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# King County Watershed Modeling Services – Green River Water Quality Assessment, and Sammamish- Washington, Analysis and Modeling Program Watershed Modeling Calibration Report

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In Progress



**King County**

Department of Natural Resources and Parks  
Water and Land Resources Division

**Science Section**

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# Section 4—Appendix A

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## Prepared for:



**King County**

Department of Natural Resources and Parks  
**Water and Land Resources Division**

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In conjunction with King County

Alternative formats available

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**Appendix A - WATER BALANCE**

## A.1 Little Bear Creek

	Till Forest	Till Pasture	Till Forest	Till Low Density	Till High Density	Till Commercial/	Outwash Forest	Outwash Pasture	Outwash Forest	Outwash Low Density	Outwash High Density	Outwash Commercial/	EIA
PERLND			Residential	Residential	Residential	Industrial			Residential	Residential	Residential	Industrial	
	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)	(in)
Influx													
Rainfall	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03
Runoff													
Surface	0.10	0.11	0.10	0.29	0.25	0.29	0.02	0.03	0.02	0.08	0.08	0.08	33.38
Interflow	4.85	7.01	4.82	13.15	13.03	13.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baseflow	13.05	12.83	13.08	9.44	9.56	9.45	19.16	21.91	19.16	24.73	24.73	24.73	0.00
Total	18.00	19.95	17.99	22.88	22.84	22.88	19.17	21.94	19.17	24.81	24.81	24.81	33.38
GW Inflow													
Deep	1.79	1.79	1.79	1.35	1.36	1.35	1.02	1.17	1.02	1.32	1.32	1.32	0.00
Active	13.14	13.12	13.16	9.86	9.99	9.87	19.27	22.22	19.27	25.19	25.19	25.19	0.00
Total	14.93	14.91	14.96	11.21	11.35	11.22	20.29	23.39	20.29	26.51	26.51	26.51	0.00
Evaporation													
Potential	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
Intercep St	11.54	10.69	11.54	9.54	9.54	9.54	11.54	10.69	11.54	9.54	9.54	9.54	9.65
Upper Zone	3.87	3.81	3.88	4.83	4.86	4.83	0.46	0.81	0.46	1.77	1.77	1.77	0.00
Lower Zone	7.36	6.20	7.35	3.86	3.85	3.86	10.46	8.07	10.46	5.19	5.19	5.19	0.00
Ground Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baseflow	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.00
Total	23.23	21.17	23.24	18.70	18.72	18.70	22.93	20.04	22.93	16.97	16.97	16.97	9.65
Area (ac)	2,434.47	531.23	941.64	1,666.81	545.17	45.76	1,218.46	195.99	546.36	346.59	41.04	301.26	965.03
Area (%)	24.89%	5.43%	9.63%	17.04%	5.57%	0.47%	12.46%	2.00%	5.59%	3.54%	0.42%	3.08%	9.87%
Grouped (%)	39.49%	8.62%	15.27%	27.04%	8.84%	0.74%	45.98%	7.40%	20.62%	13.08%	1.55%	11.37%	100%

<b>PERLND</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Influx								
Rainfall	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03
Runoff								
Surface	0.10	0.09	0.11	0.14	0.10	0.11	0.14	0.30
Interflow	3.87	5.28	7.03	8.63	6.15	7.81	9.57	11.44
Baseflow	13.89	12.64	11.22	10.02	13.54	12.19	10.73	9.14
Total	17.85	18.02	18.36	18.78	19.79	20.11	20.43	20.88
GW Inflow								
Deep	1.91	1.74	1.54	1.37	1.89	1.70	1.50	1.28
Active	13.99	12.72	11.28	10.06	13.84	12.47	10.98	9.38
Total	15.90	14.46	12.81	11.43	15.73	14.17	12.47	10.65
Evaporation								
Potential	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
Intercep St	11.54	11.54	11.54	11.54	10.69	10.69	10.69	10.69
Upper Zone	4.29	3.63	2.95	2.65	4.01	3.59	3.36	2.99
Lower Zone	7.02	7.57	8.08	8.23	6.11	6.33	6.41	6.54
Ground Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baseflow	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Total	23.32	23.21	23.04	22.89	21.27	21.07	20.92	20.69
Area (ac)	1,304.13	760.62	274.22	95.50	326.47	149.17	43.53	12.06
Area (%)	13.33%	7.78%	2.80%	0.98%	3.34%	1.53%	0.45%	0.12%

<b>PERLND</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Influx								
Rainfall	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03
Runoff								
Surface	0.10	0.09	0.11	0.14	0.11	0.28	0.74	2.24
Interflow	3.87	5.28	7.03	8.63	11.87	14.22	15.44	15.72
Baseflow	13.89	12.64	11.22	10.02	10.55	8.61	7.40	6.11
Total	17.85	18.02	18.36	18.78	22.53	23.11	23.58	24.08
GW Inflow								
Deep	1.91	1.74	1.54	1.37	1.50	1.23	1.06	0.89
Active	13.99	12.72	11.28	10.06	10.98	9.04	7.81	6.49
Total	15.90	14.46	12.81	11.43	12.48	10.27	8.87	7.38
Evaporation								
Potential	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
Intercep St	11.54	11.54	11.54	11.54	9.54	9.54	9.54	9.54
Upper Zone	4.29	3.63	2.95	2.65	5.14	4.63	4.18	3.72
Lower Zone	7.02	7.57	8.08	8.23	3.76	3.93	4.07	4.20
Ground Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baseflow	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Total	23.32	23.21	23.04	22.89	18.91	18.57	18.27	17.94
Area (ac)	491.13	327.55	97.54	25.43	873.79	578.90	169.95	44.17
Area (%)	5.02%	3.35%	1.00%	0.26%	8.93%	5.92%	1.74%	0.45%

<b>PERLND</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Influx								
Rainfall	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03
Runoff								
Surface	0.11	0.28	0.74	2.23	0.12	0.28	0.73	2.22
Interflow	11.87	14.22	15.44	15.74	11.87	14.22	15.44	15.74
Baseflow	10.55	8.61	7.40	6.11	10.55	8.61	7.40	6.11
Total	22.53	23.12	23.58	24.08	22.53	23.11	23.58	24.08
GW Inflow								
Deep	1.50	1.23	1.06	0.89	1.50	1.23	1.06	0.89
Active	10.98	9.04	7.81	6.50	10.98	9.04	7.81	6.50
Total	12.48	10.27	8.87	7.38	12.48	10.27	8.87	7.38
Evaporation								
Potential	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
Intercep St	9.54	9.54	9.54	9.54	9.54	9.54	9.54	9.54
Upper Zone	5.14	4.63	4.18	3.72	5.14	4.63	4.18	3.72
Lower Zone	3.76	3.93	4.07	4.20	3.76	3.93	4.07	4.20
Ground Water	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Baseflow	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Total	18.91	18.57	18.27	17.94	18.91	18.57	18.27	17.94
Area (ac)	307.77	180.12	50.09	7.18	24.06	16.23	4.14	1.33



<b>PERLND</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Area (%)	3.15%	1.84%	0.51%	0.07%	0.25%	0.17%	0.04%	0.01%

<b>PERLND</b>	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Influx										
Rainfall	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03	43.03
Runoff										
Surface	0.02	0.03	0.02	0.08	0.08	0.08	33.38	33.38	33.38	33.38
Interflow	0.00	0.00	0.00	0.00	0.00	0.00				
Baseflow	19.16	21.91	19.16	24.73	24.73	24.73				
Total	19.17	21.94	19.17	24.81	24.81	24.81	33.38	33.38	33.38	33.38
GW Inflow										
Deep	1.02	1.17	1.02	1.32	1.32	1.32				
Active	19.27	22.22	19.27	25.19	25.19	25.19				
Total	20.29	23.39	20.29	26.51	26.51	26.51				
Evaporation										
Potential	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65	23.65
Intercep St	11.54	10.69	11.54	9.54	9.54	9.54	9.65	9.65	9.65	9.65
Upper Zone	0.46	0.81	0.46	1.77	1.77	1.77				
Lower Zone	10.46	8.07	10.46	5.19	5.19	5.19				
Ground	0.00	0.00	0.00	0.00	0.00	0.00				

<b>PERLND</b>	<b>71</b>	<b>72</b>	<b>73</b>	<b>74</b>	<b>75</b>	<b>76</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>
	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>	<b>(in)</b>
Water										
Baseflow	0.47	0.47	0.47	0.47	0.47	0.47				
Total	22.93	20.04	22.93	16.97	16.97	16.97	9.65	9.65	9.65	9.65
Area (ac)	1,218.46	195.99	546.36	346.59	41.04	301.26	177.56	482.58	143.93	160.97
Area (%)	12.46%	2.00%	5.59%	3.54%	0.42%	3.08%	1.82%	4.93%	1.47%	1.65%