LED FACILITY LIGHTING CASE STUDY

"From the vendor retained by LAS, to the team that works as representatives for LAS, all have simplified the process."

James Tkachyk , Parks & Facilities Division Lead

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ABOUT LAS

LAS is a preferred provider of competitively-priced and sustainable business services for Ontario municipalities and the broader public sector. LAS helps its customers ***Save Money, Make Money & Solve Capacity***.

Lake of the Woods KENORA

Facility & Address
Kenora Water Treatment Plant
5 7th Street South, Kenora, ON

Use(s)
Water Treatment Plant

Annual Operating Hours
3,420 hours

Project Size
460 T12 & T8 fixtures

Existing Fixtures
T12 & T8 ranging from 13W - 114W

LED Replacement Fixtures
460 LED T8 fixtures

Reason for Lighting Upgrade
High energy consumption, increasing failure rates and maintenance costs

Project Cost
$76,624

conrad lighting solutions

AcuityBrands.

THE SITUATION

The City of Kenora's Water Treatment Plant was built in 1979. With the emergence of newer lighting technology, Kenora was looking for opportunities to remedy them many outages the plant has experienced, as well as lower energy consumption and related costs, and improve lighting conditions. Pre-existing fixtures included a mix between T12 and T8 lamps and ballasts at wattages ranging from 13W - 114W.

THE SOLUTION

The lighting upgrade to Kenora's Water Treatment Plant occurred through the facility, with notable areas including the chlorine room, clarifier room, control room, transformer room, hallways, and offices. Both the T12 and T8 fixtures were replaced with LED T8s, again varying in wattages, reducing annual energy consumption by 75,504 kWh, from 116,605 kWh to 41,101 kWh.

INSTALLED FIXTURES

Total # Fixtures	Wattage / Fixture	Total kWh	kWh Savings
460	Varies (6W - 60W)	41,101	75,504

"I have requested quotes for many lighting projects and LAS has competitively won 90% of them."

-James Tkachyk, Parks & Facilities Division Lead

THE RESULTS

Annual Consumption **Before** Upgrade	116,605 kWh
Annual Consumption **After** Upgrade	41,101 kWh
Annual Energy Consumption Savings	**75,504 kWh**
Annual Energy Costs **Before** Upgrade	$20,990
Annual Energy Costs **After** Upgrade	$7,398
Annual Energy Cost Savings	**$13,592**
Annual Maintenance Cost Savings*	$2,500
IESO Incentives	$6,650
Return On Investment	23%
Simple Payback	4.34 years

64% Decrease in Energy Usage

65% Decrease in Energy Costs

8.7% Project Cost in IESO Incentives

4.34 Years Simple Payback

* Energy costs and savings are based on an average cost of $0.18/kWh at the time of the project

**Maintenance cost savings are estimated based on established lamp and ballast failure rates.