Friends of Little Salt Spring (FLSS)

Position Paper on Climate Change

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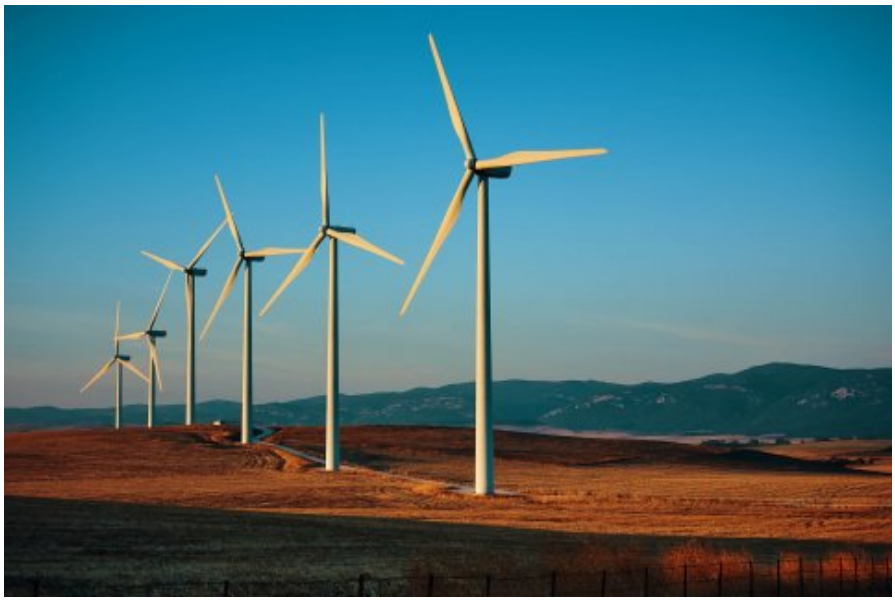
1. Our Place in the Natural World

Our goal is to preserve Little Salt Spring and its pristine surroundings for posterity. We FLSS consider ourselves and the spring a part of the natural world. The natural world has been placed at risk by the impact of mankind on our planet in the years since the industrial revolution. The factors influencing that change are complex and include (but are not limited to):

- increased carbon and methane emissions through the burning of wood and coal
- destruction of wild habitat for agricultural and other human purposes
- pollution of waterways from industrial waste
- plastic pollution in the oceans and air
- poor agricultural practices such as tilling fields and using harmful pesticides

2. **Some scary facts about climate change**: The UN Intergovernmental Panel on Climate Change (IPCC) fifth assessment report.



Climate Change is the defining issue of our time and we are at a defining moment. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale. Without drastic action today, adapting to these impacts in the future will be more difficult and costly.

The Human Fingerprint on Greenhouse Gases: Greenhouse gases occur naturally and are essential to the survival of humans and millions of other living things, by keeping some of the sun's warmth from reflecting back into space and making Earth livable. But after more than a century and a half of industrialization, deforestation, and large-scale agriculture, quantities of greenhouse gases in the atmosphere have risen to record levels not seen in three million years. As populations, economies and standards of living grow, so does the cumulative level of greenhouse gas (GHGs) emissions.

There are some basic well-established scientific links:

3. The concentration of GHGs in the earth's atmosphere is directly linked to the average global temperature on Earth;
3. The concentration has been rising steadily, and mean global temperatures along with it, since the time of the Industrial Revolution;
3. The most abundant GHG, accounting for about two-thirds of GHGs, carbon dioxide (CO_2), is largely the product of burning fossil fuels.

3. The Urgency of The Situation

- From 1880 to 2012, the average global temperature increased by 0.85°C.
- Oceans have warmed, the amounts of snow and ice have diminished and the sea level has risen. From 1901 to 2010, the global average sea level rose by 19 cm as oceans expanded due to warming and ice melted. The sea ice extent in the Arctic has shrunk in every successive decade since 1979, with 1.07 × 106 km² of ice loss per decade.
- Given current concentrations and ongoing emissions of greenhouse gases, it is likely that by the end of this century global mean temperature will continue to rise above the pre-industrial level. The world's oceans will warm and ice melt will continue. Average sea level rise is predicted to be 24–30 cm by 2065 and 40–63 cm by 2100 relative to the reference period of 1986–2005. Most aspects of climate change will persist for many centuries, even if emissions are stopped.
- There is alarming evidence that important tipping points, leading to irreversible changes in major ecosystems and the planetary climate system, may already have been reached or passed. Ecosystems as diverse as the Amazon rainforest and the Arctic tundra, may be approaching thresholds of dramatic change through warming and drying. Mountain glaciers are in alarming retreat and the downstream effects of reduced water supply in the driest months will have repercussions that transcend generations.

Global Warming of 1.5°C

- In October 2018 the IPCC issued a special report on the impacts of global warming of 1.5°C, finding that limiting global warming to 1.5°C would require rapid, far-reaching and unprecedented changes in all aspects of society. With clear benefits to people and natural ecosystems, the report found that limiting global warming to 1.5°C compared to 2°C could go hand in hand with ensuring a more sustainable and equitable society. While previous estimates focused on estimating the damage if average temperatures were to rise by 2°C, this report shows that many of the adverse impacts of climate change will come at the 1.5°C mark.

- The report also highlights a number of climate change impacts that could be avoided by limiting global warming to 1.5ºC compared to 2ºC, or more. For instance, by 2100, global sea level rise would be 10 cm lower with global warming of 1.5°C compared with 2°C. The likelihood of an Arctic Ocean free of sea ice in summer would be once per century with global warming of 1.5°C, compared with at least once per decade with 2°C. Coral reefs would decline by 70-90 percent with global warming of 1.5°C, whereas virtually all (> 99 percent) would be lost with 2ºC.

- The report finds that limiting global warming to 1.5°C would require "rapid and far-reaching" transitions in land, energy, industry, buildings, transport, and cities. Global net human-caused emissions of carbon dioxide (CO2) would need to fall by about 45 percent from 2010 levels by 2030, reaching 'net zero' around 2050. This means that any remaining emissions would need to be balanced by removing CO2 from the air.

- **Particular Significance to Florida Residents**

The state of Florida is particularly at risk from climate change because of the following factors:

- The whole of the state is low lying and many areas are close to the water level (such as North Port and Miami) putting us at high risk from rising water levels.
- Our area is prone to hurricane activity that will increase as water temperature rises. Hurricanes are predicted to be more frequent, more intense and slower moving with more rainfall.
- Our topsoil is mostly sandy with little organic matter, at risk of being washed away by intense rainfall.
- The whole of Florida sits on a substrate of limestone that is easily impacted by increased rainfall and water flow.
- Our oceans are already prone to harmful and dangerous algae that can be exacerbated by rising water temperatures.
- Our coral reefs have already been harmed and in some cases destroyed by increased water temperatures.

Luckily, our climate has sunshine about 95 days of the year making solar energy very realistic.

5. Potential impact of climate change on LSS

- Changes in water level may impact the spring and the archeological artifacts therein.
- Changes in temperature may affect the surrounding ecology, in particular the unique orchid species growing there.
- Hurricane activity may damage the trees and other structures surrounding the pond.

6. Simple things we can all do to ameliorate the effects of climate change and other damaging results of human industry.

- Reduce our use of plastic by using biodegradable and reusable materials (shopping and food storage bags)
- Where feasible, use solar, wind and geothermal energy instead of wood and coal-based fuel.
- Buy fuel efficient cars and household devices.
- Compost and use food scraps.
- Collect rainwater for watering plants
- Use safe, organic methods of dealing with household and garden pests.

We are committed to leaving the earth and LSS as unchanged as possible for the benefit of our own children and grandchildren as well as future generations around the world. We wish the wonderful and still mysterious ecologies of our planet, both on land and in the oceans, to thrive and be undisturbed.

7. Fact Finding and discussions at monthly board meetings

This issue will be discussed at monthly board meetings as well as public meetings.