

Pollen: A Naturally-Occurring Phenomena

Pollen from plants, especially trees like pine and cottonwood, can be found in the late spring and in summer floating on and settling in surface waters. This naturally occurring phenomenon can look like a film on the water or appear as discolored pockets in the water. Pollen has been reported to the Michigan Department of Environmental Quality as yellow paint, white paint, oil, scum, and even sludge. This phenomenon is caused by plant pollen that is distributed onto the water where it sticks and collects.

Pollen consists of tiny grains that are produced in flowering and cone-bearing plants. Pollen grains of different plant species vary in shape, size, and surface features. Most pollen grains are round or oblong and range from 15 micrometers to more than 200 micrometers wide. (Ten thousand micrometers equal one centimeter). Every grain has an outer shell, which may be smooth or wrinkled or covered with spines or knobs. This shell prevents the inner cells from drying out.

The wind has a major role in carrying pollen for plant reproduction as it blows pollen from one flower or cone to another. Plants such as maize and wheat, which are pollinated by wind, produce vast amounts of pollen—a maize plant can produce more than 18 million pollen grains. Wind pollinated plants include many trees, various crops, grasses, and nettles. The wind may carry pollen grains 90 miles or farther from the plant. On some windy days, you can actually watch the pollen being carried from trees, especially evergreens.

Some airborne particles that collect in water can indicate pollution. When deciding if the phenomenon is natural or caused by pollution, consider the following:



Pollen washing ashore.

- ◆ Time of year: allergy season (especially spring and summer) usually coincides with this phenomenon.
- ◆ Oil sheen: no oil sheen will be visible, only a film may appear.
- ◆ Staining: pollen usually will not stain porous material.
- ◆ Wind direction: pollen will be found downwind of the plant source. It will accumulate on the ground and on everything around, including cars and in mud puddles.
- ◆ Feeling of substance: pollen should feel coarse, not slimy to the touch.

If you find pollution and believe it is human-induced, please report it to the State of Michigan's Pollution Emergency Alerting System (PEAS) hotline at 1-800-292-4706. For more information please contact any Water Bureau district office or call the State of Michigan's Environmental Assistance Center at 1-800-662-9278.

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Tree pollen on and in water.

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