

Air Quality in Saskatchewan



Clean air is vital to the health and well-being of Saskatchewan's people and natural environment. 'Air' is the everyday term for the atmosphere - the intermixed layer of nitrogen, oxygen and other trace gases that surrounds our planet and makes life on Earth possible. Air pollutants in Saskatchewan originate from local, regional and global sources where major influences on air quality include industrial emissions, vehicle emissions, forest fires and agricultural operations. Air quality depends on the rate at which pollutants are emitted into the atmosphere and the ability of the atmosphere to disperse these pollutants. As a result, air pollution can be pervasive and does not recognize property or political boundaries.

Who does it affect?

Poor air quality can affect human health, the environment and the economy. The very young, elderly or those with compromised immune systems are often the most susceptible to air pollution. Asthma, lung cancer, cardiovascular disease, allergies and other human health problems have been linked to, or can be worsened by, poor air quality. Impacts on plant and animal biological diversity and productivity have also been attributed to pollutants in the atmosphere. Air pollution can have an impact on our economic wellbeing. The desire to prevent air pollution can affect decisions about what we buy, what we use, and how or where it is produced. Repairing the damage caused by air pollution, including health and environmental problems, can have economic implications. On the other hand, the creation of new technologies, knowledge, and jobs to address air quality concerns can produce economic opportunities.

How do we measure the air quality?

Measuring and evaluating air quality is an important activity in maintaining Saskatchewan's air quality. Instruments continuously monitor the ambient air and report up to the hour measurements that are made available to the public. The Air Quality Index (AQI) describes the general air quality in Saskatchewan by transforming ambient concentration measurements of sulphur dioxide (SO₂), nitrogen dioxide (NO₂), ozone (O₃), carbon monoxide (CO) and fine particulates (PM_{2.5}) into a single number, or index, that represents the measured quality of the air. The index is also used to monitor longterm trends in air quality.

Where do we monitor the air quality?

Real-time measurements are taken at six permanent stations located at the following locations:

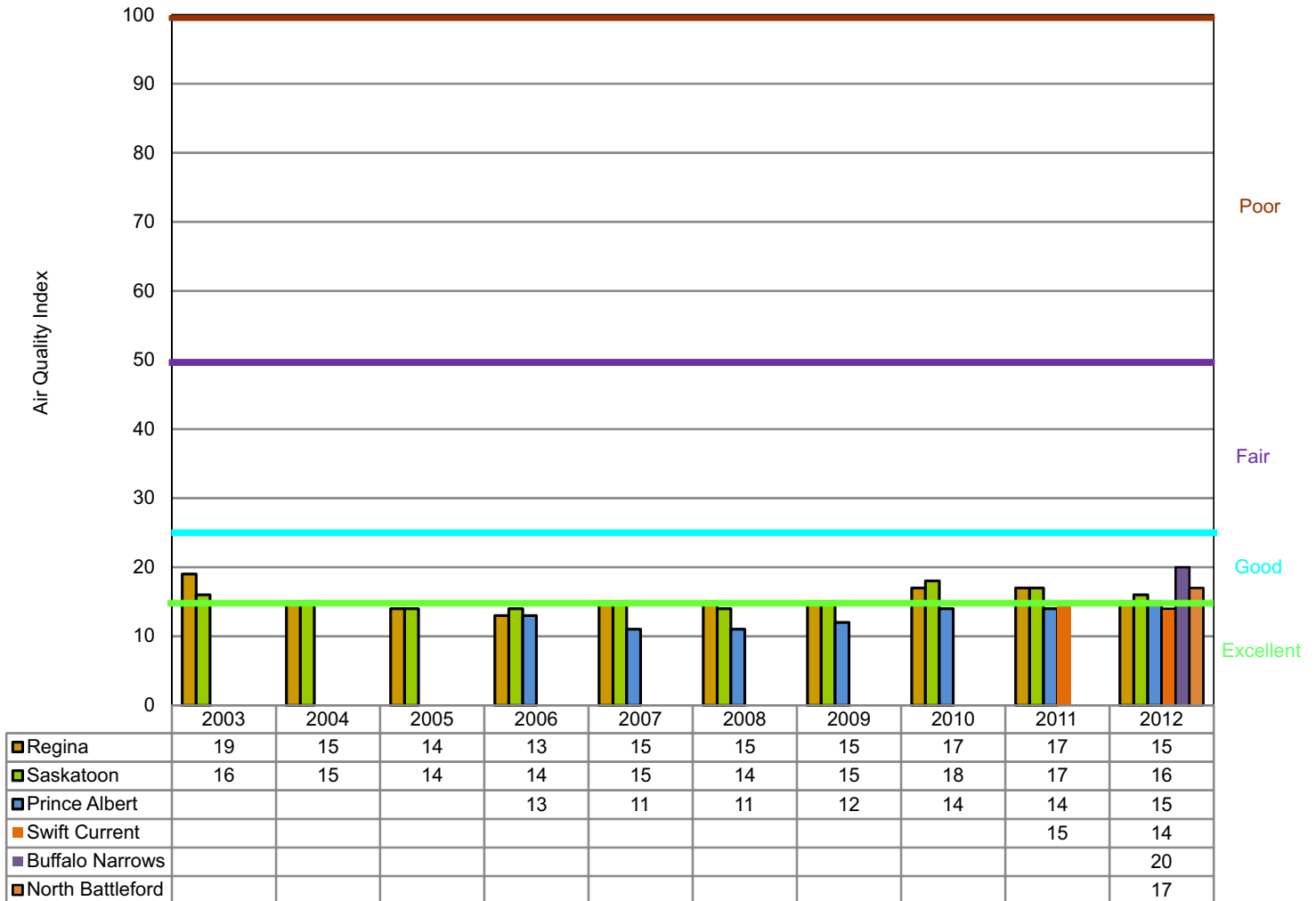
- Buffalo Narrows
- North Battleford
- Prince Albert
- Regina
- Saskatoon
- Swift Current

In addition, the Saskatchewan Air Monitoring Laboratory (SAML) is able to supplement the permanent station monitoring and collect data in locations where permanent stations do not exist. Since its acquisition in 2007 the SAML has collected data at more than 40 sites throughout the province. The ability to move the SAML from one location to the next make it an excellent tool for special monitoring studies and surveys.



What is the air quality in Saskatchewan?

The figure below taken from Saskatchewan's 2013 State of the Environment Report shows that air quality in Saskatchewan is primarily excellent with no anticipated harmful effects. The AQIs for Regina, Saskatoon, Prince Albert and Swift Current have consistently rated good to excellent and there has been a relatively stable trend in this measure.



Source: Saskatchewan Ministry of Environment, Technical Resources Branch 2013

Where can I find out more about the air quality in Saskatchewan?

Up to the hour measurements, historic data, air quality guidelines, and reports can be found on the Saskatchewan Ministry of Environment website at: www.environment.gov.sk.ca/air.

For further information, contact the Ministry of Environment Client Service Office at
1-800-567-4224 (toll free in North America), or 306-787-2584 in Regina.