2026 Current Issue Learning Objectives

Non-Point Source Pollution Mitigation - It Begins at Home

ENVIROTHON
ALBERTA

Key Topic 1: Non-Point Source Pollution Status

1. Define non-point source (NPS) pollution and differentiate it from point source pollution using real-world examples from urban and rural settings.
2. Explain changes in climate or landscape features can impact NPS.
3. Identify major types, sources and pathways of NPS pollution in surface water systems, including stormwater runoff, agricultural fields, and impervious surfaces.
4. Describe the impacts of NPS pollution on water quality and designated water uses (e.g., recreation, fisheries, drinking water).

Key Topic 2: NPS in a Growing World and Your Role In It

1. Explain how population growth, urban expansion, and agricultural intensification contribute to increased non-point source pollution.
2. Identify common products or practices in daily life that contribute to non-point source pollution through indirect pathways (e.g., fertilizers, car washing, pet waste).
3. Illustrate the concept of an environmental footprint as it relates to NPS pollution, using tools such as the Alberta Tomorrow Simulator.
4. Understand how to describe the Urban Stream Syndrome, the common symptoms associated with this syndrome, and the drivers of these symptoms.

Key Topic 3: Strategies to Evaluate NPS Sources, Issues, and Solutions

1. Explain how monitoring data (e.g., water quality indicators such as total suspended solids or nutrients) can be used to evaluate the presence and severity of NPS pollution.
2. Describe the challenges in monitoring, quantifying, and managing NPS pollution compared to point source pollution.
3. Demonstrate how to design or participate in a local monitoring project that addresses NPS pollution, such as conducting a lake or river water quality monitoring program.

Key Topic 4: Legislation, Regulations, and Voluntary Measures

1. Summarize major policies/programs in Alberta that address non-point source pollution, including regional Watershed Management Plans and Environmental Quality Guidelines for Alberta Surface Waters.
2. Understand the tools available to industries such as Agriculture and Forestry for mitigating NPS.
3. Differentiate between regulatory and voluntary approaches to controlling NPS pollution and identify examples of each.
4. Understand the role that regional watershed planning and stewardship bodies play in mitigating NPS.

Key Topic 5: Best Management Practices for NPS

1. Identify common BMPs used to reduce NPS pollution in urban, suburban, and agricultural environments (e.g., rain gardens, cover crops, buffer strips, pervious pavement).
2. Understand the principles of salt use on private roads, parking lots, and walkways. This includes understanding how salt works, best practices, and the concept of a eutectic point for different melting agents.
3. Explain how selected BMPs reduce pollutant loads or improve stormwater infiltration, using diagrams or real-world examples.
4. Demonstrate how to plan or assess low impact development using a site sketch (ex, calculating runoff volume for different surfaces on a property).