

**Providence RECenter Lighting System**

<b>Lighting System</b>	<b>Number of Lamps</b>	<b>Average Watt for each lamp</b>	<b>Total watts</b>
T8 Fluorescent Lamps & Electronic Ballast	218	32	6976
T12 Fluorescent Lamps & Electronic Ballast	273	34	9282
Incandescent Exit Signs	9	12	108
LED Exit Signs	9	2	18
400w Metal Halide Lamps	98	400	39200
360w Metal Halide Lamps	8	360	2880
Incandescent Lamps	54	100	5400
Compact Fluorescent Lamps	41	25	1025
<b>Total Watt</b>			64889
<b>Average hours a month this lighting will be used</b>			500
<b>Total KWh a month</b>			<b>32445</b>
<b>Total KWh a year</b>			<b>389334</b>

<b>Annual CO2 Reduction by Planting Trees in Park Authority by efforts between 4/20/07 and 10/1/08</b>	
Number of trees planted	<b>482</b>
Pounds CO2 reduction by planting each average tree	<b>330</b>
Total annual pounds CO2 reduced by tree planting in Park Authority	<b>159060</b>
<b>Assumptions:</b>	
1. Each year, the average yard tree cleans 330 pounds of carbon dioxide from the atmosphere. (Source: <a href="http://www.birdday.org/resources/factsheetaudubonwhatyoucando.pdf">http://www.birdday.org/resources/factsheetaudubonwhatyoucando.pdf</a> )	
<b>CO2 Reduction by using synthetic turf in athletic fields (4/20/07 to 10/1/08)</b>	
Total hours a year for mowing athletic fields	<b>440</b>
Gallons of gas consumed per hour by lawn mower	<b>1</b>
Pounds CO2 reduction per gallons of gas reduction	<b>20</b>
Total annual pounds CO2 reduced by using synthetic turf in Park Authority	<b>8800</b>
<b>Assumptions:</b>	
1. One gallon of gas saving keeps 20 pounds of carbon dioxide out of atmosphere (Source: <a href="http://www.birdday.org/resources/factsheetaudubonwhatyoucando.pdf">http://www.birdday.org/resources/factsheetaudubonwhatyoucando.pdf</a> )	
2. We assumed that gas consumption by mowing machine for athletic fields is one gallon per hour	

<b>CO2 Reduction for Providence RECenter lighting system by planned efforts before 10/1/08</b>	
Annual KW consumed in providence RECenter lighting system (see Providence worksheet)	<b>389334</b>
Expected KW saving by implementing planned project	<b>15%</b>
Pounds CO2 reduction per KWh electricity consumption reduction	<b>2</b>
<b>Total annual pounds CO2 reduced by lighting update plan</b>	<b>116800</b>
<b>Assumptions:</b>	
1. One KWh electricity saving keeps 2 pounds of carbon dioxide out of atmosphere (Source: <a href="http://www.cleanerandgreener.org/resources/emission_reductions.htm">http://www.cleanerandgreener.org/resources/emission_reductions.htm</a> )	
2. We assumed that saving electricity consumption by Providence RECenter lighting system will be 15 percent	