*Article Summary Assignment #3*

**Summary Article**

This article talks about Puget Sound (Seattle) region main source of pollution: runoff water. This region experiences rainfall year round and its population growth is directly impacting the water resources. As population expands, trees and grassland are being replaced by concrete. The impervious surfaces used to build houses, roads, and buildings do not allow water to recharge into the underground water basins. Furthermore, heavy rainfall runs across lawns treated with pesticides and fertilizers, then it makes its way into oily streets, and finally into creeks, rivers, and the ocean. Moreover, constant rain can overwhelm combined sewer and storm-drain systems resulting in the flow of untreated sewage into the sound.

The solution proposed by the author is the construction of rain gardens throughout the region. Rain gardens are shallow depressions made of well-drained spongy soil at the base. Also, the depression has plants to make it attractive. Besides the environmental benefit of these rain gardens, they provide a habitat for birds and butterflies. In addition, the reduction in runoff water decreases flooding, which is a major issue in developed and populated cities in the country. The polluted water from rooftops, driveways, and streets can be captured, absorbed, and cleaned by rain gardens in the city. The Puget Sound local governments are aware of the current pollution situation and expect the number of households in the area to increase by nearly 30 percent by the year 2040. Thus, they offer rain garden incentives, such as grants and rebate programs.

**Course Readings**

This article focuses and promotes one of the 4 R’s of sustainable urban watersheds from Lecture 18: recharge. Recharge groundwater by capturing storm water runoff to decrease pollution. As learned in lecture, roots (in this case from the rain gardens) in the soil act like sponges by holding and releasing water into groundwater storage. Simultaneously, the tree canopy intercepts a significant amount of water and it evaporates back to the atmosphere, as learned in the laboratory session. Another environmental benefit is that trees help cool the surrounding area.

**My point of view**

Promoting rain gardens in the Puget Sound region is an effective way of maintaining water clean. Nevertheless, house owners would have to assure that there is an underground water basin in the place they live. Also, they need to know what type of soil they have beneath their houses. If the soil does not absorb water naturally, then the water in the rain garden will remain there for several days during heavy rainfall transforming the rain garden into a natural habitat of mosquitoes and bacteria to grow. As a consequence, it can spread deceases in the neighborhood and surrounding areas.

Hyperlink to the article:

https://www.seattletimes.com/pacific-nw-magazine/building-a-rain-garden-is-a-creative-way-to-keep-pollution-from-flowing-into-puget-sound/