

Kenny, Ann

From: Whiting, Kelly [Kelly.Whiting@METROK.COV]
Sent: Monday, July 02, 2001 2:00 PM
To: Kenny, Ann
Cc: Masters, David
Subject: Ecological Input

Ann -

I did get a chance to talk briefly with one of our lead stream ecologist. Here is a summary of some of his recommendations:

1. The proposed mitigation should be evaluated against existing stream hydrology to look for departures from the existing stream hydrograph. His concern is that the mitigations may impose biological cues that could disrupt natural biological processes. For example, a sudden rise in summer flows could imply the on set of winter conditions and corresponding biological responses (e.g., fish moving out of deep pools, etc.). If comparison of existing hydrographs and future hydrographs with proposed mitigation is provided we can look more closely at expected departures from the existing hydrology. This may imply a more gradual on-set of the low flow offset flows, or discharge through wetlands/ponds rather than straight to stream.
2. He was less concerned with mitigation under extreme drought conditions. These conditions happen less frequently and have less influence on biological processes than the more frequent (e.g., 2-year) low flow conditions. He was more concerned with sudden departures from the existing hydrographs than with fully mitigating 100-year type drought conditions.
3. He indicated that water quality (e.g., temperature, DO, pollutants) may be as critical as matching hydrology. Sudden changes in temperature, flowrates, etc. should be avoided. This may imply looking closely at how the reserved water is introduced to the stream (e.g, through ponds/wetlands, or directly to stream), to avoid sudden changes.

Based on these items, I think it is important to see what the proposed mitigation does to effect the in-stream hydrology. This would be a comparison of existing and future summer hydrographs during the period of record where future conditions can be simulated.

When the plan is received, I should be able to get additional consultation time with our ecologist as needed. Let me know if you have any questions.

---Kelly.

Kelly R. Whiting, PE
King County Department of Natural Resources
Water and Land Resource Division
Drainage Services Section
Engineering Studies and Standards
201 South Jackson Street, Suite 600
Seattle, WA 98104-3855
phone: 206.296.8327
fax: 206.296.0192
Kelly.Whiting@metrokc.gov
<http://dnr.metrokc.gov/wlr/dss>

AR 023807