LAKE HURON CENTRE FOR COASTAL CONSERVATION

NEARSHORE WATERS

The nearshore zone of Lake Huron where the shoreline meets the water extending to a depth of 6-metres is dynamic and relies on the water levels of Lake Huron to define its boundaries- varying seasonally and annually. Nearshore zones range from hard, dolomite shoals and blocks, to sandy, highly erodible substrates in the southern basin. To the north, glacially-scoured limestone bedrock lake bottom is clearly identified in aerial photography. The nearshore zone is directly influenced by ecosystems adjacent to the shoreline and cumulative impacts from further inland, as well as holistic influences. The most significant ecological process associated with the nearshore is wave action moving towards the shore from the open water offshore, shoaling and breaking as waves move across the lake bottom; inducing wave generated currents transporting sediment on shore, offshore and alongshore.

ECOLOGICAL SERVICES PROVIDED BY NEARSHORE WATERS:

- Spawning grounds for fish in nearshore waters supports 90% of Lake Huron's fish species.
- Feeding areas for waterfowl including Herons, Turns, and Gulls.

STRESSORS AND THREATS AFFECTING ECOSYSTEM HEALTH:

- Nutrient and sediment loading from inland sources culminate in the nearshore waters.
- Development of auxiliary structures (e.g. docks and groynes) degrade ecological integrity by impeding littoral transport of sediment, imposing on feeding and spawning area for fish, and changing nutrient, dissolved oxygen, and sedimentation levels.
- Land-use change from development for residential (e.g. docks) and transportation (e.g. marinas) reduces habitat quality.
- Invasive species establishing populations in nearshore waters (e.g. Zebra mussels, Round Goby, and Spiny Water Flea), can alter the chemical composition of nearshore waters and completely alter the food web.

WHAT CAN YOU DO?

- Remove shoreline hardening structures: structures like groynes, jetties, and sea walls all negatively impact water quality, and are not effective on Lake Huron.
- Be thoughtful about cumulative impacts: everything happening across southwestern Ontario eventually ends up in the Great Lakes. Protecting the nearshore waters starts on the landscape.
- Habitat clean-ups will ensure garbage is removed which can pose an entanglement or ingestion threat to wildlife.

FUN FACTS

There is a high diversity of small fishes (>60 species) in Lake Huron's nearshore waters, the majority of which are native to Lake Huron.

90% of Great Lakes fish and invertebrates live in or use nearshore waters for part of their lifecycle.

OTHER RESOURCES:

The Lake Huron Centre for Coastal Conservation

www.lakehuron.ca

Social @coastalcentre

the Coastal Centre

The Lake Huron Centre for Coastal Conservation

Fact sheets produced as part of the Coastal Action Plan for the Southeastern Shores of Lake Huron
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FLUSHING WOES:

Inspect and pump out your septic system every 3-5 years to ensure that no leaks are occurring which contribute nutrient inputs to nearshore waters.

NOSY NEIGHBORS:

Community collaboration in removing shoreline hardening structures will improve nearshore water quality and reduce associated impacts caused by hardened structures.

WHO, WHAT, WHERE:

Monitoring invasive species presence and treating existing populations will protect natural shorelines and delicate food webs in nearshore waters. Removing invasive species in nearshore waters will restore spawning habitat for fish and feeding area for amphibians and reptiles.