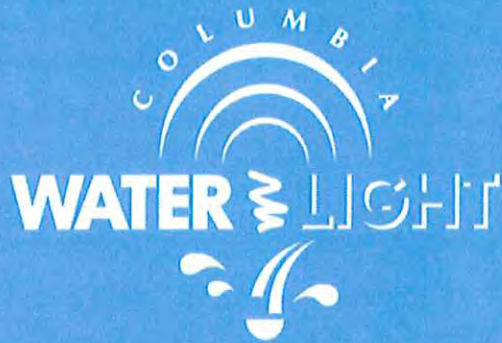


# Columbia Street Lights



Presented by:  
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1

## Street Light Overview



- Recently completed a city-wide inventory.
- Currently 8,950 street lights in service.
- Range from 100 watts to 400 watts.
- All are high pressure sodium or mercury vapor.

2



**Unmetered Street Light Report** November 2008

Street Lights Installed by Columbia Water & Light Dept.		Previous Number	Installed	Removed	Current Number	Current Rate	TOTAL
100W HPS	C-150113 L-80048	1275			1,275	\$5.00	\$6,375.00
175W MV	C-150125 L-80120	508			508	\$5.78	\$5,748.48
250W MV	C-150131 L-80128	408			408	\$8.15	\$3,308.90
250W HPS	C-150819 L-81830	1612			1,612	\$14.82	\$23,800.64
310W HPS	C-150818 L-81832	0			0	\$18.18	\$0.00
400W HPS	C-150115 L-80090	11			11	\$17.60	\$195.80
400W MV	C-150133 L-80132	22			22	\$11.55	\$254.10
1000W MV	C-150129 L-80138	0			0	\$29.27	\$0.00
175W MV PTL	C-150127 L-80122	136			136	\$11.11	\$1,510.96
					4,400		\$41,282.08
<b>Lights with underground charges:</b>							
100W HPS PTL	C-150083 L-82020	3536	1		3,536	\$11.18	\$39,532.48
175W MV	C-150121 L-82058	0			0	\$10.88	\$0.00
250W MV	C-150123 L-82058	0			0	\$13.07	\$0.00
250W HPS	C-150125 L-82090	700	11		720	\$19.74	\$14,212.80
310W HPS	C-150127 L-82082	0			0	\$21.10	\$0.00
400W HPS	C-150129 L-82064	3			3	\$22.72	\$68.16
400W MV	C-150131 L-82068	0			0	\$18.47	\$0.00
250W HPS DSL	150131-131822	170			170	\$19.74	\$3,355.80
100W HPS DSL	150131-131820	61			61	\$9.92	\$605.12
					4,400		\$27,774.36
<b>TOTAL</b>					<b>8,800</b>		<b>\$99,057.44</b>

K:\Engineering\Clock\Rachel Center\Shared\StreetLight Report.xls

## Street Light Overview



- Provide public/pedestrian safety.
- Provide increased security.
- Reduce vehicle accidents.
- Reduce crime.





## Street Light Overview



- W&L installs and maintains Columbia's street lights.
- W&L bills Public Works for the monthly fee for each light.
- Monthly fees range from \$5.00 to \$22.72 per month per light.
- Current total monthly bill is \$99,057.44.

7

## Street Light Overview



- Street lights are not metered.
- Street lights add to our "system losses."
- We do actively repair lights that are burned out and also repair lights that are on during the day ("day burners").

8

## Lumecon LED Light Comparison



LED:	HPS:
\$1,371 Cost	\$129 Cost
156 Watts	250 Watts
6,300 Lumens	27,500 Lumens
100,000 hours (22.8 years)	40,000 hours (9.1 years)
7 Year Warranty	New Bulb \$18.92
	Replace Bulb: \$45 <sup>9</sup>

## Lumecon LED Light Comparison



LED:	HPS:
Lumens per Watt	Lumens per Watt
40	110

High Pressure Sodium lights are more efficient than LED lights.

## Lumecon LED Light Comparison



Lumecon LED street lights are 10.6 times as expensive and produce only 23% of the light in comparison to a High Pressure Sodium light.

11

## LED Roadway Lighting Limited Comparison (Ken Cartmill)



LED:	HPS:
\$975 Cost	\$57 Cost
79 Watts	100 Watts
6,650 Lumens	9,500 Lumens
100,000 hours (22.8 years)	40,000 hours (9.1 years)
	New Bulb \$18.90
	Replace Bulb: \$45

12



## LED Roadway Lighting Limited Comparison



LED Roadway Lighting street lights are 17 times as expensive and produce only 70% of the light in comparison to a High Pressure Sodium light.

13

## Budget Impact



- Current Street Light Budget      \$1,427,800  
    (after \$100,000 reduction)
- Boone Electric and UMC            \$173,250
- Amount Left for W&L              \$1,254,550

14

## Budget Impact



- Added 11 Lights in November \$868
- Estimate Over Budget \$23,533

15

## Options to Meet Budget



- Change out All MV's to HPS's that would reduce cost.
- This Will Save Approximately \$12,000.

16



## Impact of One New Light on the Budget (Annual Cost)



### Overhead:

100W HPS - \$64.52  
250W HPS - \$191.23  
400W HPS - \$229.68

### Underground:

100W HPS - \$144.26  
250W HPS - \$254.71  
400W HPS - \$293.16

17

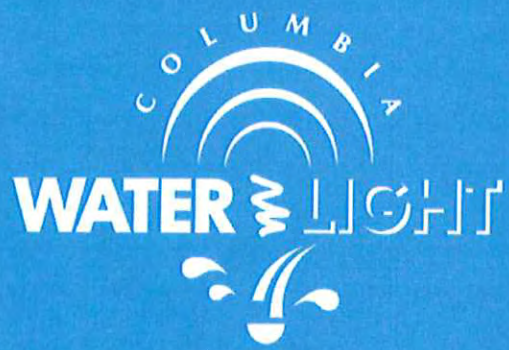
## Options to Meet Budget



### ✓ To Meet Budget We Could Remove:

- ✓ 516 - 100 Watt Overhead HPS
- ✓ 231 - 100 Watt Underground HPS
- ✓ 174 - 250 Watt Overhead HPS
- ✓ 130 - 250 Watt Underground HPS

18



Questions?