



National Wildlife Refuge System

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Alaska Maritime National Wildlife Refuge (NWR) - Tuxedni Wilderness

Air Quality Related Values

An Air Quality Related Value (AQRV) is a resource, as identified by the Federal Land Manager, for one or more federal areas, that may be adversely affected by a change in air quality. The resource may include visibility or a specific scenic, cultural, physical, biological, ecological, or recreational resource identified by the Federal Land Manager for a particular area.

Aquatic Resources

Tuxedni Wilderness contains a number of bogs, marshes, and streams. The aquatic resources associated with these areas are air quality related values (AQRVs) as they are sensitive to pollutants deposited from the atmosphere. The sensitivity of these resources has not been investigated. However, they may be sensitive to sulfur and nitrogen deposition; in addition, they may be directly affected by toxic metals and organic pollutants deposited from the atmosphere.

Fauna/Wildlife

Tuxedni has large colonies of sea birds, including black-legged kittiwakes, horned puffins, common murrelets, pigeon guillemots, and glaucous-winged gulls. Vegetated areas provide habitat for many other birds including spruce grouse, willow ptarmigans, and pine grosbeaks. Salmon are abundant along the coast. Birds, fish, and other wildlife are considered sensitive air quality related values (AQRVs) as they may be affected by air pollution. Air pollution may indirectly affect wildlife by causing

habitat degradation. In addition, wildlife may be directly affected by atmospheric deposition of pollutants such as mercury and other toxics.

Soils

A report describes the soils of Chisik Island and provides information on their genesis and landscape setting. The susceptibility of Tuxedni soils to atmospheric deposition has not been investigated.

Vegetation

Published accounts record a total of 290 vascular plants, 218 lichens, and 286 bryophytes for Tuxedni Wilderness Area. Lichens are an important ecosystem component in Tuxedni. Several genera of lichens found in Tuxedni are known to be sensitive to air pollutants (from studies in the Pacific Northwest) and include *Alectoria*, *Ramalina*, *Lobaria*, and *Nephroma*. These lichens are considered sensitive AQRV's. The following links detail plant species sensitive to ozone.

- [Tuxedni WA Lichen Species](#)
- [Tuxedni WA Species Sensitive to Ozone](#)
- [Ozone Sensitive Plant Species on NPS and U.S. FWS Lands](#) (PDF 236KB)
- [Ozone Bioindicators on NPS and U.S. FWS Lands](#)

Visibility

Visibility is a sensitive AQRV at Tuxedni. Visibility may be affected by widespread haze or pollutant plumes. The link provided is to the Interagency Monitoring of Protected Visual Environments (IMPROVE) website for access to visibility data.

- [IMPROVE Visibility Data](#)