Protecting the water from excess nutrients
Primer

Nutrients such as Phosphorous and Nitrogen and chemicals such as fertilizers can upset the delicate balance of a lake ecosystem, causing a depletion of oxygen and weed and/or algae growth. Weeds and Algae Weeds like Eurasian Milfoil, algal blooms like Cladophora and blue-green algae growth all depend on the nutrient balance of the water. Potentially toxic algae blooms can be devastating for a lake or bay. Reducing what enters the water is paramount but natural land is key too. The microbes, plants & aquatic species in natural shorelines & wetlands help absorb nutrients & water, break down contaminants and prevent erosion.

Things you can do at Georgian Bay

- Volunteer to test water clarity & phosphorous with the Lake Partner Program [http://desc.ca/programs/lpp]. See mapping of those sites and data at [https://www.ontario.ca/environment-and-energy/map-lake-partner]
- Help species at risk by helping with Loon Nest Watch & other monitoring, reporting species sightings. See www.gbbr.ca & atlas@ontarionature.org
- Adopt strong stewardship programs to educate other lake users on ways to promote good water quality

Best Practises to reduce nutrients & chemicals entering Georgian Bay

- Let no dirty water enter the waterbody or land near the waterbody
- Do not bathe or wash laundry in the lake, or use a shower that is not connected to a waste system
- Reduce wash-down practises. When washing boats, docks, decks and cottages, use the least toxic method possible; do not use products like TSP (tri-sodium-phosphate)
- Do not use chemical fertilizers & pesticides
- Do not use microbeads. Reduce the use of plastic including microfibre. All plastic eventually breaks down into “micro-plastics” which are harmful to humans & wildlife
- Reduce watering projects. Choose native plants. They are more drought tolerant.
- Chemical choice and use
  - choose products with the least harmful ingredients
  - stain or paint well away from the water’s edge
  - store chemicals well away from the water
- Monitor, test, maintain, upgrade, replace all types of septic systems (septic tanks, drain fields, leach pits, cesspools, composting toilet, pit privy, etc.)
- Use safe composting methods (must reach 60° Celsius for safe decomposition)
- Use technologies which use the least amount of water
- Support septic system re-inspections (voluntary, or by township/municipality)
- Support holding tank inspections of boats by MOECC/OPP/Coast Guard
- Promote the use of grey water holding tanks for boats

Best Practises to enhancing the natural capabilities of the land & reduce nutrient & chemical run-off into Georgian Bay

The most important thing cottagers can do is maintain a healthy shoreline which can support a wide variety of plants and creatures. For information on maintaining or creating a property that supports ecosystem health. See the Georgian Bay Biosphere's *Life on the Bay Guide* (https://www.gbbr.ca/our-environment/life-on-the-bay-guide/)

- Naturalize your shorelines (e.g., vegetated buffer strips, wetlands) to help control soil erosion and the runoff of nutrients into the lake and nearby rivers and streams
- Allow vegetation to grow rather than exposing rock.
- Limit the amount of impervious surfaces, including roofs, parking areas, and patios, to reduce runoff to nearby waterbodies
- Encourage the creation & rehabilitation of wetlands & naturalizing watercourses
- Reduce or discontinue fertilizing shrub, plant, or kitchen gardens, especially fertilizers that contain phosphorous

Best practises for selecting cleaning products

- Use the least toxic *ingredients* you can (pure soap, baking soda, vinegar, borax…)
- Use smaller amounts (*more* soap won't get things *more* clean)
- Use phosphate-free products. Most products are regulated but there is an exemption for automatic dishwashing detergents
- "Biodegradable" can be misleading. Everything is biodegradable if given enough time. Labels should include a time-frame to give it meaning
- Purchase products that have a credible certification (Eco-logo)
- Recipes to make your own cleaners see the Environmental Defence guide *Spring Cleaning* at: environmentaldefence.ca/wp-content/uploads/2016/01/SpringCleaning.pdf or videos of instructions at: http://www.womensvoices.org/take-action-with-womens-voices/green-cleaning-parties/green-cleaning-recipes/

Best practises for personal care items

- Do not use personal care products containing microbeads, triclosans or triclocarbon
- For information and rating system on personal care products see the Environmental Working Group's *Skin Deep* guide at: http://www.ewg.org/skindeep/

Other Resources

- Ontario Government site about water and water protection: https://www.ontario.ca/page/source-protection
- *Lakeshore Capacity Assessment Handbook; Protecting Water Quality in Inland Lakes in Ontario's Precambrian Shield* [https://www.ontario.ca/document/lakeshore-capacity-assessment-handbook-protecting-water-quality-inland-lakes-ontarios-precambrian]
- *Federation of Ontario Cottagers (FOCA) fact sheet; a healthy shoreline checklist* [link to https://foca.on.ca/wp-content/uploads/2013/06/Healthy_Shoreline_Checklist_at_20111.pdf]
- *Federation of Ontario Cottagers (FOCA) fact sheet; Pollution Prevention* [https://foca.on.ca/wp-content/uploads/2013/06/POLLUTION_PREVENTION.pdf]
- About microplastics see: http://www.lakescientist.com/microplastics-pollution-great-lakes-ecosystem-summary-presentations-iaglr-2014/