# Sustainability Roadmap 2018-2019: Climate Change Adaptation

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

**Health and Human Services Agency** 

Edmund G. Brown Jr., Governor



# Department of Rehabilitation Sustainability Road Map 2018-2019: Climate Change Adaptation

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## Acronyms

**AB** Assembly Bill

**EHT** Extreme Heat Threshold

**EO** Executive Order

GCM Global Circulation Model

**GHG** Greenhouse Gas

**RCP** Representative Concentration Pathway

SB Senate Bill

## **EXECUTIVE SUMMARY**

The Governor's Office requested that departments owning or managing buildings prepare a Road Map to Achieving Executive Orders B-18-12 and B-16-12 by December 16, 2013. In response, the Department of Rehabilitation (DOR) has prepared this roadmap document to describe the status and steps to achieving the objectives, targets and requirements related to climate change adaptation.

The mission of the DOR is to work in partnership with consumers and other stakeholders to provide services and advocacy resulting in employment, independent living and equality for individuals with disabilities in California. Since it was established in 1963, the DOR has reported to the Health and Human Services Agency, with functions and responsibilities contained in Section 19000-19856 of the California Welfare and Institutions Code. DOR is the designated state administrative unit responsible for the State's vocational rehabilitation program authorized by the Federal Title IV of the Workforce Innovation and Opportunity Act (WIOA), which incorporates the Federal Rehabilitation Act of 1973, as amended.

The aforementioned laws were enacted to ensure all Americans have the opportunity to learn and develop skills, engage in productive work, make choices about their daily lives, and participate fully in community life. DOR provides vocational counseling, guidance, and services to individuals with disabilities to prepare for, obtain and maintain employment, and to live independently in their communities.

The DOR provides vocational rehabilitation services to approximately 110,000 consumers annually through 84 offices statewide. DOR has over 1,800 employees with approximately 1,300 employees in the field providing direct services to individuals with disabilities.

The majority of DOR office locations are within 74 privately leased office spaces and most of the lease terms for those locations are eight years (four years firm term and four years soft term). The DOR also occupies 9 Department of General Services (DGS) managed buildings. The DOR owns and manages the Orientation Center for the Blind (OCB), a three-building campus located in Albany, California. The OCB fosters independent living for the blind or visually impaired adults through an immersion program in a residential environment. This live-in, dorm style community operates 24 hours a day, 7 days a week.

Because the DOR is mainly comprised of privately lease offices, these present the biggest challenge and opportunity related to climate adaptation. To meet the department's mission, the DOR's services must be accessible to all Californians, which means the DOR has a wide disbursement of offices throughout the state. It also means that there is a high probability that multiple offices will be in locations impacted by climate change and potentially impacting the surrounding communities. To address both the need to service existing and potential DOR clients, as well as be cognizant of the climate impacts, the DOR is in the process of amending its criteria for field office placement. This will allow the DOR to understand what climate risks may be associated with a potential or existing office location and take appropriate action.

Additional criteria for consideration will include increases in temperatures, changes in precipitation, sea level changes, vulnerable and disadvantaged communities, and urban heat islands. Completion and utilization of the amended office placement criteria will occur in January 2018.

Additionally, the DOR has incorporated a Sustainability Analyst position into the department to continue to monitor climate change impacts and develop climate change response plans. This position will work cooperatively with DOR business areas and other stakeholders to identify, incorporate, and monitor sustainability opportunities and efforts within the DOR.

Finally, the DOR has in progress several sustainability efforts underway at the OCB to meet identified sustainability goals. Climate adaptation considerations have been included in these efforts, as well as the sustainability of the OCB campus in relation to climate changes and surrounding natural resources.

The DOR has made much progress towards the targets and requirements of Executive Orders B-18-12 and B-16-12, and is committed to continuing its efforts in accomplishing these objectives.

Joe Xavier		
Director		

## 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
- Climate Change Adaptation
- 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 has issued numerous executive orders directing sustainable state operations. The order relevant to climate adaptation is:

### 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 by 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 build climate preparedness and reduce GHG emissions, prioritize natural infrastructure, and protect the state's most vulnerable populations.

## **Legislative Direction**

Several pieces of legislation were signed in 2015-16 that codified several elements of the EO. 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)
- SB 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)

#### State Resources and Guidance Documents

California has invested significant resources in understanding the risks of climate change to the State and actions available to respond to and reduce these risks. These include the following:

- <u>Safeguarding California</u>: The State's climate adaptation strategy organized by sector. Each sector identifies risks from climate change and actions to reduce those risks.
- <u>Safeguarding California Implementation Action Plans</u>: 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.
- **Building 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.
- <u>California's Climate Change Assessments</u>: California has completed three comprehensive assessments of climate change impacts on California. Each assessment has included development of projections of climate impacts on scale that is relevant to State planning (i.e., downscaled climate projections). These data are available through <u>Cal-Adapt</u>, an online data visualization and access tool.

## CLIMATE CHANGE ADAPTATION

<u>Executive Order B-30-15</u> directs State Agencies to integrate climate change into all planning and investment. Planning and investment can include the following:

- Infrastructure and capital outlay projects
- Grants.
- Development of strategic and functional plans,
- Permitting,
- Purchasing and procurement,
- Guidance development,
- Regulatory activity,
- Outreach and education.

This template will focus on the first three of these activities, and follows the guidance created by the Technical Advisory Group developed under EO B-30-15 to assist State Agencies to complete this task.

## **Climate Change Risks to Facilities**

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

The DOR maintains 74 privately leased field offices throughout the state. On the whole, the DOR is one of multiple tenants which occupy office space in a building, with an average office size of approximately 4,600 square feet per DOR field office. The primary focus in determining DOR field office locations is the area where current and potential DOR consumers can most easily access DOR services. These areas are referred to as the DOR "catchment areas." In addition to catchment areas, other considerations employed in determining the location of DOR field offices include market rental rates, proximity to public transportation and energy efficient or LEED Certified buildings.

The lease term for DOR field offices is normally eight years (four years firm term, four years soft term). Two years prior to the conclusion of the lease term, a site search is conducted to determine if a more appropriate location for a DOR field office is available. This relatively short lease term can assist the DOR in adapting to changing climates and vulnerable population shifts by providing the mobility to identify more climate conscious locations for DOR field offices.

Because the 74 DOR field offices are spread throughout the state, multiple offices have potential to impact or be impacted by climate change and/or the surrounding communities. In the past, climate impacts were not primary considerations for determining DOR field office locations; however, current DOR field office selection criterion is being amended to include climate impacts. Additionally the Cal-Adapt website, the CalEnviroScreen tool, the CalEPA Urban Heat Island maps and other resources, will be utilized when assessing viable DOR field

office locations to assist in selecting most appropriate locations, inclusive of climate and community impact considerations.

A disruption of service in an identified catchment area would mean that those individuals with disabilities would have to travel farther to obtain DOR services or potentially would not be able to receive them at all. While the disruption of DOR services would not pose an unacceptable risk to the public health and safety or affect critical natural systems, critical infrastructure or other assets, disruption of services may impact vulnerable populations. One factor in determining the location of a DOR Field Office is ensuring the catchment area includes people who may not normally have ready access to DOR services. This includes areas where vulnerable populations are present and if the DOR is unable to provide services in an area, those individuals with disabilities in that area may be impacted.

In addition to the DOR field offices, the DOR has one owned facility in Albany, CA, the OCB. This three building campus hosts a training program for blind or visually impaired adults and has been in operation since the 1960's. The OCB has always taken the climate impacted by the facility's function into consideration. The OCB is bordered by Cerrito Creek and the care and maintenance of the portion of the waterway adjacent to the OCB has consistently been a consideration. In addition to the creek, the OCB remains conscientious of other environmental impacts, including building improvement projects, student training activities, and seasonal resource impacts (drought, power needs), sustainable landscaping, etc. However as more resources become available for educating staff and students regarding climate impacts, the OCB has increased awareness and identified new opportunities to limit climate impacts in facility changes, implemented sustainability projects and daily campus function.

### **Understanding Climate Risk to Existing Facilities**

#### **Risk from Increasing Temperatures**

Under a changing climate, temperatures are expected to increase – both at the high and low end. As a result, facilities will experience higher maximum temperatures and increased minimum temperatures.

Table 1: Top 5 Facilities Most Affected by Changing Temperature

Facility Name	Annual Mean Maximum Temperature (1961 – 1990)	Annual Mean Maximum Temperature (2031 - 2060)	Annual Mean Max T (2070- 2099)	Annual Mean Minimum Temperature (1961 – 1990)	Annual Mean Minimum Temperature (2031 - 2060)	Annual Mean Min T (2070- 2099
Modoc	63	69	74	30	35	40
Yreka	65	71	75	36	41	45
Susanville	64	69	74	34	39	43
S. Lake Tahoe	57	63	67	28	33	38
Victorville	76	82	86	44	49	53

In addition to changing average temperatures, climate change will increase the number of extreme heat events across the State. Extreme events are likely to be experienced sooner than changes in average temperatures.

Table 2: Five Facilities that Will Experience the Largest Increase in Extreme Heat Events

Facility Name	Extreme heat threshold (EHT)	Average number of days above EHT (1961- 1990)	Average number of days above EHT (2031- 2060)	Increase in number of days above EHT by mid- century	Avg. # days above EHT (2070- 2099)	Increase in Avg. # days above EHT by end of century
Victorville	105	4	26	22	39	35
Antelope	105	4	26	22	39	35
Visalia	103	4	26	22	43	39
Auburn	102	4	23	19	36	32
Grass Valley	96	4	23	19	38	34

The majority of DOR field offices are in privately leased office space, thus the majority of offices which will be impacted by temperature change and extreme heat events will be those DOR field offices. Although these buildings are managed by a private lessor and not by the DOR, the DOR will still be impacted by the changes in temperature. One impact is increased utilities costs, either through separated metering or higher rental rates if utilities are included in the lease. Higher temperatures also mean more strain on the building's environmental system, which could result in HVAC failure and corresponding temporary DOR office closure. Additionally, higher temperatures can impact the health and safety of both DOR staff and consumers who visit the facility.

The five DOR field offices identified above in Table 1 were selected based on the projections that the temperature changes will be the most significant over the projected periods, 2031-2060 and 2070-2099. Four of the five offices are located in Northern California and one in Southern California. The five DOR field offices identified in Table 2 were selected for having the greatest increase in extreme heat events. Three of these offices are located in Northern California and the remaining two in Southern California.

Northern California DOR field offices tend of have a smaller foot print and are more sparsely located than compared to Central and Southern California DOR field offices. The characteristics are due to the population concentrations being smaller and more spread out than in other areas. Although measuring less square footage than other DOR offices, due to the large catchment areas these offices cover, fuel expended by DOR consumers to reach these offices may be greater than in other more concentrated urban areas. The concerns regarding rising temperatures in these Northern California offices and the one Southern California office (Victorville) identified above can include notable climate impacts, such as rising sea levels, declines in spring runoff, glacial melt, rise in lake water temperatures, ocean acidification, increase in wildfires, impacts to wildlife and changing vegetation patterns in forests.

The DOR is in the process of amending privately leased field office site selection criteria to include climate change consideration, such as extreme heat. This addition will allow the DOR to utilize current temperature change projection resources to determine if a potential field office location is likely to experience extreme heat impacts during the span of the lease; typically DOR lease terms are eight years. Through this assessment, the DOR can measure the severity of projected heat impacts and look to other less impacted areas for field office placement. However, because the DOR services must be available to all California individuals with disabilities, there will be occasions when the DOR will need to locate a field office in an area with projected extreme heat impacts. For these circumstances, the DOR will work cooperatively with the DGS and the location's lessor when negotiating a potential lease to formulate an extreme heat contingency plan and address preventative heat impact building modifications.

In addition, the DOR is always exploring new opportunities to better serve DOR consumers and address climate change impacts. One path currently under exploration is connecting with DOR consumers electronically, through the use of Skype and other means of providing remote counseling. Although the DOR will always need to have a presence in DOR catchment areas to reach those who may not be able to use electronic means of communication, by having such options available to those that do, the DOR can further reduce its footprint and the need for consumer transportation to DOR field offices, thus decreasing the impacts to the surrounding environment.

#### **Risks from Changes in Precipitation**

Table 3: Facilities that Will be Most Impacted by Projected Changes in Precipitation

Facility Name	Annual Mean Maximum Precipitation (1961 – 1990)	Annual Mean Precipitation (2031 – 2060)	Percent Change by mid-century	Annual Mean Precipitation (2070 - 2099)	Percent change by end of century
Grass Valley	50	55	10%	52	4%
Eureka	50	56	12%	52	4%
Ukiah	50	56	12%	55	10%

Because of the employment assistance provided by the DOR, precipitation levels are not a significant impact on the way the DOR does business, unless the severity of the precipitation impacts safety and/or disrupts public and private transit that DOR employees and consumers would use to access our facilities. The DOR field offices identified in Table 3 were chosen because they have the greatest annual precipitation levels (inches) when compared to other DOR offices.

The DOR works cooperatively with the DGS and private lessors to address maintenance, repair and preventative climate impact measures for the buildings in which the DOR is a tenant. For existing or planned DOR field offices, the DOR will work with the DGS and the lessor to address potential impacts to DOR field offices where change to precipitation may impact building function or access to DOR services. Additionally, because DOR lease terms are eight years, if

impacts from changes in precipitation affect a DOR field office beyond what a lessor can or will address, the DOR has the latitude to identify a new office location which may not be as impacted by changes in precipitation.

In the spring of 2017, California experienced substantial rain which impacted access to several DOR field offices and resulted in flooding in one office. The DOR worked with the DGS and the building's lessor to address the office damages which resulted from the flooding. However, the event also revealed a previously unidentified flooding vulnerability specific to the building's location, which the lessor has been unable to rectify. As the lease renewal for this location will be occurring in the next two years, the DOR is assessing alternative field office locations in light of the identified risk.

#### Risks from Sea Level Rise

Increasing global temperatures are contributing to rising sea levels. Rising sea levels will result in inundation of coastal areas and increased flooding due to storm surges. The California Ocean Protection Council (OPC) has issued <u>guidance</u> for State agencies on what level of sea level rise to consider. The Guidance document provides the following estimates of sea level rise for the California Coast, which are based on a study by the National Academy of Sciences:

Time Period	North of Cape Mendocino	South of Cape Mendocino
2000 - 2030	-4 to 23 cm (-0.13 to 0.75 ft)	4 to 30 cm (0.13 to 0.98 ft)
2000 - 2050	-3 to 48 cm (-0.1 to 1.57 ft)	12 to 61 cm (0.39 to 2.0 ft)
2000 - 2100	10 to 143 cm (0.3 to 4.69 ft)	42 to 167 cm (1.38 to 5.48 ft)

An accompanying OPC resolution recommends that departments base analyses on estimates of sea level rise in the upper two-thirds of the range.

The DOR utilized the <u>Pacific Institute</u> to reference current and potential flood risk to DOR field offices. In total, four DOR privately leased offices are in current flood risk zones and fourteen additional offices are near flood risk zones. Of the fourteen, the majority are privately leased offices, but two locations are in state-owned, DGS managed buildings and one is DOR owned, the OCB.

The DOR privately leased office space provides a unique flexibility with regard to risk from rising sea levels. Rising sea level risks occur over time, with erosion and flooding potential increasing. The DOR privately leased offices are leased for eight year terms, allowing the DOR to take into consideration the current risk levels from rising sea levels in a potential office location area over the next ten years and make a determination for office placement based on the risks to both the climate and to the DOR consumers, staff and office function. To address this assessment, in 2018 the DOR will be including climate risks to the parameters reviewed in determining field office placement.

For DOR offices in state-owned, DGS managed buildings, there is no finite lease term. This means that the DOR will work with the DGS to assess the climate risks and safety to state-owned buildings near flood risks zones as those buildings risk levels increase.

For the DOR's owned OCB, in Albany, the risks from rising sea levels in the San Francisco Bay area will need to be continually monitored for changes. As there are many jurisdictions that rising sea levels will impact in the San Francisco Bay area, there are many references to status, impacts and active projects to mitigate impacts. The <a href="San Francisco Bay Conservation and Development Commission">San Francisco Bay Conservation and Development Commission</a> provide planning and current project information that the DOR will utilize to develop an OCB impact plan over the coming years to address rising sea levels.

Additionally, the OCB grounds have experienced some flooding from the Cerrito Creek, which boarders the OCB property. There have been no impacts to the campus buildings from these occurrences, however the potential exists. The OCB has explored building up the natural infrastructure of the property to minimize future flooding impacts, including utilizing assistance from the California Conservation Corps. However, the cost for the needed alterations is substantial and available funds in the past have been put towards the OCB program and facility function. In 2018, the DOR will reassess the flood risks to the facility and if warranted, develop a phased approach to infrastructure improvements to spread the modifications and cost over a manageable, reasonable period. Until infrastructure modifications are complete, OCB flood contingency plans will also be reviewed and modified, if needed, for the safety of the students and DOR staff, and the continuation of the facility.

Table 4: Facilities at Risk From Rising Sea Levels

Facility Name	Is it located in a Flood Risk Zone? Yes/No	Is it located near a Flood Risk Zone? Yes/No
Eureka Branch Office	Yes	
Richmond	Yes	
San Mateo	Yes	
Santa Barbara District Office	Yes	
OCB		Yes
Antioch		Yes
Napa		Yes
Novato		Yes
Greater East Bay District Office		Yes
Berkeley		Yes
Oakland		Yes
Fremont		Yes
San Francisco District Office		Yes
San Bruno		Yes
Menlo Park		Yes
Capitola		Yes
Salinas		Yes
Oxnard		Yes
South County		Yes

#### Natural Infrastructure to Protect Existing Facilities

EO B-30-15 directs State agencies to prioritize the use of natural and green infrastructure solutions. Natural infrastructure is the "preservation or restoration of ecological systems or the utilization of engineered systems that use ecological processes to increase resiliency to climate change, manage other environmental hazards, or both. This may include, but need not be limited to, flood plain and wetlands restoration or preservation, combining levees with restored

natural systems to reduce flood risk, and urban tree planting to mitigate high heat days" (Public Resource Code Section 71154(c)(3)).

The primary opportunity for the DOR to utilize natural infrastructure to protect existing facilities is with the OCB. Aside from the OCB being located near a flood risk zone, the OCB is bordered by the Cerrito Creek and the Albany Hill Park. The Cerrito Creek has experienced some erosion over the years and although this erosion does not pose any immediate risks to the OCB campus, long term impacts and the need to preserve the creek and adjacent Albany Hill Park have always been a concern for the OCB. The OCB has and continues to work cooperatively with City of Albany, local preservation groups and other stakeholders towards the maintenance of the creek and surrounding area.

#### Understanding the Potential Impacts of Facilities on Communities

#### **Vulnerable Populations**

Certain populations are more susceptible to the effects of changing climate conditions, and will have less capacity to recover from changing average conditions and more frequent and severe extreme events. A number of factors contribute to vulnerability, often in overlapping and synergistic ways. These can include a number of social and economic factors, and be determined by existing environmental, cultural, and institutional arrangements. Vulnerable populations can include, but are not limited to, people living in poverty; people with underlying health conditions; incarnated populations; linguistically or socially isolated individuals; communities with less access to healthcare or educational resources; or communities that have suffered historic exclusion or neglect.

It is the DOR's mission to assist individuals with disabilities in obtaining and retaining employment. The DOR provides consultation, counseling and vocational rehabilitation, and works with community partners in assisting individuals with disabilities in obtaining employment. Vulnerable populations can include individuals with disabilities and it is the DOR mandate to serve these California residents. To be able to provide services to individuals with disabilities, the DOR has field offices throughout California. By the nature of how the DOR serves DOR consumers, there is no evident increased vulnerability to the vulnerable populations in the communities where DOR facilities are located.

#### **Disadvantaged Communities**

California is required to invest resources in disadvantaged communities (DACs). DACs are identified using CalEnviroScreeen, a tool that ranks census tracts based on a combination of social, economic, and environmental factors. While it does not capture all aspects of climate vulnerability, it is one tool that is available, and does include several relevant characteristics. In many cases, disadvantaged communities are more likely to suffer damage under changing climate conditions, including extreme events. The department's facilities located in these communities can contribute or alleviate the vulnerability of these communities.

14 of 84 DOR field offices, or 17%, are located in disadvantaged communities. The DOR provides consultation, counseling and vocational rehabilitation, and works with community

partners in assisting individuals with disabilities in obtaining employment, including disadvantaged communities. In addition, to alleviate vulnerability of these communities, the DOR works actively with community stakeholders to provide advocacy to assist individuals with disabilities to live independently and in equality. The DOR also encourages employers to recognize the value and talent that individuals with disabilities add to the workplace and community.

For DOR field offices located in disadvantaged communities, the DOR will work with the DGS and the building lessors to determine what building modification may be possible to reduce the climate change vulnerabilities or provide other benefits to the communities in these areas. In the DOR's 2017 Zero Emission Vehicle Roadmap, the DOR identified that it will be sending communications to all building lessors where the DOR is a tenant encouraging them to install electronic vehicle (EV) charging stations in their building's parking areas. The communications will also include resources where they can obtain more information on EV benefits, installation and potential funding assistance.

Table 5: Facilities located in disadvantaged communities

	Table 5. Facinites located in disadvantaged communities			
Facility Name	CalEnviroScreen Score	Is it located in a disadvantaged		
		community? Yes/No		
Modesto	76-80%	Yes		
Salinas	76-80%	Yes		
Canoga Park	81-85%	Yes		
Glendale	81-85%	Yes		
Stockton	81-85%	Yes		
West Covina	86-90%	Yes		
El Centro	86-90%	Yes		
Commerce	96-100%	Yes		
El Monte	96-100%	Yes		
Norwalk	96-100%	Yes		
Gardena	96-100%	Yes		
Bell	96-100%	Yes		
Compton	96-100%	Yes		
Oxnard	96-100%	Yes		

#### **Urban Heat Islands**

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.

Table 6: Facilities Located in Urban Heat Islands

Facility Name	Located in an urban heat island (yes/no)
West Covina	Yes
Pasadena	Yes
Temecula	Yes
San Bernardino	Yes
Riverside	Yes

Five of the 84 DOR offices, or 6%, are located in Urban Heat Islands, with Urban Heat Island Index (UHII) scores greater than 15,000. The offices are privately leased office spaces in multitenant buildings. Some of the buildings have parking lots owned by or adjacent to the building, some do not. As the leases for these locations come close to conclusion, the DOR will reexamine the placement of these offices in relation to their presence in an urban heat island and the best way the DOR can continue to provide services to individuals with disabilities in the impacted communities. If relocation is not an option due to the need for DOR services in the area, the DOR will work with the DGS and the building's lessor to determine what building improvements can be made to mitigate any contributing factors to the Urban Heat Island.

#### **Understanding Climate Risk to Planned Facilities**

#### **Full Life Cycle Cost Accounting**

EO B-30-15 directs State agencies to employ full life cycle cost accounting in all infrastructure investment. Lifecycle cost accounting includes:

- Considering initial investment costs, as well as lifetime operation and maintenance costs under changing climate conditions, including changing average conditions and increases in extreme events.
- Applying non-market evaluation methods such as travel cost, avoided costs or contingent valuation to capture hard to quantify benefits and costs.

The DOR is not planning to build any new facilities. However, the DOR's privately leased office spaces typically have 8 year lease terms. The DOR begins the process for lease renewal or searching for a new lease space for field offices 24 months prior to the end of the lease term. Currently, the DOR has 31 active privately lease space projects, at various stages including location site searches, lease renewal negotiations, office constructions, etc. Previously, climate impacts were not primary considerations for determining DOR field offices locations; however, current DOR field office selection criterion is being amended to include climate impacts. . The amendments will include, but not be limited to risks associated with increases in temperatures, changes in precipitation, sea level changes, vulnerable and disadvantaged communities, and urban heat islands. If it is necessary for the DOR to lease office space in a building which is in an area susceptible to climate change, in advance of signing of the lease, the DOR will work with the DGS and the potential lessor to determine what building modifications are feasible to lessen the climate impacts to both the field office and surrounding communities. Additionally, the local field office will work with the DOR Business Services Section to develop appropriate contingency plans to address the potential climate impacts to that office for the safety of consumers and DOR staff, and to continue to provide DOR services to the area.

As the 31 active DOR projects are in different stages of development and office location criteria is still being amended, the DOR is currently assessing which of these projects can be modified to address climate considerations. Once finalized, the DOR will be able to better assess and take actions to address climate risks, risks to disadvantaged communities, natural infrastructure opportunities and lease term life cycle cost accounting.

# Integrating Climate Change into Department Planning and Funding Programs

As the DOR five year <u>strategic plan</u> (2013-2018) is nearing conclusion, the DOR will be determining how climate change can be incorporated, as appropriate, into the department's next planning cycle.

**Table 7: Integration of Climate Change into Department Planning** 

Plan	Have you integrated climate?	If no, when will it be integrated?	If yes, how has it been integrated?
DOR 2013-2018 Strategic Plan	No	Under review	

Although the DOR does not generally fund large scale construction projects, it will consider climate change in its planning and selection of office locations in consideration of the DOR mission and goals in providing services to individuals with disabilities in California.

## **Measuring and Tracking Progress**

The DOR is undertaking several measures to incorporate, track, and evolve climate change into department policy. Firstly, the DOR has established a new position, Sustainability Analyst, under the DOR Administrative Services Division. This position will work cooperatively with business areas throughout DOR to identify, incorporate and monitor sustainability opportunities and efforts in DOR office placement and function. They will be responsible for staying informed of existing and well as new mandated and voluntary directions related to sustainable operations. They will also participate in workgroups and attend meetings with stakeholders regarding DOR current and future sustainability efforts. This position will be advertised for recruitment in early January 2018.

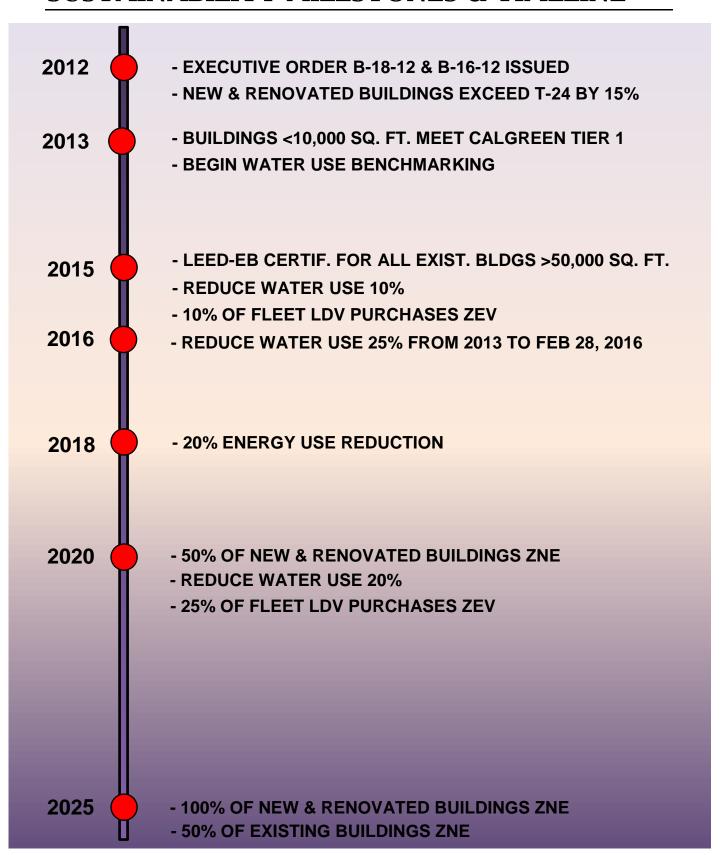
The DOR is currently amending criteria for determining field office placement to include climate change and other sustainability considerations. This amendment should be completed in January 2018. In addition to the criteria, the DOR will maintain a listing of DOR offices which impact or can be impacted by climate change. This will include, but not be limited to risks associated with increases in temperatures, changes in precipitation, sea level changes, vulnerable and disadvantaged communities, and urban heat islands. The DOR Sustainability Analyst will also conduct assessments twice a year to identify climate change data which may impact DOR office related to these risks and provide recommendations to address these changes.

As the DOR facilities are primarily privately leased office space, the DOR has been working with the DGS regarding amendments to the DGS Standard Lease language to incorporate more stringent requirements regarding sustainable practices for office construction, furniture, water and energy usage tracking and facility services and operation.

Department policy for sustainable office operations is also in revision to include DOR Central Office, Field Office and OCB operational changes. These changes include measures to improve energy conservation, water reduction and diminish climate impacts. The revised operations policy for the DOR Central and field offices will be implemented in the first quarter of 2018, with the OCB policy changes implemented in the second quarter of 2018.

Further measurement and tracking will be provided through the DOR's participation in the Climate Registry Information System (CRIS) and future Sustainability Roadmaps. It is through these undertakings that the DOR intends to address identified climate impacts, as well as stay informed and adapt to future climate changes.

## SUSTAINABILITY MILESTONES & TIMELINE



## **DEPARTMENT STAKEHOLDERS**

Understanding Climate Risk at Existing Facilities		
Business	Joseph Carmena III, Chief of Business Services	
Services		
Section	Comprehensive assessment of DOR owned, leased and DGS managed offices.	
VR Program	Peter Harsch, Deputy Director Vocational Rehabilitation Employment Division	
	Elena Gomez, Deputy Director, Specialized Services Division	
	Collaboration with BSS on assessment and implementation of changes related	
	to field office locations.	
OCB	Jessica Grove, OCB Administrator	
	Collaboration with BSS on assessment and implementation of changes related	
	to OCB campus.	

	Understanding Climate Risk at Planned Facilities
Business	Joseph Carmena III, Chief of Business Services
Services	
Section	Assesses climate risks to potential privately leased field office locations,
	determines office placement and develops climate risk contingency plans.
VR Program	Peter Harsch, Deputy Director Vocational Rehabilitation Employment Division
	Elena Gomez, Deputy Director, Specialized Services Division
	Collaboration with BSS on assessment and implementation of changes related
	to potential field office locations.
	to potential field office locations.

Integrating Climate Change into Department Planning and Funding Programs		
Business	Joseph Carmena III, Chief of Business Services	
Services	Fariba Shahmirzadi, Deputy Director Administrative Services Division	
Section and		
Administrative	Assesses and provides inclusion of Climate Change considerations in DOR	
Services	policy and planning	
Division		
VR Program	Peter Harsch, Deputy Director Vocational Rehabilitation Employment Division	
	Elena Gomez, Deputy Director, Specialized Services Division	
	Collaboration with BSS on assessment and implementation of changes related	
	to field office locations.	

Measuring and Tracking Progress		
Business	Joseph Carmena III, Chief of Business Services	
Services		
Section	Assessment and documentation of DOR efforts to reduce climate change to	
	DOR offices and surrounding communities.	
VR Program	Peter Harsch, Deputy Director Vocational Rehabilitation Employment Division	
	Elena Gomez, Deputy Director, Specialized Services Division	
	Work in partnership with BSS on assessment and documentation related to	

	field office locations.
OCB	Jessica Grove, OCB Administrator
	Work with BSS on assessment and documentation related to the OCB campus.