GOAL 3

Conserve Resources and Use Renewable Energy Technologies

Snohomish County

# SOAP Action Update

## *McCollum Park LED Lighting Retrofit*


***The Dollars and Sense of Energy Efficient Lighting!***
In 2014 Snohomish County completed an LED lighting retrofit project in McCollum Park office and classroom buildings. A total of 145 outdated T12 flourescent lamps with magnetic ballasts were changed out to light emitting diode (LED) lamps.

The new LED lighting has many advantages over its flourescent predessor, including:

- More energy efficient
- Longer lamp life hours
- Reduced replacement and maintenance costs
- Better lighting quality in work spaces
- LEDs are mercury free

As an added benefit, the new LED lighting product does not need ballasts, which contributed to project cost savings.

A life cycle cost assessment for this retrofit shows that the County is projected to save 41,912 killowatt hours (kwh) of energy per year over the existing lighting technology, or about 810,000 kwh of energy over the approximate 20 year life span of the lamps. That's enough energy to power about 75 homes for a year[1]!

Saving energy in County buildings is one way Snohomish County is reducing our carbon footprint and working to achieve our environmental goals. Conserving electricity helps reduce greenhouse gas emissions by reducing the need for energy that must be created and distributed. It's estimated that the annual impact of the lighting retrofit will save the equivalent of 28 tons of carbon dioxide emissions per year.

**1** Assumes average Snohomish County homes uses 10,837 kwh per year, according to U.S. Energy Information Administration.

## *environmental goals*

Increasing the energy efficiency of County buildings is one example of how we are taking action to achieve our Sustainable Operations Action Plan (SOAP )Goals and Objectives, namely:

- **Goal 3:** Conserve Resources and Use Renewable Energy Technologies
- **Objective 3L:** Reduce energy and water use through equipment upgrades, procurement and construction practices, and resource conservation in County operations.
- **Strategy 3(iv):** Upgrade inefficient equipment to facilitate energy and water conservation and recovery, as funding becomes available.

## *environmental benefits*

The LED lighting retrofit at McCollum Park will…..

- Save over 40,000 kwh of electricity per year – enough electricity to power 96 televisions for a year[2].
- Avoid 30 metric tons of carbon emissions annually .

## *economic case*

By taking action to achieve Snohomish County's sustainability goals, and increasing energy efficiency, the county realizes an economic benefit as well.

- The County is projected to save **over $75,000** in electricity, operation, and maintenance costs over the useful life of the new lighting improvements.
- The County captured value by acting quickly to retrofit the old lamps. The Net Present Value of completing this project before utility rebates expired (and with energy savings realized earlier) was nearly $7,000 higher over the expected 20 year life of the retrofit than if the same project had been done a year later.

**2** Assumes average Energy Star 32" LCD tv (50 watt consumption).