Best Management Practices to prevent water pollution

Best Management Practices (BMPs): *Best management practices are methods that have been determined to be the most effective and practical methods for preventing and reducing nonpoint water pollution.* Nonpoint pollution is the largest source of water pollution! Below are some BMPS compiled from EPA and Missouri DNR websites and from Project Wet.

Agricultural Lands (Animals or Crops)

Read and follow all label directions for application of chemicals, fertilizers, fungicides, and pesticides. Avoid any use, if possible, by finding a safe and effective alternative.

Use farming methods to conserve soil, such as conservation tillage (no till farming), contour farming, or crop rotation. These methods help to conserve soil and reduce erosion. Eroded soils become sediments in waterways and create numerous problems for aquatic life.

Leave filter strips and field borders (riparian zones) along wetlands and streams. These buffer zones slow down erosion. In addition, the plants absorb runoff containing excessive nutrients. Flood waters are slowed down. Trees provide shade that helps to keep water temperatures lower, thus helping oxygen stay dissolved in the water for aquatic life.

Fence all or part of waterways from livestock. Seek out cost-share programs for help. Contact area United State Department of Agriculture (USDA), University of Missouri Extension Office (has information for dairy and swine operations), and/or the National Resource Conservation Service (NRCS) for program information.

Construct livestock waste collection and treatment ponds for confined livestock.

Plant cover crops to protect exposed soils. Plant trees to shelter areas from wind erosion.

Avoid overgrazing and use a grazing rotation system. See agencies listed above for guidance.

Grow grass in stormwater drainage waterways. Seal abandoned wells.

Roads and Streets (Urban, Rural, Commercial, Industrial)

Dispose of all household hazardous wastes as directed on label or at a hazardous waste collection facility. Household hazardous wastes are disposed products that have ingredients that are toxic, flammable, corrosive, or reactive.

Maintain autos so they don't leak oil, fluids, or lubricants. Recycle oil at collection facility.

Install catchment basins when constructing roads to stop sediment erosion from entering waterways.

Logging
Use a forest management plan prepared by a private land specialist from public agencies such as Missouri Department of Conservation (MDC). Such plans are individualized and free of charge to private land owners.

Use uneven age management for harvest. Avoid clearcuts especially in large areas. Get guidance from MDC or a professional forester.

Plant grass seed in disturbed area immediately after harvest.

Keep a forest buffer (riparian zone area) along stream areas.

Build terraces or catch basins to catch eroded sediment before it can enter a stream. Water bars (humps of dirt) placed across a logging road can divert rainwater off the road, to avoid eroding it. Monitor water entering and leaving logging area.

Do not dump or leave oils and other lubricants on site. Dispose of them in collection facility.

Residential (Suburbs or Rural)
Read labels and dispose of all household hazardous wastes as directed or use household hazardous waste collection facility.

Recycle electronic waste. Recycle and use a trash collection service rather than a personal dump or illegal dumping. ***Avoid burning trash, especially plastics, which create cancer causing dioxins when burned.***

Read all labels for lawn and garden products. Follow instructions for use and disposal. Compost if possible.

Install rain barrels for roof runoff for outdoor watering. Build raingardens to catch and encourage water to soak in rather than run off.

Landscape with native trees, shrubs, and plants so watering is less necessary in times of drought. For many more ideas see Missouri Botanical Garden's website page for "Rainscaping."

Pick up pet waste in disposal bags and deposit in trash. Avoid walking pets in drainage areas.

Maintain septic tanks in the following ways:
- Use water efficiently so as not overload your system. Use full loads of laundry and the dishwasher.
- Do not use toilets as trash cans. Only human wastes, toilet paper, and safe cleaning products should ever go down into your septic tank.
- Avoid "flushable wipes!" They will clog septic systems and waste water treatment systems. Avoid the use of a garbage disposal.
- Do not put grease or harsh chemicals down the drains.
- Keep trees from drainage field. Get inspected yearly.
- Septic tanks need pumping every three to five years.

For more information see:

[Septic Systems (Decentralized/Onsite Systems) | US EPA](#)

[Polluted Runoff: Nonpoint Source (NPS) Pollution | US EPA](#)   Note this link has numerous links within it that go to things you can do to protect water quality in the major water use categories.

[Protecting Water Quality from Agricultural Runoff (epa.gov)](#) Agriculture other than Animal Feeding Operations is exempt from the Clean Water Act. This link has background (causes and effects), plus related publications and websites.

[Facts on Open Burning Under Missouri Regulations - PUB2047 | Missouri Department of Natural Resources (mo.gov)](#)

[Household Hazardous Waste | Missouri Department of Natural Resources (mo.gov)](#) The lower portion has a great drop down for specific handlings procedures for assorted HHW.

[Water Facts | US Forest Service (usda.gov)](#) This sheet explains why protecting forests protects our groundwater.

[Rainscaping Guide (missouribotanicalgarden.org)](#) More information on many cool ways to collect stormwater runoff from around the home and divert it to infiltration.

[Missouri Forest Management Guidelines](#) This high quality, comprehensive document covers a number of forest-related recommendations in [Unit III, Standards, Guidelines, and BMPs](#).

[Abandoned Wells | Missouri Department of Natural Resources (mo.gov)](#)

[Facts on Open Burning Under Missouri Regulations - PUB2047 | Missouri Department of Natural Resources (mo.gov)](#)