

# **CITY OF PACIFIC GROVE**

## **PG&E LED STREETLIGHT UPGRADE PROJECT**

### **FINAL ADOPTED INITIAL STUDY & MITIGATED NEGATIVE DECLARATION**

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PACIFIC GROVE, CA 93950

**REVISED APRIL 11, 2018**

**ADOPTED BY CITY OF PACIFIC GROVE CITY COUNCIL ON APRIL 18, 2018**

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**INITIAL STUDY / ENVIRONMENTAL CHECKLIST FORM**

- 1. Project Title:** PG&E LED Streetlight Upgrade Project
- 2. Lead Agency Name and Address:** City of Pacific Grove, 300 Forest Ave., Pacific Grove, CA 93950
- 3. Lead Agency Contact Person and Phone Number:** Wendy Lao, Associate Planner, T: 831-648-3185 E: [wlao@cityofpacificgrove.org](mailto:wlao@cityofpacificgrove.org)
- 4. Project Location:** Public right-of-ways throughout the City of Pacific Grove, Monterey County, CA.
- 5. Project Applicant(s):** Geoff Pollard, Pacific Gas and Electric Company (PG&E), Customer Care Program Manager, Expert Customer Impact – Electric Reliability. E-mail: [G1P9@pge.com](mailto:G1P9@pge.com). Telephone: (415) 535-7045. Address: 1850 Gateway Boulevard. Concord, CA 94520.
- 6. General Plan (GP)/Land Use Plan (LUP) Designations:** Not applicable (public right-of-way).
- 7. Zoning:** Not applicable (public right-of-way).
- 8. Project Description:** The proposed project is part of an energy efficiency incentive program sponsored by the U.S. Department of Energy and the California Public Utilities Commission. The project would replace approximately 514 of the City's existing High Pressure Sodium (HPS) streetlights with energy-efficient Light-Emitting Diode (LED) fixtures. The purpose of the project is to reduce energy consumption, which would also result in the reduction of greenhouse gas emissions and other air pollutants from non-renewable electrical generating facilities. Since LED fixtures use less energy and have a longer life, operational costs would also be reduced. LED technology also avoids the use of toxic substances, such as mercury and lead, which are contained in some other types of light fixtures. In addition, LED fixtures may be specifically aimed down to illuminate defined areas on the ground. The lights are also proposed to include shielding as needed in order to reduce glare on adjacent properties. No ground disturbance or new construction would occur because only the existing light fixtures will be retrofitted. No new light poles are proposed.

After installation of the replacement LED fixtures affected persons may request modifications to fixture wattage and/or shields by contacting the City. The City will then consult with PG&E, and if the City determines that the requested change would not adversely affect public safety, modifications to fixture specifications or shielding will be made.

**9. Surrounding Land Uses and Setting:** *(Briefly describe the project's surroundings)*

The project site is located along streets throughout the City of Pacific Grove. Light fixture replacements are proposed where existing PG&E street lights are located. Some of the streetlights are located in the Coastal Zone, the Environmentally Sensitive Habitat Area, the Area of Special Biological Significance Watershed, and/or the Archaeologically Sensitive Area.

**10. Other public agencies whose approval is required:** California Coastal Commission (CCC).

**11. Review Period:** March 7, 2018 through April 6, 2018, 5:00 p.m.

**Environmental Factors Potentially Affected:**

The environmental factors checked below (✓) would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

	<b>Aesthetics</b>		<b>Greenhouse Gases</b>		<b>Population/Housing</b>
	<b>Agricultural Resources</b>		<b>Hazards &amp; Hazardous Materials</b>		<b>Public Services</b>
	<b>Air Quality</b>		<b>Hydrology/Water Quality</b>		<b>Recreation</b>
	<b>Biological Resources</b>		<b>Land Use/Planning</b>		<b>Transportation/Traffic</b>
	<b>Cultural Resources</b>		<b>Mineral Resources</b>		<b>Utilities/Service Systems</b>
	<b>Geology/Soils</b>		<b>Noise</b>		<b>Mandatory Findings of Significance</b>
	<b>Tribal Cultural Resources</b>				

## **CEQA Environmental Checklist**

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to the California Environmental Quality Act (CEQA), not the National Environmental Policy Act (NEPA), impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

### **Evaluation of Environmental Impacts**

Each of the responses in the following environmental checklist take account of the whole action involved, including project-level, cumulative, on-site, off-site, indirect, construction, and operational impacts. A brief explanation is provided for all answers and supported by the information sources cited.

1. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone).
2. A “Less Than Significant Impact” applies when the proposed project would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.
3. A “Less Than Significant Impact With Mitigation Incorporated” applies when the proposed project would not result in a substantial and adverse change in the environment after mitigation measures are applied.
4. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect is significant. If there are one or more “Potentially Significant Impact” entries when the determination is made, an Environmental Impact Report is required.

## 1. AESTHETICS

### A. Would the project have a substantial adverse effect on an identified scenic vista?

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**Item A Discussion:** The project would have a **less than significant impact** on an identified scenic vista. A scenic vista is generally described as a clear, expansive view of the natural environmental, historic and/or architectural features, usually from an elevated point or open area, which possesses visual and aesthetic qualities of value to the community. Scenic vistas within the City of Pacific Grove may be views of the Pacific Ocean, historic structures and/or open space lands.

The Pacific Grove Local Coastal Program’s Land Use Plan (LUP) contains Policy 2.5.4.1 which states, “It is the policy of the City of Pacific Grove to consider and protect the visual quality of scenic areas as a resource of public importance. Pacific Grove’s coastal zone designates scenic areas including: All areas seaward of Ocean View boulevard and Sunset Drive, Lighthouse Reservation lands, Asilomar Conference Ground dune lands visible from Sunset Drive, lands fronting on the east side of Sunset Drive; and the forest-front zone between Asilomar Avenue and the crest of the high dune (from the north side of the Pico Avenue intersection to Sinex Avenue).” Some existing streetlights are located in areas with formally designated “ocean views” according to the LUP Figure 5, Shoreline Access Map. Most of these formally designated ocean views provide a view of the ocean along the public right-of-way or from public property.

There are also existing streetlights located adjacent to designated scenic areas and ocean views. However, no change is proposed to streetlight poles and only the existing HPS light fixtures would be replaced with LED bulbs, which would not affect views of scenic areas. Furthermore, because scenic vistas are viewed during the day and the streetlights are only operational at night, impacts on scenic views would be **less than significant**.

### B. Would the project substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**Item B Discussion:** As discussed in 1.A. above, the proposed project is located in an area with scenic resources; however, no change is proposed to streetlight poles and only the existing HPS light fixtures would be replaced with LED bulbs. Because natural scenic resources are viewed during the day and the streetlights are only operational at night, no significant impacts to natural scenic resources occur. Nighttime lighting of scenic historic resources that are located near existing HPS

streetlights would not change substantially with the new LED fixtures. Impacts would be **less than significant**.

**C. Would the project substantially degrade the existing visual character or quality of the site and its surroundings?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item C Discussion:** No change is proposed to the number, size or location of street light poles, and only the existing HPS bulbs would be replaced with LED bulbs. LED bulbs are available in a range of power levels and “correlated color temperatures” (CCT). If excessively bright replacement LED bulbs were used, the proposed project could have the potential to substantially degrade the existing visual character by creating increased glare as compared to the existing HPS bulbs (see also 1.D below). However, an advantage of LED technology is that bulbs are available in different CCTs, which may be perceived as “warmer” or “cooler” shades of white. LED light fixtures may be specifically aimed down to illuminate distinct areas on the ground. In addition, in some locations, such as residential neighborhoods or sensitive wildlife areas, unwanted light intrusion onto adjacent properties could cause adverse impacts unless the light fixtures are fitted with “cutoff shields” to prevent excessive glare on adjacent properties. The following mitigation measures would reduce potential impacts to a level that is **less than significant**.

Mitigation Measures

1. The selection and directional orientation of LED replacement street lighting fixtures and bulbs shall be approved by the Public Works Director or designee, in consultation with the Police Chief to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. The current bulbs will be replaced with LED bulbs of comparable wattage. The project proposes 3000-Kelvin CCT light bulbs all throughout the city, with the exception of one predominantly-commercial area where 4000-Kelvin light bulbs are proposed. The only predominantly-commercial area where the 4000-Kelvin light bulbs are proposed is a portion of the Highway 68 corridor from Sunset Drive to the northwest through Presidio Boulevard to the southeast. In addition, where feasible, lower CCT bulbs and reduced lighting levels will be used near sensitive wildlife habitat.
  
2. Light fixtures shall be installed in a manner approved by the Public Works Director or designee, in consultation with the Police Chief to aim light onto the public right-of-way, and fixtures in residential areas or adjacent to sensitive wildlife habitat shall be fitted with cutoff shields to block light rays from shining directly onto residential properties or wildlife habitat areas in the vicinity of each streetlight.

**D. Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item D Discussion:** Street lighting is provided in urban areas to improve public safety for motorists, cyclists and pedestrians. HPS street lights are currently provided in Pacific Grove, and the primary purposes of the proposed project are to reduce environmental impacts by reducing energy use and greenhouse gas emissions while also reducing the energy and maintenance cost to taxpayers.

With street lighting, there is a tradeoff between public safety and aesthetics. While some may prefer less, or no, nighttime street lighting for aesthetic or other reasons, the result could be increased risks to public safety. In determining the appropriate type and configuration of street lighting, the City must balance public health and safety against aesthetic and other concerns. Some recent studies have raised concerns regarding potential adverse health effects, such as interference with human sleep patterns, that could be caused by certain types of lighting. In its report Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting the American Medical Association Council on Science and Public Health (AMA, 2016) addressed potential health concerns related to LED street lighting and adopted the following recommendations:

1. That our American Medical Association (AMA) support the proper conversion to community-based Light Emitting Diode (LED) lighting, which reduces energy consumption and decreases the use of fossil fuels.
2. That our AMA encourage minimizing and controlling blue-rich environmental lighting by using the lowest emission of blue light possible to reduce glare.
3. That our AMA encourage the use of 3,000K or lower lighting for outdoor installations such as roadways. All LED lighting should be properly shielded to minimize glare and detrimental human and environmental effects, and consideration should be given to utilize the ability of LED lighting to be dimmed for off-peak time periods.

Street lighting of any type (LED, HPS, etc.) has the potential to produce undesirable amounts of light or glare. Since no additional light fixtures are proposed, the only potential impacts associated with the proposed project would result from the difference in light characteristics between the current HPS fixtures and the proposed LED fixtures. In order to balance public health and safety concerns and other concerns such as aesthetics and wildlife impacts, mitigation measures 1 and 2 are proposed (see 1.C, above). Those mitigation measures would be consistent with the recommendations of the AMA and would reduce potential impacts to a level that is **less than significant**.

## 2. AGRICULTURE AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

**A. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B. Conflict with existing zoning for agricultural use, or a Williamson Act contract?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D. Result in the loss of forest land or conversion of forest land to non-forest use?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**E. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Items A, B, C, D, E Discussion:** According to the California Department of Conservation’s Farmland Mapping and Monitoring Program, the City of Pacific Grove is located on land identified as urban and built-up land and other land. There are no agriculture or forestry resources within or surrounding the project site, therefore **no impact** would occur.

### 3. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

**A) Conflict with or obstruct implementation of the applicable air quality plan?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**Item A Discussion:** PG&E estimates that the proposed LED upgrade project would result in a reduction in energy use of approximately 50 million kWh per year throughout PG&E’s project area as compared to existing HPS lighting, with a reduction in air pollutants. (PG&E, 2018) During the installation phase of the project, vehicle trips would be required to replace the light fixtures. However, periodic maintenance and bulb replacement for the current light fixtures also requires periodic vehicle trips. PG&E estimates that LED fixtures have a life expectancy of up to four times longer than HPS fixtures; therefore, no substantial increase in long-term vehicle trips or related emissions would be expected to occur as a result of the project. Potential impacts on implementation of the air quality plan would be **less than significant** and no mitigation measures are required.

**B) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

			✓	
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**Item B Discussion:** The proposed project consists of the replacement of HPS lights with energy-efficient LED lights and does not involve any construction activities. As noted in Item 3.A above, no substantial increase in vehicle trips or related emissions would be expected to occur as a result of the project. Therefore, the project would have a **less than significant impact** on ambient air quality and/or existing air quality violations, and no mitigation measures are required.

**C) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

The proposed project would be expected to result in a long-term reduction in criteria pollutants because of the reduced energy usage of LED lights as compared to the existing HPS lights. In addition, the proposed project does not involve construction activity or ground disturbance, and therefore would not generate fugitive dust. As a result, potential impacts would be **less than significant**.

**D) Expose sensitive receptors to substantial pollutant concentrations?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

A sensitive receptor is generally defined as a location such as a residence, school, retirement facility, or hospital, where sensitive populations (e.g., children, the elderly, and people with respiratory or related health problems) could reasonably be exposed to continuous emissions. Although sensitive receptors are located in the project vicinity, the project would reduce total emissions from electrical power plants due to lower energy usage. As noted in 3.A above, project implementation would require vehicle trips during installation and maintenance; however, the number of trips would not be substantially greater than current trips for routine maintenance of the existing HPS lights due to the longer life expectancy of LED fixtures. Potential air quality impacts to sensitive receptors would be **less than significant**.

**E) Create objectionable odors affecting a substantial number of people?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Item E Discussion:** The project entails light fixture replacements and would not generate any objectionable odors. Thus, the project will result in **no impact** related to objectionable odors.

#### 4. BIOLOGICAL RESOURCES

Would the project:

**A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the [California Department of Fish and Game](#) or [U.S. Fish and Wildlife Service](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item A Discussion:** The Asilomar Dunes planning area is identified in the Pacific Grove General Plan and Local Coastal Program Land Use Plan as a land habitat of great sensitivity. The entire Asilomar Dunes area provides existing and potential habitat for several indigenous species and plants that have adapted specifically to local environmental factors including salt-laden and desiccating winds, and shifting, nutrient-poor soils that are endemic to the Asilomar Dunes area. Because of the rarity of many of the plant and animal species and the fragile nature of the dunes habitat, the California Coastal Commission has designated the Asilomar Dunes as an “environmentally sensitive habitat area (ESHA)” under which the California Coastal Act requires a higher level of environmental protection and restriction on development. The dunes provide habitat for ten plant and five animal species of special concern. Species of special concern are those that are endangered, rare, or threatened. The five animal species of special concern include the black legless lizard, Monarch butterfly, white-tailed kite, Smith’s blue butterfly, the American peregrine falcon, and raptors.

The United States Department of Energy acknowledges that the medical community has learned much about the LED “blue light” role in physiology of plants and animals. Their [Street Lighting and Blue Light Frequently Asked Questions](#) (DOE, 2017) report states, “Researchers have demonstrated, for example, the ability of such light to affect circadian rhythm (the 24-hour ‘biological clock’). Humans and other organisms have evolved this biological response to regular periods of daylight and darkness... Because of the rise of white LEDs for outdoor lighting, and their relatively greater short-wavelength content compared to the high-pressure sodium (HPS) products they’re typically replacing, concerns have arisen that the potentially increased presence of short

wavelengths in the night environment may be detrimental to health. However, it's important to note that the spectral content of LEDs can be engineered to provide any spectrum desired.” The American Medical Association (AMA, 2016) has recommended a maximum of 3000K CCT lighting in order to have less of an impact on wildlife.

As noted in Section 1-Aesthetics, street lighting is provided for public health and safety purposes. In determining the appropriate type and placement of street lights, the City must balance competing objectives including the safety of motorists, cyclists and pedestrians on public streets, potential impacts related to aesthetics and wildlife, and the cost to taxpayers. The City will select LED replacement lights and set lighting intensity at levels necessary for safety while minimizing potential impacts on sensitive wildlife, as described in Mitigation Measures 1 and 2. These mitigation measures would reduce potential impacts to a level that is **less than significant**.

Mitigation Measures

1. The selection and directional orientation of LED replacement street lighting fixtures and bulbs shall be approved by the Public Works Director or designee, in consultation with the Police Chief to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. The current bulbs will be replaced with LED bulbs of comparable wattage. The project proposes 3000-Kelvin CCT light bulbs all throughout the city, with the exception of one predominantly-commercial area where 4000-Kelvin light bulbs are proposed. The only predominantly-commercial area where the 4000-Kelvin light bulbs are proposed is a portion of the Highway 68 corridor from Sunset Drive to the northwest through Presidio Boulevard to the southeast. In addition, where feasible, lower CCT bulbs and reduced lighting levels will be used near sensitive wildlife habitat.
2. Light fixtures shall be installed in a manner approved by the Public Works Director or designee, in consultation with the Police Chief to aim light onto the public right-of-way, and fixtures in residential areas or adjacent to sensitive wildlife habitat shall be fitted with cutoff shields to block light rays from shining directly onto residential properties or wildlife habitat areas in the vicinity of each streetlight.

**B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the [California Department of Fish and Game](#) or [US Fish and Wildlife Service](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item B Discussion:** Please see discussion in 4.A, above. Mitigation Measures 1 and 2 would reduce potential impacts to a level that is **less than significant**.

**C. Have a substantial adverse effect on federally protected wetlands as defined by [Section 404 of the Clean Water Act](#) (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Item C Discussion:** No construction or ground disturbance is proposed as part of the proposed project; therefore, **no impact** to wetlands would occur.

**D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item D Discussion:** Please see discussion in 4.A, above. Mitigation Measures 1 and 2 would reduce potential impacts to a level that is **less than significant**.

**E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Item E Discussion:** Please see discussion in 4.A, above. Mitigation Measures 1 and 2 would reduce potential impacts to a level that is **less than significant**.

**F. Conflict with the provisions of an adopted [Habitat Conservation Plan](#), [Natural Community Conservation Plan](#), or other approved local, regional, or state habitat conservation plan?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Item F Discussion:** The project site is not within a habitat conservation plan area. **No impact** would occur.

## 5. CULTURAL RESOURCES

Would the project:

**A. Cause a substantial adverse change in the significance of a [historical resource](#) as defined in [§ 15064.5](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to [§ 15064.5](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D. Disturb any human remains, including those interred outside of dedicated cemeteries?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Items A, B, C, and D Discussion:** The proposed project would not alter any historical, archaeological, paleontological, resources, unique geological feature, nor disturb any human remains. **No impact** would occur.

## 6. GEOLOGY AND SOILS

Would the project:

**A) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**

**(i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**(ii) Strong seismic ground shaking?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**(iii) Seismic-related ground failure, including liquefaction?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**(iv) Landslides?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Result in substantial soil erosion or the loss of topsoil?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

				✓
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**D) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**E) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Items A, B, C, D and E Discussion:** The project proposes to replace the light fixtures of existing streetlights. No new construction is proposed; therefore, the project would not alter any geological features, including seismic activities and soil erosion, or wastewater disposal systems. **No impact** would occur.

## 7. GREENHOUSE GAS EMISSIONS

Would the project:

**A) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**B) Conflict with an applicable plan, policy or [regulation](#) adopted for the purpose of reducing the emissions of greenhouse gases?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**Discussion: Items A and B:** A primary purpose of the proposed LED upgrade project is to reduce energy use and greenhouse gas emissions. Since LED fixtures of comparable light output use less energy than the existing HPS fixtures, total long-term energy usage and greenhouse gas emissions would be reduced. As noted in 3.A (Air Quality) above, project implementation would require vehicle trips; however, because of the longer life expectancy of LED fixtures the number of trips would not be substantially greater than current trips for routine maintenance of the existing HPS lights. Potential impacts would be **less than significant**.

**8. HAZARDS AND HAZARDOUS MATERIALS**

Would the project:

**A) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact

				✓
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**E) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**F) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**G) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**H) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion: Items A-F, and H:** The proposed project would not involve the use, transport or disposal of hazardous materials. The project site is not included on a list of hazardous materials site compiled pursuant to Government Code Section 65962.5. The project would have no effect on aircraft operations. Additionally, the proposed project is not located within or adjacent to a wildland fire hazard area. This would result in **no impact**.

**Discussion: Item G:** During the installation phase of the project, temporary lane closures may be required to accommodate utility trucks; however, existing regulations require that any such closures

comply with City regulations for work conducted in the public right-of-way, including maintaining emergency access. This would result in a **less than significant** impact.

## 9. HYDROLOGY AND WATER QUALITY

**Would the project:**

**A) Violate any [water quality standards or waste discharge requirements](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Substantially deplete [groundwater](#) supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**E) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**F) Otherwise substantially degrade water quality?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**G) Place housing within a 100-year flood hazard area as mapped on a [federal Flood Hazard Boundary](#) or [Flood Insurance Rate Map](#) or other flood hazard delineation map?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**H) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**I) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**J) Inundation by seiche, tsunami, or mudflow?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Items A-J Discussion:** The proposed light fixtures replacement would not involve any new construction or ground disturbance; therefore, **no impact** would occur.

**10. LAND USE AND PLANNING**

**Would the project:**

**A. Physically divide an established community?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**C. Conflict with any applicable habitat conservation plan or natural community conservation plan?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Item A:** The project proposes to replace the light fixtures of existing streetlights. This would not physically divide an established community. This results in **no impact**.

**Item B:** As discussed in 4.A (Biology), the Pacific Grove Local Coastal Program Land Use Plan includes policies to protect sensitive wildlife species. The City will select LED replacement lights and set lighting intensity at levels necessary for safety while minimizing potential impacts on sensitive wildlife, as described in Mitigation Measures 1 and 2. These mitigation measures would reduce potential impacts to a level that is **less than significant**.

Mitigation Measures

1. The selection and directional orientation of LED replacement street lighting fixtures and bulbs shall be approved by the Public Works Director or designee, in consultation with the Police Chief to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. The current bulbs will be replaced with LED bulbs of comparable wattage. The project proposes 3000-Kelvin CCT light bulbs all throughout the city, with the exception of one predominantly-commercial area where 4000-Kelvin light bulbs are proposed. The only predominantly-commercial area where the 4000-Kelvin light bulbs are proposed is a portion of the Highway 68 corridor from Sunset Drive to the northwest through Presidio Boulevard to the southeast. In addition, where feasible, lower CCT bulbs and reduced lighting levels will be used near sensitive wildlife habitat.
  
2. Light fixtures shall be installed in a manner approved by the Public Works Director or designee, in consultation with the Police Chief to aim light onto the public right-of-way, and fixtures in residential areas or adjacent to sensitive wildlife habitat shall be fitted with cutoff shields to block light rays from shining directly onto residential properties or wildlife habitat areas in the vicinity of each streetlight.

**Item C:** The project site is not located within a habitat conservation plan or natural community conservation plan area. **No impacts** would occur.

## 11. MINERAL RESOURCES

**Would the project:**

**A. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Items A and B discussion:** The project proposes to replace the light fixtures of existing streetlights. Furthermore, according to the City’s General Plan, there are no known mineral resources located in Pacific Grove. Therefore, the project would have **no impact** on mineral resources.

**12. NOISE**

Would the project result in:

**A) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**E) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**F) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**Discussion**

**Items A, B, C, D:** The project proposes to replace HPS light fixtures with LED fixtures. During operation, LED fixtures do not generate a substantial amount of noise. Minor and temporary noise could occur during installation of the new fixtures. Potential impacts would be **less than significant**.

**Items E, F:** The project site is not located within two miles of an airport or within an airport land use plan, nor is the project in the vicinity of a private airstrip. This results in **no impact**.

**13. POPULATION AND HOUSING**

**Would the project:**

**A) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items A, B and C:** The proposed replacement of existing light fixtures would not induce population growth or displace housing. **No impact** would occur.

**14. PUBLIC SERVICES**

**Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:**

**A) Fire protection?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Police protection?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Schools?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D) Parks?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**E) Other public facilities?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items A-E:** The proposed replacement of existing light fixtures would have no effect on demand for fire protection, police protection, schools, parks, or other public facilities. This results in **no impact**.

**15. RECREATION**

**A) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items A and B:** The proposed replacement of existing light fixtures would have no effect on the use of recreational facilities or demand for expansion or addition of parks or other recreation facilities. This results in **no impact**.

**16. TRANSPORTATION/TRAFFIC**

**Would the project:**

**A) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**B) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**C) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**D) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
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				✓
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**E) Result in inadequate emergency access**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
			✓	

**F) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items A, B, C, F:** The proposed LED upgrade project would have **no impact** on transportation, air traffic, public transit, bicycle or pedestrian facilities.

**Item D:** Glare from excessively bright streetlights could have the potential to create a safety hazard. However, the purpose of street lighting is to improve public safety for motorists, cyclists and pedestrians due to better nighttime visibility. As discussed in Section 1 (Aesthetics) LED fixtures are available in a range of power levels and color temperatures, and may be specifically aimed down to illuminate defined areas on the ground. As described in Mitigation Measure 1, the City will select and adjust the light fixtures to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. This mitigation measure would reduce potential safety impacts to a level that is **less than significant**.

Mitigation Measure

1. The selection and directional orientation of LED replacement street lighting fixtures and bulbs shall be approved by the Public Works Director or designee, in consultation with the Police Chief to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. The current bulbs will be replaced with LED bulbs of comparable wattage. The project proposes 3000-Kelvin CCT light bulbs all throughout the city, with the exception of one predominantly-commercial area where 4000-Kelvin light bulbs are proposed. The only predominantly-commercial area where the 4000-Kelvin light bulbs are proposed is a portion of the Highway 68 corridor from Sunset Drive to the northwest through Presidio Boulevard to the southeast. In addition, where feasible, lower CCT bulbs and reduced lighting levels will be used near sensitive wildlife habitat.

**Item E:** During the installation phase of the project, temporary lane closures may be required to accommodate utility trucks; however, existing regulations require that any such closures comply with City regulations for work conducted in the public right-of-way, including maintaining emergency access. This would result in a **less than significant** impact.

**17. TRIBAL CULTURAL RESOURCES**

**A. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:**

**1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items 1-2:** The project proposes to replace the light fixtures of existing streetlights. This would not affect tribal cultural resources. This results in **no impact**.

**18. UTILITIES AND SERVICE SYSTEMS**

**A. Would the project:**

**1. Exceed wastewater treatment requirements of the applicable [Regional Water Quality Control Board](#)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**2. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**3. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**4. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**5. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**6. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**7. Comply with federal, state, and local statutes and regulations related to solid waste?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
				✓

**Discussion**

**Items 1-7:** The project proposes to replace the HPS light fixtures of existing streetlights with LED fixtures. This would have no effect on water, wastewater or solid waste facilities. This results in **no impact**.

**19. MANDATORY FINDINGS OF SIGNIFICANCE**

**1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**2. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**3. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?**

IMPACT	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
		✓		

**Discussion**

**Item 1:** As discussed above, no construction or ground disturbance is proposed as part of the LED upgrade project since no change to existing streetlight poles is proposed. However, the replacement of HPS bulbs with LED bulbs has the potential to result in impacts due to glare, interference with human sleep patterns, nocturnal wildlife and the safety of motorists unless the type and intensity of replacement bulbs are properly selected, installed and operated. The mitigation measures described herein would ensure a balance between public health and safety objectives and concerns regarding aesthetics, wildlife disturbance and interference with human sleep patterns, and would reduce potential impacts to a level that is less than significant.

**Item 2:** Similar LED streetlight replacement projects have occurred throughout the nation in order to reduce energy consumption and greenhouse gas emissions. Approval of the proposed project in Pacific Grove would be consistent with federal and state policy as well as the actions of numerous cities and counties throughout the country. The mitigation measures described herein would reduce potential impacts in Pacific Grove to a level that is less than significant.

**Item 3:** As discussed in Items 1 and 2, above, the mitigation measures described herein would reduce potential impacts on human beings to a less than significant level.

## **SUMMARY OF PROPOSED MITIGATION MEASURES**

1. The selection and directional orientation of LED replacement street lighting fixtures and bulbs shall be approved by the Public Works Director or designee, in consultation with the Police Chief to provide appropriate lighting levels based upon public safety considerations while also minimizing aesthetic impacts and glare. The current bulbs will be replaced with LED bulbs of comparable wattage. The project proposes 3000-Kelvin CCT light bulbs all throughout the city, with the exception of one predominantly-commercial area where 4000-Kelvin light bulbs are proposed. The only predominantly-commercial area where the 4000-Kelvin light bulbs are proposed is a portion of the Highway 68 corridor from Sunset Drive to the northwest through Presidio Boulevard to the southeast. In addition, where feasible, lower CCT bulbs and reduced lighting levels will be used near sensitive wildlife habitat.
2. Light fixtures shall be installed in a manner approved by the Public Works Director or designee, in consultation with the Police Chief to aim light onto the public right-of-way, and fixtures in residential areas or adjacent to sensitive wildlife habitat shall be fitted with cutoff shields to block light rays from shining directly onto residential properties or wildlife habitat areas in the vicinity of each streetlight.

**DETERMINATION:**

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	✓
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a “potential significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	



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Wendy Lao, Associate Planner  
City of Pacific Grove

March 5, 2018

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Date

## REFERENCES:

- American Medical Association, Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting (CSAPH Report 2-A-16), 2016 (<https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/councils/Council%20Reports/council-on-science-public-health/a16-csaph2.pdf>)
- Biological Survey Report for Kevin and Linda Smith (APN 007-031-017). Prepared by Thomas K. Moss, Coastal Biologist. Revised December 27, 2017
- California Department of Conservation. Farmland Mapping and Monitoring Program. (<http://www.conservation.ca.gov/dlrp/fmmp>)
- California Department of Transportation (Caltrans). California Scenic Highway Program. (<http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html>)
- City of Pacific Grove, Pacific Grove General Plan
- City of Pacific Grove, Pacific Grove Local Coastal Program Land Use Plan
- City of Pacific Grove, Pacific Grove Municipal Code Chapter 23.73
- Pacific Gas & Electric, LED Streetlight Replacement Program, 2018 ([https://www.pge.com/en\\_US/business/save-energy-money/business-solutions-and-rebates/lighting/led-street-lighting/led-streetlight-replacement-program.page](https://www.pge.com/en_US/business/save-energy-money/business-solutions-and-rebates/lighting/led-street-lighting/led-streetlight-replacement-program.page))
- Rensselaer Polytechnic Institute Lighting Research Center, Response to the 2016 AMA Report on LED Lighting, June 30, 2016 (<http://www.lrc.rpi.edu/resources/newsroom/AMA.pdf>)
- U.S. Department of Energy, True Colors: LEDs and the relationship between CCT, CRI, optical safety, material degradation, and photobiological stimulation, October 2014 (<https://www1.eere.energy.gov/buildings/ssl/pdfs/true-colors.pdf>)
- U.S. Department of Energy, Street Lighting and Blue Light: Frequently Asked Questions, February 2017 (<https://www.energy.gov/eere/ssl/downloads/street-lighting-and-blue-light-faqs>)