Stormwater Pollutant Factsheet

Biological Oxygen Demand

Biological (or biochemical) oxygen demand (BOD) is a measure of the dissolved oxygen that is consumed as organic contaminants decay or break down in waterways. An excess of organic contaminants can use up dissolved oxygen faster than it can be replaced. Low levels of dissolved oxygen can be harmful to fish and other aquatic life.

Potential Sources of BOD

- Deicing aircraft or pavements
- Storing food waste or other waste material outdoors
- Managing landscaping waste
- Leaks from dumpsters
- Fertilizer, herbicide, or pesticide use
- Sanitary facilities, such as portable toilets
- Washing equipment with soap containing biodegradable solutions
- Spills of biodegradable material

Best Management Practices

- Follow facility-specific BMPs for applying deicing and anti-icing materials.
- Maintain an adequately sized dumpster and use a lid to cover it. Keep the area surrounding the dumpster tidy. Check for leaks periodically and make sure it is watertight.
- Avoid using cleaning agents outdoors where they may flow into the stormwater system – even if the product label says it is biodegradable.
- Wash with cold water only if washing equipment outdoors.
- Discharge food preparation wastewater to the sanitary sewer only.
- Mulch grass clippings back into the ground or haul them away immediately. Do not

allow them to accumulate on-site.

- Avoid using fertilizer, herbicide, or pesticide if possible. If fertilizers are used, closely follow the manufacturer's instructions for proper application.
- Properly maintain portable toilets. Secure them from vandalism by locking doors when not in use and attach them to a solid fixture, such as a pole.

Take care with biodegradable products

Biodegradable cleaners may seem like a more environmentally-friendly option, but they consume dissolved oxygen as they breakdown, which can be harmful to fish and other aquatic wildlife. It is always best to wash vehicles and equipment indoors where wastewater can be directed to the sanitary sewer system. If washing must be done outdoors, use cold water, avoid using detergents, and wash in an area that allows infiltration, such as gravel. If detergents are necessary, wash water should be discharged to the sanitary sewer.

Additional Resources

Cleaning with Steam: Port of Seattle demonstration, *Washington Stormwater Center*

Dissolved Oxygen and Biochemical Oxygen Demand, *U.S. Environmental Protection Agency*

Industrial Stormwater Best Management Practices, *Oregon Department of Environmental Quality*