January 4, 2008

Berni Johnston
Team 4 Engineering
5819 NE Minder Road
Poulsbo, WA 98370

Re: Review of Proposed Storm Detention Plans for Poulsbo Meadows and Mountain Aire Projects.

Dear Berni:

I have been asked to address comments that arose during review of the drainage plan for Mountain Aire and Poulsbo Meadows. Specifically, the comments states:

"The Preliminary Storm Drainage Report does not address whether the diversion and combining of post-development flows from Poulsbo Meadows and Mountain Aire will affect the pre-development hydrology of Lemolo Creek and associated downstream wetland areas. In particular, the delineated wetlands on the Mountain Aire site may be affected by the proposed vault release point. The Report should be revised to include an evaluation of post-development hydrology impacts."

I have reviewed the storm drainage report and visited the area to determine if the proposed diversion of water from the Poulsbo Meadows site into the detention vault proposed at the south end of the Mountain Aire project site will negatively impact Lemolo Creek. We also have some information about one of the properties between the two project sites that allow us to make additional judgments concerning the proposed diversion of water. It seems like the main issue is the diversion of water from Poulsbo Meadows into the vault on Mountain Aire, which will flow into the delineated Wetland A at the southeast corner of the Mountain Aire site. The Poulsbo Meadows site is currently composed of a fairly dry, sloping pasture that is currently un-grazed but may be mowed during the summer months. Tallagson Road lies along the entire east edge of the site with a ditch located on the project side of the road. During a recent visit to the site, I observed that water was present at a low point of the Poulsbo Meadows site (due to heavy rain events preceding my visit) about halfway along Tallagson Road that was flowing into the ditch. There was no water present in the north half of the ditch. Water flows southerly through the ditch to a residential driveway, which heads west from where Tallagson Road heads east. During this visit, no surface water connection was observed between the Poulsbo

Meadows site and Lemolo Creek, which lies about 75 feet east of the site. There is no culvert under Tallagson Lane that conveys water to Lemolo Creek from this site. There is a culvert under the driveway that appears to convey water southerly toward the northeast corner of the Mountain Aire site. Based on these findings, the Poulsbo Meadow site does not contribute water directly into Lemolo Creek so it appears that the conveyance of storm water from Poulsbo Meadows onto the Mountain Aire site will not have negative impact to Lemolo Creek.

While water from Poulsbo Meadows does not flow directly into Lemolo Creek, it does flow southerly and appears to enter the man made swale that now resembles wetland at the northeast corner of the Mountain Aire site. This wet area was not identified as wetland during the preliminary visits to the site in 2005 because it didn't meet all three parameters. This area was impacted when the orchard was cleared and it appears that it was dug out slightly to create a swale to convey water from the upslope swale, which is a natural swale that lays just offsite to the north. The newly created swale is not fully functioning because of ruts and puddles that are preventing the drainage of water through the swale and out of this area. As a result, it now resembles a wetland because water is remaining just long enough during the growing season to allow the growth of volunteer wetland emergent plant species. The swale conveys water to a tightline that begins at the home just east of the project site and flows into Lemolo Creek, which lies beyond the home. The water from Poulsbo Meadows and along the north edge of Mountain Aire will be conveyed into the detention vault as part of the storm water plan and will allow the wet area at the northeast corner to once again become upland. The absence of water flowing into this area will not reduce flows in Lemolo Creek because this source of water is not providing significant amounts of water to the stream system.

The wetland at the southeast corner of the Mountain Aire site is fed by surface water and seasonal groundwater seepage that originates on the slopes west of the system. The detention vaults are proposed just upslope from the wetland and will discharge into the wetland buffer so that the upslope water is conveyed into wetland as it has been over a long period of time. The development will reduce the groundwater discharge because the upland will not longer be available to recharge the water that discharges into the wetland but because it is seasonal and the wetland is also fed by surface water runoff, the hydrologic regime of the wetland will not be altered significantly. The detention vaults will discharge into the wetland via the proposed

biofiltration swale so it will continue to provide a source of water to the wetland and Lemolo Creek. If necessary, roof runoff can be conveyed from homes closest to the wetland to the buffer edge to provide an additional source of hydrology.

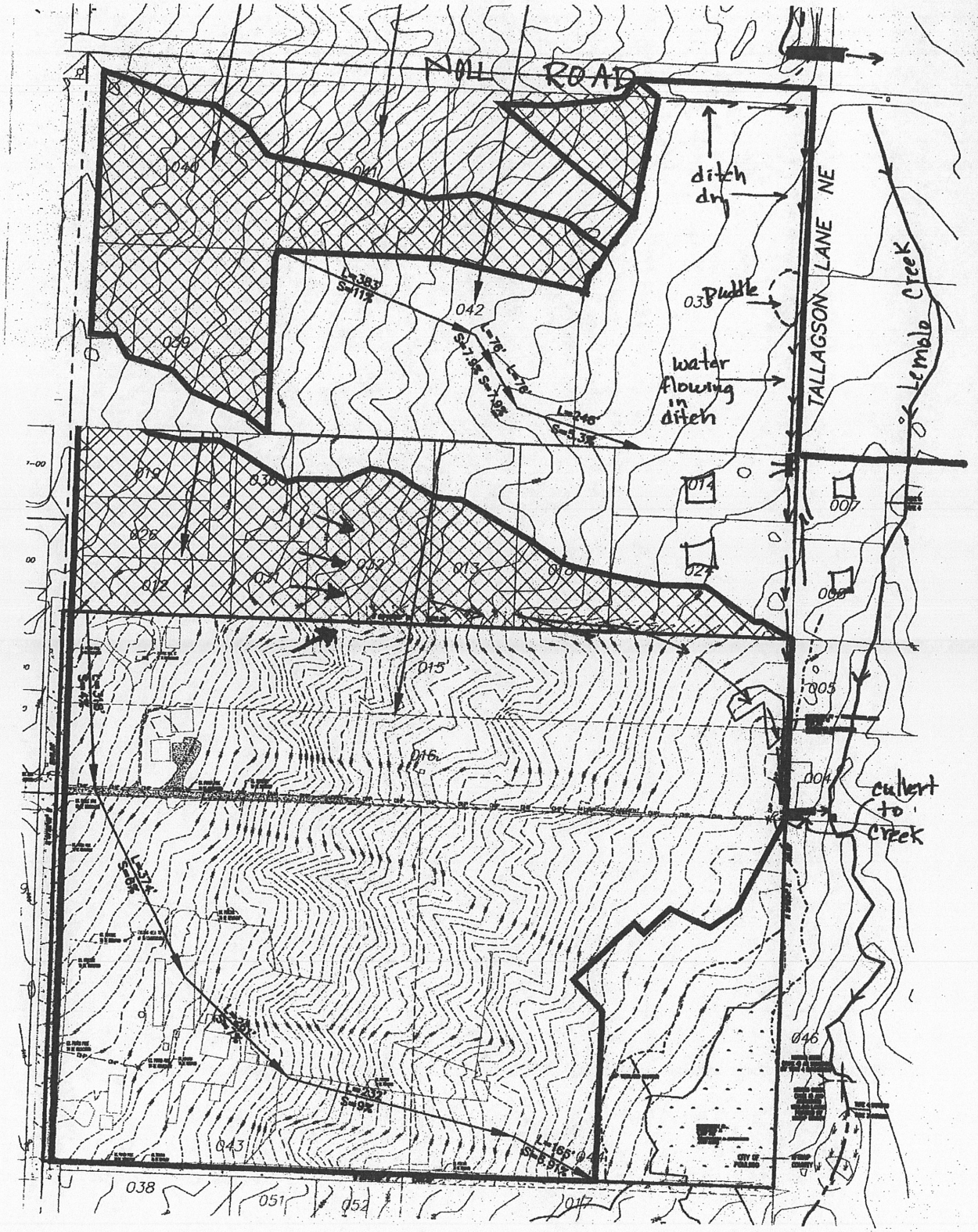
In closing, it is necessary to reiterate that the proposed storm water detention and drainage system will not alter the water flow within Lemolo Creek as the Poulsbo Meadows site and the wet swale across the north edge of the Mountain Aire site do not provide a significant source of hydrology to the stream system. Lemolo Creek is a surface water fed system that receives water from many homes and upland areas along its entire drainage basin that provides most of the water to this system. The regulated wetland at the southeast corner will not be significantly affected by the proposed detention facility because it will continue to receive the same amount of water from the detention system.

If there are any other concerns please feel free to contact me at (360) 876-2403.

Sincerely,

Joanne Bartlett
Professional Wetland Scientist

Attachments


NOLL ROAD
ditch dry
TALLAGSON LANE NE
Lemolo Creek
puddle
water flowing in ditch
culvert to creek
040
041
042
039
033
019
036
026
012
031
032
013
018
014
007
024
008
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L=383'
S=11%
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L=248'
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