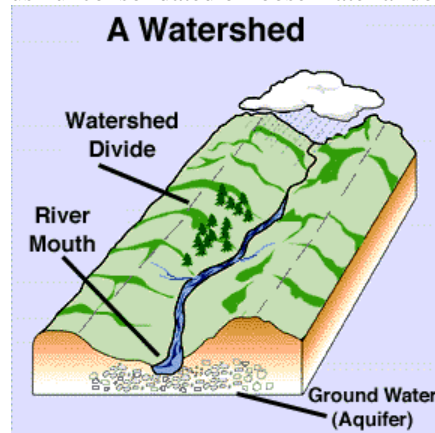


IN YOUR BACKYARD - Topic: Stream Pollution
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Did you know?

Almost everything found on land makes its way into nearby waterways. This is because every piece of land is part of a **watershed**. While some materials sink into the ground, many are transported by water sources such as rain, a hose or a pipe. These forces tend to flush unconsolidated or loose material downhill into streams.



Streams naturally contain low concentrations of chemicals such as nitrogen, phosphorus, calcium and iron. These chemicals and other naturally occurring elements have been flowing into the stream for thousands and even millions of years. Some naturally occurring things you may be able to see in the streams are bugs, fish, sediment, leaves, twigs, branches and even entire trees. Those components that do not belong in the stream, things that have showed up since being introduced by humans, are called **pollutants**.

Pollutants are classified in two groups, **point source pollutants** and **non-point source pollutants**. **Point source pollution** is pollution that can be traced back to a single origin or source such as a sewage treatment plant discharge. **Non-point source pollution** is pollution that occurs when rainfall, snowmelt, or irrigation runs over land or through the ground, picks up pollutants, and deposits them into rivers, lakes, and coastal waters or introduces them into ground water.

Common causes of local **pollutants** are:

1. Animal manure. Adding manure to the soil has agronomic benefits through the addition of plant nutrients (nitrogen, phosphorus and potash) and organic matter. These same nutrients that are beneficial in soil for plant growth are considered pollutants in water. The objective of any manure land application system must be to keep manure on the soil, where it has value, and out of water where it is a pollutant.
2. Household trash. Correctly disposing of household trash and responsible recycling help to eliminate unsightly pollutants in our water ways.

What you can do to help!

Avoiding stream pollution from manure is not difficult. Common sense is the rule to follow when handling manure. Principles of proper manure management and land application include:

- 1a. Maintain separation distances and buffer areas between land used for manure application and surface water drainage. With no slope a minimum buffer distance of 10 feet of vegetated ground or 25 feet of bare ground from streams and ditches is recommended (Figure 1). On frozen ground, 60 feet of vegetated ground or 150 feet of bare ground is recommended (Figure 2). Greater setbacks are recommended on sloping ground.

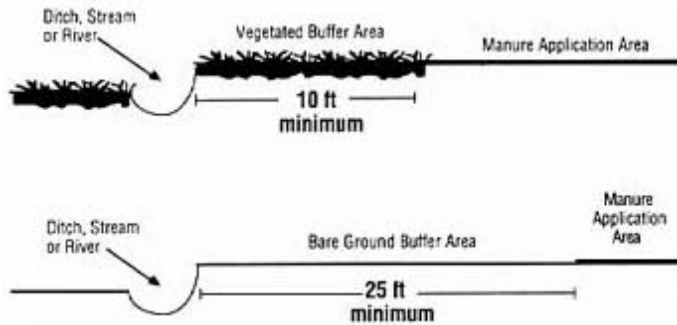


Figure 1. Minimum buffer areas on non-sloping ground.

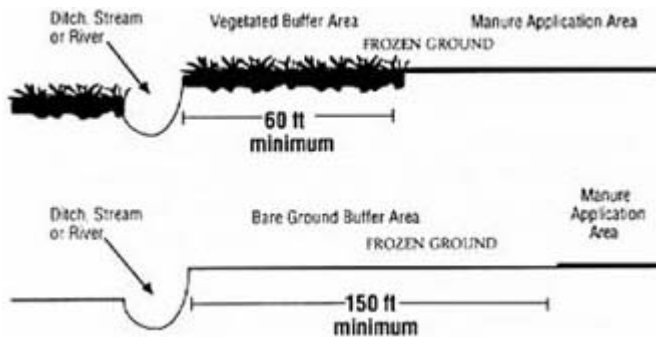


Figure 2. Minimum buffer areas on non-sloping frozen ground.

- 1b. Restrict surface application of manure on sloping ground when it is frozen or just prior to rain.
- 1c. Take care when applying manure to fields with subsurface drainage, especially when the soil is dry and cracked. It is advisable to till the soil prior to application if cracks are present. All "blow holes" in the drainage system must be repaired prior to application. Surface inlets and french drains must be avoided.
- 1d. Limit one-time application volumes of liquid manure to the amount of moisture needed to bring the soil up to field capacity. Heavy applications can result in puddling and runoff.
- 1e. Limit application of manure nutrients to crop need. Excess application results in buildup of soil nutrients.
- 1f. Test manure and soil to determine appropriate application rates.
- 2a. Correctly dispose of hazardous household products. Keep paints, used oil, cleaning solvents, polishes, pool chemicals, insecticides, and other hazardous household chemicals out of drains, sinks, and toilets. Many of these products contain harmful substances -- such as sodium hypochlorite, petroleum distillates, phenol and cresol, ammonia and formaldehyde -- that can end up in nearby water bodies.
- 2b. Use nontoxic household products whenever possible. Discarding toxic products correctly is important, but not buying them in the first place is better.
- 2c. Recycle and dispose of all trash properly. Never flush non-degradable products -- such as disposable diapers or plastic tampon applicators -- down the toilet. They can damage the sewage treatment process and end up littering waters.