

Table II - Nonpoint Source Pollutants, Characteristics and Impacts

Nonpoint Source Pollutants	Pollution Characteristics	Impacts
Sediments	<ul style="list-style-type: none"> Produced by natural and anthropogenic erosion of streams. Generated by particulates settled on impervious surfaces. Constitutes the largest mass of pollutant loadings to surface waters. Provide transport for other pollutants like nutrients and bacteria. 	<p><i>Short term:</i> increased turbidity, reduced light penetration, decreased submerged aquatic vegetation (SAV), respiration impacts to fish and wildlife, reduced fecundity in fish.</p> <p><i>Long term:</i> Smothered benthic habitat, siltation, channel shoaling, aesthetic impacts.</p>
Nutrients	<ul style="list-style-type: none"> Introduced to the watershed by the burning of fossil fuels, use of fertilizers and detergents and the deposit/disposal of human and animal wastes. Phosphorus and nitrogen are the primary nutrients of concern. 	<ul style="list-style-type: none"> Eutrophication and low dissolved oxygen in marine ecosystems.
Oxygen-Demanding Substances	<ul style="list-style-type: none"> Organic matter enters fresh and coastal waters and then is decomposed, depleting dissolved oxygen. Organic matter is washed off impervious surfaces with runoff. 	<ul style="list-style-type: none"> Depletes dissolved oxygen. Exacerbates the negative impacts of eutrophication.
Pathogens	<ul style="list-style-type: none"> Associated with the feces of warm-blooded animals. Elevated levels typically found in urban runoff. Leading cause of water quality impairments in the United States. 	<ul style="list-style-type: none"> Beach and shellfish bed closures. Contaminated drinking water sources.
Road Salts	<ul style="list-style-type: none"> Primarily in northern climates. Major pollutant in urban areas. Produces high salt/chlorine concentrations in surface and ground water. 	<ul style="list-style-type: none"> Contaminated surface waters and ground water. Toxic to benthic organisms. Ecological effects pronounced in freshwater systems.
Petroleum hydrocarbons	<ul style="list-style-type: none"> Derived from oil and other petroleum products. Introduced into the watershed from vehicles. Accumulates on impervious surfaces. Bind to sediments and often collect in the benthic region. 	<ul style="list-style-type: none"> Toxic to aquatic life at high and low levels depending on compound. Accumulate and persist in the benthic environment.
Heavy Metals	<ul style="list-style-type: none"> Common in urban runoff: cadmium, chromium, copper, lead, and zinc. Copper, lead, and zinc are the most prevalent in nonpoint source pollution from urban areas. Deposit from vehicles and the atmosphere (particulate matter). 	<ul style="list-style-type: none"> Produce toxic effects on aquatic life. Bioaccumulate in fish and marine mammals.
Toxics	<ul style="list-style-type: none"> Various toxic compounds (USEPA “priority pollutants”) can be found in urban runoff. 	<ul style="list-style-type: none"> Acute and chronic impacts to aquatic life.