Sustainability Roadmap 2022-2023 California Department of Justice

Sustainability Master Plan
and Biannual Progress Report on Legislative Sustainability Mandates and the Governor's Sustainability Goals for California State Agencies
December 31, 2023

Gavin Newsom, Governor

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CALIFORNIA DEPARTMENT OF JUSTICE ROADMAP

Sustainability Road Map 2022-2023
California Department of Justice (DOJ)

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EXECUTIVE SUMMARY

The California Department of Justice – Office of the Attorney General (DOJ) is a constitutional office representing the people of California in civil and criminal matters before trial, appellate, and supreme courts of California and the United States. DOJ owns and occupies 8 buildings, occupies 6 buildings owned by the Department of General Services (DGS), and leases 18 buildings from non-state entities, for a total of 32 facilities that it occupies statewide, totaling 1.8 million square feet. DOJ's work force is made up of 5,597 lawyers, investigators, sworn peace officers, and other employees who work in partnership with state and local agencies to:

- Enforce and apply laws fairly and impartially.
- Ensure justice, safety and liberty for everyone.
- Encourage economic prosperity, equal opportunity and tolerance.
- Safeguard California's human, natural and financial resources for this and future generations.

DOJ supports environmental sustainability in several ways. DOJ's legal division has (1) an Environmental Section that enforces state and federal environmental laws affecting California's natural resources, communities, and public health, (2) a Natural Resources Law Section that represents multiple state agencies responsible for natural resources management or pollution control, and (3) a Land Use and Conservation Section that represents the state in land use litigation and in cases involving lands that the state owns and administers for resource conservation, recreation or development. While DOJ's attorneys investigate and litigate matters concerning global warming, hazardous waste, air and water pollution, and natural resources conservation, this Roadmap focuses primarily on sustainability efforts for facilities owned by DOJ.

This Roadmap was created in response to the Governor's Executive Orders (EOs) and various sustainability mandates and policies (Appendix F, page 123). It describes goals, steps, and plans to achieve sustainability objectives for DOJ owned buildings, which consists of eight forensic laboratories that operate under the Bureau of Forensic Services (BFS). These are: Ripon, Riverside, Freedom, Fresno, Santa Barbara, Eureka, Redding, and Santa Rosa. Where DOJ occupies buildings owned by DGS, that agency ensures sustainability compliance for them. Where buildings are occupied by DOJ and owned by a private lessor, DOJ makes sustainability efforts to ensure those leased buildings comply with the applicable sustainability policies. DOJ is making progress toward achieving the targets and requirements of the Governor's EOs and is committed to accomplishing these goals (Appendix E, page 119).

In April 2020, DOJ established the Sustainability Unit, which is responsible for the development and implementation of the Department's sustainability program and coordinating DOJ functions to align and be consistent with goals, regulations, and guidelines of existing and evolving state sustainability and climate change policies.

There are six chapters in this Roadmap: Climate Change Adaptation, Zero Emission Vehicles (ZEVs), Energy, Water, Sustainability Operations, and Funding, each summarized below.

Climate Change Adaptation

In a changing climate, DOJ practices climate adaptation strategies for its facilities to help reduce climate risks. In regards to new construction, leases, and landscape/facility projects, DOJ considers the following:

- Temperature changes (including extreme heat events);
- Urban heat island effect, drought and wildfires;
- Precipitation changes (including extreme precipitation events); and,
- Sea level rise (e.g. flood risk).

Zero Emission Vehicles (ZEV)

DOJ's fleet consists mainly of (1) public safety vehicle that are exempt from the state's zero emission policies and/or (2) vehicles requiring large cargo/passenger capacity, which presents challenges for DOJ meeting ZEV requirements. Where feasible, DOJ is replacing vehicles with plug-in hybrid vehicles (PHEV), followed by hybrid electric vehicles (HEVs) per State Administration Manual (SAM) 4121.1. To date, DOJ has implemented the following strategies:

- Installation of Beam ARC Chargers at five of the eight forensic laboratory facilities owned by DOJ;
- Decreased vehicle fuel consumption emissions by 58 percent since 2010 compared to 2022 (the addition of PHEVs and HEVs, as well as the pandemic, are contributing factors to this decrease); and,
- The DOJ's telework policy (DOJ Administrative Manual - Chapter 20) encourages teleworking for employees based on workload, work conditions, and organizational needs, which reduces in-person meetings and vehicle use.

Energy

A look at DOJ's energy use and trends shows energy use has increased 10% from baseline (2003) to 2022, due in part to the fact that DOJ added three new crime lab facilities since 2003, as well as operation of more energy intensive lab equipment. Considering this small change on energy use, the Department's building inventory should undergo a Level 2 survey from ASHRAE (The American Society of Heating, Refrigerating and Air-Conditioning Engineers) on a yearly basis. The energy surveys conducted on Department-owned buildings in the last five years include surveys conducted in 2022 on LED lighting upgrades and energy equipment retrofit for all eight DOJ-owned crime labs. These surveys guide DOJ's energy efficiency projects and maintenance activities to focus on the highest energy using buildings.

To reduce energy use, and find and implement greener and more efficient alternatives, DOJ is currently:

- Collaborating with DGS and PG&E to complete LED lighting fixture retrofits for laboratories that are owned by DOJ;
- Collaborating with DGS to seek on-site solar generation options;
- Encouraging telework for employees (that includes office sharing and hoteling), which is expected to reduce energy consumption at worksites.

Water

DOJ has placed a significant amount of effort into reducing its water use. Overall, DOJ has reached a 21% reduction in water usage from the 2010 baseline. This is due mainly to shutting off landscape irrigation at the Redding laboratory site during 6 months every winter in response to CA's drought. Other DOJ water conservation efforts are:

- DOJ maintains the water treatment system installed at four DOJ lab locations to continue saving water long-term;
- DOJ is working with DGS to improve the water saving infrastructure at these four DOJ labs by installing a water system that reclaims used water from the cooling towers to reuse it for landscape irrigation; and,
- DOJ is working with outside organizations, including landscape architects, to assess converting landscaping at DOJ facilities to a more drought tolerant environment.

Sustainability Operations

DOJ incorporates green practices into its operations to reduce entity-wide greenhouse gas (GHG) emissions. DOJ has reduced its GHG emissions by 47% since 2010. This indicates that DOJ has met and exceeded the 20% reduction goal, which was accomplished by reducing overall energy use by both buildings and vehicles (electricity, natural gas, and vehicle fuel purchases) in addition to increasing the number of fuel-efficient vehicles in its fleet. DOJ reports its GHG emissions through the Climate Registry Information System (CRIS) and energy and water through the Energy Star Portfolio Manager (ESPM). Other efforts to lower GHG emissions that DOJ's Sustainability Unit is implementing and planning are:

- Establishing contracts with vendors who follow sustainable practice and green equipment
- Ensuring wide universal waste contracts are in place to promote the proper recycling
- Increased spending on goods and services with the greatest potential to Green
- Encouraging the EPP Training and Education and planning to track procurement staff who complete it

Funding

In regards to funding, DOJ does not itself have a life cycle cost accounting process in place. Lifecycle considerations are employed by DGS in new building design, operations and other built infrastructure. DGS calculates these costs on DOJ's behalf. DOJ's current financing model is developed through partnerships with Energy Services Companies (ESCO) that deliver energy savings performance contracts (ESPC) which improve performance as well as achieve return on investment (ROI). This funding goes towards the following sustainable projects and operations:

- Energy efficiency upgrades.
- Water conservation projects.

All sustainability related questions, comments, and suggestions can be submitted to the sustainability inbox sustainability@doj.ca.gov.

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CHAPTER 1 - CLIMATE CHANGE

Department Mission and Climate Change Adaptation

For all infrastructure, it is important to assess the risk a changing climate poses to an asset or project (e.g., sea level rise or increasing daily temperatures). It is also important to recognize the impact an infrastructure project has on the surrounding community and the impacts on individual and community resilience (e.g., heat island impacts).

DOJ's portfolio consists of many facilities leased from non-state entities, and climate adaptation changes are challenging to implement at these locations. In order to make any major changes, replacements, or renovations to leased facilities, the lessor or owner of the property must agree to the contract terms. Using the information outlined in this Roadmap, DOJ can better determine how to consider climate change for a given project, plan, or existing infrastructure. DOJ will consider climate adaptation strategies when facilitating projects and replacing building systems. The sustainability team will work with DOJ facilities' directors and staff to implement informed decisions. These strategies include:

- Evaluating whether the new project, materials, or system needing replacement will operate effectively in a changing climate (depending on climate risks existing for that particular location);
- Evaluating whether or not the new project, materials or system needing replacement incorporates Zero Net Energy (ZNE) approaches. Consideration and implementation of ZNE approaches will make buildings operate more efficiently (see Chapter 3 Energy section); and,
- Evaluating how the new project, materials, or system needing replacement will affect the staff (operational/health wise), the surrounding community, and the environment.

Accordingly, the sections in this chapter focus on the DOJ's eight properties that are department-owned: the DOJ's Bureau of Forensic Services (BFS) crime laboratories, where, there are fewer barriers to change in regards to climate considerations. DOJ looks forward to including leased sites in future assessments.

Climate Change Risks to Facilities

Executive Order B-30-15 directs State Agencies to integrate climate change into all planning and investment, which can include the following:

- Infrastructure and capital outlay projects

- Grants
- Development of strategic and functional plans
- Permitting
- Purchasing and procurement
- Guidance development
- Regulatory activity
- Outreach, and education

EO B-30-15 directs State agencies to prioritize the use of natural and green infrastructure solutions. 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)).

Assessing Climate Risk to Existing 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)
BFS – Ripon	102.7	4	20	16	40	36
BFS – Riverside	105.2	4	21	17	45	41
BFS – Freedom	90.2	4	8	4	16	12
BFS – Fresno	106.3	4	32	28	60	56
BFS – Santa Barbara	89.1	5	9	4	21	16
BFS- Eureka	76.6	4	6	2	26	22
BFS - Redding	107.1	4	21	17	49	45
BFS – Santa Rosa	98.7	4	12	8	24	20

Table 1.2: 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)
BFS – Ripon	74.6	79.2	6%	82.9	11%
BFS – Riverside	79.8	84.7	6%	88.3	11%
BFS – Freedom	67.5	70.9	5%	74.5	10%
BFS – Fresno	76.7	81.8	7%	85.8	12%
BFS – Santa Barbara	69.7	73.4	5%	76.5	10%
BFS- Eureka	58.7	62.6	7%	66.3	13%
BFS - Redding	75.3	79.8	6%	83.3	11%
BFS – Santa Rosa	71.5	75.3	5%	78.8	10%

Table 1.3: 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)
BFS – Ripon	47.9	52.2	9%	56.1	17%
BFS – Riverside	52	56.4	8%	60.4	16%
BFS – Freedom	46.1	49.8	8%	53.5	16%
BFS – Fresno	48.8	53.4	9%	57.4	18%
BFS – Santa Barbara	49	52.2	7%	55.3	13%
BFS- Eureka	46.5	50	8%	53.8	16%
BFS - Redding	51.2	55.4	8%	59.3	16%
BFS – Santa Rosa	43.9	47.9	9%	51.7	18%

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
BFS – Ripon	2647	1870	777	1267	1380
BFS – Riverside	1400	852	548	428	972
BFS – Freedom	3112	2068	1044	1218	1894
BFS – Fresno	2610	1848	762	1232	1378
BFS – Santa Barbara	2305	1490	815	878	1427
BFS- Eureka	4537	3275	1262	2111	2426
BFS - Redding	2618	1925	693	1310	1308
BFS – Santa Rosa	3052	2211	841	1484	1568

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
BFS – Ripon	1272	2083	811	2961	1690
BFS – Riverside	1727	2798	1071	3839	1041
BFS – Freedom	111	320	209	861	750
BFS – Fresno	1788	2801	1013	3761	1973
BFS – Santa Barbara	243	640	397	1208	965
BFS- Eureka	8	45	37	317	309
BFS - Redding	1977	2913	936	3889	1917
BFS – Santa Rosa	369	751	382	1517	1148

Reporting Narrative on HDD and CDD

Temperature is important to all eight DOJ-owned forensic laboratory facilities because they manage and preserve evidence, samplings, and equipment requiring proper care and storage under certain temperatures. It is essential that a laboratory's heating and cooling system operates permanently, correctly and efficiently. Tables 1.3a and 1.3b list the DOJ's forensic laboratory facilities that are most impacted by projected changes in Heating Degree Days (HDD), and Cooling Degree Days (CDD).

DOJ looked at its laboratory facilities that could pose a risk if heating and cooling systems are not properly maintained. If not properly managed, since extreme heat or cool temperatures can negatively affect the facilities. So far, the majority of the facilities have not reported extreme temperatures affecting their facilities. DOJ labs stay operational while providing essential services to various State agencies.

The use of proper surrounding natural infrastructure can significantly mitigate increasing Cooling Degree Days (CDD) impacts at facilities exposed to highest risk. This strategy has been implemented at four labs; Redding, Ripon, Fresno, and Riverside. Riverside, one of the top facilities at risk for more CDD, has a significant amount of shrub and mature trees versus concrete, where heat can be trapped.

Plan to Mitigate HDD and CDD

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

Facility Name	2030
BFS- Riverside	21 Days
BFS-Ripon	13 Days
BFS-Redding	6 Days
BFS-Fresno	11 Days

According to Cal-Adapt, the days above represent the projected number of extreme heat and cool days per year above the 98th percentile of the area from 2022-2030. For example, Fresno has 11 days of extreme heat of a range above 106.6 degree Fahrenheit, which is 98 percent above the threshold in the area.

Planning Narrative to Mitigate HDD and CDD

From the perspective of heating and cooling needs for buildings, the US Environmental Protection Agency (EPA) reports that HDD have declined in the United States, particularly in recent years, as the climate has warmed indicating a decreased in overall heating needs. Furthermore, CDD have been increasing particularly over the last few decades, indicating an increasing energy demand for air conditioning.

DOJ is planning on retrofitting the landscape at all eight laboratory facilities to improve sustainability and help reduce impacts in terms of energy requirements from changing temperatures. HDD and CDD data will allow DOJ to further prioritize which buildings need attention first in regard to climate change adaptation processes.

DOJ is aware of how the retrofitting landscape project at laboratory facilities will help mitigate extreme daily temperatures on their surroundings and the effects of CDD. There is no current estimated project implementation for retrofitting the landscape at the other four Lab facilities, however, DOJ will be working on searching for funding through 2024-2025.

Assessing Risk from Urban Heat Islands

"Urban heat islands" occur when cities replace natural land cover with dense concentrations of pavement, buildings, and other surfaces that absorb and retain heat. This effect increases energy costs (e.g., for air conditioning), air pollution levels, and heat-related illness and mortality.

Urban heat islands are a concern as the ability to control the additional effects of urban heat islands on employees and operations may be beyond the ability of the department. Departments need to know the impact of urban heat islands on their facilities and need to factor in the additional energy load that may be required to mitigate the additional heat.

A facility's immediate surroundings are also important. Large expanses of hardscape near the building increase the temperatures significantly. Landscaping plays a vital role in heat island mitigation, especially shade trees.

Table 1.4: 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.
BFS – Riverside	Yes	12,603
BFS – Ripon	No	10,730
BFS – Freedom	N/A	9,985
BFS – Santa Barbara	Yes	7,647

Reporting Narrative on Urban Heat islands

The majority of DOJ's lab facilities have trees and shrubs surrounding the building and a parking lot to reduce urban heat island effect and provide more cooling to its facility. However, two of DOJ's laboratories are located in urban heat islands: Riverside and Santa Barbara. Both have over 5000 sq. ft. of parking and other impervious surrounding surfaces.

As mentioned before, Riverside is on the radar for CDD mitigation. DOJ's other facilities, although not located in urban heat islands, have some adaptations which include planting trees and shrubs around the buildings and parking lots. This natural landscape absorbs less heat and provides shading as well as cooling of the environment through evapotranspiration.

DOJ's Sustainability Unit will do more assessing to further minimize the effect of heat spikes and the potential impacts that could affect laboratory work. More research needs to be applied to those facilities with an abundance of pavement to see if more vegetation (such as drought tolerant natives) can be planted around the facilities.

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
BFS – Riverside	Landscape retrofit	2025

Planning Narrative for Urban Heat Islands Mitigation

The Sustainability Unit is planning on retrofitting the landscaping with drought tolerant plants for the Redding, Ripon, Fresno, and Riverside labs as part of a reclaimed water project.

Currently, DOJ is working with DGS approved vendor, BKF, to determine which plants work best for each lab's microclimate. A feasibility report will need to be conducted after DOJ finds proper funding for this project. Depending on the results, the expectation is that the DOJ will implement these changes by 2025. It challenges the Sustainability Unit to develop an appropriate plan that will mitigate the impermeable surface areas surrounding a facility at the speed the temperature is increasing.

Assessing Risk from Changes in Precipitation

Table 1.5: 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)
BFS - Ripon (CENTRAL VALLEY)	11.3	13	15%	14	24%	1	1	2
BFS - RIVERSIDE	11.3	11.9	5%	12.8	13%	4	4	5
BFS - FREEDOM	20.4	23.5	15%	25.4	25%	1	1	2
BFS - FRESNO	11.6	12.7	9%	13.2	14%	2	1	3
BFS - SANTA BARBARA	16.5	19.5	18%	21.2	28%	2	2	3
BFS - Eureka	40.6	46.5	15%	47.8	18%	1	2	2
BFS - Redding	41.5	44.9	8%	46.8	13%	1	1	1
BFS – Santa Rosa	29.8	35.3	18%	38.3	29%	1	2	3

Reporting Narrative Changes in Precipitation

The impacts of climate change on the amount of precipitation California will receive in the future are slightly less certain than the impacts on temperature. However, it is expected that California will maintain its Mediterranean climate pattern (dry summers and wet winters), but more precipitation will fall as rain than as snow. Larger spans of rainfall can result in flooding, but will also result in shifts in runoff timing (earlier) and runoff volumes (higher). It will also result in

decreased snowpack. Using data from Cal-Adapt, DOJ identified the precipitation risks for its lab facilities.

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
NO FACILITIES AT RISK	

Planning Narrative on Precipitation Changes Mitigation Plan

NO FACILITIES AT RISK

Assessing Risk from Sea Level Rise

The California Ocean Protection Council (OPC) has issued the State of California Sea-Level Rise Guidance (Guidance) for State agencies on what level of sea level rise projections to consider in planning. Table 1.6 identifies DOJ's facilities at risk from Sea Level Rise (SLR).

Table 1.7: 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)
BFS - Eureka	North Split	1.2	Yes	3.1	Yes
BFS – Santa Barbara	Santa Barbara	0.7	Yes	2.1	Yes
BFS – Freedom	Monterey	0.8	Yes	2.3	Yes
BFS - Richmond	San Francisco	0.9	Yes	2.5	Yes

Reporting Narrative on Sea Level Rise Impacts

Three laboratories owned by DOJ are at risk based on SLR projections: Eureka, Freedom, and Santa Barbara. Similar to the flooding occurring from increased precipitation, SLR has the potential to cause flooding requiring relocation of laboratories or other adaptation actions. However, assuming further analysis indicates not all buildings will be able to be relocated, other measures are needed to be researched to minimize the impacts of potential flooding.

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?
BFS – Eureka	North Split	No
BFS – Santa Barbara	Santa Barbara	No
BFS – Freedom	Monterey	No

Planning Narrative of Sea Level Rise Impact

DOJ does not yet have a plan to mitigate the impact of sea level rise on the facilities at Risk from Rising Sea Levels (Eureka, Santa Barbara, and Freedom). However, it is on the radar as the Sustainability Unit researches new ways for our facilities to use natural infrastructure as a mitigation strategy of potential impacts. In the future, DOJ will develop a plan to reduce the impacts of sea level rise on facility performance, however, its implementation will be subjected to feasibility and funding.

Assessing Risk from Wildfire

Table 1.8: Top 5-10 Facilities Most at Risk to Current Wildfire Threats by Fire Hazard Severity Zone

Facility Name	Fire Hazard Severity Zone Designation (low, medium, high, very high)
BFS – Ripon	Low Risk
BFS –Fresno	Low Risk
BFS – Eureka	Low Risk
BFS – Freedom	Low Risk
BFS – Riverside	High Risk
BFS – Santa Rosa	High Risk
BFS - Redding	Very High Risk
BFS – Santa Barbara	Low Risk

Table 1.9: Top 5-10 Facilities that will be Most Impacted by Projected Changes in Wildfire by Acres Burned

Facility Name	Acres Burned (1961-1990)	Acres Burned (2031-2060)	Acres Burned (2070-2099)
BFS – Ripon	29.19	30.64	62.52
BFS – Eureka	30.89	42.26	54.61
BFS – Freedom	28.42	34.35	31.88
BFS – Riverside	59.55	15.57	15.57
BFS – Santa Rosa	14.83	14.33	14.33
BFS - Redding	23.23	8.65	10.13
BFS – Santa Barbara	74.63	98.35	97.61
BFS – Fresno	N/A	N/A	N/A

Reporting Narrative on Wildfire Risks

Wildfire poses a risk to DOJ's eight laboratories. Currently, Redding, Riverside and Santa Rosa labs are the facilities at very high and high risk for wildfire threats by fire hazard severity zone.

With fire risks increasing every year, power shut-offs increase as well. The risk of public safety power shut-offs (PSPS) currently impacts four of the labs. DOJ's laboratory facilities contain generators with enough fuel for forty-eight hours in the case of power shut-off. The Redding laboratory, for example has been temporarily closed on multiple occasions due to severe smoke and PSPS. These closures and their causes have impacted the health and safety of staff. These facilities stock personal protective equipment (PPE) such as carbon impregnated air filters, air purifiers, and masks to help ensure the safety of employees.

DOJ's laboratory facilities have also developed evacuation procedures and perform regular landscape maintenance which contribute mitigating wildfire risk.

Planning Outline to Mitigate Wildfire Risks

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

Facility Name	Plan 2023-2030
BFS-Ripon	No
BFS-Santa Barbara	Yes
BFS-Eureka	Yes
BFS-Freedom	No

Planning Narrative of Wildfire Risk Mitigation Plan

In concordance to the steady increase of wildfires within the State, DOJ will consider planning on more wildfire risk mitigation strategies for the laboratories being affected by PSPS. The department would need to allocate stocking all Lab facilities with fuel to sustain normal operations for more than forty-eight hours.

However, further analysis should be done by 2025 to determine what other protective measures can be implemented depending on availability of funding.

Understanding Climate Risk to Planned Facilities

In April 2015, the Governor issued EO B-30-15, establishing greenhouse gas reduction targets and specifying steps for consideration of climate impacts. The EO requires all state agencies to consider the impacts of climate change in all planning and investment activities, including capital outlay projects. All Five-Year Infrastructure Plans must include information about how departments will integrate climate adaptation strategies into planning their infrastructure projects, and how this information will be used to inform the development of future guidance for incorporating climate adaptation and resilience into infrastructure planning.

All planned facilities are required to have climate risk assessments. Agencies are required to have processes in place to perform risk assessments on all new facilities.

Tables 1.10: a-g: Climate Risks to New Facilities

a.1 Annual 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)
NO NEW FACILITIES					

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)
NO NEW FACILITIES					

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)
NO NEW FACILITIES				

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
NO NEW FACILITIES				

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
NO NEW FACILITIES					

e. Wildfire Risks by Fire Hazard Severity Zone

Facility Name	Current Fire Hazard Severity Zone (low, medium, high, very high)
NO NEW FACILITIES	

f. Wildfire Risk by Acres Burned

Facility Name	Acres Burned (1961-1990)	Acres Burned (2031-2060)
NO NEW FACILITIES		

g. Risk from HDDs/CDDs

Facility Name	Heating/Cooling Degree Days (1961-1990) (HDD/CDD)	Heating/Cooling Degree Days (2031-2060) (HDD/CDD)
NO NEW FACILITIES		

Planning Narrative for Understanding Climate Risks to Planned Facilities

DOJ currently has no approved plans for new construction facilities. However, any new, planned facilities will undergo climate adaptation screening to ensure the new facility incorporates climate adaptation strategies to all climate risks mentioned earlier.

Understanding the Potential Impacts of Facilities on Communities

Climate change disproportionately impacts vulnerable communities, with certain populations experiencing heightened risk and increased sensitivity to climate change and have less capacity to recover from changing average conditions and more frequent and severe extreme events.

Several factors contribute to vulnerability, often in overlapping and synergistic ways. These can include a number of social and economic factors, and be determined by existing environmental, cultural, and institutional arrangements. Vulnerable populations can include, but are not limited to, people living in poverty; people with underlying health conditions; incarnated populations; linguistically or socially isolated individuals; communities with less access to healthcare or educational resources; or communities that suffered historic exclusion or neglect.

While there is no single tool to identify vulnerable populations in an adaptation context, there are a number of state-wide, publicly available tools that when overlaid with climate projection data can help identify communities most at risk to a changing climate. Some of these tools, including a definition for vulnerable communities, are available in a resource guide developed by the Integrated Climate Adaptation and Resiliency Program in the Office of Planning and Research.

Reporting on Facilities located in Disadvantaged Communities

DOJ labs provide forensic services to local disadvantaged communities at Riverside and Fresno Labs. If the Riverside lab which is located at high risk for wildfire threats by fire hazard severity zone has to close due to a PSPS event - this puts the community around at risk to being a "vulnerable community" for not having access to forensic services when there are urgent cases that need to be processed or when emergency lab equipment is needed.

In contrast, the Fresno location can be of assistance to emergency responders in the event of a power outage. Recently, Fresno received a portable electric

vehicle charging station. This station utilizes solar panels for electricity generation and is not connected to the grid. If the community were to lose power, the charging station has household-style electrical outlets that emergency responders can utilize to power their equipment.

Table 1.11: Facilities Located in Disadvantaged Communities

Facility Name	CalEnviroScreen Score	Is it located in a disadvantaged community? Yes/No
BFS – Ripon	51-60%	No
BFS – Riverside	81-90%	Yes
BFS – Freedom	41-50%	No
BFS – Fresno	91-100%	Yes
BFS – Santa Barbara	No score	N/A
BFS- Eureka	31-40%	No
BFS - Redding	11-20%	No
BFS – Santa Rosa	51-60%	No

Planning Narrative for Facilities in Disadvantaged Communities

Thirty percent of the Department's laboratories are located in "Disadvantaged Communities" (DACs) as stated by Cal Enviro Screen. The laboratories serve the disadvantaged communities indirectly by providing forensic services to local law enforcement agencies that do not have their own forensic services.

To prevent issues that may affect disadvantaged communities, DOJ must look for ways to set-up effective programs at the Riverside Lab to operate effectively even during a PSPS schedule.

New Facilities and Disadvantaged Communities and Urban Heat Islands

Table 1.12: 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)
BFS-Ripon	No	No
BFS-Riverside	Yes	Yes
BFS-Freedom	No	N/A
BFS-Fresno	Yes	No
BFS-Santa Barbara	N/A	N/A
BFS-Eureka	No	N/A
BFS-Redding	No	N/A
BFS-Santa Rosa	No	No

Integrating Climate Change into Department Funding Programs

Table 1.13: Integration of Climate Change into Department Planning

Name of Plan	Have you integrated climate?	If no, when will it be integrated?
NO PLAN		

Reporting Narrative for Integrating Climate Change into Department Planning Process

DOJ has implemented climate change through contracts that will further optimize the energy and water efficiency of the Department's facilities and assist components in achieving DOJ's goal of a net zero emission building portfolio by 2045. DOJ is committed to achieving the sustainability goals including E.O. 14057, "Catalyzing Clean Energy Industries and Jobs through Federal Sustainability", and continuing its progress reducing greenhouse gas (GHG) emissions.

DOJ will enhance Department-wide awareness and technical capacity by strengthening existing partnerships and seeking out new areas for collaboration, and by developing outreach and training materials that both educate and inspire the Department's workforce.

Planning Narrative for Integrating Climate Change into Department Planning Process

As mentioned above, DOJ's Sustainability Unit was established in 2020 with goals of integrating climate change in development planning. Recent efforts and missions have provided education to staff and stakeholders. The plan is to continue to grow the unit in order to have the capacity to properly ensure the Department is taking steps to comply with the Governor's "green" executive orders and initiatives.

Community Engagement and Planning Processes

Table 1.14: 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
NO COMMUNITY ENGAGEMENT PROCESS			

Reporting Narrative for Community Engagement and Planning Processes

NO COMMUNITY ENGAGEMENT PROCESS. THE FORENSIC LABORATORIES ARE NOT OPEN TO THE PUBLIC.

Planning Narrative for Community Engagement and Planning Processes

NO COMMUNITY ENGAGEMENT PROCESS. THE FORENSIC LABORATORIES ARE NOT OPEN TO THE PUBLIC.

Climate Change Implementation Planning in Funding Programs

Table 1.15: 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 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
NO FUNDING OR GRANT PROGRAMS				

Reporting Narrative for Climate Change Implementation Planning in Funding Programs

NO GRANT OR OTHER FUNDING PROVIDED.

Measuring and Tracking Progress

Changing climate conditions necessitate an adaptive management approach. An adaptive management approach is informed by tracking changing climate conditions and the performance of a plan or project. Building check points into a project or plan timeline can help to create a system for regular review and, if needed, adjustments are made.

Reporting Narrative on Measuring and Tracking Progress

DOJ tracks its GHG emissions through the Climate Registry Information System (CRIS) and energy and water through the Energy Star Portfolio Manager (ESPM). Specific climate data is measured and tracked through spreadsheets and using online tools (cal-adapt).

The Sustainability Unit is dedicated to ensuring that DOJ is up to speed with all sustainability related mandates and policies. The unit is in the process of assessing DOJ's sustainability needs. The Sustainability Unit will use adaptive approaches and plans on researching and developing more policies to help the Department increase sustainability efforts and track progress.

CHAPTER 2 – ZERO-EMISSION VEHICLES

The purpose of this chapter is to detail DOJ's progress of its ZEV Report and Plan to the Governor and the public.

Department Mission and Fleet

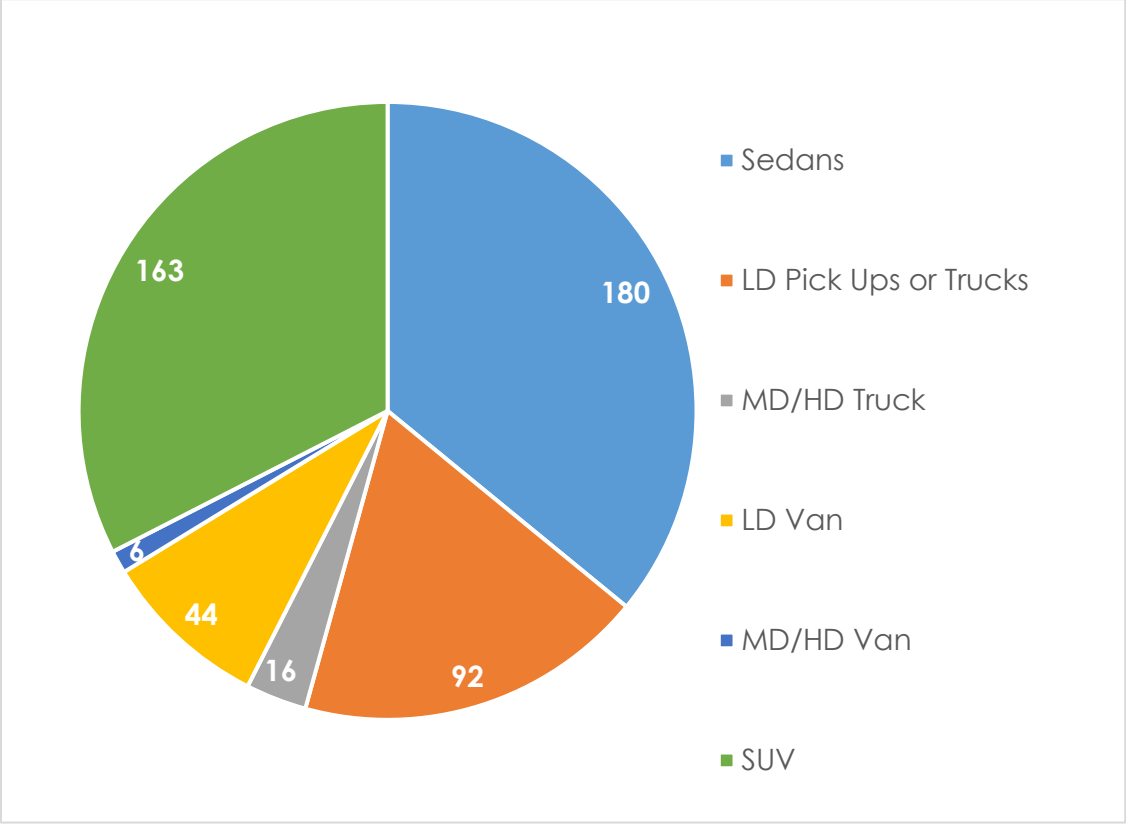
DOJ's mission to provide high quality, impartial forensic service in the interest in public safety and justice requires that employees utilize vehicles in a variety of applications for law enforcement, emergency response, and certain administrative functions. Common vehicle usage includes, but is not limited to, traveling to sites such as court houses, towing equipment used as evidence in hearings, high speed pursuit of a vehicle, and participating in criminal investigations that involve collecting and transporting evidence throughout the state of California.

DOJ enforcement officers and emergency response teams use unmarked 4-wheel drive pickups and sport utility vehicles (SUVs) to access all areas of the state, participate in patrols, respond to emergency situations, and ensure regulatory compliance with federal and state laws. Additionally, DOJ enforcement officers may use unmarked sedans and vans when conducting criminal investigations in an urban environment with unpredictable terrain. Attorneys, Criminal Analysts, and Administrative staff working from regional headquarters, remote offices, and labs use a variety of vehicles to travel to meetings and perform routine day-to-day functions such as meetings, site visits, facility assessments, and trips to local courthouses. These vehicles are pooled and used when needed. The frequency of use for these vehicles is dependent on the demand. Yet, because of all of these demands, DOJ has a EO B-16-12 Public Safety Special Performance Exemption that specifies public safety vehicles with performance requirements, in this case sworn vehicles, are exempt from state agency's annual zero emission vehicle (ZEV) purchasing requirements.

The majority of DOJ's fleet consists of law enforcement (sworn) vehicles. The following graph shows the number and percentage of vehicle types within the Department.

Composition of Vehicle Fleet

Graph 2.1: 2022 Composition of Vehicle Fleet



DGS asks to report data from Green Fleet, however, this data is directly from DOJ's fleet team, which has a more accurate count.

Fuel Types

Reporting on Total Fuel Use by Fuel Type.

Table 2.1: Total Fuel Purchased in 2021/2022

Year	Diesel (Gallons)	Gasoline (Gallons)	Renewable Diesel (Gallons)
2021	3,101	228,327	0
2022	2,668	261,592	0

Reporting Narrative on Fuel Type Selections

DOJ decides which fuel type to use based on the tasks given to the fleet. The department's next steps to establish a policy on which fuel types to use depends on the effectiveness of growing technology as most tasks require fuel reliability.

Additionally, and not mentioned in the table above, Green Fleet reported that DOJ uses other fuel such as 85% Ethanol, Biodiesel, and Alternative Fuel since 2021. With a breakdown of 54 hybrids in 2021 to 62 hybrids in 2022, DOJ is working on increasing their sustainable fuel consumption as range mileage increases.

Furthermore, due to the unpredictable terrain for each mission task, gas-powered vehicles are a required use due to their reliability. DOJ needs reliable fuel sources for its fleet that hydrogen fuel cannot provide due to availability opportunities and cost. Therefore, DOJ is moving towards SAM compliance (**MM 15-07**: Diesel, Biodiesel, and Renewable Hydrocarbon Diesel Bulk Fuel Purchases) for the next steps to establishing policy including fuel type.

Reporting Vehicle GHG Emissions

Table 2.2: Vehicle GHG Emissions

Year	Fleet GHG (CO2 e)
2015	4,809
2016	3,204
2017	2,148
2018	1,871
2019	2,705
2020	1,932
2021	1,843
2022	2,233

Reporting Narrative for Vehicle GHG Emissions

DOJ decreased their overall fuel consumption by 24% since 2018. This is likely due to the pandemic because when comparing 2018 vs 2019, vehicle fuel emissions only dropped by 1% whereas 2019 vs 2020, vehicle fuel emissions dropped by 23%. As policies changed after the pandemic, DOJ has increased their fuel consumption by 21% since 2021. Yet, the number has not reached the peak of 2019 (which was prior to the pandemic).

Planning Narrative for Vehicle GHG Emission Reductions:

DOJ has a goal for fleet emission reduction. The department is in the process of establishing contracts to build more electric vehicle recharge stations in both

leased and owned facilities. This past year, DGS helped add two-sided EV ARC Beam chargers to five of the BFS labs. As new technology develops, DOJ hopes the switch to electric vehicles can become more reliant for their fleet.

Rightsizing the Fleet

Teleworking, Mission Changes, and Technology Changes

New telework policies may have an impact on fleet usage.

On-going legislative mandates and changing circumstances frequently alter the department's mission and/or day-to-day operations.

With the advent of new fuel types, new driving aids and other advances in technology such as telematics as well as new transportation models, may impact the department's fleet.

Telematics

Implementation Status

In accordance with SAM section 4122, state departments are required to install telematics devices on all state fleet assets. Departments are required to install all telematics devices on light duty vehicles by August 1, 2021, and are required to install telematics on all remaining assets by February 1, 2022. Additionally, departments shall develop and issue a telematics policy that is specific to their needs by March 31, 2021

Reporting Narrative on Telematics Implementation Status

Sworn pool vehicles that are used by employees that hold peace officer status correspond to 79% of DOJ's fleet. Non-sworn pool vehicles are to be available for employees online in the conduct of official state business and are not assigned to one specific individual. DOJ did not have telematics until the end of 2021 for non-sworn vehicles. The telematics data that DOJ can use for non-sworn vehicles is and has been utilized to assess the fuel demand and analyze a foreseeable implementation process for hybrid and ZEV vehicles, as has been done in 2022 by the increase of hybrid vehicles. Due to a potential compromise of the safety of the driver and/or a case in operation, DOJ does not install telematics devices on sworn vehicles. Telematics gathers and stores geographical and on-board diagnostic information that is sensitive information for sworn vehicles.

Vehicle uses of DOJ enter mileage reading manually on the STD-273 report. Vehicle contracts enter mileage into the Acquisition Management System (AMS) by the 7th of each month. The DOJ Fleet coordinator uploads manual and telematics derived data to DGS on a monthly basis. Only non-sworn vehicle data is provided to the public in order to provide confidentiality to the agents and their missions.

DOJ's exemption request for telematics on sworn vehicles was submitted in March of 2022. It would encompass all sworn law enforcement vehicles of all types. The request was denied by DGS, and DOJ is currently appealing the denial.

Planning Narrative for Telematics Data

As stated above, DOJ cannot have telematics for sworn vehicles.

Reduction of Fleet Total Mileage and Fleet Size

Implementation of all the above sections lead to fleet usage becoming more efficient. As policies, technologies and telematics converge, there will be fewer miles traveled and fewer vehicles will be needed. Departments need to continuously review this triple convergence and strive to maximize the effectiveness of their fleets. A department plan that routinely reviews and adapts to changing conditions ensures that the goals of this chapter are achieved.

Planning Narrative for Fleet Total Mileage and Fleet Size Reduction

DOJ's telework policies may have an impact on fleet usage. DOJ encourages the use of telework in accordance with DOJ's Telework Policy where appropriate considering workload, work conditions, and organizational needs. Although teleworking employees will not be reimbursed for mileage or travel expenses as a result of reporting to their main office. The Department has reduced the number of fleet vehicles starting in 2021, as most in-office work requirements have hybrid options. Telework monitoring is accounted for and monitored monthly.

DOJ is committed to the goal of achieving efficient sustainable fuel for its fleet, to the extent feasible in accordance with the Department's mission and/or day-to-day operations. DOJ plans to establish a single system to track Department-wide ZEV electricity usage at the bureau or vehicle level. The configuration and initial usage of this system will be to manage and set steps for the 100 Percent Zero-Emission Vehicle Fleet goal. DOJ expects to manage the impact of fewer

fuel purchase and use by fewer miles traveled as well as total fleet reduction. Telematics technology is utilized in the analysis of fleet utilization.

Existing Fleet Description

Light Duty Fleet Vehicles

DOJ currently uses the light duty fleet for many tasks. Eighty percent of the light duty fleet is used for law enforcement, while the remaining 20% is used for delivery, full service trucks, evidence collection, and a remaining few for office and Technical Assistance Center (TAC) support.

Reporting On Total Miles Traveled

Table 2.3: Total Miles Traveled

Year	2017	2018	2019	2020	2021	2022
Miles Traveled	No Data	5,827,892	5,854,037	4,452,657	4,681,606	5,240,325

Reporting Narrative on Total Miles Traveled

DOJ's yearly mileage does not follow a pattern. It is difficult to plan for a reduction of miles traveled as it depends on demands outside of DOJ's control for law enforcement agent missions. After COVID, the telematics data indicated that even with a steady increase of miles as people came back to work, it still has not surpassed 2019 (pre-COVID).

Reporting On Miles Per Gallon

Table 2.4: Miles per Gallon

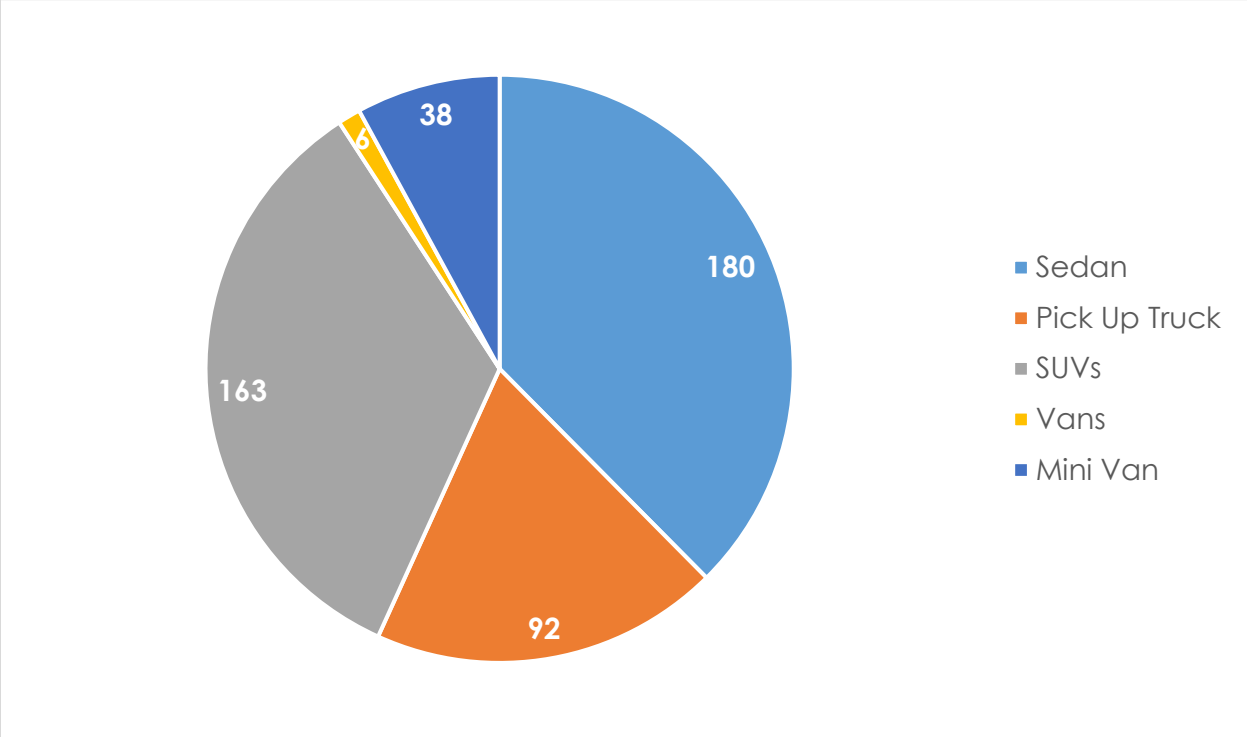
Year	2017	2018	2019	2020	2021	2022
MPG	20.27	20.92	21.25	22.01	22.11	21.98

Reporting Narrative on Miles Per Gallon

The yearly miles in table 2.4 has slightly increased over time. Using this telematics data for non-sworn vehicles, DOJ will employ reliable strategies to reduce the miles per gallon and switch the yearly trend.

Composition of Light Duty Vehicle Fleet

Graph 2.2: Composition of Light Duty Vehicle Fleet



Light Duty Take-Home Vehicle Fleet Status

Vehicles are authorized for home storage, per SAM Section 4109. The Department of General Services (DGS) requires that vehicle home storage permits (VHSPs) issued by state agencies shall adhere to policies outlined in section VHSP Requirements and meet the criteria of essential or cost-effective permits as noted in section Criteria for Essential & Cost-Effective Permits. DGS requires the use of criteria that augment those provided in the CCR, Title 2, Section 599.808. Further, agencies shall use the revised STD 377, Vehicle Home Storage Permit/Request Form when requesting vehicle home storage permits.

Storage of state-owned mobile equipment at an employee's residence on a regular basis requires an approved Vehicle Home Storage Request/Permit form, STD 377, be on file with the employee's department. Annual renewal of STD 377 is required.

Executive Order (EO) B-2-11 specifies that state agencies and departments may only issue VHSPs that are essential or cost effective. In continuance of this policy, DGS developed ongoing criteria to assist departments in their future determinations of essential and cost-effective VHSPs.

ANNUAL CERTIFICATION

Beginning on January 2, 2014, and each year thereafter, state agencies shall submit a DGS OFAM 162 - VHSP Certification Form to DGS that denotes the number of VHSPs issued at that time. DGS may, at any time, request copies of the permits or a list of names and other specific data for the individuals who have been issued permits.

- VHSP annual certifications shall be completed each calendar year.
- VHSP requests (STD 377, Vehicle Home Storage Request/Permit Form) shall be completed for each applicable employee.

The minimum retention schedule for the required documents noted above shall be the current fiscal year and the preceding fiscal year.

Table 2.5: "Take Home" Vehicle Fleet Status

Vehicle Type	Sedan	LD Pickups or Trucks	MD/HD Pickup or Truck	LD Van	MD/HD Van	SUV
Totals	115	89	1	1	1	148

As of Jan. 13, 2023, DOJ has 355 vehicles with a Vehicle Home Storage Permit (VHSP) certified status, which is 66% of DOJ's total fleet.

The nature of undercover work requires agents to swap vehicles throughout the year. Many non-sworn vehicles are used to respond to crime scenes. So, it can be tricky to contain one vehicle for just one purpose since they switch often. An average 30-60 vehicle transfers per month for the 291 agents. All of the vehicles in the count above are available for take-home status. Therefore, vehicles often change during and immediately after the (Vehicle Home Storage Permit) VHSP certification process. Providing fixed data will not be accurate data.

All sworn vehicles have take-home status; all of the vehicles in the count are available for take-home status. DGS only requires one VHSP per year and they do not require one VHSP every time an agent switches a vehicle. Additionally, an agent is not assigned the same vehicle throughout their career with DOJ. Vehicles often change during and immediately after the VHSP certification process.

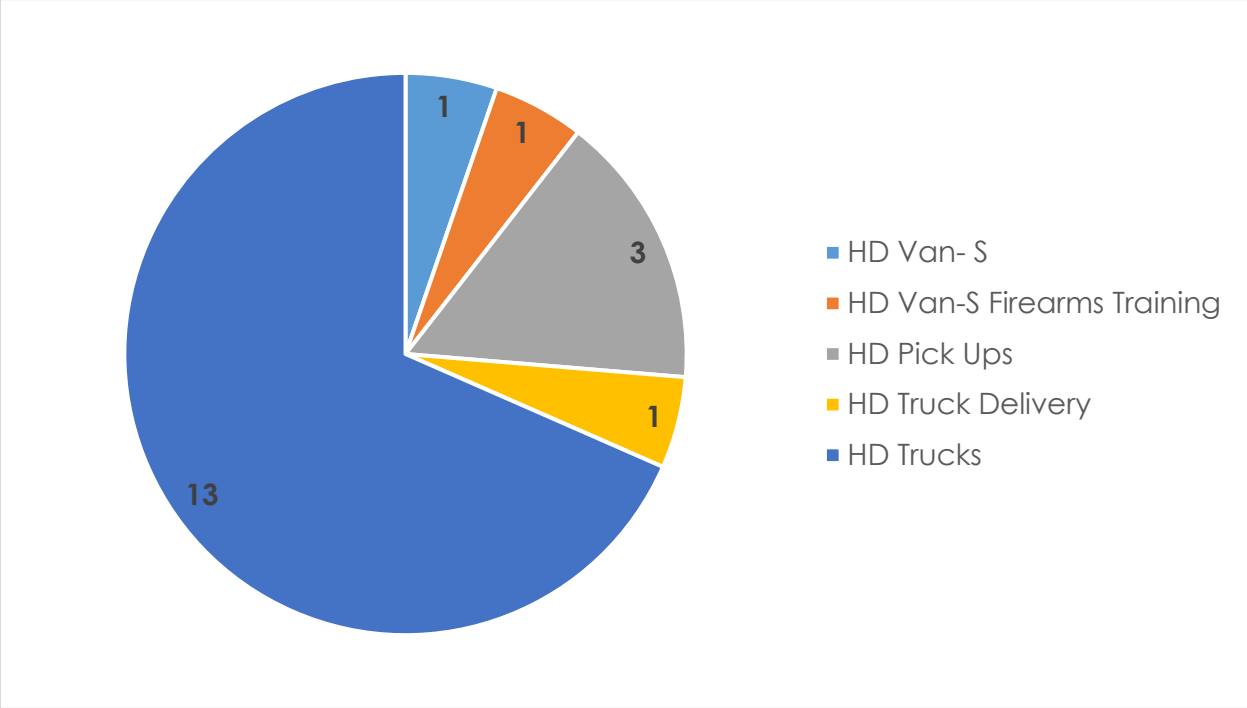
Planning Narrative on Integrating the Take Home Vehicle Program with Telework and Emissions Reduction Strategies

All vehicles can be swapped throughout the year whether assigned or pool. It would be difficult to give a count of vehicle classes that are taken home without including fluctuating pool vehicles. These vehicles are utilized for investigative and undercover need. Vehicles are assigned by business need and validated during Fleet Acquisition Plan (FAP) process, the data fluctuates because of this. This makes planning for integrating a take home vehicle program with telework and emission reduction strategies very challenging since vehicles are moved on a regular basis depending on the need and therefore never calculated.

As technology develops, the strategy will be to work with implementing a system to report and follow a reduction pattern of mileage as ZEVs become more reliable and available.

Medium and Heavy-Duty Fleet Vehicles

Graph 2.3: Composition of Medium and Heavy-Duty Vehicle Fleet Subject to the ZEV First Purchasing Mandate



DOJ has 15 HD Trucks, 1 MD Truck, and 6 MD/HD and 6 Vans (3 MD and 3 HD). Out of DOJ's 22 MD/HD vehicle fleet, 19 of them are subject to ZEV First Purchasing Mandate.

Incorporating ZEVs into the State Fleet

Pursuant to the Governor's **Executive Order B-16-12**, state departments are required to increase the number of zero emission vehicles (ZEV) within their state fleet. As departments move towards this initiative, additional measures have been placed on the ZEV vehicle purchasing policy. Departments are advised, as of January 1st, 2020, to purchase vehicles from authorized Original Equipment Manufacturers (OEMs) that have aligned with the California Air Resources Board (CARB). 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.

With these various policies now in place, departments must consider the most effective ways to incorporate ZEVs into their fleet.

Light-Duty ZEV Adoption

A widespread shift to Zero Emission Vehicles is essential for California to meet its GHG emission goals. State departments are now required to incorporate larger numbers of ZEVs in their vehicle fleets. Starting in FY 17/18, the percentage of new light duty vehicles that must be Zero Emission Vehicles increases by 5% each year, reaching 25% in FY 19/20 and 50% in FY 24/25.

Vehicles that meet specified mileage and age thresholds are eligible for replacement. Currently ZEVs are available on statewide commodity contracts in a range of light duty vehicle categories. While many vehicle classes currently lack a ZEV alternative to purchase due to the purchasing restrictions imposed in State Administrative Manual Section 4121.8.

Table 2.6: Light Duty Vehicles in Department Fleet Currently Eligible for Replacement

# of Vehicles eligible for replacement	Sedans	LD vans	LD Pickups	SUVs, 5 passengers	SUVs, 7 passengers	SUVs, 8 passengers	Total
Totals	180	6	38	92	18	95	429

Table 2.6 lists the vehicles in the fleet eligible for replacement based on mileage and age. The figures cited above are subject to change given:

- Availability of funding to replace eligible vehicles.

- Replacements of out-of-service vehicles not meeting mileage but approved by DGS' Office of Fleet and Asset Management (OFAM) inspections.

Table 2.7 lists the estimated number of ZEVs that have been or are anticipated to be added to the DOJ fleet in the coming years.

Table 2.7: Plan for Light Duty ZEV Additions to the Department Fleet

Battery Electric Vehicle (BEV)	0	2	1	NO DATA
Plug-in Hybrid Vehicle (PHEV)	0	1	0	NO DATA
Fuel Cell Vehicle	0	0	0	0
Percent of total purchases	0%	4.4%	1.6%	NO DATA
Required ZEV Percentage	**35%**	**40%**	**45%**	**50%**
Total number of ZEVs in Fleet*	0	3	4	NO DATA

A total of three vehicles are planned for purchase via the FY 22/23 and FY 23/24 Fleet Acquisition Plans as stated in the table above. Those vehicles have not yet been delivered to DOJ, therefore our current fleet has no BEVs.

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

ZEVs are incorporated as required per DGS guidelines. The use of ZEVs in the department's light duty vehicle fleet depends on the longevity of a single charge. As of October 2023, the Tesla Model 3 is the longest **approved** vehicle mileage with 263 miles. For most cases, DOJ requires reliable vehicles with higher ranges for unpredictable terrain. This is why DOJ has typically used Plug-in Hybrids instead. Additionally, the ZEV vehicle also has to meet the need of remote areas. Some of the DOJ locations are in domiciled locations that require electric charging infrastructure that are not usually supported because of the terrain.

Each non-sworn vehicle is analyzed thoroughly. If a ZEV purchase can be made it will be. DOJ must receive DGS approval for every purchase and that includes analyzing for ZEV purchases. Over three quarters of the DOJ fleet is sworn and even higher if specialty vehicles are included. Yet, there are very few

opportunities to purchase ZEV. As stated previously, there are also other considerations for non-sworn DOJ vehicles. This includes use for transporting sensitive equipment and supplies that could require long distances and 24/7 availability. The majority of DOJ's vehicles are ICE law enforcement vehicles who use Plug-in Hybrids. Currently there are 62 hybrids in the fleet. DOJ has many specialty vehicles, because of the confidential nature of these vehicle requirements, DOJ can't share additional information of employee use as it will jeopardize the safety of our agents.

The Light Duty Fleet programs are mainly concerned with reliable infrastructure. For example, DGS provided chargers at five BFS labs but they are for employee use only. It's recorded to be slow to charge and often breaks down. The available PHEVs on contract are hatchbacks. For mileage range reliability reasons, BFS requested five HEVs instead of PHEV's or BEV's for their remote locations (Redding, Ripon and Fresno) on the 23/24 FAP.

In regards to lighter work that does not require hauling or carrying heavy equipment, DOJ utilizes PHEVs where possible. DOJ has a few PHEV all-wheel drive SUVs and will incorporate more into the fleet wherever it is deemed feasible.

DOJ's best option for ZEVs are for fleet vehicles primarily used for meetings and site visits. For trips out of range for the current DOJ ZEVs, hybrids will be considered as the next best option.

Planning Narrative for Integrating ZEVs into Take-Home Vehicles

ZEVs are incorporated as required per DGS guidelines. DOJ Fleet does not plan purchases; programs receive their budget each Fiscal Year (FY) in July 1st. They plan accordingly for the FY FAP, making decisions based on the age and condition of the fleet as much as the available budget allows. Additionally, programs consistently are unable to plan for ZEV as much locations that purchase vehicles do not have dedicated fleet charging stations.

DOJ has remote locations where there are little to no access to reliable, dedicated on site charging for non-sworn vehicles. Additionally, vehicles are used for long distance travel that must be supported by mileage data. That combination allows for justifiable exemptions to ZEV purchases.

Out of all the eligible vehicles for replacement, there are currently 30 vehicles in DOJ's fleet eligible for replacement in vehicle classes for which ZEVs are available on contract. DOJ's fleet team is working on an analysis and funding opportunities for which these vehicles could be replaced with ZEVs. DOJ will

incorporate ZEV strategies when applicable for current home storage vehicles by facilitating energy efficient charging ports when funding becomes available.

Medium- Heavy-Duty ZEV Adoption

Like the light-duty purchasing policy above, the adoption of MD/HD ZEVs is essential to meet greenhouse gas emission reduction goals. As of July 2020, SAM section 4121.9 requires state agencies to prioritize the purchasing of MD and HD ZEVs vehicles into their fleets. Additionally, beginning December 31st, 2025, departments are required, per Assembly Bill (AB) 739, to have 15% of newly purchased vehicles with a gross weight rating of 19,000 pounds or more be ZEVs. This percentage will increase to 30% by December 31st, 2030.

Vehicles over meet specified mileage and age thresholds are eligible for replacement. Currently ZEVs are available on statewide commodity contracts are Class 2B, Class, 3, Class 4, Class 5, Class 6, and Class 8.

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

Table 2.8: MD/HD Vehicles in Department Fleet Currently Eligible for Replacement

-						

Table 2.9: 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	0	NO DATA	NO DATA	NO DATA
Plug-in Hybrid Vehicle (PHEV)	0	0	NO DATA	NO DATA	NO DATA
Fuel Cell Vehicle	0	0	0	0	0
Percent of total purchases	0	0	NO DATA	NO DATA	NO DATA
Total number of ZEVs in Fleet	0	0	0	0	0

Reporting Narrative for Medium-Heavy Duty ZEV Adoption

DOJ's fleet is typically used to perform duties in which a vehicle can operate off-road, respond to emergencies, and carry heavy equipment. For these types of vehicles, they require a four-wheel drive system, enough torque for hauling, pick-up style for loading, high clearance, and have the capacity for long distance trips. Work using these types of vehicles includes patrolling remote areas, carrying emergency response equipment, evidence, hauling crime scene investigation supplies, and various law enforcement equipment. Currently there are no Battery Electric Vehicles (BEV) or Plug-in Hybrid Electric Vehicles (PHEV) that fulfill the requirement available for purchase by DOJ. DOJ needs Heavy Duty BEVs and PHEVs that can withstand any terrain and an unexpected need on mileage range.

Employees transport personal goods, as well as evidence or court documents, across the state and a trunk is required to protect those items in travel. There are no 5 passenger PHEV's currently on contract with a trunk available. The sedans are particularly difficult to purchase as PHEV. If there were vehicles that meet the needs, the DOJ would certainly make that choice to purchase. The DOJ fleet analyst team covers this program extensively on the Fleet Acquisition Plan (FAP) that is referred to in the Appendix.

If a sworn vehicle is in pursuit and runs off charge in the middle of the action, it can harm a mission. Trucks are usually used for these missions or pursuits since they are reliable on any terrain in California. There are only a few zero emission trucks that came available in the market the past 1-1/12 years, which are extremely expensive. Therefore, funding opportunities are DOJ's planning priority.

It is challenging for DOJ to incorporate ZEVs given DOJ's law enforcement mission, as well as funding, and technology advancements in battery longevity. DOJ uses MD/HD vehicles for command centers, crime response trucks and vans, and delivery trucks. One heavy-duty truck is used for firearms training. Currently, terrain in/around facilities and barriers to charging station installation does not support vehicles that respond to crime scenes, as it is not reliable. ZEV vehicles will be considered where appropriate for replacement.

Replacement vehicles are subject to budget and need. All HD vehicles are specialty vehicles. Some are used for command center and crime scene response. Specialty vehicles are not subject to the ZEV First Purchasing Mandate. These vehicles are typically a considerable cost, once they are outfitted for their purpose. Replacement eligibility is based on mileage and/or age guidelines.

However, car manufacture companies are anticipating the development of the heavy-duty ZEV segment, which once available, could meet these needs. DOJ's fleet team is continually looking for opportunities to gradually incorporate ZEVs into its future fleet for non-law enforcement purposes.

ZEV Public Safety Exemption

Management Memo 16-07 changed the requirements for Public Safety Exemptions. EO B-16-12 specifies that only public safety vehicles with special performance requirements are exempted from a state department's annual zero emission vehicle (ZEV) purchasing requirements. Governor Brown's 2016 ZEV Action Plan requires the Department of General Services (DGS) to evaluate and provide further guidance to agencies as to the appropriate circumstances under which the public safety exemption should be invoked to ensure that ZEVs are integrated into public safety mobile assets wherever feasible.

Accordingly, when evaluating the invocation of this exemption for a specific light-duty vehicle within its fleet, a state agency must be able to demonstrate that:

1. The vehicle is an authorized emergency vehicle pursuant to California Vehicle Code §165; and,

2. The vehicle, pursuant to California Vehicle Code §21055, may be:
    a. Driven in response to an emergency call or while engaged in rescue operations, or
    b. Driven in immediate pursuit of an actual or suspected violator of the law,
    c. Driven in response to, but not returning from, a fire alarm, or
    d. Operated from one place to another as rendered desirable or necessary by reason of an emergency call and operated to the scene of the emergency, or
    e. Operated from one fire station to another or to some other location by reason of the emergency call: and,

3. The vehicle must be able to reach the anticipated emergency location within 30 minutes to no more than 1 hour.

4. Where emergency response is not the primary purpose of a vehicle, a state agency must be able to demonstrate that the specific vehicle may be used as part of an established mutual aid agreement that would necessitate an emergency response as outlined above.

Reporting Narrative for ZEV Public Safety Exemption

Sworn vehicles are authorized emergency vehicles pursuant to California Vehicle Code section 165. They are equipped with code three light bars, radios, computers, spotlights, a tow package, and various other electronic equipment that does not come standard on a normally outfitted vehicle. These vehicles are used often and, in some cases, in off-road environments. They must have the ability to safely and quickly reach a reported crime in progress, investigation scenario, and assist during public safety requests.

DOJ law enforcement and emergency response fleet is comprised of four-wheel drive pickups, SUVs, and sedans used for special cases such as undercover operations or emergency use. There are a small number of hybrids in this fleet operated by law enforcement officers. However, these hybrids do not offer off-road capability nor towing ability, so these hybrids have minimal use.

At this moment, law enforcement agents will be driving ZEV as a test. Since the battery takes time to charge, law enforcement agents would need a ZEV for normal shift and another one for after-hours emergencies, which makes ZEVs not reliable and feasible yet. In regards to agent safety, vehicles used for pursuit reasons are mainly trucks, which makes managing different terrain more reliable. ZEV/hybrid vehicles at this rate are easily identifiable if a whole fleet is using them.

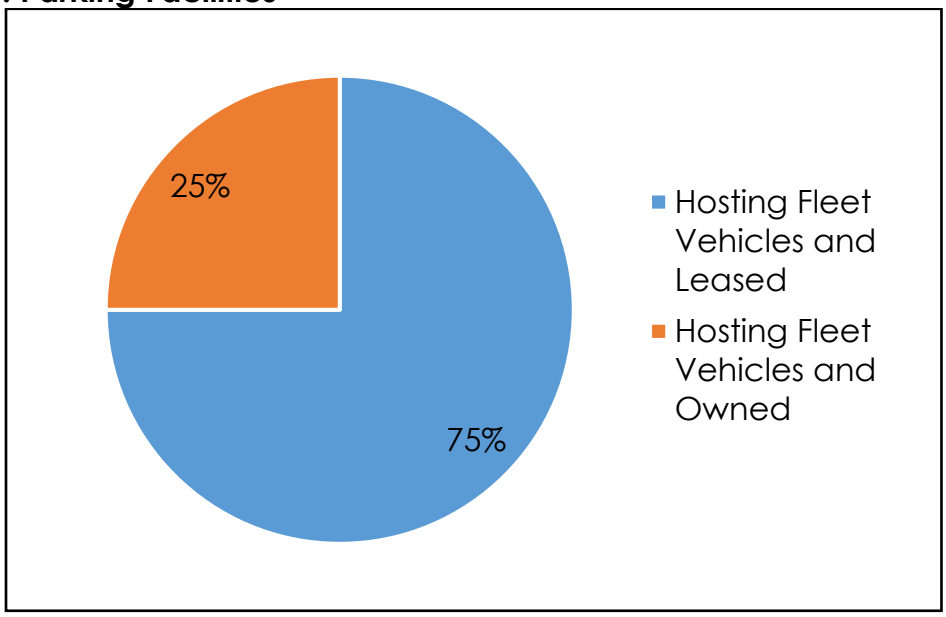
Planning Narrative for ZEV Public Safety Exemption

To align with the evolving state of Electric Vehicle (EV) mandates, the Sustainability Unit recommends EVs as a top priority for all future DOJ vehicle purchases. Where EVs are not feasible, PHEVs and HEVs are recommended. Internal combustion-only vehicles should not be considered for purchase unless alternatives have been justified as being not feasible and an exemption is warranted. Exemptions for purchasing ZEVs, PHEVs, HEVs would be any one or more of the following: Public Safety Vehicle (also known as authorized emergency vehicle defined in Vehicle Code §165), requires 4x4 capability, and/or requires a certain towing weight ability not available in EVs on contract. The EO-16-12 Public Safety Special Performance Exemption - 4124.4 applies to undercover (sworn) vehicles only. Therefore, concerning lighter work not requiring hauling or carrying heavy equipment, DOJ has purchased hybrids and is in process of planning to purchase ZEVs once the charging infrastructure is in place. The Sustainability Unit also recommends EVSE infrastructure to be a top priority.

DOJ's Sustainability Unit understands that there are exceptions for public safety vehicles, yet there will likely come a time in the near future in which options for alternative fuel and zero emission vehicles will provide reliability and security for public safety vehicles and those who drive them. Nevertheless, currently alternate-fuel vehicle use is not feasible for every application. It should be ensured that every vehicle purchase is vetted for compliance. Alternate-fuel vehicles have come a long way in regard to range and capability, but battery charger capacity and terrain (usually for truck or SUV potential) must expand to meet the needs of DOJ's fleet.

Department's Parking Facilities

Graph 2.4: Parking Facilities



Reporting Narrative on Parking Facilities

DOJ's facilities mainly consist of offices and forensic labs. With regard to facilities that host fleet vehicles, leased facilities represent 75%, whereas owned facilities represent 25%. DOJ currently owns eight labs, all of which host fleet vehicles. The offices and labs are generally mixed use and house attorneys, criminalists, enforcement officers, and other various administrative staff. Larger main offices have dedicated secured parking lots for DOJ fleets and open mixed parking for employees and visitors. The parking lot at smaller facilities is generally mixed across all parking types. There are few visitors, as labs are not open to the public. Generally, most visitors are staff and law enforcement from other public agencies.

Although this section focuses on charging stations at DOJ facilities, DOJ acknowledges that other forms of traveling to work that are greener do exist (e.g. cycling, walking, public transit etc.) and DOJ intends to create educational material to inform DOJ employees of the benefits. Where staffing and resources are available, DOJ also intends to create programs where employees receive incentives for opting to travel greener (e.g. parking charging rates that favor EVs).

Reporting on Status of EVSE Projects

Per MM No. 16-07- Zero-Emission Vehicle Purchasing and Electric Vehicle Service Equipment Infrastructure Requirements, DGS is to assist state agencies in the development and implementation of each agency's workplace charging plan that will result in EV charging availability at a minimum of 5% of workplace parking spaces at state-owned facilities.

The needs assessment reviews the estimates of future ZEV fleet purchases and includes a count of visitor and workplace parking spaces to calculate the number of L1, L2 and Level 3 chargers over the next three years to adequately serve fleet vehicles and achieve the 5% goal established in the ZEV Action Plan.

The chargers reported on Table 2.10 are for employees only as DOJ vehicles are parked in a locked gated area behind the building. Thus, left without access to chargers when parked. When plans to build infrastructure for chargers arise, DOJ must take into account the access for DOJ vehicles and ensure the chargers are in locked gated areas.

Table 2.10: Status of EV Charging Projects

Facility Name	Total Parking Spaces	Existing L1 Charging Ports (2022)	Existing L2 Charging Ports (2022)	Existing L3 Charging Ports (2022)	Total Charging Ports (2022)	EV Charging Ports Needed by 2025
BFS – EUREKA FORENSIC LABORATORY	22	0	0	0	0	2
BFS – REDDING FORENSIC LABORATORY	32	2	0	0	2	2
BFS – SANTA ROSA FORENSIC LABORATORY	24	2	0	0	2	1
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	55	0	0	0	0	3
BFS – RIVERSIDE FORENSIC LABORATORY	65	4	0	0	4	0
BFS – FREEDOM FORENSIC LABORATORY	23	0	0	0	0	2
BFS – FRESNO FORENSIC LABORATORY	30	2	0	0	2	3
BFS – SANTA BARBARA FORENSIC LABORATORY	15	2	0	0	2	1
Total	266	12	0	0	12	14

EV Charging Site Assessments

Reporting on 2022 Facility Site and Infrastructure Assessments

Site assessments are performed to establish the cost and feasibility of installing needed Electric vehicle supply equipment (EVSE) infrastructure.

Site assessments have been conducted at the eight DOJ's BFS-owned labs to establish the cost and feasibility of installing needed new EV charging infrastructure. Table 2.11 lists the facilities that were assessed in 2022 by Centrica Business Solutions, a potential bid for a DGS approved vendor, Centrica, that had a master contract with PG&E. They provided an EVSE assessments in 2022 to establish workflow potential in additional chargers considering that Level 1 (L1) EV chargers are the slowest to power up a vehicle while Level 3 (L3) EV chargers are the fastest of the three which have a power output from 60 kW to 360 kW, and are usually expensive.

DOJ is not currently involved in active projects with DGS to have any more EVSE assessments take place. This is something the Department looks forward to implementing, which will be dependent upon the future fleet needs at each location.

Table 2.3: 2022 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
BFS – EUREKA FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – REDDING FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – SANTA ROSA FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – RIVERSIDE FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – FREEDOM FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – FRESNO FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
BFS – SANTA BARBARA FORENSIC LABORATORY	0	1	0	Centrica Business Solutions
Total	0	1	0	Centrica Business Solutions

Planning Narrative on EVSE Construction Plan

Five of the Department's BFS labs have EV ARC Beam chargers, which were provided by DGS OS-Clean Transportation Unit at no cost to DOJ. These solar-powered chargers have been reported to charge slowly and malfunction often, which are currently being used by employee-owned vehicles. Currently, DOJ is planning on incorporating level 2 chargers into lease renewals and owned facilities per SAM section 4121.6.

Since a significant number of DOJ's fleet vehicles are used to perform duties that require them to go off-road, respond to emergencies, and carry heavy equipment, planning for EVSE chargers would mean that the cost benefit should not only be worth investing but also reliable when the unexpected is required for a task. Because of all the reasons stated above, ZEVs is not a viable option for DOJ law enforcement at this time. When the technology can provide EV vehicles with this capacity, DOJ will plan to implement them in their fleet and the required charging infrastructure. Data will be utilized to ensure that charging infrastructure and charging availability, average driving range, and travel needs are all met.

Additionally, charging infrastructure available to DOJ vehicles is predominantly limited to Level 1 chargers, which are typically not appropriate to support a BEV that is used to conduct DOJ business, due to the length of time to charge a vehicle's battery. Due to these variable factors, an EV Charging policy is not in development by AMU at this time. Upon formulation of this policy, AMU will need to collaborate with DOJ Facilities, as the charging infrastructure is managed there. When planning for chargers, DOJ must consider the geographic area and terrain as this will affect the reliability of the right type of ZEV. There are not many ZEV vehicles in the fleet to assign specific types but when the technology provides adequate battery charge reliability, DOJ will devise a plan simultaneously.

On-going EVSE Charging Operations and Maintenance

Public EV Charging Policies

Reporting Narrative on Public EV Charging Policies

PUBLIC CHARGING POLICY NOT REQUIRED

Planning Narrative on Public EV Charging Policies

PUBLIC CHARGING NOT REQUIRED

Employee EV Charging Policies

State agencies may allow state employees to charge their EVs while visiting or working at a state-owned or leased building or facility. If workplace charging is provided, then an EV charging policy must be in place. MM16-07 also contains the EV Charging Reimbursement Authority section which states: "When an agency elects not to charge a monetary fee for use of the EV charging station, such an action may be considered a public benefit and not a gift of public funds that is prohibited by Section 6 of Article XVI of the California Constitution."

Although an agency is not required to assess a fee to state employees for EV charging, it may do so. It is necessary to notify anyone who would use an EV charger at any of your department's parking facilities of your department's policies.

Reporting Narrative on Employee EV Charging Policies

NO EMPLOYEE EV CHARGING POLICY IN PLACE

Planning Narrative on Employee EV Charging Policies

Although DOJ does not have an Employee EV Charging Policy in place, we have a quick guide for elective vehicles that is in the appendix.

Fleet EV Charging Policies

Reporting Narrative for Fleet EV Charging

NO FLEET EV CHARGING POLICY.

Planning Narrative for Fleet EV Charging

Because DOJ is not currently deploying an EV fleet, DOJ does not currently have a Fleet EV Charging Policy in place but plans to have one when there are more charging infrastructures built. However, for DOJ to deploy its ZEVs effectively there is a safety issue regarding using telematics or software systems for tracking.

Hydrogen Fueling Infrastructure

Planning Narrative for Hydrogen Fueling Infrastructure

Hydrogen Fuel Cell Electric Vehicles (FCEV) are a type of ZEV running on compressed hydrogen fed into a fuel cell "stack." The fuel cell stack produces electricity to power an electric motor of the vehicle. These vehicles tend to have a longer range than most of the electric cars available to the state. FCEVs are a good alternative to electric vehicles, although the price is much higher. DOJ does not currently have plans for adding hydrogen fueling infrastructure, but will consider it if FCEV are added to DOJ's fleet in the future.

CHAPTER 3 – ENERGY

Department Mission and Building Infrastructure

Each state agency is responsible for monitoring energy use and reporting baseline and annual energy use for compliance with the energy use reduction targets. Energy use shall be measured at facilities that have meters and sub-meters. This chapter of the Roadmap collects and analyze the Department's energy information.

Reporting Narrative for Department Mission and Building Infrastructure:

DOJ manages many different types of facilities throughout California and reports on eight owned forensic labs. The rest of DOJ's properties are leased from private entities in which utility usage is not being reported by the Department, or from the DGS, which reports on energy usage for all of its tenants combined.

DOJ's eight regional crime laboratories are under the Bureau of Forensic Services (BFS), a comprehensive state-of-the-art, American Society of Crime Lab Directors-accredited forensic program servicing 47 of the state's 58 counties for state and local law enforcement, district attorneys, and the courts.

BFS laboratories perform forensic examinations across a broad range of physical evidence, i.e. DNA, Biology, Firearms, Trace, Latent Prints, Toxicology, Alcohol, Controlled Substances and Field Investigations. All labs are operational 24-7/ 365 days to maintain the integrity of evidence through proper cataloguing, handling, analysis, and storage of evidence. The labs are required to stay open and operational during emergency or crisis for intake and analysis.

Department Energy Use

Reporting on Total Purchased Energy

For DOJ-owned locations, all energy is metered and tracked through the locations utility (PG&E and SCE). With a combined square footage of 173,595 square feet, together these labs use about 30 million kBtus on an annual basis. The labs require consistent temperature control, which significantly contributes to energy use which is the majority of the Department's purchased energy. DOJ Sustainability employees enter data into Energy Star Portfolio Manager (ESPM) on a monthly basis (or as frequently as the billing cycle) and reports totals to DGS annually according to State Administrative Manual (SAM) Chapter 1815.3.

Table 3.1 is a breakdown of 2021 and 2022 total purchased energy for all eight DOJ-owned lab facilities.

Table 3.1: Total Purchased Energy 2021 and 2022

Purchased Energy	2003 Baseline Quantity	Unit	2021 Quantity	2022 Quantity	% Qty. Change 2003-22
Electricity	5,587,785	kWh	6,914,734	5,736,127	**+3%**
Natural Gas	168,438	therms	130,457	104,600	**-38%**
TOTALS	29,102,959	kBtu Site	36,638,741	30,031,655	**+3%**

Please note that three more buildings were built after 2003, the baseline year, which contributed to the increase in energy usage as well as more energy intensive usage of lab equipment.

Department Energy Use

This section of the Roadmap starts with analysis of DOJ's facilities, and covers energy use, and practices surrounding energy efficiency.

Reporting High Energy Use Buildings

Table 3.2 shows the Department's highest energy use buildings at all DOJ owned facilities (eight Forensic laboratories) were listed.

Table 3.2: Properties with Largest 2022 Energy Consumption

Building Name	Floor Area (ft^2)	Site Energy (kBTU)	Source Energy (kBTU)	Source EUI (kBTU/ft^2-yr)
BFS – RIVERSIDE FORENSIC LABORATORY	39,000	6,661,943	16,210,516	421
BFS – FRESNO FORENSIC LABORATORY	36,007	6,931,507	19,045,051	529
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	32,000	5,351,155	13,147,129	411
BFS – REDDING FORENSIC LABORATORY	16,799	2,423,458	7,505,349	447
BFS – SANTA ROSA FORENSIC LABORATORY	15,645	3,422,187	6,152,366	393
BFS – SANTA BARBARA FORENSIC LABORATORY	13,800	3,602,507	7,409,176	536
BFS – FREEDOM FORENSIC LABORATORY	11,086	1,026,989	2,304,720	208
BFS – EUREKA FORENSIC LABORATORY	9,771	611,943	1,277,827	131
Total for Buildings in This Table	**174,108 ft^2**	**30,031,655 kBTU**	**73,052,134 kBTU**	**---**
Total for All Department Buildings	**174,108 ft^2**	**30,031,655 kBTU**	**73,052,134 kBTU**	**---**
% of Totals	**100 %**	**100 %**	**100 %**	**---**

Energy Efficiency Solutions for Largest Energy Using Buildings

This Planning Outline evaluates the energy efficiency work needed to reduce total energy use at DOJ's highest energy use buildings listed in Table 3.2.

DOJ is currently in the process of upgrading lighting and fixtures to LED, replacing old HVAC systems, and installing solar panels to help carry the energy load of sites that qualify. Energy audits of the eight labs have already been conducted as of 2022 by PG&E's sub-contractor, Centrica. DOJ's 5-year Infrastructure Plan includes a scope of work for energy efficiency upgrades has been finalized and will include the following listed below in Planning Outline PO3a. This extensive project is estimated to save DOJ a total of 1,439,260 kWh annually. This project is part of PG&E's Energy Efficiency Bundling Opportunity in collaboration with DGS and is under a master contract. DOJ is working with

GS$mart on securing a loan to fund the project. The proposed project completion date is December 2024.

Planning Outline PO3a: Planning for Buildings with Largest Energy Use

Building Name	Proposed Energy Efficiency Solutions
BFS – RIVERSIDE FORENSIC LABORATORY	• HVAC Upgrades (which include installing high efficiency boilers, condensers, and/or ductless split systems) • Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – FRESNO FORENSIC LABORATORY	• HVAC Upgrades (which include installing high efficiency boilers, condensers, and/or ductless split systems) • Install Rooftop Solar • LED Lighting and Controls Retrofit • New EMS (Energy Management System)
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	• HVAC Upgrades (which include installing high efficiency boilers, condensers, and/or ductless split systems) • Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – REDDING FORENSIC LABORATORY	• HVAC Upgrades (which include installing high efficiency boilers, condensers, and/or ductless split systems) • Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – SANTA ROSA FORENSIC LABORATORY	• Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – SANTA BARBARA FORENSIC LABORATORY	• Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – FREEDOM FORENSIC LABORATORY	• Install Rooftop Solar • LED Lighting and Controls Retrofit
BFS – EUREKA FORENSIC LABORATORY	• Install Rooftop Solar • LED Lighting and Controls Retrofit

Narrative for Building Energy Efficiency

The Department's 5-year Infrastructure Plan is to have upgraded all interior and exterior lighting of the eight DOJ-owned laboratories to LED, install solar panels, and upgrade the old HVAC systems at the locations listed above in Planning

Outline PO3a. The Department's plan is consistent with California State Sustainability goals to reduce energy usage by 20%.

The Department has faced various other challenges while working toward meeting the Governor's goals. Challenges include securing funding and creating a contract with a qualified Energy Services Company as part of California Government Code section 4217. DOJ's endeavor on installing solar for all DOJ-owned facilities was initially held off due to low return on investment (ROI) from the project. This was remedied by adding more to the project scope such as upgrading the building EMS (Energy Management System) at the Fresno lab, which is estimated to save the DOJ 20,048 kWh annually. The Department continues to be mindful of the Governor's sustainability goals and is working towards meeting them.

Zero Net Energy (ZNE)

Zero Net Energy (ZNE) is a term used to describe an energy efficient building or facility that consumes no more energy than it produces from renewable on-site or-off site sources in a one-year span. State policies set forth the following milestones for state zero net energy buildings:

- 2017 – 100% of new construction, major renovations and build-to-suit leases beginning design after 10/23/2017 to be ZNE
- 2025 – 50% of total existing building area will be ZNE

Reporting on Existing Building ZNE

Table 3.3 provides a status of DOJ's progress in meeting these ZNE requirements.

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 yet in design)	0	0	0%
Addtl. Exist. Bldg. Area within 15% of ZNE target EUI and have EE projects planned	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%

Planning Narrative of Table 3.3: Zero Net Energy Buildings

DOJ does not have any ZNE facilities. However, the Department is working towards having all of its eight owned lab facilities be ZNE ready, meaning that the labs' source EUI (Energy Use Intensity) will meet the energy efficiency ZNE threshold. After meeting the threshold, those laboratories' next step is to generate their energy use from onsite or long term off-site renewable sources, such as solar power. When the generation is measured and equal to the amount that particular facility uses within one year, it is considered a ZNE facility. Renewable sources and ZNE definitions are detailed in DGS's ZNE guidelines. In order to meet ZNE goals, the department is currently working with PG&E to look into installing solar panels at select lab locations listed in Planning Outline PO3a. The Department is working with GS$mart on securing a loan to fund the project. The proposed project completion date is December 2024.

New Building Title 24 Energy Use

All new state buildings and major renovations beginning design after July 1, 2012, must exceed the current California Code of Regulations (CCR) Title 24, energy requirements by 15% or more.

New Building Construction Exceeding Title 24 by 15%

Table 3.4 provides the status of the Department's new building construction.

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	NO NEW CONSTRUCTION	NO NEW CONSTRUCTION
Under Design or Construction	NO NEW CONSTRUCTION	NO NEW CONSTRUCTION
Proposed Before 2025	NO NEW CONSTRUCTION	NO NEW CONSTRUCTION

DOJ has had no new construction or major renovations recently. When DOJ requires new construction or renovations, the Department will work closely with and rely on DGS to implement new construction requirements. The Department will ensure when working with contractors that Title 24 requirements are met by at least 15%.

Existing Buildings Energy Efficiency

Energy efficiency is central to building sustainability efforts, enabling departments to use less energy (including fossil fuels) to power and operate their buildings. According to State Administrative Manual (SAM) Chapter 1815.3, existing state-owned buildings shall enter their energy consumption data into the ENERGY STAR Portfolio Manager (ESPM) annually by March 1st as part of the annual benchmarking program and provide access to this data base to the DGS Office of Sustainability

Reporting on Energy Efficiency for Existing Buildings

Since 2020, DOJ's Sustainability staff enters the energy consumption data for all eight owned buildings into the ESPM platform annually The data includes the DOJ's energy use by DOJ-owned facilities. Total energy use is a good measurement but sometimes can be misleading if buildings with large square footage are added to the portfolio.

Table 3.5 looks at overall energy use trends at the eight DOJ-owned lab facilities over a series of years using EUI. EUI is energy use per square footage per year and can be a more accurate measurement of energy efficiency and building performance. Please note the baseline year is 2003 and three more buildings were built after that year. Moreover, source energy use also includes the amount of energy it takes to produce and deliver the energy to the site.

Table 3.5: Department-Wide Energy Trends

Year	Floor Area (ft^2)	Total Source kBTU Consumption	Department Average EUI (Source kBtu /square foot)
Baseline Year 2003	141,664	57,462,838	406
2013	174,108	79,643,792	459
2014	174,108	75,306,831	434
2015	174,108	75,924,189	437
2016	174,108	84,223,458	485
2017	174,108	78,969,723	455
2018	174,108	89,011,294	513
2019	174,108	88,605,716	510
2020	174,108	77,331,047	445
2021	174,108	88,537,953	510
2022	174,108	73,052,134	421
% Change 2003-2022	**23 %**	**35%**	**10 %**

Narrative for the Department-Wide Energy Trends

The Department's energy trends show a source energy use intensity increase of 10% from 2003-2022. As mentioned earlier, this small increase in total energy use is due to the addition of three crime lab facilities after 2003, as well as operation of more energy intensive lab equipment.

Based on the energy audits, DOJ is currently working towards replacing all fluorescent light fixtures with LED as well as update any high-energy consumption systems to newer models that use less energy. The estimated completion time for these retrofits is December 2024.

Energy Savings Projects

Considering DOJ's change on energy use from baseline to 2022, approximately 10% of department building inventory should undergo an ASHRAE (The American Society of Heating, Refrigerating and Air-Conditioning Engineers) Level 2 survey each year, generally focusing on the highest energy-using buildings first. These surveys should guide the DOJ's energy efficiency projects and maintenance activities.

Table 3.6 summarizes the DOJ's completed energy saving from surveys conducted in 2021 and 2022 at the eight DOJ-owned lab facilities.

Table 3.6: Summary of Energy Savings Projects 2021-2022

Year Funded	Estimated Energy Savings (kBTU/yr)	Floor Area Retrofit (sq.ft.)	Percent of Department Floor Area
2021	0	0	0%
2022	3,220,508	174,108	100%
Total		**174,108**	**100%**

Planning Narrative for Energy Savings Projects 2021-2022

The energy surveys conducted on Department-owned buildings in the last five years include surveys conducted in 2022 on LED lighting upgrades and energy equipment retrofit for all DOJ-owned labs. The DOJ's efforts to conduct energy savings projects on these buildings have been extensive. All eight labs have been audited as of December 2022. Projects to retrofit energy equipment are currently underway. DOJ is working with the DGS Office of Sustainability on these energy savings projects and based on the DGS selected vendor's estimates, DOJ is projected to save 943,877 kWh annually when these projects are complete.

Energy Audits/Surveys Completed or In-Progress

Table 3.7: Energy Audits/Surveys Completed or In-Progress

Year	Total Department Floor Area (sq. ft.)	Energy Audits/ Surveys Under Way (sq. ft.)	Percent of Department Floor Area
2021	NONE COMPLETED	NONE COMPLETED	NONE COMPLETED
2022	174,108	174,108	100%

Planning Narrative Energy Audits/Surveys Completed or In-Progress

The challenges the Department has faced while working toward meeting this goal pertains to securing funding. As of December 2022, DOJ was able to overcome this challenge by working with DGS, PG&E, Centrica, and Vector on completing these energy audits through California Government Code section 4217 and looking into the GS$Mart loan program. The Department is currently working with GS$mart on securing a loan to fund energy projects.

Demand Response (DR)

Executive Order B-18-12 directed all state departments to "participate in available Demand Response (DR) programs and to obtain financial incentives for reducing peak electrical loads when called upon, to the maximum extent that is cost-effective for each State-owned or leased facility and does not materially adversely affect department operations." The 2022 summer heat waves further prompted the Governor's Office to request that departments curtail power where possible during grid emergencies.

Departments can employ DR to reduce energy use in their buildings in response to requests from California's grid operator (CAISO) or during periods when energy costs are high (during "peak hours"). CAISO will issue "Flex Alerts," and other calls for energy reduction from residents and commercial users.

Departments are to curtail their energy usage whenever possible during a Flex Alert. DR programs are also used for reducing energy use during specific periods of the year (e.g., seasonally). DR programs operate throughout the year when energy supplies are low or when the grid operators need a reduction of energy demand.

Participating in DR Utility Programs & Participating in DR Events

Table 3.8 summarizes DOJ's participation in DR programs.

Table 3.8: Demand Response (DR) Program Participation

DR Program Participation	Number of Buildings	Estimated Available Energy Reduction (kW)	Actual Curtailment (kW)
Number of Buildings Participating in 2021	0	NO DATA	NO DATA
Number of Buildings Participating in 2022	0	NO DATA	NO DATA
Planned Number of Buildings that will Participate in 2023	0	NO DATA	NO DATA
Total Number of Department Buildings	0	NO DATA	NO DATA
2022 Department Buildings Participating (Percent)	0%	0%	0%

Planning Narrative for Demand Response (DR) Program Participation

DOJ is currently not participating in any DR programs because the eight DOJ-owned laboratories operate on a 24-hour basis and therefore do not have major energy-use peaks. However, DOJ is willing to consider reducing energy loads by adjusting lighting intensity and looking into changing thermostats to smart thermostats in the future.

Renewable Energy

Renewable energy in the form of solar power, wind, and other clean renewable energy help reduce Greenhouse Gas (GHG) emissions from state operations. Although there are no specific kW goals for renewable energy, renewable energy does count towards meeting: (1) Zero Net Energy goal for 2025, (2) 20% grid-based energy use reduction by 2020 and (3) 100% renewable electricity purchases by state agencies by December 31, 2035.

EO B-18-12 requires that new or major renovated state buildings over 10,000 square feet must use clean, on-site power generation, and clean back-up power supplies, if economically feasible. SB 1020 requires that state agencies purchase 100% renewable electricity by December 31, 2035. Facilities with available open land must consider large-scale distributed generation through various financing methods, including, but not limited to, third party power purchase agreements (PPAs). In considering economic feasibility, departments should consider, at a minimum, both present and future costs of energy, demand management benefits of onsite generation, facility resiliency during power outages, and carbon emissions compared to grid power.

SAM Chapter 1815.31 states that renewable energy can also be obtained through off-site long-term agreements that can be allocated toward energy efficient buildings in department portfolios to help them qualify as ZNE portfolio buildings.

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

DOJ currently has three sites whose grid energy comes directly from off-site clean and renewable sources (table 3.9) as indicated in the utility bills. The BFS – Freedom Forensic Laboratory receives its electricity from Central Coast Community Energy, the BFS – Eureka Forensic Laboratory uses Redwood Coast Energy Authority, and the BFS – Santa Rosa Laboratory uses Sonoma Clean Power. These public agencies provide a wide range of energy services to the local communities they serve. Electricity from these agencies are delivered to the labs through PG&E, who remains an essential partner for power distribution.

Table 3.9 summarizes DOJ's operational, in construction, or in planning renewable energy.

Table 3.9: On-Site and Off-Site Renewable Energy

Status	Number of Sites	Capacity (kW)	Estimated Annual Power Generation (kWh)	Percent of Total Annual DGS Power Use
Current On-Site Renewables in Operation or Construction	0	0	0	0
On-Site Renewables Planned	0	0	0	0
On-Site Renewables Totals	0	0	0	0
Department-Wide Total Energy Use (kWh equivalent)	0	0	0	0
Current Off-Site Renewables	3	NO DATA	600,168	10%
Planned Off-Site Renewables	0	0	0	0
Off-Site Renewables Combined Current & Planned	3	NO DATA	600,168	10%
Current Combined On-Site and Off-Site Renewable Energy	**3**	**NO DATA**	**600,168**	**10%**
Additional Planned On-Site and Off-Site Renewables	4	402.4	646,433	NO DATA

Planning Narrative for On-Site and Off-Site Building Renewable Energy

Renewable energy generation is important to meeting DOJ's GHG emission goals. In August 2023, the Department determined the feasibility and approved the installation of on-site renewable energy. As part of the Energy Reduction Project, DOJ is currently working with DGS to assess all DOJ-owned facilities for solar installation and so far, the Santa Barbara, Freedom, Eureka and Fresno labs have been selected for on-site rooftop solar installation in collaboration with PG&E. The Department is targeting the remaining four sites as potential candidates and will be assessing those sites for solar projects in the near future.

DOJ has not yet met the zero-net energy goal of generating >50% of its energy from renewable resources. DOJ does not yet have a plan to get to 100% renewable energy purchases by 2035 but is in the process of adding on-site renewable energy generation through solar panels to help carry some of the energy load of the labs.

Monitoring-Based Commissioning (MBCx)

Monitoring-based Commission (MBCx) is an energy efficiency practice that uses software and hardware to capture building data and apply analytics to identify anomalies and deficiencies in the operation of a building. SAM Chapter 1815.3 requires all state agencies managing state-owned buildings to pursue MBCx for all facilities over 5,000 square feet whose EUIs exceed the required thresholds.

All existing state buildings over 5,000 square feet whose EUIs exceed required thresholds are to incorporate Monitoring-Based Commissioning (MBCx) to support cost effective and energy efficient building operations and Environmental Monitoring System (EMS)/Building Management System (BMS).

Reporting Narrative for MBCx Status of Buildings

The Fresno laboratory is the only facility where DOJ is currently working to incorporate MBCx by upgrading its Energy Management System (EMS) to a newer model. This EMS system has been operating since the building's construction in 2003 and needs to be replaced with a more efficient model. This outdated system has been malfunctioning recently and is wasting energy. The Fresno lab uses the most amount of energy out of all the labs because it is the biggest.

Table 3.10 lists DOJ's buildings that currently have MBCx projects in place.

Table 3.10: Current & Potential MBCx Projects

Facility	Building Name	Location	Floor Area (sq. ft.)	EMS Make, Model, Installation/ Upgrade	EMS Year	MBCx Capable, Difficult, or No EMS	MBCx Projected Start Date	MBCx Projected Cost ($ if known)
11087	BFS – FRESNO FORENSIC LABORATORY	Fresno	36,007	Invensys, Network 8000 system	2003	Capable	2024	698,299

Planning Narrative for MBCx Status of Buildings

DOJ's goal is to implement MBCx at the Fresno lab within the next six months as part of the Energy Reduction Project with PG&E in collaboration with DGS.

Building Controls

Reporting on EMS/BMS/Controls Building Capability

Building controls such as Energy Management Systems (EMS) and Building Management Systems (BMS), as well as smart thermostats for smaller buildings can be effective in automating functions that reduce energy use. For example, EMS controls can be set on a schedule that automatically ensures all lights and equipment are turned off at the end of each workday. Building HVAC controls can be set to allow for a +2- or -2-degree fluctuation from the temperature set point seasonally. Today's EMS and BMS offerings on the market offer numerous ways for departments to reduce power purchased (energy use) and save money on their utility bills.

The ability to control a building's major systems is important to participate in DR, which helps reduce energy use and improve overall energy efficiency while upholding best management practices for energy use. Building controls, whether they are an EMS/BMS system or smart thermostats, contribute to overall building energy efficiencies.

Reporting Narrative for Building Controls

None of DOJ's controls operate remotely off-site. This is due to security concerns. Confidential data is stored at these locations, therefore; all buildings must operate using on-site controls. All DOJ labs operate 24/7 with lighting and HVAC controls set to automatically power down to 50% load capacity between the hours of 6 p.m. and 6 a.m. Table 3.11 below includes DOJ's existing EMS/BMS controls currently installed.

Table 3.11: Building Controls

Equipment Controls	% of Buildings Controlled Remotely Offsite	% of Buildings with Controls Onsite	% of Total Buildings
Lighting	0	100	100
HVAC: EMS/BMS	0	80	80
HVAC: Smart Thermostats	0	0	0
Other: _____	0	0	0

Planning Narrative for Building Controls

For the labs that do not have an EMS/BMS, the option of installing smart thermostats for these locations will be investigated. These labs do not operate like normal office buildings and certain rooms need to be kept at a constant

temperature for testing purposes. There are currently no plans to install an EMS/BMS at these locations. This is due to the equipment being very costly to add on to the buildings. DOJ sees this need as a low priority project since these labs are relatively small (as little as 9,771 square feet) and already have a low energy output. The labs that do have EMS/BMS receive upgrades on an as needed basis. These upgrades are costly to the Department, this is why they are not replaced more frequently and only when they are malfunctioning.

Energy Reduction Strategies - Best Management Practices (BMPs)

Building Best Management Practices (BMPs) are ongoing actions establishing and maintaining building energy use efficiency.

The following Management Memos and sections of the State Administrative Manual (SAM) provide specific Instructions and support for helping departments reduce energy use and comply with Title 24:

- Department of Technology's Basic Policy 4819.31, item 13: Power. management savings on electronic devices.
- Management Memo 14-07 "Standard Operating Procedures for Energy Management in State Buildings" and its associated Standard Operating Procedures.
- Management Memo 14-09 "Energy Efficiency in Data Centers and Server Rooms" greater than 200 and 1,000 square feet.

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

In response to the Management Memos and sections of the State Administrative Manual (SAM), DOJ will put together a best practice guide for all locations. This guide will include general energy management procedures, ensuring a facility conserves energy and uses it efficiently. It is essential that these facilities and employees of DOJ have access to a list of BMPs. While it is impractical to monitor employee adherence to every one of the BMPs, monitoring of monthly energy use should still be conducted to identify locations where energy use is increasing, and where potential problems may exist to address them accordingly.

CHAPTER 4 - WATER EFFICIENCY AND CONSERVATION

Department Mission and Water Use

California experiences the most extreme variability in yearly precipitation in the nation. In 2015, California had record low statewide mountain snowpack of only 5% of average while 2012-14 were the four driest consecutive years of statewide precipitation in the historical record. The 2017 water year (October 1, 2016-September 30, 2017) surpassed the wettest year of record (1982-83) in the Sacramento River and San Joaquin River watersheds and close to becoming the wettest year in the Tulare Basin (set in 1968-69). These potential wide swings in precipitation from one year to the next show why California must be prepared for either flood or drought in any year.

Using water wisely throughout the State is critical. The EOs and SAM sections listed in the previous chapters help demonstrate the connection between water and energy use, (the water-energy nexus), water and climate change, and water and landscaping. Further, the impact of water uses by state agencies goes beyond the scope of these EOs and SAM sections and DGS management memos as these documents do not address such related issues as water runoff from landscaping and various work processes and the potential for water pollution or the benefits of water infiltration, soil health and nutrient recycling. However, by using holistic water planning, a well-crafted water plan can not only meet all state requirements but also add considerable value and benefits to the organization and surrounding communities. Therefore, DOJ is creating and implementing programs that meet the governor's sustainability goals for water conservation.

These water efficiency and conservation efforts demonstrate the progress DOJ has made toward meeting the Governor's goals. This chapter identifies successful accomplishments, ongoing efforts, and outstanding challenges. Recently, these projects include installing low-flow toilets and sinks, conducting landscape retrofit, and installing reclaimed water systems to reuse cooling unit blowdown water for irrigation.

Reporting on Total Purchased Water

Each of the eight DOJ-owned lab facilities use a significant amount of water due to the unique nature of the operations in these labs. With a combined square footage of 174,108 square feet, together these forensic laboratories can

consume as much as 5 to 10 times more water than a typical office. Most of the water use reported is considered indoor use: sanitary water, lab process water, water used for sterilization, reverse osmosis (RO)/deionized (DI) water production, and HVAC/mechanical equipment.

Audit findings also reported that a large consumption of water in these lab locations is due to landscape irrigation. The DOJ lab sites irrigate a combined square footage of 92,828 square feet of landscape, which mainly includes turf grass. Measures are being reviewed in which "blowdown" greywater captured from the building's chiller systems may be rerouted for landscape irrigation needs.

The Department's water management efforts are currently being concentrated on modifying each lab's mechanical cooling system (evaporative cooling). This system causes water to be lost through evaporation, drift and blowdown. All fresh water contains naturally high mineral content concentrations, causing scale formation in the building's HVAC systems. Because of the high mineral content of the water sources at each of the labs, scale formation is not being reduced enough to decrease required blowdowns, which results in high potable water waste. In 2015, DOJ was awarded a $305,000 grant to install side-stream sand filtration systems (Dolphin System), water softener tanks and pulse-powered HVAC water treatment systems at selected lab locations to help save water and increase the potential to reclaim water for irrigation use. The installation of these Dolphin systems is complete for the Ripon, Redding, Riverside, and Fresno locations. DOJ hopes to pursue more grant opportunities when they become available again to fund more water conservations projects in the future.

The sources of non-purchased water at these DOJ locations is unknown at this time. Non-purchased water is water that comes from sources other than a 3rd party water supplier. Sources of non-purchased water may include domestic wells or surface water diverted from rivers, lakes, ponds, or irrigation canals.

The tables below include all available water usage information for the eight DOJ-owned buildings where the State pays bills that are subject to Governor's Executive Orders.

Table 4.1: Total Purchased Water

Purchased Water	2021 Quantity (gal/yr.)	2022 Quantity (gal/yr.)	2021 Cost ($/yr.)	2022 Cost ($/ yr.)
Potable	5,386,400	6,134,000	$14,151	$21,755
Recycled Water	NO DATA	NO DATA	NO DATA	NO DATA

Reporting on Properties with Largest Purchased Water Use per Capita.

Table 4.2: Properties with Purchased Largest Water Use Per Capita

Building Name	Area (ft^2)	# of Building Occupants	Total 2022 Gallons	Total 2022 Irrigation in Gallons (if known)	Gallons per Capita
BFS – RIVERSIDE FORENSIC LABORATORY	39,000	31	2,542,800	NO DATA	224
BFS – RIPON (CENRAL VALLEY) FORENSIC LABORATORY	32,000	38	2,203,800	NO DATA	159
BFS – FRESNO FORENSIC LABORATORY	36,007	41	719,600	NO DATA	48
BFS – REDDING FORENSIC LABORATORY	16,799	38	395,200	NO DATA	28
BFS – SANTA BARBARA FORENSIC LABORATORY	13,800	13	139,100	NO DATA	29
Total for Buildings in This Table	137,093	161	6,000,500	NO DATA	98 (Average)
Total for All Department Buildings	174,108	195	6,134,000	NO DATA	---
% of Totals	79 %	83%	98 %	NO DATA	---

Reporting on Properties with Largest Landscape Area Using Purchased Water

Table 4.3: Properties with Largest Landscape Area Using Purchased Water

Building Name	Landscape Area (ft^2)
BFS – FRESNO FORENSIC LABORATORY	34,800
BFS – REDDING FORENSIC LABORATORY	26,774
BFS – RIPON FORENSIC LABORATORY	24,868
BFS – RIVERSIDE FORENSIC LABORATORY	38,362
BFS – SANTA ROSA FORENSIC LABORATORY	2,824
Total Landscaping area for Buildings in This Table	127,628
Total Landscaping for All Department Buildings	130,311
% of Totals that is large landscape	98 %

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

Table 4.4: Department Wide Purchased Water Use Trends

Year	Total Occupancy /year	Total Amount Used (Gallons/year)	Per capita Gallons per person per day
Baseline Year 2010	135	5,940,700	121
2018	142	7,380,600	142
2019	163	7,169,400	121
2020	178	5,540,000	85
2021	200	5,386,400	74
2022	195	6,134,000	86
2024 Goal	225	4,709,000	57

Reporting Narrative on Purchased Water Use Trends from 2010 to Present

The Department has been steadily decreasing its per capita water usage from 2018 to 2021 with a slight increase in 2022. The return to workplace from a telework centered scheduled most likely caused this increase as more personnel are now occupying the labs on a daily basis. The Department has not had many significant challenges in meeting the mandatory water reductions for purchased water. The strategies the Department has been utilizing in order to meet the reduction goals is to reduce irrigation during the winter months and explore the option of installing a reclaimed water system where applicable. Although the Dolphin systems were installed, the labs are planning on reusing the cooling tower blowdown water for landscape irrigation. DOJ is currently working with DGS and BKF on installing a reclaimed water system at each site with a Dolphin system. Water conservation plans estimate that by installing two filtration systems

and water softeners, these labs can run up to seven cycles and save over 100,000 gallons of water per month. The installation of water conservation infrastructure is being addressed.

DOJ is currently in the process of exploring other options for reclaimed water. A feasibility report was drafted by BKF for each of the four labs utilizing a Dolphin system as of October 2023. The water savings were discovered not to be as high as DOJ had anticipated. Subsequently, the project cost was too high for such a low return on investment and the reclaimed water project was put on hold until grant funding could be secured.

Reporting on Percentage Total Purchased Water Reductions Achieved

Overall, compared to the 2010 baseline, the Department has observed a 3% increase in water usage, as shown in Table 4.5.

Table 4.5: Total Purchased Water Reductions Achieved in Gallons

2010 Baseline totals (Gallons)	2021 Totals (Gallons)	2022 Totals (Gallons)
5,940,700	5,386,400	6,134,000
+ or -Gallons Compared to Baseline Year	-554,300	193,300
Department- Wide Reduction as a % from 2010 baseline	-9%	3%

Department Indoor Water Use

Fixtures and Water Using Appliances Needs Inventories

Reporting on Building Indoor Water Fixtures and Water Using Appliances Needs

Table 4.6: Building Indoor Water Fixtures and Water Using Appliances Needs Inventories Summary

# of toilets to be replaced	# of urinals to be replaced	# of faucet aerators to be replaced	# of showerheads to be replaced *	# of clothes washers to be replaced	# of garbage disposals to be replaced.	# of pre-rinse valves to be replaced
36	9	38	NO DATA	NO DATA	NO DATA	NO DATA

Planning Narrative for Indoor Building Water Fixtures and Water Using Appliances Needs

Most projects completed by DOJ facilities are maintenance inspections, repairs, or replacements requested by the location staff. These projects are completed on an as-needed basis. The Department is in the process of replacing water fixtures such as urinals, toilets, and faucets with more efficient models. All eight labs will be retrofitted by 2024 with high efficiency touchless systems to minimize the transmission of germs and reduce water waste. Water efficiency use evaluations have been conducted for each site as of December 2022 by a DGS approved contractor, Centrica. Water use data pertaining to showers, clothes washers, garbage disposals, and pre-rinse valves is unknown at this time because this equipment was not evaluated as part of the fixture upgrade project. The Department plans on having the upgrades listed above completed by 2024.

Water Conservation and Water Efficiency Projects for Purchased Water

Reporting on Current Indoor Water Efficiency Projects 2020- Present

Table 4.7: 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
2020	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
2021	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
2022	47,500 (current estimate)	IN PROGRESS	$318 (current estimate)

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

Planning Outline PO4:a: Building Indoor Water Efficiency Priority Projects for the Next 5 Years

Building Name	Type of Project	Est Water Savings	Est. Start Date
BFS – RIVERSIDE FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – REDDING FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – RIPON FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – FRESNO FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – FREEDOM FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – SANTA ROSA FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – EUREKA FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024
BFS – SANTA BARBARA FORENSIC LABORATORY	Wash Closet Upgrades	6,000 (gal)	2024

Planning Narrative for Future Indoor Water Efficiency - Building Priority Projects

The Department has not yet reached its mandatory indoor building water efficiency reduction goals given in Executive Order B-37-16, but the proposed projects in Table 4.6 will help achieve them. The installation of low-flow toilets, urinals, and sinks will not only reduce indoor water usage for the labs, but also help reduce the transmission of germs. Unfortunately, these projects will not meet other sustainability goals such as heat island reduction, natural infrastructure, and water recycling. Nevertheless, these goals will be pursued in other future projects.

Reporting on General Water Management BMP

BMPs (Best Management Practices) 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.

These BMPs require that the Department have enough staff with the requisite expertise, knowledge, time, and resources to perform the actions required.

Reporting on General Water Management BMP

Four buildings responded to the General Water Management BMP survey, three do not have a designated staff member to check the water meter leak detector and one did not respond. The frequency the water meter leak detector is checked is unknown at this time, but DOJ will be monitoring this from now on.

Planning Narrative on General Water Management BMP

The Department's plan is to work with all eight of these building managers to correct errors indicated by creating a BMP guide in the upcoming year for those who did and did not respond.

Reporting on Leak Detection and Repair BMPs

Four of the eight DOJ labs responded to the Leak Detection and Repair BMP survey and three do not have a procedure in place.

Planning Narrative on Leak Detection and Repair BMPs

The Department's plan is to work with these building managers to correct this error in the upcoming year. Typically, the building's landscape contractor assumes the responsibility of checking the water meter for leaks and making repairs as needed.

Reporting on Kitchen Water Conservation BMPS

Six of the eight DOJ labs (Santa Rosa, Santa Barbara, Freedom, Fresno, Redding, Ripon) responded to the Kitchen Water Conservation BMP survey, and two of those do not have a procedure in place.

Planning Narrative on Kitchen Water Conservation BMPs, Fixtures

The Department's plan is to work with the building managers to correct this error by developing a BMP guide this upcoming year.

Reporting on Laundry Facilities Water Conservation BMPS

Seven of the eight DOJ labs responded to the Laundry Facilities Water Conservation BMP survey. The Fresno lab is the only building with laundry facilities and BMP are achieved.

Planning Narrative on Laundry Facilities Water Conservation BMPS

NO LAUNDRY FACILITIES AT BFS EUREKA, REDDING, SANTA ROSA, RIPON, FREEDOM, SANTA BARBARA AND RIVERSIDE.

Department Total Non-Purchased Water

State agencies may use water from sources other than a 3rd party water supplier. Sources of non-purchased water may include a department's domestic wells, or surface water pulled from rivers, lakes, or irrigation canals. Sometimes the surface water passes through, and the water returns to its source. Regardless of whether water returns to its source, the fact remains that Departments rely on the availability of this water for a variety of purposes, either mission related, such as water for wildlife or for day-to-day operations such as dust control.

Reporting on Total Non-Purchased Water Excluding Water Reuse or Recycling

Table 4.8: Department-Wide Non-Purchased 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	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED
2021	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED
2022	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED	NON-PURCHASED WATER NOT USED

Reporting Narrative for Nonpurchased Water

NON-PURCHASED WATER NOT USED.

Reporting Narrative for Nonpurchased Water Use Trends

NON-PURCHASED WATER NOT USED.

Planning Narrative for Nonpurchased Water Unavailability.

NON-PURCHASED WATER NOT USED.

Department Water Energy Nexus Reporting

Water is a critical resource required for electric thermal power generation, both as feed water for boilers and as cooling water for condensers for steam systems, regardless of fuel type. Thus, water requirements for electricity generation compete with other uses for and users of energy. Savings of either water or energy will improve water efficiency and conservation. This section focuses on the water side of the water energy nexus.

Boiler water conservation and efficiency is best achieved by installing dedicated meters for water intake and by increasing the number of times water can be recirculated. This reduces the amount of water needed to replace the water lost to evaporation and water lost due to the increasing concentration of impurities. Over time, the concentration of dissolved solids from the makeup water increases in the boiler as pure water off-gases as steam. Due to this increase in dissolved solids, corrosion, and scale increase. The technical term for the relationship between the level of dissolved solids in the boiler and the dissolved solids in the feed water is "Cycles of concentration." Installing water treatment will help increase the number of cycles of concentration, reducing the amount of makeup water. Additionally, water treatment allows water that cannot be used as makeup water to become available for various types of water reuse. Furthermore, water treatment makes water suitable for different kinds of water reuse when it cannot be used as makeup water. The following sections address these aspects of water conservation and efficiency with respect to the Department's boilers.

Reporting on Annual Amount of Boiler Makeup Water Used

Table 4.9: Annual Amount of Boiler Makeup Water Used

Boiler Water Use	Year 2021	Year 2022
Amount of Water Used for Makeup (Gallons)	NO DATA	NO DATA
Amount of Water Currently Reused. (Gallons)	NO DATA	NO DATA
Remaining additional water suitable for other purposes (Gallons)	NO DATA	NO DATA
Totals for all Facilities	NO DATA	NO DATA

Planning Narrative on Boiler Water Reuse Opportunities

The Department currently does not track the annual boiler water usage for the eight labs. The Santa Rosa, Santa Barbara, Fresno, and Ripon labs all recirculate their boiler water but the amount is unknown at this time. Some water quality challenges are associated with this water, such as high silica at the Ripon lab. If DOJ decides to look into reusing boiler water for alternative purposes, the uses might be for irrigation like chiller blowdown water. DOJ will review possible reuse by 2026.

Planning Narrative for Boiler Efficiency

The most potential for boiler water use efficiencies comes from the potential to increase cycles of concentration, and the potential to treat discharge water to a quality for reuse. This section examines the Department's opportunities to increase boiler water use efficiency using water treatment to achieve both increased number of cycles of concentration and reusing discharge water.

The Department has not yet achieved maximum boiler efficiencies by installing meters and maximizing the numbers of cycles of concentration. The Department plans to enhance efficiency by upgrading the boilers to more water efficient models. Many of DOJ's labs were built with two boilers and if one fails, the other can take its place. Most of the time, only one boiler runs at a time while the other is being repaired. These boilers are sometimes difficult and costly to replace and are only done so on an as needed basis.

Reporting on Cooling Towers' Water Use

Cooling towers chill buildings by evaporating water. A typical cooling tower

pumps warm water from the heat source (such as an air-conditioning system or process equipment) to the top of a cooling tower and is either sprayed or dripped through fill material called "wet decking". Air that is blown through the falling water evaporates and chills the water. The cooling tower loses water through three processes:

1. Evaporation through the top of the tower, which amounts to about three gallons per minute in a 100-ton (350 kW) chiller.
2. Drift Losses, where the airflow carries droplets of water (mist) out of the tower.
3. Blowdown, the regular removal of water from the bottom of the cooling tower to lower concentrations of dissolved minerals and other contaminants. It is necessary to add makeup water to cooling towers to compensate for these losses.

The higher the acceptable "concentration ratio", or level of dissolved minerals in the blowdown water, the greater the water savings, as the cooling towers need less makeup water. Total water use of the cooling tower is the relationship between make-up water, evaporation, and blowdown rates. Each of the sections below focus on how effectively and efficiently the Department maximizes its water use and reuse in cooling towers, however, there is not a current track of how much.

Table 4.10: Cooling Tower Water Use

Cooling Tower Water Use	Year 2021	Year 2022
Amount of Water Used for Make-up (Gallons)	NO DATA	NO DATA
Totals for all Facilities	NO DATA	NO DATA

Planning Narrative on Cooling Tower Water Use.

The Department currently does not track annual cooling tower water usage for the labs. The Fresno lab chiller was replaced in 2020. According to Fresno lab water survey it can be estimated that it uses 45,000 gallons of water annually for cooling tower reuse/recirculation. Going forward, the Department will work with building engineers on tracking and trending this data for all the labs.

Planning Narrative for Cooling Tower Water Reuse

COOLING TOWER WATER REUSE ACHIEVED

Planning for Narrative for Cooling Tower Efficiency

COOLING TOWERS WATER USE EFFICIENCY ACHIEVED

Reporting on Boilers Water Treatment Needs Inventories Summary

This section is concerned with the water portion of the Water/energy nexus found in all boiler systems. Therefore, the aspects of boiler management that depend on water are covered in the boiler needs inventory.

Table 4.11: Summary of Boilers Water Treatment Needs Inventory

Number of meters to purchase and install	Water Treatment	Other
NO BOILER WATER TREATMENT NEEDS	NO BOILER WATER TREATMENT NEEDS	NO BOILER WATER TREATMENT NEEDS

Planning Narrative for Boilers Water Treatment Needs

All boilers with meters and water treatment installed already have the proper inventories in place according to survey results. Three boilers are currently in the process of being replaced with high efficiency models at the Fresno, Riverside and Ripon labs, DOJ's largest labs. These projects will help push the Department in the right direction for best management practices.

Reporting on Cooling Systems Needs Inventory Summary

Table 4.12: Summary of Cooling System Needs Inventory

Equipment Needed	Equipment Totals for all Facilities
Meters	NO COOLING SYSTEMS NEEDS
Water Treatment	NO COOLING SYSTEMS NEEDS
Other	NO COOLING SYSTEMS NEEDS

Planning Narrative for Cooling Systems Needs

All cooling towers with meters and water treatment installed already have the proper inventories in place according to survey results.

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

Table 4.13: Summary of Efficiency Projects for Boilers and Cooling Systems

Project Type	Water Saved (Gallons/yr.)	Number of Completed Projects	Number of Projects in Progress
2020	NO DATA	1	0
2021	NO DATA	0	0
2022	NO DATA	0	3

Planning Narrative for BMPs for Building Boilers and Cooling Systems

BUILDING BOILERS AND COOLING SYSTEMS BMPS ACHIEVED

Department Outdoor Water Use:

Reporting on outdoor water use is important because landscaping typically uses 50% or more of a department's total water use. The department's outdoor water use is determined by the amount and type of landscaping, amount and type of irrigation hardware, irrigation operations, best management practices for landscaping and irrigation, use of meters and sub-meters, appropriate pressure regulation and installation of back flow prevention.

Achieving water conservation and water efficiency for outdoor water use frequently requires an elevated level of expertise and certified staff for both irrigation and landscaping.

Components of a successful water conservation and water efficiency program for outdoor water use includes:

- *Irrigation and Irrigation Hardware*
- *Efficient irrigation systems*
- *Pressure regulation*
- Irrigation sensors
- *Backflow prevention*
- *Flow sensing (MWELO requirement for landscapes >5000 sq. ft.*

Reporting on Outdoor Irrigation Hardware Inventory

Three of the eight DOJ labs responded to the survey and reported not needing

irrigation hardware.

Table 4.14 below shows the Department's outdoor irrigation hardware and provides the necessary information regarding the condition of the outdoor irrigation fixtures, and whether any of these items need replacement.

Table 4.14: Summary of Outdoor Irrigation Hardware Needs Inventory

Irrigation Hardware Type	Total Hardware Needed
Separate meters or sub-meters	0
Irrigation controllers required with weather or soil moisture adjustment and flow sensing capabilities	0
Backflow prevention devices	0
Flow sensors to be purchased and installed	0
Automatic rain shut-off devices	0
New pressure regulators	0
New hydro-zones	0
New valves	0
Filter assemblies	0
Drip irrigation emitters	0
Booster pumps	0
Rotary nozzles or other high efficiency nozzles	0

Planning Narrative for Outdoor Irrigation Hardware Needs

DOJ sustainability Unit will obtain the data belonging to the remaining labs from the landscaping contractors directly.

Reporting on Outdoor Irrigation Hardware Water Efficiency Projects

The Department currently has no irrigation hardware upgrades projects planned as it is reported in Table 4.15.

Table 4.15: Summary of Outdoor Hardware Water Efficiency Projects Completed 2020 -Present or In Progress

Year Funded	Water Saved (Gallons/yr.)	Completed Hardware Water Efficiency Projects	Hardware Water Efficiency Projects in Progress
2020	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
2021	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
2022	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS

Planning Narrative for Irrigation Hardware Water Efficiency Projects

Hardware water efficiency projects are performed on an as-needed basis and irrigation equipment is only replaced when it malfunctions.

Reporting on Irrigation Hardware Maintenance BMPS

Six of the eight DOJ labs responded to the Irrigation Hardware Maintenance BMP survey. Of those six labs, only the Eureka lab has a procedure in place. Typically, the building's landscape contractor assumes the responsibility of irrigation hardware maintenance.

Planning Narrative on Irrigation Hardware Maintenance BMPS

DOJ currently does not have a plan to adjust these contracts to reflect BMPs but, will look into this in the near future.

Reporting on Living Landscape Inventory

Far from being just an aesthetic or ornamental feature, landscaping plays a critical role around public buildings and facilities. From providing safety and security, to reducing local heat islands, suppressing dust, reducing water runoff, maintaining soil health, aiding in water filtration and nutrient recycling, landscaping around public buildings is essential. Further, landscaping in public places frequently surrounds historic places and public memorials as well as provides pleasant public gathering spaces. The health and proper maintenance of these landscapes is vital to the physical wellbeing of California's people as well as to its social, cultural, political, and historical life.

Additionally, the many vital ecosystem functions carried out by living public landscaping are critical in helping California meet its goals for GHG reduction, climate adaptation, water and energy efficiency, and water conservation. Urban forests are vital to improve site conditions for occupants and visitors to buildings and the surrounding community.

Reporting Narrative on Living Landscape Inventory

The majority of the landscaping at DOJ-owned locations contains living turf grass and depending on the work involved, may require city permits to change the landscape features. These locations are in an urban setting with a variety of shrubs, trees, and other foliage that are irrigated using drip systems. In 2015, the labs had a water survey conducted in regards to their landscaping needs. The conclusion of the survey was a recommendation to remove all grass turf and contour the landscape for proper rain-water drainage. The Freedom, Santa Rosa, Eureka, and Santa Barbara labs completed this and replaced their existing

drip irrigation system with point source irrigation. However, another assessment needs to be completed to assess Model Water Efficient Landscape Ordinance (MWELO) standards. The Department plans to reassess the landscape irrigation systems at DOJ-owned locations by 2026 with the goal of furthering water conservation.

The Department has little authority over the landscaping options at leased facilities, however when searching for a new location, the facilities management unit will ensure that a living landscape and or drought tolerant landscape is considered.

An assessment of the Redding, Riverside, Ripon, and Fresno Lab landscape was completed in 2021 to incorporate a reclaimed water system and DOJ is hoping to retrofit the land to include more drought tolerant plants.

Table 4.16: All Facilities with > 500 sq. ft. of Living Landscape Inventory

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)
BFS – REDDING FORENSIC LABORATORY	26,774	0	Redding Area - Enterprise	Yes	Yes
BFS – RIPON FORENSIC LABORATORY	24,868	0	SAN JOAQUIN VALLEY - EASTERN SAN JOAQUIN	Yes	No
BFS – FRESNO FORENSIC LABORATORY	34,800	0	SAN JOAQUIN VALLEY - KINGS	Yes	No
BFS – FREEDOM FORENSIC LABORATORY	913	0	Pajarao Valley	Yes	No
BFS – SANTA ROSA FORENSIC LABORATORY	2,824	0	Santa Rosa Valley - Santa Rosa Plain	No	Yes
BFS – EUREKA FORENSIC LABORATORY	550	0	Eureka Plain	Yes	No
BFS – RIVERSIDE FORENSIC LABORATORY	38,362	0	Upper Santa Ana Valley - Chino	No	Yes
BFS – SANTA BARBARA FORENSIC LABORATORY	1,220	0	CORRALITOS - PAJARO VALLEY	Yes	Yes

Reporting Narrative on Living Landscape Inventory

The Department does not have any historical features or designated memorials on lab landscape. An MWELO audit has yet to be conducted so data regarding climate appropriate plants is unknown. The Department has adapted its living landscape choices for both drought and climate adaptation by reducing water usage during the winter months and following water suppliers' recommendations. There are plans to retrofit all turf grass into native groundcover in the future to further reduce the Department's water usage.

Planning on Living Landscape Upgrades Landscape for the Next 5 Years

Planning Outline PO4: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
BFS – RIVERSIDE FORENSIC LABORATORY	38,362	NO DATA	NO DATA	TBD
BFS – REDDING FORENSIC LABORATORY	26,774	NO DATA	NO DATA	TBD
BFS – RIPON FORENSIC LABORATORY	24,868	NO DATA	NO DATA	TBD
BFS – FRESNO FORENSIC LABORATORY	34,800	NO DATA	NO DATA	TBD
BFS – FREEDOM FORENSIC LABORATORY	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
BFS – SANTA ROSA FORENSIC LABORATORY	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
BFS – EUREKA FORENSIC LABORATORY	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS
BFS – SANTA BARBARA FORENSIC LABORATORY	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS	NO CURRENT PROJECTS

Planning Narrative on Living Landscape Upgrades for the Next 5 Years

The Department has no data indicating whether or not it has achieved MWELO standards for its living landscape, but plans on having an assessment completed by 2026. Once funding is available, the Fresno, Ripon, Redding, and Riverside labs will have the turf grass retrofitted with drought tolerant landscape as part of the reclaimed water project to reuse chiller blowdown water for irrigation purposes. These projects are estimated to take place over the next five years and will help advancing DOJ towards MWELO compliance.

Planning Narrative for Remaining non MWELO Compliant Living Landscape Upgrades

According to the data from the table above in PO4:c, the remaining square feet of landscaping that will still need to be converted to MWELO or climate appropriate landscaping is unknown at this time. Until a proper survey is conducted, the Department anticipates that all landscape will need to be converted to achieve this goal. The next steps are to develop a plan by 2026.

Reporting on Living Landscape Water Efficiency Projects 2020 – Present

Table 4.17: Summary of Completed Living Landscaping Water Efficiency Projects

Year Funded	Est Annual Water Savings (Gallons)	Sum of MWELO Landscape installed (sq. ft.)	Sum of Climate Appropriate Landscape Installed (sq. ft.)
2020	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS
2021	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS
2022	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS	NO COMPLETED PROJECTS

Reporting on Living Landscape BMPs

The Department had no completed living landscape water efficiency projects between 2020 and 2022 for the labs. In 2021, a reclaimed water project was initiated for the Redding, Ripon, Riverside, and Fresno labs through DGS and BKF for the purpose of reclaiming chiller blowdown water released by the Dolphin Systems to use for irrigating the landscape. This project includes retrofitting the lab landscape to include more drought tolerant plants. A feasibility report was

completed as of 2023 and final project scope and cost were determined to not be feasible.

Planning Narrative on Living Landscape BMPs

DOJ Sustainability Unit will search for funding opportunities to perform living landscape water efficiency projects by 2026.

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

Large landscapes exceeding 20,000 square feet have a special set of maintenance and irrigation requirements. As part of the Water Use Guidelines and Criteria, the water uses for landscape areas over 20,000 sq. ft., shall be tracked through a water budget program.

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. The water budget also:

- Establishes an efficient standard for the landscape area.
- The water budget programs use local weather measurements to adjust the irrigation schedule on a weekly, biweekly, or monthly basis.
- Requires a dedicated landscape meter or an irrigation sub-meter to track the actual landscape water use.
- Requires that the actual water use be entered into the water budget program and the program compares the water use to an efficiency standard.
- The water use tracking program helps improve irrigation scheduling and helps detect irrigation system leaks.

Landscape water budget management services in California are available by landscape associations and private vendors.

Enough landscape maintenance staff shall attend an EPA WaterSense labeled training program such that the required number of staff become certified.

Table 4.18 describes the large landscape inventory and water budget requirements for the DOJ's BFS labs exceeding 20,000 square feet.

Table 4.19: Large Landscape Inventory and Water Budget Requirements

Name of Facility Sites/Locations with > 20,000 sq. ft. of Landscaping	Landscape Area per Facility	Water Budget per Facility	EPA WaterSense or Irrigation Association Certified Staff per Facility
BFS – RIVERSIDE FORENSIC LABORATORY	38,362	138,993	0
BFS – REDDING FORENSIC LABORATORY	26,774	140,451	0
BFS – RIPON FORENSIC LABORATORY	24,868	129,157	0
BFS – FRESNO FORENSIC LABORATORY	34,800	202,070	0

Reporting on Achieving Large Living Landscape Requirements

Large landscape water use often represents a significant percentage of a facility's water use and significant water savings can often be achieved through better irrigation scheduling or inexpensive improvements in irrigation hardware. As a part of the Water Use Guidelines and Criteria, the water use for landscape areas over 20,000 sq. ft. shall be tracked through a water budget program.

DOJ has not assessed individual labs on a water budget program. The Department will be working closely with property managers and engineers to meet water budget goals. Leased facility landscapes are managed by the property management and DOJ has little to no authority over those locations.

Planning Narrative Instructions on Achieving Large Living Landscape Requirements

The table below combines several concepts including the impact of the large landscape area on the local groundwater basin when the water source is groundwater. It also covers the amount of landscaping which needs to be converted and total amount of water used in the water budget as well as the number of staff who are to be EPA Water-Sense certified.

Planning Outline PO4:d: Achieving Large Living Landscape Area Requirements

Facility Name	Landscaping sq. ft. to be upgraded to MWELO standards	Water Budget per Facility in Gallons	Ground Water Basin	# of staff Needing EPA WaterSense certification	Date for Achieving
BFS – RIVERSIDE FORENSIC LABORATORY	NO DATA	138,993	Upper Santa Ana Valley - Chino	1	TBD
BFS – REDDING FORENSIC LABORATORY	NO DATA	140,451	Redding Area - Enterprise	1	TBD
BFS – RIPON FORENSIC LABORATORY	NO DATA	129,157	SAN JOAQUIN VALLEY - EASTERN SAN JOAQUIN	1	TBD
BFS – FRESNO FORENSIC LABORATORY	NO DATA	202,070	SAN JOAQUIN VALLEY - KINGS	1	TBD

Critically Overdrafted Groundwater Basins and Water Shortage Contingency Plans

Urban water suppliers are required to maintain Water Shortage Contingency Plans that are customized to local conditions. These plans include a staged response to water shortages and droughts lasting up to three years. When implementing the stages of the Water Shortage Contingency Plan, the water supplier requires increasingly stringent reductions in water use.

For drought planning, the EO 37-16 includes four components: use water more wisely, eliminate water waste, strengthen local drought resilience and improve agricultural water use efficiency and drought planning. The California Department of Water Resources (DWR) is to strengthen the requirements for these Plans, including, the creation of common standards for each stage in the plan, and extending the drought planning from three to five years. For smaller water suppliers and rural communities not required to maintain a Water

Shortage Contingency Plan, DWR works with counties to facilitate improved drought planning.

The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at a local level by local agencies. SGMA required, by June 30, 2017, the formation of locally controlled groundwater sustainability agencies (GSAs) in the State's high- and medium-priority groundwater basins and sub basins. A GSA is responsible for developing and implementing a groundwater sustainability plan (GSP) to meet the sustainability goal of the basin to ensure that it is operated within its sustainable yield, without causing undesirable results. For those facilities located in critical groundwater basins, state agencies are to work with the local GSA plan.

Reporting on Buildings in Critically Overdrafted Groundwater Basins

Three out of the eight laboratories (Ripon, Fresno, and Freedom) are located in areas of critical groundwater basins as it is reported in Table 4.19.

Table 4.20: Buildings in Designated Critically Overdrafted Groundwater Basins

Building Name	Basin Name	Amount of water Used 2021 (Gallons)	Amount of water Used 2022 (Gallons
BFS – RIPON FORENSIC LABORATORY	SAN JOAQUIN VALLEY - EASTERN SAN JOAQUIN	1,591,300	2,203,800
BFS – FRESNO FORENSIC LABORATORY	SAN JOAQUIN VALLEY - KINGS	1,624,500	719,600
BFS – FREEDOM FORENSIC LABORATORY	Pajarao Valley	19,300	22,500

Reporting on Buildings with Urban Water Shortage Contingency Plans

Table 4.21: Buildings with Urban Water Shortage Contingency Plans

Building Name	Name of Water Supplier with Urban Water Shortage Contingency Plans	Year of Publication or Update
BFS – FRESNO FORENSIC LABORATORY	City of Fresno	2022

Planning Narrative for Urban Water Shortage Contingency Plans

The Department has one building that is currently subject to an urban water contingency plan under the City of Fresno. The Fresno lab hosts critical operations and functions including but not limited to forensic examinations across a broad range of physical evidence. The majority of these tests require the labs to use reverse osmosis water to maintain sterility of these processes. The lab also requires a constant flow of air circulation through their HVAC system which uses water to cool down the building. Water use is critical for the essential functions of the lab and reducing water use will impact these operations. The Department has taken steps to mitigate these risks and reduce its use of water in this facility by limiting the irrigation of the landscape. The Department currently does not have a plan for reducing the required percentage of water for each stage of the City of Fresno's urban water shortage contingency plan. The next steps are to develop and implement a plan by 2026.

The Department will ensure its locations meet the water shortage contingency plans of its suppliers. Sustainability staff will reach out to Ripon and Freedom to assist in identifying the water suppliers' plans to ensure either the facility is aware of the plan, or if no plan exists, work with location managers to ensure they have a plan. DOJ is also looking at the water systems at these locations and will work with the onsite DGS engineers to further conserve as much water as possible.

Reporting Narrative for Department's Contingency Plan

The Department became aware of the City of Fresno's contingency plan to reduce water use from 10% to 20% in 2022. According to the Fresno lab, operations would be affected by these water reductions, as staff requires more time to comply and research equipment water usage. The building's present cooling tower condenser water treatment system is connected to the Dolphin system, which requires a significant amount of water replacement to run effectively.

Planning Narrative on Department's Contingency Plan

The Department will have to research and plan for this type of event. The Fresno lab will most likely not be able to move its critical operations in the event of a prolonged water shortage from the water supplier as these functions are critical to the Central California Region as a whole. This lab is one of DOJ's largest forensics science labs. The next steps are to stay up to date on changes from the water supplier's current water contingency plan and plan accordingly.

CHAPTER 5 - SUSTAINABLE OPERATIONS

Greenhouse Gas Emissions

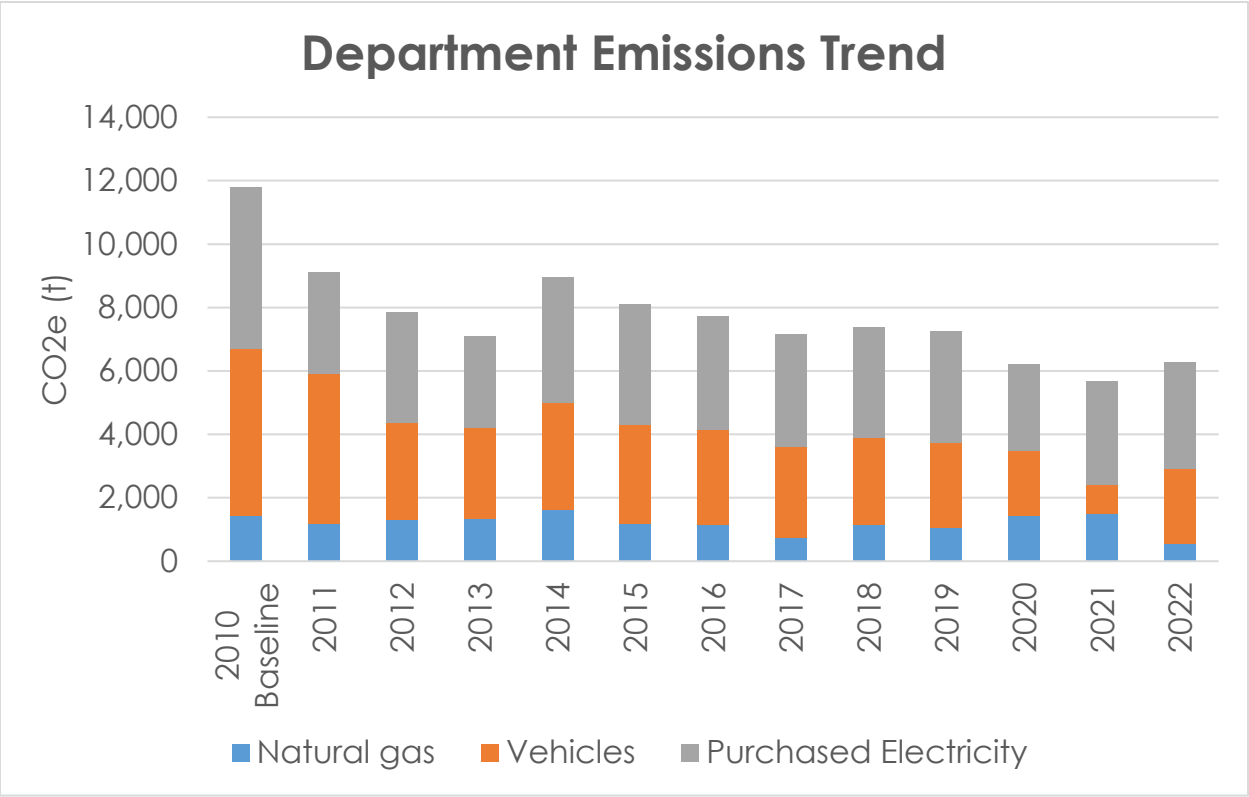
State agencies were directed to take actions to reduce entity-wide greenhouse gas emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline. Looking forward, SB 1203 declares that state agencies will aim to achieve net-zero emissions of GHGs no later than January 1, 2035, or as feasible thereafter.

Since 2020, DOJ has been reporting GHG emissions for all its facilities into the Climate Registry Information System(CRIS). GHG emission includes both vehicle and building emissions (electricity, natural gas, and vehicle fuels purchases). The reported 47% reduction in GHG emissions indicates that DOJ has met and exceeded the 20% goal of reducing its GHG emissions in comparison to 2010 reference data. This decrease is likely due to vehicles becoming more fuel-efficient, increasing use of HEVs into DOJ's fleet, and the 2020 pandemic.

Table 5.1: GHG Emissions since 2010 (Metric Tons) from CRIS reports

Emissions Source	Natural gas	Vehicles	Purchased Electricity	Total
2010 Baseline	1,445	5,238	5,094	11,777
2011	1,191	4,713	3,199	9,103
2012	1,294	3,086	3,475	7,855
2013	1,345	2,862	2,880	7,087
2014	1,611	3,370	3,961	8,942
2015	1,183	3,116	3,795	8,094
2016	1,135	3,018	3,569	7,722
2017	719	2,897	3,547	7,163
2018	1,168	2,710	3,498	7,376
2019	1,059	2,680	3,510	7,249
2020	1,433	2,059	2,705	6,197
2021	1,485	929	3,260	5,674
2022	556	2,380	3,349	6,285
Percent Change since Baseline	-62%	-55%	-34%	-47%

Graph 5.1: GHG Emissions since 2010



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

There are strategies that will help DOJ achieve the net-zero carbon requirement by 2035. The Department may implement any of the following strategies in part or in total or may use additional strategies:

- Energy Efficiency
- Electrification of Building Energy-Using Systems
- On-Site Renewable Energy
- Purchased Renewable Energy
- Fuel Efficient Vehicles
- Zero Emission Vehicles
- Biofuels +

DOJ Sustainability Unit is currently researching and implementing new policies to continue decreasing GHG emissions even further. EO B-30-15 extends beyond infrastructure to broader planning efforts. In an effort to comply with this order, DOJ is looking for funding to develop a GHG reduction plan that includes solar and fleet transition planning projects.

Carbon Inventory Worksheet

In preparation for department decarbonization plans, which will be due with the 2025 Sustainability Roadmap, an initial step is to take an inventory of all department carbon emitting equipment and systems. This step will help departments see which building systems will need to be electrified by 2035, and help them strategize depending on upcoming renovations, equipment condition (and need for replacement anyway), future facility obsolescence, and planning for upgrades.

Planning Narrative for Carbon Inventory Worksheet

DOJ will develop an inventory of sources of Scope 1 GHG emissions associated with fossil fuel combustion at the Department's Energy Independence and Security Act (EISA) 432. This step will assist in our goal for electrified buildings that are required by 2035.

The department does not have a complete Carbon Inventory Worksheet for lab facilities but plans to in preparation for the 2025 Roadmap.

Building Design and Construction

New Building LEED Certification

Executive Order B-18-12 and the State Administrative Manual (SAM) Chapter 1815.3 requires that all new buildings, major renovation projects and build-to-suit leases over 10,000 square feet obtain LEED Silver certification or higher. All new buildings under 10,000 square feet shall meet applicable CalGreen Tier 1 measures. New buildings greater than 5,000 square feet are also required to be commissioned after construction.

DOJ has no approved plans to construct new buildings at this time. There has been only one minor remodel in one of the laboratories (Riverside). DOJ labs are not new buildings, so there has been no LEED certification for them.

Table 5.2: New Building Construction since July 1, 2012

Building Name	LEED Certification Type & Level Achieved	Commissioning Performed (Y/N)
NO NEW BUILDINGS	N/A	N/A

Planning Narrative of Table 5.2: New Building Construction since July 1, 2012

NO NEW BUILDINGS

LEED for Existing Buildings Operations and Maintenance

Executive Order B-18-12 and the State Administrative Manual (SAM) Chapter 1815.3, provide that all state buildings over 50,000 square feet are required to complete LEED-EBOM certification and meet an Energy Star rating of 75 to the maximum extent cost effective. LEED-EBOM certifications expire after three years and require recertification to ensure that sustainable operations are still in place.

DOJ has no LEED-EBOM buildings. All DOJ-owned labs are under 50,000 square feet. A department goal is to increase sustainability efforts and adapt buildings to LEED standards where feasible.

Table 5.3: Large Building LEED Certification for Existing Buildings

Number of Buildings over 50,000 sq. ft. and eligible for LEED EBOM	Number of Building over 50,000 sq. ft. that have achieved LEED EBOM	Percentage of Buildings over 50,000 sq. ft. that have achieved LEED EBOM
NO BUILDINGS EXCEED 50,000 SQ.FT.	N/A	N/A

Planning Narrative for Table 5.3 Large Building LEED Certification

NO BUILDINGS EXCEED 50,000 SQ.FT.

Indoor Environmental Quality (IEQ)

Daylighting in New Construction

State agencies shall implement mandatory measures and relevant and feasible voluntary measures of the California Green Building Standards Code

(CALGreen), Part 11, related to indoor environmental quality (IEQ) that are in effect at the time of new construction, major renovations, alterations, and maintenance repairs and shall use adhesives, sealants, caulks, paints, coatings, and aerosol paints and coatings that meet the volatile organic chemical (VOC) content limits specified in *CALGreen* Tier 1.

Indoor Environmental Quality must also be maintained using low emitting furnishings, cleaning products and cleaning procedures. Carpet systems, carpet cushions, composite wood products, resilient (e.g., vinyl) flooring systems, and thermal insulation, acoustical ceilings and wall panels shall meet the VOC emission limits specified in CALGreen.

Reporting Narrative Daylighting in New Construction

Daylighting is the controlled admission of natural light, direct sunlight, and diffused-skylight into a building to reduce electric lighting and save energy. When daylighting a space, it is important to take actions to harness the full spectrum of natural sunlight to minimize the number of hour's electricity is needed. In the future, DOJ will work with contractors to make daylighting a priority builds. It will be taken into account to provide a direct line of sight to the outdoors via vision glazing between 2.5 and 7.5 above the finished floor in 90% of all regularly occupied areas. Top-lighting, side-lighting, light shelves, and reflective room surfaces, will also be considered as a means to eliminate glare and photo-sensor controls. Progress is slow because DOJ must have a specific protocol for lighting in their laboratories.

Cal Green Measures

INDOOR ENVIRONMENTAL QUALITY, CAL GREEN MEASURES NOT ACHIEVED

Planning Narrative for CALGreen Tier 1 Indoor Environmental Quality Measures

Currently, DOJ does not have a plan to implement these measures. The next steps to develop a plan would be to build more tasks under the Sustainability Unit and work with facility managers to organize the plans per each facility.

IEQ-New Buildings and Renovation Measures

NO DATA FOR IEQ NEW BUILDINGS AND RENOVATION MEASURES

Planning Narrative for IEQ-New Buildings and Renovation Measures

For most of DOJ's buildings, there is no data due to the department not having any new construction or major renovations. BFS-Riverside Lab is the only lab that

has had some minor changes that added to the installed specialized air treatment for buildings where air quality standards are routinely exceeded.

Daylighting and Views in New Construction

Reporting Narrative Daylighting and Views in New Construction

NO DATA FOR DAYLIGHTING AND VIEWS IN NEW CONSTRUCTION

Furnishings Standards

FURNISHING STANDARDS ACHIEVED

Planning Narrative for Compliance with Furnishing Standards

DOJ continues to work on updating the purchase process. DOJ purchases office furniture through California Prison Authority (CalPIA) which manufacturing and associated products are compliant with the DGS' Purchasing Standard and Specifications (Technical Environmental Bid Specification 1-09-71-52). These standards include requirement of low emitting furnishings that are safer and more environmentally friendly.

DOJ also looks to continue applying standards for purchases of Heating, Refrigerating and Air-Conditioning systems in compliance with The American Society of Heating, Refrigerating and Air-Conditioning Engineers' (ASHRAE) Standard 189.1-2011 (Section 8.4.2.5).

Green Seal Cleaning Products

GREEN CLEANING PRODUCTS STANDARDS ACHIEVED

Planning Narrative on Using Green Seal Cleaning Products

Per DGS purchasing requirements, departments are to use cleaning products from CalPIA. DOJ's Sustainability Unit is responsible for implementing the green seal cleaning products that are required. DOJ labs confirmed that they purchase CalPIA or GS-37 cleaning products. The Sustainability Unit will be working on this with facility leads to maintain cleaning standards.

Cleaning Procedures – Various Standards

Cleaning Procedures Standards Compliance. Reference: Section 142.3, Labor Code, such as:

- All vacuum cleaners used in department facilities achieve the Carpet and Rug Institute Seal of Approval.
- Entryways are maintained as specified in CalGreen Section A5.504.5.1.
- Cleaning procedures meet the Green Seal GS-42 standard.
- Cleaning procedures follow the Carpet and Rug Institute's *Carpet Maintenance Guidelines for Commercial Applications*.
- Cleaning procedures meet Title 8 Section 3362

Planning Narrative for Cleaning Procedures – Various Standards

DOJ contracts out for cleaning and maintenance services at the eight DOJ labs. At DGS-owned locations occupied by DOJ, DGS personnel use cleaning products based on their purchasing standards. Like mentioned above, their purchasing standard complies with CalPIA or GS-37 cleaning products. When staffing resources are available, DOJ intends to review maintenance contracts to ensure language includes cleaning products that are environmentally required.

Reporting on Cleaning Procedures – Title 8, Section 3362

Cleaning procedures at DOJ facilities maintain workplaces clean, orderly and in a sanitary condition. Also the interiors, exteriors and environs of buildings are cleaned and maintained as defined in Section 5140.

Planning Narrative for Cleaning Procedures TITLE 8 SECTION 3362

Title 8 Section 3362 GREEN CLEANING PROCEDURES STANDARDS ACHIEVED

HVAC Operation Requirements

Cal/OSHA - Title 8 regulations Section 5142 "Mechanically Driven Heating, Ventilating and Air Conditioning (HVAC) Systems to Provide Minimum Building Ventilation" Reference: Section 142.3, Labor Code.

HVAC operations for DOJ's owned forensic laboratories have contract maintenance scheduled every four months or as needed based on environmental concerns. Some labs also have DGS engineers onsite who ensure the HVAC systems operate properly and to specifications.

Some of DOJ's buildings do not require a computer based preventative maintenance program as it has not been developed or the lab did not have the data for this.

Planning Narrative for HVAC Operations

The department is working to ensure maintenance programs by 2026 on a current contract through DGS in collaboration with PG&E.

HVAC Inspection Requirements

Annual inspections of HVAC systems are required, and all HVAC inspections and maintenance are documented in writing.

Planning Narrative for HVAC Inspection Requirements

HVAC INSPECTION REQUIREMENTS ACHIEVED

Integrated Pest Management (IPM)

Reporting on IPM plans

Per SAM Section 1821.3, Integrated Pest Management (IPM), department staff and MM 15-06, contracted pest management companies will follow an IPM strategy that focuses on long-term prevention of pest problems through monitoring for pest presence, improving sanitation, and using physical barriers and other nonchemical practices. If nonchemical practices are ineffective, Tier 3 pesticides may be used, progressing to Tier 2 and then Tier 1 if necessary.

Table 5.4: Integrated Pest Management Contracts

Pest Control Contractor Name	IPM Specified (Y/N)	Contract Renewal Date
Clark Pest Control	N	NO DATA
Valley Wide Pest Control	N	NO DATA
Hitmen Pest Control	N	NO DATA
4 Less Termite	N	NO DATA
Alliance Land Care	N	NO DATA
Terminex International	N	NO DATA
Zac Gonzalez Landscaping	N	NO DATA

Planning Narrative for Pest Control Contracts

Department staff and contracted pest management companies will follow an IPM strategy focusing on long-term prevention of pest problems through monitoring for pest presence, improving sanitation, and using physical barriers and other nonchemical practices. If nonchemical practices are ineffective, Tier 3 pesticides may be used, progressing to Tier 2 and then Tier 1 if necessary.

To follow the requirements, in 2020 DOJ created a formal policy for its IPM plan. DOJ intends future contracts to contain IPM practices. The evaluation of the effectiveness of the practices would be different/unique to the particular pest of concern. The IPM details procedures for DOJ staff or contractors to carry out when controlling pests. Practices are aimed to use more environmentally friendlier options. The policy is effective throughout all DOJ locations, owned and leased sites.

NO CONTRACTS

Fossil Fuel Landscaping Equipment Replacement with Low Emitting Landscaping Equipment

Per SAM Section 1821.6, Landscape, landscaping tasks are to be done with manual equipment whenever possible. For tasks that require power equipment, electric or battery powered equipment should be used whenever possible. Equipment in this category includes, but is not limited to, mowers, leaf blowers, string trimmers, hedge trimmers, chainsaws, pole saws, and tillers. Electric equipment shall be charged with grid electricity and never with a portable fossil fuel generator. Engine powered lawn and garden equipment may only be used in compelling circumstances with the prior authorization of facilities management. Departments are to replace gasoline-powered equipment with zero-emission strategies including (but not limited to) electric, battery powered or manual equipment as equipment replacement schedules allow.

Planning Narrative for Replacing Fossil Fuel Landscaping Equipment

NO LANDSCAPING EQUIPMENT

DOJ contracts out landscaping at facilities it owns, so DOJ has no control over landscaping equipment. However, DOJ intends to create new policies by 2025 for requiring landscaping vendors to utilize low-emission landscaping equipment.

Waste and Recycling Programs

The California Integrated Waste Management Act (Assembly Bill 939, Sher, Chapter 1095, Statutes of 1989 as amended) established the solid waste management hierarchy. Source reduction and reuse are at the top of the state's waste management hierarchy; recycling and composting is next, followed last by environmentally safe disposal. California's Department of Resources Recycling and Recovery (CalRecycle) administers the state's recycling and waste management programs.

Across California, there are thousands of state buildings and campuses that play a significant role in helping California meet our recycling and climate goals for all material types, including organic materials like yard waste, paper, and food scraps.

Current statutes require all state agencies and large state facilities to divert at least 50 percent of their solid waste from disposal facilities on and after Jan. 1, 2004. The law also requires by May 1 annually each state agency and large facility to submit an annual report to the California Department of Resources Recycling and Recovery (CalRecycle) summarizing its yearly progress in implementing waste diversion programs.

Since 2020, DOJ has been reporting its waste and recycling efforts each year.

Designated Waste and Recycle Coordinator and Program Basics

Pursuant to AB 75, each state agency shall have at least one designated waste and recycle coordinator. The coordinator shall perform the duties imposed pursuant to this chapter using existing resources. The coordinator shall be responsible for implementing the integrated waste management plan and shall serve as a liaison to other state agencies and coordinators.

DOJ programs have assigned On-Site Recycling Coordinators (OSRC) for each building, as well as a department Recycling Coordinator (DOJRC) who is responsible for collecting data from the OSRC's and reporting department-wide waste and recycling efforts. Each OSRC is responsible for coordinating recycling activities and sharing information with the DOJRC. Together, the DOJRC and OSRC work to ensure that recycling targets are met.

Reporting Narrative for Designated Waste and Recycle Coordinator and Program Basics

DOJ's Sustainability Unit establishes contracts with vendors for adequate waste and recycling receptacles with proper signage. Prior to signing the contract,

DOJ must receive a confirmation of these requirements from the vendor. While visiting facilities, the Sustainability Unit conducts a thorough review in the year to confirm the condition of the receptacles for recyclable materials and proper signage, education and staffing are still functioning, as it should.

Planning Narrative for Designated Waste and Recycle Coordinator and Program Basics

DESIGNATED WASTE, RECYCLE COORDINATOR, AND PROGRAM BASICS ACHIEVED

SARC Report

SARC Report on Total Waste per Capita

The data below was collected from the department's 2022 SARC Report.

Table 5.5: State Agency Reporting Center (SARC) Report on Total Waste per Capita

Per Capita Disposal Rate	2021	2022	Total Waste 2021	Total Waste 2022	% Change from 2021/2022
Target 0.6	0.13	0.14	122.93 tons	147.56 tons	35%

Reporting Narrative on SARC Report on Total Waste per Capita

DOJ has a total of 5,597 employees and a total of 147.56 tons of waste disposal, and 0.14 per capita disposal rate (pounds/person/day) in 2022. Despite the increment in waste disposal between 2021 and 2022, there is still a significant number of DOJ employees 'working from home.' Therefore, the recycling, organics and not-reused goals are still below the 60% per capita disposal target.

Planning Narrative on SARC Report on Total Waste per Capita

2022 SARC REPORT

The inability of the vast majority of evidence and lab equipment to be recycled makes it challenging for the DOJ to meet the per capita disposal rate target.

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.

AB 341, Mandatory Commercial Recycling (Chesbro, Chapter 476, Statutes of 2011) requires businesses and public entities that generate four cubic yards or more of commercial solid waste per week to arrange for recycling services under the goal of source reducing, recycling, or composting 75% of solid waste generated statewide

Reporting Narrative on Recycling Program and Practices

DOJ has an internal recycling program mainly consisting of reporting and recycling contracts. With the creation of the new Sustainability Unit, the Department hopes to increase training, awareness, and recycling programs. The Sustainability Unit intends to develop and implement programs that meet the governor's sustainability goals for green operations. Currently, offices have recycling stations for white paper, mixed paper, aluminum, glass, and plastic. There are bottle recycling containers throughout break rooms and a battery recycling station. The largest type of waste for the department is contaminated paper goods (tissues, napkins, etc.). The obstacle in decreasing this amount is finding enough resources to provide organic bins throughout, along with educating staff. Another obstacle is finding vendors to provide services in remote areas.

Planning Narrative on Recycling Program and Practices

Although DOJ recycles much of its waste, certain waste from the labs cannot be recycled, and technology has not yet provided an alternative.

Organics Recycling

State agencies must implement AB 1826 (Chesbro, Chapter 727, Statues of 2014). State agencies that generate two cubic yards or more of commercial solid waste (total trash, recyclables, and organics) per week shall arrange for organic waste recycling services.

Organic waste includes:

- Food waste
- Green waste
- Landscape and pruning waste.
- Nonhazardous wood waste
- Food-soiled paper

The exemption under 42649.82 (e)(3)(E) related to businesses that generate one cubic yard or less of organic waste is no longer in effect. Furthermore, CalRecycle has extended the current AB 1826 rural exemption until December 31, 2026.

Effective January 1, 2022, state agencies must implement SB 1383 (Lara, Chapter 395, Statutes of 2016). State agencies are currently required to maintain mandatory commercial recycling and organic recycling programs, including ensuring that properly labeled recycling containers are available to collect bottles, cans, paper, cardboard, food waste, and other recyclable materials.
SB 1383 builds upon these efforts by identifying ***non-local entities*** and expanding the definition of organic waste to include food scraps, landscape and pruning waste, organic textiles and carpets, lumber, wood, manure, biosolids, digestate, and sludges. Under SB 1383, non-local entities include:

1. State agencies
2. State Park facilities
3. Prisons
4. Public universities and community colleges
5. Special districts
6. Federal facilities
7. County fairgrounds

Reporting Narrative on Organic Recycling Program and Practices

DOJ is actively working on adding an organics-recycling program following updates made to the Department of Justice Administrative Manual (DOJAM) and creating an Organic Waste Program for each office. All facilities meeting the waste threshold (two cubic yards or more of commercial solid waste (total trash, recyclables, and organics) per week) have an Organic Waste Program implemented or are in the process of implementation. The staff count at DOJ Labs is relatively low and organic waste is minimal. Currently, the landscaping contractors take care of the landscaping and pruning waste; however, DOJ is examining into its facilities and different organizations in the area and implementing organic waste guidelines.

Planning Narrative on Organic Recycling Program and Practices

ORGANIC RECYCLING REQUIREMENTS ACHIEVED

Edible Food Recovery Program

Commercial edible food recovery begins January 1, 2024, for Tier 2 generators including state agencies that have cafeterias that seat at least 250 people or is greater than or equal to 5,000 square feet. SB 1383 requires that by 2025 California will recover 20 percent of edible food that would otherwise be sent to landfills, to feed people in need.

Edible food means food intended for people to eat, including food not sold because of:

- Appearance
- Age
- Freshness
- Grade
- Size
- Surplus
- Edible food includes but is not limited to:
- Prepared foods
- Packaged foods.
- Produce

Reporting on Edible Food Recovery Program

Table 5.6: Edible Food Recovery Program Elements

Building Name	Cafeteria ➢ 5,000 Square Feet (Enter sq. ft.)	Cafeteria +250 Seats (Enter actual number of seats)	Was Cafeteria Open in 2022?	Food Recovery Agreement Yes, No or Unknown
NO EDIBLE FOOD RECOVERY PROGRAM REQUIRED				

Reporting Narrative on Edible Food Recovery Program

NO EDIBLE FOOD RECOVERY PROGRAM REQUIRED

Planning Narrative on Edible Food Recovery Program

NO EDIBLE FOOD RECOVERY PROGRAM REQUIRED

Reporting on Food Service Items Program

Table 5.7: Food Service Concessionaire Items Program Elements

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

Planning Narrative on Food Service Items Program

NO FOOD SERVICES

Hazardous Waste Materials

Reporting on Hazardous Waste Materials

Hazardous waste is a waste with properties that make it potentially dangerous or harmful to human health or the environment. The universe of hazardous wastes is large and diverse. Hazardous wastes can be liquids, solids, or contained gases. They can be the by-products of manufacturing processes, discarded used materials, or discarded unused commercial products, such as cleaning fluids (solvents) or pesticides. In California the individual generating the waste must determine if the waste generated meets the criteria of hazardous waste from non-specific sources as defined in the CA Code of Regulations 22 CCR section 66261.3. The hazardous waste is classified as either being subject to Resource Conservation and Recovery Act (RCRA), found in Title 40 of the Code of Federal Regulations (CFR), or it is subject to HSC and 22 CCR. The hazardous waste categories include acutely hazardous waste, extremely hazardous waste, non-RCRA hazardous waste, RCRA hazardous waste, special waste, and universal waste. The Department of Toxic Substances Control (DTSC) has provided a self-paced internet course on hazardous waste identification to further assist in properly identifying waste.

In California, waste oil and materials that contain or are contaminated with waste oil are usually regulated as hazardous wastes if they meet the definition of "used oil" in HSC section 25250.1, which reads as any oil that has been refined

from crude oil, or any synthetic oil, that has been used and, as a result of use, or as a consequence of extended storage, or spillage, has been contaminated with physical or chemical impurities. In addition, used oil means a material that is subject to regulation as used oil under Part 279 (commencing with section 279.1) of Subchapter I of Chapter 1 of 40 CFR.

Hazardous waste disposal requires a licensed hazardous waste disposal vendor. North State Environmental, the vendor listed in table 5.8 below provides the Riverside lab with the complete chain of custody from collection of the hazardous waste to its proper disposal including type and amount of waste.

Table 5.8: Hazardous Waste Materials

Department -Wide Hazardous Material Name	Department Total Hazardous Material Amount (lbs.)
North State Environmental	260

At this time, the Riverside lab had reported an amount of 260 pounds of hazardous mixed waste material.

Reporting Narrative for Hazardous Waste Materials

Each DOJ laboratory location has its own hazardous waste management program and disposes of hazardous materials through different contracted environmental companies such as North State Environmental that the Riverside lab listed as their vendor and was reported in the table 5.8.
DOJ's Sustainability Unit works on contracts with vendors to provide mixed waste, battery and fluorescent bulb recycling at all DOJ facilities which helps keeping hazardous material out of landfills. When there are available staffing resources, DOJ intends to further assess to ensure that the hazardous materials generated do not end up in landfills and to review/update internal procedures for universal waste.

Planning Narrative for Hazardous Waste Materials

DOJ does not have alternatives for the hazardous waste materials that it generates. Services for hazardous waste management are contracted to outside vendors. One out of the eight labs responded to the survey that was requested by DGS to report this data. However, this number will increase as data from the other labs is reported.

Universal Waste

Agencies are to ship their universal waste to another handler, a universal waste transfer station, a recycling facility, or a disposal facility. There are eight categories of waste that have been classified as Universal Wastes—batteries, electronic waste, Cathode Ray Tubes (CRTs), CRT glass, lamps, mercury wastes, non-empty aerosol cans, and PV modules. This is covered in the SAM 1930.15 - Universal Waste (Batteries, Mercury Thermostats and Products Non-Empty Aerosol Cans).

Reporting on Department-Wide Universal Waste Materials

At DOJ, the Asset Management Unit (DOJ Property) uses various vendors throughout the state to dispose obsolete e-waste. There is no a specific contract associated with DOJ's e-waste management since the vendors offer free pickups of e-waste. To provide universal waste materials managing services at DOJ's BFS Labs, the Sustainability Unit manages a contract with vendors that provide this service. There is no contract for CRT pickup since facility leads they are reused or not thrown as waste.

Table 5.9: Reporting on Department- Wide Universal Waste Materials

Category	Universal Waste Contract in Place YES or NO
Electronic Waste	YES
Batteries	YES
CRTS	NO
CRT glass	NO
Lamps	YES
Mercury Wastes	YES
Non-empty aerosol cans	YES
PV modules	NO PV MODULES IN USE

Planning Narrative for Department-Wide Universal Waste Materials

DOJ is currently in the process of establishing a new contract with a vendor for battery and mercury waste recycling. It's predicted to start April 2024. The Department does not handle PV modules.

Material Exchange

These programs promote the exchange and reuse of unwanted or surplus materials from the Department. The exchange of surplus materials reduces the

cost of materials/products for the receiving Department and results in the conservation of energy, raw resources, landfill space, including the reduction of greenhouse gas emissions, purchasing and disposal costs.

Reporting Narrative on Department-Wide Material Exchange

DOJ participates in material exchange with the following different types of organizations:

- Nonprofit/school donations
- Internal property reutilizations
- State surplus (accepted by DGS)
- Used book exchange/buy backs
- Employee supplies exchange

Planning Narrative on Department-Wide Material Exchange

After the pandemic, DOJ looked though the materials exchange activities halted during the pandemic and hopes to implement strategies over the next two years.

Waste Prevention Program

Programs in this section support (a) waste prevention: actions or choices reducing waste and prevent the generation of waste in the first place; and (b) reuse: using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material.

Reporting Narrative on Department-Wide Waste Prevention

DOJ encourages waste prevention/reuse through the following methods:

- Paper forms reduction – online forms
- Remanufactured toner cartridges
- Electronic document storage
- Utilizing the intranet and bulletin boards
- Reuse of office furniture, equipment, and supplies
- Reuse of packing materials
- Utilizing email instead of paper memos
- Food donation

- Remanufactured equipment

Planning Narrative on Department-Wide Waste Prevention

DOJ shall implement recycling and waste reduction strategies in each facility, including promoting reuse wherever possible. Such strategies shall include, but are not limited to, the following:

- Increasing employee awareness of recycling programs and opportunities by placing large clear signage in appropriate locations throughout DOJ-owned/leased facilities.
- Educating employees on program goals through the Intranet, trainings, and e-mail.
- Designating a well-marked, specific area for recycling in each office. All employees are expected to recycle the following:
    - Paper (white, mixed color, newspaper, confidential shredded)
    - Cardboard
    - Plastic (bottles/containers)
    - Glass (bottles/containers)
    - Aluminum/Metal (bottles/containers)
    - Toner cartridges
    - Telephone books
    - Batteries

Reuse Program

Reuse programs focus on using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material.

Reporting Narrative for Department-Wide Material Reuse

The reuse activities that DOJ currently participates in include reuse of office furniture, packing materials, equipment, and supplies. DOJ also has a process, in collaboration with Central Services, to reutilize remanufactured toner cartridges.

Planning Narrative for Department-Wide Material Reuse

Given the requirements, some of DOJ's equipment cannot be recycled and must be thrown to waste or hazardous (depending on the type). The Department is aiming to keep up with new technologies that could advance the waste to a reuse process if possible.

Employee Waste and Recycling Training and Education

Pursuant to AB 2812 (Gordon, Chapter 530, Statutes of 2016), each state department is required to provide adequate receptacles, signage, education, and staffing, and arrange for recycling services consistent with existing recycling requirements for each office building of the state agency or large state facility. The bill requires, at least once per year, each covered state agency and large state facility to review the adequacy and condition of receptacles for recyclable material and of associated signage, education, and staffing. Additionally, the bill requires each state agency to include in its existing Report to CalRecycle a summary of the state agency's compliance with the act.

Reporting Narrative for Employee Waste and Recycle Training and Education

DOJ encourages recycling efforts through the following training, education and assessment methods:

- Dedicated recycling staff (Onsite Recycling Coordinators)
- Signage (signs, posters, labels for recycling bins)
- Employee training
- Adequate number and condition of recycling receptacles
- Educational web pages (intranet or internet), brochures, flyers, newsletters, publications
- Newspaper articles/ads
- Office recycling guides and fact sheets
- Outreach (internal/externals) e.g. environmental fairs
- Waste audits, waste evaluations/surveys

Planning Narrative for Employee Waste and Recycle Training and Education

EMPLOYEE TRAINING AND EDUCATION ACHIEVED

Environmentally Preferred Purchasing (EPP)

State agencies are required to purchase and use environmentally preferable products (EPP) that have a reduced effect on human health and the environment when compared with competing goods that serve the same purpose. The environmental impact of the goods the Department buys is often larger than the impact of Department operations. DOJ is committed to reducing the environmental impact of the goods and services that are purchased.

Reporting Narrative for Measure and Report Progress on EPP Spend

When buying EPP products, DOJ adheres to the EPP specifications in the following areas in the bid solicitations:

- Postconsumer recycled content
- Energy efficiency
- Durability
- Low/zero air emissions
- Low/zero hazardous ingredients or content
- Water efficiency
- Easy, nonhazardous maintenance
- End-of-life management, which keeps materials out of landfills (e.g., reuse, recycling, return to manufacturers)
- Low life-cycle cost
- Responsible manufacturing
- Packaging and distribution efficiency

Planning Narrative for Measure and Report Progress on EPP Spend

The Department plans to implement a formal process of tracking these EPP spend requirements in the future. As of right now purchases of EPP goods and services are not being measured, monitored, nor reported so data is limited.

Goods and Services Categories with the Greatest Potential to Green:

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

Table 5.10: Goods and Services Categories with the Greatest Potential to Green

Good or Service	2022 Total Spend ($)	2022 Percent EPP Spend (%)	EPP Target (%)
Antifreeze	$22.99	100	50
Compost and Mulch	-	-	75
Glass Products	$62,465.83	17	75
Lubricating Oils	$272.10	54	50
Paint	-	-	75
Tire Derived Products	$4,400.00	100	75
Tires	$35,266.94	0	50

Planning Narrative for Goods and Services Categories with the Greatest Potential to Green

DOJ would plan to use a cost benefit analysis as a commitment to increase EPP per commodity. Much of the barriers to increasing spending percentage on goods and services with the greatest potential to green has to do with a limit on budget. Yet, at this time, DOJ has not made a commitment, a plan to increase funding research to provide more opportunities would be the best plan for the department.

EPP BMPs

The Green Buyer website tracks and offers transparency in agencies' performance for buying EPP goods. EPP goods are those identified as EPP when entered SCPRS. These goods are available from statewide contracts or complaint with DGS Purchasing Standards or SABRC. EPP goods are categorized by UNSPSC and compared with goods of the same category to establish the percent EPP spend as reported in SCPRS. EPP goods are found on DGS Buying Green website.

Reporting Narrative for EPP BMPS

EPP purchases are not currently tracked. DOJ's Sustainability Unit looks to identify funding and qualifying for new sustainable opportunities and spending. When

DOJ engages and proceeds with contracts, the roles of sustainability and EPP criteria will be embedded within the contracts with new vendors.

Planning Narrative for EPP BMPs

Before DOJ can implement a plan for purchasing more EPP goods, it first needs to develop a proper measuring and monitoring process in order to have a baseline to plan from.

EPP Training and Education

Reporting on EPP Training and Education

DGS provides online EPP training courses that are easily accessible to the public at this link dgs.geniussis.com/PublicWelcome.aspx.

Listed below are DOJ's Contract and Purchasing Unit's (CPU) EPP training numbers and purchasing procedures.

Table 5.11: 2022 EPP Basic Training Completions

CalHR Classification	Total Number of Staff	EPP Basic Training Completion	Percent Trained	2023 EPP Training Goal
NO BUYERS HAVE COMPLETED TRAINING	3 DOJ Staff Members	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING

Table 5.12: 2022 EPP Intermediate Training Completions at DOJ

Classification	Total number of staff	EPP Intermediate Training Completions	Percent Trained	2023 EPP Training Goal (%)
NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING

Table 5.13: 2022 EPP Executive Training Completions for Executive Members at DOJ

Executive Member	Title	Date Completed
NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING	NO BUYERS HAVE COMPLETED TRAINING

Reporting Narrative on EPP Training and Education

DOJ has disseminated information on this training to all procurement staff by updating the DOJ Administrative Manual in 2021. All DOJ buyers are encouraged to attend the California's Procurement and Contracting Academy's (CALPCA) online EPP training course (Basic, Intermediate and Executive levels) in order to become more knowledgeable in regards to EPP products. However, CalPCA' system does not generate the reporting information regarding training completions of DOJ procurement staff. Each learner that has completed any of the EPP courses can log into their own CalPCA Online account to generate the certificates.

The DOJ's EPP training metrics are not tracked so it is unknown if buyers have additional training and certifications beyond the basic CalPCA EPP training course. However, the Department always promotes EPP where applicable through supply chain.

Planning Narrative on EPP Training and Education

The Department will develop strategies to track EPP training by procurement staff, through use of spreadsheets and software. DOJ will be evaluating these metrics in the future as well to improve education at all three levels.

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

State Agency Buy Recycled Campaign (SABRC) is a joint effort between CalRecycle and the Department of General Services (DGS) to implement state laws requiring state agencies and the Legislature to purchase recycled-content products (RCP) and track those purchases. It complements the intent of the Integrated Waste Management Act (AB 939, Sher, Chapter 1095, Statutes of 1989, and Public Resources Code 4000 et al), which was enacted to reduce the amount of waste going to California's landfills. SABRC Reports are due by October 31st each year (PCC Section 12211).

Measure and Report SABRC Progress

Table 5.14: State Agency Buy Recycled Campaign (SABRC) FY 22/23 Performance

Product Category	SABRC Reportable Dollars	SABRC Compliant Dollars	% SABRC Compliant
Antifreeze	0	0	0
Carpet	0	0	0
Compost and Mulch	0	0	0
Glass Products	$92,040	$25,787	28%
Erosion Control Products:	0	0	0
Lubricating Oils	0	0	0
Paint	0	0	0
Paper Products	$379,280	$206,967	55%
Pavement Surfacing	0	0	0
Plastic Products	$1,683,896	$1,300,359	77%
Printing and Writing Paper	$746,865	$466,564	63%
Metal Products	$3,125,205	$1,817,773	58%
Soil Amendments and Soil Toppings	0	0	0
Textiles	$122,763	$121,862	99%
Tire Derived Products	$5.49	0	0
Tires	$21,435	$21,435	100%

Reporting Narrative for Measure and Report SABRC Progress

Table 5.14 shows the Department needs to identify SABRC compliant tires, tire derived products, and glass products. The reason why the tire categories have no compliant dollars spent is because DOJ requires new tires to be available for emergency use. In addition, tires are purchased for the many pursuit and active investigation vehicles, which cannot contain recycled or retreated tires due to the risk of public safety. However, there is a potential opportunity for non-emergency use vehicles.

The reason why glass products are not in SABRC compliance is due to forensic laboratory glass needs. Antifreeze, lubricating oils, paint, compost and mulch are all maintenance-type products usually paid under maintenance contracts

or the voyager system and are difficult to track. They are currently excluded until DOJ develops a new method to track dollars spent in those categories.

Planning Narrative for Measure and Report SABRC Progress

The Department is currently working on a plan to achieve SABRC compliance for the non-compliant categories where applicable. The Department will make sure staff are trained in SABRC and attend the annual training.

Reducing Impacts

The environmental impact of the goods purchased are often larger than the impact of Department operations. Sustainable Operations is a commitment to reducing the environmental impact of the Department's purchased goods and services. This section combines all of DOJ's efforts from the previous sections into this section on reducing impacts.

Reporting Narrative for Reducing Impacts

Below are the steps DOJ is taking to ensure contractors provide EPP goods and meet SABRC requirements in service contracts. These also include the ways goods and services they buy meet the current DGS purchasing standards and specifications available from the Department of General Services Buying Green website:

- Checking the Post-Consumer Recycled-Content PCRC form (standard practice for point of sale is to require vendors to submit the PCRC form with every purchase);
- Reading the recycled content label;
- Taking EPP training classes;
- Checking reseller websites, where content percentages are posted and verifying against the received PCRC;
- Verifying SABRC information on Cal Card purchases;
- Discussing EPP in Cal Card trainings;
- Ensuring specifications of statewide contracts are met;
- If a non-standard item is requested, checking that the item is energy star rated;
- For non-mandatory statewide contract hardware, requiring the vendor to disclose recycled content on Cal Recycle 74 form; and
- For goods not on a statewide contract, checking the DGS website for comparable products that meet EPP standards, if available.

Location Efficiency

Location efficiency refers to the effect of a facility's location on travel behavior and the environmental, health and community impacts of that travel behavior including emissions from vehicles. Locating Department facilities in location efficient areas reduces air emissions from state employees and users of the facilities, contributes to the revitalization of California's downtowns and town centers, helps the Department compete for a future workforce that prefers walkable, bikeable, and transit-accessible worksites and aligns Department operations with California's planning priorities. Smart Location Scores can be found at https://www.slc.gsa.gov/slc/

Smart Location Score for New Leases after January 1, 2020

Table 5.15: Smart Location Score for New Leases after January 1, 2020

Facility name	Smart Location Calculator Score
NO NEW LEASES	

Planning Narrative Instructions for Smart Location Score after January 1, 2020

NO NEW LEASES

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

Table 5.16: Current (non-expired) Leases Prior to 2020 - Lowest Smart Location Score

Facility name	Smart Location Calculator Score
TBD	

CHAPTER 6 -FUNDING OPPORTUNITIES

DOJ intends to pursue any financing available to state departments. The Sustainability Unit is in the process of assessing DOJ's sustainability needs and searching for funding opportunities to apply adaptive approaches and plans on researching and developing more policies to help the Department increase sustainability efforts and track progress.

Funding Opportunity Climate Change Adaptation

Chapter 1 reviews DOJ's Climate Change adaptation strategies and plans needed. The information included in Table 6.1 below was collected from Chapter 1. However, no climate change projects have been identified yet.

Table 6.1: Climate Change Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
NO PRIORITIES		Choose an item.		

Funding Opportunities for ZEVs and EV Infrastructure

Chapter 2 describes DOJ's progress and needs in integrating ZEVs into its vehicle fleet, installing additional EV infrastructure, and it also identifies the requirements to vehicle charging policy development (for employees and public use), installing telematics, and planning for hydrogen fuel opportunities.

DOJ does have five L1 EV chargers already at the Santa Rosa, Santa Barbara, Fresno, Ripon, Redding labs. The department leaves the operation to each DOJ program occupying the facility where the chargers are located. Each program sets their policy and/or time-limit. Currently there are no cost recovery policies in place. Further research in best practices will need to take place as staffing resources become available. This is a low priority project, but will rise as demand for EV charging use grows.

DOJ received these five EV Arcs from DGS in 2022. EV Arcs are mobile charging stations powered by solar and are completely off-grid. Each charging Arc currently can charge up to two vehicles at a time and provide some minimal shading for the parking lot. The EV Arcs also act as an energy source in case extreme natural disasters or emergency events occur. The Arcs are a good start

for EV infrastructure, but DOJ plans to identify additional electric vehicle supply equipment (EVSE) funding and hopes to install more EV infrastructure for the fleet's future ZEVs.

However, there are no priorities currently in place since the department only has one plug-in hybrid vehicle currently in DOJ's fleet.

The information included in Table 6.2 below was collected from Chapter 2.

Table 6.2: EV Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
NO PRIORITIES		Choose an item.		

Funding Opportunities for Building Energy Conservation and Efficiency

Chapter 3 reviews DOJ's progress in meeting the required Energy conservation goals through BMPs, installing energy efficient equipment, installing renewable energy, and enrolling in DR programs.

DOJ intends to pursue any financing available to state departments to improve energy efficiency. The department is currently working with PG&E and outside vendors to evaluate the laboratory sites for energy savings and retrofits. If participation in PG&E's GS $Mart program is determined to be beneficial, DOJ intends to place all labs on this program where applicable.

In regards to renewable energy, the department is currently working with DGS and outside partners towards a PPA (Power Purchase Agreement). The information included in Table 6.3 below was collected from Chapter 3.

Table 6.3: Building Energy Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
BFS – FRESNO FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – REDDING FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – RIVERSIDE FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – SANTA ROSA FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – SANTA BARBARA FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – EUREKA FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024
BFS – FREEDOM FORENSIC LABORATORY	Energy Efficiency Upgrades	ESCO Funding	January 2024	December 2024

Funding Opportunities for Water Conservation and Efficiency

Chapter 4 reviews DOJ's progress in meeting the required water conservation goals which requires using BMPs, having water saving fixtures and appliances, having appropriate landscaping and irrigation and appropriately trained and certified staff.

DOJ is currently working with a DGS contractor, BKF, on retrofitting indoor water use equipment for all eight laboratory facilities. These priorities are relatively low but were added on to the scope of the energy efficiency project with DGS in collaboration with PG&E and Centrica to maximize return on investment. Furthermore, the department is also working on drought planning through landscaping with drought tolerant native plants through their outside contracts.

The information included in table 6.4 below was collected from Chapter 4.

Table 6.4: Water Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
BFS – FRESNO FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – REDDING FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – RIVERSIDE FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – RIPON (CENTRAL VALLEY) FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – SANTA ROSA FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – SANTA BARBARA FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – EUREKA FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024
BFS – FREEDOM FORENSIC LABORATORY	Wash Closet Infrastructure Upgrades	ESCO Funding	January 2024	December 2024

Funding Opportunities for Sustainable Operations

Chapter 5 reviews your DOJ's sustainable operations. Improvements in this Chapter require actions such as training, education, and outreach, updating procedures, purchasing new equipment, implementing new polices and hiring new staff. The information included in table 6.5 below was collected from Chapter 5. The Sustainability Unit intends to develop and implement programs that meet the Governor's sustainability goals for sustainability operations.

Table 6.5: Sustainable Operations Priorities

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
NO PRIORITIES	**Choose an item.**	Choose an item.		

DOJ is looking for funding to develop a GHG reduction plan that includes solar and fleet transition planning projects, as well as to have a complete Carbon Inventory Worksheet for lab facilities.

Full Life Cycle Cost Accounting

Life-cycle cost analysis (LCCA) is an economic method of project evaluation in which all costs arising from owning, operating, maintaining, and disposing of a project are considered important to the decision. LCCA is well suited to the economic evaluation of design alternatives that satisfy a required performance level but may have differing investment, operating, maintenance, or repair costs, and different life spans. It is particularly relevant to the evaluation of investments where high initial costs are traded for reduced future cost obligations.

EO B-30-15 States "agencies shall take climate change into account in their planning and investment decisions, and employ full life-cycle cost accounting to evaluate and compare infrastructure investments and alternatives."

Reporting on Life Cycle Cost Accounting

NO INFRASTRUCTURE INVESTMENTS

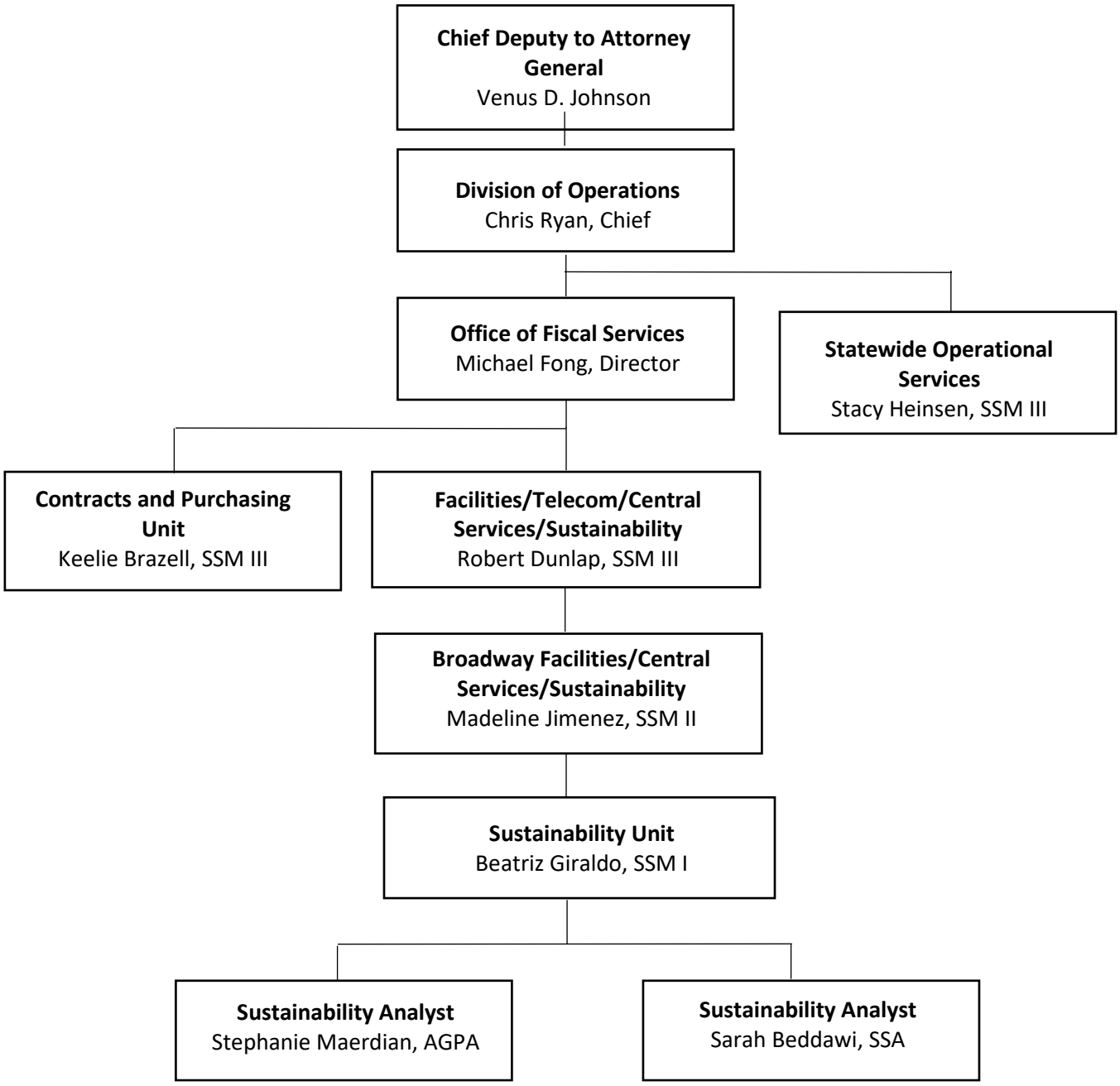
DOJ does not have a life cycle cost accounting process in place at the moment and this is something that will be addressed in the near future. Lifecycle considerations are employed by DGS in new building design and operations and other built infrastructure. DGS calculates these costs on DOJ's behalf.

Planning for Implementing Life Cycle Cost Accounting

NO INFRASTRUCTURE INVESTMENTS

DOJ does not use Life Cycle Cost Accounting, but will be adding this as an action item to address in the future.

APPENDIX A – SUSTAINABILITY LEADERSHIP



APPENDIX B – SUSTAINABILITY MILESTONES &TIMELINE

APPENDIX C – ACRONYMS

Customize to include organizations and acronyms within your specific department

AB	Assembly Bill
ADR	Automated Demand Response
AMB	Asset Management Branch (at DGS)
BMP	Best management practices
CA	California
CALGREEN	California Green Building Code (Title 24, Part 11)
CEC	California Energy Commission
DGS	Department of General Services
DWR	Department of Water Resources
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.)
EVSE	Electric vehicle supply equipment (charging equipment)
FMD	Facilities Management Division (a division at DGS)
GCM	Global circulation model
GHG	Greenhouse gas
GHGe	Greenhouse gas emissions
GSP	Groundwater Sustainability Plan
IEQ	Indoor environmental quality

kBTU	Thousand British thermal units (unit of energy)
LCM	The Landscape Coefficient Method
LEED	Leadership in Energy and Environmental Design
MAWA	Maximum applied water allowance
MM	Management Memo
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)
OS	Office of Sustainability (at DGS)
PMDB	Project Management and Development Branch (at DGS)
PPA	Power purchase agreement
PUE	Power usage effectiveness
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
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.

Back flow prevention device - a device that prevents contaminants from entering the potable water system in the event of back pressure or back siphonage.

Baseline - an initial set of critical observations, data or values that are used for comparison, as control or reference state, against which we measure change. It is also the scenario with absence of a recognized intervention such as policy, decision, investment, incentive, or other act intended to influence activities that produce GHG emissions and whose impact is being assessed (GHG Management Institute).

Benchmarking - the process of measuring performance using a specific indicator which provides insights that help organizations understand how they compare with others in terms of best-practice processes. It can also help organizations identify areas, systems, or processes for improvements.

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.

Critical overdraft - 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.

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.

Green House Gases (GHG) - Gases that trap heat in the atmosphere are called greenhouse gases. These are Carbon dioxide (CO2), Methane (CH4), Nitrous oxide (N2O) and Fluorinated gases such as Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF6), and Nitrogen Trifluoride (NF3).

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

Make up 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 – is 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.

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.

WUCOLS – it refers to Water Use Classification of Landscape Species. 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)

APPENDIX E – DEPARTMENT STAKEHOLDERS

Climate Change Adaptation

Understanding Climate Risk at Existing Facilities	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Understanding Climate Risk at Planned Facilities	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Integrating Climate Change into Department Planning and Funding Programs	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Measuring and Tracking Progress	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Zero Emission Vehicles

Incorporating ZEVs Into the Department Fleet	
Statewide Operational Services	Nick Getty, Staff Services Manager I Sue Wildanger, AGPA

Telematics	
Statewide Operational Services	Nick Getty, Staff Services Manager I Sue Wildanger, AGPA

Public Safety Exemption
N/A

Outside Funding Sources for ZEV Infrastructure	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Hydrogen Fueling Infrastructure	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Comprehensive Facility Site and Infrastructure Assessments	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

EVSE Construction Plan	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

EVSE Operation	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Energy

Zero Net Energy (ZNE)	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

New Construction Exceeds Title 24 by 15%
N/A

Reduce Grid-Based Energy Purchased by 20% by 2018	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Server Room Energy Use
N/A

Demand Response
N/A

Renewable Energy	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Monitoring-Based Commissioning (MBCx)
N/A

Financing	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Water Efficiency and Conservation

Indoor Water Efficiency Projects In Progress First initiative	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

Boilers and Cooling Systems Projects In Progress	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

Landscaping Hardware Water Efficiency Projects In Progress	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

Living Landscaping Water Efficiency Projects In Progress	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	

Buildings with Urban Water Shortage Contingency Plans In Progress	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

Green Operations

Greenhouse Gas Emissions	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst

	Stephanie Maerdian, Sustainability Analyst

Building Design and Construction	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

LEED for Existing Buildings Operations and Maintenance
N/A

Indoor Environmental Quality
N/A

Integrated Pest Management	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Contracts and Purchasing Unit	Keelie Brazell, Staff Services Manager III
Facilities Unit	Troy Whitfield, Facilities Manager I

Waste Management and Recycling	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst

Environmentally Preferable Purchasing	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Contracts and Purchasing Unit	Keelie Brazell, Staff Services Manager III

Location Efficiency	
Sustainability Unit	Beatriz Giraldo, Sustainability Manager I Sarah Beddawi, Sustainability Analyst Stephanie Maerdian, Sustainability Analyst
Facilities Unit	Troy Whitfield, Facilities Manager I

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

The following executive orders, Management Memos, legislative actions, resources, and guidance documents provide the sustainability criteria, requirements, and targets tracked and reported herein.

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.

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
- **MM14-02:** Water Efficiency and Conservation
- **MM 14-05**: Indoor Environmental Quality: New, Renovated, And Existing Buildings
- **MM 14-09**: Energy Efficiency in Data Centers and Server Rooms
- **MM 15-03**: Minimum Fuel Economy Standards Policy
- **MM 15-04**: Energy Use Reduction for New, Existing, and Leased Buildings
- **MM 15-06**: State Buildings and Grounds Maintenance and Operation
- **MM 15-07**: Diesel, Biodiesel, and Renewable Hydrocarbon Diesel Bulk Fuel Purchases
- **MM 16-07**: Zero-Emission Vehicle Purchasing and EVSE Infrastructure Requirements

Recent Legislative Actions

Several pieces of legislation were signed in 2015-16 that codified several elements of the executive orders, or provided further requirements included in the policies. These include the following:

- **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)
- **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)

Other Legislative Actions

- **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.

- **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 2015.

- **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.

- **AB 75** – Implement an integrated waste management program and achieve 50 percent disposal reduction target. State Agencies report annually on waste management program

- **SB 1106** – Have at least one designated waste management coordinator. Report annually on how your designated waste and recycling coordinator meets the requirement.

- **AB 2812** - Provide adequate receptacles, signage, education, staffing, and arrange for recycling services. Report annually on how each of these is being implemented

- **AB 341** – Implement mandatory commercial recycling program (if meet threshold). Report annually on recycling program

- **AB 1826** – Implement mandatory commercial organics recycling program (if meet threshold). Report annually on organics recycling program

- **SB 1383** - 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.

- **SB 1335** - requires food service facilities located in a state-owned facility, a concessionaire on state-owned property, or under contract to dispense prepared food using reusable, recyclable, or compostable. food service packaging

Action Plan

- **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.

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.
- **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.
- **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.

APPENDIX G LIST OF TABLES AND GRAPHS