FRASER RIVER ACTION PLAN

Fact Sheet

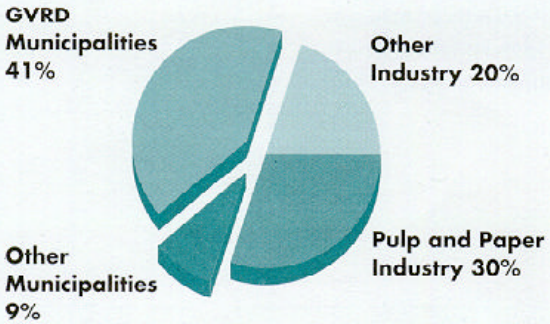
Pollution in the Fraser

What is pollution?

For most of us, this might seem like an easy question to answer: pollution is harmful material entering the environment. But it's not quite that simple. Some substances are harmless in one form, but toxic in another. For example, nitrogen in various forms, is vital to plant life and is a large part of the air we breathe – but combined with hydrogen it becomes ammonia, which can kill fish. Pollution is really a condition of the environment rather than a substance. The key is whether or not the introduced substance harms living things or degrades the quality of the environment – if it does, it's pollution.

Identifying sources of pollutants

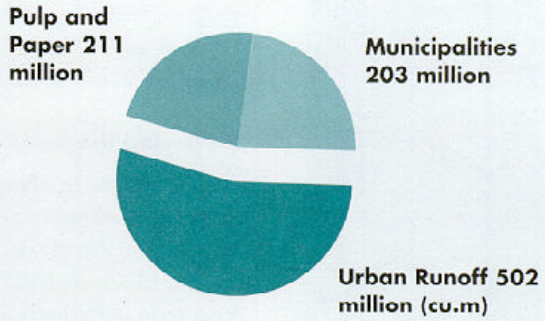
The Fraser River Action Plan is working hard to identify all sources and quantities of pollutants into the Fraser. FRAP is compiling a comprehensive database of point sources – those that can be traced to a particular point – such as wastewater discharges from municipal and industrial treatment systems and combined sewage and stormwater overflows. Results show that one of the main polluters is...us. Municipalities release half of the wastewater entering the lower Fraser River; the vast majority of this ultimately comes from household water-use and sewage. Common substances such as household cleaners, paint and laundry detergent can do enormous environmental harm if flushed down sinks, toilets and storm drains.



Municipalities release half of the wastewater entering the lower Fraser River.

Non-point sources

When rain water runs off farm land into ditches, or washes city streets and industrial sites before draining away, it picks up all kinds of contaminants that eventually end up in the river. Manure is one major potential pollutant in agricultural runoff, especially in the Fraser Valley which has high livestock densities. Pesticides, if improperly applied on fields, and wastewater from poorly maintained septic systems may both pose a problem. All may get into the drainage system and arrive untreated in the river or in groundwater. The diffuse nature of these non-point sources make them harder to quantify: FRAP scientists and other stakeholders are currently measuring and defining the extent of the problem.

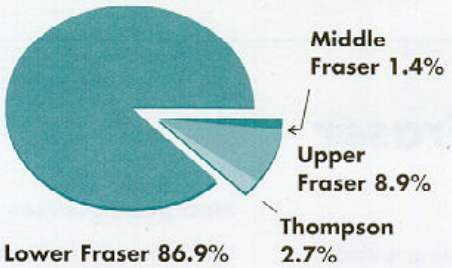


Urban runoff, a non-point source, accounts for more than the combined discharges from municipalities and pulp & paper mills.

Runoff from urban areas picks up sediments and chemical pollutants such as trace metals, PCBs and hydrocarbons from cars and trucks. For the Fraser Basin as a whole, by volume, urban runoff adds up to 500 million cubic metres a year – enough to fill B.C. Place Stadium 250 times! That's more than the annual discharge from municipal and pulp and paper sources combined. With its high population and large urban areas, the lower Fraser Basin is by far the largest

Environment Canada Environnement Canada
Fisheries and Oceans Pêches et Océans

contributor to urban runoff, dumping almost 55 thousand tonnes of suspended solids into the Fraser basin annually. By assessing impacts of runoff and land-use practices in a smaller basin like the Brunette River in Burnaby, FRAP and other stakeholders, such as UBC's Westwater Research Centre, hope to recommend better ways of managing these issues in the basin as a whole.



Urban areas in the Lower Fraser are responsible for most of the suspended solids discharged into the Fraser Basin.

More environmentally responsible practices

Part of FRAP involves working with various stakeholders to develop environmental guidelines, pollution prevention practices and waste management policies that encourage farmers, individual homeowners and industries to adopt more environmentally responsible management practices. The idea is to prevent pollution before it starts. Guidelines and codes of good practice developed for different industries have a twofold purpose: they educate people about pollution and its prevention; and they offer practical ideas for operational changes that can be made to prevent pollution.

Enforcing the laws to curb polluters

An important part of the battle against pollution in the Fraser is the enforcement of laws and regulations that limit or prohibit the discharge of certain substances. In cooperation with the provincial government, FRAP's long-term objective is to achieve over 90% compliance with environmental laws by targeting the worst polluters. Enforcement's primary tools are site inspections to check for compliance with regulations, the publication of compliance status reports, prosecutions and court orders for clean-up and restoration. Detailed investigations are conducted at problem sites, and the full force of the law, including prosecutions and fines, can be, and is, brought to bear.

Determining environmental quality

By defining the health of the river and finding out where polluted conditions are occurring, FRAP will provide a baseline against which to measure efforts to curb pollution. Checking the status of certain "indicator" species such as mountain whitefish, peamouth chub, eagles and osprey helps give a picture of the overall health of the basin. The plan is also focusing on some major contaminant sources such as pulp mills.

Setting water quality objectives

The Fraser River Action Plan and BC Environment are developing water quality objectives for the Fraser. These are critical benchmarks for pollution and a basis against which to measure change. Stakeholders play an important role in this process that considers all existing and potential water uses and their environmental impacts. Through public meetings and open houses, the public will also have a chance to review draft objectives. Scientists compile and assess data on the existing state of the river, provide technical assessments on the sources of contaminants and prepare draft objectives.

Ultimately, the goal of a clean, sustainable Fraser depends on the users of the river, which includes all of us that live within the river's basin.

Canada

For more information, please contact:

Fraser River Action Plan
Communications Officer
Environment Canada
224 West Esplanade
North Vancouver, B.C. V7M 3H7

Fraser River Action Plan
Communications Manager
Fisheries and Oceans
Suite 1220, 555 West Hastings Street
Vancouver, B.C. V6B 5G3