

Attachment Q: Critique of Engineering Report

M. R. Adelman

Mark R. Adelman, Ph.D.

Costco's Engineering Report & Stormwater Management Plans: Is Anybody Watching?

by

Mark R. Adelman [1]

Webmaster, The Stop Costco Gas Coalition (SCGC) [2]

A. Introduction and Overview

This document is related to Costco's Special Exception application S-2863, asking for approval to build/operate a mega gas station in the southwest quadrant of Westfield's Wheaton Plaza. It is a filing, on behalf of the SCGC, in opposition to S-2863. Our filing is directly linked to Costco's Engineering Report, which is Exhibit R in its set of filings for S-2863. As such, Exhibit R should contain components related to the requirement for a Stormwater Management Plan (SMP). The latter would in turn be related to Costco's Forest Conservation Plan (FCP) which would include discussion of how the Stormwater Management plan filed by Costco protects the Stream Buffer of the Wheaton Green Forested Buffer. In addition, Costco's Engineering Report should contain information on how Costco will monitor the status of the underground gasoline holding tanks - because any leakage from these tanks will have negative impacts on the underground water beneath/near them, thus on the Forest Stream Buffer, and ultimately on the water quality draining from the site - via the overall watershed - into the Chesapeake Bay. In fact, Exhibit R contains almost none of the above. It is an exceedingly brief document, with a collection of attachments stating the Costco (and or Westfield) has been given exemptions from having to file such plans.

B. What Costco's Engineering Report Does/Does Not Contain

The report is very brief: not quite 3 pages in toto, divided into 8 sections, and with four attachments. The 8 sections, with our comments are:

I. Property Description: This is brief and accurate.

II. Project Description: Also brief and apparently accurate. It notes the facility will have 3 separate underground fuel tanks, each with a capacity of 20,000 gallons; there will also be one 2,500 gallon tank for "fuel additive".

III. Vehicular Access: Brief, but inaccurate. It repeats the mistake, found in other Costco filings, of saying there are five entrances to the Mall (there are four) but does not repeat the error of claiming there are three off University Bld. (there are only two).

IV. Natural Resources Inventory/Forest Stand Delineation: This brief section states that an inventory was prepared (but it is not attached). It states that a letter of exemption was issued, but does not state what the exemption was for. The attached letter (attachment A) is an exemption (42011026E) from the need to file a Forest Conservation Plan. We comment on this, below, with reference to section V.

V. Forest Conservation: This section states that the proposed development was previously exempted from Forest Conservation requirements. But "since the layout of the fuel station has since been revised, a new Forest Conservation Exemption

Application was submitted to M-NCPPC on October 1, 2012." There is no mention that a new exemption was issued and none is attached.

Our filing (Exhibit N) and a separate supporting filing by Audubon Naturalist Society (ANS, Exhibit O), assert that the previous exemption was invalid (there were a number of irregularities in the issuing process) and that, in any case it could not be construed as being applicable to the gas station, because it was issued before the application for the gas station (S-2863) was filed. We quote here from Exhibit N:

"The site on which Costco proposes to build/operate its mega gas station is immediately adjacent to the Kensington Heights neighborhood; that includes residential homes, the Kenmont Swim Club, and the Stephen Knolls School for special needs children. The interface between the Costco site and the adjacent neighborhood is a portion of Wheaton's Green Forested Buffer. It is a relatively thin strip of land but is nevertheless one of the largest portions of the Forested Buffer, which is supposedly protected by the Wheaton Sector Plan. The forest buffer has a stream bed running through it (the Stream Buffer) and this is fed by the various streams that lie immediately underneath the surface upon which Costco proposes to build/operate the mega gas station. The Forest Buffer is a sloping domain through which the air pollutants released by the proposed gas station will reach the Kensington Heights community: such pollutants must follow this path because they will flow downhill and prevailing winds will simply add to the physical forces that drive them down this slope. Similarly, the Stream Buffer that is part of the Forest Buffer is the path that will be followed by any pollutants released from the gasoline holding tanks; such pollutants will follow the multiple paths by which material entering the watershed ultimately reach the Chesapeake Bay.

Montgomery County Code, that governs how Costco's application (S-2863) must be evaluated, specifies (section 59-G-1.23 (d)) that the applicant (Costco) must file a Forest Conservation Plan (FCP), related to the forested buffer mentioned above. However Costco has not filed such an FCP because it claims to have received an exemption from this requirement. The exemption in question (42011026E) was issued by the Montgomery County Planning Department to Westfield Corporation, for the Wheaton Costco Mall Addition construction project. But since that exemption was issued improperly (see following) and at a time when Costco had not yet applied for the Special Exception needed for the proposed mega gas station, it is clearly not appropriate to claim that the exemption applies to the gas station. In fact, given that the proposed gas station is to be sited even closer to the Forest Buffer than is the Costco store, and poses a far more likely threat to the Forest and Stream Buffer than does the store, it seems especially important to re-visit the entire matter of the issuance of the exemption and require that the Planning Department process separate applications for exemptions (one for the store, another for the gas station). More to the point, Costco should comply with the Forest Buffer protection mandate as set forth in the Wheaton Sector Plan and submit the required Forest Protection Plan, rather than relying on exemption(s) of questionable validity.

Those who wish more information on the above should read our filing on the Forest Buffer issue, as well as the separate filing by the Audubon Naturalist Society (ANS) on the same issue. ANS also raised concerns about the implications of failure to even recognize the existence of the forested buffer because the forest section in

question is in a stream buffer and Westfield/Costco had, by virtue of the above cited exemption, thus also been exempted from having to comply with conditions of the regulations (NRI-FSD) that would normally apply so that storm water management plans are consistent with preserving the qualities of stream buffers and, thus, groundwater.]”

VI. Sediment Control and Stormwater Management: The sediment control plan is largely one of management of sediment during the construction phase; it has been approved and we will not comment on that here.

The stormwater management plan submitted by Bohler appears to have been approved, subject to some conditions. We comment on two aspects:

1. Stormwater management pertains to control of surface water run-off; it does not address issues related to underground water quality. As discussed below, this is of major concern
2. In its filing to the Planning Commission (Exhibit O), ANS raised several questions as to the adequacy and quality of the stormwater management system that Costco/Westfield have installed. To quote the ANS filing:

“The outfall in the forested buffer was constructed by Westfield to discharge stormwater from Costco development’s impervious surfaces into Silver Creek. The approximate total area of disturbance is over 6,000 sq. ft – about half taken up by the cemented riprap outfall and half by the access path made by the bulldozers. This is well in excess of the 5,000 sq ft disturbance limit mandated by the forest conservation exemption. Since no paperwork has been filed for construction of this outfall, it is unclear how many trees were removed, but the bed of Silver Creek was scoured with bulldozers, filled with riprap and cement poured on top. The only mitigation measure observable for the bulldozer access road is straw. Several of the trees still standing have root zones that sustained critical damage with no remediation efforts. The only sediment control measure observed is silt fencing, which has failed in several places. Several trees yield different DBH (diameter at breast height) than indicated in the NRI/FSD plan (basically the application to get the exemption) and at least several other significant trees are not marked on the NRI-FSD, further undermining the accuracy of the application and lack of regulatory oversight.

Amazingly enough, the worst part is yet to come. In the few short months since completion, the outfall is already showing signs of failure at the downstream end, with water dislodging riprap and gouging a new gully in the concrete seal Westfield claims will protect Silver Creek for decades to come. It is entirely obvious that the conventional outfall design Westfield chose is inadequate for the task at hand. At the time, the community lobbied for a different solution – a Low Impact Development device, called a Regenerative Stormwater Conveyance (RSC), otherwise known as a Coastal Plain Outfall. This alternative, sustainable stormwater outfall uses a series of vegetated step pools that do not require extensive forest and creek bed disturbance, and that infiltrate runoff. The RSC technique decreases water turbidity, retains and reduces stormwater volumes, incorporates sediment into soil, absorbs and breaks down other pollutants, provides wildlife habitat for riparian flora & fauna. As a living

green infrastructure technology, the performance of the RSC improves over time at combating stormwater, unlike Westfield's conventional system that has already started to fail mere months after installation."

In other words, Westfield/Costco chose an inferior system for stormwater management and then constructed it so poorly that it is already failing.

At this point we would like to comment on Costco's plan for monitoring of underground water quality in/around and downstream of the project site, but cannot do so, because Costco has filed no such plan. Not in the Engineering Report, not in its Environmental Report, and not in any other document that was filed with the Special Exception application. This glaring lack cannot be ignored.

We note that Appendix D to the Engineering Report is in principle relevant to this issue. It is a "Final Report of Geotechnological Exploration & Engineering Services". The report was prepared in February, 2010 (long before S-2863 was filed). We note that it refers to three 30,000 gallon storage tanks (vs. the 20,000 tanks mentioned above) each to be installed about 20 feet deep. The report refers to a number of test borings, including a few in/near the site of the tanks, but there is no reference to any study relating to monitoring of the underground around the tanks after installation is complete and the gas station is operational. Thus there is again no evidence that the engineering report is in any way informative as to how ground water quality is to be monitored once the proposed gas station is operational.

VII. Easements and Dedication: Another short section; no apparent errors.

VIII. Public Utilities: Another short section; no apparent errors.

C. Summary and Comments

There are two elements of the County Code, relating to approval of a Special Exception application for a gas station, that are not met by Costco's Engineering Report.

1. By failing to provide any information regarding how ground water impacts around the underground gasoline storage tanks will be monitored as to potential leakage, Costco has not satisfied General Conditions 59-G-1.23 (e) because it has failed to prove the planned use will not impact groundwater quality in the neighborhood or the impacted watersheds.

2. Costco has not satisfied General Conditions 59-G-1.23 (d) because it has failed to provide a Forest Conservation plan and the process by which it obtained an exemption from this requirement is invalid.

For these reasons (and others) Costco's application (S-2863) should be disapproved.

ENDNOTES

1. Dr. Adelman has an AB in Biology and a PhD in Biophysics. His CV is available at (<http://www.educationalassistance.org/MRA/MRAPersonal/CV.html>). He has over 40 years experience in reading and evaluating complex documents and deciding whether the data presented support the conclusions reached.

2. The Stop Costco Gas Coalition was formed in October 2012 by a group of citizen-activists who were concerned that only a small segment of the public was following the Costco mega gas station issue. The SCGC website (www.stopcostcogas.org) has a large amount of information about the application, background material relevant to understanding the Special Exception process, references providing information on citizen concerns, and a listing of the members who have joined the Coalition.