

## **INTRODUCTION**

The environmental information in this section is designed to present an overview of the environmental conditions and features within the City and the Puget Sound region.

The Growth Management Act, which guides the development of local comprehensive plans and regulations, requires local governments to plan for a healthy environment. A relevant goal in the Act is as follows:

Protect the environment and enhance the state's high quality of life, including air and water quality, and the availability of water.

As residents of the Puget Sound basin, we are becoming increasingly aware of the extent to which urbanization of Puget Sound has disrupted a very rich, biologically diverse and interconnected ecosystem. Impacts to air and water quality have been an issue for many years. More recently, wildlife habitat and specifically, the listing of Puget Sound chinook salmon as "Threatened" under the Endangered Species Act (ESA) has become an issue of concern, for communities with a marine shoreline, and also communities with freshwater shorelines. Local communities and the State now must address restoration, as well as protection, of our important natural features.

## **BACKGROUND**

### **Air Quality Overview**

Air quality within the Puget Sound airshed is regulated at both the national level and the regional level through the Clean Air Act. Air quality is generally assessed in terms of whether concentrations of air pollutants are higher or lower than ambient air quality standards set to protect human health and welfare. Air pollution has a disproportionate effect on sensitive groups such as children, the elderly, and people with heart and lung diseases. Air pollution is also a quality of life issue.

The main sources of air pollution in the Puget Sound region are vehicular and marine traffic, industrial emissions, wood stoves and fireplaces, outdoor burning, and other sources such as lawnmowers, aircraft, trains, and other recreational vehicles. Motor vehicles contribute approximately 57% of the air pollution in the state of Washington. The primary pollutants are PM10/PM2.5 (particulate matter), carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, and lead.

The United States Environmental Protection Agency (EPA) has established a system to categorize and report air quality based on pollutant concentrations. This system is called the Air Quality Index (AQI) and utilizes a numerical scale divided into six health categories. The scale is as follows:

- From 0 to 50                      Good
- From 51 to 100                  Moderate
- From 101 to 150                Unhealthy for sensitive groups
- From 151 to 200                Unhealthy
- From 201 to 300                Very unhealthy
- From 301 and above            Hazardous

An AQI value of 100 generally corresponds to the national air quality standard for the pollutant, which is the level EPA has set to protect public health. AQI values below 100 are generally thought of as satisfactory. When AQI values are above 100, air quality is considered to be unhealthy—at first for certain sensitive groups of people, then for the broader population as AQI values get higher.

Within the Puget Sound region, the Washington State Department of Ecology (DOE) and Puget Sound Clean Air Agency (PSCAA) jointly regulate and monitor air quality. When necessary, the agency calls an air pollution watch to reduce particulate matter pollution by voluntary curtailment of wood burning. Burn bans are issued when real-time monitoring data shows “impaired air quality” as defined by state law. An ozone “smog watch” is called to target mobile combustion sources for voluntary reductions to prevent ozone standard exceedances. In 1999 and 2000, there was one day in each of the years where the AQI value exceeded 100.

A geographical area is designated as a “nonattainment area” if any one of the federal air quality standards is violated. A “nonattainment” area must develop and follow a plan to meet and maintain the federal standards. Once the standards are met, the area is redesignated as a “maintenance area”. There are currently no nonattainment areas within the Puget Sound region, but there are maintenance areas. Puget Sound (King, Pierce, and Snohomish Counties) and Vancouver (Clark County) are maintenance areas for ozone. Thurston County, Tacoma Tidelands, Kent Valley, and Seattle Duwamish are maintenance areas for particulate matters. Puget Sound (King, Pierce, and Snohomish Counties) and Vancouver (Clark County) are maintenance areas for carbon monoxide. The number of good air quality days continues to dominate regionally.