

# A Lighting Plan for Kingsville

A made-in-Kingsville Solution,  
with a 2020 vision for the future,  
To correct a made-in-Kingsville  
Problem

# Introduction

- The year was 1970, I was 20 years old, we baby boomers chanted "save the ecology" (whatever that was) "save the whales", a rock concert was organized in Vancouver to finance the first Greenpeace ship for its first mission to the Island of Amchitka
- and Joni Mitchell sang " Don't it always seem to go, That you don't know what you got 'til it's gone, They paved paradise and put up a parking lot".
- The various protests of the 1970's were instrumental in birthing environmental groups and David Suzuki, a native son of Olinda, began his mission to preserve the earth and all that live there.
- Environmental Legislation to reduce and prevent Air ,Water and Land pollution soon followed.
- Recently, our Mayor represented Kingsville in the Great Lakes and St Lawrence Cities Initiative whose resolutions include Climate Change and Energy and Eco System Protection, among others.

# Light Pollution

- Fast forward to 2020. Great strides have been made in Pollution Legislation. I dread to consider where we would be today had we done nothing.
- Unfortunately today we are suffering from another man-made issue. We are facing the degradation and loss of night due to Light Pollution. We must ask ourselves “What will be our legacy to our children and the generations to follow? Will we continue to deprive them of the darkness of night, a factor important to a good night’s sleep and it’s the restorative period required for Human health.
- Will we continue to deprive them of the wonder of our astronomy, an opportunity to gaze at the Milky Way from Essex County; something many of us enjoyed in the past.

# What is Light Pollution; International Darksky Association, Definitions:

- **Light Pollution:** Any adverse effect of artificial light.
- **Light Trespass:** Light falling where it is not wanted or needed. Spill light. Obtrusive light.
- **Light Spill:** Unwanted spillage of light onto adjacent areas and may affect sensitive receptors particularly residential properties and ecological sites.

## IDA Definitions continued..

- **Glare:** Intense and blinding light that reduces visibility. A light within the field of vision that is brighter than the brightness to which the eyes are adapted.
- **Skyglow:** Diffuse, scattered sky light attributable to scattered light from sources on the ground. Every misapplied light source contributes in some form to Skyglow

# Adverse Effects of Artificial Light at Night (ALAN) on Human Health

- It is common knowledge there is a correlation between ALAN and the health of shift workers as it disrupts the Circadian Rhythm, our biological clock. Darkness is necessary to restore human biological function.
- Exposing non-shift workers to the same environment results in the same effect.
- ALAN in the visible spectrum, outdoor ALAN in the blue-light spectrum, which is believed to be the most biologically relevant exposure, was positively associated with prostate cancer and, to a lesser extent, with breast cancer.

<https://ehp.niehs.nih.gov/doi/10.1289/EHP1837>

# Adverse Effects of ALAN on Nature

- All of nature, plants and animals, rely on the light/dark cycles.
- ALAN confuses the flight of migratory birds who rely on the clues of starlight for navigation. Essex County is within the flight path of many migratory species.

# Current Conditions

- With the advancement of LED lighting technology, we have increased adverse lighting effects by installing LED lamps. The drivers are energy savings, lower costs through Government Rebates and increased replacement periods. Unknowingly we have installed lamps that emit blue-rich/white light which is the spectrum most detrimental to Humans and the environment. We all need to do our part in eliminating unnecessary light.
- From 2016 to 2020 the Hydro supply to this area was increased significantly allowing Greenhouse Operators to install and initiate the use of grow lights for 24 hour crop lighting.
- By 2025, the Hydro supply will be doubled and the use of grow lights will surely increase.
- Incentives and rebates are currently available to cover up to 55% of retrofitting greenhouses to LED lighting.



# What To Do?

- Investigate the need for a Lighting Bylaw for Kingsville by consultation with the citizens of this municipality. Establish a Lighting Committee.
- A Lighting Bylaw will require cooperation with all property owners in the Municipality; Residential, Industrial, Commercial and Agriculture.
- This resolution will reduce/eliminate the “them versus us” comments and complaints that I am sure consume some of our Administrations' valuable time.
- A sample Lighting Bylaw has been provided

# Advantages of a Lighting Bylaw

- Results will improve Health and Safety of Kingsville's citizens and those who visit us
- Will provide Planning Dept. with proper wording for Site Plan administration
- Will provide specifications and other data required for cooperation and enforcement
- Will enhance our enjoyment of property and our view of the Night Sky

# First Steps

- Investigate and correct all lighting that has a dangerous effect on Transportation Safety.  
Example: excessive glare at intersections.
- Review and enforce contraventions of any Site Plan Agreement.
- Publish brochures and documents to encourage “good neighbour” communication to resolve concerns.

# What can Kingsville do?

- Kingsville should step forward as the leader in Windsor Essex County to reduce unnecessary light thereby restoring our Dark Skies.
- By being the leader, Kingsville should open dialog and collaborate with neighbouring Municipalities to assist them with achieving this common goal.
- Using current research data, apply the correct lighting for streets and municipally owned buildings.
- Promote the best application of lighting for the community and strive for a Healthy Environment for all.
- Enact a Lighting Bylaw

# Light Glare at Intersection CR29 & CR34



# Light Glare at Intersection CR18 & CR34





How do these people sleep at night?



# Light Trespass





# Violation of Site Plan Agreement?



“When we forget that we are embedded in the natural world, we also forget that what we do to our surroundings we are doing to ourselves.”

**David Suzuki**

## Acknowledgements

- Royal Astronomical Society of Canada, Windsor
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- Windsor Cancer Research Group (WCRG)
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- Illuminating Engineering Society (IES)
- Town of Huntsville
- Town of Mississippi Mills