

Beach Development / Sand Placement

What is the Issue?

Lakeshore property owners who develop private beaches are changing the natural function of the lake bed and shore. Sand deposited within a fish bearing water body has a negative impact on fish and the aquatic environment as it alters fish habitat and can affect water quality. Beach development/sand placement below the banks of the lake is illegal unless approved.

Councillors may notice certain residents developing a beach, and may themselves receive inquiries from residents regarding beach development by neighbours and other community members.



Photo credit: Gerry Haekel

Background

Few lakes in Alberta have natural, high quality sandy shores, or beaches. Lakeshore property owners often wish to “improve” their shore by removing rocks and vegetation, or by creating beaches. They may deposit sand in the lake or on the shore, or renovate existing natural shore by disking and harrowing to loosen hard packed shores for improved recreational use. New sand is often deposited on the ice in winter when heavy equipment can access shore areas from public access points. When the ice melts, the sand drops in place.

Problems Caused by Bringing Sand into the Lake

Fish typically deposit eggs on, or in proximity to, aquatic vegetation growing in shallow water. Sand can cover eggs deposited by spawning fish, causing these eggs to die. Another problem with sand is that often the quality of the sand is unknown. Earth carried in with the sand adds nutrients to the water, increasing plant growth. This includes the growth of algae, and can certainly add to the possibility of algal blooms. In the same manner, other pollutants can enter the water without us even being aware of them. An example would be biological pathogens such as *E. coli*, if the sand came from land where cattle were being kept.

Generally, sand is not a very stable material and is easily susceptible to erosion by wave action. It can be slowly carried out into deep water or deposited elsewhere on the shore by currents passing along the shore. Maintaining the presence of a beach often involves repeated applications of sand to compensate for loss by wave erosion. The result is a cumulative negative impact on the lake.

Individual Actions Do Matter

Making a beach at the lake may not seem like a big deal. Over time, however, the combined cumulative impact of repeatedly adding sand to maintain a beach (by one or many individuals), and the removal of aquatic vegetation around a lake, results in the loss of most of the natural components of a healthy, functioning lake ecosystem.

Natural shoreline areas provide habitat for fish and wildlife, protect shorelines from wave and wind erosion, and filter harmful material out of the water. Although altering the shoreline may be desired, in the long run, the cumulative changes of the natural shoreline of a lake will result in the loss of natural habitat and reduced water quality.

What Does the Law Say?

Depositing sand to create a beach, or renovating the shore of a lake through mechanical means, are regulated activities that may require some form of authorization from the provincial and/or federal government.

Private Land – Beach Development

Depositing sand below the bank, or “ordinary high water mark” (OHWM), of the lake requires Public Lands Act approval, as the Crown owns this land. It may also require approval under the aquatic environment provisions of the *Alberta Water Act* or the fish habitat provisions of the federal *Fisheries Act*, as this area is within the bed and shore of the water body.

The deposit of sand on private land above the bank, or OHWM, does not require Public Lands Act approval, but may require approval under the *Alberta Water Act* or the federal *Fisheries Act*, as this area may be within the floodplain of the water body.

Public Beach Development

Often, people who own property on the lakefront wish to develop a beach. Regulatory agencies generally discourage the development of individual beaches on residential properties as these beaches frequently tend to encroach onto Crown land. Regulatory agencies generally will not approve sand placement below the OHWM unless compelling reasons justify this form of development. Consideration for beach development is, however, given for community beach and swimming areas, as these areas serve a broad public function.

Development Without an Approval

Deposit of sand for beach creation without an approval or authorization is either a contravention or prohibited activity under provincial or federal legislation. Persons involved in the unauthorized deposit of sand are subject to fines, orders to restore, or other court imposed penalties.

What Should I Do?

A local municipality does not have a jurisdictional role in authorizing the deposit of sand, or other fill material, on the shores of a lake below the legal bank, or OHWM, except where a surveyed legal road allowance extends into a water body. When this occurs, it is usually to facilitate public access.

A local municipality does have a jurisdictional role in authorizing activities occurring within environmental reserves, as these are titled lands owned by the municipality.

If You See Someone Making a Beach

General guidelines when dealing with a resident who is creating or renovating a beach:

- Ask the resident to produce a permit.
- If there is no permit, explain the legislative requirements and violation consequences. Provide the resident with contacts.
- Describe the impacts on the lake the activity may be having and provide relevant educational materials.
- Advise the resident to stop the activity.

If a resident complains of sand being deposited in the water or on the shores of a lake, forward the complaint to the local Public Lands and Forests office, the local Alberta Environment office, or the Department of Fisheries and Oceans Canada. They will confirm whether there is an approval, or initiate an investigation if there is not.

Developing a Community Beach and Swimming Area

While it is not advisable for every landowner in a Summer Village to create their own private beach, it is understandable for residents to want a sand beach where they can go out and enjoy the water. A reasonable compromise here would be for the Summer Village to develop a community beach. The impact on the lake would be much less than that of many private beaches. Alberta Environment and the Public Lands and Forests Division of Alberta Sustainable Resource Development (SRD) are quite sympathetic towards creating community beaches and would likely grant an approval for one. It is important to follow all government recommendations and Best Management Practices when developing a community beach.

If a Summer Village council has the support of the community to develop a community beach, they could promote the naturalization of shorelines within the Summer Village. Council/administration could agree to develop and maintain the community beach in return for residents allowing the shoreline fronting their properties to return to a natural state.

Information and Education

Changing people's attitudes about having a beach at the lake is not an easy task. Consider using the Summer Village newsletter or a public meeting to give residents information on the effects of beach development. The more people understand how important natural shorelines are, the less inclined they will be to alter them.

Who Can I Contact?

For more information on creating beaches, sand placement, or any other shoreline alterations at the lake, contact:

- The regional office of Alberta Environment.
- The regional office of Public Lands and Forests Division, SRD.
- The regional office of the federal Department of Fisheries and Oceans.

To download a permit to apply for sand placement on the shoreline go to:

- **Application Form LS102-Lakeshore/Water Body Modification (Form)**
<http://www3.gov.ab.ca/env/water/legislation/forms/index.html> http://www3.gov.ab.ca/srd/land/u_shorelands_app_reg.html

Are There Any Resources Available?

- **About Public Lands: Water Bodies and the Management of Bed and Shores (Fact Sheet)**
http://www3.gov.ab.ca/srd/land/APL_Water_Bodies.html
- **Approvals & Regulatory Requirements-Public Lands-SDR (Fact Sheet)**
http://www3.gov.ab.ca/srd/land/u_shorelands_app_reg.html
- **What You Should Know about Fish Habitat and Building a Beach**
http://www.dfo-mpo.gc.ca/canwaters-eauxcan/infocentre/guidelines-conseils/factsheets-feuillets/alberta/ab4_e.asp
- **Common Lakeshore & Wetland Activities Requiring Approvals (Reference Table)**
http://www3.gov.ab.ca/srd/land/pdf/Activity_Approval_Table1.pdf
- Fisheries and Oceans Canada has resources available on their web-site:
www.dfo-mpo.gc.ca/canwaters-eauxcan/infocentre/guidelines-conseils/index_e.asp
- **The Shore Primer – Prairie Edition: A Cottager’s Guide to a Healthy Waterfront (Booklet)**
http://www.dfo-mpo.gc.ca/regions/central/pub/shore-rive/index_e.htm