Sustainability Roadmap 2022-2023 Department of Developmental Services

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

Gavin Newsom, Governor

December 2023

DEPARTMENT OF DEVELOPMENTAL SERVICES ROADMAP

Sustainability Road Map 2022-23
Department of Developmental Services

Primary Author(s)
David Brownson, Associate Construction Analyst
Helen Hoang-Phou, Staff Services Manager I Specialist
Juan Ortiz-Rios, Staff Services Manager I

DC&M Supervisor, Facilities Planning and Support
Marie Maddy

CEA, Business Management Section
Noah Valadez

CEA, Administration Division
Jim Knight

Chief Deputy Director, Operations
Carla Castañeda

Director
Nancy Bargmann

Table of Contents

EXECUTIVE SUMMARY

The Department of Developmental Services (DDS) currently operates two State owned developmental centers (DCs), one Community Care Facility and seven community State-Operated Stabilization Training Assistance Reintegration (STAR) homes. The two DCs, by location, include Fairview Developmental Center (FDC) in Costa Mesa, Orange County and Porterville Developmental Center (PDC) in the city of Porterville, Tulare County. DDS' one leased Community Facility, Canyon Springs (CSCF), is located in Cathedral City, Riverside County. The STAR homes are divided by three regions: North STAR (three homes) located in Vacaville, Solano County, Central STAR (two homes) located in Porterville and Springville, Tulare County, and South STAR (two homes) located in Costa Mesa, Orange County.

Services at all facilities include care and supervision on a 24-hour basis, supplemented with appropriate health, medical and dental care, assistance with activities of daily living, training, education, and active treatment. The primary mission of the DC/CSCF facilities is to provide 24-hour habilitation and treatment services for residents with developmental disabilities designed to increase levels of independence, functioning skills, and opportunities for making choices that affect a person's life including the identification of services and supports and options for transition into the local community.

DDS' two state-owned campuses are comprised of approximately 206 structures, which total approximately 2,343,265 square feet of space. Building types include but are not limited to residential housing units; public and support buildings such as auditoriums, chapels, plant operations shops, offices, warehouses; medical clinics, labs, and hospitals; schools, and kitchen buildings.

The 2015 Budget, initiated closure planning for FDC and the PDC General Treatment Area.

FDC is licensed as an Intermediate Care Facility/ Developmentally Disabled (ICF/DD) with a ten-bed capacity and the majority of the facility was placed into warm shutdown in December 2019. The infrastructure projects at FDC are limited to maintenance and repairs of fire and life safety systems.

PDC is licensed and certified as Skilled Nursing Facility, ICF/ID, and General Acute Care hospital. Secure treatment services are provided only at PDC. The general treatment facility of PDC is being closed; however, DDS will pursue ongoing infrastructure improvements at PDC as the services provided through the secure treatment facility are unique in the state and expected to remain necessary. Additionally, existing buildings within the campus are approximately

70+ years old, operate under numerous code waivers, and are not suited to meet modern service delivery regulations and models.

CSCF is a 63-bed leased facility licensed as an ICF/ID. Opened in 2000, CSCF serves persons with challenging behavioral issues. There are approximately seven years remaining on the existing lease; and infrastructure projects, maintenance, and repairs are generally the responsibility of the landlord.

STAR homes provides acute crisis services to adolescents (7-17 years old) and adults (18 years of age and older) with developmental disabilities receiving regional center services and who need time-limited crisis stabilization services for up to 13 months. STAR homes provide person-centered support and crisis stabilization to the individuals being served, so that they can successfully transition to a community living setting. A private property management company is responsible for all infrastructure projects, maintenance, and repairs.

DDS, including the State Operated Facilities Division (SOFD), is committed to meeting the resource conservation goals as stipulated by the Governor. DDS began energy and resource conservation efforts in earnest in the early 2000's. Porterville DC has completed the construction of a new main kitchen that was recognized as the SOFD's first LEED-Gold certified building. DDS' downsizing and other efforts to date at the remaining DCs have resulted in a decrease of energy consumption of 52% when compared to a base year of 2003 and greenhouse gas emissions reduction of 73% when compared to a base year of 2010. Water conservation efforts have reduced water consumption at SOFD facilities by 35% compared to 2010 levels.

The DC system is challenged by the age of its buildings. The newest DC, Fairview, was built in 1959, preceded by Porterville, which was built in 1953. Additionally, there has been a significant and consistent drop in consumer census at all developmental centers as residents' transition to community-based living arrangements. The closure of the facilities and downsizing of PDC limit fiscally sound opportunities when evaluating cost effectiveness of large-scale energy reduction and conservation projects as building use time horizons are relatively short. However, DDS' downsizing and commitment to energy and resource conservation have yielded significant results which have met or exceeded all resource use reduction standards as stipulated by EO-B-18-12 and others related to water, energy, and greenhouse gas emissions reductions.

Climate Change

DDS has identified its facilities most vulnerable to climate change impacts. DDS will work with entities responsible for new construction, repairs and retrofits, and on-going operations to incorporate measures to improve resilience to climate

change impacts. Temperature changes, especially extreme heat events, changes in precipitation, and effects of drought are of particular concern and will be areas focus.

Zero Emissions Vehicles
DDS is committed to reducing emissions associated with the operations of the department's fleet of vehicles. In the three years preceding 2021, DDS did not procure any new vehicle as the fleet went through a comprehensive use evaluation. DDS's approved 2021/22 Fleet Acquisition Plan includes 16, BEV and PHEV vehicles as we begin to transition our fleet to ZEV or low emissions vehicles. DDS plans to install enough Level 1 and Level 2 charging stations to serve 5% of employee parking places and a 1:1 charging ratio for all fleet ZEVs and PHEVs.

Energy
DDS is evaluating the replacement of six 1950's era buildings with 10 new units. DDS will work DGS and a team of experts to pursue ZNE status of these building to the extent practical. On-site renewable energy will also be evaluated at PDC as part to the facility modernization efforts planned over the next several years. PDC is in the construction phase of the facility's central boiler plant replacement project. The three new boilers will not only be more efficient than the 70-year-old units they are replacing, they will also produce far less emissions.

Water Efficiency and Conservation
PDC produces all its own water from a severely impacted water table. This has resulted in many challenges over the last decade or so. PDC rehabilitated several of its water wells in 2016 and is in the process of installing a nitrate reduction facility in the central water treatment plant to increase the reliability of potable water production. This is important not just for the vulnerable population served by PDC, but also for the surrounding community. PDC has been called upon to supplement local water district supplies during previous periods of severe drought when many local water wells failed to produce adequate water supplies to meet local needs.

Sustainable Operations
All DDS buildings constructed after 2012 are LEED certified. DDS' five-year plan includes construction to replace outdated building from the 1950's. All new construction will be state of the art LEED certified. DDS practices environmentally preferred purchasing to the extent practical and has extensive green building maintenance procedures in place. DDS continues to reduce greenhouse gas emissions by installing new low emission facility infrastructure and purchasing low emissions fleet vehicles.

Executive Director Signature

Nancy Bargmann
Director

CHAPTER 1 - CLIMATE CHANGE

Department Mission and Climate Change Adaptation

The Department of Developmental Services' vision is for people with intellectual and developmental disabilities experience respect for their culture and language preferences, their choices, beliefs, values, needs, and goals, from a person-centered service system made up of a network of community agencies that provide high quality, outcome-based and equitable services. DDS is committed to providing leadership that results in quality services to the people of California and assures the opportunity for individuals with developmental disabilities to exercise their right to make choices. This quality service includes accountability, where there is an establishment of a system to ensure DDS, state developmental centers, regional centers and services providers are following all applicable federal and state laws, and regulations.

With the closure of the DCs, transition of the Porterville General Treatment population into the community, and subsequent consolidation of facility support services into the Secure Treatment Program at Porterville, the lifetime operations of the remaining campuses is limited.

- Project planning at Fairview DC which entered warm shutdown in December 2019, will include continued maintenance of the physical assets and for ensuring fire, life, health, and safety on the campus.

- Canyon Springs Community Facility (CSCF) is leased by the state and has seven years remaining on the current lease. Future project planning is limited to parameters within the lease document and will not be included for the climate adapt section.

- Porterville Developmental Center (DC) integrates the overall impact that climate change will have into the planning parameters for all appropriate projects. Incorporation of these screening criteria, as well as climate considerations, into DDS' Capital Outlay, Special Repair, and Deferred Maintenance infrastructure project planning and investments began with Fiscal Year 2018-19 projects.

Climate Change Risks to Facilities

Climate Change Risk Process:

DDS has one developmental center of primary concern with respect to climate change. The facility is Porterville Developmental Center (PDC) in Tulare County. PDC is the only facility that will remain of the Developmental Center system. The most significant challenge to DDS resides in the fact that PDC is located on a severely impacted groundwater basin and produces all of its own potable water from ground water extraction facilities located on the property. Therefore, the Model 1: HadGEM2-ES (warm/dry) scenario detailed by Cal-Adapt is considered a potential threat to operations at the center. DDS has already begun steps to protect the facility and facility operations from the effects of this scenario. This is particularly important in that the recent severe drought and condition of the groundwater basin adds credence to the probability of the warm-dry scenario. Specifics regarding DDS' efforts are detailed later in this chapter.

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)
PDC	103	4	24	20	39	35

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)
PDC	78.8	83.2	4.4	85.3	6.5

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)
PDC	45.1	49.1	4	49.5	0.4

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

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

Facility Name	Heating Degrees 1961-1990	Average Modeled Heating Degrees (year), 2031-2060	Change in Heating Degree Days Historical to Mid-Century	Average Modeled Heating Degrees (year), 2070-2099	Change in Heating Degree Days Historical to End-Century
No facilities at risk.					

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
No facilities at risk					

Reporting Narrative on HDD and CCD

PDC is located in a relatively punishing climatological location within California, and significant resources are spent annually to provide air conditioning to maintain interior environments for the extremely vulnerable populations served by DDS. This increases energy consumption and maintenance cycle on heating, ventilation, and air conditioning equipment systems. Performance of facility operations depends largely on staff operating within the desert conditions, limiting direct solar exposure, and keeping internal room temperatures within acceptable levels which is challenging due to the structural materials and age of the buildings, and requires increased electricity/utility output at higher costs per square footage. Facility operations show marked increase of defects and failures on days of increased temperatures, and these projections simply are not sustainable without some form of mitigation planning.

Occupant health and safety could be affected by these projections of increased extreme heat days. DDS' consumer population is among some of the most sensitive and vulnerable California citizens, whose very lives are directly impacted by the temperatures within their residential facilities, as well as the morale of the support (nursing) staff. Should the facilities experience higher temperatures for longer durations than currently recorded, there is an increased likelihood that most will remain indoors rather than traveling outdoors, limiting recreational and other social opportunities. Higher mean minimum temperatures are going to shorten the cooling seasons and extend the already extreme temperatures of the summer into both calendar spring and autumn seasons.

PDC is located in an above average temperature location within California. This increases energy consumption and maintenance cycle on heating, ventilation, and air conditioning equipment but can easily be mitigated by proper facility management if sufficient resources are available.

Strategies that may be of use in mitigating extreme heat events include renovating existing buildings with heat-reduction renewable materials. Using such materials in new building construction (if approved by Dept. of Finance) may decrease interior heat retention, thus relieving stress from the current air conditioning equipment. Projects are currently in progress are improvements to select air-conditioning facilities and reflective films and shutters to minimize heat penetration into buildings. Additional improvements will be pursued as funding is available. Eliminating the spread of asphalt (blacktop) in favor of surface coverings that are more reflective/less heat absorbent materials are also being researched. Planting more shade-providing trees and plants will be considered after fully evaluating the installation of the water nitrate reduction facility that is

currently under construction. Consuming too much nitrate can affect how blood carries oxygen and can cause methemoglobinemia.

Plan to Mitigate HDD and CDD

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

Facility Name	2030
Porterville Developmental Center	**Energy efficiency upgrades, solar projects, etc.**

Planning Narrative to Mitigate HDD and CDD

Nearly every project at Porterville Developmental Center to some degree is increasing the building/ HVAC efficiency. Through planning and design the aging facility is being upgraded to include building management systems as well as additional insulation and energy efficient equipment.

Assessing Risk from Urban Heat Islands

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.
No facilities at risk		

Reporting Narrative on Urban Heat islands

No facilities at risk.

Planning Outline for Urban Heat Islands Mitigation:

No facilities at risk.

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

Facility Name	Mitigation or Plan	Est. Implementation Date
No Facilities at risk		

Planning Narrative for Urban Heat Islands Mitigation

No facilities at risk.

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)
PDC	11	12	9	12	0	3	2	3

Reporting Narrative on Precipitation Impacts

No facilities at risk.

Planning Outline to Mitigate Precipitation Changes

No facilities at risk.

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

Facility Name	Extreme Precip (2030) Plan or strategy
PDC	Annual precipitation change is desirable. No strategy necessary.

Planning Narrative on Precipitation Changes Mitigation Plan

No facilities at risk.

Assessing Risk from Sea Level Rise

Table 1.6: 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)
No Facilities at risk					

Reporting Narrative on Sea Level Rise Impacts

No facilities at risk.

Planning Outline to Mitigate Sea Level Rise Impacts

No facilities at risk.

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

Facility Name	Tide Chart Region	Plan 2030?
No facilities at risk		

Planning Narrative of Sea Level Rise Impact

No facilities at risk.

Assessing Risk from Wildfire

Table 1.7: 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)
No facilities at risk	

Table 1.8: 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)
No facilities at risk			

Reporting Narrative on Wildfire Risks

No facilities at risk.

Planning Outline to Mitigate Wildfire Risks

No facilities at risk.

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
No facilities at risk	

Planning Narrative of Wildfire Risk Mitigation Plan

No facilities at risk.

Understanding Climate Risk to Planned Facilities

Tables 1.9: a-g: Climate Risks to New Facilities

a.1Annual Mean Max. Temperature

Facility Name	Historical Annual Mean Max. Temp. (1961 – 1990)	Annual Mean Max. Temp. (2031 – 2060)	Change from Historical to Annual Mean Max. Temp (2031-2060)	Annual Mean Max Temp. (2070-2099)	Change from Historical to Annual Mean Max. Temp (2070-2099)
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

Currently the Department does have any plans to build or developed new facilities. The information in Tables 1.9a-g will be used and taken into consideration in the planning and designing for any new facilities. The challenge the Department faces in developing strategies to account for climate change in Planned Facilities is the lack of expertise and knowledge in the subject matter; a consultant would be needed to guide in the beginning of the design phase.

Understanding the Potential Impacts of Facilities on Communities

Reporting on Facilities located in Disadvantaged Communities

Table 1.10: Facilities Located in Disadvantaged Communities

Facility Name	CalEnviroScreen Score	Is it located in a disadvantaged community? Yes/No
PDC	96	Yes

Planning Narrative for Facilities in Disadvantaged Communities

PDC is located in a disadvantaged community. PDC is a local employment center for the community of Porterville: worker program services are offered for clients through the Vocational Education and High School Diploma program opportunities. Neither facility provides healthcare or social support services to their local communities. However, Emergency Response Plans are in place at each facility to serve their local communities in the event of an emergency.

Additionally, DDS works with local county and city officials to mitigate emergency conditions when possible. For example, during the height of the drought, many local water wells within Tulare County "went dry" or ceased to produce sufficient water to serve local residents. PDC's more sophisticated well production facility allowed PDC to enter into an agreement with Tulare County to provide the local residents with up to 750,000 gallons of water per month as part of the State sponsored Household Tank Program. PDC does not provide services directly to the public.

New Facilities and Disadvantaged Communities and Urban Heat Islands

Table 1.11: 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)
No new facilities		

Integrating Climate Change into Department Funding Programs

Table 1.12: Integration of Climate Change into Department Planning

Name of Plan	Have you integrated climate?	If no, when will it be integrated?
	Yes/No	Date
Reduce emissions by modernizing the PDC central plant and other facilities	Yes	Ongoing
Increase energy efficiency	Yes	Ongoing
Protect against climate change	Yes	Ongoing
Reduce vehicle emissions	Yes	Ongoing

Reporting Narrative for Integrating Climate Change into Department Planning Process

Integrating sustainability into facility operations is a journey that proceeds incrementally, ideally developing committed teams, creative solutions, solid strategies, and measurable goals. Sustainability drivers (cost reduction, regulatory compliance, environmental stewardship, community pressures, and social responsibility) inform essential planning and policy development.

Successful sustainability programs require an institutional commitment, policies to drive change, and dedicated resources to make programs happen. Senior leadership support and involvement, including good communication as well as both symbolic and substantive actions, are key to a program's long-term success. The policies and practices of top management will shape the behavior of the entire staff to achieve the goals of the Governor.

Planning Narrative for Integrating Climate Change into Department Planning Process

Climate change integration into department planning process achieved.

Community Engagement and Planning Processes

Table1.13: 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	Not considered	Yes	Not prioritized

Reporting Narrative for Community Engagement and Planning Processes

While the Department does not directly serve the general public, the Department will engage and pursue partnerships with local and regional agencies when appropriate. The following are examples on DDS' coordination with local agencies:

- DDS partnered with the City of Costa Mesa by providing a staging area for a large infrastructure project. The DDS facility is less than 1 mile from the project site. The alternate staging area was over 10 miles away. The use of the DDS site greatly decreased traffic congestion of dozens of large truck daily trips and emissions associated with the project by an estimated 80%.
- DDS partners with the City of Costa Mesa to provide over 5 acres of open green space for youth sport programs in a heavily urbanized area.
- DDS partnered with the City of Porterville during the recent drought crises that lead to many rural residential water wells going dry. PDC provided

water to hundreds of city residents until local officials secured an alternative water source.

Planning Narrative for Community Engagement and Planning Processes

Community engagement and planning processes achieved.

Climate Change Implementation Planning in Funding Programs

Table1.14: 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	NA	NA	NA	NA

Reporting Narrative for Climate Change Implementation Planning in Funding Programs

No grant or other funding provided.

Planning Narrative for Climate Change Implementation Planning in Funding Programs

No grant or other funding provided.

Measuring and Tracking Progress

Reporting Narrative on 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.

Mitigating the effects of drought and rising temperatures is of great concern to DDS. The individuals served by DDS are considered a vulnerable population and planning for future effects on our service delivery system is an ongoing process. Reducing emissions and dependence on fossil fuels is also an important factor in DDS planning.

The DDS Facilities Planning and Support Section monitors and tracks all infrastructure and other related projects to ensure that environmental concerns and state goals are met to the extent feasible.

DDS also employs subject matter experts and partners with the DGS to achieve LEED certification for all new construction projects. Regular project meetings address both technical end environmental aspects associated with projects pursued by DDS. DDS also partners with the DGS Office of Sustainability and attends regular meetings and seminars to stay current on appropriate information and state goals and funding programs. DDS identifies and prioritizes green and sustainable projects in all phases of project development from conceptual proposals through construction and ongoing operations.

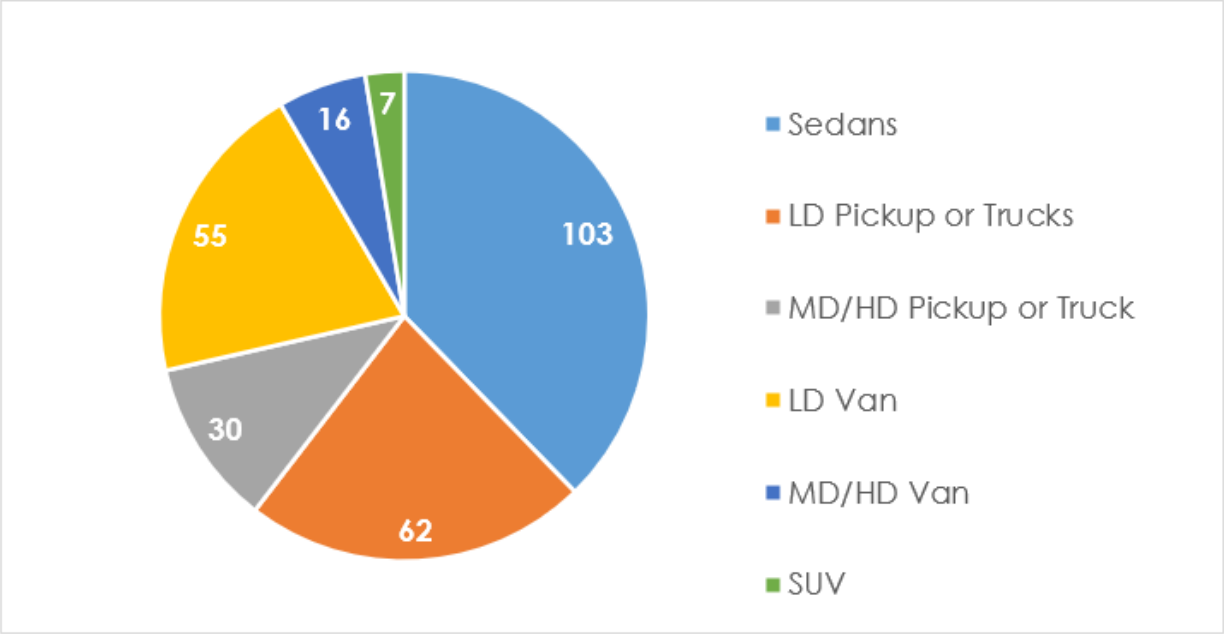
CHAPTER 2 – ZERO-EMISSION VEHICLES

Department Mission and Fleet

DDS' mission in providing quality services to individuals with intellectual and developmental disabilities consist of meeting federal and state laws and regulations; this includes meeting vehicle needs and requirements at state developmental centers. DDS' fleet consists of a wide variety of vehicles including, but not limited to, sedans, vans, pick-up trucks, tractors, golf carts, etc. Sedans and vans are used primarily for transporting residents for vocational development, leisure, academic advancement, communication, mobility, medical treatment, socialization, and community integration, both on campus and in community settings. Sedan and vans are used for short trips depending on when residents have a transportation need. Other vehicles are utilized throughout the day for the maintenance of facility grounds and structures. After the closure of the FDC, PDC General Treatment Program (GTP), and SDC, all vehicles unable to be reassigned for reutilization will be transported to their respective Department of General Services' (DGS) auction yards.

Composition of Vehicle Fleet

Graph 2.1: 2022 Composition of Vehicle Fleet



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	900	10,379	0
2022	1203	7678	

Reporting Narrative on Fuel Type Selections

Due to continued downsizing and conservation efforts, total gasoline consumption is down from 2021 levels except for diesel, reported in the last DDS Roadmap document. Diesel increase is attributed to increase in economic activity in DDS facilities. Diesel increase is 33.67% and gas is down 26.02%. DDS utilize fuel sources available from DGS approved vendors. Currently, hydrogen fuel has not been considered. DDS will begin working on establishing polices to determine what fuels type to utilize. DDS' next steps will include researching and consulting with DGS subject matter experts for guidance and advice on establishing a policy.

Rightsizing the Fleet

Teleworking, Mission Changes, and Technology Changes

The Department's telework policy does not affect vehicle usage, nor does it impact DDS' fleet purchasing plan.

Telematics

Implementation Status

Reporting Narrative on Telematics Implementation Status

In accordance with SAM section 4122, state departments are required to install telematics devices on all state fleet assets. DGS has put a pause on Telematics Installation until the original is approved by the Air Resource Board. DGS' has found an alternative method on installing telematic devices. DGS' is now scheduling install appointments for their leased assets. DDS' is in the process of installing devices on their owned assets, DDS' has telematics policy set in place.

DDS has a telematics program and requires all drivers of DDS vehicles to adhere to the policy. Equipment installations will be phased in as new vehicles are purchased and the DDS fleet is converted to low emission or ZEV assets.

Planning Narrative for Telematics Data

The Department of General Services (DGS), Office of Fleet and Asset Management (OFAM) and Department of Developmental Services is responsible for acquiring, implementing, and maintaining a vendor provided telematics solution for DGS leased and Agency owned vehicles/mobile assets. The GPS units to be installed on the assets will provide information which is vital for proper fleet management and driver safety. In addition, telematics helps to streamline the cycle cost of service and repairs and identifying opportunities for ZEV adoption.

Existing Fleet Description

Light Duty Fleet Vehicles

Light duty trucks and vans are used primarily for on-campus maintenance, repairs, and day-to-day operations. Sedans, Vans, SUV's ae used primarily for short trips, off-campus client transportation needs; such as medical appointments and court hearings.

Reporting On Total Miles Traveled

Table 2.2: Total Miles Traveled

Year	2017	2018	2019	2020	2021	2022
Miles Traveled	288,500	144,659	198,809	236,629	143,617	76,923

Reporting Narrative on Total Miles Traveled

DDS yearly mileage for 2022 is 76,923, over the years we have improved mileage reporting Instruction process, to ensure we are receiving accurate data. The trend has been a reduction in mileage due to a reduction in the older fleet vehicles. DDS is waiting for DGS to provide updated replacement vehicles. The telematics data will assist DDS in determining what the facilities needs are based vehicle usage, this will assist in ensuring that all fleet vehicles meet DGS utilization standards. To reduce the total miles traveled, DDS will work with the fleet coordinators to ensure that the appropriate vehicle type is being utilized.

Reporting On Miles Per Gallon

Table 2.3: Miles per Gallon

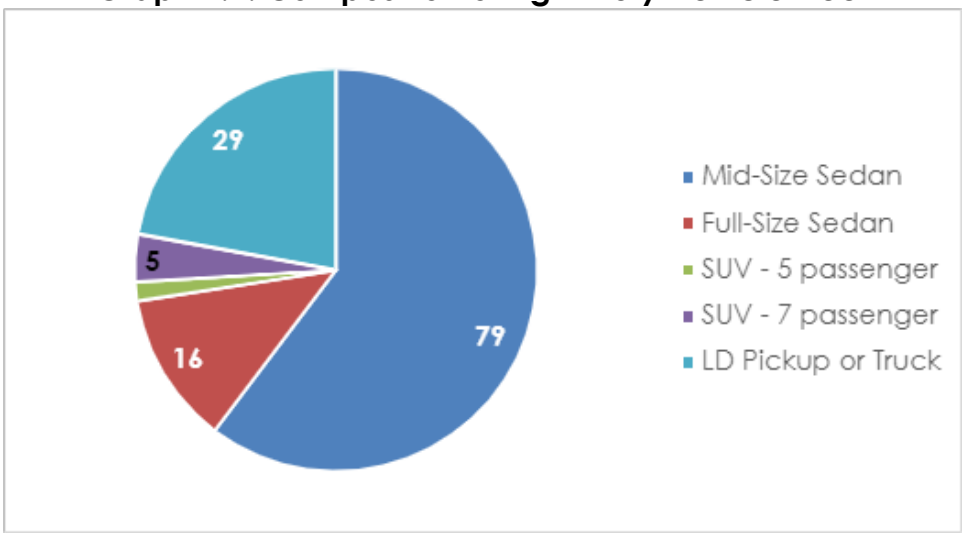
Year	2017	2018	2019	2020	2021	2022
MPG	17.89	18.1	18.2	20.8	20.8	23

Reporting Narrative on Miles Per Gallon

This year's mileage was 76,923 miles with an average of 23 MPG. The overall trend has been an increase in MPG due to new and hybrid vehicles. Telematics could be utilized to assist drivers with driver performance to increase MPG. The department will work on analyzing telematics data to assist where we have low MPG reporting.

Composition of Light Duty Vehicle Fleet

Graph 2.2: Composition of Light Duty Vehicle Fleet



Light Duty Take-Home Vehicle Fleet Status

Table 2.4: "Take Home" Vehicle Fleet Status

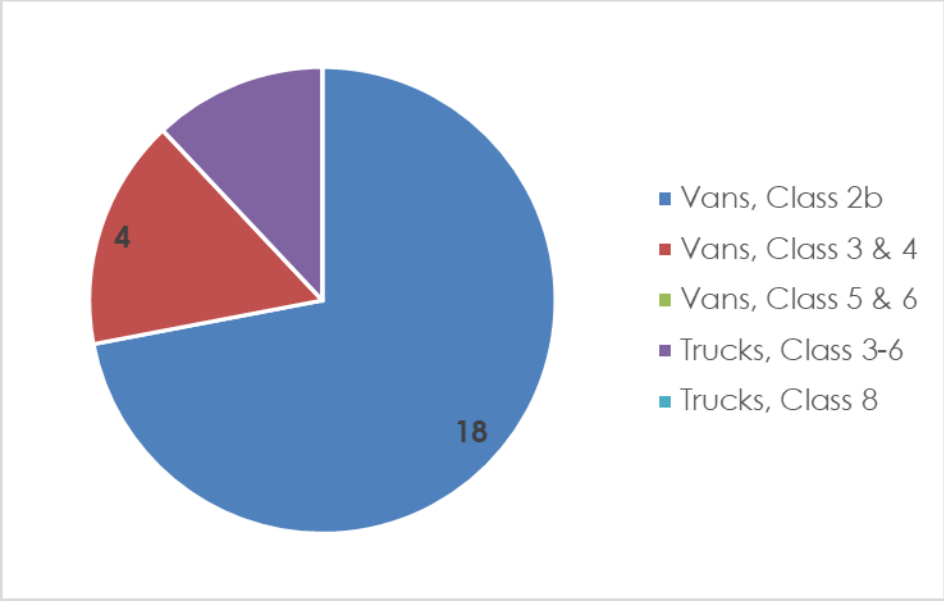
Vehicle Type	Sedans	LD Pickup or Trucks	MD/HD Pickup or Truck	LD Van	MD/HD Van	SUV
Totals	2	0	0	0	0	0

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

Vehicles that are authorized for home storage, per SAM Section 4109, are subject to all applicable ZEV purchasing policies. DDS has two (Office of Protective Services vehicle) OPS stored off site. Telework does not impact OPS on the VHSP. Emission reduction strategies the Department practices includes replacing older vehicles with ZEV when available, monitor and conduct routine car maintenance, and practice fuel efficient driving techniques.

Medium and Heavy-Duty Fleet Vehicles

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



Incorporating ZEVs into the State Fleet

Light-Duty ZEV Adoption

Table 2.5: 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	95	48	42	2	4	0	191

Table 2.6: Plan for Light Duty ZEV Additions to the Department Fleet

ZEV Category	21/22	22/23	23/24	24/25	25/26
Battery Electric Vehicle (BEV)	6	13			
Plug-in Hybrid Vehicle (PHEV)		1			
Fuel Cell Vehicle					
Percent of total purchases					

Required ZEV Percentage	35%	40%	45%	50%	55%
Total number of ZEVs in Fleet*					

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

A widespread shift to ZEVs is essential for California to meet its Green House Gas (GHG) emission goals. State departments are now required to incorporate and prioritize a larger number of light-duty ZEVs in their vehicle fleets. Starting in FY 2017/18 the percentage of new light duty vehicles that must be ZEVs began increasing by 5% each year, reaching 25% in FY 2019/20 and 50% in FY 2025/26.

Zero Emission Vehicles could be used by DDS employees for the transportation of DDS consumers to medical appointments, vocational and recreational activities, and other uses outside of DDS facilities. On campus, electric golf carts and other miscellaneous electric vehicles are already extensively utilized.

Range limitations and an insufficient number of charging stations limit wide-spread use of electric vehicles for off campus uses. However, as funding sources are made available, DDS will pursue fleet electrification to the extent practical. PDC has engaged the Department of General Services, Office of Sustainability to conduct an assessment of the PDC campus to determine opportunities and challenges associated with the transition to a ZEV rich fleet.

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, departments are encouraged to complete and review Table 2.2 as if all light duty vehicle classes have a ZEV alternative available for purchase.

Planning Narrative for Integrating ZEVs into Take-Home Vehicles

DDS' take home vehicle program follows the State of California, Office of Fleet and Asset Management's guidelines and regulations. Vehicles that are authorized for home storage, per SAM Section 4109, are subject to all applicable ZEV purchasing policies. DDS has two ZEVs Office of Protective Services vehicle stored off site. The type of work and duties performed by OPS staff is used to ensure the right type of vehicle is assigned; and when appropriate, ZEV strategies are incorporated to assists with VHSP.

Medium- Heavy-Duty ZEV Adoption

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

Table 2.7: MD/HD Vehicles in Department Fleet Currently Eligible for Replacement

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

Table 2.8: Planned Medium/Heavy Duty ZEV Additions to the Department Fleet

Vehicle Type	21/22	22/23	23/24	24/25	25/26
Battery Electric Vehicle (BEV)	2	10	9	15	10
Plug-in Hybrid Vehicle (PHEV)	19	3	10	4	3
Fuel Cell Vehicle	0	0	0	0	0
Percent of total purchases	42%	48%	83%	61%	68%
Total number of ZEVs in Fleet	39	60	73	92	111

Reporting Narrative for Medium-Heavy Duty ZEV Adoption

Similar to 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 31, 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 31, 2030.

Transition of MD/HD vehicles are expected to take additional time due to limited availability of these vehicle model types as well as required charging stations. Range limitations for these types of vehicles are also of concern. As technology advances, it is anticipated that many of the trucks that are currently used on campus will be able to be transitioned to ZEV assets.

The DCs use a variety of pickup trucks and box trucks driven by staff for daily routine operations, deliveries, and carry necessary supplies for the upkeep and maintenance of the campus and facilities. Because these vehicles rarely leave range considerations, and the availability of charging stations are less of a concern. As more of these types of vehicles are available as ZEVs, DDS will pursue the transition of these assets to ZEVs.

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

ZEV Public Safety Exemption

Reporting Narrative for ZEV Public Safety Exemption

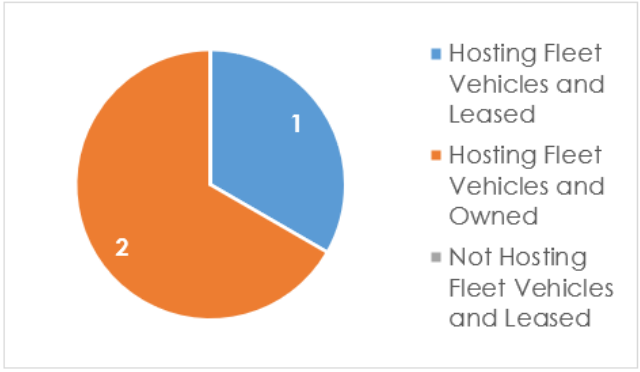
All approved Fleet Acquisition plan for Office of Protective Services vehicles are Exempt from ZEV purchasing mandates pursuant to SAM section 4121.8 Public Safety Special Performance Exemption.

Planning Narrative for ZEV Public Safety Exemption

All approved Fleet Acquisition plan for Office of Protective Services vehicles are Exempt from ZEV purchasing mandates pursuant to SAM section 4121.8 Public Safety Special Performance Exemption. The Department is evaluating the telematic data and the usage of the vehicles to determine if ZEVs are suitable to meet the needs of OPS.

Department's Parking Facilities

Graph 2.4: Parking Facilities



Reporting Narrative on Parking Facilities

DDS operates two State owned facilities (PDC and FDC) and one leased facility (CSCF). All facilities have parking on the grounds. Parking is primarily designated for staff and fleet use. There are a limited number of designated parking spaces for use by visitors at each facility. DDS does not offer public parking at either facility.

DDS facilities allow employees to charge their personal vehicles through the use of standard electrical outlets (also known as level 1 charging).

In conjunction with DGS, DDS is currently planning to install electric vehicle charging stations at PDC. The goal is to provide 5% of employee parking with Level 2 EV chargers and a 1:1 for all electric fleet vehicles. A timeline for these installations has not been determined and will depend on available funding.

DDS will work with the Department of General Services, Office of Sustainability, Transportation Unit to evaluate facility electrical infrastructure and options for installation of charging stations.

Reporting on Status of EVSE Projects

Table 2.9: 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
PDC	2047	4	4		8	50
DDS			10		10	
Total	**2047**	**4**	**13**		**18**	**50**

EV Charging Site Assessments

Reporting on 2022 Facility Site and Infrastructure Assessments

Table 2.10: 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
Porterville Development Center (PDC)		Admin Bldg Parking – 8 ports Staff Parking Lot – 50 ports		DGS OS -CTU

Total		**58 ports**		

Planning Narrative on EVSE Construction Plan

Porterville Development Center has purchased six HCS Series, Level 2, 240V EVSE charging stations. One dual charging station has been installed at the new Main Kitchen parking lot at the east end of the facility. PDC plans to install two dual charging stations at the General Services garage for fleet charging upon approval of DDS' Fleet Acquisition Plan and install one Level 2 dual charging station at the Administration parking lot at the front entrance of the facility. PDC is currently working with DGS, Office of Sustainability Clean Transportation Unit to install an additional 40 Level 2 chargers.

The Department intends to work with the DGS Real Estate in 2024 to provide charging at a number of leased facilities.

EVSE guidelines and policy will be developed in conjunction with the DGS OS-CTU evaluations detailed above.

DDS is committed to evaluating current DGS EVSE pricing guidelines and policy in order to implement for our department's use. While cost recovery policies are not in place, DDS plant operations and Facilities Planning and Support Unit staff will work closely together with DDS executive management to draft an enterprise policy applicable to all DDS locations. Further, EVSE reporting requirements and data collection efforts will be established and implemented according to DDS fleet management policies and directives.

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 policy not required.

Employee EV Charging Policies

Reporting Narrative on Employee EV Charging Policies

No employee EV charging policy in place.

Planning Narrative on Employee EV Charging Policies

The next steps to developing a plan involves meeting with management at PDC to discuss the development of a EV charging policy and getting approval from the Department's HR and Legal Team. The executive management team at Porterville Developmental Center will be responsible for developing employee EV charging plans.

Fleet EV Charging Policies

Reporting Narrative for Fleet EV Charging

No fleet EV charging polices.

Planning Narrative for Fleet EV Charging

The fleet EV charging needs at PDC are currently being studied to determine the overall fleet EV charging plan for the campus. As further development are being made with the overall fleet EV charging infrastructure, PDC will continue to work with DGS to meet all of the campus needs and develop the necessary fleet EV charging policies. The executive management team at Porterville Developmental Center will be responsible for developing employee EV charging plans.

Hydrogen Fueling Infrastructure

Planning Narrative for Hydrogen Fueling Infrastructure

DDS possesses no hydrogen fueling stations and has no future plans to install hydrogen fueling infrastructure. Furthermore, as there are no FCVs in DDS' current fleet and no planned future purchases, it would not be cost-effective to install hydrogen fueling infrastructure. There are two (2) hydrogen fueling stations operating within the surrounding area of the FDC, located in Costa Mesa, California with more in development in the Los Angeles County region. Currently, there are no hydrogen fueling stations in the vicinity of the CSCF located in Cathedral City, California. Similarly, the hydrogen fueling station closest to the PDC is located eighty-seven (87) miles away in Coalinga, California.

CHAPTER 3 – ENERGY

Department Mission and Building Infrastructure

Reporting Narrative for Department Mission and Building Infrastructure:

DDS currently operates two State developmental centers (DCs) which are licensed and certified as Intermediate Care Facility/Developmentally Disabled (ICF/DD) service facility. DDS also operates one smaller, state-operated community facility (CF) licensed as an ICF/DD facility.

The primary mission of the DC/CF facilities is to provide 24-hour habilitation and treatment services for residents with developmental disabilities designed to increase levels of independence, functioning skills, and opportunities for making choices that affect a person's life including the identification of services and supports and options for transition into the local community.

A person-centered planning approach is utilized, involving the resident, developmental center and regional center staff, parents, other appropriate family members or legal representatives to identify and meet service and treatment needs of the residents. Services are designed to include activities that involve all aspects of daily living which include residential services through skill training, specialized medical and dental healthcare, physical/ occupational/ speech therapies and language development, and leisure and recreational opportunities. In addition, residents under age 22 attend school either in the community or in DC/CF classes. Adults participate in a wide variety of vocational and skill-development programs both at the DC and/or in the local community.

Porterville Developmental Center (PDC) and Fairview Developmental Center (FDC) are comprised of 169 structures which total approximately 2,343,265 square feet of space. Building types include but are not limited to residential housing units, public and support buildings (auditoriums, chapels, plant operations shops, offices, and warehouses), medical clinics, labs, hospitals, schools, and kitchen buildings. FDC is currently in warm shut down and is implementing all Basic Policy 4819.31 and Management Memo 14-07 when applicable. Consequently, this chapter will focus on PDC.

In addition to the building assets detailed above, PDC's built infrastructure that consumes purchased energy consists of the following: an eight well, water production field, a booster pump station and chlorine generator; as well as a nitrate removal system for potable water distribution that is currently under

construction. Also, PDC's wastewater system consists of multiple lift stations and a sewage grinder.

The central boiler (currently being upgraded) and chiller plant consumes natural gas and electricity to provide steam and chilled water to heat and cool most of the buildings on site. Steam is also utilized to prepare food in the main kitchen. Annex buildings and the 96 bed units utilize grid electricity and/or natural gas for climate control.

Total Purchased Energy

Table 3.1: Total Purchased Energy 2021 and 2022

Purchased Energy	2003 Baseline Quantity	Unit	2021 Quantity	2022 Quantity	% Qty. Change 2003-22
Electricity	179,856,224	kWh	21,174,894	20,706,156	-88%
Less EV Charging	N/A	kWh			
Natural Gas	5,877,559	therms	1,770,153	1,549,218	-74%
Propane	N/A	gallons	N/A	N/A	
Fuel Oil	N/A	gallons	N/A	N/A	
Steam	8,895,701	pounds	N/A	N/A	-100%
Chilled H2O	499	kBtu	N/A	N/A	-100%
TOTALS	**474,782,387**	**kBtu Site**	**22,945,571**	**225,571,204**	**-52%**

Department Energy Use

Reporting High Energy Use Buildings

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)
Porterville DC	1,210,503	129,310,804	230,508,727	190
Fairview DC	1,102,715	96,260,400	160,901,659	146
Total for Buildings in This Table	**2,313,218**	**225,575,204**	**391,410,385**	**169**
Total for All Department Buildings	**2,313,218**	**225,571,204**	**391,410,385**	**169**
% of Totals	**100%**	**100%**	**100%**	**100%**

Energy Efficiency Solutions for Largest Energy Using Buildings

Planning Outline PO3a: Planning for Buildings with Largest Energy Use

Building Name	Proposed Energy Efficiency Solutions
Porterville DC	**Solar project in planning stage**
Fairview DC	**No updates planned**

Narrative for Building Energy Efficiency

Individual buildings are not metered so a comprehensive consumption data report is not available. The Department is working towards installing utilities meters on the main utilities to each building, measuring electrical, water, and steam usage.

PDC has been determined to be a "Historic District". The historic district status of our buildings greatly reduces the opportunities to reduce consumption by remodeling to increase energy efficiency. Additionally, the closure of the general treatment portion of the facility has been reversed to a degree, increasing energy consumption. Many buildings that were previously closed and vacant has been revived for other uses by DDS and other state entities in response to local wild-fires and the pandemic. Buildings that were vacant are now housing STAR program clients, Cal Fire occupancies, and COVID surge buildings.

A current project where the Department ran into a roadblock with the Office of Historic Preservation (OHP) was the PDC Administration Building window replacement project. The PDC Administration Building is original to the campus and is the only building over 100,000 square feet. The original scope of work involved changing out all existing single pane windows with more energy

efficient double pane windows. However, with PDC deemed as a historic district, the project required OHP's approval. OHP denied the request which prolonged the project timeline and added additional cost to the project. Working with DGS to come up with an alternative solution, it was decided to install interior storm windows instead. The theoretical R value measuring resistance to heat gain or loss on the interior storm windows is estimated to increase from R value of 1 to R value of 3-3.5. Any future project involving the renovating of any existing, exterior buildings may require additional time and funds.

In the Department's Five-Year Capital Outlay Plan, the Department identified a project to replace six 70-year-old buildings with ten, adding approximately 110,000 square feet of more environmentally sophisticated residential buildings to accommodate DDS' service provision needs into the future. DDS will be working with DGS Sustainability team on the design and DGS will be the construction lead.

These replacement residential buildings will be located on the grounds of the existing Porterville DC. Therefore, all energy parameters as detailed in this Chapter will be applicable to these future buildings. The new buildings will be designed and constructed to all modern codes including Title 24 energy requirements. The buildings will be LEED certified and designed to incorporate on-site renewable energy generation.

Zero Net Energy (ZNE)

Reporting on Existing Building ZNE

Table 3.3 Zero Net Energy Buildings

Status of ZNE Buildings	Number of Buildings	Floor Area (ft^2)	% of Building Area
Buildings Completed and Verified	0	0	0%
Building in Design or Under Construction	0	0	0%
Building Proposed for Before 2025 (but not yet in design)	10	110,330	5%
Addtl. Exist. Bldg. Area within 15% of ZNE target EUI and have EE projects planned	1	29,075	1%
Totals for ZNE Buildings by 2025	11	139,405	6%
Totals for All Department Buildings by 2025	200	2,313,218	100%
% ZNE by 2025	6%	6%	

Planning Narrative of Table 3.3: Zero Net Energy Buildings

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

Given the age of the DDS building portfolio and the limited life expectancy associated with their use, DDS has determined that it is not cost effective to pursue ZNE projects on existing buildings.

New Construction Exceeds Title 24 by 15%

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

New Buildings Exceeding Title 24 by 15%	Number of Buildings	Floor Area (ft^2)
Completed Since July 2012	1	29,075
Under Design or Construction	0	0
Proposed Before 2025	10	110,330

DDS received a Certificate of Occupancy on a single building (new main kitchen at PDC) in 2014. The new Main Kitchen is part of the Secure Treatment Program facilities and utilizes electricity and natural gas for climate control. The building is LEED Gold certified. This parameter will be made part of the building plans and specification requirements for all proposed new buildings.

Existing Buildings Energy Efficiency

Reporting on Energy Efficiency for Existing Buildings

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

Year	Floor Area (ft^2)	Total Source kBTU Consumption	Department Average EUI (Source kBtu /square foot)
Baseline Year 2003	**2,188,979**	**894,590,000**	**217**
2013	**2,190,863**	**523,790,459**	**203**
2014	**2,285,060**	**411,446,791**	**180**
2015	**2,313,218**	**410,314,586**	**177**
2016	**2,313,218**	**450,267,752**	**195**
2017	**2,313,218**	**434,106,024**	**188**
2018	**2,313,218**	**427,847,713**	**185**
2019	**2,313,218**	**420,139,949**	**182**
2020	**2,313,218**	**417,976,695**	**181**
2021	**2,313,218**	**426,969,439**	**185**
2022	**2,313,218**	**391,410,385**	**169**
% Change 2003-2020	**6%**	**-56%**	**-22%**

Narrative for Table 3.5: Department-Wide Energy Trends

Table 3.5 details the last several years of energy use for the two existing facilities that were operated through 2022 against the 2003 baseline. Energy use has been reduced by 669,018,796 kBTU or 75 percent.

Energy reduction trends are expected to continue as one existing facility is closed and/or downsized. Other than facility steam surveys in 2011 and the lighting replacement projects referenced above that were conducted in 2012. DDS has not conducted any major energy reduction or facility retrofit projects designed to reduce energy consumption.

Apart from the Porterville STP, the ongoing closure of DDS facilities and the questionable use of any remaining buildings, pay back periods associated with large scale efforts precluded such projects. PDC completed an Energy Management System study as part of the pursuit of a comprehensive control system that will be installed after the facility master plan is finalized. Additional energy efficiency projects are underway at PDC, both a boiler and chiller upgrade are under construction.

Because of the ongoing closure activities and the rate at which buildings are being closed, there are no plans to conduct energy surveys at this time. Building systems continue to be maintained in accordance with manufacturer guidelines. DDS will not conduct any energy projects prior to completing the current closure activities and master planning of PDC.

Energy Savings Projects

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
2014	N/A	1,210,503	5%
2018	N/A	110,712	52%
2019	N/A	1,210,503	52%
Total			

Planning Narrative for Table 3.6 Energy Savings Projects 2021-2022

DDS facilities always looks to include energy efficiency upgrades when possible, during facility repair/ remodel projects. No energy surveys have been conducted during the past 2 years. DDS plans to reach out to DGS Office of Sustainability in the future to conduct energy audits.

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
	None Completed	None Completed	None Completed

Planning Narrative for Table 3.7 Energy Audits/Surveys Completed or In-Progress

DDS facilities have not completed any energy audits during the 2021-2022 timeframe. DDS plans to complete energy audits in the future as funding is available.

Demand Response (DR)

Participating in DR Utility Programs & Participating in DR Events

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	0	0
Number of Buildings Participating in 2022	0	0	0
Planned Number of Buildings that will Participate in 2023	206	N/A	N/A
Total Number of Department Buildings	206		
2022 Department Buildings Participating (Percent)	0 %	0 %	

Planning Narrative for Table 3.8: Demand Response (DR) Program Participation

Fairview DC does not participate in demand response currently but is pursuing enrolling in a DR program. The facility is in a warm shut down and energy consumption is at minimum levels.

PDC has not formally participated in demand response because PDC is a 24-hour facility that cares for clients with special needs with a hospital on grounds. Porterville Developmental Center is currently enrolling in a demand response program with Enersponse to facilitate DR participation where feasible.

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			
On-Site Renewables Planned	0			

On-Site Renewables Totals	0			
Department-Wide Total Energy Use (kWh equivalent)	-	-		100
Current Off-Site Renewables	0			
Planned Off-Site Renewables	0			
Off-Site Renewables Combined Current & Planned	0			
Current Combined On-Site and Off-Site Renewable Energy	**0**			
Additional Planned On-Site and Off-Site Renewables	0			

Planning Narrative for Table 3.9, for all Existing Building Renewable Energy

DDS facilities do not produce any on-site renewable energy currently. Porterville Developmental Center is in discussion with DGS regarding a solar array for the facility. The project is still in the pre-design/ study phase.

Monitoring-Based Commissioning (MBCx)

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)
PDC	**All**	**Porterville**	**1,086,264**	**Varies**	**Var.**	**No**	**NA**	**NA**
FDC	**All**	**Fairview**	**1,102,715**	**Varies**	**Var.**	**No**	**NA**	**NA**

Planning Narrative for Table 3.10: MBCx Status of Buildings

PDC has installed EMCS only on the HVAC systems. Because the HVAC on each building are replaced at various times, there are multiple EMCS being utilized. This has created issues with stocking different parts and electronics due to incompatibility. There are also different programming languages from one manufacturer to another. Each manufacture requires a specific

software/hardware and must be run on separate servers or compartmentalized servers; creating challenges for the IT division to maintain multiple servers that essentially performs the same function. The different systems also require separate reporting files, resulting in difficulties with training staff and spending extra time to compile and format the data from various reports into one file.

A comprehensive EMS study was previously completed. However, until a comprehensive master plan for the facility is completed, MBCx activities will not be pursued.

Building Controls

Reporting on EMS/BMS/Controls Building Capability

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	100	**100**
HVAC: Smart Thermostats	**NA**	**NA**	**NA**
Other: _____			

Planning Narrative for Table 3.11: EMS/BMS/Controls Building Capability

DDS facilities are actively upgrading BMS controls during deferred maintenance and special repair projects. Structures utilizing outdated controls on equipment are upgraded to current standards during the maintenance process. Funding and access are two obstacles that DDS faces when upgrading buildings. Due to the nature of the facilities DDS can only have so many buildings unoccupied during construction at any given time. Additionally, funding is limited and must be shared with other maintenance and repair issues to keep the facilities operational.

Energy Reduction Strategies - Best Management Practices (BMPs)

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

DDS has implemented many Best Management Practices (BMPs) throughout the two developmental centers where feasible. BMP improvements actively being implemented include: occupancy sensor installation, replacing incandescent

and fluorescent lighting with energy efficient LED lighting, ensuring new equipment purchases are energy star rated, replacing aging refrigerators with more efficient models, installing programmable thermostats in buildings where EMS/ BMS is not feasible. Due to the age of the facilities lighting and HVAC control options are sometimes limited and cost to upgrade is unfeasible. DDS is actively pursuing reducing energy consumption when funding is available.

CHAPTER 4 - WATER EFFICIENCY AND CONSERVATION

Department Mission and Water Use

DDS currently operates two State developmental centers (DCs) which are licensed and certified as Intermediate Care Facility/Developmentally Disabled (ICF/DD) services. DDS also operates one smaller, state-operated community facility (CF) licensed as an ICF/DD facility.

The primary mission of the DC/CF facilities is to provide 24-hour habilitation and treatment services for residents with developmental disabilities designed to increase levels of independence, functioning skills, and opportunities for making choices that affect a person's life including the identification of services and supports and options for transition into the local community.

A person-centered planning approach is utilized, involving the resident and the parents or other appropriate family members or legal representatives, developmental center, and regional center staff, to identify and meet service and treatment needs of the residents. Services are designed to include activities that involve all aspects of daily living including residential services through skill training, specialized medical and dental healthcare. Physical, occupational, and speech therapies are provided, as are language development, leisure, and recreational opportunities. In addition, residents under age 22 attend school either in the community or in DC/CF classes. Adults participate in a wide variety of vocational and skill-development programs both at the DC and/or in the local community.

DDS' two state owned campuses are comprised of 206 structures which total approximately 2,313,218 square feet of space. Building types include but are not limited to residential housing units; public and support buildings such as auditoriums, chapels, plant operations shops, offices, warehouses; medical clinics, labs, and hospitals; schools, and kitchen buildings. PDC General Treatment Area has closed and FDC is currently in warm shut down.

PDC has extensive water production facilities and produces all of their own water from groundwater sources. FDC purchases its water from the local water district. Table 4.1 details total purchased water. Only FDC purchases water.

Reporting on Total Purchased Water

Table 4.1: Total Purchased Water

Purchased Water	2021 Quantity	2022 Quantity	2021 Cost ($/yr.)	2022 Cost ($/yr.)
Potable	34,73500 gal	31,865,548 gal	NO DATA	NO DATA
Recycled Water	0	0	0	0

Reporting on Properties with Largest Purchased Water Use per Capita.

Table 4.2: Properties with Purchased Largest Water Use Per Capita

Building Name	Area (ft2)	# of Building Occupants	Total 2022 Gallons	Total 2022 Irrigation in Gallons (if known)	Gallons per Capita
PDC	1,210,503	1,600	110,840,800	NO DATA	Not Valid
FDC	1,102,715	NA	31,865,548	NO DATA	Not Valid
Total for Buildings in This Table	2,313,218		142,706,348		---
Total for All Department Buildings	2,313,218	1,600	142,706,348		89,191
% of Totals	100 %		100 %		---

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 (ft2)
FDC	1,038,499
Total Landscaping area for Buildings in This Table	1,038,499
Total Landscaping for All Department Buildings	1,038,499
% of Totals that is large landscape	100 %

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	43,435	219,363,400	13.84

2018	43,435	165,880,400	10.46
2019	43,435	147,268,300	9.29
2020	43,435	155,033,100	9.78
2021	43,435	153,981,400	9.71
2022	43,435	142,706,348	9.00
2024 Goal	43,435	131,778,135	8

Reporting Narrative on Purchased Water Use Trends from 2010 to Present

Per capita usage cannot be determined with meaningful accuracy. The centers operate on a 24-hour basis, many visitors and guests are intermittently on grounds and several buildings are leased and/or loaned to other state entities that are not under the control of DDS.

DDS has engaged in landscape turf reduction, irrigation efficiency enhancement projects, and leak detection and reduction projects. DDS recognizes that landscaping is a significant contributor to the overall water use of our facilities and efforts with regard to landscaping water use reductions have contributed significantly to the overall reduction of water use at our facilities.

Based on reported water consumption volumes, department wide water consumption is down 61.6 percent from the 2010 baseline. These reductions have been achieved by a combination of facility reduction and consolidation efforts, numerous conservation projects, and public awareness campaigns directed at staff and visitors to the centers.

Reporting on Total Purchased Water Reductions from 2010 to Present

Table 4.5: Total Purchased Water Reductions Achieved in Gallons

Purchased Water Use 2010 Baseline totals (Gallons) X	2021Totals (Gallons) Y	2022 Totals (Gallons) Z
219,363,400	153,981,400	142,706,348
+ or -Gallons Compared to Baseline Year	-65,382,000	-76,657,052
Department- Wide Reduction as a % from 2010 baseline	-30%	-35%

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
Water Conservation achieved	Water Conservation achieved	Water Conservation achieved	Water Conservation achieved	Water Conservation achieved	Water Conservation achieved	Water Conservation achieved

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

Water conservation achieved.

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
NO CURRENT PROJECTS			

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

No projects planned.

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
No projects planned			

Planning Narrative for Future Indoor Water Efficiency - Building Priority Projects

Indoor water efficiency achieved.

Planning Narrative on General Water Management BMP

General water management BMP achieved.

Planning Narrative on Leak Detection and Repair BMP

Leak detection and repair BMP achieved.

Planning Narrative on Kitchen Water Conservation BMPs, Fixtures

Kitchen water conservation BMP achieved.

Planning Narrative on Laundry Facilities Water Conservation BMPS

No data.

Department Total Nonpurchased Water

Reporting on Total Nonpurchased Water Excluding Water Reuse or Recycling

Table 4.8: Department-Wide Nonpurchased Water Use

Year	Groundwater Basin(s) Name	Number of Domestic or Irrigation Wells	Groundwater Use in Gallons	Surface Water Use in Gallons	Total (Gallons/ Year)
Baseline Year 2020	Tule River Basin	6	120,209,027	N/A	120,209,027
2021	Tule River Basin	6	119,669,249	N/A	119,669,249
2022	Tule River Basin	6	110,840,817	N/A	110,840,817

Reporting Narrative for Nonpurchased Water

Tasks that use nonpurchased water include drinking water, bathroom and kitchen faucet, fire protection system and landscaping irrigation. The source of the nonpurchased water is from well water and uses nonpurchased water daily. There is no seasonality to the use of nonpurchased water.

Reporting Narrative for Nonpurchased Water Use Trends

The Department's nonpurchased water use trends downward from the baseline year 2010. The Department will continue to plan for living landscape projects. Barriers to reducing nonpurchased water use include funding and staffing availability.

Planning Narrative for Nonpurchased Water Unavailability.

The Department's plan to reduce its use of nonpurchase water includes turf replacement with hardscape, mulched planters, and decomposed granite features. Funding for this project was requested through DGS 2022 Water Grant Program; however, funding for the program was not restored. With no secure funding for this project, there is currently no implementation date. The Department's plan if this water is no longer available is to drill new water wells and consolidate with other water systems as needed.

Department Water Energy Nexus Reporting

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

Boiling water reuse achieved.

Planning Narrative for Boiler Efficiency

Boiler water use efficiency achieved.

Reporting on Cooling Towers' Water Use

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 is currently completing a cooling tower replacement project.

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 Needs Inventories Summary

Table 4.11: Summary of Boilers Needs Inventory

Number of meters to purchase and install	Water Treatment	Other
Totals	No boiler water treatment needs.	

Planning Narrative for Boilers Needs

There are no boiler water treatment needs at this time.

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	
Other	

Planning Narrative for Cooling Systems Needs

No cooling system needs. There is a new cooling system replacement project currently underway.

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			2
2021			2
2022			2

Planning Narrative for BMPs for Building Boilers and Cooling Systems

Building boilers and cool systems BMPS will be achieved. The boiler equipment project and new cooling system project are scheduled for completion by end of 2023.

Department Outdoor Water Use:

Reporting on Outdoor Irrigation Hardware Inventory

Table 4.14: Summary of Outdoor Irrigation Hardware Needs Inventory

Irrigation Hardware Type	Total Hardware Needed
Separate meters or sub-meters	No Data
Irrigation controllers required with weather or soil moisture adjustment and flow sensing capabilities	No Data
Backflow prevention devices	No Data
Flow sensors to be purchased and installed	No Data
Automatic rain shut-off devices	No Data
New pressure regulators	No Data
New hydro-zones	No Data
New valves	No Data
Filter assemblies	No Data
Drip irrigation emitters	No Data
Booster pumps	No Data
Rotary nozzles or other high efficiency nozzles	No Data

Planning Narrative for Outdoor Irrigation Hardware Needs

The Department plans to conduct a survey and study by 2026 to obtain the necessary data to determine if there is a need to update outdoor irrigation. The next steps would be to secure funding to conduct a survey and study to prioritize projects' needs.

Reporting on Outdoor Irrigation Hardware Water Efficiency Projects

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			
2021			
2022	No Current projects		

Planning Narrative for Irrigation Hardware Water Efficiency Projects

Upgrades to irrigation hardware complete.

Planning Narrative on Irrigation Hardware Maintenance BMPS

The Department plans to conduct a survey by 2026 to gather the necessary data to determine if there is need for irrigation hardware BMPs. The next step would include securing funding to conduct a survey.

Reporting on Living Landscape Inventory

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)
PDC	4,100,886	2	58,222 Tule	Yes	No

Reporting Narrative on Living Landscape Inventory

There is a gazebo structure and a small, designated landscape area with some trees that are designated memorials, estimated total in about 2,000 square feet. These historical features and designated memorials do utilize grass as integral to the meaning and setting. The Department will continue to provide the necessary water to the designated memorial landscape area; however, it will not impact the water efficiency and conservation planning.

Reporting on Living Landscape Upgrades 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
PDC		2,438,720		TBD

Planning Narrative on Living Landscape Upgrades for the Next 5 Years

The Department had submitted a landscape project through DGS's Water Grant Program. The landscape project included deliverables of a landscape design to reduce water usage for irrigation. Over the next 5 years, the department plans to secure funding for the landscape projects.

Planning Narrative for Remaining non MWELO Compliant Living Landscape Upgrades

After achieving the project in the Planning Outline, the department will need to make an assessment as if there are additional landscape area that can be converted to MWELO.

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 CURRENT PROJECTS		

2021	NO CURRENT PROJECTS		
2022	NO CURRENT PROJECTS		

Planning Narrative on Living Landscape BMPs

Living landscape efficiency projects completed.

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

Table 4.18: 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
PDC	4,100,886 sq. ft.		

Reporting on Achieving Large Living Landscape Requirements

Planning Outline PO4:c: 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
PDC	2,438,720 sq. ft.	NA – Study to be performed as funding becomes available	Tule	1	2025

Planning Narrative on Achieving Large Living Landscape Requirements

PDC is currently served by a single meter for all water consumption on the campus. Water treatment plant production is the meter data source. Additionally, the configuration and number of different landscape areas and looped redundancies within the system will require significant funding to

develop a suitable metering system for water budgeting and monitoring to be carried out. Therefore, a large landscape water budgeting program is not in place at this time but may be available as funding permits. A comprehensive initial study will be conducted to identify additional resource needs.

Critically Overdrafted Groundwater Basins and Water Shortage Contingency Plans

Reporting on Buildings in Critically Overdrafted Groundwater Basins

Table 4.19: Buildings in Designated Critically Overdrafted Groundwater Basins

Building Name	Basin Name	Amount of water Used 2021 (Gallons)	Amount of water Used 2022 (Gallons
PDC	Tule Basin	119,669,249	110,840,817

Reporting on Buildings with Urban Water Shortage Contingency Plans

Table 4.20: Buildings with Urban Water Shortage Contingency Plans

Building Name	Name of Water Supplier with Urban Water Shortage Contingency Plans	Year of Publication or Update
No buildings subject to plans		

Planning Narrative for Urban Water Shortage Contingency Plans

No buildings subject to plan.

Reporting Narrative for Department's Contingency Plan

The Department does not have a solidified water supplier's contingency plan. If the well production required a 50% reduction in water use at PDC, the Department would request for a production of another well source or work with local water agencies (such as the City of Porterville) if another well source cannot be obtained in order to keep PDC open and functioning.

Planning Narrative on Department's Contingency Plan

The Department's plan for mitigating a 50% or more reduction in water would be to complete the landscape turf reduction project and to conduct a water

survey to identify what other water reduction projects can be completed. Due to the mission and the community being served at PDC, the Department cannot move its critical operations due to prolonged water shortage supply from the water supplier.

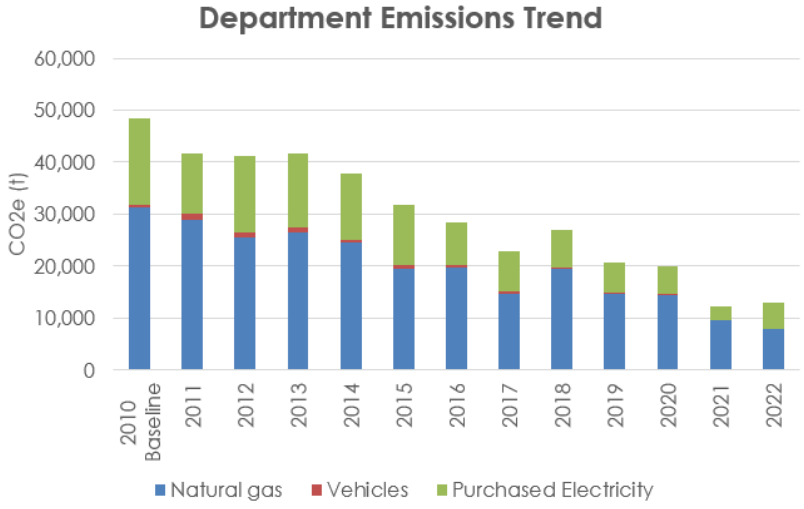
CHAPTER 5 - SUSTAINABLE OPERATIONS

Greenhouse Gas Emissions

Table 5.1: GHG Emissions since 2010 (Metric Tons)

Emissions Source	Natural gas	Vehicles	Purchased Electricity	Total
2010 Baseline	31,331	408	16,584	48,323
2011	28,916	1,095	11,617	41,628
2012	25,520	918	14,815	41,253
2013	26,506	1,044	14,212	41,762
2014	24,441	562	12,924	37,927
2015	19,569	545	11,633	31,748
2016	19,662	586	8,171	28,419
2017	14,566	581	7,647	22,794
2018	19,475	322	7,116	26,913
2019	14,641	190	5,939	20,770
2020	14,384	235	5,330	19,949
2021	9,577	105	2,560	12,242
2022	7,793	82	5,119	12,994
% Change since Baseline	-75%	-80%	-69%	-73%

Graph 5.1: GHG Emissions since 2010



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

Our agency has not yet reached its GHG goals; DDS is actively pursuing energy efficiency upgrades, on site renewable energy options, fuel efficient and zero emission vehicles. The age of our buildings as well as built infrastructure presents considerable challenges to meeting NZE/ GHG goals. Through pursuing new energy efficiency projects DDS intends to reduce GHG as much as possible in the coming years.

Carbon Inventory Worksheet

Planning Narrative for Carbon Inventory Worksheet

DDS has completed the carbon inventory worksheet.

Building Design and Construction

New Building LEED Certification

Table 5.2: New Building Construction since July 1, 2012

Building Name	LEED Certification Type & Level Achieved	Commissioning Performed (Y/N)
New Main Kitchen	**Gold**	**Y**

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

DDS received a Certificate of Occupancy on a single building (new main kitchen at PDC) in 2014.

DDS employs a team of qualified professionals on all major renovation and new construction projects. When necessary, the construction team is augmented with consultant specialists. DDS incorporated all mandatory and voluntary measures of the California Green Building Standards Code (CALGreen) as it relates to new construction into its current operational plans at all facilities, effective since 2013.

LEED for Existing Buildings Operations and Maintenance

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
1	**0**	**0**

Planning Narrative for Table 5.3 Large Building LEED Certification

The only building greater than 50,000 square feet is the Administration Building located at PDC. Due to its age and constructed materials, the building will need extensive renovation to obtain current CALGreen Standards. DDS has determined that LEED-EBOM certification is not a cost-effective option. However, PDC is renovating the building with new energy efficient storm windows as well as other minor energy efficiency improvements such as LED lighting.

Indoor Environmental Quality (IEQ)

Daylighting in New Construction

DDS plans to incorporate daylighting in new construction where possible. Design will depend on building use and construction type.

Planning Narrative for CALGreen Tier 1 Indoor Environmental Quality Measures

INDOOR ENVIRONMENTAL QUALITY, CAL GREEN MEASURES ACHIEVED

Planning Narrative for IEQ-New Buildings and Renovation Measures

Oversight inspection and audit performed by DDS/DGS on all construction projects for DDS.

Planning Narrative for Compliance with Furnishing Standards

All furniture and seating purchased through California Prison Industries Authority (CALPIA) contracts. These contracts mandate full compliance with DGS' Purchasing Standards and Specifications. Oversight inspection and audits are performed by DDS staff on all CALPIA contracts. This ensures compliance with DGS' Purchasing Standard and Specifications (*Technical Environmental Bid Specification 1-09-71-52,* Section 4.7) and or American Society of Heating, Refrigerating and Air-Conditioning Engineers' (ASHRAE) *Standard 189.1-2011* (Section 8.4.2.5).

Planning Narrative on Using Green Seal Cleaning Products

All cleaning products are purchased through CALPIA contracts, which mandate full compliance with Green Seal (GS) Standard GS-37: Cleaning Products for Industrial and Industrial Use. Oversight inspection and audits are performed by DDS purchasing staff on all CALPIA contracts.

Planning Narrative for Cleaning Procedures – Various Standards

Purchasing Officers, Housekeeping Supervisors, and General Services Administrators are responsible for ensuring that all vacuum cleaners used in department facilities achieve the Carpet and Rug Institute Seal of Approval; that entryways are maintained as specified in CalGreen Section A5.504.5.1, that cleaning procedures meet the Green Seal GS-42 standard, and that all cleaning procedures follow the Carpet and Rug Institute's *Carpet Maintenance Guidelines for Commercial Applications* and Title 8 Section 3362. Additionally, all cleaning procedures contracted through CALPIA or DGS mandate full compliance with CALGreen and Green Seal specifications. Oversight inspection and audits are performed by DDS staff on all CALPIA or DGS contracts.

Planning Narrative for HVAC Operations

DDS employs a variety of building facility plant operations staff including but not limited to stationary engineers, building trade professionals, plumber, and electricians that perform the various technical procedures and activities required to meet or exceed Green Building Standards. These include, but are not limited to:

- HVAC systems provide no less than the required minimum outdoor air requirements
- A computer-based preventative maintenance program is in place for all HVAC equipment.
- Buildings are purged with outdoor air sufficient for three complete air changes or the minimum ventilation rate allowed in Section 120.1(c)2 of Title 24 for 1 hour before occupancy.

Planning Narrative for HVAC Inspection Requirements

- HVAC systems are inspected at least annually and that all HVAC inspections and maintenance performed are documented. These inspections include:

- Verification of minimum outdoor airflows using hand-held airflow measuring instruments.
- Confirmation that air filters are clean and replaced based on manufacturer's specified interval.
- Air filters used have a MERV rating of no less than 11.
- Verification that all outdoor dampers, actuators, and linkages operate properly.
- Checking condition of all accessible heat exchanger surfaces for fouling and microbial growth, with action taken when fouling is found.
- Checking the first 20 feet of ductwork downstream of cooling coils for microbial growth, take action if growth is found.
- Ensuring that cooling towers are properly maintained and that records of chemical treatment are kept. Retrofit to prevent cooling tower plumes closer than 25 feet to any building air intake.

Integrated Pest Management (IPM)

Reporting on IPM plans

Table 5.4: Integrated Pest Management Contracts

Pest Control Contractor Name	IPM Specified (Y/N)	Contract Renewal Date
No Contractor	**Y**	**N/A**

Planning Narrative for Pest Control Contracts

DDS staff will follow an integrated pest management (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.

Integrated Pest Management Plan developed and implemented in 2016, in response to MM 15-06, issued by DGS. All required elements incorporated into existing and future Pest control contracts, as part of comprehensive plan for long-term prevention.

Fossil Fuel Landscaping Equipment Replacement with Low Emitting Landscaping Equipment

Planning Narrative for Replacing Fossil Fuel Landscaping Equipment

DDS utilizes manual labor when available over fossil fuel equipment. Additionally, electric equipment is being actively purchased and used as a replacement for fossil fuel equipment. As existing landscape equipment reaches the end of its life cycle zero emission replacements are being purchased.

Waste and Recycling Programs

Designated Waste and Recycle Coordinator and Program Basics

Reporting Narrative on Designated Waste and Recycle Coordinator and Program Basics

All buildings at DDS have adequate receptacles for recycled materials and signage. Employee outreach on recycling and waste is regularly scheduled. An annual review of waste and recycling is conducted by the General Services department.

Planning Narrative on Designated Waste and Recycle Coordinator and Program Basics

PER CAPITA DISPOSAL RATE ACHIEVED

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
0.5	**Total Number of Employees:** 1,122 Target: 33.9 Annual: 3.35	**Total Number of Employees:** 1,102 Target: 33.9 Annual: 1.79	685 Tons	359.28 Tons	-69%

	Non-Employee (Patient) Population: 200 Target: 93.9 **Annual 18.77**	**Non-Employee (Patient) Population:** 178 Target: 93.9 **Annual 10.28**			

Reporting Narrative on SARC Report on Total Waste per Capita

PDC subscribes to its local jurisdiction's approved waste hauler (City of Porterville). Every year the City of Porterville submits a report on PDC waste tonnage removed from the facility. Disposal of normal refuse vs recycle refuse are as follows:

- PDC has two roll off bins for bulk cardboard. Bulk cardboard that is not recycled by the facility residential buildings primarily go into these bins. These roll off bins are usually utilized by facility maintenance, skill, and trade departments. Once these bins are full, the City of Porterville hauls off the recycled content and provides an annual tonnage report.

- Patient Residential buildings and offices have their own designated recycle bins that are strategically placed at each residence/office. All recyclable bins are labeled for recycle and color-coded blue. All recyclable items from the residential and office buildings are placed in these designated bins. These Items primarily consists of misc. cardboard, napkins, newspaper, printing paper, shredded paper, aluminum bottles, cans, and etc. This is all in effort to divert recyclable objects from the landfill. All blue recycle bins are picked up by the City of Porterville on a weekly basis.

- All areas throughout the facility have regular refuse bins strategically placed and designated for regular waste. This is for regular waste that is deemed non-recyclable. The City of Porterville picks up and hauls off waste on weekly schedule.

- The increase in disposal waste was due to the pandemic. PDC served as a COVID surge facility with a treatment center included. The increase of waste is due to the procedures of proper clothing barriers, face mask, gloves, gowns, and other personal protective gear from the increased staff from CAL-OES, EMSA and patients.

Mandates and requirements are set by CalRecycle and legilation. PDC makes every effort to comply with all requirements. Education of recycle efforts,

provided recycle bins and separation of refuse generated at PDC ensures compliance. In addition, Numerous reports submitted to CalRecyle (waste management and buy recycle) explain PDC's compliance. Specifically, the Buy Recycle Report requires specific percentage targets to meet within purchasing recycled content products. Most targets are met within the report. However, some targets cannot be met, because of the frequency of purchasing specific products or cost effectiveness and poor product quality of products. Explanations for any noncompliance are summarized in the Buy Recycle Reports. From there, CalRecycle reviews the report and communicates with PDC about its progress. The biggest obstacle that contributes to noncompliance for PDC is the downsizing and shut down of half the facility over the past 5 years. The need for frequent purchases withing all reportable categories has gone down significantly. This is explained on the Buy Recycle Report.

Targets that exceed progress reflect efficient purchasing, data tracking, facility recycle education and adequate receptacles.

Planning Narrative on SARC Report on Total Waste per Capita

PER CAPITA DISPOSAL RATE ACHIEVED

Recycling Program and Practices

Reporting Narrative on Recycling Program and Practices

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

Most items generated, cardboard, paper, aluminum products (bottles cans), dietary tin cans, shredded paper, misc. items are recycled and diverted from the landfill from PDC.

Planning Narrative on Recycling Program and Practices

RECYCLING PRACTICES ACHIEVED

Organics Recycling

Reporting Narrative on Organic Recycling Program and Practices

Dietetic Services places all organic food scrap that does not go into the garbage disposal into designated facility dumpsters provided by the city of Porterville. The dumpsters provided are for organic waste only. For Dietetic Services the key players are the Dietetics Director, Supervisors and all Food Service staff. In conjunction with the named above key players, all PDC employees and other misc. departments may participate in utilizing the facility provided organics disposal dumpsters. Custodial staff, level of care staff and any other PDC staff may use the organic waste dumpsters.

PDC have adequate bins and appropriate signage. Along with PDC's main kitchen's organic waste dumpsters, all food serving and food prep serving areas within the facility have organic waste dumpsters. Dietetic Services places all organic food scrap that does not go into the garbage disposal into designated dumpsters provided by the city of Porterville. Facility hosted organic waste dumpsters are provided in all food serving and food prep serving areas within the facility. Currently, the Department have no challenges with organics recycling.

Planning Narrative on Organic Recycling Program and Practices

Organic Recycling requirements achieved.

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
Main Kitchen	**29,075**	**N/A**	**Yes**	**No**

Reporting Narrative on Edible Food Recovery Program

The Department current does not have an edible food recovery program.

Planning Narrative on Edible Food Recovery Program

The Department is in the process of developing a partnership with one or more community organizations and will be in compliance prior to January 1, 2024.

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
Main Kitchen	**Cook/Chill**	**All Reusable**	
Unit Kitchens	**Cook/Chill**	**All Reusable**	
Unit Kitchens	**Isolation meals**	**Recyclable**	**Cal-Recycle List**

Planning Narrative on Food Service Items Program

Food Service Items Program Achieved.

Hazardous Waste Materials

Reporting on Hazardous Waste Materials

Table 5.8: Hazardous Waste Materials

Department -Wide Hazardous Material Name	Department Total Hazardous Material Amount (Tons)
Asbestos	50.8108
Acetone (Used)	0.108
Mercury (Amalgam)	0.0035
Paint	0.293

Reporting Narrative for Hazardous Waste Materials

Porterville Developmental Center generates various hazardous wastes through its day-to-day operations. The wastes most commonly generated are asbestos, generally flooring or insulation, from abatement projects. Amalgam ampules are generated from the dental clinic and used paint waste is generated by the paint department. PDC has contracts in place to have all hazardous wastes removed from the facility in a timely manner as well as having a specific locked storage building on site for hazardous wastes.

Planning Narrative for Hazardous Waste Materials

The department has minimized hazardous wastes to the extent possible.

Universal Waste

Reporting on Department-Wide Universal Waste Materials

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	YES
CRT glass	YES
Lamps	YES
Mercury Wastes	YES
Non-empty aerosol cans	YES
PV modules	YES

Planning Narrative for Department-Wide Universal Waste Materials

Department wide universal waste materials disposal achieved.

Material Exchange

Reporting Narrative on Department-Wide Material Exchange

Planning Narrative on Department-Wide Material Exchange

These programs promote the exchange and reuse of unwanted or surplus materials from your agency. The exchange of surplus materials reduces the cost of materials/products for the receiving agency and results in the conservation of energy, raw resources, landfill space, including the reduction of greenhouse gas emissions, purchasing and disposal costs.

PDC conducts bid sales of items no longer in use or damaged, broken etc. These items are surveyed out then sold through bid process. Items no longer used at PDC can be sent to other state agencies who may need the items. E-Waste is compiled, manifested, and sent to CALPIA for inmate job training programs. Donations of items not needed or no longer in use by the facility may be donated to approved donor recipients though specified procedures.

PDC intends to continue with their material exchange program into the foreseeable future.

Waste Prevention Program

Reporting Narrative on Department-Wide Waste Prevention

Programs in this section support (a) waste prevention: actions or choices that reduce 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.

PDC conducts bid sales of items no longer in use or deemed damaged, broken etc. All items are surveyed and identified to be fixed, repurposed, of restocked before surveying out to be sold through the bid process.

Planning Narrative on Department-Wide Waste Prevention

PDC is planning to further reduce department wide waste by participating in food recovery and donation activities in the near future.

Reuse Program

Reporting Narrative for Department-Wide Material Reuse

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. PDC re-uses material where possible for activities in different departments to reduce costs as well as waste. Additionally removed fixtures/ equipment is often saved for re-use on different buildings when possible.

Planning Narrative for Department-Wide Material Reuse

PDC will continue the reuse program into the future and looks to optimize reuse opportunities when possible.

Employee Waste and Recycling Training and Education

Reporting Narrative for Employee Waste and Recycle Training and Education

Porterville Developmental Center trains and educates employees on waste and recycling through the use of facility bulletins, email newsletters and training. Signage, education, and training is reviewed annually, and no deficiencies were found during the last review.

Planning Narrative for Employee Waste and Recycle Training and Education

EMPLOYEE TRAINING AND EDUCATION ACHIEVED

Environmentally Preferred Purchasing (EPP)

Reporting Narrative for Measure and Report Progress on EPP Spend

The environmental impact of the goods we buy is often larger than the impact of our own department operations. Our department is committed to reducing the environmental impact of our goods and services we purchase. All procurement officers have completed the EPP Training Certification program offered by CALPCA. EPP goods preferred through the contracting bid and award process, and all service contracts ensure that contractors are aware of and must meet SABRC requirements prior to award.
Purchasing Officers, area supervisors, and General Service Administrators are responsible for ensuring that the following EPP standards are adhered to when possible.

- Paint (i.e. master painter's institute certified paint and recycled paint)
- IT goods (energy star rated: computers, monitors and televisions DGS-52161505 Purchasing Standard or meet current specifications of statewide contracts)
- Janitorial supplies and cleaners (EcoLogo, Greenseal certified cleaners, DGS_471318A Purchasing Standard compliant)
- Janitorial supplies, paper products (i.e. State Agency Buy Recycled Campaign (SABRC) compliant and DGS_141117A Purchasing Standard Compliant)
- Desk Lamps (DGS-391115-A Purchasing Standard compliant)
- Office equipment (i.e. EPEAT compliant and EnergyStar rated printers, copiers and DGS_432121A Purchasing Standard compliant for high-end multifunctional devices) and
- Paper products (i.e. Sustainable Forestry Initiative certified, SABRC compliant copy paper, DGS-441200-A Purchasing Standard compliant)
- Remanufactured toner cartridges (available from PIA and statewide contract ID/Number: 1-15-75-61)

Planning Narrative for Measure and Report Progress on EPP Spend

- Increase EPP spend include identifying top five percent of spend with largest opportunity to "green"
- Measure percent EPP spend in comparison to non-EPP spend
- Incorporate EPP criteria in the goods and services the state buys
- Embed sustainability roles and responsibilities into purchasing procedures

- Train buyers in the benefits of buying EPP products, how to apply EPP best practices, the importance of accuracy in recording buys within SCPRS and reporting labor separate from goods in service contracts, and listing EPP goods by line item
- Engage and educate suppliers to offer EPP products when selling to the state

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 (%)
Paint	**12034.33**	**10**	**50**
Paper Products	**404844.70**	**60**	**75**

EPP BMPs

Reporting Narrative for EPP BMPS

EPP BMPS ACHIEVED. DDS strives to reduce environmental impacts such as energy, water and natural resource conservation when making purchases. The department tracks purchases in the SABRC report annually.

Planning Narrative for EPP BMPs

EPP BMPS ACHIEVED

Reporting on EPP Training and Outreach

Table 5.11: 2022 EPP Basic Training Completions

CalHR Classification	Total Number of Staff	EPP Basic Training Completion	Percent Trained	2023 EPP Training Goal
Associate Government Program Analyst	**6**	**6**	**100**	

CalHR Classification	Total Number of Staff	EPP Basic Training Completion	Percent Trained	2023 EPP Training Goal
Staff Services Analyst	**3**	**3**	**100**	
Accounting Officer	**1**	**1**	**100**	

Table 5.12: 2022 EPP Intermediate Training Completions at [Agency Name]

Classification	Total number of staff	EPP Intermediate Training Completions	Percent Trained	2023 EPP Training Goal (%)
NO DATA				

Table 5.13: 2022 EPP Executive Training Completions for Executive Members at [Agency Name]

Executive Member	Title	Date Completed
NO DATA		

Reporting Narrative on EPP Training and Education

NO DATA

Planning Narrative on EPP Training and Education

EPP training and education program planned.

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

Reporting on SABRC Progress

Table 5.14: State Agency Buy Recycled Campaign (SABRC) FY 21/22 Performance

Product Category	SABRC Reportable Dollars	SABRC Compliant Dollars	% SABRC Compliant
Antifreeze	1280.32	1280.32	100
Carpet	NA	NA	NA
Compost and Mulch	2016.45	1443.20	72
Glass Products	NA	NA	NA
Erosion Control Products:	NA	NA	NA
Lubricating Oils	8968.70	8968.70	100
Paint	13760.41	1247.64	9
Paper Products	446319.57	277699.51	62
Pavement Surfacing			
Plastic Products	107818.47	57784.69	54
Printing and Writing Paper	74545.07	54093.93	72
Metal Products	51107.14	43062.51	84
Soil Amendments and Soil Toppings	NA	NA	NA
Textiles	NA	NA	NA
Tire Derived Products	NA	NA	NA
Tires	59198.24	54369.00	92

Planning Narrative for Measure and Report SABRC Progress

Paint, writing, and paper products purchased did not meet the compliance percentage, efforts are being made to meet compliance in the future.

Reducing Impacts

Reporting Narrative for Reducing Impacts

DDS will require that all procurement offices complete EPP and other CalPCA training as available. Contract reviewers and approvers will monitor procurement contracts to ensure compliance to the extent practical.

Appropriate parameters will be included in contract bid specifications for construction contracts, service and transportation agreements, commodity purchases, grants, interagency agreements and Architecture and Engineering (A&E) contracts.

Location Efficiency

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 LEASESES

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
NO LEASED BUILDINGS	
NO LEASED BUILDINGS	
NO LEASED BUILDINGS	

CHAPTER 6 -FUNDING OPPORTUNITIES

Funding Opportunity Climate Change Adaptation

Table 6.1: Climate Change Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
No Priorities				

Funding Opportunities for ZEVs and EV Infrastructure

Table 6.2: EV Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
PDC	**EV Fleet Exchange**	**EVSE Special Funding**	**2021**	**November 2024**
PDC	**EV Charging Infrastructure**	**EVSE Special Funding**	**TBD**	**TBD**

Funding Opportunities for Building Energy Conservation and Efficiency

Table 6.3: Building Energy Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
PDC	**Admin Window Replacement Project**	**Maintenance Budget**	**2018**	**TBD**
PDC	**Solar Project**	**Grant Funding**	**TBD**	**TBD**

Funding Opportunities for Water Conservation and Efficiency

Table 6.4: Water Conservation and Efficiency Priority Projects

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
PDC	**Boiler Project**	**BCP**	**2020**	**Dec 2023**

PDC	**Chiller Cooler System Project**	**Maintenance Budget**	**2018**	**Dec 2023**
PDC	**Water Audit**	**Grant Funding**	**TBD**	**TBD**
PDC	**Drought tolerant Landscape replacement**	**Grant Funding**	**TBD**	**TBD**

Funding Opportunities for Sustainable Operations

Table 6.5: Sustainable Operations Priorities

Building Name	Project	Funding Source	Est. Begin Date	Est. Completion Date
Fossil Fuel Landscaping equipment replacement	**Need Special Equipment**	**Existing Maintenance Budget**	**TBD**	**TBD**
Edible Food program implementation	**Need Procedure Update**	**Existing Overhead**	**2022**	**December 2023**
Environmental Preferred Purchase Training	**Need Staff Training**	**Existing Training Budget**	**TBD**	**TBD**

Full Life Cycle Cost Accounting

Reporting on Life Cycle Cost Accounting

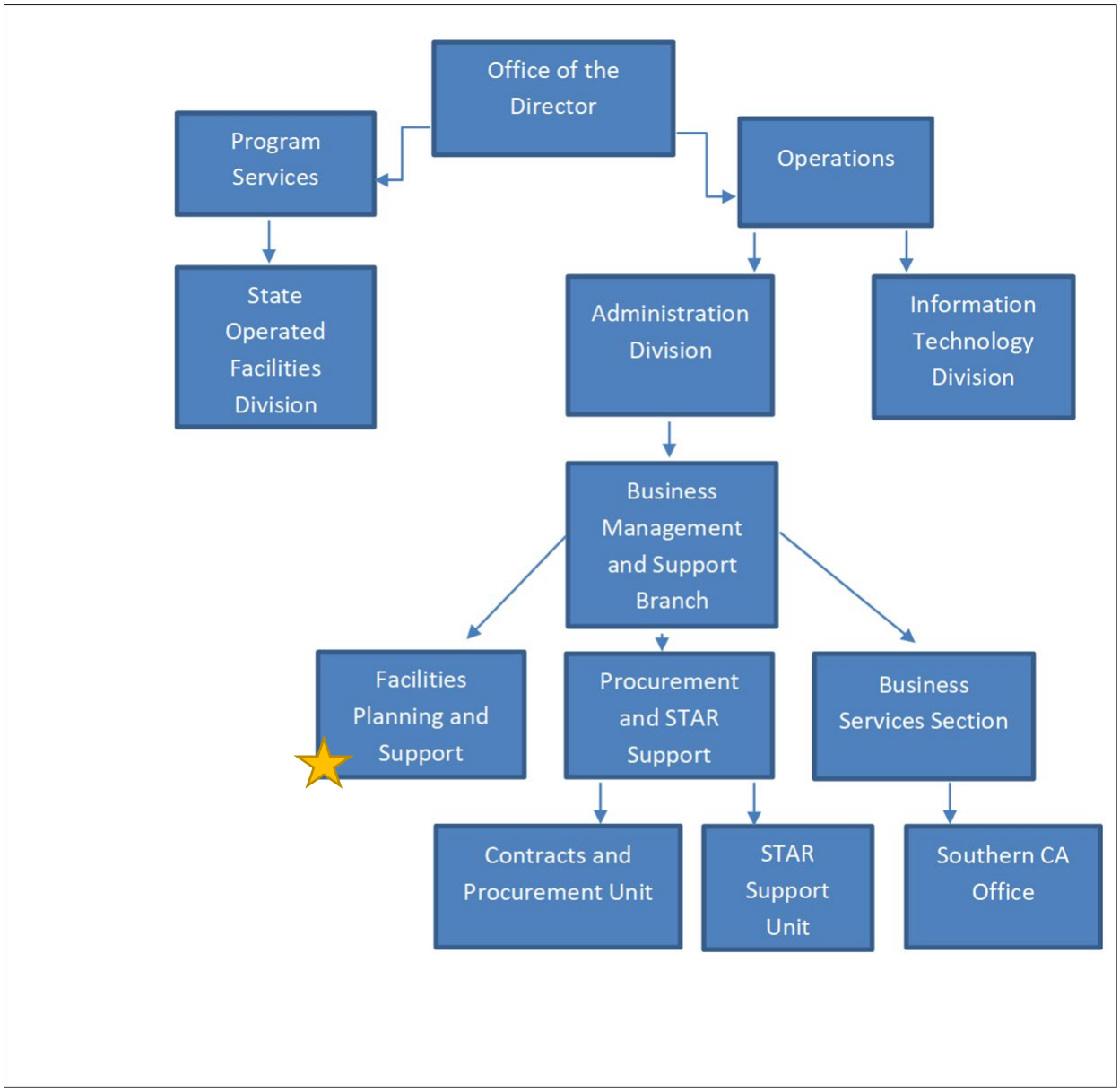
No infrastructure investments.

Planning for Implementing Life Cycle Cost Accounting

No infrastructure investments.

CHAPTER 7 – PUBLIC EDUCATION AND OUTREACH

APPENDIX A – SUSTAINABILITY LEADERSHIP



★ Sustainability Roadmap

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.

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

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 – 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 - 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

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

Climate Change Adaptation

Understanding Climate Risk at Existing Facilities
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy,** Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov). **Shawna Gregg,** PDC Administrative Services Director (ASD), (Shawna.Gregg@pdc.ca.gov). **Frank Chandler,** PDC Assistant Administrative Services Director (AASD), (Frank.Chandler@pdc.ca.gov).

Understanding Climate Risk at Planned Facilities
Individual or division name **Title, role, responsibilities, managers, and other relevant information.**

Integrating Climate Change into Department Planning and Funding Programs
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy,** Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov).

Measuring and Tracking Progress
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy,** Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov).

Zero Emission Vehicles

Incorporating ZEVs Into the Department Fleet
Michael Sanchez, Staff Services Manager II, (Michael.Sanchez@dds.ca.gov). **Juan Ortiz-Rios,** Staff Services Manager I, (Juan.Ortiz-Rios@dds.ca.gov).

Telematics
Juan Ortiz-Rios, Staff Services Manager I, (Juan.Ortiz-Rios@dds.ca.gov).

Public Safety Exemption
N/A

Outside Funding Sources for ZEV Infrastructure
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy,** Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov). **Shawna Gregg,** PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov).

Hydrogen Fueling Infrastructure
N/A

Comprehensive Facility Site and Infrastructure Assessments
Marie Maddy, Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov). **Shawna Gregg,** PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov).

EVSE Construction Plan
N/A

EVSE Operation
N/A

Energy

Zero Net Energy (ZNE)
N/A

New Construction Exceeds Title 24 by 15%
N/A

Reduce Grid-Based Energy Purchased by 20% by 2018
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy,** Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov). **Shawna Gregg,** PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov).

Server Room Energy Use
Jim Switzgable ,Chief Information Officer/Deputy Director (jim.switzgable@dds.ca.gov)

Demand Response
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth,** PDC Chief of Plant Operations III (CPO III), (Dennis.Haworth@pdc.dds.ca.gov).

Renewable Energy
N/A

Monitoring-Based Commissioning (MBCx)
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth,** PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

Financing
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov).

Water Efficiency and Conservation

Indoor Water Efficiency Projects In Progress First initiative
N/A

Boilers and Cooling Systems Projects In Progress
Marie Maddy, Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov).

Landscaping Hardware Water Efficiency Projects In Progress
N/A

Living Landscaping Water Efficiency Projects In Progress
N/A

Buildings with Urban Water Shortage Contingency Plans In Progress
N/A

Green Operations

Greenhouse Gas Emissions
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov). **Marie Maddy**, Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov). **Shawna Gregg**, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler**, PDC AASD, (Frank.Chandler@pdc.dds.ca.gov).

Building Design and Construction
Marie Maddy, Chief of Facilities Planning and Support, (marie.maddy@dds.ca.gov).

LEED for Existing Buildings Operations and Maintenance
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler**, PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth**, PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

Indoor Environmental Quality
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler**, PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth**, PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

Integrated Pest Management
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler**, PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth**, PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

Waste Management and Recycling
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler**, PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth**, PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

Environmentally Preferable Purchasing
Noah Valadez, Branch Manager, (Noah.Valadez@dds.ca.gov) **Shawna Gregg,** PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov).

Location Efficiency
Shawna Gregg, PDC ASD, (Shawna.Gregg@pdc.dds.ca.gov). **Frank Chandler,** PDC AASD, (Frank.Chandler@pdc.dds.ca.gov). **Dennis Haworth,** PDC CPO III, (Dennis.Haworth@pdc.dds.ca.gov).

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