DEPARTMENT OF ECOLOGY
State of Washington

Boeing Auburn Fabrication Site

SURFACE WATER
Remedial Investigation Results

Surface Water in Auburn and Algona is Not a Hazard to Human Health

Ecology Oversaw the Remedial Investigation of Surface Water

The Department of Ecology (Ecology) oversaw a comprehensive investigation of contamination, called a Remedial Investigation (RI), at the Boeing Facility (Facility). The investigation focused on volatile organic compounds (VOCs), trichloroethene (TCE) and its breakdown product, vinyl chloride (VC).

The results from the RI do not indicate negative health effects if people touch the surface water in Auburn and Algona. During the investigation, the Boeing Company (Boeing) sampled surface water, wetland and stormwater features (ditches) and yard water. Contaminants from the Facility were generally not detected in Mill Creek or the Auburn Environmental Park wetlands.

Algona's Surface Water Samples Report Some Contamination

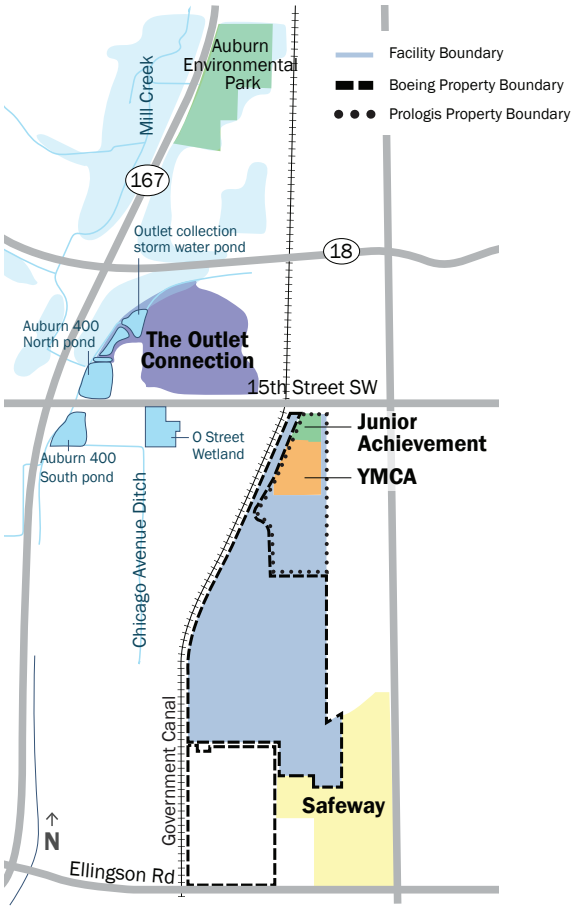
Surface water samples were taken from Government Canal, the Chicago Avenue ditch and yards and ditches in Algona. Concentrations for all samples were below the drinking water requirements. Ecology will require cleanup levels to be lower (more stringent) than the drinking water standards.

Government Canal and Chicago Avenue Ditch Results

Surface water samples taken from Government Canal, which flows south, did not detect any of the contaminants. However, surface water samples taken at Chicago Avenue ditch, which flows north, did detect contamination, most likely from shallow groundwater emerging into the ditches. Washington State Department of Health and Ecology reviewed several years of monitoring data from the ditch and surrounding stormwater features and concluded that there are no adverse health effects from occasionally touching or accidentally swallowing this water. The water in these ditches is not a source for drinking water, but is protected downstream as a potential future drinking water source.

Yard Surface Water Results

Surface water samples were collected from residential yards in Algona during winter flooding to test whether groundwater might emerge into yards. All



results were far below the health-based screening levels and did not indicate a need for further evaluation.

Ecology invited residents from 27 homes to have their yard water tested. These homes were selected because they were located above contaminated groundwater that could potentially discharge to yard water. Five agreed to participate. Of the homes that agreed to sampling, there were no detections of TCE or VC in yard water samples except at one location. At that location, the sample result was just at the detection limit and well below the screening levels.

Water Quality in Commercial Auburn is Not at Risk

Investigations also evaluated areas in Auburn, including the O Street wetland, the Auburn Environmental Park wetlands, the Outlet Collection ponds, the Auburn 400 storm water ponds, the channelized portion of the wetlands west of State Route 167 and Mill Creek. The only detections in Auburn have been in the Auburn 400 storm water ponds and just downstream.

Most VOC concentrations measured in surface water were below levels that would require cleanup. However, a few detections of TCE and VC in the Auburn 400 storm water ponds are above detection limits and above the most stringent surface water quality criteria that are intended to protect surface water for beneficial uses, such as drinking water and eating fish.

Next Steps: Feasibility Study Will Propose Cleanup Alternatives

Ecology is recommending that Boeing continue to monitor surface water and will determine cleanup actions during and after the FS to ensure surface water will be protected in the future.

Although TCE and VC were detected in some storm water collection ponds and channels in Algona and southwest Auburn, their extent is limited. Concentrations do not indicate that negative health impacts would result from occasionally touching or swallowing the water or breathing the air.

More About Drinking Water

None of the contaminants are presently detected in drinking water. Drinking water is provided by the public drinking water system of Auburn whose wells draw from much deeper in the ground and are located to the east, away from the direction of groundwater flow. The drinking water supply is monitored for contaminants that include TCE and VC. Private wells are not monitored like public drinking water. If you have a private well, please contact Ecology.

Якщо ви хочете отримати інформацію про забруднення грунтових вод у Алгоні та Оберні українською мовою, будь ласка, зателефонуйте 425-649-7181, щоб поговорити зі співробітником Департаменту Екології та перекладачем.

ਅਲਗੋਨਾ (Algona) ਅਤੇ ਔਬਰਨ (Auburn) ਵੱਚਿ ਭੂਮੀਗਤ ਪਾਣੀ ਦੇ ਦੂਸ਼ਣ ਬਾਰੇ ਪੰਜਾਬੀ ਵੱਚਿ ਹੋਰ ਜਾਣਕਾਰੀ ਲਈ, ਕਰਿਪਾ ਕਰਕੇ ਚੌਗਰਿਦਾ ਵਰਿਆਿਨ (Ecology) ਦੇ ਸਟਾਫ ਮੈਂਬਰ ਅਤੇ ਇੱਕ ਦੁਭਾਸ਼ੀਏ ਨਾਲ ਗੱਲ ਕਰਨ ਲਈ 425-649-7181 ਤੇ ਫੋਨ ਕਰੋ।

Para sa higit pang impormasyon tungkol sa pagkakontamina ng groundwater sa Algona at Auburn na nasa wikang Tagalog, mangyaring tumawag sa 425-649-7181 upang makipag-usap sa isang miyembro ng kawani ng Ecology at sa isang interpreter.

To request ADA accommodation for disabilities, or printed materials in a format for the visually impaired, call Ecology at (425) 649-7000 or visit www.ecy.wa.gov/accessibility.html. Persons with impaired hearing may call Washington Relay Service at 711. Persons with speech disability may call TTY at (877) 833-6341.

This fact sheet should be accompanied by the Remedial Investigation Folio and is one of four fact sheets relaying information about the investigation's findings.

Key Terms

Cleanup Level
The concentration of a hazardous substance in soil, water, air or sediment that is determined to be protective of human health and the environment under specified exposure conditions.

Detection Limit
The minimum concentration of a compound that can be measured and reported with 99 percent confidence.

Facility
The Boeing Auburn Fabrication Facility, also known as the Boeing property.

Feasibility Study (FS)
A detailed study identifying and evaluating cleanup alternatives.

Plume
The area covered by the spread of contaminated groundwater.

Remedial Investigation (RI)
An investigation of a site's contamination.

Screening Level
Concentration levels of contaminants used early on in an investigation when knowledge about the contaminants and impacts is low (e.g. routes of exposure are unknown, number of contaminants are unknown). If screening levels are exceeded, then a more detailed and focused investigation is made.

Site
The Boeing property, plume and all affected areas.

Trichloroethene (TCE)
An industrial degreaser and volatile organic compound.

Vinyl Chloride (VC)
A breakdown product of TCE; a volatile organic compound.

Volatile Organic Compound (VOCs)
Compounds that easily evaporate from water into air at normal air temperatures. Examples of household products that contain these compounds include gasoline, dry cleaning fluid, solvents and paint thinners.