



NorthWestern Energy LED Street Lighting Project for City of Missoula and Missoula County – Project Update

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- Statewide Project Overview
- Missoula Specific Update



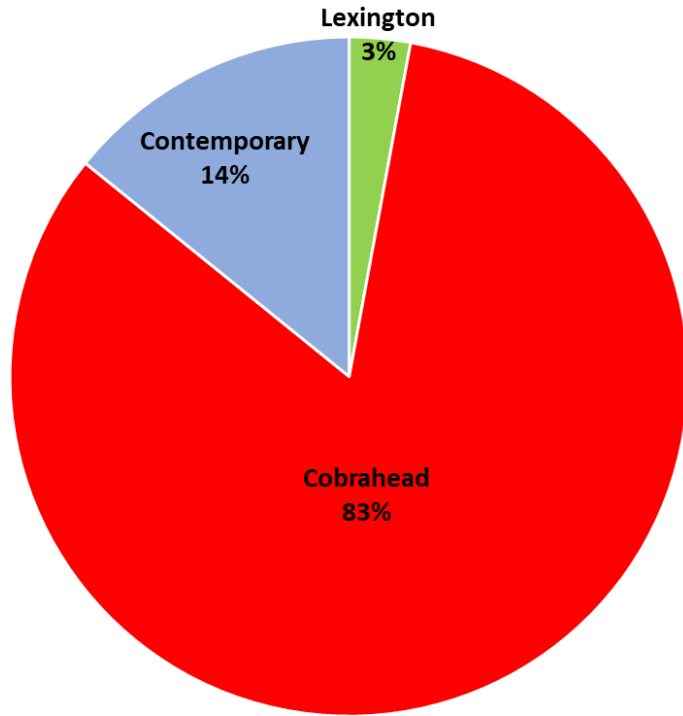
- Four-year program to replace 43,000 existing NWE owned street lights in SILDs across Montana with LED lights.
 - Not NWE owned area lighting billed to customers
 - (another project address these)
 - Not City owned and MDOT owned street lighting
 - Not privately owned area lighting
- Existing High Pressure Sodium (HPS) fixtures replaced on a like for like basis with equivalent LEDs. Generally, poles will not be replaced nor styles changed.
- Why now & what are advantages?
 - LED lights use about 50 percent less electricity than traditional High-Pressure Sodium (HPS) and last 2 to 3 times longer.
 - LED lighting technology is very mature now and the industry is transitioning away from HPS lighting.



NorthWestern Energy - Missoula Area SILD Lights

- 2411 Northwestern Owned (SILD) Street Light Fixtures
 - 1,808 light fixtures in 34 City of Missoula SILDs.
 - 603 light fixtures in 35 Missoula County SILDs.
- 1862 (mostly cobrahead style) are completed to date

NorthWestern Energy Street Lights for City of Missoula and Missoula County
Combined by Fixture Type



FIXTURE TYPE	CITY	COUNTY	COMBINED	%
Cobrahead	1693	306	1999	83%
Contemporary	115	227	342	14%
Lexington		70	70	3%
TOTALS	1808	603	2411	100%



- NorthWestern owned Intersection Lights
 - (approx.) 415 total
 - Generally Cobrahead Style
 - 382 are completed to date



Example: Cobra Head Style

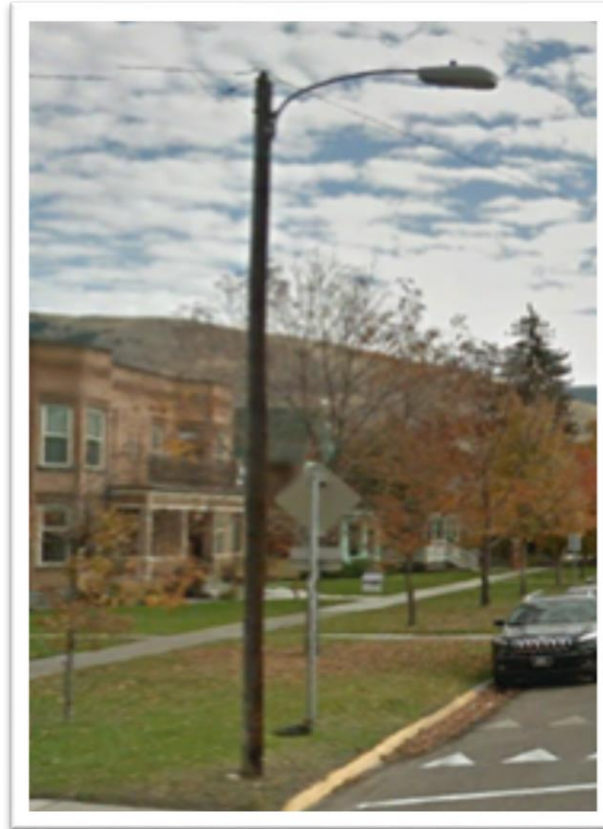
HPS



HPS Cobra head medium semi-cutoff



HPS Cobra head medium cutoff



LED



LED GE Flat Glass/Discrete LED



LED Eaton Discrete LED

- Existing poles depending on SILD: wood, steel, fiberglass
- New LED fixtures: Dark Sky Compliant



Contemporary



Existing HPS



Lexington



Existing HPS



Dark Sky
LED Lexington



Dark Sky
LED Lexington
on Contemporary



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Questions

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