



# MEMORANDUM

PLANNING DIVISION  
COMMUNITY & ECONOMIC DEVELOPMENT

---

To: Salt Lake City Planning Commission

From: Aaron Barlow, Principal Planner

Date: April 8, 2021

Re: **2020 Salt Lake City Street Light Master Plan**

---

The Department of Public Utilities has completed development of an updated city-wide Streetlight Master Plan. This plan will replace the previously-approved 2006 street light plan. Details about the proposed plan—including the project background, the public engagement process, and the plan’s priorities—are included with the attached memorandum. Links to the 2020 Salt Lake City Street Light Master Plan and the accompanying Technical Guidance and Implementation document are also included.

State Statute **[10-9a-203(1)]** requires the Planning Commission to review all City plans and provide a recommendation to the City Council prior to adoption. All questions regarding details about the proposed plan should be directed to Marian Rice, Deputy Director, Department of Public Utilities, at 801-483-6765 or [marian.rice@slcgov.com](mailto:marian.rice@slcgov.com).

## **EXHIBITS**

Memorandum from Marian Rice, Deputy Director, Department of Public Utilities, regarding the 2020 Salt Lake City Street Light Master Plan



# MEMORANDUM

SALT LAKE CITY DEPARTMENT OF PUBLIC UTILITIES

---

To: Salt Lake City Planning Commission

From: Marian Rice, Deputy Director, Department of Public Utilities

Date: April 8, 2021

Re: **2020 Salt Lake City Street Light Master Plan**

---

## **REQUEST:**

2020 Salt Lake City Street Light Master Plan - Representatives from the Department of Public Utilities of the City will provide an overview of the 2020 Salt Lake City Street Light Master Plan (Plan). Major changes in the 2020 Plan from the 2006 Plan include a systematic approach for choosing lighting strategies of public ways based on adjacent land use, pedestrian activity, and street typology. The 2020 City Street Light Master Plan includes all areas of the City and will impact all City Council districts. Staff Contact: Marian Rice at 801-483-6765 or [marian.rice@slcgov.com](mailto:marian.rice@slcgov.com).

## **BACKGROUND/DISCUSSION:**

Salt Lake City was the 5<sup>th</sup> City in the United States to have streetlights. The City's first systematic plan for installing streetlights was adopted in 1908. The most recent street lighting plan was completed in 2006. In 2013, the management of the streetlight system was transferred from the Transportation Division to the Department of Public Utilities. This transfer included changing the funding source for the operation, maintenance and capital improvements of the system from the General Fund and Special Assessment Areas (SAA's) to a newly created street lighting enterprise fund.

Currently Public Utilities maintains over 15,500 streetlights within Salt Lake City boundaries. The Street Lighting Enterprise Fund was primarily developed to maintain existing lighting and upgrade fixtures to newer technology LED. First generation LED lights installed had few options regarding lumen output (measure of light output and brightness) and color temperature (whiteness of the light). The City's practice was to replace the older fixtures with LED fixtures at the same lumen output using a 4,000-Kelvin temperature, which at the time was the industry standard. These new LED fixtures had the same measurable light output but were perceived as a brighter light. During the first few years of conversion to the new LED fixtures mainly within industrial, commercial and higher density residential areas, Public Utilities received more positive feedback than negative. When installation began in the residential neighborhoods, there were more complaints. Residents were not pleased with the brightness of the lights as well as the white light emitted. The City is also proactively working on various streets projects, community improvement projects, pedestrian and bicycle friendly projects, and issues related to crime. Street lighting has a role to play in all of these endeavors.

## **2020 Street Lighting Master Plan Development and Content**

In 2018, Public Utilities began the process of updating the Street Lighting Master Plan (Plan). This planning effort includes a review and update of policies related to the system, engagement of stakeholders in the planning process and design guidance for the City's street light system.

Public Utilities partnered with GSBS Consulting and Clanton & Associates to develop the Plan. This Plan provides design guidance for improving street and pedestrian lighting that will create a quality nighttime visual experience while being more energy efficient. Four guideposts, developed by stakeholder committees, that include Safety, Character, Responsibility, and Equity, drive the Plan's policies. The Plan also draws on bodies of knowledge throughout the world regarding advancements in the technology and science of how we can light our public ways.

The 2020 Street Lighting Master Plan incorporates two volumes, including the Master Plan itself and Technical Guidance and Implementation guide. Both are attached to this Memorandum. Primary components of the Plan include:

- System Background
- System Evaluation
- Plan Guideposts
- Street Lighting Basics Overview
- Process for Evaluating the Lighted Environment
- Comprehensive Improvements
- Minimal Improvements
- Lighting Controls and Adaptive Dimming Strategies
- Lighting Calculations
- Appendices
  - Lighting Terms
  - Meeting Notes
  - Existing Conditions Report
  - Nocturnal Infrastructure for Ecological Health (report)
  - Luminaire Submittal Form

If approved, the 2020 Street Lighting Master Plan would implement the following major policy statements for the City:

- 1) Street lighting will enhance safety through the implementation of industry recognized standards.
- 2) Street lighting standards will include allowances to encourage dimming strategies relating to pedestrian activity, wildlife, and dark skies lighting.
- 3) Street lighting will minimize the obtrusive effects of light at night resulting from light trespass, light pollution, and glare through the selection and placement of appropriate poles, fixtures, light type, and light levels.
- 4) Provide pedestrian lighting in accordance with neighborhood plans and in accordance with the typologies of this Plan.
- 5) Provide street and pedestrian lighting that minimizes impacts to sensitive wildlife species.

- 6) Select fixture types to provide dark skies protection.
- 7) Implementation based on neighborhood and community input to determine pole, fixture type, maximum and minimum light level, and the implementation of adaptive dimming applications when appropriate.

Funding and prioritization are the key drivers in implementation of the policies, standards, and strategies in the Plan. Implementation recommendations outlined in the Plan are as follows:

**1) Priority One**

- a. Neighborhoods currently underserved for street and/or pedestrian lighting based on adjacent land uses.
- b. High conflict areas including school zones, bus stops, transit stations, and neighborhood byways.

**2) Priority Two**

- a. Areas with non-compliant existing street lighting.

**3) Ongoing**

- a. Replacement of lamps with LED luminaires on regular maintenance schedule as appropriate.
- b. Replacement of non-compliant street lighting in areas of ecological sensitivity.
- c. Installation of dimming capability.
- d. New development or redevelopment proposals.

**4) Step One**

- a. Identify high conflict areas in the City.
- b. Review the current lighting map to identify underserved neighborhoods.
- c. Respond to requests from community or neighborhoods for lighting changes.

**5) Step Two**

- a. Contact community and neighborhood representatives to identify priorities and review options according the matrix developed in the Plan.
- b. Identify the community preferred option.

**6) 6) Step Three**

- a. Estimate cost of preferred option.
- b. Seek funding approval/develop financial strategy.

**3) Step Four**

- a. Design, schedule, and implement the preferred option.

If the Plan is adopted, it will reflect public feedback and the City's street lighting system will be better incorporated into City livability and development goals. Major changes in the 2020 Plan from the 2006 Plan include a systematic approach for choosing lighting strategies of public ways based on adjacent land use, pedestrian activity, and street typology. Procedures for determining pedestrian lighting are included, as are lighting procedures for environmentally sensitive areas. Because of this, the current base street lighting standard will likely change depending on the land use, pedestrian activity, and street typology. It is anticipated that Public Utilities will need to prepare an updated capital improvement program and schedule for the street lighting system if this Plan is adopted,

along with an updated evaluation of street lighting rates, rate structure and financial strategies for capital improvements.

**PUBLIC PROCESS:**

Public Utilities consistently receives feedback regarding the current lighting system, both positive and negative. A major driver of the 2020 Street Lighting Master Plan includes this public feedback. For instance, Public Utilities has received feedback regarding the performance of LED fixtures, public safety, environment, and equity.

As part of the Plan effort, three groups were formed to advise in the development of the Plan. The first group, the Advisory Committee, consisted of representatives from each City Council District recommended by City Councilmembers or Council staff. Advisory Committee members were asked to provide input on lighting in their specific district and in common areas of the City. Throughout the course of developing the Plan this committee helped in evaluating the existing system and provided guidance pertaining to the Plan’s scope and reach.

A second group formed as a Technical Committee consisting of staff from City Departments and Divisions who hold a direct interest in the street lighting program. Technical Committee members include representatives from Salt Lake City Police Department, Fire Department, Sustainability Department, Engineering Division, Planning Division, and the Urban Forestry Division. Technical Committee members provided input based on their unique responsibilities with respect to how streetlighting influenced their tasks. This committee provided direction in how lighting design criteria could assist in meeting the City’s goals and more specifically, helping to accomplish their Department’s individual responsibilities.

The third group was formed from stakeholders in the community including representatives from agencies and groups in the transportation, education, environmental, and business sectors who have a vested interest in Salt Lake City. The primary purpose of this group was to provide input as the Plan progressed. This provided a level of transparency and allowed for feedback to ensure the Plan had a solid foundation to address the multiple values of a comprehensive lighting system.

Public Utilities and the GSBS Consulting team met with the Advisory and Technical Committees to help frame the vision and goals of the Plan. The committees were encouraged to offer their opinion on existing lighting conditions throughout the City and what improvements could be made. These Committees toured 17 sites throughout the City with varied lighting characteristics and land use. At each of these sites committee members were asked several questions to gauge their opinion on the existing lighting conditions. The GSBS Consulting team also took light measurements at each of these locations to compare with current industry lighting standards. Using the data collected from the measured light readings and input from the committees, GSBS created an Existing Lighting Conditions report. This report summarized current lighting conditions to assist with developing design criteria and a future implementation plan using the guideposts detailed in the Plan.

**Meetings and Formal Engagement:**

- November 5, 2018: Street Lighting Site Tour and Surveys – Advisory and Technical Committees
- April 3, 2019: Street Lighting 101 – Advisory Committee
- April 25, 2019: Visioning Session – Advisory Committee
- April 26, 2019: Technical Committee
- May 24, 2019: City Council and Mayor’s Office Briefing

- July 29 and 30, 2019: Stakeholder Update
- April 2019 – November 2019: Public Street Lighting Survey, 160 respondents
- January 8, 2020: Progress Update – Advisory Committee
- October 22, 2020: Public Utilities Advisory Committee
- March 2, 2021: Salt Lake City Council Work Session

**EXHIBITS:**

[Street Lighting, Volume 1 – Master Plan](#)

[Street Lighting, Volume 2 – Technical Guidance and Implementation](#)