

Acid Rain

By Jonathan

[Link to website](#)

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Introduction

Acid rain can destroy marble's shine and color and it kills trees and plants that give us the air we need. Acid rain affects the U.S, Canada, western Europe, China and India the hardest. Acid rain harms trees, marine life and the man-made world.

What is Acid rain?

Acid rain is rain that has come in contact with acidic particles that include carbon dioxide, sulfur dioxide, and Nitrogen dioxide. These acidic particles come from factories, cars and factory farms. It has a pH of 4.0 to 4.4. It is strongly acidic and it can corrode and damage the man-made world and the natural world.

What is the pH value?

The pH value is a system that can chart acidity or basicity that is important in chemistry, gardening and pool maintenance. It normally has a range of 0-14, 14 being the most basic and 0 being the most acidic with 7 being neutral (in the middle).

Acid rain harms trees, marine life and the man-made world.

Acid rain harms trees in a way that makes them lose leaves, damages tree bark and slows down growth and makes them more prone to diseases, extreme weather and insects. Also, acid rain can make soil acidic, which

can deprive the tree of nutrients and kill bacteria essential for the tree.

[Resources](#)

Acid rain can disrupt marine life as well. Rainbow trout begin to die at a pH value of 6. Crayfish and mayflies die at a pH of 5.5 while all fish die at a pH of 4.2 (acid rain level). Also, Marine life is the most at risk from acid rain because larvae do not have defenses to protect from acid rain.

[Resources](#) [Resources](#)

Fish	Rainbow trout	Crayfish	Mayflies	All fish	
pH when fish die	6	5.5	5.5	4.2(Acid rain level)	

Weaker

Stronger

Before acid rain
fish and sea
animals thrived!
After acid rain a
lot of sea
creatures die or
are weakened
by the strong
acidity.

Acid rain can damage the man-made world as well. Acid reacts to stone on buildings and statues and other things in a way that makes them erode. Some historical sites have already seen damage. Modern cars and plumbing may corrode at strong acidity. [Resources](#)

What causes it?

When particles such as sulfur dioxide and carbon dioxide and other acidic particles react to the rain that is already slightly acidic, they make the rain strongly acidic. For example in New York State, soil has less protection to acid rain. Smoke from big cities such as Boston or New York City gets carried away by wind to upper New York State and Vermont where soil has less protection.

What can you as an individual do to help?

You can save energy to help because acid rain is created by the gasses that power plants produce. Or you could eat locally instead of foods like bananas or coconuts. So less energy used will produce less acid rain. You can also drive less or take public transportation more or use more of an energy friendly car instead of high energy cars.

What should we as a community be doing?

We should be stopping the release of sulfur dioxide, carbon dioxide, nitrogen dioxide and other gasses by using more environmentally-friendly factories, cleaner cars or electric cars or better airplanes.

What are we doing?

The Clean Air Act of 1990 states that the amount of harmful gasses that are emitted are going to be limited. It has also reduced the amount of Sulfur dioxide by 33% and Nitrogen dioxide by 27%.

Conclusion

Acid rain harms trees, marine life and the man-made world. So now you probably think that acid rain is HORRIBLE but you still can help.

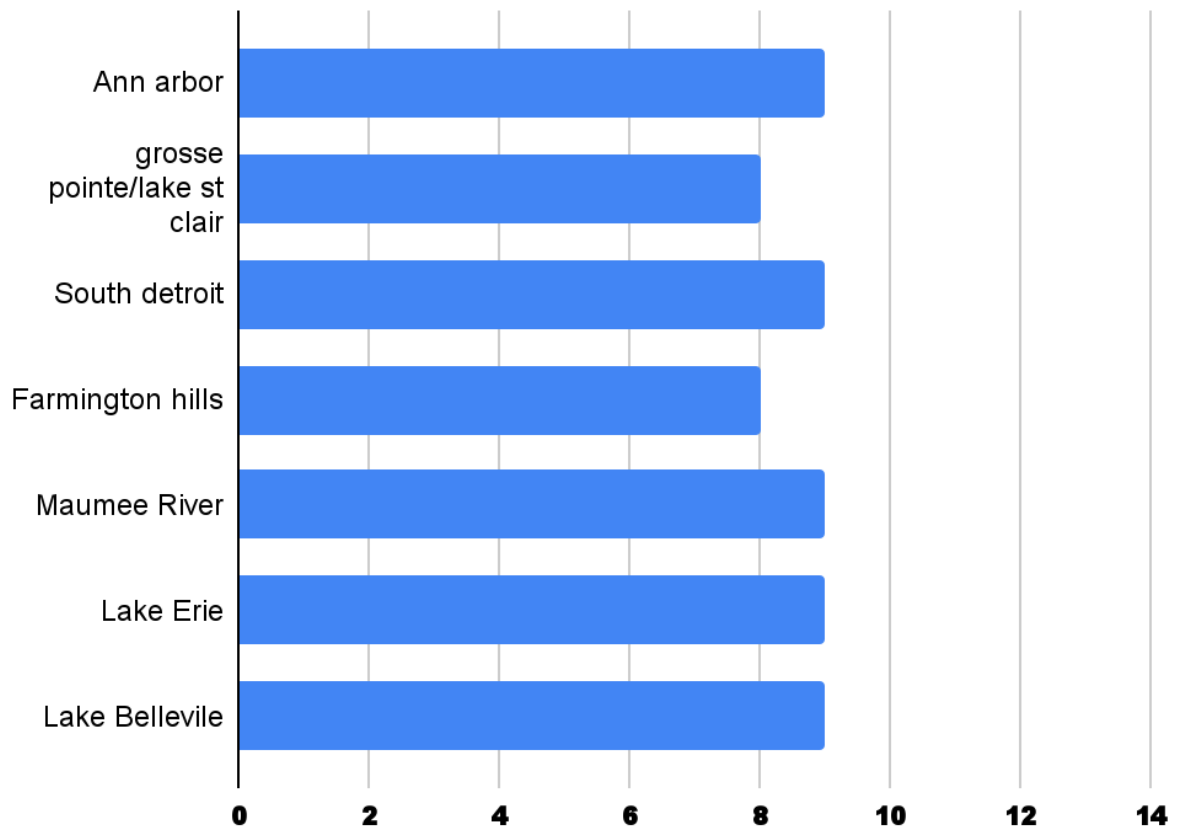
If you ride your car less and bike more and eat locally produced food you are helping. But if you really want to make a difference you can not fly so much.

Thank you for being a difference!

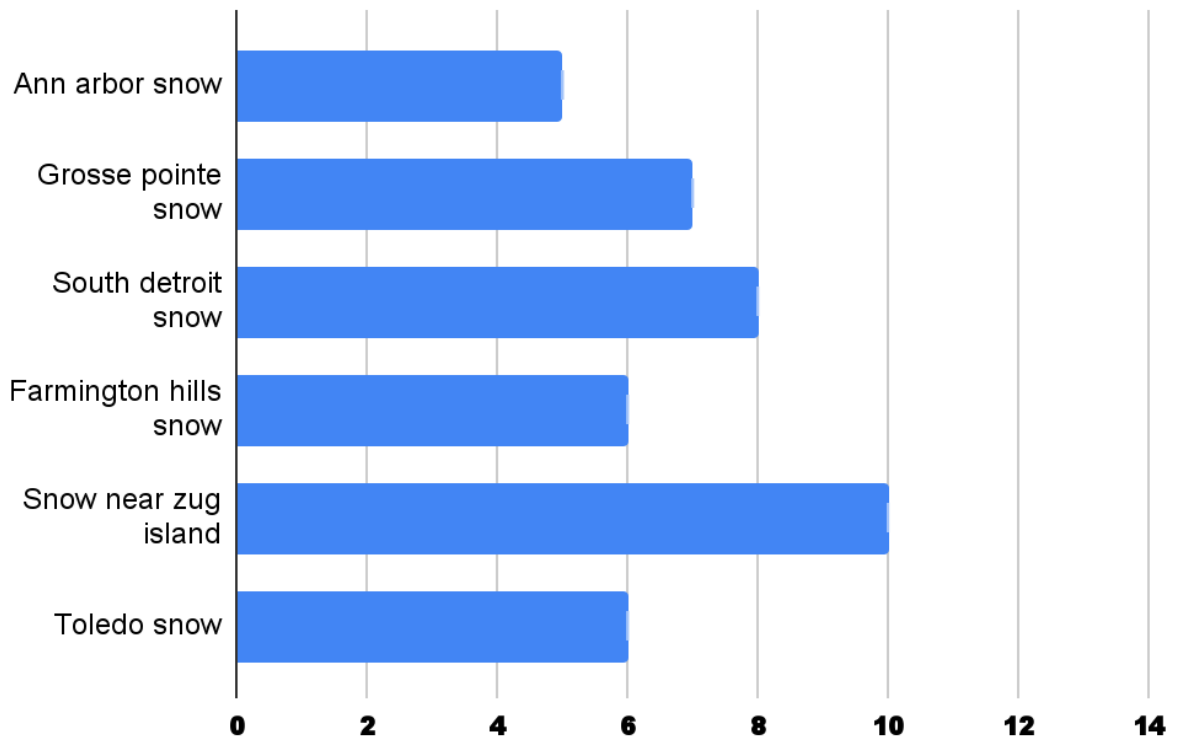
More Information

Samples

pH of Samples



Snow Samples



The Huron river's pH is 8.65 (Basic)

Ann arbor's snow has a pH of 5.27(Acidic)

A tributary to the rouge river in Farmington hills has a pH of 7.97(slightly Basic)

The snow in Farmington hills has a pH of 6.09 (Acidic)

Lake st. clair's water has a pH of 8.26(Basic)

The snow in east detroit has a pH of 7.2 (slightly basic)

The water in the belle isle area has a pH of 8.53(basic)

The water near zug island has a pH of 9.24 (basic)

The snow 1 mile away from zug island has a pH of 8 (basic)

Snow near zug island has a pH of 10.13 (strongly Basic)

Salinity of samples

(Snow has less salt due to leaving the salt behind. The salt that they have is from the salt on the sidewalk)

Huron river: 390 ppm(0.04%)

Ann arbor snow:15 ppm(0.001%)

A tributary to the river rouge in farmington hills:1060 ppm(0.1%)

Farmington hills snow:27 ppm(0.003%)

Lake st clair:135 ppm(0.013%)

East Detroit snow:84 ppm(0.008%)

Belle isle area:166 ppm (0.016%)

Snow 1 mile away from zug island:69 ppm(0.006%)

Zug island water:126 ppm(0.012%)

Snow near zug island:50 ppm(0.005%)

(Temperature between 18 celsius and 20 celsius)

For more information about the pH value please visit



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