

Sustainability Roadmap 2018-2019: Green Operations

Progress Report and Plan for Meeting
the Governor's Sustainability Goals
for California State Agencies

California Department of Fish and
Wildlife

Edmund G. Brown Jr., Governor

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California Department of Fish and Wildlife Sustainability Roadmap 2018-2019: Green Operations

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Acronyms

CALGREEN	California Green Building Code (Title 24, Part 11)
DGS	Department of General Services
EO	Executive Order
EPP	Environmentally Preferable Purchasing
GHGe	Greenhouse Gas Emissions
IEQ	Indoor Environmental Quality
LEED	Leadership in Energy and Environmental Design
MM	Management Memo
SAM	State Administrative Manual
SCM	State Contracting Manual

EXECUTIVE SUMMARY

The California Department of Fish and Wildlife's (CDFW) mission is to manage California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public.

CDFW is responsible for over 1,000,000 acres of fish and wildlife habitat, managed through 722 properties throughout the state. These properties provide habitat for a rich diversity of fish, wildlife, and plant species and comprise habitats from every major ecosystem in the state. In addition to managing wildlife areas and ecological reserves, CDFW operates 24 fish hatcheries to provide sportfish stock for anglers in California. The department is also responsible for other programs, such as private lands conservation programs that assist landowners with the management of wetlands, riparian habitats, native grasslands and wildlife-friendly farmlands.

Due to the variety of programs and services CDFW offers, its portfolio is very diverse. There are approximately 576 structures located on lands owned by CDFW. Some of these buildings include small hunter check stations, residences, and large offices. The wide variety of locations include labs, fish hatcheries, ecological reserves, wildlife areas, field offices and many more. Of the 722 properties, CDFW owns 86 facilities, leases 116 and the rest of the properties are open wildlife areas with no structures or personnel attached.

CDFW has almost met the Greenhouse Gas (GHG) goal mandated by Executive Order B-18-12, currently at a 17 percent reduction compared to the 2010 baseline. CDFW is committed to reducing its carbon footprint as much as possible and is confident that it will meet its goal. However, CDFW wants to do more and, does not intend to stop at 20 percent. The department is evaluating its portfolio to set goals beyond 2020.

CDFW is evaluating its entire department across many areas of sustainability to see where reductions and improvements can be made. The department has signed up to participate in the Sustainable Purchasing Leadership Council (SPLC) Benchmark pilot with Department of General Services (DGS) and is investigating how to increase Environmentally Preferred Purchasing (EPP) throughout the organization. CDFW will begin using the Smart Location Score where possible when searching for new leases and will ensure that DGS knows the target (73) for the department.

While CDFW currently only has one Leadership in Energy and Environmental Design (LEED) certified building, the department is investigating the feasibility of pursuing LEED-Existing Building (EB) certification for two fish hatcheries which are over 50 thousand square feet in building space. Although there are no new buildings planned in the foreseeable future (beyond the one almost finished), CDFW will work with to adhere to all mandates when managing any future projects for the department.

Finally, CDFW is evaluating its portfolio for all savings possible in the areas of energy efficiency, renewable energy, fleet emission reductions, etc., to reduce the department's GHG levels as much as possible.



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SUSTAINABILITY GOALS

The Governor has directed California State Agencies to demonstrate sustainable operations and to lead the way by implementing sustainability policies set by the state. Sustainability includes the following general initiatives:

- Greenhouse Gas Emissions Reductions
- Building Energy Efficiency and Conservation
- Indoor Environmental Quality (IEQ)
- Water Efficiency and Conservation
- Monitoring Based Building Commissioning (MBCx)
- Environmentally Preferable Purchasing (EPP)
- Financing for Sustainability
- Zero Emission Vehicle (ZEV) Fleet Purchases
- Electric Vehicle Charging Infrastructure
- Monitoring and Executive Oversight

The Governor and legislature have directed state agencies to prioritize sustainable operations. The orders and legislation relevant to operations described in this roadmap are:

Executive Order B-18-12

Executive Order [\(EO\) 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 onsite 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.

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 ten percent with ZEVs, and by 2020 to purchase at least 25% replacement fleet as ZEVs.

Executive Order B-30-15

[EO B-30-15](#) 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 greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030, and reaffirms California's intent to reduce greenhouse gas 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.

State Administrative Manual & Management Memos

The following Management Memos (MM) currently impose requirements for green operations on the department under the Governor's executive authority:

SAM Sections

- Chapter 1800: Sustainability

Relevant Management Memos

- MM 15-04: Energy Use Reduction for New, Existing, and Leased Buildings
- MM 15-06: Building and Grounds Maintenance and Operation
- MM 14-05: Indoor Environmental Quality: New, Renovated, And Existing Buildings
- MM 14-07: Standard Operating Procedures For Energy Management In State Buildings

Relevant Legislation

Assembly Bill (AB) 4, was passed in 1989. The State Agency Buy Recycled Campaign 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 non-recycled products, and submit plans for meeting the annual goals for purchasing recycled content products.

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 Strategic Growth Council to achieve a 10% improvement in the Smart Location Score of new leases compared to the average score of leased facilities in 2016.

GREEN OPERATIONS

Greenhouse Gas (GHG) Emissions

State agencies are directed take actions to reduce entity-wide greenhouse gas emissions by at least 10% by 2015 and 20% by 2020, as measured against a 2010 baseline.

The Department of Fish and Wildlife (CDFW) is very close to meeting the Greenhouse Gas (GHG) goal, currently at 17 percent. CDFW intends to meet its goal, but also wants to be a leader and therefore, will not stop at 20 percent. Currently the department is evaluating its portfolio to set goals beyond 2020. Some of the ways that CDFW has achieved its progress so far and how department will accomplish its goals are described below.

Energy Efficiency

CDFW has participated in a few direct install lighting upgrades using utility programs as one-off projects. The department is currently looking at the portfolio as a whole to determine the potential for savings and will act strategically to ensure maximum savings. The department is considering all opportunities and taking advantage of all partnerships with DGS, utility providers, and other non-governmental organization (NGO). In November of 2017 CDFW implemented a pilot with Pacific Gas and Electric (PG&E) to conduct energy audits and retrofits at two locations. The goal for this project is to complete energy audits and retrofit all CDFW locations currently in PG&E territory, where feasible, starting in early 2018. The project with PG&E will cover approximately 40 properties; the intent is to work with other utility providers, such as Southern California Edison (SCE) and Sacramento Municipal Utilities District (SMUD), as their programs become available.

On-Site Renewable Energy

Currently, CDFW only has two sites with small solar PV systems installed, generating about 48,594 kWh in 2016. CDFW has one fish hatchery in DGS' queue for solar panel installation, which will hopefully go out to bid sometime in 2018. CDFW is also working closely with DGS to determine the feasibility of renewable energy generation at as many sites in the portfolio as possible.

Purchased Renewable Energy

CDFW is not currently participating in any programs, however all utility programs are being researched to determine the feasibility for the department's locations.

Fuel Efficient Vehicles and Zero Emission Vehicles (ZEV)

The activities staff undertake to accomplish the department's unique mission takes them to remote, often off-road, areas of California - from harsh lava-bed terrain, coastal wetlands, high-mountain streams, lakes and meadows, and arid deserts. In order to reach these areas where the wildlife live and thrive, the use of 4-wheel drive pickups and SUVs are the normal mode of transport and make up 90 percent of the total fleet. These vehicles also regularly tow equipment such as trailered boats, snowmobiles and all-terrain vehicles.

This composition of the fleet poses some challenges in working toward the ZEV goals, given the current lack of market availability of ZEVs that allow for both 4-wheel drive and towing capabilities. The department is optimistic that the current trend of global ZEV innovation will

produce these vehicle types in the near future, and that they will be of comparable cost to conventional internal combustion engine vehicles.

Given the current nature and age of the CDFW fleet, vehicles is the department's greatest source and challenges for reducing GHG emissions. While it is getting more challenging for the department to meet the ZEV goals, CDFW is on target for 2018. The department is looking at all possibilities to increase low emitting vehicles into the fleet. DGS released new threshold requirements for replacing fleet items in November of 2017. This allows CDFW to replace fleet items that are older than 5 years of age, which will assist with modernizing the fleet, purchasing more fuel-efficient vehicles, and reducing GHG emissions. CDFW is also awaiting the telematics contract as it intends use on all vehicles.

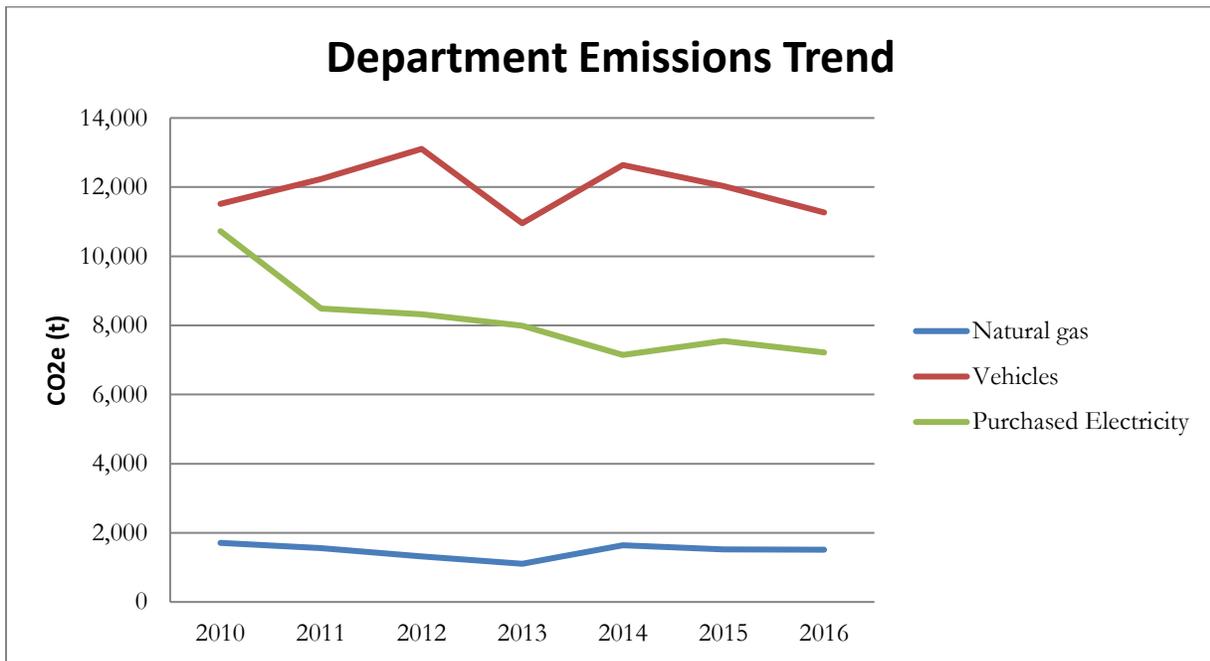
Biofuels and Renewable Diesel

CDFW is also looking at using alternative fuels to reduce emissions. Due to the types of activities needed in wildlife areas, many different types of vehicles make up the fleet, including boats, tractors and other farming equipment. There are some challenges with using biofuels and renewable diesel due to the age and nature of the fleet, but CDFW is creatively problem solving these challenges to come up with innovative solutions so that the department can reduce its fleet emissions. This includes working with DGS and manufacturers when alternatives are introduced Statewide.

Table 1: GHG Emissions since 2010

	2010	2011	2012	2013	2014	2015	2016	Percent Change since Baseline
Natural gas	1,709	1,557	1,314	1,105	1,641	1,517	1,508	-12%
Vehicles	11,514	12,236	13,105	10,955	12,642	12,032	11,266	-2%
Purchased Electricity	10,726	8,490	8,318	7,993	7,146	7,553	7,217	-33%
Total	23,949	22,283	22,737	20,053	21,429	21,102	19,990	-17%

Graph 1: GHG Emissions since 2010



Building Design and Construction

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

Since 2012, CDFW has only had one new building that is currently under construction and one leased space that had a major renovation. The leased space received a Gold, LEED certification for the interior. There are no other buildings planned, but CDFW will adhere to all mandates should the need arise again.

Table 2: New Construction since July 1 2012

Project Name	LEED Level Achieved	Commissioning Performed (Y/N)
CA Dept. of Fish and Game Office-Lab	Gold	Y
Fish Hatchery	N/A	Still under construction

State agencies shall implement mandatory measures and relevant and feasible voluntary measures of the California Green Building Standards Code (CALGreen), Part 11, related to indoor environmental quality (IEQ) that are in effect at the time of new construction or alteration and shall use adhesives, sealants, caulks, paints, coatings, and aerosol paints and coatings that meet the volatile organic chemical (VOC) content limits specified in CALGreen.

Due to the size and limitations of the lands/maintenance section, the department relies on DGS for all major renovations and new construction, and therefore, expects that they follow proper protocol on these matters.

LEED for Existing Buildings Operations and Maintenance

All State buildings over 50,000 square feet were required to complete LEED-EBOM certification by December 31, 2015 and meet an Energy Star rating of 75 to the maximum extent cost effective.

CDFW does not have any LEED-EB certified buildings. There are only two buildings that are over 50 thousand square feet. They are both fish hatcheries and due to the type are unable to get an energy star score. CDFW is investigating the feasibility and cost associated with pursuing LEED certification for these locations.

Table 3: LEED for Existing Buildings and Operations

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. required to achieve LEED EBOM that have achieved it
2	0	0

Indoor Environmental Quality

When accomplishing Alterations, Modifications, and Maintenance Repairs and when relevant and feasible, state agencies shall implement the mandatory and voluntary measures of the California Green Building Standards Code (CALGreen), Part 11, related to indoor environmental quality. Indoor Environmental Quality must also be maintained through the use of low emitting furnishings, cleaning products and cleaning procedures.

CDFW knows the value of indoor air quality, it impacts the environment, employees and all who enter the buildings. The department is committed to meeting and where possible exceeding the standards set forth in [Management Memo 14.05](#) and the CalGreen code. Below are some of the areas that CDFW is making progress.

New Construction and Renovation

Due to the size and limitations of the lands/maintenance section, the department relies on DGS for all major renovations and new construction, and therefore, expects that they follow proper protocol on these matters.

Furnishings

CDFW is currently developing a best practices guide that will help increase and ensure environmentally preferred purchasing (EPP) in all procurement, when feasible. As the programs ramps up, EPP will be part of the internal trainings offered by the department.

Cleaning Products and Cleaning Procedures

CDFW is currently writing language that will be included in all new janitorial contracts that will require vendors to use products and procedures that are Green Seal certified.

HVAC Operation

Locations will be sent a best practices guide annually and asked to review it no less than

quarterly. Further, CDFW is looking into HVAC Optimizations/Maintenance plans with the utilities to ensure that equipment is running as efficiently as possible.

Integrated Pest Management

Department staff and contracted pest management companies 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.

CDFW does not have a formal policy or integrated pest management plan in effect for the department or as part of the pest control contracts. The different regions and locations have their own contracts and deal with a variety of challenges that may not quite fit into the guidance put forth in the [DGS California Best Practices Manual](#) for offices. Most of the facilities are located on areas reserved for wildlife and therefore, critters and a bugs are present. CDFW tries where possible not to use spray pesticides, especially because it could harm wildlife and other sensitive nature areas present.

With the addition of the sustainability unit, CDFW will develop a best practices guide more suited for the department's facilities and will be distributed to all facilities, and is currently working on language that will be written into all new pest control contracts drawing upon resources from the [California Best Practices Manual](#) and Management [Memo 15-06](#), where feasible.

Environmentally Preferable Purchasing

State agencies are required to purchase and use environmentally preferable products (EPP) that have a reduced effect on human health and the environment when compared with competing goods that serve the same purpose.

Reducing Impacts

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.

CDFW has always tried to comply with mandates stated in the State Agency Buy Recycled Campaign (SABRC) reporting, and maintains overall compliance. However, there is no formal EPP program at the department. CDFW is now a member of the SPLC Benchmark pilot through DGS which will provide the department resources for developing a formal EPP program with measurable goals and benchmarks.

The department uses DGS mandated contracts for many goods and services, and has little controls over the specifics of those contracts. However, CDFW is currently writing language to be included in all department contract templates for goods and services that requires vendors to meet stated "green" requirements as outlined by DGS EPP mandates.

In future internal procurement training modules, CDFW will stress the importance of purchasing EPP products that have a lesser or reduced effect on human health and the environment and will direct staff to the State Contracting Manual (SCM) FI\$Cal Chapters 2.B9.0 and 3.B2.0 for guidance and resources. This information will also be included as part of the Procurement Package Checklist.

Paint

Paint is not used in volume yearly at CDFW owned facilities, and the department has no input in the type of paint used for leased buildings.

IT goods and Office Equipment

CDFW is compliant with all requirements, where feasible, for energy saving equipment when purchasing IT goods and other office equipment.

Janitorial supplies and Cleaners

For janitorial services and supplies, CDFW utilizes the state mandated contracts put forth by DGS, when possible. CDFW has no control over these contracts. However, the department is developing language to include on all department contract templates for janitorial products and services that will list out Green Seal and other EPP requirements.

Desk Lamps

CDFW is in the process of updating building lighting wherever possible, and should reduce the need for desk lamps. Those that are still required will be prioritized based on the purchasing standards. In future procurement training modules, CDFW will stress the importance of purchasing EPP lighting fixtures, which meet EPP specifications. This information will also be included as part of the Procurement Package Checklist.

Paper Products

CDFW utilizes the state mandated contract for paper (copier), and also purchases recycled paper from Small Business and Disabled Veteran Enterprise Services vendors for minimal orders.

Remanufactured Toner Cartridges

CDFW purchases toner cartridges that are recycled by using the state mandated toner contracts.

Measure and Report Progress

CDFW is now a member of the SPLC Benchmark pilot through DGS which will provide the department resources for developing a formal EPP program with measurable goals and benchmarks. At this time, the department is unable to determine what factors will be measured as no baseline has been set. All strategies will be considered, and CDFW will implement all feasible guidance given from the SPLC pilot program.

Other strategies to build a strong EPP program include incorporating EPP into future CDFW procurement training classes, which would include separate training modules for EPP and SABRC products. Further, best practices guides as well as EPP information will be included into the Procurement Package Checklist.

CDFW complies with mandates for SABRC and SCPRS to the best of its ability. Compliance exists in most categories of SABRC. CDFW is looking at ways to improve purchasing in those categories that do not quite meet compliance.

Table 4: State Agency Buy Recycled Campaign 2016 Performance

Product Category	SABRC Reportable Dollars	SABRC Compliant Dollars	% SABRC Compliant
Antifreeze	778.28	527.53	67.78
Compost and Mulch	714.44	423.51	59.28
Glass Products	23995.93	19288.88	80.38
Lubricating Oils	19526.59	5286.49	27.07
Paint	7226.54	5291.9	73.23
Paper Products	93611.60	64845.05	69.27
Plastic Products	226971.84	146190.53	64.41
Printing and Writing Paper	55671.74	40467.98	72.69
Metal Products	179769.94	128409.70	71.43
Tire Derived Products	62417.76	59714.23	95.67
Tires	115460.57	0	0

There are only two categories that the department has not yet met the target for, tires and lubricating oils. There are safety concerns within the department about using retreaded tires as well as the tires do not meet the necessary requirements for the department’s Law Enforcement Vehicles. CDFW is looking into ways to increase the use of retreaded tires and/or looking for alternatives that meet the EPP standards while not compromising functionality or safety for department use. CDFW is slowly increasing the use of re-refined oil products, and is looking at ways to incorporate this use more within the fleet.

CDFW hopes that once the Green Buyer website is finished it will be a useful tool for determining the commodities that have the greatest potential to “green”. In the meantime, the department is waiting for further guidance from the SPLC Benchmark pilot on how to proceed with increasing EPP spend and setting appropriate targets.

However, while we are waiting to finish the benchmark cohort, there are some categories that have been identified with potential to increase environmentally friendly purchasing but unfortunately, due to data issues resulting from the Fi\$Cal transition, exact percentages cannot be determined at this time. It is the hope that 2017 will have better data on EPP spend with the new Fi\$Cal system coming online.

Table 5: Commodities categories with the greatest Potential to Green

Commodity	2016 Total Spend (\$)	2016 Percent EPP Spend (%)	EPP Target (%)
Tires	115460.57	0	50 %
Clothing	Unavailable	Unavailable	
Lubricating Oils	19526.59	5286.49	70 %
Cleaning Products	Unavailable	Unavailable	

Sustainability Development and Education

CDFW will incorporate language in all solicitations and statements of work, to address EPP and the importance of the environment. In addition, the department will include the importance of purchasing of EPP products in future CDFW internal trainings. Finally, a dedicated staff person has been identified to increase and formalize an EPP program. CDFW is researching and creating a formal plan to identify opportunities to communicate with bidders and vendors on all items including EPP.

Total Number of Employees Assigned as Buyers: 400

CDFW has created internal training courses due to the lack of availability and offerings of the CalPCA courses. In future trainings, EPP will be included. The department strongly encourages that all buyers take the course, but at this time it is not mandatory. CDFW was not able to access data on buyers' EPP training at this time, but is looking into the option of making training mandatory for all buyers.

Location Efficiency

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

CDFW's goal is to have an average location efficiency score increase for all new leases of 10% higher than the average measured on Jan 1 2017. The baseline score is currently 66.67 Smart Location Calculator (SLC) and the new department target is 73 SLC.

Table 8, lists the only lease that began after January 2017, many other leases are currently in negotiation. The lease below was executed in mid-2017 before the roadmaps were due, and CDFW was not aware of the SLC score and baseline at that time. However, the property management team is now aware of the score, the baseline, and the requirement. Going forward, CDFW will work with DGS to try and meet the goal of 73 SLC or better on all new leases.

Table 6: Smart Location Score for new Leases

Facility name	Smart Location Calculator Score
Santa Rosa	43
Average	43
Baseline	66.67
% change from Baseline	36%

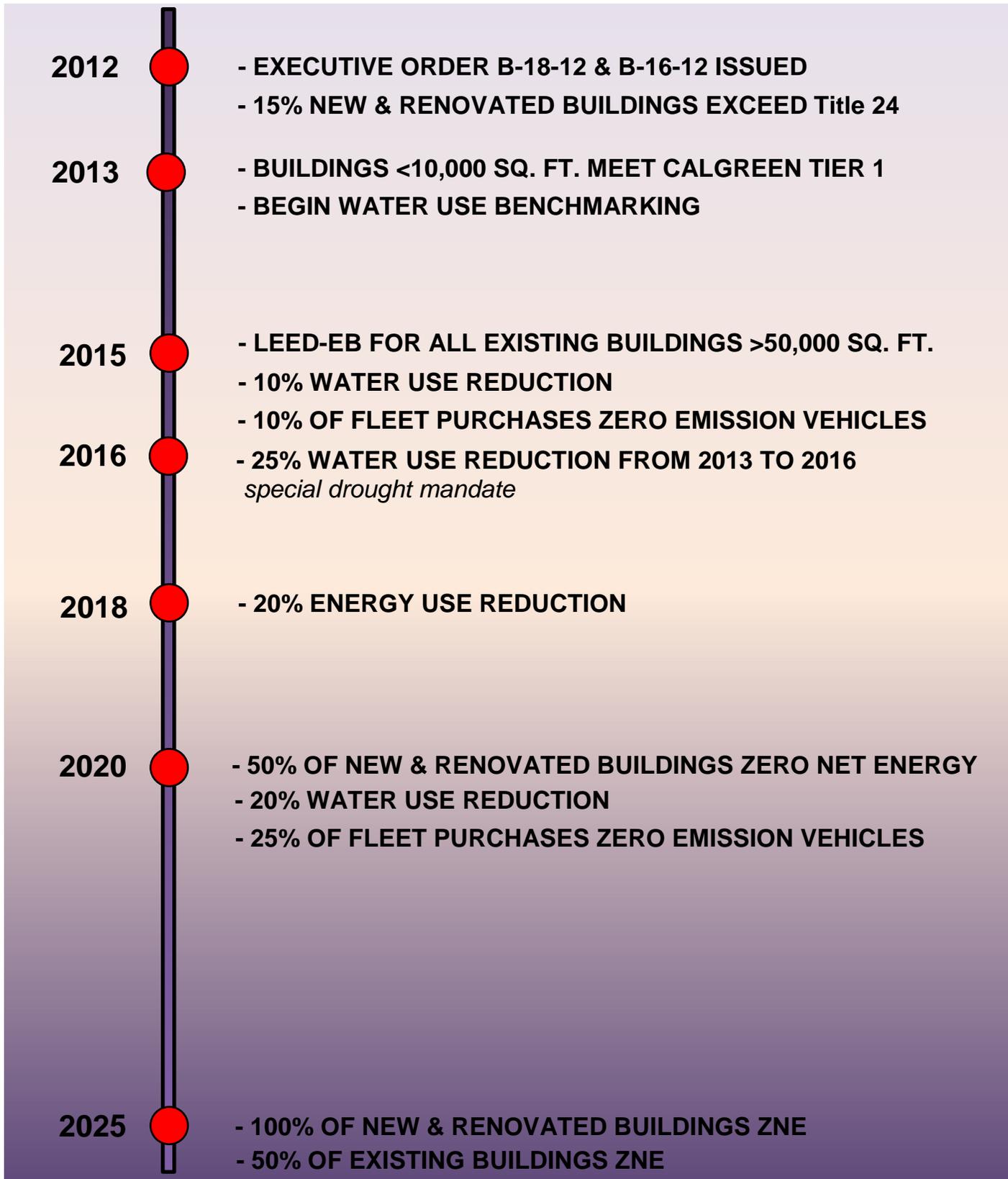
Table 9 lists the department's lowest scoring leases. This list was narrowed to only include shop, storage and office types. All other sites (types) need to be located where they are because of their relation to the wildlife area, etc. The property management staff will look at locations to see where improvements in scores can be made as leases renew. Unfortunately, many locations need to be close to the wildlife they serve which often means remote locations. However, if there is a way to improve efficiency, the department will. It is important to look at all of the low scoring leases, not just the bottom 10. CDFW will also ensure that DGS knows the department's baseline and goals.

Table 7: Lowest Smart Location Score Leases

Facility Name	Address	City	Space Type	SLScore - CORRETED
OFFICE/STORAGE	LAKE DAVIS	UNINCORP - PLUMAS CO	OFFICE (GENERAL)	0.00
SHOP/STORAGE	17041 S LOVEKIN BOULEVARD	BLYTHE	OFFICE (FIELD)	9.05
OFFICE	2109 ARCH AIRPORT ROAD	STOCKTON	OFFICE (FIELD)	33.99
OFFICE	22759 S MERCY SPRINGS RD	LOS BANOS	OFFICE (GENERAL)	36.51
WAREHOUSE	5341 ERICKSON WAY	ARCATA	OFFICE (FIELD)	37.78
OFFICE/WAREHOUSE	50 ERICKSON COURT	ARCATA	OFFICE (FIELD)	37.78
OFFICE	4005 N WILSON WAY	STOCKTON	OFFICE (GENERAL)	40.72
OFFICE/WAREHOUSE	3883 RUFFIN ROAD	SAN DIEGO	OFFICE (FIELD)	44.96
RYAN RANCH	20 LOWER RAGSDALE DRIVE	MONTEREY	OFFICE (FIELD)	47.86
BUILDING E	350 HARBOR BOULEVARD	BELMONT	OFFICE (GENERAL)	48.08
WAREHOUSE	8171 ALPINE AVENUE	SACRAMENTO	OFFICE (FIELD)	48.60
WAREHOUSE	8169 ALPINE AVENUE	SACRAMENTO	OFFICE (FIELD)	48.60
WAREHOUSE	8175 ALPINE AVENUE	SACRAMENTO	OFFICE (FIELD)	48.60

WAREHOUSE	1550 SCHWAB STREET	RED BLUFF	OFFICE (FIELD)	51.03
WAREHOUSE	1530 SCHWAB STREET	RED BLUFF	OFFICE (FIELD)	51.03
HANGAR 44, TAXIWAY DELTA	1760 AIRPORT BOULEVARD	RED BLUFF	OFFICE (GENERAL)	51.03
OFFICE/WAREHOUSE	5355 SKYLANE BOULEVARD	SANTA ROSA	OFFICE (FIELD)	51.73

SUSTAINABILITY MILESTONES & TIMELINE



DEPARTMENT STAKEHOLDERS

Greenhouse Gas Emissions	
Individual / Manager	Title
Diane Brown-Tapia	Sustainability Manager
Gabe Tiffany	Deputy Director

Building Design and Construction	
Individual / Manager	Title
Rob Benson	Senior Civil Engineer
Sandra Morey	Deputy Director

LEED for Existing Buildings Operations and Maintenance	
Individual / Manager	Title
Diane Brown-Tapia	Sustainability Manager
Gabe Tiffany	Deputy Director

Indoor Environmental Quality	
Individual / Manager	Title
Diane Brown-Tapia	Sustainability Manager
Gabe Tiffany	Deputy Director

Integrated Pest Management	
Individual / Manager	Title
Diane Brown-Tapia	Sustainability Manager
Gabe Tiffany	Deputy Director

Environmentally Preferable Purchasing	
Individual / Manager	Title
Liz Caples	Procurement Manager
Amy Manasero	Assistant Branch Chief

Location Efficiency	
Individual / Manager	Title
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