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July 25, 2001

Ann E. Kenny
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

Dear Ms. Kenny:

SUBJECT: Low Streamflow Analysis, Summer Low Flow Impact Offset Facility Proposal, Seattle-Tacoma International Airport

The purpose of this letter is to provide some clarifications on my letter to you dated July 23. These clarifications are a result of the discussions that occurred yesterday on a conference call between the Port, Ecology, King County, Parametrix, Aquaterra, and Floyd Snider McCarthy. Specific items for clarification are listed below.

1. On page 4, the second sentence in paragraph 2 should read, "In areas where the embankment is proposed, recharge entering the embankment was calculated using 'flat outwash grass.'"
2. The paragraph that discusses the non-contiguous groundwater contributions to Walker Creek (paragraph starting on the bottom of page 4 and continuing on page 5) contains two errors. The new impervious area is 69 acres, not 38. The effective impervious area is 59.3 acres, not 37.2. The modeling and back up are correct and consistent with these areas.
3. The sixth to the last page in the Walker Creek package entitled "Reserve Storage Vaults for Walker Creek" includes a section called "Contributing Drainage Area." This page has been revised as follows:

<u>Subbasin</u>	<u>Vaults</u>	<u>Area</u>	<u>% Contribution</u>
SDW2	F	6.0	52
SDW2	F	3.5	30
Lined Area			
SDW2	F	2.0	18
Pond Cover			
		Total	11.5

The modeling is consistent with this table.

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4. Additional information on the Hydrus/slice modeling of the embankment is included. This information consists of a draft figure and text explaining how the slice modeling results were integrated over the fill length in each basin. This information was provided as an interim deliverable on July 9.
5. Non-hydrologic effects are described in a section that begins with a table entitled "Summary of Non-Hydrologic Impacts". Additional information regarding how the summary table was developed is provided in this section. Data for each column were determined as follows:

Number of Septic Tanks

The number of septic tanks was determined using information provided by Southwest Suburban Sewer District. Breakdown of septic tanks in each basin is determined by the surface watershed in which the parcel was located. Estimated septic tank usage was determined as described on the page entitled "Estimated Recharge Quantity". The column headings, which were inadvertently left off this page, are "Miller Creek", "Walker Creek", and "Des Moines Creek", respectively. Total recharge from septic systems (the last row on the "Estimated Recharge Quantity" page) is shown as 52,963 gallons per day (gpd) for Miller Creek and 9,201 gpd for Walker Creek, which convert to 0.082 cfs and 0.014 cfs for Miller Creek and Walker Creek, respectively.

Septic Tank Adjusted

This column refers to an adjustment of septic tank seepage that can be made in the Miller Creek basin to reflect water that is lost to deep groundwater. This seepage adjustment was incorrectly made to Walker Creek, and has been corrected in the summary table below. This correction does not change the total non-hydrologic impact in Walker Creek.

Withdrawals

The estimated water withdrawals in Miller creek are summarized in Table G-2 (attached), which was not included with the July 23rd letter. This table has been reviewed and approved as part of the SMP review.

With the modifications described above, the "Summary of Non-Hydrologic Impacts" table is corrected as follows:

Creek	Number of Septic Tanks	Septic Tank Estimated	Septic Tank Adjusted	Withdrawals ^b	Total Impact
Miller	236	-0.082	-0.057 ^a	+0.042	-0.02
Walker	41	-0.014	-0.014	N/A	-0.01

6. In the non-hydrologic impact section, references were made to spreadsheets that were submitted on the CD. The files are "MillerWaterPumpage.xls" and "SepticRecharge.xls"
7. In the final low flow report, details will be provided demonstrating the feasibility of vault construction and discharge mechanisms.

8. The model output used for 2006 in the Walker Creek basin was not included in the attachments in the July 23rd letter. This information was forwarded to Kelly Whiting on July 24th, and is included in the attached CD (filename "wwcnofill.inp" and "mnofill.inp").

I apologize for the confusion. Please contact me at 206/988-5528 if you have any questions.

Sincerely,



Keith R. Smith
Water Resources Manager

Attachments

C: Kelly Whiting, KCDNR

Table G-2. Update of Estimated Water Pumpage from Miller Creek.

Parcel	Notes	Last Name	Available Pumping Rate (gpm)	Acres	Estimated Months of Water Use Per Year	Estimated Actual Pumping Rate ⁵ (gpm)	Updated Usage Estimate (cfs)	Comments
068R	1	Genzale	2.5	4	5	0.52	0.001	4 acres, 2.5 gpm June to mid-October
185R	1	Berry	5	1	6	1.25	0.003	Less than 1 acre, summer only
244R	1	Randall	5	0.5	6	1.25	0.003	Only in summer/garden
097R	1, 6	Smith	20	0.6	4	3.33	0.007	Pump 4 months for orchard, lawn, and garden
311R	1	Rholon	5	1.7	6	1.25	0.003	Water in summer - unknown quantity
316R	1	Rouillard	0	0.25			0.000	1940-60 maximum, 1990's no water usage
050R	1	Eistminger	0				0.000	None to very little
246R	1	Galando	0	0.75			0.000	Unknown - doesn't remember dad pumping water
093R	2	Raffo	0	3.5			0.000	Table indicates no water
055R	1	Mason	0				0.000	Municipal water
060R	1	Vacca	0				0.000	Municipal water
061R	1	Vacca	0				0.000	Municipal water
143R	1	Brate	0	1			0.000	Water right not used
182R	1	Illcs	0	1			0.000	Water right not used
253R	1	Kobela	0	0.5			0.000	Water right not used
298R	1	Warner	0				0.000	Water right not used
302R	1	Lopez	0				0.000	Water right not used
062R	1	Scarsella	0	1.2			0.000	Water right not used
142R	1	Wind of the Willows Condos	0	0.75			0.000	Water right not used
214R	3	Kamp	20	1	6	5.00	0.011	Information from table G-1 only
321R	3	Beaudin	20	0.75	6	5.00	0.011	Information from table G-1 only
088R		Goodmansen					0.000	Information from table G-1 only
322R	4	Longridge	4.5		6	1.12	0.003	Information from table G-1 only
Estimated Historical Water Use						18.72	0.042	

NOTES gpm = gallons per minute cfs = cubic feet per second

1 Information from owner

2 Table G-1 indicates that Miller Creek water was not used

3 Table G-1 indicates 20 gpm; assume 6 months of water use for irrigation

4 Table G-1 indicates no information; assume minimum water right of 0.01 cfs

5 Available pumping rate x estimated months of water use per year x 0.5 (12 hours per day)

6 Available pumping rate estimated from Q (annual); Q (instantaneous) appeared to be abnormally high

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