

Astoria Landfill & CMH Field



Photo courtesy of Scott Holmstedt

Overview

This document is intended to serve as a summary of information resulting from many years of collaborative effort between stakeholders including the City of Astoria, Columbia Memorial Hospital (CMH), the Astoria School District and Recology (formerly known as Western Oregon Waste). After approximately 20 years of standing dormant with little beneficial use to our community, the landfill property will now be used by the community for many years to come as an all weather sports complex.

Community Need

All over the country, communities are looking to create more green space, parks and community gathering places. As a local example of reuse, the new facility will replace the old field, Gyro Field, and will be used for multiple sports, including football, soccer, baseball and softball. The relocation of the sports field will allow CMH to move forward on a much needed expansion in the future. This expansion will allow the hospital to provide much needed services such as cancer diagnosis and treatment eliminating the need for patients to travel to Portland or Longview.

History of the Astoria Landfill Property

The City owned Astoria Landfill is an inactive landfill located at 1800 Williamsport Road within the southeast municipal boundaries of the City of Astoria. The City began operating the landfill as a municipal open waste burning facility in about 1965. The site accepted general household waste, and select commercial and industrial wastes. The primary sources of the site's industrial waste were from fish and seafood processing plants, and the Crown-Zellerbach paper pulp mill located in Wauna.

A solid waste transfer station was constructed on the site in 1985 and general landfill activities ceased at that time. Currently the transfer station is operated by the Recology Company (formerly Western Oregon Waste). The City had a requirement to close the landfill, but had lacked adequate funding to implement full closure. In September, 2011, the Oregon Department of Environmental Quality (DEQ) provided grant funds for a Site Investigation (SI). The SI allowed the City to move into the next step, a Landfill Closure Plan. The Closure Plan incorporated the Sports Complex development to meet the landfill capping requirements. Since the redevelopment benefited both the City and Recology, a cost sharing agreement was developed into a 4 Party Agreement between the City, the School District, CMH and Recology.

The New Sports Complex

The sports complex required careful planning and a design that assures compatible use with both the existing transfer station and the potential future use of a relocated Public Works Operations shop and yard. The Hospital's design team worked closely with the City and Recology during the development of the Sports Complex plans. An important part of this planning was the assurance that all DEQ requirements and obligations for safe landfill closure were met.

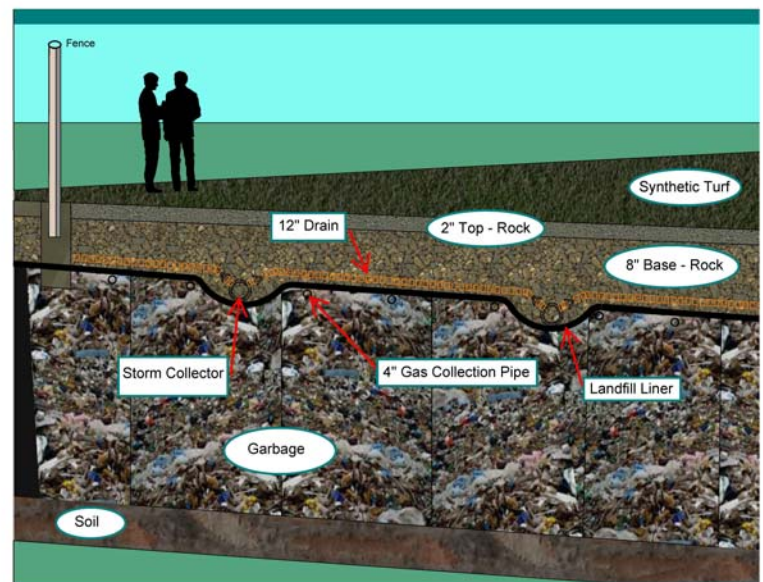
Post-closure activities consist of monitoring and maintaining the waste containment systems and monitoring groundwater to ensure that waste is contained. The required post-closure period is typically 30 years from site closure. Specific post-closure requirements consist of maintaining the integrity and effectiveness of the landfill features.

Development of the sports complex at the site consists of a 160,000 square foot all-weather, multi-use sports field with associated parking and vehicle access facilities, above ground support structures (locker rooms, concessions, restrooms, dugouts), spectator seating (grandstands and bleachers), utilities, and overhead lighting.

Landfill Features

There are several safety features built into the site to ensure that waste and by-products are contained and managed safely. Some are visible above ground (for example, monitoring wells heads) and some are not visible such as the piping and vents located throughout the sports complex. These systems are in place so that the landfill contents and the gases produced by the landfill material do not present a risk to the public. Since the landfill is primarily composed of municipal and construction waste it may take decades, even centuries for it to completely decompose. As materials decompose, methane gas and leachate (the liquid produced as material breaks down) is created.

The landfill has four main safety features to contain and/or monitor the gas and liquid produced. These features include a landfill liner, a landfill gas management system, a gas alarm system and a leachate monitoring system. In addition, the City will conduct routine monitoring with very accurate equipment designed to measure low levels of gases and ensure proper functioning of the landfill features.



Landfill Liner: The landfill is lined with a 40 millimeter plastic liner. The liner and accompanying gas collection system keeps the buried material contained, keeps stormwater out of the landfill and serves as a barrier so that gases cannot move into the air or surrounding soil. Liners are also installed under each building pad to prevent landfill gas from migrating up into occupied areas.

Landfill Gas Management System: The landfill gas venting system installed at the site manages landfill gas that is generated by waste in the landfill. The system consists of a membrane liner beneath buildings and the sports field, gas collection pipes beneath the membrane, and riser pipes vented to the atmosphere. The landfill gas venting system risers and sampling ports are the only above ground portions of the landfill features. These features will be monitored and inspected to assure that all engineered safeguards remain fully functional.

Gas Alarm System: Detectors and alarms are in place as a venting system safeguard. If gas is detected, occupants will be directed off-site until the problem is resolved. The School District and City will monitor and maintain the methane detection system that has been installed inside of the sports complex structures. Due to all of the safeguards in place, it is anticipated that conditions that will trigger an alarm will be a rare occasion.

Leachate Monitoring System: Leachate is a technical name for the liquid that created by the waste in the landfill. The leachate monitoring system has been in place for many years at the landfill. Water quality testing of the leachate to date has met DEQ standards. Leachate monitoring will take place in conjunction with the gas monitoring activities and reported to DEQ.

Can a Landfill really be used as a Sports Complex?

Yes! The Astoria Sports Complex will be a public space and it is not the only example of a public space built over a landfill. Nationwide there are many examples, and as land for parks, green spaces and recreation become more difficult to acquire, more landfills will be converted or reused. Public health involvement at sites with potential contamination or hazards concerns ensure safe reuse of the site through evaluating health risks and understanding and addressing potential risks. The Landfill Closure & Redevelopment Project has been approved by DEQ, who regulates the re-use of landfills and reviewed by the Oregon Health Authority, who evaluates human health risks.

Community Involvement

This project has involved three community serving entities: Columbia Memorial Hospital, the Astoria School District and the City of Astoria who worked with regulatory agencies to make this project a success. Along the way there were multiple public meetings where community members shared information. The City had numerous City Council meetings where decisions were presented and approved. Most importantly the Astoria School District held public presentations to work through the many details of the new Sports Complex identifying the needs of the users and the functionality of the facility.

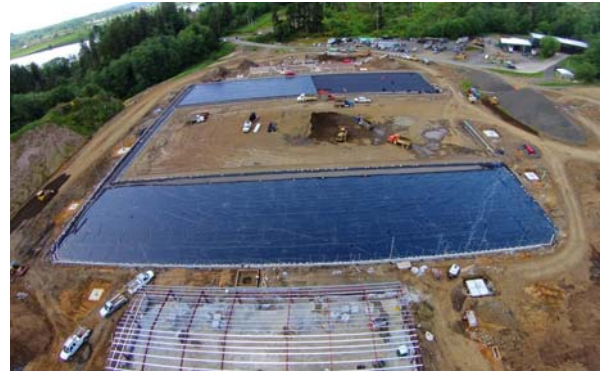


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Gas monitoring vent and sample port

For more information about athletic events and activities at the facility, contact AHS Athletic Secretary Theresa Dursse at tdursse@astoria.k12.or.us or 503-325-3911, ext. 318.

Acknowledgements

The following partners were involved in the development of the Astoria Sports Complex Project



State of Oregon
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Environmental
Quality

