

Table 12.--Distributed average dissolved-oxygen deficits, by subreach, for simulations that include projected changes in CBOD5 and ammonia nitrogen

concentrations from the Fayetteville wastewater-treatment plant

[Deficits in milligrams per liter]

Flow and temperature conditions	Sub-reach no.	CBOD5=30 mg/L Ammonia=No change					CBOD5=20 mg/L Ammonia=10 mg/L					CBOD5=10 mg/L Ammonia=10 mg/L					CBOD5=10 mg/L Ammonia= 5 mg/L					CBOD5=10 mg/L Ammonia= 3 mg/L					CBOD5=5 mg/L Ammonia=2 mg/L				
		Ben-thal deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net photo-syn-thetic deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net photo-syn-thetic deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net phot-syn-thetic deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net photo-syn-thetic deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net photo-syn-thetic deficit	CBOD deficit	Ammonia deficit	Ni-trite deficit	Net photo-syn-thetic deficit					
Initial river discharge =	1	4.443	0.134	0.041	0.014	-1.617	0.134	0.041	0.014	-1.617	0.134	0.041	0.014	-1.617	0.134	0.041	0.014	-1.617	0.134	0.041	0.014	-1.617	0.134	0.041	0.014	-1.617					
7-day 10-year low flow.	2	.539	.140	.004	.001	-.470	.140	.004	.001	-.470	.140	.004	.001	-.470	.140	.004	.001	-.470	.140	.004	.001	-.470	.140	.004	.001	-.470					
	3	.510	.318	.036	.005	-.112	.215	.085	.006	-.112	.110	.085	.006	-.112	.110	.042	.005	-.112	.110	.025	.004	-.112	.060	.017	.004	-.112					
	4	.384	.422	.125	.039	-.194	.285	.191	.063	-.195	.148	.191	.063	-.195	.148	.096	.035	-.194	.148	.057	.023	-.195	.080	.038	.018	-.195					
	5	.369	.343	.155	.060	-.418	.233	.154	.064	-.418	.121	.154	.064	-.418	.121	.077	.032	-.417	.121	.046	.019	-.418	.065	.031	.013	-.418					
	6	.397	.220	.072	.026	-.658	.148	.037	.015	-.568	.077	.037	.015	-.568	.077	.021	.007	-.520	.077	.011	.005	-.508	.040	.008	.003	-.455					
Water temperature = 29° C.	7	.198	.160	.068	.016	-.466	.110	.019	.006	-.333	.060	.219	.006	-.280	.060	.018	.003	-.268	.060	.006	.002	-.263	.030	.004	.001	-.234					
	8	.572	.840	.378	.114	-1.905	.570	.064	.026	-1.230	.295	.064	.026	-.958	.295	.032	.012	-.913	.295	.020	.008	-.896	.165	.013	.006	-.751					
	9	.220	.110	.040	.006	-.357	.080	.005	.001	-.301	.040	.005	.001	-.265	.040	.002	.000	-.262	.040	.001	.000	-.261	.020	.001	.000	-.243					
	10	.475	.288	.344	.110	-.982	.202	.010	.004	-.691	.105	.010	.004	-.595	.105	.006	.002	-.588	.105	.003	.001	-.585	.058	.002	.001	-.536					
Initial river discharge =	1	3.047	.113	.035	.011	-.964	.113	.035	.011	-.964	.113	.035	.011	-.964	.113	.035	.011	-.964	.113	.035	.011	-.964	.113	.035	.011	-.964					
7-day 10-year low flow	2	.380	.131	.011	.003	-.288	.120	.011	.003	-.288	.131	.011	.003	-.288	.131	.011	.003	-.288	.131	.011	.003	-.288	.131	.011	.003	-.288					
	3	.294	.220	.016	.002	-.056	.150	.039	.002	-.056	.080	.039	.002	-.056	.080	.020	.002	-.056	.080	.012	.002	-.056	.040	.008	.002	-.056					
	4	.216	.300	.046	.014	-.095	.204	.089	.024	-.095	.106	.089	.024	-.095	.106	.045	.015	-.095	.106	.027	.011	-.095	.060	.018	.010	-.095					
	5	.207	.262	.074	.026	-.204	.178	.113	.043	-.204	.090	.113	.043	-.204	.090	.056	.022	-.204	.090	.034	.014	-.204	.050	.023	.010	-.204					
	6	.224	.181	.064	.021	-.323	.123	.078	.028	-.323	.064	.078	.028	-.323	.064	.039	.014	-.323	.064	.024	.008	-.322	.036	.016	.006	-.296					
Water temperature = 19° C.	7	.108	.132	.068	.014	-.374	.090	.072	.017	-.374	.050	.072	.017	-.325	.050	.036	.008	-.224	.050	.022	.005	-.182	.030	.014	.004	-.152					
	8	.316	.725	.324	.097	-1.693	.490	.286	.100	-1.287	.255	.286	.100	-.962	.255	.143	.050	-.768	.255	.086	.030	-.692	.140	.058	.020	-.536					
	9	.121	.100	.030	.005	-.170	.070	.023	.024	-.170	.030	.023	.004	-.170	.030	.012	.002	-.169	.030	.007	.001	-.164	.020	.005	.001	-.145					
	10	.264	.300	.284	.080	-.473	.206	.078	.027	-.473	.109	.087	.027	-.461	.109	.039	.014	-.425	.109	.023	.008	-.393	.060	.016	.005	-.344					