

CURRENT STANDARD - NO BMPS South Kingstown SWAP

		Study Area Land Use Indicators						Riparian Indicators					Estimated Nutrient Loadin			
Study Area	Scenario	Acres	% Sewer	% High Intensity Land Use	% Impervious	% Forest	% Wetland	% Forest & wetland	RIP % HILU	RIP%Impervious	RIP % Forest	RIP % Wetland	RIP % Forest and Wetland	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr

Factory Pond Use	Current Land Use	951	0%	11%	7%	57%	6%	63%	16%	3%	41%	25%	66%	2.1	8.2	3.2
South Kingstown Aquifer (Q)	Current Land Use	7185	10%	25%	8%	32%	18%	50%	10%	5%	28%	46%	74%	4.2	13.9	5.2
South Kingstown Aquifer	Current Land Use	7185	10%	25%	8%	32%	18%	50%	10%	4%	29%	45%	74%	4.2	13.9	5.2
United Water WHPA	Current Land Use	1906	0%	14%	3%	39%	25%	63%	1%	1%	27%	67%	95%	2.9	12.0	3.7
URI/Kingston WHPA	Current Land Use	656	75%	66%	29%	11%	6%	18%	40%	20%	23%	32%	56%	5.4	10.7	7.4

FUTURE STANDARD - NO BMPS

		Study Area Land Use Indicators						Riparian Indicators					Estimated Nutrient Loadin			
Study Area	Scenario	Acres	% Sewer	% High Intensity Land Use	% Impervious	% Forest	% Wetland	% Forest & wetland	RIP % HILU	RIP%Impervious	RIP % Forest	RIP % Wetland	RIP % Forest and Wetland	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr

Factory Pond Use	Future Land Use	945	0%	8%	10%	32%	6%	38%	15%	4%	37%	25%	63%	2.0	7.5	2.9
South Kingstown Aquifer	Future Land Use	7185	11%	22%	10%	24%	18%	42%	10%	5%	26%	45%	72%	3.7	12.0	4.8
United Water WHPA	Future Land Use	1906	0%	11%	5%	29%	25%	53%	1%	1%	27%	67%	94%	2.6	10.7	3.2
URI/Kingston WHPA	Future Land Use	656	75%	65%	30%	10%	6%	16%	40%	20%	23%	32%	55%	5.2	9.9	7.2

CURRENT STANDARD - g Estimated Nitrate-N sources to grw recharge **SOILS** hydrologic groups

Study Area	Scenario	Total N to study area lbs/ac/yr	% N in SW runoff from Atm.	P to SW lbs/ac/yr	Septic Systems	Lawn Fert.	Agri. Fert	Pet Waste	Other	% A	% B	% C	% D	%SHWT <1.5-3.5'	%SHWT 1.5'-3.5'	%Restr.C, .2"/hr	% Erode
Factory Pond South	Current Land Use	11.5	11.9%	0.5	29%	8%	52%	2%	9%	74%	20%	0%	6%	6.2%	1%	0%	57%
Kingstown Aquifer (Q) South	Current Land Use	19.1	6.9%	0.7	15%	6%	76%	1%	3%	15%	63%	8%	15%	27.5%	8%	1%	24%
Kingstown Aquifer	Current Land Use	19.1	6.9%	0.7	15%	6%	76%	1%	3%	15%	63%	8%	15%	27.5%	8%	1%	24%
United Water WHPA	Current Land Use	15.7	2.0%	0.4	21%	4%	69%	1%	5%	14%	56%	4%	26%	32.7%	3%	1%	36%
URI/Kingston WHPA	Current Land Use	18.0	0.5%	1.8	12%	16%	69%	1%	2%	9%	77%	7%	7%	16.0%	9%	0%	31%

FUTURE STANDARD - h Estimated Nitrate-N sources to grw recharge **SOILS** hydrologic groups

Study Area	Scenario	Total N to study area lbs/ac/yr	% N in SW runoff from Atm.	P to SW lbs/ac/yr	Septic Systems	Lawn Fert.	Agri. Fert	Pet Waste	Other	% A	% B	% C	% D	%SHWT <1.5-3.5'	%SHWT 1.5'-3.5'	%Restr.C, .2"/hr	% Erode
Factory Pond South	Future Land Use	10.4	13.2%	0.6	44%	16%	30%	3%	6%	74%	21%	0%	6%	6.3%	1%	0%	56%
Kingstown Aquifer	Future Land Use	16.8	7.5%	0.8	21%	9%	66%	1%	3%	15%	63%	8%	15%	27.5%	8%	1%	24%
United Water WHPA	Future Land Use	13.9	2.3%	0.5	30%	8%	56%	2%	4%	14%	56%	4%	26%	32.7%	3%	1%	36%
URI/Kingston WHPA	Future Land Use	17.2	0.5%	1.8	13%	18%	65%	1%	2%	9%	77%	7%	7%	16.0%	9%	0%	31%

CURRENT STANDARD -

	SWAP	Estimated Water Budget / Runoff / Recharge																		
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Study Area	Scenario	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre	Precip Inches	ET Inches	Avail. Precip Inches	SW runoff Inches	Net recharge Precip. Inches	ISDS recharge Inches	SW runoff % avail.	GW recharge % avail	Precip Mgalyr	ET Mgalyr	Avail. Precip Mgalyr	surface runoff Mgalyr	Avg.net recharge precip. Mgalyr	ISDS recharge Mgalyr	If 100% forested surface runoff Mgalyr	Lost recharge from 100% forested Mgalyr	
	Current Land																					
Factory Pond	Use	2%	1%	150	0.16	44	21	23	6.1	16.9	0.3	27%	73%	1136	542	594	158	436	7	68	90	
South Kingstown Aquifer (Q)	Current Land Use	2%	2%	962	0.13	44	21	23	8.5	14.5	0.2	37%	63%	8584	4097	4487	1,666	2,822	42	716	950	
South Kingstown Aquifer	Current Land Use	2%	2%	962	0.13	44	21	23	8.5	14.5	0.2	37%	63%	8584	4097	4487	1,666	2,822	42	716	950	
United Water WHPA	Current Land Use	1%	10%	261	0.14	44	21	23	5.0	18.0	0.3	22%	78%	2278	1087	1191	257	933	14	128	129	
URI/Kingston WHPA	Current Land Use	3%	2%	55	0.08	44	21	23	14.4	8.6	0.1	63%	37%	784	374	410	257	152	2	32	225	

FUTURE STANDARD -

	SWAP	Estimated Water Budget / Runoff / Recharge																		
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Study Area	Scenario	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre	Precip Inches	ET Inches	Avail. Precip Inches	SW runoff Inches	Net recharge Precip. Inches	ISDS recharge Inches	SW runoff % avail.	GW recharge % avail	Precip Mgalyr	ET Mgalyr	Avail. Precip Mgalyr	surface runoff Mgalyr	Avg.net recharge precip. Mgalyr	ISDS recharge Mgalyr	If 100% forested surface runoff Mgalyr	Lost recharge from 100% forested Mgalyr	
	Future Land																					
Factory Pond	Use	2%	5%	206	0.22	44	21	23	7.1	15.9	0.4	31%	69%	1128	539	590	182	408	9	68	114	
South Kingstown Aquifer	Future Land Use	2%	2%	1,204	0.17	44	21	23	8.9	14.1	0.3	39%	61%	8584	4097	4487	1,746	2,742	53	716	1,030	
United Water WHPA	Future Land Use	1%	11%	337	0.18	44	21	23	5.3	17.7	0.3	23%	77%	2278	1087	1191	274	916	18	128	147	
URI/Kingston WHPA	Future Land Use	3%	3%	57	0.09	44	21	23	14.6	8.4	0.1	64%	36%	784	374	410	261	149	3	32	228	

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Study Area Land Use Indicators Riparian Indicators Estimated Nutrient Loadin

Study Area	Scenario	acres	% sewer	% High Intensity Land Use	% Impervious	% Forest	% Wetland	% Forest & wetland	RIP % HILU	RIP% Impervious	RIP % Forest	RIP % Wetland	RIP % Forest and Wetland	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr
Factory Pond	Future Land Use Denit All	945	0%	8%		32%	6%	38%	15%	-22%	37%	25%	63%	1.6	6.0	2.9
Factory Pond	Future Land Use New Denit 46	945	0%	8%		32%	6%	38%	15%	-2%	37%	25%	63%	1.9	7.1	2.9
KW / URI WHPA	Current Land Use Imperv Reduction	656	57%	66%		11%	6%	18%	59%		25%	14%	40%	5.8	13.9	6.7
KW / URI WHPA	Current Land Use Scenarios Imperv	658	57%	67%		11%	6%	18%	59%		25%	14%	40%	5.6	13.4	6.7
KW / URI WHPA	Current Land Use Scenarios2 imperv reduction	656	57%	70%		11%	6%	18%	59%		25%	14%	40%	5.9	13.5	6.8
KW / URI WHPA	Current Land Use With Scenarios2	656	57%	70%		11%	6%	18%	59%		25%	14%	40%	7.0	13.4	7.5
KW / URI WHPA	Current Land Use With Scenarios	658	57%	67%		11%	6%	18%	59%		25%	14%	40%	6.6	13.3	7.3
KW / URI WHPA	Future Land Use Impervious Reduction	656	57%	65%		10%	6%	16%	60%		25%	14%	39%	5.5	13.0	6.5

BMPS

g Estimated Nitrate-N sources to grw. recharge **SOILS** hydrologic groups

Study Area	Scenario	Total N to study area lbs/ac/yr	% N in SW runoff from Atm.	P to SW lbs/ac/yr	Septic Systems	Lawn Fert.	Agri. Fert	Pet Waste	Other	% A	% B	% C	% D	% HWT <1.5-3.5'	% HWT 1.5'-3.5'	%Restr.C <.2"/hr	%Erode
Factory Pond	Future Land Use Denit All	8.9	13.2%	0.6	31%	21%	38%	4%	8%	74%	21%	0%	6%	6.3%	1%	0%	56%
Factory Pond	Future Land Use New Denit 46	10.1	13.2%	0.6	42%	17%	32%	3%	6%	74%	21%	0%	6%	6.3%	1%	0%	56%
KW / URI WHPA	Current Land Use Imperv Reduction	20.6	0.5%	1.6	31%	12%	53%	2%	2%	9%	77%	7%	7%	16.0%	9%	1%	31%
KW / URI WHPA	Current Land Use Scenarios Imperv	20.1	0.5%	1.6	32%	13%	52%	2%	3%	9%	77%	7%	7%	16.0%	9%	1%	31%
KW / URI WHPA	Current Land Use Scenarios2 imperv reduction	20.3	0.5%	1.6	32%	13%	51%	2%	2%	9%	76%	7%	7%	16.0%	9%	1%	31%
KW / URI WHPA	Current Land Use With Scenarios2	20.9	0.5%	1.8	32%	13%	52%	2%	2%	9%	76%	7%	7%	16.0%	9%	1%	31%
KW / URI WHPA	Current Land Use With Scenarios	20.6	0.5%	1.8	32%	13%	52%	2%	2%	9%	77%	7%	7%	16.0%	9%	1%	31%
KW / URI WHPA	Future Land Use Impervious Reduction	19.5	0.5%	1.6	34%	14%	48%	2%	3%	9%	77%	7%	7%	16.0%	9%	1%	31%

BMPS

SWAP

Estimated Water Budget / Runoff / Recharge

Study Area	Scenario	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre	Precip Inches	ET Inches	Avail. Precip Inches	SW runoff Inches	Avg.net recharge precip. Inches	Avg. net ISDS recharge Inches	SW runoff % avail.	GW recharge % avail	Precip Mgal/yr	ET Mgal/yr	Avail. Precip Mgal/yr	surface runoff Mgal/yr	Avg.net recharge precip. Mgal/yr	ISDS recharge Mgal/yr	If 100% forested surface runoff Mgal/yr	Lost recharge from 100% forested Mgal/yr
Factory Pond	Future Land Use Denit All	2%	0%	206	0.22	44	21	23	7.1	15.9	0.4	31%	69%	1128	539	590	182	408	9	68	114
Factory Pond	Future Land Use New Denit 46	2%	0%	206	0.22	44	21	23	7.1	15.9	0.4	31%	69%	1128	539	590	182	408	9	68	114
KW / URI WHPA	Current Land Use Imperv Reduction	3%	0%	185	0.28	44	21	23	12.9	10.1	0.5	56%	44%	784	374	410	230	180	8	32	198
KW / URI WHPA	Current Land Use Scenarios Imperv	3%	0%	185	0.28	44	21	23	13.0	10.0	0.5	56%	44%	786	375	411	232	179	8	32	199
KW / URI WHPA	Current Land Use Scenarios2 imperv reduction	4%	0%	185	0.28	44	21	23	13.3	9.7	0.5	58%	42%	784	374	410	238	172	8	32	205
KW / URI WHPA	Current Land Use With Scenarios2	4%	0%	185	0.28	44	21	23	15.0	8.0	0.5	65%	35%	784	374	410	267	142	8	32	235
KW / URI WHPA	Current Land Use With Scenarios	3%	0%	185	0.28	44	21	23	14.5	8.5	0.5	63%	37%	786	375	411	260	151	8	32	227
KW / URI WHPA	Future Land Use Impervious Reduction	3%	0%	189	0.29	44	21	23	13.1	9.9	0.5	57%	43%	784	374	410	233	177	8	32	200