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Locate and mitigate the state of nitrate: Assessing potential sources of nutrients in tributaries to the Nooksack River

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Since the early 1900s, nitrogen fertilizers and agricultural strategies have more than doubled the amount of nitrogen entering the land from both domestic and agricultural sources. Agricultural activities such as crop production, livestock manure application, and irrigation practice have been linked to increased nitrogen entering the soil, which is then released to surface water and groundwater. In recent decades, changes in agricultural practices have been observed as a result of changing conditions in the region, including land use changes and increased mechanization. The resulting nutrient concentrations in groundwater and surface water may pose a threat to aquatic life and human health. This study assesses the state of nitrate pollution in the Nooksack River and its tributaries, with a focus on understanding the potential sources of nutrients in the region.

The Nooksack River is a major tributary to the Columbia River and flows through a region that has experienced significant agricultural development over the past century. The river and its tributaries are viewed as a potential source of nutrients that contribute to the overall nutrient concentrations in the Columbia River. To assess the state of nitrate pollution in the region, the study collects water samples from various streams and tributaries, including Bertrand, Fishtrap, and Kamm creeks, and measures nitrate concentrations in both surface water and groundwater. The study also investigates the nutrient fluxes in the streams, with a focus on understanding the potential sources of nutrients in the region.

The study identifies different sources of nutrient pollution, including agricultural activities such as crop production, livestock manure application, and irrigation practice. Increased mechanization and changes in agricultural practices have led to increased nitrogen entering the soil, which is then released to surface water and groundwater. The study also investigates the potential impact of nutrient pollution on aquatic life and human health.

The study concludes that nutrient pollution is a significant issue in the Nooksack River and its tributaries, with potential impacts on aquatic life and human health. Further research is needed to better understand the potential sources of nutrients in the region and to develop effective strategies to mitigate nutrient pollution.