

AM NO. 11-062

MEMO TO: Mayor and City Council

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DATE: March 1, 2011

SUBJECT: **STAFF REPORT: UPDATE ON WELLHEAD PROTECTION
IMPLEMENTATION OF STORMWATER INFILTRATION SYSTEM
ASSESSMENTS**

Purpose

This is a status report on the Wellhead Protection Program's assessment and modification process for existing stormwater infiltration systems. During the adoption process in February 2010, the City Council requested annual status reports on this effort.

Background

The original Wellhead Protection Ordinance adopted in October 2003, required risk assessment and potential upgrades to existing infiltration systems within five years (October 2008). Through the City's research for this project many more systems were identified than originally anticipated. During that same time the Washington State Department of Ecology (Ecology) came out with new regulations for Underground Injection Control Systems (UICs), which also covers infiltration systems. In 2008, the City Council approved an extension to the infiltration upgrade requirements that lined up with the timeline for Ecology's requirements. The City Council also directed staff to work with businesses that might be affected by the infiltration requirements to develop criteria and a clear process.

Staff assembled a technical advisory group (TAG) of affected businesses and the Chamber of Commerce in January 2009. The team worked diligently throughout the year to collaboratively develop an assessment program that would be protective of groundwater and address the concerns of businesses. The result of this collaboration was the development of assessment criteria, implementation schedule, and risk-based modification approach that was supported by staff, TAG members, and meets the assessment requirements of the Washington State Department of Ecology.

The Assessment Criteria and Form were attachments to Ordinance No. 2521, approved by the City Council on February 2, 2010. The Assessment Criteria delineates a process that includes

calculating a risk level for each system, developing risk reduction measures, and setting a schedule for implementing the risk reduction measures. Deadline for completion of the Assessment Form was February 3, 2011.

Resolution No. 1321, also approved February 2, 2010, provides incentives to owners to complete the modification of existing stormwater infiltration systems on a timely basis. The resolution eliminated permit fees for required work and established a Groundwater Incentive Program to provide limited matching funds for work required by the City.

On March 31, 2010, letters were emailed or mailed to 100 facilities with the Assessment Form, instructions, and map of each site's infiltration facility. Follow up reminder emails and post cards, were sent several times during the year to encourage timely submittal.

Once the assessment process is completed for a facility, the City issues an Authorized Work Letter that identifies the steps necessary to reduce the site risks to acceptable levels. They range from operational best management practices (BMPs) such as conducting vehicle maintenance indoors and covering dumpsters, to structural BMPs such as providing secondary containment or isolating fuel storage and dispensing areas.

Current Status:

- One hundred (100) facilities identified as needing assessments.
- Owners of 62 facilities completed the assessment before August 3, 2010, making the owners eligible for a Groundwater Incentive Program voucher, equal to 50% matching funds up to a maximum of \$6,000 per affected parcel.
- Owners of an additional 24 facilities have submitted their assessments by February 2, 2011, making the owner eligible for a 50% matching funds voucher, up to a maximum of \$4,000 per affected parcel.
- The City has made commitments to provide up to \$394,000 in incentive funds at 86 facilities.
- Fourteen (14) facility owners did not complete their assessment by the February 3, 2011, deadline. These facilities will not be eligible for financial incentives. Reminder letters will again be sent out to these facilities. If the assessments are not submitted within a reasonable grace period (60 days), the City may consider action through code enforcement and/or may eliminate infiltration credits from their stormwater bills.
- Natural Resources staff are reviewing the submitted assessments and meeting with owners at their facilities to discuss the information provided. Meetings have been

conducted with owners of 40 parcels (not including the City parcels) where staff has presented options for stormwater system modifications.

- Authorized work letters have been sent to the owners of 19 parcels. Letters outline the best management practices (BMPs) and site modifications that must be completed by February 2016.

Based on staff's review, assessments completed by owners have been a fair evaluation of the risks at the facility; however, the most common error observed has been whether the site has stormwater treatment. Many owners indicated that their stormwater was treated before infiltration; however, only two systems reviewed to date actually had appropriate treatment in place for the risks at the site. Most facilities will require the addition of some level of treatment to mitigate the risk from on-site activities. This was anticipated as the Stormwater Manual did not require treatment of stormwater before 1996, and most of the facilities were built before that date.

Typically, staff proposes up to three options for modifications to stormwater systems, working with owners and considering the layout of the site to recommend the most feasible, effective and least costly treatment options for the individual site.

1. Continued infiltration after stormwater passes through a rain garden or Filterra (rain garden in a vault) containing a soil media to filter out contaminants.
2. Continued infiltration after stormwater passes through a BayFilter or StormFilter vault containing removable cartridges to filter contaminants.
3. Discharge of stormwater from pollution generating surfaces to the City's stormwater conveyance system (with treatment on-site or at a regional facility).

Recommended modifications have focused on installation of water quality treatment to remove contaminants from stormwater prior to infiltration. Continuing to infiltrate clean stormwater is important to the owners as it helps to reduce their monthly stormwater bill and it also helps maintain aquifer recharge. The most common modifications recommended are installation of a rain garden, Filterra, BayFilter or StormFilter. Each of these approved treatment methods uses special soil/mulch mixtures or media to filter oils, metals and other contaminants from stormwater. They have the added benefit of a small foot print which makes them a preferred technology for installation at small and existing facilities. Estimated costs for these systems vary widely based on the size of the paved area and lay of the land. For a typical lot with 6,000 square feet of impervious parking area the costs range from \$12,800 for installation of a rain garden, \$19,000 for the Filterra, \$29,000 for the StormFilter, to \$48,000 for connection and discharge to the City storm system (includes payment of a capital facilities charge).

Owner Concerns

Owners have been thankful for staff assistance with a subject that they are not generally familiar. The most frequent concern staff hears from owners is about the potential cost of the modifications to their systems, especially during these tough economic times. As a reminder, staff informs them that they have until 2016 to prepare and implement the final changes and that staff has eliminated the cost for permits. Several facility owners have hired engineers and are beginning to design stormwater modifications for their facilities or are having their own staff begin design work.

Stormwater system modification is a cost that most have not budgeted for. Several owners have said they will defer most of the work for a year or more, others have said that they are in the process of selling or redeveloping and will not make changes now because the entire property will be developed in the near future.

Recently a number of owners have expressed that they feel they should be grandfathered in, or not required to meet new stormwater standards at a facility that was approved by the City for construction in the past. In discussions with these owners, staff notes having learned much in the last 25 years about protecting the City's groundwater and drinking water resource and now must protect the resource. Staff also notes that the U.S., State and City codes require these protective actions and require proactive groundwater pollution prevention measures to ensure the safety of the public drinking water supply. These actions also help to reduce the owner's potential liability for cleanup by reducing the chances of a spill causing contamination of their site and groundwater. Some owners have been satisfied with staff's explanation.

In 2011

- On January 4, 2011, reminders were sent to the remaining facility owners that had not responded to the earlier notifications. All assessments should have been submitted by February 3, 2011.
- Staff anticipates that many facilities will begin design work this spring and hope to facilitate permit applications to allow work to begin as early as this summer.
- Staff will continue to conduct site visits to review the remaining assessments, help owners to develop cost effective pollution prevention methods, and implement those modifications reduce the risk to the City's groundwater resource.