



## Water Quality

### Clean Water

#### Tackling Non-point Source Water Pollution in British Columbia

Our well-being depends on sustainable supplies of clean water for our physical health and for a healthy environment to live and play in. Our economy also depends on clean water for activities such as fishing, agriculture, food processing and tourism.

Although British Columbia's water quality is generally good, localized cases of water pollution are on the increase — problems like public beach closures, algal blooms and aquatic weed infestations, fish kills, shellfish harvesting closures, boil-water advisories, outbreaks of water-borne illnesses and contaminated ground water.

**Many people assume most of these problems are beyond their control but, in fact, the opposite is true.**



These problems are largely caused by the accumulated actions of many individuals over a wide area. They cannot be linked to a single "point source" but, in fact, come from several "non-point" sources.

#### ***What Is Non-point Source Pollution?***

Non-point source (NPS) water pollution is the release of pollutants to surface and ground waters from one or more activities over a broad area. Simply put, it's polluted runoff. As water flows over and through the land surface, it carries contaminants and debris to receiving waters. It is often the cumulative effect of several "sources" and pollutants which impact the environment. Of course, pollutants also enter water from "point" sources.



A point source is a single identifiable cause of pollution, such as a pipe through which a factory or treatment plant discharges waste water to the environment.

British Columbia's efforts to protect water quality by regulating "end of pipe" point discharges from industrial and municipal outfalls have generally been successful, and we now must focus our attention on non-point sources.

### ***What are the Pollutants?***

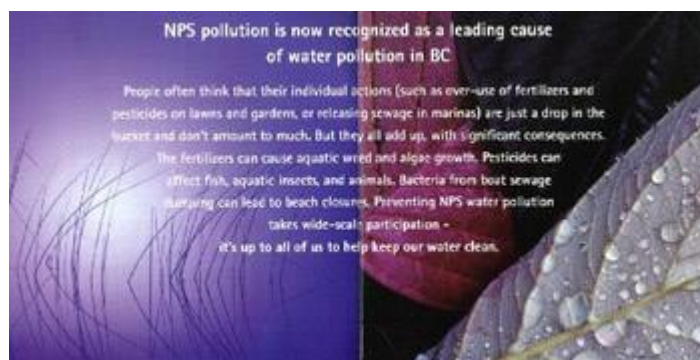


NPS pollutants can be grouped into five main categories:

- **Pathogens** — like bacteria and viruses
- **Nutrients** — nitrogen and phosphorus from fertilizers and organic wastes
- **Sediments** — soil and sand particles suspended in the water
- **Toxins** — substances such as ammonia, nitrate, metals, pesticides and a variety of organic compounds
- **Oxygen depleting substances** — organic wastes like manure and sewage

### ***What are the Main Sources of NPS Pollution in British Columbia?***

- **Land Development** — construction projects and urban development can generate sediments and other contaminants
- **Agriculture** — fertilizers, manure, pathogens, pesticides and sediments can enter surface and ground waters
- **Stormwater Runoff and Combined Sewer Overflows** — nutrients, sediments, pathogens and toxins are picked up from yards, streets, parking lots and industrial sites and enter surface and ground water
- **On-site Sewage Systems** (e.g. septic systems) — nutrients and pathogens can seep into ground water and surface water if the systems are improperly installed or maintained
- **Forestry and Range** — soil erosion from road building and logging activities, fertilizer and pesticide application and burning are potential sources of water contamination
- **Atmospheric Deposition** — pollutants released from motor vehicles and other sources eventually settle and enter waterbodies
- **Boating Activities** — vessel operation, maintenance and sewage discharges can result in contaminants entering waterbodies



### ***What are the Impacts of NPS Water Pollution?***

- Poor quality drinking water
- Damage to aquatic ecosystems
- Diminished recreation and tourism opportunities
- Impacts on First Nations food harvesting areas
- Economic losses to commercial and recreational fishing and shellfish harvesting
- Costs of environmental remediation
- Reduced aesthetic values of waterbodies
- Reduced real estate values (e.g. shoreline developments)

### ***What is Government doing to Address NPS Pollution?***

The Ministry of Environment, Lands and Parks (now called Ministry of Water, Land and Air Protection) takes the lead in addressing NPS pollution and has produced an [NPS Action Plan](#) titled "Tackling Non-point Source Water Pollution in British Columbia". This document outlines approaches to managing NPS pollution to ensure the healthy future of water resources in BC. The ministry is already implementing several initiatives under the NSP Action Plan:

- working with the Ministry of Agriculture, Food and Fisheries and the BC Agriculture Council to address environmental concerns in the agricultural industry
- managing sewage and stormwater through Liquid Waste Management by municipalities
- promoting "Best Management Practices" for industry
- implementing a Water Education Program which employs youth to deliver clean water messaging
- working with Environment Canada and other partners to address NPS under the Georgia Basin Ecosystem Initiative
- developing and implementing legislation to protect fish and sensitive waterbodies

### ***How Can I be Part of the Solution?***

#### 1. Around your home:

- reduce use of household hazardous products and use environmentally friendly alternatives. Call the Consumer Product Stewardship Hotline toll-free at 1-800-505-0139 to find out how to safely dispose of hazardous products
- check and repair fluid leaks from your vehicle
- reduce use of fertilizers and pesticides on your lawn and garden
- water your lawn and garden sparingly

#### 2. For on-site sewage system users:

- have your sewage system inspected and pumped out regularly
- don't put solids or toxic chemicals down the drain
- compost as much kitchen waste as possible
- don't put heavy objects or vehicles on the septic field

#### 3. For boaters:

- don't release sewage in marinas, bays or inlets. Install a holding tank and use pump-out stations where available
- use biodegradable products to clean your boat
- keep motors well maintained to prevent fuel and lubricant leaks

4. Around your farm or ranch:

- reduce use of fertilizers, herbicides and pesticides. Follow instructions and provincial application guidelines carefully. Consider using natural pest control methods.
- construct adequate manure storage facilities and follow manure spreading guidelines
- prevent cattle access to streambanks and waterbodies