## PRIORITY IMPROVEMENTS:

1 _____

2 _____

3 _____

## SUGGESTIONS & SOLUTIONS

If you live in the Sebago Lake Watershed and would like an on-site visit to discuss your survey results, contact the Portland Water District Standish Office at 774-5961. For additional erosion control information contact the Cumberland County SWCD at 856-2777.


**PORTLAND WATER DISTRICT**
**1 WHITE ROCK ROAD**
**STANDISH, ME 04084**
**1-207-774-5961**


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# STORMY DAY SURVEY

### CLEAN LAKE LOT CHECK-UP

MARK SHAHN - VIRTUAL DESIGN, INK


Produced by:
Cumberland County SWCD
Portland Water District


# STORMY DAY SURVEY

### CLEAN LAKE LOT CHECK-UP

Phosphorus pollution from eroding soil is a major threat to water quality in Maine lakes and ponds. But often erosion seems invisible – we're not used to looking at our camps with a critical eye. Exposed tree roots, well worn footpaths, driveways that always seem to need fresh gravel – these are signs of chronic erosion problems.

How do you figure out if phosphorus pollution and erosion are problems on your land? The Portland Water District and the Cumberland County Soil & Water Conservation District would like to enlist you as a detective to investigate chronic erosion around our lakes. We've pulled together a "do-it-yourself" checklist to use to conduct a Stormy Day Survey around your lake home.

Water is the major culprit in the invisible erosion racket – it is usually the vehicle for soil to reach streams, ponds and lakes. As a detective you'll need to do some surveillance during a heavy rainfall to observe water's activities. But don't rush out first thing – wait until the ground is soaked and water has saturated the soil and the leaf cover. Then you should see some action.

**Raindrop Impact:** Like tiny bombs, raindrops fall onto the soil surface, often displacing soil particles great distances. This is the first step in erosion.

**Take note:** Are your raindrops deflected by vegetation? Are they absorbed into a leaf litter? Or are they pounding on bare soil surfaces? A careful survey of surface cover is critical for your survey.

**Rill Erosion:** Water is very predictable – it always runs downhill. Look for areas where water is collecting into miniature gullies (called rills) and check for the following:

- Is the water clean or is it cloudy (with suspended soil particles)?
- Is the water gouging a channel into the ground?
- Is it digging out the base of ditches?
- Are road surfaces showing signs of wash-out?

Trace water channels back up-hill. Find out where it's coming from.

Scrutinize the drainage patterns on your land. Keep in mind the following items that are also important for controlling erosion and phosphorus pollution:

- Rainwater from impervious surfaces (roofs, driveways, etc...) should be filtered through vegetation – it's full of phosphorus when compared to lake water.
- Keep impervious areas small, as far as possible from lakes, and surrounded by vegetation.
- Preserve or repair the forest's natural duff layer – it protects the soil and filters pollutants.
- Depressions and wet spots are great for slowing down water, reducing erosion and promoting infiltration.
- Vegetated buffers work best when they have a duff layer, are composed of various sizes of plants, and are as wide as possible
- Defining beach areas, parking areas and walkways helps protect vegetation from damage.

# STORMY DAY SURVEY

## CLEAN LAKE LOT CHECK-UP

Use the checklist below to uncover erosion problems on your land. Check off the areas that apply to your property. Circle whether the areas are:

- Stable (no sign of soil movement – surface covered by vegetation/stone/ect.)
- Eroding (bare soil exposed, small or large scoured channels observed).

## PUBLIC OR PRIVATE ROADS

### ROAD SURFACE

☐ Paved Stable Eroding
☐ Gravel Stable Eroding

### ROAD SYSTEM DITCHES

☐ Ditch base Stable Eroding
☐ Ditch sides Stable Eroding
☐ Drain thorough vegetated buffer
☐ Drain directly to waterbody – no buffer

### ROAD CULVERTS

☐ Inlets Stable Eroding
☐ Outlets Stable Eroding

## DRIVEWAY

### DRIVEWAY SURFACE

☐ Paved Stable Eroding
☐ Gravel/Soil Stable Eroding
☐ Rain from driveway surface filtered through vegetated buffer

### DRIVEWAY CULVERTS

☐ Inlets Stable Eroding
☐ Outlets Stable Eroding
☐ Combination of vegetation (excellent)

### DRIVEWAY DITCHES

☐ Ditch Base Stable Eroding
☐ Ditch Sides Stable Eroding
☐ Drain through vegetated buffer
☐ Drain directly to waterbody – no buffer

### LOCATION OF DRIVEWAY

☐ Close to lake
☐ Far from lake

## PARKING AREA

### PARKING SURFACE

☐ Paved Stable Eroding
☐ Gravel/Soil Stable Eroding

### SIZE

☐ Large
☐ Small

### LOCATION

☐ Close to lake (not good)
☐ Far from lake (good)

### LIMITS OF PARKING AREA

☐ Well defined
☐ Poorly defined
☐ Rain from parking surface drained through vegetated buffer strip

## LAWN AND RECREATION AREAS

### BUFFER ABILITY OF AREA

☐ Bare sand (poor)
☐ Grass (poor to fair)
☐ Duff layer (fair to good)
☐ Shrubs (fair to good)
☐ Trees (fair to good)

### GRADING (direction to which rainwater flows)

☐ Toward lake
☐ Irregular drainage – depressions present

### LOCATION

☐ Close to lake
☐ Far from lake

### FOOTPATHS

### SURFACE COVER

☐ Bare Soil Stable Eroding
☐ Protected
Surface cover is:_____

### PATH LIMITS

☐ Well defined
☐ Poorly defined

### PATH CONFIGURATION

☐ Straight (not good)
☐ Serpentine (good)

### WET SPOT / WETLANDS

☐ Drained / Altered
☐ Natural

### SLOPE SURFACES

☐ Stable
☐ Eroding

### BEACH AREA

☐ Bare sand Stable Eroding
☐ Protected Stable Eroding
Surface cover is: _____

### BEACH AREA LIMITS

☐ Stable
☐ Eroding

### SIZE

☐ Large
☐ Small

### FISH HABITAT IN BEACH AREA

☐ Raked (poor habitat)
☐ Natural (good habitat)

### VEGETATION ALONG SHORE

☐ Grass (poor to fair)
☐ Shrubs (fair to good)
☐ Trees (fair to good)
☐ Combination (excellent)

### BOAT RAMP AREA

☐ Bare Soil Stable Eroding
☐ Protected Stable Eroding

### LIMITS OF BOAT RAMP AREA

☐ Well defined
☐ Poorly defined

### ROOF RUNOFF

☐ Channelized
☐ Diffused (spread out)
☐ Rain from roof runoff filtered through vegetated buffer strip

## STREAMS (crossing property)

### STREAM BANKS

☐ Stable
☐ Eroding

### STREAM CHANNEL

☐ Stable
☐ Eroding

### OTHER SOURCES OF PHOSPHORUS POLLUTION YOU SHOULD CONSIDER

- Lawn fertilizers
- Improperly maintained septic systems
- Pet droppings
- Grass clippings
- Detergents / soaps
- Motor & boat oils / greases
- Dust