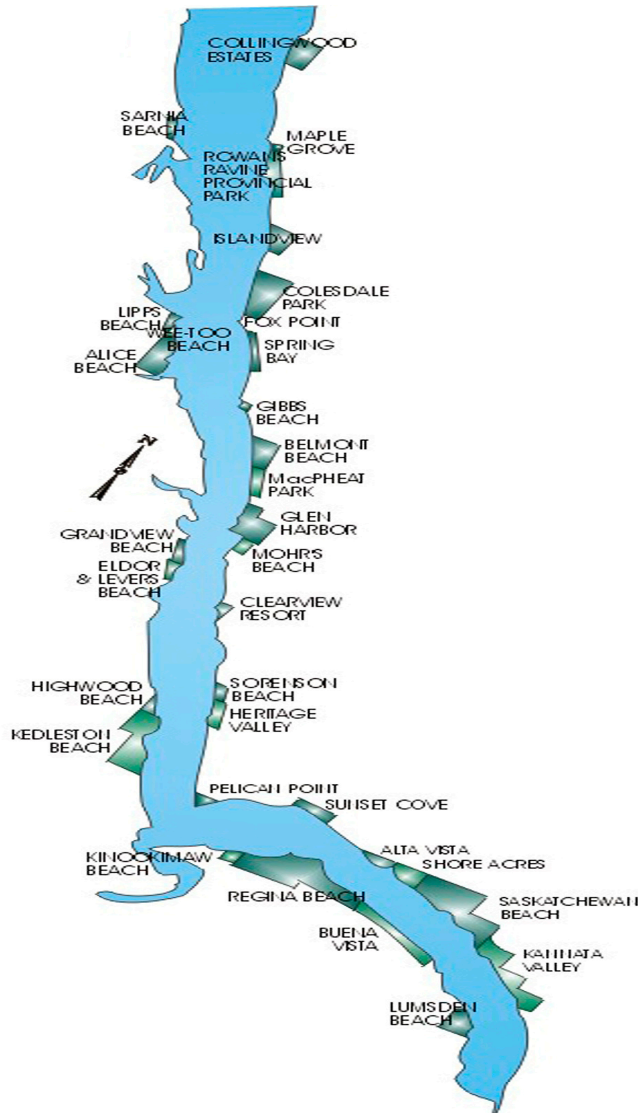


Last Mountain Lake Fuel Spill Recovery and Education Program



PREPARED BY:
The Last Mountain Lake
Stewardship Group
(www.lmlsg.ca)

Background

LAST MOUNTAIN LAKE FUEL SPILL RECOVERY AND EDUCATION PROGRAM

The Last Mountain Lake Stewardship Group (LMLSG) is launching the fuel spill and education program to help boaters, marinas and lakeside residents clean up fuel spills which would otherwise adversely affect the lake.

With more and more people at the lake, we are also seeing an increase in the number of boats and watercraft on our lake, which can lead to more accidental spillage of gasoline and oil. To help address this, we will be providing people and businesses with (free) fuel spill recovery products, as well as information on good fuel management practices.

The LMLSG group will be handing out fuel-absorbing products from *Universal Remediation Inc.*, <http://www.unireminc.com>, a U.S.-based company that has partnered with the group to provide products for the program at cost. Their products, which are endorsed by NASA and the U.S. based Environmental Protection Agency, soak up spilled fuel and/or oil that can then be easily and safely removed from the watercourse. LMLSG will begin their program with the marina and cottage owners along the shoreline – areas where fuel and oil spills can have highly negative impacts on vegetation and fish habitat.

The fuel spill recovery and education program will help us reach our goal of restoring and maintaining the natural shoreline and riparian areas of Last Mountain Lake. It will also help prevent pollution from entering Last Mountain Lake and increase community awareness of fish habitat issues.

The Last Mountain Lake Stewardship Group is a volunteer organization that works to increasing public awareness about lake health issues and encourages good stewardship on and around the lake. The group was formed in 2003, and includes representatives from property owners surrounding the lake.

More information on the Last Mountain Lake Stewardship Group and their Fuel Spill Recovery Program is available at <http://www.lmlsg.ca>.

What the EPA Says About the Universal Remediation Products

The following is a quote from the EPA: **EPA Management Measures for Petroleum Control Section 4.7**: "In independent tests by the National Environmental Technology Applications Corporation (NETAC), oil pollutants treated with PRP were reduced by up to 98 percent within 8 weeks."

More About the Products from NASA

PRP is the result of innovative work by scientists at NASA and has been awarded a NASA Product Hall of Fame. To learn more about this NASA technology award winning product, see Universal Remediation on the History Channel show Modern Marvels, 'It Came From Outer space' April 9th, 2007. Contact us for a CD or DVD copy of this production.



Petroleum Remediation Powder (PRP) http://www.unireminc.com/prp_powder.html

The basic technology behind PRP is thousands of microcapsules—tiny balls of beeswax with hollow centers. Water cannot penetrate the microcapsule’s cell, but oil is absorbed right into the beeswax spheres as they float on the water’s surface. This way, the contaminants—chemical compounds that originally come from crude oil such as fuels, motor oils, or petroleum hydrocarbons—are caught before they settle.

PRP works well as a loose powder for cleaning up contaminants in lakes and other ecologically fragile areas. The powder can be spread over a contaminated body of water or soil, and it will absorb contaminants, contain them in isolation, and dispose of them safely. In water, it is important that PRP floats and keeps the oil on the surface, because, even if oil exposure is not immediately lethal, it can cause long-term harm if allowed to settle. Bottom-dwelling fish exposed to compounds released after oil spills may develop liver disease, in addition to reproductive and growth problems. This use of PRP is especially effective for environmental cleanup in sensitive areas like coral reefs and mangroves.



BioSoks <http://www.unireminc.com/biosok.html>

One of the most popular uses for PRP is the BioSok Bilge Maintenance System. It allows boaters to clean up small spills. Boats take on water, either from rain, washing, or waves splashing over the sides. This water often mixes with cleaning fluids, and oil and gas from a boat’s motor. The water collects in a bilge, the area inside a boat’s bottom designed to collect and hold the errant water. A bilge needs to be pumped overboard regularly to prevent the boat from taking on too much water. This bilge water, though, is often contaminated.

The BioSok is a small, 3- by 10-inch “sock” with PRP encased in polypropylene that floats in the bilge, absorbing and bioremediating any hydrocarbons, thus, decontaminating the water. Each BioSok can immediately absorb twice its weight and can degrade more than 20 times its weight in oil over time. One BioSok will generally last for an entire boating season. It requires no maintenance or monitoring, and it safely eliminates the pollutants and fumes associated with spilled oil and gasoline.

Spill Kit

The spill kit supplied to each marina will include:

- 25 lb (11.5 kg) container of PRP Powder (c/w scoop)
- Two boxes of BioSoks
- One dozen BioCollars
- BioPads and pan
- Collapsible 8 foot pool skimmer
- Latex gloves
- Garbage bags
- Instruction Sheet/Contact sheet/Sign-off Sheet
- LMLSG Pamphlets



FUEL SPILL RESPONSE and CLEAN-UP

The objectives of responding to a spill are:

- Ensure the safety of the first responders and employees
- Ensure the safety of the public;
- Protect property; and
- Protect the environment.

The objectives of a cleanup operation are:

- To prevent further discharge of the pollutants;
- To contain the spilled pollutant;
- To minimize the effects of the spill; and
- To restore the affected area and the environment as near as possible to pre-spill conditions.
- Report the spill to Sask Spills - **Toll Free: 1-800-667-7525**

LIABILITY: The owner of the pollutant and/or the person with control of the commodity at the time of the spill is responsible for the cleanup and potential damage claims.

(SEE PAGE 8 FOR DETAILED CLEAN-UP PROCEDURES)

Legalities

Environmental Management and Protection Act, 2002

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The Environmental Spill Control Regulations

2 In this Act:

- (a) “**adverse effect**” means impairment of or damage to the environment, or harm to human health, caused by one or any combination of any chemical, physical or biological alteration;

4(1) No person shall discharge or allow the discharge of a substance into the environment in an amount, concentration or level or at a rate of release that may cause or is causing an adverse effect unless otherwise expressly authorized pursuant to:

- (a) this Act or the regulations;

Duty to report discharge

(2) If a person has control of a substance that is discharged into the environment and that may cause, is causing or has caused an adverse effect, that person shall, immediately on becoming aware of the discharge, report it to the persons mentioned in clauses (1)(a), (b), (c) and (e).

Duty to take remedial measures

7 Any person who discharges or allows the discharge of a substance into the environment in contravention of section 4 shall:

- (a) take all reasonable measures to:
 - (i) prevent, reduce and remedy the adverse effects of the substance; and
 - (ii) remove or otherwise dispose of the substance in a manner that minimizes the adverse effects;

When environmental protection order may be issued

9 If a person discharges or allows the discharge of a substance into the environment in contravention of section 4 or fails to comply with section 7, the minister may issue an environmental protection order or an emergency environmental protection order directed to that person.

Penalties

(2) Every person who contravenes a provision of this Act or the regulations is guilty of an offence and liable on summary conviction to a fine not exceeding \$1,000,000, to imprisonment not exceeding three years or to both that fine and imprisonment.

(3) Every director, officer or agent of a corporation who directed, authorized, assented to or acquiesced in or participated in an act or omission of the corporation that would constitute an offence by the corporation is guilty of that offence and is liable on summary conviction to the penalties provided for that offence whether or not the corporation has been prosecuted or convicted.

Provincial Agency to Contact
www.saskspills.ca - Toll Free: 1-800-667-7525

Spills may, in a broad sense, be determined as *releases of pollutants into the natural environment originating from a structure, vehicle, or other container*. Spills must be reported immediately when the quantity of the material spilled equals or exceeds the reportable quantity set out in the Appendix to *The Environmental Spill Control Regulations* or when they cause, **or may cause an adverse effect**, including any of the following:

- impairment to the quality of the natural environment - air, water, or land;
- injury or damage to property or animal life;
- adverse health effects;
- making property, plant, or animal life unfit for use;
- loss of enjoyment of normal use of property; or
- interference with the normal conduct of business.

REMEMBER: Any spill, release or emergency that **may** cause an adverse effect to the environment or pose a risk to public health or safety must be immediately reported.

REPORTING

Verbal Report (for most spills) If you believe you may have a spill or other environmental emergency, call the Provincial Enforcement Centre Spill Report Line **Toll Free: 1-800-667-7525** and provide the following information:

- Your name, call back telephone number/fax number;
- Location and time of the spill (i.e. City, town, address, highway number, land location);
- Type and quantity of pollutant spilled (product name, volume spilled);
- A description of the spill site and immediately surrounding area (soil type, on or near surface water, drainage characteristics, groundwater depth, proximity to dwellings, location of domestic service lines, etc.);
- What Agencies have responded and who is on scene at present
- Local weather conditions (wind direction and speed, rain, snow, etc.);
- The names of all persons notified of the spill;
- The known causes and effects of the spill;
- First response and remedial actions that have taken place with respect to the spill such (containment work at time of spill); and
- Any further action or work that is contemplated or required (details of cleanup and restoration procedures, and details of disposal including location and procedures).

Written report Whenever a spill occurs as defined in the Regulations that exceeds the defined maximum limits, (i.e. 100 litres of gasoline), the responsible party will be required to submit a written spill report (Word version) within seven days. (Online form)

FUEL SPILL CLEAN-UP PROCEDURES

- 1.Ensure the safety of all persons surrounding the spills
- 2.Call emergency services if required (Police, fire, ambulance)
- 3.Extinguish any open flames and prevent persons from smoking.
- 4.Turn off the source of the spill if possible
- 5.**Once safe to do so**, deploy PRP powder directly onto the spill using the scoop provided.
Cover as much of the spill as possible with a thin layer. (Now would be the best time to put on the latex gloves). PRP powder is safe to handle but hydrocarbons (petroleum products) should not come in contact with your bare skin.
- 6.As the PRP starts to clump, start collecting the PRP powder from the outer edges of the fuel spills working towards the middle of the spills with the pool skimmer. If the spill has spread far, consider using a boat to reach the spill. (Remember a PFD).
- 7.Shake off or wipe off the “used” PRP into the supplied garbage bags. Disposed of garbage bag and latex gloves accordingly.
- 8.**Repeat the above steps** to ensure thorough collection.
- 9.**BioCollars** - Whenever they are depleted or at the start of each week, place a fresh BioCollar on the end of the fuel nozzle. This product will absorb any gasoline backslash. Product will “shrink” in size when depleted.
- 10.**BioPads** - Place BioPad in tray on dock. When finished re-fuelling the vessel, place nozzle on BioPad to collect any spillage. Replaced as required.

CONTACTS -(Manager, Supervisor, Commodore, Owner)

Police - Spill Control Centre - Toll Free: 1-800-667-7525
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Fire -	Ambulance -
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Contact: _____	Home	Work	Cell
Contact: _____	Home	Work	Cell
Contact: _____	Home	Work	Cell

***** I have read and familiarized myself with the above procedures:**

_____(Name)_____(Date)_____

_____(Name)_____(Date)_____

_____(Name)_____(Date)_____

_____(Name)_____(Date)_____

_____(Name)_____(Date)_____