

CURRENT STANDARD - NO BMPS North Kingstown /Kent SWAP

Study Area Land Use Indicators

Riparian Indicators

Study Area	Scenario	Acres	% Sewer	% High Intensity Land Use	% Im-pervious	% Forest	% Wetland	% Forest & wetland	RIP % HILU	RIP %Im-pervious	RIP % Forest	RIP % Wetland	RIP % Forest and Wetland
Mish_whpa_Current	Land Use	302	0%	21%	18%	44%	23%	68%	25%	18%	29%	45%	74%
Hunt_Mishnock Reservoir	Current Land Use	1647	4%	33%	23%	21%	21%	42%	14%	11%	22%	50%	71%
NK5_Current	Current Land Use	2210	0%	27%	7%	26%	12%	39%	7%	3%	36%	46%	82%
NK6_Current	Current Land Use	316	0%	31%	24%	22%	21%	42%	14%	11%	34%	46%	79%
NKlower_Current	Current Land Use	149	0%	3%	2%	45%	14%	59%	0%	0%	48%	50%	98%
NKProposed_Current	Current Land Use	243	0%	22%	15%	33%	33%	66%	5%	3%	13%	66%	78%
SpringLake_Current	Current Land Use	406	0%	36%	24%	32%	8%	40%	13%	8%	43%	31%	73%
EDC_Current	Current Land Use	946	13%	38%	29%	17%	16%	33%	18%	15%	16%	43%	59%

CURRENT STANDARD

Estimated Nutrient Loading

Estimated Nitrate-N sources to grw recharge

Study Area	Scenario	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr	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
Mish_whpa_Current	Land Use	4.3	18.1	3.1	21.2	0.2%	0.7	88%	3%	0%	5%	3%
Hunt_Current	Land Use	4.3	15.8	3.1	18.9	4.4%	0.8	84%	7%	2%	5%	2%
Mishnock Reservoir Current	Land Use	6.9	20.2	4.0	24.2	25.6%	0.9	85%	5%	4%	5%	1%
NK5_Current	Land Use	4.5	18.5	5.8	24.3	1.6%	0.7	18%	3%	76%	1%	2%
NK6_Current	Land Use	4.9	18.2	3.7	21.9	0.0%	0.9	79%	8%	6%	5%	2%
NKlower_Current	Land Use	0.4	0.7	3.6	4.3	78.4%	0.2	11%	7%	0%	1%	82%
NKProposed_Current	Land Use	1.0	3.7	2.5	6.2	9.2%	0.5	78%	7%	0%	5%	11%
SpringLake_Current	Land Use	5.1	20.0	3.3	23.3	6.2%	0.9	86%	6%	0%	5%	3%
EDC_Current	Land Use	4.3	14.3	3.1	17.4	3.6%	0.9	81%	9%	2%	6%	2%

CURRENT STANDARD

SOILS hydrologic groups

SWAP

Study Area	Scenario	% A	% B	% C	% D	%SHWT <1.5-3.5'	%SHWT 1.5'-3.5'	%Restr.C, .2"/hr	% Erode	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre
Mish_whpa_C urrent	Current Land Use	20%	68%	1%	10%	34.2%	23%	1%	59%	10%	4%	319	1.06
Hunt_Current Mishnock Reservoir Current	Current Land Use	62%	14%	2%	22%	25.4%	3%	0%	12%	21%	1%	1,442	0.88
NK5_Current	Current Land Use	29%	53%	6%	11%	22.7%	8%	3%	19%	1%	1%	476	0.22
NK6_Current	Current Land Use	55%	16%	6%	22%	31.4%	4%	1%	10%	22%	3%	301	0.95
NKlower_Curr ent	Current Land Use	55%	17%	0%	28%	16.7%	6%	0%	11%	0%	0%	1	0.00
NKProposed _Current	Current Land Use	47%	16%	0%	37%	33.5%	0%	0%	7%	3%	1%	46	0.19
SpringLake_ Current	Current Land Use	74%	15%	8%	4%	12.9%	3%	1%	29%	33%	1%	463	1.14
EDC_Current	Current Land Use	72%	13%	4%	11%	16.3%	4%	1%	15%	22%	1%	727	0.77

CURRENT STANDARD

Estimated Water Budget / Runoff / Recharge

Study Area	Scenario	Precip Inches	ET Inches	Avail. Precip Inches	SW runoff Inches	Net recharge Precip. Inches	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
Mish_whpa_C urrent	Current Land Use	43	18	25	7.9	17.1	1.7	32%	68%	352	147	205	65	140	14	12	53
Hunt_Current Mishnock Reservoir Current	Current Land Use	43	18	25	10.2	14.8	1.4	41%	59%	1923	805	1118	454	664	63	85	369
NK5_Current	Current Land Use	43	18	25	7.3	17.7	0.3	29%	71%	2580	1080	1500	437	1,063	21	116	321
NK6_Current	Current Land Use	43	18	25	10.1	14.9	1.5	40%	60%	369	155	215	87	128	13	12	75
NKlower_Curr ent	Current Land Use	43	18	25	16.9	8.1	0.0	67%	33%	173	73	101	68	33	0	64	4
NKProposed _Current	Current Land Use	43	18	25	9.3	15.7	0.3	37%	63%	284	119	165	62	104	2	19	42
SpringLake_ Current	Current Land Use	43	18	25	9.6	15.4	1.8	39%	61%	474	199	276	106	169	20	18	88
EDC_Current	Current Land Use	43	18	25	11.5	13.5	1.2	46%	54%	1105	463	642	296	346	32	35	261

FUTURE STANDARD - NO BMPS

		Study Area Land Use Indicators							Riparian Indicators				
Study Area	Scenario	Acres	% Sewer	% High Intensity Land Use	% Im-pervious	% Forest	% Wetland	% Forest & wetland	RIP % HILU	RIP%Im-pervious	RIP % Forest	RIP % Wetland	RIP % Forest and Wetland
Mishnock WHPA	Future Land Use	301	0%	32%	25%	36%	23%	60%	26%	18%	28%	45%	74%
Hunt Reservoir	Future Land Use	1654	4%	35%	27%	14%	21%	35%	15%	11%	18%	50%	71%
Mishnock Reservoir Buildout	Future Land Use	3928	0%	32%	22%	12%	24%	36%	20%	10%	17%	42%	63%
Nk Wells 1, 2, 4 & 5	Future Land Use	2229	0%	16%	17%	18%	12%	31%	4%	3%	34%	46%	82%
Nk Well #6	Future Land Use	316	0%	31%	26%	17%	21%	38%	15%	11%	32%	46%	79%
Nk Wells 3, 7 & 8	Future Land Use	149	0%	3%	6%	1%	14%	16%	0%	0%	7%	51%	98%
NK Proposed Well Site	Future Land Use	243	0%	22%	20%	17%	33%	50%	5%	3%	13%	66%	78%
Spring Lake	Future Land Use	412	0%	41%	34%	7%	8%	15%	13%	8%	25%	31%	73%
EDC	Future Land Use	946	12%	41%	33%	10%	16%	26%	18%	15%	14%	43%	59%

FUTURE STANDARD - |

Estimated Nutrient Loading

Estimated Nitrate-N sources to grw recharge

Study Area	Scenario	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr	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
Mishnock WHPA	Future Land Use	5.5	20.5	3.5	24.0	0.2%	0.8	90%	3%	0%	5%	2%
Hunt Reservoir	Future Land Use	5.4	18.7	3.4	22.0	4.1%	0.9	86%	7%	0%	5%	1%
Mishnock Reservoir Buildout	Future Land Use	8.0	22.6	4.0	26.6	25.2%	0.9	88%	5%	0%	5%	1%
Nk Wells 1, 2, 4 & 5	Future Land Use	2.3	9.0	2.8	11.8	3.4%	0.7	74%	15%	5%	3%	3%
Nk Well #6	Future Land Use	5.5	19.9	3.9	23.8	0.0%	1.0	85%	8%	0%	5%	1%
Nk Wells 3, 7 & 8	Future Land Use	2.0	2.9	4.0	6.9	71.6%	0.4	58%	37%	0%	3%	2%
NK Proposed Well Site	Future Land Use	2.2	7.2	3.0	10.2	7.6%	0.7	80%	12%	0%	5%	3%
Spring Lake	Future Land Use	8.3	27.4	0.0	27.4	3.2%	1.7	86%	8%	0%	5%	1%
EDC	Future Land Use	5.3	16.6	3.4	19.9	3.4%	1.0	85%	9%	0%	4%	1%

FUTURE STANDARD - |

SOILS hydrologic groups

SWAP

Study Area	Scenario	% A	% B	% C	% D	%SHWT <1.5-3.5'	%SHWT 1.5'-3.5'	%Restr.C, .2"/hr	% Erode	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre
Mishnock WHPA	Future Land Use	20%	68%	1%	10%	34.3%	23%	1%	59%	12%	0%	353	1.17
Hunt Reservoir	Future Land Use	62%	13%	2%	22%	25.3%	3%	0%	12%	22%	0%	1,690	1.02
Mishnock Reservoir Buildout	Future Land Use	49%	27%	3%	20%	29.8%	11%	0%	28%	17%	0%	4,983	1.27
Nk Wells 1, 2, 4 & 5	Future Land Use	29%	53%	6%	11%	22.5%	8%	3%	19%	5%	0%	943	0.42
Nk Well #6	Future Land Use	55%	16%	6%	22%	31.4%	4%	1%	10%	21%	0%	340	1.07
Nk Wells 3, 7 & 8	Future Land Use	54%	17%	0%	29%	16.6%	6%	0%	11%	0%	0%	16	0.11
NK Proposed Well Site	Future Land Use	47%	16%	0%	37%	33.5%	0%	0%	7%	3%	0%	88	0.36
Spring Lake	Future Land Use	74%	15%	7%	3%	12.7%	3%	1%	29%	39%	0%	619	1.50
EDC	Future Land Use	71%	14%	4%	11%	16.3%	4%	1%	15%	23%	0%	849	0.90

FUTURE STANDARD - I

Estimated Water Budget / Runoff / Recharge

Study Area	Scenario	Precip Inches	ET Inches	Avail. Precip Inches	SW runoff Inches	Net recharge Precip. Inches	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
Mishnock WHPA	Future Land Use	43	18	25	10.4	14.6	2.0	41%	59%	351	147	204	85	120	16	12	73
Hunt Reservoir	Future Land Use	43	18	25	11.4	13.6	1.7	46%	54%	1931	808	1123	513	610	77	85	428
Mishnock Reservoir Buildout	Future Land Use	43	18	25	14.7	10.3	2.1	59%	41%	4586	1920	2666	1,565	1,101	227	711	854
Nk Wells 1, 2, 4 & 5	Future Land Use	43	18	25	8.4	16.6	0.7	34%	66%	2602	1089	1513	510	1,003	43	116	394
Nk Well #6	Future Land Use	43	18	25	10.7	14.3	1.8	43%	57%	369	155	215	92	122	16	12	80
Nk Wells 3, 7 & 8	Future Land Use	43	18	25	18.7	6.3	0.2	75%	25%	173	73	101	76	25	1	65	11
NK Proposed Well Site	Future Land Use	43	18	25	10.9	14.1	0.6	44%	56%	284	119	165	72	93	4	19	53
Spring Lake	Future Land Use	43	18	25	13.0	12.0	2.5	52%	48%	481	202	280	146	134	28	18	127
EDC	Future Land Use	43	18	25	12.7	12.3	1.5	51%	49%	1105	462	642	327	315	39	35	291

BMPS

Study Area Land Use Indicators

Riparian Indicators

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
Mishnock Reservoir Buildout	Future Land Use Denit New	3928	0%	32%		12%	24%	36%	20%	9%	17%	42%	59%
Mishnock WHPA	Future Land Use Denit New	310	3%	31%		35%	23%	58%	26%		28%	45%	73%
EDC	Future Land Use Denit	946	12%	41%		10%	16%	26%	18%		14%	43%	56%
EDC	Future Land Use Denit HILU	946	12%	41%		10%	16%	26%	18%	10%	14%	43%	56%
EDC	Future Land Use Denit Nonres HILU	946	12%	41%		10%	16%	26%	18%		14%	43%	56%
Spring Lake	Future Land Use Denit HILU	412	0%	41%		7%	8%	15%	13%	-3%	25%	31%	56%
Spring Lake	Future Land Use Denit Nonres HILU	412	0%	41%		7%	8%	15%	13%		25%	31%	56%
Spring Lake	Future Land Use Denit New	412	0%	41%		7%	8%	15%	13%	-3%	25%	31%	56%

BMPS

Estimated Nutrient Loading

Estimated Nitrate-N sources to grw. recharge

Study Area	Scenario	NO3N in GW Recharge mg/l	NO3N to GW recharge lbs/ac/yr	N SW runoff lbs/ac/yr	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
Mishnock Reservoir Buildout	Future Land Use Denit New	7.9	22.1	4.0	26.2	25.2%	0.9	88%	5%	0%	5%	1%
Mishnock WHPA	Future Land Use Denit New	5.1	18.8	3.6	22.4	0.1%	0.9	89%	4%	0%	5%	2%
EDC	Future Land Use Denit	5.3	16.6	3.4	19.9	3.4%	1.0	85%	9%	0%	4%	1%
EDC	Future Land Use Denit HILU	3.7	11.4	3.4	14.8	3.4%	1.0	79%	13%	0%	6%	2%
EDC	Future Land Use Denit Nonres HILU	4.9	15.2	3.4	18.5	3.4%	1.0	84%	10%	0%	5%	1%
Spring Lake	Future Land Use Denit HILU	5.9	19.3	4.1	23.4	4.9%	1.2	81%	11%	0%	7%	1%
Spring Lake	Future Land Use Denit Nonres HILU	8.0	26.2	6.3	32.5	3.2%	1.7	86%	8%	0%	5%	1%
Spring Lake	Future Land Use Denit New	7.8	25.5	4.1	29.6	4.9%	1.2	85%	8%	0%	5%	1%

BMPS

SOILS hydrologic groups

SWAP

Study Area	Scenario	% A	% B	% C	% D	% HWT <1.5-3.5'	% HWT 1.5'-3.5'	%Restr.C <.2"/hr	%Erode	<i>HILU on A soil</i>	<i>HILU on HWT <3.5'</i>	# ISDS	ISDS /Acre
Mishnock Reservoir Buildout	Future Land Use Denit New	49%	27%	3%	20%	29.8%	11%	0%	28%	17%	0%	4,983	1.27
Mishnock WHPA	Future Land Use Denit New	20%	68%	1%	10%	33.3%	22%	1%	58%	12%	0%	344	1.11
EDC	Future Land Use Denit	71%	14%	4%	11%	16.3%	4%	1%	15%	23%	0%	849	0.90
EDC	Future Land Use Denit HILU	71%	14%	4%	11%	16.3%	4%	1%	15%	23%	0%	849	0.90
EDC	Future Land Use Denit Nonres HILU	71%	14%	4%	11%	16.3%	4%	1%	15%	23%	0%	849	0.90
Spring Lake	Future Land Use Denit HILU	74%	15%	7%	3%	12.7%	3%	1%	29%	39%	0%	619	1.50
Spring Lake	Future Land Use Denit Nonres HILU	74%	15%	7%	3%	12.7%	3%	1%	29%	39%	0%	619	1.50
Spring Lake	Future Land Use Denit New	74%	15%	7%	3%	12.7%	3%	1%	29%	39%	0%	619	1.50

BMPS

Estimated Water Budget / Runoff / Recharge

Study Area	Scenario	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
Mishnock Reservoir Buildout	Future Land Use Denit New	43	18	25	14.7	10.3	2.1	59%	41%	4586	1920	2666	1,565	1,101	227	711	854
Mishnock WHPA	Future Land Use Denit New	43	18	25	10.4	14.6	1.9	42%	58%	361	151	210	88	123	16	12	75
EDC	Future Land Use Denit	43	18	25	12.7	12.3	1.5	51%	49%	1105	462	642	327	315	39	35	291
EDC	Future Land Use Denit HILU	43	18	25	12.7	12.3	1.5	51%	49%	1105	462	642	327	315	39	35	291
EDC	Future Land Use Denit Nonres HILU	43	18	25	12.7	12.3	1.5	51%	49%	1105	462	642	327	315	39	35	291
Spring Lake	Future Land Use Denit HILU	43	18	25	13.0	12.0	2.5	52%	48%	481	202	280	146	134	28	18	127
Spring Lake	Future Land Use Denit Nonres HILU	43	18	25	13.0	12.0	2.5	52%	48%	481	202	280	146	134	28	18	127
Spring Lake	Future Land Use Denit New	43	18	25	13.0	12.0	2.5	52%	48%	481	202	280	146	134	28	18	127