

Kamuron (et al.)--

Thanks for the opportunity to comment. I don't know if this message will "qualify" as a formal response to the City's DNS, but my intent is less to go on-record as to pass along information. Besides, I'm traveling and it's the best I can do! I hope it will be of some assistance.

I see three items in the proposed critical areas update on which I feel I can shed a little more light.

1. CHOICE OF MAP DESIGNATING NO-DISTURBANCE AREAS: I would caution you strongly against switching your map-based reference from the original King County SAO folio to the basin plan maps. The latter were never intended to be used in that fashion, and (as I recall) the language in the plan consistently referenced the SAO folio. Why? Because the process that created that folio had systematically evaluated the conditions recognized to create a hazard, and it developed the maps at a detailed scale. Basin planning effort could never have duplicated that effort, and why would we bother?--it already had been done. When we saw necessary changes to the folio maps, we made them TO THE FOLIO--and a new version was (eventually) adopted by the County Council. This occurred primarily with the landslide hazard zones, and I was involved with most of those in the early 1990's.

As for the Erosion Hazard zones in the SAO Folio and referenced in the Basin Plan, these were a direct transfer of the SCS soils mapping, where all occurrences of soils recognized by SCS as "severe" or "very severe" erosion hazard were included. It seemed logical then, and it seems logical today. I can't imagine any reason to change. If the City would prefer using its "own" map to identify these areas, I recommend using the same process that King County used in 1978...and, because the underlying SCS soils map is unchanged, you'll have the same map that the County had (but now it would be "yours"!). But--don't change maps to one that always presumed the underlying authority of the SAO folio, and made no particular effort to duplicate its information.

2. DISPERSION AS STORMWATER "MANAGEMENT"--Dispersion trenches have a long history in the annals of stormwater management in King County. I remember visiting debris piles blocking Newport Way, blow-outs on Coal Creek, and (a little closer to home) catastrophic incision along 0143G, all downstream of dispersion trenches. I'd like to think that we'd learned our lessons--water that spreads out can re-collect, and indeed TRIES to reorganize into a channel. Only where the ground is flat, the soil is porous, and the vegetation is abundant is there any likelihood of genuine infiltration. Indeed, if you can't achieve infiltration at the end of a pipe, I doubt you will do any better, long-run, with a trench. I have not ferreted out the details of your language in the proposed code to see the wiggle-room provided. I bet you want someone to "certify" that a trench is not going to cause a problem downstream. After the next 4" winter storm (it's been a while for one of them, remember, but they WILL be back), see if you can clean out the gravel with that piece of paper.

Remember--if it won't infiltrate out the end of a pipe, it won't infiltrate out the side of a trench.

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3. RUNOFF INTO THE NO-DISTURBANCE ZONE--Maybe I just have too many memories of the "bad old days," but the language of 21A.85.060(3)c(v) [proposed] is scary. A drainage system that "will not significantly increase the risk of landslide or erosion to the no-disturbance area"?

How? Where? Has anyone been paying attention? During preparation of the basin plan, we spent a very long time trying to solve this problem. What do you do when every increment of increased stormwater appears to have a direct (negative) response to the channel, and thence into Lake Sammamish? When there is no "buffering capacity"? I mean, maybe there used to be but it's all gone--development of the 1960's, and 1970's, and 1980's (and,

alas, beyond) got there first and used it all up.

For the basin plan, we could only come up with two answers: infiltrate it all, or bypass it all. There is no "third" option. I don't remember if, at the time, we believed that sufficiently severe detention might be a

last alternative, but subsequent published research (a.k.a. Best Available Science) has laid hope that to rest. I'm sorry, truly, that pipelines

have not fixed this problem, and that they also bring the potential for unintended consequences. I know that the City must be pressured by property owners who want to build out "just like the other guy." But if you were ever looking for a location where you got the biggest environmental bang for your regulatory buck--or, perhaps better put, the largest environmental problems for your regulatory flexibility--this is the place. If Lake Sammamish isn't worth it, why bother at all?

It's very good to see that the City is making a concerted effort to build from existing work and to solicit further input, and I appreciate your

steady attempts to engage others in this process. I also know that competing city policies are no less insistent, but resolving this particular set of trade-offs is as easy as you ever are going to get. We as a region have almost 2 decades now in closely watching these streams, both in the City and around the region, and so we have no excuse for not knowing the outcome of our decisions. Choose wisely!

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Ebright Creek slopes

There have been 3 landslides in Ebright Creek in the last 4 years:

- The first occurred during dry conditions.
- The second slide which occurred on the slope of the Frasier property wiped out the 2011 Kokanee run smothering them with sediment.
- The third slide occurred on the Frazier property this spring 2012 following stormwater failures of the Greenbriar development upslope.



First landslide in Ebright Creek



Slide on Frasier property in gully adjacent to Ebright Creek, March 2011



Mud flows from gully flowing across Ebright Creek, March 2011



Landslide sediment in Ebright Creek, March 2011



Lower reach of Ebright Creek through Pereyra property, east of parkway, March 2011

Lewis Creek west Lake Sammamish

A Lakemont detention pond blew out in a 25 year storm in January 1990. This major event completely destabilized the canyon through which Lewis Creek flows, and had it not been for the 6 ft. culvert at I-90 that backed up the water 40 feet more houses would have been damaged downstream.



Remains of Lakemont detention pond after blowout, January 1990



Erosion through Lewis Creek ravine after detention blowout, January 1990



Erosion through Lewis Creek ravine after detention blowout, January 1990



Sediment at culvert above 1-90 after Lakemont blowout, January 1990



Damage south of 1-90 culvert after detention blowout, January 1990



Damage to homeowner property on Lewis Creek after blowout, January 1990

Lewis Creek Spring 2007 Storm

A large storm in the spring of 2007 filled the wetland at the Lewis Creek park and moved loads of sediment downstream and dumped them into Lake Sammamish.

This storm event wiped out the Kokanee run in Lewis Creek for the year.



Lewis Creek headwaters wetland, Spring 2007 storm



Lewis Creek at 1-90 culvert, Spring 2007 storm



Lewis Creek above 185th St. Bridge, Issaquah, Spring 2007



Lewis Creek below 185th St. Bridge entering Lake Sammamish, Spring 2007



Lewis Creek entering Lake Sammamish, Spring 2007 storm

Stream north of Newport Way, Issaquah

The first picture is of the stream after it had been restored by the city of Issaquah after it blew out during the spring 2007 storm carrying outwash and debris over the road.

The following pictures are the same stream that blew out during the storm in December of 2010, again sending water and outwash across the road.



Completed work stabilizing stream south of Newport Way, Issaquah after Spring 2007 storm.



Stream south of Newport Way, Issaquah after 2010 storm.



Outwash of stream south of Newport Way, Issaquah after Dec. 2010 storm.



Cleanup & renewed stabilization of stream south of Newport Way, Issaquah after 2010 storm.