq. ft.) and the Required Associated Landscape Water Budget Schedule

Name of Facility Sites/Locations with > 20,000 sq. ft. of Landscaping	Landscape Area per Facility (Sq. Ft.)	Water Budget per Facility (Gallons)	EPA WaterSense or Irrigation Association Certified Staff per Facility
NO LARGE LANDSCAPES			

Reporting on Achieving Large Living Landscape Requirements (>20,000 sq. ft.)

NO LARGE LANDSCAPES LANDSCAPES.

Planning Outline PO5:c: Achieving Large Living Landscape Area Requirements (>20,000 sq. ft.)

Facility Name	Landscaping sq. ft. to be upgraded to MWELO standards	Water Budget per Facility (Gallons)	Ground Water Basin	# of staff Needing EPA WaterSense certification	Date for Achieving
NO DATA					

Planning Narrative on PO5.c: Achieving Large Living Landscape Requirements (>20,000 sq. ft.)

NO LARGE LANDSCAPES LANDSCAPES.

Critically Overdrafted Groundwater Basins and Water Shortage Contingency Plans

Reporting on Buildings in Critically Overdrafted Groundwater Basins

Table 5.18: Buildings in Designated Critically Overdrafted Groundwater Basins

Building Name	Basin Name	Amount of water Used 2023 (Gallons)	Amount of water Used 2024 (Gallons
DSH-A	Atascadero Groundwater Subbasin	68,518,000	65,012,000

Reporting on Buildings with Urban Water Shortage Contingency Plans

Table 5.19: Buildings with Urban Water Shortage Contingency Plans

Building Name	Name of Water Supplier with Urban Water Shortage Contingency Plans	Year of Publication or Update

DSH-A	Atascadero Mutual Water Company (AMWC)	6/24/2021
DSH-C	City of Coalinga	7/1/2022
DSH-N	City of Napa Water Division	1/29/2025
DSH-P	East Valley Water District	6/30/2021

Reporting Narrative for Table 5.20: Urban Water Shortage Contingency Plans

Urban Water Management Plans (UWMPs) are prepared by urban water suppliers every five years. These plans support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. All water suppliers serving more than that either provides over 3,000 acre-feet of water annually or serve more than 3,000 urban connections is required to submit an UWMP.

Department's Urban Water Shortage Contingency Plan

At DSH, all five hospitals have Urban Water Shortage Contingency Plans in place in the event of a disaster which includes a drought action plan. This can include compromised quantity and quality of drinking water, effects on air quality and increased wildfire risk. The purpose of the Drought Action Plan is to establish procedures for when a proclamation of a State of Emergency is issued by the Governor of California for drought and generate efforts to reduce water use and promote conservation.

Reporting Narrative for Department's Contingency Plan

DSH-M: Water is drawn from the potable water system and stored in two 750,000 gallons tanks. The tank's capacity is maintained at approximately 75%. The treated water is tested routinely for chlorine residuals, total coliform, and e. coli by Golden State Water Company, the water supplier for the region.

The reservoir is an enclosed tank that pumps pressured water throughout the entire campus via two feed lines. One feed line enters the northeast corner of the campus, and the other enters the southeast corner of the campus.

DSH-M also uses reclaimed water. Reclaimed water pumps are housed in a separate building near Plant Operations. The purpose of reclaimed water is to maintain the hospital's grounds and specific Plant Operations assignments.

In 2020, reclaimed water accounted for 48% of the total water usage at DSH-M.

Planning Narrative on Department's Contingency Plan

At DSH, the facilities incorporate mitigation, in response to previous water conservation efforts by doing the following:

Potable Water Use

- Patients and staff education
- Replenishing the tanks by operating the pumps during off-peak hours to ensure efficient storage and energy conservation.
- Replace older-model plumbing fixtures with low-flow faucets, toilets, and showerheads.
- Monitor meter readings
- Regular inspection and repair of the water distribution system including plumbing.

Reclaimed/Recycled Water Use

- Watering the landscaping in off-peak evening hours to reduce evaporation and maximize water retention.
- Regular inspection and repair of the irrigation water distribution system.
- The Central Utility Plant can use potable water and recycled water in the cooling towers to create chilled water for the Hospital's HVAC System. Currently, the Hospital has two segregated systems and is only using reclaimed water in the cooling towers

For DSH-A: PHASE I (≤ 10% conservation)

When a proclamation is issued by the Governor's Office, the Emergency Services Coordinator/Designee will be responsible for disseminating the following information:

- Initiate ASHALL and Everbridge message (Appendix B) a. Notify staff of the proclamation and link to the official document.
- Provide recommendations to reduce water use and promote conservation.
    - Limit water use when possible, during hand hygiene or general washing of items.

    - Encourage staff to promptly report all water leaks so repairs can be conducted in a timely and efficient manner to minimize waste.
    - Eliminate use of water to wash-down hardscaped surfaces such as concrete and asphalt.
    - Limit washing vehicles to the minimum necessary.
    - Reduce overall use of water for both production and cleaning up in all kitchen and dining areas.
- Utilize Therapeutic Community meetings to share information with patients and include tips to reduce water use.
    - Limit water use when possible during hand hygiene or general washing of items.
    - Reduce shower times if possible.

PHASE II (≤ 20% conservation)

If water reduction targets are not met in Phase I of this plan, DSH-A can implement the following measures. If no further water reduction can be made without compromising patient care and facility needs, an exemption will be requested.

- Assess and modify irrigation of essential and any non-essential areas.
- Implement deficit landscape irrigation practices to sufficiently irrigate and keep vegetation alive (i.e. multiple, short waterings at night.)
- The Executive Director can issue a moratorium to all departments to reduce water consumption (See recommendations in Phase I).
- Lawn reduction / utilize water-efficient landscaping

PHASE III (≤ 20-30% conservation)

The Booster Station Reservoir can maintain normal facility operations for 3-4 days. In the event of groundwater shortage or major water supply disruption, DSH-A can implement the following contingency measures.

- Utilize emergency tie-in (El Camino Real/San Rafael Rd) with Atascadero Mutual Water Company (AMWC)
- Cease all landscape watering on facility grounds.

For DSH-C: Current Conservation Efforts:

DSH-C is current in Stage 2 (20-35% supply reduction) since July 1, 2022. DSH-C

stages of conservation efforts are as follows:

Level 1: 10-20% Supply Reduction (Standard Water Conservation Alert)

- No hose washing of sidewalks, walkways, driveways, parking areas, patios, porches, verandas.
- No water customer shall permit water to leak on their premises; all leaks shall be repaired in a timely manner.
- Designated times and days of irrigation:
    - No water customer shall sprinkle, water, irrigate shrubbery, trees, and lawns, landscaped or vegetated areas between the hours of 10:00 a.m. – 6:00 p.m. This does not apply to water dependent industries.
    - Use of handheld hose with a shut-off valve shall be permitted at any time.
- The use of water from fire hydrants shall be limited to fire fighting and related activities necessary to maintain public health, safety, and welfare.

Level 2: 20-35% Supply Reduction (High Water Conservation Alert)

- All prohibitions and restrictions in Level 1 remain in effect.
- Designated times and days of irrigation:
    - No water customer shall sprinkle, water, or irrigate any shrubbery, trees, lawns, grass, groundcovers, plants, vines, gardens, or any other landscaped or vegetated areas on between the hours of 9:00 a.m. and 6:00 p.m. This does not apply to water dependent industries).
    - No irrigation shall occur on Sundays, Mondays, and Thursdays.

DSH-C is currently only watering plants and trees from 2100-0600 on Wednesdays. All grass within DSH-C has been surrendered.

For DSH-M: PHASE I (≤ 15% conservation)

When the Governor's Office issues the proclamation, the Emergency Services Coordinator/Designee will be responsible for disseminating the following information:

DSH-M Phase 1

- Initiate DSH-M Water Conservation Plan:
- Notify staff of the proclamation and link to the official document.
- Reduce water usage and promote conservation. ▪ Shut off the faucet while washing hands.
    - Encourage staff to report all water leaks promptly.
    - Eliminate the use of water to wash down hardscaped surfaces such as concrete and asphalt.
- Limit washing vehicles or restricted to every other week.
    - Windows need to be clean often for safety reasons.
- Request the Therapeutic Community to share information with patients and include tips to reduce water use
    - Shut off the faucet when brushing teeth or washing hands.
    - Reduce shower times if possible.

GSWC Phase 1

- Outdoor irrigation is restricted to two days per week.
    - Addresses ending in: Watering Days
        - Even numbers (0,2,4,6,8) Sunday and Wednesday
        - Odd Numbers (1,3,5,7,9) Tuesday and Saturday
    - All outdoor irrigation must occur between the hours of 7 p.m. and 8 a.m.

DSH-M Phase 2

- Assess and modify irrigation of essential and any non-essential areas.
- Implement minimal landscape irrigation practices to sufficiently irrigate and keep vegetation alive (i.e., multiple, short-duration watering at night.)
- The Executive Director can issue a moratorium to all departments to reduce water consumption (See recommendations in Phase I).
- Lawn reduction/utilization of water-efficient landscaping

❖ An exemption will be requested if no further water reduction can be made without compromising patient care and facility needs.

GSWC Phase 2

- The customer's allocation will be based on the previous baseline, less than 25%.

- All usage, in excess of the customer's allocation will be charged at the regular rate plus a drought emergency surcharge of $2.50 per CCF.

PHASE III (>25% conservation)
The capacity of the existing reservoirs can maintain normal facility operations for 3-4 days. In the event of major water supply disruption, DSH-M can implement the following contingency measures include phase I and phase II.

- Utilize emergency procedures, i.e., close intake valves to reservoirs from the supply system, and tie-in both reservoirs to provide potable water to the Facility.
- Cease all landscape watering on facility grounds.

GSWC Phase 2

- The customers' allocation will be based on the previous baseline, less than 25%.
- All outside use of potable water is strictly prohibited. ▪
    - First violation of this restriction will result in a written warning.
    - Second violation of this restriction will result in the installation of a flow restrictor for a minimum of 30 days.
    - Third violation of this restriction will result in the termination of water service
- All usage, in excess of the customer's allocation will be charged at a regular rate plus a drought emergency surcharge of $10.00 per CCF.

For DSH-N: Stages of Action

Stage	Percent Supply Reduction	Water Supply Condition
3	≤20-30%	If water reduction targets are not met in stage 2 of this plan, DSH-Napa will implement the measures contained in Stage 2, ≤ 10-20% conservation above and the following measures. If no further water reduction can be made without compromising patient care and facility needs, an exemption will be requested.

Catastrophic Supply Interruption

If one or more of the water supply lines fails, the hospital can meet all critical clinical and treatment needs with one line coupled and curtailment of irrigation as it is a non-clinical function. In the event of catastrophic loss of water supply, DSH-Napa would be greatly impacted as a loss of water would mean the inoperability of the Central Plant.

Chapter 6 – FACILITIES' CONSTRUCTION AND OPERATIONS

Department Mission and Facilities Construction and Operations

DSH's five hospitals encompass approximately 6.6 million gross square feet of space in 575 buildings and roughly 2,600 acres of land. DSH continuously works to optimize and minimize energy use by improving the efficiency of existing equipment, facilities, and operations. DSH also continues to work with the DGS Sustainability Team and other stakeholders to conduct comprehensive energy reports like energy efficiency measures, decarbonization and enrollments of all facilities into demand response program which will result in documented solutions for achieving energy cost reductions and savings.

Building Design and Construction

New Building LEED Certification

Table 6.1: New Building Construction since July 1, 2012

Facility Name	LEED Certification Type & Level Achieved	Commissioning Performed (Y/N)
Napa State Hospital	LEED-NC Silver	Y
Metropolitan State Hospital	LEED-NC Gold	Y
Patton State Hospital	LEED-NC Gold	Y

DSH-Napa - Main Kitchen

Completed in November 2017, the DSH-Napa New Main Kitchen project involved the construction of a new single-story central kitchen facility spanning 30,000 gross square feet. The kitchen provides meals for over a thousand patients through six satellite kitchens located on the campus. The new kitchen features a cook/chill bulk food delivery system and required the abatement and demolition of six existing structures, along with significant work on underground utilities.

Site improvements included landscape and irrigation, walks, curbs, gutters, and parking. The building is a concrete slab on grade, steel structure, with plaster exterior and a single-ply roof with skylights. Special features include new kitchen equipment, high-capacity food storage racks, large refrigerator, and freezer walk-ins, and loading docks with overhead coiling doors. Surface finishes include epoxy flooring, ceramic tile, carpet tile, gypsum board, and acoustical ceilings. Additional features include a card key access system, CCTV, and diesel power engine generator.

The program areas encompass utensil and cart sanitation, dry storage equipped with high-capacity food storage racks, large coolers, and walk-in freezers, clinical dietitian workspaces, loading docks, an outdoor terrace, a spacious mechanical yard, an electrical yard with an emergency generator, a surface parking lot, and additional functional support areas. The project was meticulously coordinated across all design disciplines, addressing ventilation and steam loads, ensuring proper clearances and drainage, accommodating weight loads, and adhering to ADA compliance. The landscape features a variety of plants which are integrated into the site's edible garden for use by the kitchen. According to the Code Analysis in the Construction Documents, the building design exceeded Title 24 by 10% and achieved LEED Silver.

DSH-Metropolitan - Central Kitchen

Finished in 2010, Metropolitan's newly established central kitchen spans 27,000 square feet, taking the place of an outdated kitchen that had reached the end of its operational life. This new facility is only half the size of the previous one yet manages to double the meal output. Foodservice Equipment & Supplies Magazine recognized Metropolitan State Hospital as the recipient of the "2012 Design Project of the Year" award. The kitchen prepares over 9,000 meals per day.

Additionally, the project has achieved LEED Gold certification due to its energy-efficient and sustainable design practices. The implementation of sustainable packaging equipment has enhanced efficiency, ensured better food consistency, and significantly minimized food waste.

DSH-Patton - Central Kitchen


Completed in 2019, Patton's new central kitchen spans 36,000 square feet. This facility is a partial renovation of seven existing satellite kitchens situated across five different buildings. The new central kitchen features cutting-edge equipment, including a parallel remote refrigeration system with temperature monitoring capabilities; cook-chill equipment (form-fill seal machine, kettles, chiller tanks); a flight type dishwasher; energy-efficient steam equipment; bakery rack ovens; blast chillers; and variable speed exhaust hood systems, along with the implementation of a cook-chill program.

The project has achieved LEED Gold certification for its energy efficiency and sustainable attributes, surpassing Title 24 by 15%.

Reporting Narrative for Table 6.1: New Building Construction since July 1, 2021

NO NEW BUILDINGS.

Planning Narrative for Table 6.1: New Building Construction since July 1, 2012-January 1, 2024

NO NEW BUILDINGS. LEED CERTIFCATION ACHIEVED.

LEED for Existing Buildings Operations and Maintenance

Table 6.2: Large Building LEED Certification for Existing Buildings

Number of exist. buildings >50,000 sq. ft. requiring LEED-EB Certification	Number of Existing buildings > 50,000 sq. ft. LEED-EB Certified	Percentage of Existing Buildings > 50,000 sq. ft. that have achieved LEED-EB
25	0	0%

Reporting Narrative for Table 6.2: Large Building LEED Certification

NO DATA.

EBOM surveys conducted at DSH facilities are expensive and could potentially cost millions to complete. Many of DSH's structures are too outdated to adequately fulfill LEED standards. In most instances, the expenses associated with meeting these standards would likely surpass the costs of designing, constructing, and occupying a new sustainably designed building. Most of the existing buildings on the premises that are 50,000 square feet or larger (and may qualify for LEED EBOM) include the Skilled Nursing Facilities (SNF), patient treatment centers, and patient housing.

Planning Narrative for Table 6.2 LEED for Existing Buildings and Operations

Given its aging infrastructure, DSH has significant capital improvement requirements, which encompass seismic retrofitting, security enhancements, fire-life-safety upgrades, infrastructure replacements, and new construction initiatives. Nevertheless, DSH continues to collaborate with DGS through their programs and projects like ESCO and demand response to perform energy savings and identify potential retrofit projects that will enhance energy efficiency at all DSH facilities. DSH's 5-year Capital Outlay plan and long-term planning also consider additional measures and proposals of LEED into all future building projects.

Indoor Environmental Quality (IEQ)

Daylighting and Views in New Construction

Reporting Narrative for Daylighting and Views in New Construction

Reporting Narrative Instructions:
NO NEW CONSTRUCTION.

DSH is integrating the concept of maximizing daylight into all upcoming projects. While achieving optimal natural lighting in patient areas can be difficult, the hospital is collaborating with its retained architecture and engineering firm, as well as DGS, to investigate possible solutions. To enhance natural lighting, a significant number of windows and glazing will be necessary. Additionally, materials such as reflective surfaces and light-colored paints will be evaluated to reduce glare and heat.

Planning Narrative Daylighting in New Construction

NO NEW CONSTRUCTION.

The department will coordinate with the facilities to research and apply what is permissible and necessary for daylighting in all upcoming projects.

CALGreen Tier 1 Indoor Environmental Quality Measures

CalGreen Tier 1 Measures

Reporting Narrative for CALGreen Tier 1 Indoor Environmental Quality Measures

INDOOR ENVIRONMENTAL QUALITY, CALGREEN MEASURES ACHIEVED.

Agencies are required to comply with the guidelines set forth in Management Memo 14-05, which is designed to foster healthy indoor environments for individuals occupying newly built or significantly renovated structures. This is achieved by implementing suitable and effective measures related to Indoor Environmental Quality (IEQ) as specified in the CALGreen code. IEQ encompasses various aspects of the living conditions within a facility, including air quality, availability of natural light and views, acoustic conditions, and thermal comfort.

DSH's FPCM and Plant Operations teams are responsible to consult with A/E

team on the implementation of Cal Green measures. These standards have been and will continue to be worked on with the A/E team for all projects to ensure sustainability requirements are feasible.

Planning Narrative for CALGreen Tier 1 Indoor Environmental Quality Measures

INDOOR ENVIRONMENTAL QUALITY, CALGREEN MEASURES ACHIEVED.

IEQ-New Buildings and Renovation Measures

Reporting Narrative for IEQ-New Buildings and Renovation Measures

IEQ-NEW BUILDINGS AND RENOVATION MEASURES ACHIEVED.

IEQ standards are essential for obtaining LEED certification, and DSH'S FPCM and Plant Operations team have integrated CALGreen and commissioning requirements as fundamental aspects of new construction and renovation projects. For instance, the IEQ strategies that comply with the Volatile Organic Chemical (VOC) content limits outlined in CALGreen are included in the construction specifications for new projects and are part of DSH's Five-Year Capital Outlay plan, which includes:

- Adhesives
- Fabrics
- Sealants
- Caulking
- Paints
- Coatings
- Aerosol paints
- Carpet systems
- Carpet cushions
- Wall panels
- Resilient flooring
- Thermal insulation
- Acoustical ceilings
- Composite wood products

Planning Narrative for IEQ-New Buildings and Renovation Measures

IEQ-NEW BUILDINGS AND RENOVATION MEASURES ACHIEVED.

DSH is currently enhancing indoor environmental quality (IEQ) through superior designs, construction, and its operational and maintenance

practices. Numerous hospitals have either completed or are in the midst of roof replacement initiatives, which include upgrades to the air handling units (AHU). The plans and specifications for these projects have considered CALGreen and all relevant IEQ standards.
All new construction and renovation projects, as previously mentioned, will undergo evaluation and analysis to ensure compliance with IEQ standards and that other CALGreen/LEED requirements are integrated into majority of DSH's projects now and in the future.

Furnishing Standards

Reporting Narrative for Compliance with Furnishing Standards

FURNISHING STANDARDS ACHIEVED.

DSH follows DGS' Purchasing Standard and Specifications. Employee comfort, health, and work performance are also closely linked to IEQ. The choice of furniture influences IEQ such as providing ergonomic support, generating air contaminants or toxins, and adapting to organizational changes. DSH advocates for sustainable workplace standards by utilizing furniture that is adjustable and versatile enough to accommodate various tasks and users. The arrangement of furniture is designed to maximize natural light, views, and airflow for occupants, while the selection of furniture and fabrics emphasizes products that enable DSH to accumulate points towards future LEED certification using the following:

- Low VOC emitting materials.
- Recycled content
- Local or regional materials
- Forest Stewardship Council (FSC) certified wood products

Planning Narrative for Compliance with Furnishing Standards

DSH's practices are also influenced by the "Buying Green Guide," which provides information, tools, and recommendations on the best practices for procuring green products and services in the state. The designated Procurement and Contracting Officer (PCO) at DSH is tasked with ensuring statewide compliance with the DGS EPP program and all other state contracting guidelines and statutes that regulate the acquisition process, including but not limited to, the Cal recycle guidelines or SABRC.

Green Seal Cleaning Products

Reporting Narrative on Using Green Seal Cleaning Products

GREEN CLEANING PRODUCTS STANDARDS ACHIEVED.

Eco-friendly cleaning products and services are essential to DSH's Green Building Cleaning program. According to SAM Section 1825.4, agencies must utilize indoor products and materials that release minimal or no harmful chemicals and comply with Green Seal (GS) Standard GS-37, which pertains to "Cleaning Products for Industrial and Institutional Use." This includes general-purpose cleaners, restroom cleaners, glass cleaners, carpet cleaners, and biologically active cleaning products used for routine maintenance.

Planning Narrative on Using Green Seal Cleaning Products

GREEN CLEANING PRODUCTS STANDARDS ACHIEVED.

DSH's practices are guided by EPA recommendations, the DGS EPP "Buying Green" guidelines, and the Department of Toxic Substances Control (DTSC) "Safer Consumer Practices" to help meet environmental green cleaning performance standards and to interpret eco-labels. All products are evaluated against the Green Seal criteria to confirm compliance prior to purchase. Additionally, DSH hospitals ensure that safe, convenient, and secure areas are designated for the storage of housekeeping chemicals.

DSH actively participates in the DGS' Sustainable Purchasing Stakeholder Forum to guarantee that DSH policies and procedures support future LEED certification, align strategically with industry best practices, adhere to executive orders for green cleaning, and fulfill State EPP objectives.

Cleaning Procedures – Title 8

Reporting Narrative for Cleaning Procedures – Various Standards

DSH acknowledges that its standard operating procedures must effectively safeguard vulnerable building occupants. The establishment of requirements for staffing and training maintenance personnel must align with the building's needs and adhere to California Code of Regulation (CCR), Title 8 Section 3362 concerning sanitation standards.

Planning Narrative for Cleaning Procedures – Various Standards

Continuous improvement measures are essential, as procedures, processes, and housekeeping manuals at all DSH facilities must consider the following:

- Building exterior and site maintenance programs (including assessments for preventing water intrusion and managing hazardous spills/incidents)
- Efficient and optimized energy and water usage
- Acquisition of sustainable cleaning equipment
- Procurement of environmentally preferred products
- Waste stream management
- Integrated pest management
- Ongoing IEQ and LEED goals
- Green cleaning best practices
- Promoting hand hygiene and availability of hand sanitizers

Cleaning Procedures – Title 8, Section 3362

Reporting Narrative for Cleaning Procedures TITLE 8 SECTION 3362

TITLE 8 SECTION 3362 CLEANING PROCEDURES STANDARDS ACHIEVED.

Planning Narrative for Cleaning Procedures TITLE 8 SECTION 3362

TITLE 8 SECTION 3362 CLEANING PROCEDURES STANDARDS ACHIEVED.

HVAC Operation Requirements

Reporting Narrative for HVAC Operations

HVAC OPERATIONS ACHIEVED.

DSH facilities operate 24 hours per day, seven days per week, 365 days per year. DSH relies on its Plant Operations teams to ensure heating, ventilating, and air-conditioning (HVAC) systems are compliant with the provisions of SAM 1825.4 and operate as design-intended, to:

- Prevent infectious disease transmission.
- Maintain comfortable indoor climates among patient occupied areas and employee workspaces.
- Prevent premature equipment failure.

- Avoid poor IEQ and increased energy and maintenance costs.

AHUs are central air conditioners that handle the air supplied into the buildings by the ventilation ductwork. Most units operate with minimum outdoor air as allowed for energy efficiency per Title 24 section 120 related to energy efficiency and Cal OSHA's Title 8 regulations, section 5142 related to minimum building ventilation. Energy Management Systems (EMS) are also installed at each of DSH's facilities, which ensures that minimum outdoor air requirements, set per design criteria, are provided in unison with exhaust and return air ratios.

Planning Narrative for HVAC Operations

HVAC OPERATIONS ACHIEVED.

HVAC Inspection Requirements

Planning Narrative for HVAC Inspection Requirements

HVAC INSPECTION REQUIREMENTS ACHIEVED.

Maintenance is scheduled at various intervals for different equipment depending on manufacture's recommendations. HVAC ducts, filters, and auxiliary equipment are routinely inspected and maintained. Periodic duct cleaning also ensures prevention of microbial growth. Dampers and actuators are checked during regularly scheduled inspections along with heat exchangers. Most DSH facilities contract out for maintenance of the cooling towers, the water chemistry, and control of microbial growth. Contractors are made to comply to DSH's HVAC inspection requirements, aligning with SAM 1825.4. Additionally, all DSH facilities have Building Automation Systems (BAS) in place, which monitor facility-wide HVAC systems and components as part of the program.

HVAC INSPECTION REQUIREMENTS ACHIEVED.

Integrated Pest Management (IPM)

DSH's pest management strategies are anchored in standard operating procedures that emphasize proactive measures. These include but not limited to conducting regular site inspections to assess pest types and infestation levels, maintaining a comprehensive record-keeping system to track pest outbreak trends, and developing specific action plans for identified pests. The program

prioritizes preventive measures as the primary pest control method and establishes criteria for selecting the least toxic materials.
Additionally, ongoing evaluations are conducted to assess the program's effectiveness. DSH's Integrated Pest Management (IPM) program favors non-chemical solutions, resorting to higher-tier pesticides only when monitoring indicates their necessity, in accordance with established guidelines. This careful selection and application of pest control materials aim to minimize risks to human health, beneficial organisms, and the environment.
At DSH-Coalinga and DSH-Metropolitan, Vector Control Technicians (VCTs) oversee the IPM programs, bringing professional expertise and a license from the California Structural Pest Control Board, which mandates IPM compliance and ongoing education. VCTs also provide training for maintenance staff and contractors on pest identification, treatment, prevention techniques, and the implementation of environmentally friendly practices aligned with IPM principles.

Table 6.3: Self-Managed Pest Control

Self-Managed Pest Control	Y/N	Is there an IPM plan? (Y/N)
Does your Department self-manage pest control for any and or all Department buildings and the associated building landscapes?	**Yes**	**Yes**
Does your Department self-manage pest control for any and or all Department mission-related infrastructure including, but not limited to, highway medians and shoulders, levees, reservoirs, canals, campgrounds and recreation areas?	**Yes**	**Yes**

Reporting Narrative for Table 6.3: Self-Managed Pest Control

INTERGRATED PEST MANAGEMENT REQUIREMENTS ACHIEVED.

Planning Narrative for Table 6.3 Self-Managed Pest Control

INTERGRATED PEST MANAGEMENT REQUIREMENTS ACHIEVED.

Table 6.4: External Pest Control Contracts

External Pest Control Contract	Y/N	Is there an IPM plan? (Y/N)	Contract Renewal Date
Does your Department externally contract pest control for any and or all Department buildings and the associated building landscapes? List all pest control contracts below. Add extra lines as required.	**Yes**	**Yes**	
Building Pest Control Contracts			
A Tovar Pest Control	Y	Y	6/30/2027
Allguard Termite & Pest Cntrl	Y	Y	1/31/2026
Eagleshield Pest Control Inc	Y	Y	9/30/2026
Story Trmt and Pest Cntrl Inc	Y	Y	7/31/2026
Does your Department externally contract pest control for any and or all Department mission-related infrastructure including, but not limited to, highway medians and shoulders, levees, reservoirs, canals, campgrounds and recreation areas? List all pest control contracts below. Add extra lines as required.	**Yes**	**Yes**	
Infrastructure Pest Control Contracts			
A Tovar Pest Control	Y	Y	6/30/2027
Allguard Termite & Pest Cntrl	Y	Y	1/31/2026
Eagleshield Pest Control Inc	Y	Y	9/30/2026
Story Trmt and Pest Cntrl Inc	Y	Y	7/31/2026

Reporting Narrative for Table 6.4: Pest Management Contracts

INTERGRATED PEST MANAGEMENT REQUIREMENTS ACHIEVED.

Planning Narrative for Table 6.4 Pest Management Contracts

INTERGRATED PEST MANAGEMENT REQUIREMENTS ACHIEVED.

Table 6.5: Top 5 Department Pests Requiring Pest Control

Table 6.4: Top 5 Department Pests Requiring Pest Control

Pest Name (common)	Pest Control Method(s)
Roaches	Glue Boards
	Surekill Roach Bait
	Alpine Wsg
	Gentrol-Igr
	Exciter
	Navagator/Seasonal
	Onslught(Fastcap)
Rodents	Snap Trap
	Glue Boards (at Metropolitan)
	Take Down Soft Bait (Rodenticide)-Tamper-resistant Bait Station
Fleas	Suspend Polyzone
	Gentol-Igr
	Exciter
	Onslaught Fastcap
	Gentrol
	Exciter
Mosquitoes	Suspend Polyzone
	Gentol-Igr
	Exciter
	Onslaught Fastcap
	Gentrol
	Exciter
Gnats	Surekill(Fogger)
	Bor Actin(Floor Drains/Drains)
	Endzone Insecticde Stickers

Reporting Narrative for Table 6.5: Top 5 Department Pests Requiring Pest Control

The top five pests above can cause serious threats to human health, particularly in environments such as hospitals. They are known for various diseases especially with rodents and cockroaches being prominent carriers of harmful pathogens. For instance, rodents can transmit illnesses like hantavirus and salmonella, while cockroaches are associated with bacteria such as E. coli. Beyond disease transmission, pests can also trigger allergic reactions and asthma attacks, especially in sensitive individuals. The presence of pests in sterile areas, such as

operating rooms, can lead to contamination of critical medical supplies, increasing the risk of infections. Rodents and other pests can also inflict damage on hospital infrastructure, including electrical systems and essential equipment, resulting in costly repairs.

Fossil Fuel Landscaping Equipment Replacement with Low Emitting Landscaping Equipment

Reporting Narrative for Replacing Fossil Fuel Landscaping Equipment

NO FOSSIL FUEL LANDSCAPING EQUIPMENT.

Planning Narrative for Replacing Fossil Fuel Landscaping Equipment

NO FOSSIL FUEL LANDSCAPING EQUIPMENT.

Location Efficiency

Smart Location Score for New Leases after January 1, 2020

Table 6.5: Smart Location Score for New Leases after January 1, 2020

Facility name (Select Dropdown)	Smart Location Calculator Score
ATASCADERO STATE HOSPITAL	32
COALINGA STATE HOSPITAL	2
METROPOLITAN STATE HOSPITAL	10
NAPA STATE HOSPITAL	77
PATTON STATE HOSPITAL	14
Average	27

Reporting Narrative for Table 6.6: Smart Location Score after January 1, 2020

NO NEW LEASESES.

Planning Narrative for Table 6.6: Smart Location Score after January 1, 2020

NO NEW LEASESES.

Current (non-expired) Leases Prior to 2020 - Lowest Smart Location Score

Table 6.6: Current (non-expired) Leases Prior to 2020 - Lowest Smart Location Score

Facility name	Smart Location Calculator Score
COALINGA STATE HOSPITAL	2
METROPOLITAN STATE HOSPITAL	10
PATTON STATE HOSPITAL	14

Reporting Narrative on Table 6.7: Current (non-expired) Leases Prior to 2020 - Lowest Smart Location Score

NO LEASED BUILDINGS.

Planning Narrative on Table 6.7: Current (non-expired) Leases Prior to 2020 - Lowest Smart Location Score

NO CURRENT LEASESES.

CHAPTER 7 - WASTE MANAGEMENT AND RECYCLING

Department Mission and Waste Management and Recycling

DSH operates five forensic hospitals dedicated to providing essential care, support, and safety for its patients. Given the scale of these facilities and the daily influx of patients and staff, DSH can produce sizable waste amounts. To address this, the department collaborates with DGS and external vendors to reduce waste generation. Staff members are trained in recycling and waste management practices, and each hospital has designated teams to oversee these initiatives. Additionally, individual hospitals implement their own waste management practices and procedures. The primary types of waste generated include construction materials, food, textiles, and many other general wastes. Despite ongoing efforts to minimize waste, DSH sometime faces challenges due to the accumulation of waste over time, exacerbated by limited storage space for recycle waste and materials.

Waste and Recycling Programs

Designated Waste and Recycle Coordinator and Program Basics

Reporting Narrative on Designated Waste and Recycle Coordinator and Program Basics

Recycling initiatives at each hospital are thoroughly assessed by recycle coordinators and dedicated recycling teams. DSH employs Govdeals.com to facilitate the recycling of various items, thereby minimizing landfill contributions. Additionally, the hospitals maintain contracts for the recycling of materials such as metals, electronic waste, organic food scraps, and textiles, along with specific agreements for mattress and pillow recycling. Tonnage reports are generated using waste and recycling billing data from contracted vendors. Waste and slop bins are collected on a weekly or bi-weekly basis by these vendors, and as standards evolve and contracts are renewed, update language is integrated into the new agreements.

Planning Narrative on Designated Waste and Recycle Coordinator and Program Basics

DESIGNATED WASTE, RECYCLE COORDINATOR, AND PROGRAM BASICS

ACHIEVED.

SARC Report

Table Instructions:

Table 7.1: State Agency Reporting Center (SARC) Report on Total Waste per Capita

Per Capita Disposal Rate	2023	2024	Total Waste 2023	Total Waste 2024	% Change from 2023/2024
DSH-A	5.93	5.67	720.17 tons	723.58 tons	0.47%
DSH-C	5.64	N/A	N/A	N/A	N/A
DSH-N	5.71	6.01	995.83 tons	1,057.00 tons	6%
DSH-M	2.84	7.55	997.78 tons	754.85 tons	-24%
DSH-P	2.04	2.28	959.58 tons	1,070.44 tons	12%

Reporting Narrative on Table 7.1: SARC Report on Total Waste per Capita

Based on DSH's most recent SARC reports, these are the number of employees at each of the five facilities:

- DSH-A: 1,873
- DSH-C: 2,899
- DSH-M: 1,975
- DSH-N: 2,225
- DSH-P: 2,749

The waste disposal data presented in the above table indicates that most sites have experienced an increase in waste production. Notably, DSH-M has shown a significant decrease in its waste generation from 2023 to 2024, while DSH-P has reduced its waste at 1,419 tons in 2021 (from previous roadmap) to 1,070 tons in 2024. Despite the hospitals' efforts to minimize waste, the rise in new construction projects and populations may have poses challenges in waste management. DSH continues to actively seeks recycle materials, fixtures, and furniture during

construction whenever feasible, as this approach not only supports sustainability initiatives but also provides financial savings for the department.

Planning Narrative on Table 7.1: SARC Report on Total Waste per Capita

According to the data, DSH-M and DSH-P are the only two hospitals showing improvement in waste management over the past years, while other facilities have seen an increase in waste production. DSH generates waste due to its building and occupancy types, which serve both employees and patients. The continuous operation of the facilities adds to the complexity of waste management. The department will continue to collaborate with vendors and adhere to the established procedures to enhance waste disposal rates. DSH is also currently working on a statewide policy directive for waste prevention and recycling guidelines which will ensure that all the hospitals follow and report on their recycling effort to meet DGS' recycling standards and requirements. DSH's SARC reports can be found by searching the department's name online at State Agency Waste Management Annual Reports (SARC).

Recycling Program and Practices

Reporting Narrative on Recycling Program and Practices

Recycling is the practice of collecting and diverting materials from the waste stream for remanufacturing into new products, such as recycled-content paper. Stewardship programs help collect and recycle carpet, paint, pharmaceuticals and sharps, and mattresses.

DSH facilities make every effort to recycle items such as beverage containers, glass, paper products, plastics, etc. Some items that are recycled by the hospitals include:

- Beverage containers
- Glass plastics
- Cardboard
- Papers
- Copier/ toner cartridges
- Metals
- Wood
- Textiles
- Mattresses
- Tires
- White goods

- Construction materials
- Rendering

Below are also some recycling practices at each of the DSH facilities:

- **DSH-Atascadero**
    - Utilizes a hauling company for recycled paper, cardboard, plastics, miscellaneous metals, and organics
    - E-Waste and toner cartridges are recycled by PIA
    - GovDeals.com is utilized to sell unused or end of life surplus property to avoid being discarded into the landfill
    - Mattresses and pillows are recycled
    - All towels, washcloths, blankets, and sheets are given to Plant Operations to be utilized as rags
    - 100% of all remaining textiles are recycled
    - Rendering is recycled
    - Hazardous waste is picked up and hauled away
- Office supplies and property are re-utilized throughout the facility

- **DSH-Coalinga**
    - Contracts are in place to pick up e-waste and hazardous materials
    - Automobiles are sent to state auctions
    - Major equipment is sent to DGS for sale online
    - Items no longer needed are sent to other facilities or schools
    - Mattresses are recycled
- GovDeals.com is utilized to sell unused or end of life surplus property to avoid being discarded into the landfill

- **DSH-Metropolitan**
    - Surplus property is used whenever feasible
- Equipment is reutilized internally, or General Services either recycles or donates items to be used elsewhere
    - Records are stored and archived electronically
    - Boxes, pallets, and packing materials are reused by warehouse
    - Retreaded tires and used vehicle parts are used whenever price and availability are comparable
        - Recycled content products are used, and suppliers are required to certify the minimum post-consumer recycled content

- GovDeals.com is utilized to sell unused or end of life surplus property to avoid being discarded into the landfill

- **DSH-Napa**
    - Recycling program in place to divert e-waste and hazards to the appropriate recycling centers
    - Blue recycling bins are set up throughout the facility to collect paper materials to be recycled regularly
    - Towels from the laundry department are recycled into cleaning rags for janitorial employees
    - Materials exchange is promoted by reusing and checking with State surplus prior to purchasing
    - Procurement consultants with the property department for available furniture prior to purchasing
    - Emphasis is on obtaining green products that meet the recycling percentage requirement
    - State Agency Buy Recycle Campaign (SABRC) information is reported on FI$Cal for all purchases that contain recycled materials
- GovDeals.com is utilized to sell unused or end of life surplus property to avoid being discarded into the landfill

- **DSH-Patton**
    - Collection sites and contracts with outside service providers are utilized for collection, recycling, and disposal
    - Universal waste items such as electronic devices, microwaves, batteries, and fluorescent lightbulbs are disposed of by the e-waste contractor
    - Hazardous waste, including medical and pharmaceutical waste, antifreeze, cooking oil, and motor oil, are collected and disposed of by outside contractor
- GovDeals.com is utilized to sell unused or end of life surplus property to avoid being discarded into the landfill

Planning Narrative on Recycling Program and Practices

Though DSH tries to maximize its recycling initiatives, there are some challenges which the department continues to navigate. Below is a list of the challenges the hospitals are working on to ensure compliance:

- **DSH-Atascadero**
    - Continue to research recyclers for food soiled paper for disposable trays for the dining areas
    - Paper trays, bowls, and cups increased in 2020 due to COVID as all patients were served 3 meals per day for approximately 8-9 months in their units rather than in the dining areas
    - PIA ceased pickup of e-waste and toner cartridges

- **DSH-Coalinga**
    - The location of the hospital makes it difficult to find vendors to bid or come out to the facility
    - Employees need to properly sort, and separate recyclable or disposable materials
    - Training and education of existing staff will help reduce waste and ensure staff are aware of the recycling program mandates

- **DSH-Metropolitan**
    - Seek best practices from other hospital recycling programs consistent with SB 1383 including exploration of equipment to support organic waste recycling

- **DSH-Patton**
    - Local solid waste contractors have not provided a reasonable solution or cost benefit to reuse or repurpose these types of materials such has motor oil, anti-freeze, cooking oils, etc.

Organics Recycling

Reporting Narrative on Organic Recycling Program and Practices

All state agencies are mandated to implement AB 1826 (Chesbro, Chapter 727, Statutes of 2014) and SB 1383 (Lara, Chapter 395, Statutes of 2016) to comply with the statewide recycling program requirements. DSH has adhered to AB 1826, which necessitates the establishment of recycling services for various organic materials, including food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper.

In early 2023, DSH adopted SB 1383, which emphasizes the importance of maintaining effective commercial and organic recycling programs across all state agencies. This includes ensuring that recycling containers are appropriately labeled for the collection of bottles, cans, paper, cardboard, food waste, and other recyclable items. Each hospital is equipped with designated containers for landfill, compost, and recycling to facilitate the correct sorting of waste.

The success of DSH's organic recycling program relies heavily on the efforts of the building management and plant operation staff at each hospital. They are responsible for training employees on proper waste disposal practices and ensuring that all waste is placed in the correct containers. Subsequently, contracted vendors and haulers sort and transport these materials for appropriate disposal or recycling. Additionally, each hospital designates a recycling coordinator who monitors waste data and submits annual reports to CalRecycle, ensuring compliance with state recycling mandates.

Planning Narrative on Organic Recycling Program and Practices

ORGANIC RECYCLING REQUIREMENTS ACHIEVED.

Edible Food Recover Program

Table 7.2: Edible Food Recovery Program Elements

Building Name	Cafeteria >5,000 sq. ft. (Enter sq. ft.)	Cafeteria +250 Seats (Enter number of seats)	Cafeteria Open in 2023?	Cafeteria Open in 2024?	Food Recovery Agreement (Yes, No or Unknown)
N/A	N/A	N/A	N/A	N/A	N/A

Reporting Narrative on Table 7.2: Edible Food Recovery Program Elements

NO EDIBLE FOOD RECOVERY PROGRAM REQUIRED.

Planning Narrative on Table 7.2: Edible Food Recovery Program

DSH does not engage in food recovery programs due to its specific occupancy type. The hospital's food service model does not allow for the storage of leftovers, as meals are prepared from scratch in the kitchen and served fresh daily. While the main courses are not eligible for recovery, some pre-packaged items, such as bread, yogurt, fruits, and snacks, can be stored for later use. Vendors supplying these pre-packaged food items include the Prison Industry

Authority (PIA), Meridian Food Services Inc., Performance Food Group Inc., Bimbo Bakeries USA Inc., and San Joaquin Distributors.

Food Service Items Program

Reporting Narrative on Food Service Items Program

Table 7.3: Food Service Concessionaire Items Program Elements

Building Name	Prepared Food Service Operations Type (select dropdown)	Food Service Packaging Meets Requirements	Process in Place for selecting Food Services that meet Packaging Requirements
NO FOOD SERVICES	NO FOOD SERVICES	NO FOOD SERVICES	NO FOOD SERVICES

Reporting Narrative on Table 7.3: Food Service Items Program

NO FOOD SERVICES.

This section pertains to SB 1335, which seeks to align food service packaging with the state's recycling and composting initiatives. The legislation promotes enhancements in packaging design to safeguard public health and wildlife, expands takeback and reuse options at state facilities, and aims to minimize contamination in recycling and composting processes.

Currently, DSH foodservice operations utilize cook/chill systems to ensure that meals are prepared and served in compliance with health and safety regulations. To mitigate waste, main course meals are not prepackaged. As previously noted in the recycling sections, the facilities are committed to integrating recycling and waste prevention strategies whenever feasible.

Planning Narrative on Table 7.3: Food Service Items Program

NO FOOD SERVICES.

Hazardous Waste Materials

Reporting on Hazardous Waste Materials

Table 7.4: Hazardous Waste Materials

Department -Wide Hazardous Material Name	Department Total Hazardous Material Amount (lbs.)
Alkaline Solutions	1,321
Asbestos-Containing Waste	94,040
Waste Oil, Mixed Oil, Unspecified Oil	24,259
Oil/ Water Separation Sludge	459
Latex Waste	2,852
Pharmaceutical Waste	2,274
Q2, 2012/ 2013	3,361
Q3, 2011	2,274
Off-spec, Aged, or Surplus Organics	36,222
Off-spec, Aged, or Surplus Inorganics	20,476
Other Organic Solids	21,792
Other Inorganic Waste	28,650
Empty Containers < 30 Gallons	715
Laboratory Waste Chemicals	13,049
Unspecified Organic Liquid Mix	612
Unspecified Aqueous Solution	6,847
Liquid w/ Halog Organic Comp.	16
Liquids w/ PH <= 2 w/o Metals	397
Liquids w/ PH <= 2 w/ Metals	56
Aqueous (AQ) Solutions w/ CONTG & Organic Residue	15,671
Polychlorinated Biphenyls & Materials	5,698
Photochemicals/ Photoprocessing	42
Pesticides Waste	15
Household Waste	5,093
Hydrocarbon Solvent	3,361
Ignitable	20,220

Chromium	4,800
Corrosives	1,810
Arsenic	1,548
Barium	2,598
Cadmium	1,648
Lead	8,000
Mercury	2,408
Selenium	2,360
Silver	2,392
m-Cresol	2,250
Nicotine, Warfarin and Salts	1
Phenol	16
Benzene	4,311
Selenium Sulfide	14
Methyl Ethyl Ketone	950
Tetrachloroethylene	950
Halogenated Solvents	1,900
Non-halogenated Solvents	1,900

Reporting Narrative for Table 7.4: Hazardous Waste Materials

Hazardous waste refers to materials that possess characteristics making them potentially harmful to human health or the environment. This type of waste can exist in various forms, including liquids, solids, or contained gases, and often arises from manufacturing processes, discarded materials, or unused commercial products like solvents and pesticides. Due to its dangerous nature, the disposal of hazardous waste must be handled by licensed vendors specializing in hazardous waste management.

DSH typically generates significant amounts of hazardous waste, including medical and pharmaceutical waste, antifreeze, cooking oil, and motor oil, which are collected and disposed of by external contractors at each facility. The department utilizes the Department of Toxic Substance Control's Waste Reporting System (WRS) to document and report hazardous waste activities for both the Annual Facility Report and the Biennial Hazardous Waste Report.

The primary challenge facing the department is the reduction of waste generation, which is complicated by the nature of its operations. To continue to manage waste and ensure the safe disposal of hazardous materials, each hospital within DSH has established specific units tasked with overseeing and tracking different categories of hazardous waste. For example, the Plant

Operations team is responsible for monitoring waste related to construction, such as lead and asbestos, while the Pharmacy and medical teams handle the reporting of medical and biohazard waste.

Planning Narrative for Table 7.4: Hazardous Waste Materials

Over the past two years, waste generation has shown a mixed trend, with some categories experiencing a decline while others have seen an increase. Notably, the total asbestos waste produced rose from an estimated 63,509 pounds in 2021-2022 to 94,040 pounds in 2023-2024. This uptick can be linked to the surge in new and ongoing construction projects at the hospitals, which has necessitated the removal and disposal of hazardous materials. As indicated in the table above, asbestos waste remains the predominant type of waste due to these construction activities.

DSH is committed to reducing the use of hazardous materials, although this poses challenges given its status as a medical facility that relies on certain products that inevitably generate waste, such as pharmaceuticals. Nevertheless, with the ongoing and planned upgrades to infrastructure and renovations, the likelihood of reporting hazardous materials like asbestos is expected to decrease as the facilities enhance their buildings.

Universal Waste Program

Reporting on Department-Wide Universal Waste Materials

Table 7.5: Reporting on Department- Wide Universal Waste Materials

Category	Universal Waste Contract in Place
Electronic Waste	YES
Batteries	YES
CRTS*	YES
CRT glass	YES
Lamps	YES
Mercury Wastes	YES
Non-empty aerosol cans	YES
PV modules	YES

Reporting Narrative for Table 7.5: Department-Wide Universal Waste Materials

Universal wastes are hazardous wastes that were determined to pose a lower immediate risk to people and the environment compared to other hazardous wastes. Universal wastes must be either transported out or sent out to universal waste handler so they can recycle the waste accordingly to the universal waste standards and regulations. Universal wastes are also handled by outside contractors like for hazardous waste materials. The department wide universal waste materials disposal is achieved under these contracts.

Planning Narrative for Table 7.5: Department-Wide Universal Waste Materials

DEPARTMENT WIDE UNIVERSAL WASTE MATERIALS DISPOSAL ACHIEVED.

Material Exchange Programs

Reporting Narrative on Department-Wide Material Exchange

DSH leverages state-sponsored reutilization programs, overseen by DGS, to facilitate the exchange and repurposing of unwanted or excess materials and fleet assets. This initiative not only lowers material and product costs for the receiving agencies but also contributes to energy conservation, preservation of raw resources, reduction of landfill usage, and decreases in greenhouse gas emissions, purchasing expenses, and disposal fees.

Planning Narrative on Department-Wide Material Exchange

DSH will continue to collaborate with DGS on the effort to enhance its material exchange programs and participation efforts.

Waste Prevention Program

Reporting Narrative on Department-Wide Waste Prevention

The programs offered by the state in this section aim to support DSH through two key approaches: waste prevention and reuse. Waste prevention involves actions or decisions that minimize waste generation from the outset, while reuse refers to the practice of utilizing an item or material again, either for its original function or a similar one, without making significant alterations to its physical form.

Planning Narrative on Department-Wide Waste Prevention

DSH will maintain its involvement in state-sponsored initiatives aimed at waste reduction. The hospitals are committed to reusing equipment and materials during construction projects whenever feasible to minimize waste. For instance, in projects that involve demolition, the hospital and design team will evaluate existing fixtures, such as sinks, to assess their potential for reuse. This approach not only supports recycling efforts but also helps to keep project costs down when possible.

Reuse Program

Reporting Narrative for Department-Wide Material Reuse

DSH is committed to actively participating in recycling and reusing materials whenever feasible. However, hospitals may encounter challenges when attempting to reuse materials or existing fixtures and equipment, particularly if these items are outdated or do not meet current code compliance standards. For instance, if a hospital wishes to repurpose a fixture that fails to comply with ADA guidelines, Energy Star performance criteria, or other regulatory restrictions, it cannot be reused. In such cases, the hospital is required to find alternative methods for recycling the non-compliant item.

Planning Narrative for Department-Wide Material Reuse

To strengthen the Department's material reuse initiative, DSH will actively engage in various material reuse and recycling programs while expanding its educational outreach to include employees located at headquarter, rather than limiting this effort to those working directly at the hospitals. This approach will foster a culture of sustainability by ensuring that all employees are informed about the importance of material reuse and recycling practices. By providing comprehensive training and resources it will empower the entire department to contribute to environmental conservation efforts, thereby enhancing the overall effectiveness of the material reuse program and promoting a more sustainable future for the organization.

Employee Waste and Recycling Training and Education

Reporting Narrative for Employee Waste and Recycle Training and Education

In accordance with AB 2812 (Gordon, Chapter 530, Statutes of 2016), all state departments are mandated to implement adequate recycling measures, including receptacles, signage, education, and staffing, while ensuring compliance with existing recycling standards across their office buildings and large facilities.

At DSH-Atascadero, the Hospital General Services Administrator and housekeeping supervisors play a crucial role in educating staff on proper recycling practices, while procurement processes incorporate vendor information to support sustainability. Regular recycling meetings facilitate discussions on logistics, and employee events promote recycling through the collection of various materials.

DSH-Coalinga focuses on employee education regarding the benefits of recycling and trains suppliers on the importance of using recycled materials, enhancing their marketability to state agencies. Monthly presentations by a hazardous waste specialist during new employee orientations further reinforce these initiatives.

At DSH-Metropolitan, dedicated recycling personnel ensure compliance through the presence of clear signage, employee training, and adequate receptacles, while intranet and internet resources keep staff informed about recycling requirements. Additionally, an automated training tracking system supports employee education on recycled-content procurement, ensuring that all purchases meet certification standards.

At DSH-Napa, the facility has clearly marked recycling receptacles that distinguish between recyclable and non-recyclable items. Employees have participated in the CalRecycle webinar, and dedicated staff members are responsible for collecting and organizing recyclable materials. Additionally, procurement staff maintain contracts with vendors that supply environmentally friendly products and services.

Meanwhile, at DSH-Patton, an onsite recycling coordinator is actively exploring strategies to enhance awareness and training related to recycling. The facility has strategically placed collection receptacles to maximize recyclable collection, and each container is distinctly labeled with colors or signage indicating the types of recyclables accepted.

Planning Narrative for Employee Waste and Recycle Training and Education

EMPLOYEE TRAINING AND EDUCATION ACHIEVED.

Chapter 8 - PROCUREMENT

Department Mission and Procurement

DSH utilizes Environmentally Preferable Purchasing (EPP) by integrating it into the procurement process, prioritizing products with reduced environmental and health impacts. DSH's Procurement, Contracting Selective Services follows the DGS "Buying Green Guide" and designated EPP contracts, which feature products pre-vetted for environmental attributes and adhere to DGS Purchasing Standards for specific commodities that do not have dedicated statewide contracts.

For DSH, the top 5 EPP commodities, in total dollar value, are (by UNSPSC): 46171500-Locks Security Hardware & Accessories (5.3%), 14111704- Toilet Paper/Tissue (3.6%), 14111507-Printer or copier paper (2.6%), 52151504-Domestic disposable cups or glasses or lids (1.9%), and 24111503-Plastic bags (1.2%), which account for 14.6% of all commodities purchased.

DSH facilities are highly regulated by other state agencies: Office of the State Fire Marshal (OSFM), Division of State Architect (DSA), Department of Health Care Access and Information (HCAI), among others, and all products utilized need to be approved or meet standards set by these agencies having jurisdiction. In some EPP categories like Glass and Metal Products, OSFM has set fire rated standards generally not met by recycled products.

Reporting Narrative for Measure and Report Progress on EPP Spend

DSH facilities adhere to state-mandated environmental purchasing policies, specifically Executive Order B-18-12, the Green Building Action Plan, and Public Contract Code 12400-12404. These mandates require state agencies to use environmentally preferable products (EPP) whenever they are applicable, perform well, and are cost-effective.

To meet these requirements, DSH has implemented the following measures:

- Purchasing staff vigilantly review all acquisitions and prioritize selecting post-consumer recycled content products.
- DSH buys recycled products in bulk to address emergent needs across hospitals, further promoting EPP compliance.
- Individual DSH facilities track reportable and compliant spending for the State Agency Buy Recycled Campaign (SABRC), including purchases made by maintenance and other hospital personnel.
- DSH consistently trains buyers in the benefits of buying EPP products and following EPP Best Practice Manual (BPM).

- DSH notifies department bidders of EPP requirements in these areas: Construction Contracts (Major Cap, through DGS) and A&E Contracts.

Planning Narrative for Measure and Report Progress on EPP Spend

DSH's PCSS measures, monitors, reports and oversees the EPP program, sets goals and tracks progress. For continuous improvement, DSH will conduct a comprehensive spend analysis across all acquisition categories. This will be used to identify environmental, social, and economic impacts and prioritize sustainable purchasing strategies.

Goods and Services Categories with the Greatest Potential to Green:

Reporting on Goods and Services Categories with the Greatest Potential to Green

Table 8.1: Goods and Services Categories with the Greatest Potential to Green

Good or Service	2023 Total Spend ($)	2023 Percent EPP Spend (%)	EPP Target (%)
Locks and Security Hardware…	**455,556.55**	**3.34**	**5**
Toilet Tissue/Paper	**309,213.38**	**100.00**	**80**
Printer or Copier Paper	**225,686.48**	**100.00**	**80**
Domestic Disposable Cups or Glasses or Lids	**162,769.18**	**41.4**	**45**
Plastic Bags	**101,404.85**	**100.00**	**80**

Reporting Narrative on Table 8.1: Goods and Services with the Greatest Potential to Green

Three of our top five commodities categories are at 100% EPP compliance. For Locks and Security Hardware and for Domestic Disposable Cups or Glasses or Lids, DSH utilizes mandatory LPAs to execute our procurements in these categories. Not many LPAs in these categories provide adequate information on their products meeting EPP standards and are therefore excluded from our totals.

Whenever possible DSH will work with and inquire about product EPP information from our LPA vendors and continue to improve our EPP performance.

Planning Narrative on Table 8.1: Goods and Services with the Greatest Potential to Green

For continuous improvement opportunities, DSH will continue to conduct analysis of all its acquisition activities to identify environmental, social, and economic impacts by purchasing category. This future spending analysis will enable DSH to prioritize strategies to improve sustainable purchasing practices. DSH will further incorporate EPP in its statewide procurement processes by resolving any technical barriers, negative perceptions of purchasers, and end-users of green products. Statewide policies and standard operating procedures are in development that are aligned with this goal.

EPP BMPs

Reporting Narrative for EPP BMPS

To enhance efforts in minimizing the impact on energy, water and natural resources during purchasing decisions, DSH utilizes the DGS "Buying Green Guide" to adhere to best practices in the procurements of environmentally friendly products and services. DSH procurement employees review purchases and materials and products that will be purchases. For infrastructure projects, DSH will often have DGS and/or its retained A/E firm study and recommend products that will help reduce energy, water, and comply with the Energy Star requirements as necessary. The department also tracks the reportable and compliant dollars for State Agency Buy Recycled Campaign (SABRC) category items purchased.

Planning Narrative for EPP BMPs

Recycled content paints generally have higher Volatile Organic Compounds (VOC) and are not recommended for interior use since the content levels are typically higher than recommended VOC limits (California Air Resource Board).

All other EPP BMPS achieved.

Reporting on EPP Training and Outreach

Table 8.2: 2024 EPP Basic Training Completions

CalHR Classification	Total Number of Staff	EPP Basic Training Completion	Percent Trained	2025 EPP Training Goal
Office Technician (OT)	DSH-A: 0 DSH-C: 0 DSH-N: 0 DSH-M: 0 DSH-P: 0 DSH-S: 1	DSH-A: 7 DSH-C: 4 DSH-N: 7 DSH-M:6 DSH-P: 7 DSH-S: 15	96%	100%
Staff Services Analyst (SSA)	DSH-A: 2 DSH-C: 0 DSH-N: 2 DSH-M: 4 DSH-P: 2 DSH-S: 1			
Associate Governmental Program Analyst (AGPA)	DSH-A: 4 DSH-C: 5 DSH-N: 4 DSH-M: 1 DSH-P: 4 DSH-S: 8			
Management Staff (SSMI, SSMII, etc.)	DSH-A: 1 DSH-C: 1 DSH-N: 1 DSH-M: 1 DSH-P: 1 DSH-S: 5			

Table 8.3: 2024 EPP Executive Training Completions for Executive Members

Executive Member	Title	Date Completed
N/A	N/A	N/A

Reporting Narrative on Tables 8.2-3: EPP Training and Education

A majority of DSH employees are trained in the basic procurement process for EPP, including reporting goods within the SABRC category (Table 8.2). However, data on whether these or any other employees have taken executive-level courses is unavailable (Table 8.3). To increase awareness and promote EPP, DSH will investigate providing trainings and informing necessary employees about courses offered by CALPCA and other organizations.

Environmentally Preferable Purchasing (EPP) training equips purchasing professionals with the knowledge to select goods and services that have minimal impacts on human health and the environment. DSH will be developing a statewide training directive for EPP training, to include who needs the training, additional training levels, and a systematic tracking method.

Planning Narrative on Tables 8.2-3: EPP Training and Education

EPP TRAINING AND EDUCATION ACHIEVED.

DSH purchasing supervisors will be directing their buyers who still need the training to complete it this year.

Reporting on State Agency Buy Recycled Campaign (SABRC), and Reducing Impacts

Reporting on SABRC Progress

Table 8.4: State Agency Buy Recycled Campaign (SABRC) FY 23/24 Performance

Product Category	SABRC Reportable Dollars	SABRC Compliant Dollars	% SABRC Compliant
75% Total Purchase Requirement			
Building Finishes	**$0.00**	**$0.00**	**N/A**
Carpet	**$0.00**	**$0.00**	**N/A**
Erosion Control Products	**N/A**	**N/A**	**N/A**
Glass Products	**$221,594.50**	**$5,340.36**	**2.41%**

Lubricating Oils	**$4,162.97**	**$3,920.65**	**94.18%**
Metal Products	**$3,687,854.78**	**$2,930,801.48**	**79.47%**
Paper Products	**$1,778,365.12**	**$1,362,489.56**	**76.61%**
Pavement Surfacing	**$304.80**	**$304.80**	**100.00%**
Plastic Products	**$1,824,204.64**	**$1,305,917.86**	**71.59%**
Printing and Writing Paper	**$679,024.05**	**$544,663.94**	**80.21%**
Soil Amendments and Soil Toppings	**$3,915.00**	**$3,915.00**	**100.00%**
Textiles	**$319,651.51**	**$319,651.51**	**100.00%**
Tire Derived Products	**$11,547.23**	**$9,067.28**	**78.52%**
50% Total Purchase Requirement			
Antifreeze	**$1,453.92**	**$1,453.92**	**100.00%**
Paint	**$34,758.52**	**$14,307.33**	**41.16%**
Tires	**$22,205.46**	**$0.00**	**0.00%**

Reporting Narrative for Table 8.4: Measure and Report SABRC Progress

- Glass products - DSH is 2.41% compliant, which is down from last year's 21.08%. During reconciliation, DSH also identified some items that were mis-categorized as glass when they should not have been. To ensure mis-categorizing does not happen in the future, DSH provides refresher SABRC program requirement training for staff on the importance of properly categorizing materials. Furthermore, patient units at DSH are required by the Office of the State Fire Marshal (OSFM) that all glass meet both safety (impact glass) and Fire Rating (UL) standards. Recycled glass currently does not meet these standards.

- Plastic Products - DSH is 71.59% compliant which is an improvement from FY22/23 of 68.12%. DSH is a mental health facility acting as stewards for the care of dependent adults and is bound by the requirements under CCR Title 2 & 5. Food containers need to be durable enough to be stored & transported to various units, to not cause any extraneous exposure to danger to the patient population (e.g. flimsy, thin, & porous materials that can cause food leakage which can burn patients/staff). DSH must purchase the most reliable (sturdy/durable) food container products which do not always contain high percentages of recycled materials. DSH makes every effort to use LPAs as often as possible; however, current LPAs do not offer recycled plastics that meet the safety needs of DSH patient population & staff.

- Paint - DSH is 41.16% compliant, which is down from last year's percentage of 48.89%. The U.S. Environmental Protection Agency (EPA) does not

recommend "reprocessed" paints for interior use due to the Volatile Organic Compounds (VOCs) being higher than the recommended VOC limits. DSH houses mental health patients who have a higher potential for negative health interactions with reprocessed paints. Examples of these negative interactions with VOCs include but may not be limited to eye, nose, and throat irritation, headaches, loss of coordination and nausea, and damage to the liver, kidney, & the central nervous system. DSH is bound by the requirements under CCR Title 2 and Title 5 to provide a standard of healthcare for this sensitive population.

- Tires - DSH is 0% compliant as DSH utilizes the mandatory LPA 1-23-26-01 to purchase tires which does not offer the option to purchase recycled materials.

Planning Narrative for Table 8.4: Measure and Report SABRC Progress

Similar to the plan to implement sustainable purchasing, DSH will prioritize strategies to improve procurements of the state agency buy recycled campaign (SABRC) compliant products, SABRC practices and incorporate EPP in its statewide procurement to align with this goal.

Reducing Impacts

Reporting Narrative for Reducing Impacts

DSH is committed to reducing the environmental impact of its purchased goods and services. A designated Procurement and Contracting Officer (PCO) ensures statewide compliance with the DGS EPP program and other state contracting guidelines, including those related to the California Environmental Quality Act (CEQA).

Planning Narrative for Reducing Impacts

DSH is dedicated to minimizing the environmental footprint of goods and services acquired across the state. We will achieve this through our EPP program by setting specific targets for procuring products with post-consumer recycled content, as detailed in Table 8.1. We are also committed to transparent reporting of our progress. Our approach includes:

- Prioritizing items that are cost-effective and competitively priced.
- Utilizing the DGS Buying Green Guide to implement state best practices.
- Expanding our focus to other environmental factors, such as energy and water

- Communicating regularly with purchasing staff across the state through quarterly meetings and listservs to promote EPP efforts.

CHAPTER 9 - FUNDING OPPORTUNITIES

Funding Opportunity Climate Change Adaptation

Table 9.1: Climate Change Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-A	Electrification Study	**Maintenance Budget**	N/A	Complete
DSH-C	Solar PV and Battery Storage	**Maintenance Budget**	In Design	12/2025
DSH-M	Solar PV and Battery Storage	**Maintenance Budget**	In Design	12/2025
DSH-N	Electrification Study	**Maintenance Budget**	N/A	Complete
DSH-P	Electrification Study	**Maintenance Budget**	N/A	Complete
DSH-P	Solar PV and Battery Storage	**Maintenance Budget**	In Design	10/2025

Funding Opportunities for ZEVs and EV Infrastructure

Table 9.2: EV Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-A	EV Charging Stations	EVSE Special Funding	1/01/2020	12/30/2025
DSH-M	EV Charging Stations	EVSE Special Funding	6/01/2021	12/2025
DSH-P	EV Charging Stations	EVSE Special Funding	6/01/2021	12/2025

Funding Opportunities for Building Energy Conservation and Efficiency

Table 9.3: Building Energy Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-A	ESCO	ESCO Funding	11/21/2017	06/2026
DSH-C	ESCO	ESCO Funding	4/01/2019	12/2025
DSH-M	ESCO	ESCO Funding	11/01/2020	08/2025
DSH-N	ESCO	ESCO Funding	2/01/2018	Complete
DSH-P	ESCO	ESCO Funding	11/21/2017	12/2025

Funding Opportunities for Decarbonization

Table 9.4: Funding Opportunities for Decarbonization

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-A	Electrification	Maintenance Budget	N/A	N/A
DSH-C	N/A	N/A	N/A	N/A
DSH-M	CUP Replacement	5-Year Infrastructure Plan	2022	2028
DSH-N	Electrification	Maintenance Budget	N/A	N/A
DSH-P	Electrification	Maintenance Budget	N/A	N/A

Funding Opportunities for Water Conservation and Efficiency

Table 9.5: Water Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-A	Statewide Water Management	Grant Funding	N/A	N/A

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH-C	Statewide Water Management	Grant Funding	N/A	N/A
DSH-M	Statewide Water Management	Grant Funding	N/A	N/A
DSH-N	Statewide Water Management	Grant Funding	N/A	N/A
DSH-P	Statewide Water Management	Grant Funding	N/A	N/A

Funding Opportunities for Facilities Construction and Maintenance

Table 9.6: Sustainable Operations Priorities

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH Statewide EPP Training	Need Staff Training	Existing Training Budget	Ongoing	Ongoing
DSH Statewide Sustainable Purchasing	Need Staff Training	Existing Training Budget	2024	2026

Funding Opportunities for Waste Management and Recycling

Table 9.7: Waste Management and Recycling Priorities

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
DSH Statewide Recycling Policy Directive	Need Policy Update	N/A	2025	2026

Funding Opportunities for Procurement

Table 9.8: Procurement Priorities

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
Statewide	Need Staff Training	Existing Training Budget	N/A	N/A

Full Life Cycle Cost Accounting

Reporting on Life Cycle Cost Accounting

Life-cycle cost analysis (LCCA) is an economic evaluation technique that considers all expenses associated with the ownership, operation, maintenance, and eventual disposal of a project. This method is particularly effective for assessing design alternatives that meet specific performance criteria while varying in terms of investment, operational, maintenance, and repair costs, as well as their expected lifespans. LCCA is especially pertinent for projects where a higher initial investment can lead to lower long-term costs.

Currently, DSH does not integrate LCCA into its building or site management practices when planning or developing project narratives. Given that many of its structures are over 60 years old and that DSH's record retention policy mandates keeping project files for seven years, or for the duration of Lease-Bond Funded projects plus three years, it is often challenging to ascertain the original construction costs of these buildings.

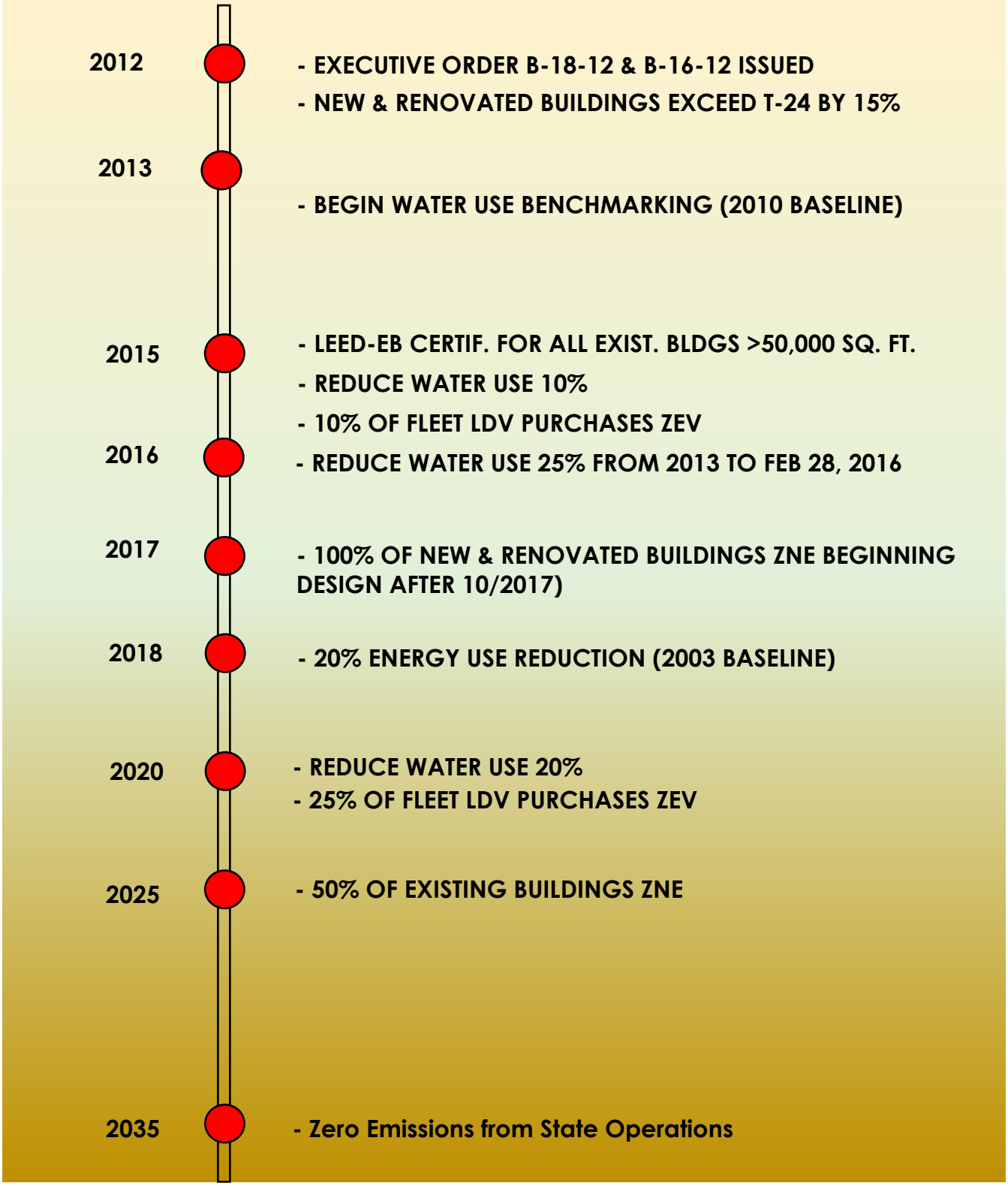
Planning for Implementing Life Cycle Cost Accounting

As previously stated, DSH does not currently utilize LCCA and has no intention of integrating it into its building and site management strategies.

Chapter 10 – PUBLIC EDUCATION AND OUTREACH

APPENDIX A – SUSTAINABILITY LEADERSHIP

APPENDIX B - SUSTAINABILITY MILESTONES & TIMELINE



APPENDIX C – ACRONYMS

ACRONYM	DEFINTION
AB	Assembly Bill
ADR	Automated Demand Response
AHU	Air Handler Unit
AMB	Asset Management Branch (at DGS)
BEV	Battery Electric Vehicle
BMP	Best Management Practices
CA	California
CALGREEN	California Green Building Code (Title 24, Part 11)
CEC	California Energy Commission
CRT	Cathode Ray Tube
CUP	Central Utility Plant
DGS	Department Of General Services
DSH	Department of State Hospitals
DWR	Department Of Water Resources
EEA	Energy Emergency Action Plan
EPD	Environmental Product Declarations
EHT	Extreme Heat Threshold
EMS	Energy Management System (Aka EMCS)
EMCS	Energy Management Control System (Aka EMS)
EO	Executive Order
EPP	Environmentally Preferable Purchasing
ESCO	Energy Service Company
ESPM	Energy Star Portfolio Manager
ETS	Enterprise Technology Solutions (A Division At DGS)
EUI	Energy Use Intensity (Source Kbtu/Sq. Ft.)
EV	Electrical Vehicle

EVSE	Electric Vehicle Supply Equipment (Charging Equipment)
FAMS	Facilities Asset Management Section (DSH)
FMD	Facilities Management Division (A Division At DGS)
FPCM	Facilities Planning and Construction Management (DSH)
GCM	Global Circulation Model
GHG	Greenhouse Gas
GHGe	Greenhouse Gas Emissions
GSP	Groundwater Sustainability Plan
HD	Heavy Duty Vehicles
HVAC	Heating Ventilation Air Conditioning
IEQ	Indoor Environmental Quality
IMP	Infrastructure Master Plan
kBTU	Thousand British Thermal Units (Unit of Energy)
LCM	The Landscape Coefficient Method
LD	Light Duty Vehicles
LEED	Leadership In Energy and Environmental Design
MAWA	Maximum Applied Water Allowance
MD	Medium Duty Vehicles
MM	Management Memo
MPG	Miles per Gallon
MWELO	Model Water Efficient Landscape Ordinance
OBAS	Office Of Business and Acquisition Services (At DGS)
OBF	On-Bill Financing
OFAM	Office Of Fleet and Asset Management (At DGS)
O&M	Operations & Maintenance
OS	Office Of Sustainability (At DGS)
PCSS	Procurement and Contracts Services Section (DSH)
PHEV	Plug-in Hybrid Electric Vehicle

PMDB	Project Management and Development Branch (At DGS)
PPA	Power Purchase Agreement
PUE	Power Usage Effectiveness
PV	Photovoltaic Vehicles
RCP	Representative Concentration Pathway
SABRC	State Agency Buy Recycled Campaign
SAM	State Administrative Manual
SB	Senate Bill
SCM	State Contracting Manual
SGA	Sustainable Groundwater Agency
SGMA	Sustainable Groundwater Management Act
SUV	Sport Utility Vehicle
WMC	Water Management Coordinator
VHSP(s)	Vehicle Home Storage Permits
WUCOLS	Water Use Classifications of Landscape Species
ZEV	Zero-Emission Vehicle
ZNE	Zero Net Energy

APPENDIX D - GLOSSARY

Backflow - is the undesirable reversal of the flow of water or mixtures of water and other undesirable substances from any source (such as used water, industrial fluids, gasses, or any substance other than the intended potable water) into the distribution pipes of the potable water system.

Backflow Prevention Device – a device that prevents contaminants from entering the potable water system in the event of back pressure or back siphonage.

Blowdown, Boilers - is the periodic or continuous removal of water from a boiler to remove accumulated dissolved solids and/or sludge. Proper control of blowdown is critical to boiler operation. Insufficient blowdown may lead to deposits or carryover. Excessive blowdown wastes water, energy, and chemicals.

Blowdown, Cooling Towers – Is the water discharged to remove high mineral content system water, impurities, and sediment.

Building Best Management Practices (BMPs) - are ongoing actions that establish and maintain building water use efficiency. BMPs can be continuously updated based on need and tailored to fit the facility depending on occupancy and specific operations.

Compost – Compost is the product resulting from the controlled biological decomposition of organic material from a feedstock into a stable, humus-like product that has many environmental benefits. Composting is a natural process that is managed to optimize the conditions for decomposing microbes to thrive. This generally involves providing air and moisture, and achieving sufficient temperatures to ensure weed seeds, invasive pests, and pathogens are destroyed. A wide range of material (feedstock) may be composted, such as yard trimmings, wood chips, vegetable scraps, paper products, manures and biosolids. Compost may be applied to the top of the soil or incorporated into the soil (tilling).

Cooling Degree Day (CDD) - is defined as the number of degrees by which a daily average temperature exceeds a reference temperature. The reference temperature is also typically 65 degrees Fahrenheit, and different utilities and planning entities sometimes use different reference temperatures. The reference temperature loosely represents an average

daily temperature below which space cooling (e.g., air conditioning) is not needed.

Critically Overdrafted - a condition in which significantly more water has been taken out of a groundwater basin than has been put in, either by natural recharge or by recharging basins. Critical overdraft leads to various undesirable conditions such as ground subsidence and saltwater intrusion.

Ecosystem Services - are the direct and indirect contributions of ecosystems to human well-being. They support directly or indirectly our survival and quality of life. Ecosystem services can be categorized in four main types:

- Provisioning services are the products obtained from ecosystems such as food, fresh water, wood, fiber, genetic resources, and medicines.
- Regulating services are the benefits obtained from the regulation of ecosystem processes such as climate regulation, natural hazard regulation, water purification and waste management, pollination, or pest control.
- Habitat services provide living places for all species and maintain the viability of gene-pools.
- Cultural services include non-material benefits such as spiritual enrichment, intellectual development, recreation, and aesthetic values.

Erosion Control Product – includes products such as compost filter socks, compost blankets and hydraulic mulch.

Environmental Product Declarations (EPD) - third-party verified reports that detail a product's impacts on the environment. The International Standards Organization (ISO) 14025 defines EPDs as a Type III declaration that "quantifies environmental information on the life cycle of a product to enable comparisons between products fulfilling the same function." EPDs can be product-specific, factory-specific, or industry-wide.

Grass Cycling - refers to an aerobic (requires air) method of handling grass clippings by leaving them on the lawn when mowing. Because grass consists largely of water (80% or more), contains little lignin, and has high nitrogen content, grass clippings easily break down during an aerobic process. Grass cycling returns the decomposed clippings to the soil within one to two weeks acting primarily as a fertilizer supplement and, to a

much smaller degree, mulch. Grass cycling can provide 15 to 20% or more of a lawn's yearly nitrogen requirements

Heating Degree Day (HDD) - is defined as the number of degrees by which a daily average temperature is below a reference temperature (i.e., a proxy for when heat would be needed). The reference temperature is typically 65 degrees Fahrenheit, although different utilities and planning entities sometimes use different reference temperatures. The reference temperature loosely represents an average daily temperature *above which* space heating is not needed. The average temperature is represented by the average of the maximum and minimum daily temperature.

Hydrozone – is a portion of a landscaped area having plants with similar water needs that are served by one irrigation valve or set of valves with the same schedule.

Landscape Coefficient Method (LCM) - describes a method of estimating irrigation needs of landscape plantings in California. It is intended as a guide for landscape professionals.

Landscape Water Budget - is the calculated irrigation requirement of a landscape based on landscape area, local climate factors, specific plant requirements and the irrigation system performance.

Lifecycle Cost Accounting - includes initial investment costs, as well as lifetime operation and maintenance costs under changing climate conditions, including changing average conditions and increases in extreme events. It may involve applying non-market evaluation methods such as travel cost, avoided costs or contingent valuation to capture hard to quantify benefits and costs

Makeup Water - Makeup water, or the water replacing evaporated or leaked water from the boiler, is first drawn from its source, whether raw water, city water, city-treated effluent, in-plant wastewater recycle (cooling tower blowdown recycle), well water, or any other surface water source.

Model Water Efficient Landscape Ordinance (MWELO)) - The Water Conservation in Landscaping Act was signed into law on September 29, 1990. The premise was that landscape design, installation, and maintenance can and should be water efficient. Some of the provisions specified in the statute included plant selection and groupings of plants based on water

needs and climatic, geological, or topographical conditions, efficient irrigation systems, practices that foster long term water conservation and routine repair and maintenance of irrigation systems. The latest update to MWELO was in 2015. MWELO applies to all state agencies' landscaping.

Mulch – Mulch is a soil topping consisting of a layer of material applied on top of soil. Examples of material that can be used as mulch include wood chips, grass clippings, leaves, straw, cardboard, newspaper, rocks, and even shredded tires. Benefits of applying mulch include reducing erosion and weeds and increasing water retention and soil vitality. Whenever possible, look for mulch that has been through a sanitization process to kill weed seeds and pests.

Natural infrastructure - is the "*preservation or restoration of ecological systems or the utilization of engineered systems that use ecological processes to increase resiliency to climate change, manage other environmental hazards, or both. This may include, but need not be limited to, flood plain and wetlands restoration or preservation, combining levees with restored natural systems to reduce flood risk, and urban tree planting to mitigate high heat days*" (Public Resource Code Section 71154(c)(3)).

Nonpurchased Water – is water that a department uses that does not come from a 3rd party supplier. It may be water from domestic wells owned by the department or water that is taken from a river, lake, canal, or other source and used by the department. The water may be returned to source after use.

Trickle Flow – A device that allows users to reduce flow to a trickle while using soap and shampoo. When the device is switched off, the flow is reinstated with the temperature and pressure resumes to previous settings.

Soil Amendments and Soil Toppings - Soil amendments Include adding ingredients such as sulfur, or sand to change the original soil, soil conditioner for potting or plant mix, Soil toppings include organic materials used for water conservation; organic materials such as biosolids or other comparable substitutes such as livestock, horse, or other animal manure, food residues or fish processing byproducts; mechanical breakdown of materials.

Sprinkler system backflow prevention devices – are devices to prevent contaminants from entering water supplies. These devices connect to the

sprinkler system and are an important safety feature. They are required by the California Plumbing Code.

Submeter- a metering device installed to measure water use in a specific area or for a specific purpose. Also known as dedicated meters, landscape submeters are effective for separating landscape water use from interior water use, evaluating the landscape water budget and for leak detection within the irrigation system.

Urban Heat Islands - are areas with localized spikes in temperature, which impact human health, increase pollution, and increase energy demand. Urban heat islands occur during the hot summer months in areas with higher percentages of impervious surface and less vegetation. This is likely in areas with large parking lots, dense development, and lower tree density and shading. Urban heat islands can be mitigated (i.e., reduced) through tree planting and other greening measures, cool roofs (e.g., lighter roofing materials that reflect light), cooler pavements, and other measures.

Water Budget - A landscape water budget is the calculated irrigation requirement of a landscape based on landscape area, local climate factors, specific plant requirements and the irrigation system performance.

Water Energy Nexus - Water and energy are often managed separately despite the important links between the two. 12 percent of California's energy use is related to water use with nearly 10 percent being used at the end water use. Water is used in the production of nearly every major energy source. Likewise, energy is used in multiple ways and at multiple steps in water delivery and treatment systems as well as wastewater collection and treatment.

Water Shortage Contingency Plans - Each urban water purveyor serving more than 3,000 connections or 3,000 acre-feet of water annually must have an Urban Water Shortage Contingency Plan (Water Shortage Plan) which details how a community would react to a reduction in water supply of up to 50% for droughts lasting up to three years.

Water Use Classification of Landscape Species (WUCOLS)-. WUCOLS are used to help determine water budgets and irrigation schedules. Use this link to access the necessary information for your landscaping needs. WUCOLS Plant Search Database (ucdavis.edu)

Zero Energy Buildings - A zero-energy building is "an energy-efficient building where, on a source energy basis, the actual annual delivered energy is less than or equal to the on-site renewable exported energy". Department of Energy (DOE), September 2015.

APPENDIX E – DEPARTMENT STAKEHOLDERS

List individuals, offices, and divisions responsible for leading efforts related to each initiative identified in this report. Include their respective titles, roles, responsibilities.

Climate Change Adaptation

Understanding Climate Risk at Existing Facilities

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Understanding Climate Risk at Planned Facilities

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Integrating Climate Change into Department Planning and Funding Programs

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Measuring and Tracking Progress

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Zero Emission Vehicles

Incorporating ZEVs Into the Department Fleet

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Telematics

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Public Safety Exemption

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Outside Funding Sources for ZEV Infrastructure

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Hydrogen Fueling Infrastructure

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Comprehensive Facility Site and Infrastructure Assessments

Facilities, Planning, Construction & Management (FPCM)
Fleet & Asset Management (FAM)
State Hospitals Plant Operations

EVSE Construction Plan

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

EVSE Operation

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Energy

Zero Net Energy (ZNE)

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

New Construction Exceeds Title 24 by 15%

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Existing Buildings Energy Efficiency

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Energy Savings Projects

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Demand Response

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Renewable Energy

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Monitoring-Based Commissioning (MBCx)

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Building Controls

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Decarbonization

Greenhouse Gas Emissions

Facilities, Planning, Construction & Management (FPCM)

Fleet & Asset Management (FAM)

State Hospitals Plant Operations

Water Efficiency and Conservation

Indoor Water Efficiency Projects in Progress First initiative

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Boilers and Cooling Systems Projects in Progress

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Landscaping Hardware Water Efficiency Projects in Progress

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Living Landscaping Water Efficiency Projects in Progress

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Buildings with Urban Water Shortage Contingency Plans in Progress

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Facilities Construction and Operations

Building Design and Construction

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

LEED for Existing Buildings Operations and Maintenance

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Indoor Environmental Quality

Facilities, Planning, Construction & Management (FPCM)
State Hospitals Plant Operations

Integrated Pest Management

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Fossil Fuel Landscaping Equipment Replacement

Fleet & Asset Management (FAM)
State Hospitals Plant Operations

Location Efficiency

State Hospitals Plant Operations

Waste Management and Recycling

Waste and Recycling Programs

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

SARC Report

Procurement & Contract Services Section (PCSS)

Recycling Program and Practices

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Organics Recycling

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Hazardous Waste Materials

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Universal Waste Program

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Material Exchange Programs

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Waste Prevention Program

Fleet & Asset Management (FAM)
Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Reuse Program

Fleet & Asset Management (FAM)
Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Employee Waste and Recycling Training and Education

Facilities, Planning, Construction & Management (FPCM)
Fleet & Asset Management (FAM)
Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Procurement

Goods and Services with the Greatest Potential to Green

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

EPP BMPs

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Reporting on EPP Training and Outreach

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Reporting on State Agency Buy Recycled Campaign

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

Reducing Impacts

Procurement & Contract Services Section (PCSS)
State Hospitals Plant Operations

APPENDIX F – SUSTAINABILITY STATUTORY REQUIREMENTS, EXECUTIVE ORDERS, AND MANAGEMENT MEMOS REFERENCES

The following legislative actions, executive orders, State Administrative Manual (SAM) Management Memos, resources, and guidance documents provide the sustainability criteria, requirements, and targets tracked and reported herein.

Recent Legislative Actions

Several pieces of legislation were signed in 2023 that codified several elements of the executive orders, or provided further requirements included in the policies. These include the following:

Senate Bill (SB) 416 (Laird, 2023)**:** Requires all new building and major renovation projects larger than 10,000 gross square feet undertaken by state agencies, and for which the project schematic design documents are initiated by the state agency on or after January 1, 2024, to obtain the Leadership in Energy and Environmental Design or "LEED" Gold or higher certification, except as provided. Requires the state agency to obtain LEED Silver certification if the state agency concerned makes a finding that achieving LEED Gold conflicts with critical operational or security requirements, is demonstrably cost ineffective, or conflicts with California Building Code requirements. Authorizes certification to an alternative equivalent or higher rating system or standard, if any, only when approved by the Director of General Services.

Senate Bill SB 837 (Archuleta, 2023): The State Energy Resources Conservation and Development Commission as of January 1, 2024, shall consider revising the definition of "conditioned space, indirectly" for purposes of those regulations to include sealed and unvented attics, where the space is enclosed by the primary thermal and air barrier and directly adjoining conditioned space.

Assembly Bill (AB) 43 (Holden, 2023): Authorizes the state board to establish an embodied carbon trading system. Authorizes the state board to integrate the embodied carbon trading system into the framework for measuring the average carbon intensity of the materials used in the construction of new buildings, as described above, on or before December 31, 2026, and to implement the system on and after January 1, 2029. Authorizes the state board to adopt rules and regulations for the credit allocation approach, the anticipated carbon price in the scheme, and trading periods. Requires the state board to periodically review and update its emission reporting and compliance standard requirements, as necessary.

Other Significant Legislative Actions

- **Assembly Bill (AB) 661** (Bennet, 2022): Requires a state agency, if fitness and quality are equal, to purchase recycled products instead of nonrecycled products whenever recycled products are available at no more than 10% greater total cost than nonrecycled products, and specified circumstances exist. Requires the Department of Resources Recycling and Recovery, in concurrence with the DGS and in consultation with impacted agencies, to update a list of products and minimum recycled content percentages, as determined to be appropriate, commencing January 1, 2026, and every 3 years thereafter. Requires the Department of Resources Recycling and Recovery to report a state agency that does not meet SABRC purchasing requirements in each product category to the DGS. The bill would require all state agency procurement and contracting officers, or their designees, to participate in mandatory annual training, as prescribed, conducted by the Department of Resources Recycling and Recovery. The bill would require the DGS and the Prison Industry Authority to prioritize the use of recycled content products.

- **Senate Bill (SB) 1020** (2022): -*Clean Energy, Jobs, and Affordability Act of 2022*. States that eligible renewable energy resources and zero-carbon resources supply 90% of all retail sales of electricity to California end-use customers by December 31, 2035, 95% of all retail sales of electricity to California end-use customers by December 31, 2040, 100% of all retail sales of electricity to California end-use customers by December 31, 2045, and 100% of electricity procured to serve all state agencies by December 31, 2035, as specified.
  - **Assembly Bill (AB) 2446** (Holden, 2022): Require the Air Resources Board, by July 1, 2025, to develop, in consultation with specified stakeholders, a framework for measuring and then reducing the average carbon intensity of the materials used in the construction of new buildings, including those for residential uses. The bill would require the framework to include a comprehensive strategy for the state's building sector to achieve a 40% net reduction in greenhouse gas emissions of building materials, as determined from a baseline calculated using a certain 2026 report, if that report is adequate, or as specified. The bill would require the strategy to achieve this target as soon as possible, but no later than December 31, 2035, with an interim target of 20% net reduction by December 31, 2030.
- **Senate Bill SB 1203 (**Becker, 2021): Requires the Department of General Services, in consultation with the state board, and to the extent feasible, to publish, on its internet website or other publicly available location, an inventory of the greenhouse gas emissions of state agencies for the prior calendar year, on or before July 1, 2024, and annually thereafter until the goal has been achieved. Requires DGS to develop and publish a plan, on or

before January 1, 2026, that describes required actions and investments for achieving net-zero emissions of greenhouse gases and an estimate of the costs associated with the planned actions and ensure that the required actions and investments are incorporated into the sustainability roadmaps of all state agencies. Requires the department to update the plan beginning June 30, 2028, and every 2 years thereafter until the goal has been achieved. Requires that, subject to an appropriation by the Legislature, the department to provide information, training, coordination, best practices, and other technical assistance to state agencies to help those state agencies implement the required actions and investments. Requires state agencies to incorporate the required actions and investments into their future budget proposals, as provided. Requires the department, beginning December 31, 2027, and biennially thereafter until the achievement of the above stated goal, to report to the Legislature on progress toward achieving that goal, as provided.

- **Senate Bill SB 1335** (Allen, 2018): Enacts the Sustainable Packaging for the State of California Act of 2018, which would prohibit a food service facility located in a state-owned facility, operating on or acting as a concessionaire on state property, or under contract to provide food service to a state agency from dispensing prepared food using a type of food service packaging unless the type of food service packaging is on a list that CalRecycle publishes and maintains on its Internet Web site that contains types of approved food service packaging that are reusable, recyclable, or compostable.
- **Assembly Bill (AB) 739** (Chau, 2017): Requires, beginning December 31, 2025, at least 15% of newly purchased vehicles with a gross vehicle weight rating of 19,000 pounds or more purchased by the department and other state entities for the state fleet to be zero emission, and beginning December 31, 2030, at least 30% of those vehicles to be zero emission. The bill would require, if the department finds, in a public hearing on or after December 31, 2026, that it cannot meet the needs of the state while meeting this requirement, the department to disclose this finding at the hearing and to the Legislature.
- **Assembly Bill (AB) 2800** (Quirk, 2016): Requires state agencies to take the current and future impacts of climate change into planning, designing, building, operating, maintaining, and investing in state infrastructure. CNRA will establish a Climate-Safe Infrastructure Working Group to determine how to integrate climate change impacts into state infrastructure engineering. (Public Resources Code Section 71155)

- **Assembly Bill AB 2812** (Gordon, 2016): Provide adequate receptacles, signage, education, staffing, and arrange for recycling services. Report annually on how each of these is being implemented

- **Senate Bill** SB 1383 (Lara, 2016): 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020, a 75 percent reduction by 2025, and 20 percent of currently disposed edible food is recovered for human consumption by 2025.
    - Agencies already in compliance with AB 1826 may need to further expand their organic waste recycling service to comply with the new requirements
    - Jan. 1, 2024, Tier 2 Commercial Edible food Generators will be required to donate edible food to a recovery organization.
- **Assembly Bill (AB) 1482** (Gordon, 2015): Requires that the California Natural Resources Agency (CNRA) update the state's adaptation strategy safeguarding California every three years. Directs state agencies to promote climate adaptation in planning decisions and ensure that state investments consider climate change impacts, as well as the use of natural systems and natural infrastructure. (Public Resources Code Section 71153)
- **Senate Bill (SB) 246** (Wieckowski, 2015): Established the Integrated Climate Adaptation and Resiliency Program within the Governor's Office of Planning and Research to coordinate regional and local efforts with state climate adaptation strategies to adapt to the impacts of climate change. (Public Resources Code Section 71354)
- **Assembly Bill AB 1826** (Chesbro, 2014): Implement mandatory commercial organics recycling program (if meet threshold). Report annually on organics recycling program.
- **Assembly Bill AB 2583** (Blumenfield, 2012): **Public Resources Code §25722.8**: Statute requires reducing consumption of petroleum products by the state fleet compared to a 2003 baseline. Mandates a 10 percent reduction or displacement by Jan. 1, 2012, and a 20 percent reduction or displacement by Jan. 1, 2020.
- **Assembly Bill AB 341** (Chesbro, 2011): Implement mandatory commercial recycling program (if meet threshold). Report annually on recycling program.
- **Senate Bill SB 1106** (Lowenthal, 2005): Have at least one designated waste management coordinator. Report annually on how your designated waste and recycling coordinator meets the requirement.
- **Assembly Bill AB 75** (Strom-Marting,1999): Implement an integrated waste management program and achieve 50 percent disposal reduction target. State Agencies report annually on waste management program.

- **Assembly Bill (AB) 4**: Passed in 1989. The State Agency Buy Recycled Campaign (SABRC) statutes are in Public Contract Code Section 12153-12217. The intent of SABRC is to stimulate markets for materials diverted by California local government and agencies. It requires state agencies to purchase enough recycled-content products to meet annual targets, report on purchases of recycled and nonrecycled products, and submit plans for meeting the annual goals for purchasing recycled-content products.

Executive Orders

The governor issued the following executive order relevant to chapters of this roadmap:

- **Executive Order B-16-12**

  EO B-16-12 directs state agencies to integrate zero-emission vehicles (ZEVs) into the state vehicle fleet. It also directs state agencies to develop the infrastructure to support increased public and private sector use of ZEVs. Specifically, it directs state agencies replacing fleet vehicles to replace at least 10 percent with ZEVs, and by 2020 to ensure at least 25 percent of replacement fleet vehicles are ZEVs.

- **Executive Order B-18-12**

  EO B-18-12 and the companion *Green Building Action Plan* require state agencies to reduce the environmental impacts of state operations by reducing greenhouse gas emissions, managing energy and water use, improving indoor air quality, generating on-site renewable energy when feasible, implementing environmentally preferable purchasing, and developing the infrastructure for electric vehicle charging stations at state facilities. The Green Building Action Plan also established two oversight groups – the staff-level Sustainability Working Group and the executive-level Sustainability Task Force – to ensure these measures are met. Agencies annually report current energy and water use into the Energy Star Portfolio Manager (ESPM).

- **Executive Order B-29-15**

  EO B-29-15 directs state agencies to take actions in response to the ongoing drought and to the state of emergency due to severe drought conditions proclaimed on January 17, 2014. Governor Brown directed numerous state agencies to develop new programs and regulations to mitigate the effects of the drought and required increased enforcement of water waste statewide. Agencies were instructed to reduce potable urban water use by 25 percent between 2013 and February 28, 2016.

- **Executive Order B-30-15**

In 2015, the governor issued EO B-30-15, which declared climate change to be a "threat to the well-being, public health, natural resources, economy and environment of California." It established a new interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 and reaffirms California's intent to reduce GHG emissions to 80 percent below 1990 levels by 2050. To support these goals, this order requires numerous state agencies to develop plans and programs to reduce emissions. It also directs state agencies to take climate change into account in their planning and investment decisions and employ life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives. State agencies are directed to prioritize investments that both build climate preparedness and reduce GHG emissions; prioritize natural infrastructure; and protect the state's most vulnerable populations.

Executive Order B-37-16

- The Department of Water Resources (Department) shall work with the Water Board to develop new water use targets as part of a permanent framework for urban water agencies. These new water use targets shall build upon the existing state law requirements that the state achieve a 20% reduction in urban water usage by 2020. (Senate Bill No. 7 (7th Extraordinary Session, 2009-2010).) These water-use targets shall be customized to the unique conditions of each water agency, shall generate more statewide water conservation than existing requirements, and shall be based on strengthened standards for:

    a. Indoor residential per capita water use.
    b. Outdoor irrigation, in a manner that incorporates landscape area, local climate, and new satellite imagery data.
    c. Commercial, industrial, and institutional water use; and
    d. Water lost through leaks.

2. The Department shall strengthen requirements for urban Water Shortage Contingency Plans, which urban water agencies are required to maintain. These updated requirements shall include adequate actions to respond to droughts lasting at least five years, as well as more frequent and severe periods of drought. While remaining customized according to local conditions, the updated requirements shall also create common statewide standards so that these plans can be quickly utilized during this and any future droughts.

State Administrative Manual & Management Memos

The following section of the State Administrative Manual (SAM), and associated Management Memos (MMs) currently impose sustainability requirements on the department under the governor's executive authority:

- **SAM Chapter 1800**: Energy and Sustainability
- **SAM Chapter 1900**
- **SAM Chapter 4100**
- **SAM Chapter 3600, Section 3627**
- **MM 15-03**: Minimum Fuel Economy Standards Policy
- **MM 16-07**: Zero-Emission Vehicle Purchasing and EVSE Infrastructure Requirements

State-wide Action Plans

- **2016 Zero-Emission Vehicle Action Plan**

  The plan establishes a goal to provide electric vehicle charging to 5 percent of state-owned parking spaces by 2022. It also advances the ZEV procurement target to 50 percent of light-duty vehicles by 2025.
- **Safeguarding California Implementation Action Plans:**

Directed under EO B-30-15, the Implementation Action Plans outline the steps that will be taken in each sector to reduce risks from climate change.

- **AB 32 Scoping Plan**: The scoping plan assumes widespread electrification of the transportation sector as a critical component of every scenario that leads to the mandated 40 percent reduction in GHG by 2030 and 80 percent reduction by 2035.

State Resources and Guidance Documents

California has invested significant resources in understanding the risks of climate change, water efficiency, strategic growth, and state actions available to respond to and reduce these risks. These include the following:

- **Safeguarding California**: The state's climate adaptation strategy organized by sector. Each sector identifies risks from climate change and actions to reduce those risks.
- **Planning and Investing for a Resilient California**: Prepared under direction of EO B-30-15, this document provides a framework for state agencies to integrate climate change into planning and investment, including guidance on data selection and analytical approach.

- **California's Climate Change Assessments**: California has completed three comprehensive assessments of climate change impacts on California. Each assessment has included development of projections of climate impacts on a scale that is relevant to state planning (i.e., downscaled climate projections). These data are available through **Cal-Adapt**, an online data visualization and access tool.
- **Water Use Reduction Guidelines and Criteria**: Issued by the California Department of Water Resources February 28, 2013, pursuant to Executive Order B-18-12. Each applicable agency was required to take actions to reduce water use in facilities and landscapes that are operated by the state, including owned, funded, or leased facilities. State-operated facilities are defined as facilities where the agency has direct control of the buildings' function, maintenance, and repair. For leased facilities, the Green Building Action Plan directed at that time that new and renegotiated leases include provisions for water conservation, reporting water use, and installation of sub-meters to the extent possible and economically feasible.
- **Strategic Growth Council (SGC) Resolution on Location Efficiency:** Location efficiency refers to the greenhouse gas emissions arising from the transportation choices of employees and visitors to a building as determined by the Smart Location Calculator. Adopted on December 6, 2016, the resolution directs members of the SGC to achieve a 10 percent improvement in the Smart Location Score of new leases compared to the average score of leased facilities in 2016.
- **EDP Compliance Guide** Environmental Product Declarations (EPD) are third-party verified reports that detail a product's impacts on the environment.

Tables of Applicable Statutory Requirements, Executive Orders and SAM and Management Memos

Table F-1 Statutory Requirements, Executive Orders, Management Memos, and the State Administrative Manual and the Applicable Roadmap Chapters

Legislation, Executive Orders, & Management Memos	Year Enacted	Climate Adaptation	ZEV	Energy	Decarb	Water	Facilities	Waste	Procurement
SB 32	2015	X			X				
SB 246	2015	X							
SB 416	2023						X		
SB 837	2023						X		
SB 1016	2008						X		
SB 1020	2022	X		X	X				
SB 1106	2005							X	
SB 1168	2014					X			
SB 1203	2021	X			X				
SB 1319	2014					X			
SB 1335	2018							X	
AB 32	2006	X	X		X				
AB 43	2023	X			X				
AB 75	1999							X	
AB 197	2016	X			X				
AB 262	2017								X
AB 341	2011						X	X	
AB 498	2002								X
AB 661	2022							X	
AB 739	2017		X						
AB 939	2021							X	
AB 1343	2010							X	
AB 1482	2015	X							
AB 1739	2014					X			
AB 1826	2014							X	
AB 2396	2016						X	X	
AB 2446	2022				X				
AB 2800	2016	X							
AB 2812	2016						X		
EO B-16-12	2012		X				X		
EO B-18-12	2015		X	X		X	X		
EO B-29-15	2015					X			

EO B-30-15	2015	X	X	X			X		
EO B-37-16	2016					X			
MM 15-03:	2015		X						
MM 16-07	2016		X						
Public Resources Code 25722.8	2001		X						

Table F-2 Action Plans, and State Resources and Guidance Documents and the Applicable Roadmap Chapters

Action Plans, and State Resources and Guidance Documents	Year	Climate Adaptation	ZEV	Energy	Decarb	Water	Facilities	Waste	Procurement
2016 ZEV Action Plan	2016		X						
Cal-Adapt website		X							
California's 4th Climate Change Assessment	2018	X							
Planning and Investing for a Resilient California	2018	X							
Safeguarding California	2014	X							

APPENDIX G LIST OF TABLES AND GRAPHS