

**STUDY AREA STATISTICS**

Estimates based on GIS data and assumptions from literature review.

Note: Nutrient loading estimates are potential inputs at the source and represent amounts entering runoff or groundwater recharge.

**STANDARD - NO BMPS**

		Study Area Land Use Indicators							Riparian Indicators					Estimated Nutrient Loading					
Study Area	Scenario	Acres	% Sewer	Percent 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	Total N to study area lbs/ac/yr	% N in SW runoff from Atm.	P to SW lbs/ac/yr
Bradford WHPA	Current Land Use	687	0%	14%	6%	46%	22%	69%	9%	4%	23%	60%	83%	2.3	11.4	3.8	15.2	0.9%	0.6
Crandall WHPA	Current Land Use	1926	22%	24%	13%	10%	56%	66%	29%	18%	10%	56%	66%	1.1	4.3	3.0	7.3	2.7%	0.6
Noyes WHPA	Current Land Use	245	73%	62%	31%	31%	2%	33%	37%	15%	55%	6%	61%	6.8	19.1	7.8	26.9	0.1%	1.5
Whiterock WHPA	Current Land Use	1094	49%	28%	19%	30%	7%	38%	23%	15%	32%	18%	49%	2.8	11.5	4.8	16.3	0.1%	1.1
Bradford WHPA	Future Land Use	689	0%	8%	11%	14%	22%	36%	9%	4%	23%	60%	83%	2.1	9.7	2.8	12.6	1.2%	0.7
Crandall WHPA	Future Land Use	1929	22%	24%	17%	6%	56%	61%	29%	18%	10%	56%	66%	0.8	3.0	2.8	5.8	2.9%	0.6
Noyes WHPA	Future Land Use	247	73%	47%	37%	15%	2%	17%	37%	15%	55%	6%	61%	4.2	10.8	6.1	16.9	1.1%	1.6
Whiterock WHPA	Future Land Use	1110	49%	32%	28%	11%	7%	19%	23%	15%	32%	18%	49%	3.4	11.3	5.1	16.4	2.2%	1.3

		Study Area Land Use Indicators							Riparian Indicators					Estimated Nutrient Loading					
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	Total N to study area lbs/ac/yr	% N in SW runoff from Atm.	P to SW lbs/ac/yr
Bradford WHPA	Current Land Use - Lawn Care	687	0%	14%		46%	22%	69%	9%		23%	60%	83%	2.3	11.2	3.8	3.8	0.9%	0.6
Crandall WHPA	Current Land Use - Lawn Care	1926	22%	24%		10%	56%	66%	29%		10%	56%	66%	1.1	4.2	3.0	7.2	2.7%	0.6
Noyes WHPA	Current Land Use - Lawn Care	245	73%	62%		31%	2%	33%	37%		55%	6%	61%	7.3	20.5	7.8	7.8	0.1%	1.5
Whiterock WHPA	Current Land Use - Lawn Care	1094	49%	28%		30%	7%	38%	23%		32%	18%	49%	2.8	11.2	4.8	16.0	0.1%	1.1
Bradford WHPA	Future Impervious Reduction 20%	689	0%	8%	10%	14%	22%	36%	9%		23%	60%	83%	2.0	9.7	2.7	2.7	1.3%	0.7
Whiterock WHPA	Future Impervious Reduction	1110	49%	32%	26%	11%	7%	19%	23%		32%	18%	49%	3.3	11.3	4.9	4.9	2.3%	1.3
Bradford WHPA	Future Lawn Care	689	0%	8%		14%	22%	36%	9%		23%	60%	83%	2.1	9.7	2.8	2.8	1.2%	0.7
Whiterock WHPA	Current Stormwater	1094	49%	28%		30%	7%	38%	23%		32%	18%	49%	2.8	11.5	4.0	15.5	0.1%	0.8

**STUDY AREA STATISTICS**

**STANDARD - NO BMPS**

		Estimated Nitrate-N sources to grw recharge					SOILS hydrologic groups					SWAP							
Study Area	Scenario	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	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre	
Bradford	Current																		
WHPA	Land Use	45%	5%	41%	3%	5%	18%	40%	26%	16%	28.0%	8%	23%	31%	4%	1%	235	0.34	
Crandall	Current																		
WHPA	Land Use	23%	12%	60%	1%	4%	11%	26%	5%	59%	61.8%	2%	1%	23%	3%	2%	128	0.07	
Noyes	Current																		
WHPA	Land Use	27%	3%	66%	2%	2%	32%	41%	25%	2%	29.6%	24%	52%	41%	25%	8%	83	0.34	
Whiterock	Current																		
WHPA	Land Use	49%	14%	30%	3%	4%	27%	57%	14%	2%	20.8%	8%	5%	54%	10%	3%	411	0.38	
<b>BMPS</b>																			
		Estimated Nitrate-N sources to grw. recharge					SOILS hydrologic groups					SWAP							
Study Area	Scenario	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	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre	
Bradford	Future Land Use	70%	15%	8%	5%	3%	18%	40%	26%	16%	28.0%	8%	23%	31%	3%	1%	311	0.45	
Crandall	Future Land Use	61%	24%	11%	2%	3%	10%	26%	5%	58%	61.7%	2%	0%	23%	2%	2%	235	0.12	
Noyes	Future Land Use	54%	15%	26%	3%	2%	32%	41%	25%	3%	29.4%	23%	52%	41%	21%	6%	95	0.38	
Whiterock	Future Land Use	66%	19%	10%	4%	2%	27%	56%	14%	3%	20.6%	8%	5%	53%	11%	3%	545	0.49	

		Estimated Nitrate-N sources to grw. recharge					SOILS hydrologic groups					SWAP						
Study Area	Scenario	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	HILU on A soil	HILU on HWT <3.5'	# ISDS	ISDS /Acre
Bradford	Current																	
WHPA	Land Use - Lawn Care	46%	4%	42%	3%	5%	18%	40%	26%	16%	28.0%	8%	23%	31%	4%	1%	235	0.34
Crandall	Current																	
WHPA	Land Use - Lawn Care	24%	10%	62%	1%	4%	11%	26%	5%	59%	61.8%	2%	1%	23%	3%	2%	128	0.07
Noyes	Current																	
WHPA	Land Use - Lawn Care	25%	10%	62%	2%	2%	32%	41%	25%	2%	29.6%	24%	52%	41%	25%	8%	83	0.34
Whiterock	Current																	
WHPA	Land Use - Lawn Care	51%	11%	30%	3%	5%	27%	57%	14%	2%	20.8%	8%	5%	54%	10%	3%	411	0.38
Bradford	Future Impervious Reduction 20%	70%	15%	8%	5%	3%	18%	40%	26%	16%	28.0%	8%	23%	31%	3%	1%	311	0.45
Whiterock	Future Impervious Reduction	65%	19%	10%	4%	3%	27%	56%	14%	3%	20.6%	8%	5%	53%	11%	3%	545	0.49
Bradford	Future Lawn Care	70%	15%	8%	5%	3%	18%	40%	26%	16%	28.0%	8%	23%	31%	3%	1%	311	0.45
Whiterock	Current																	
WHPA	Stormwater	49%	14%	30%	3%	4%	27%	57%	14%	2%	20.8%	8%	5%	54%	10%	3%	411	0.38

**STUDY AREA STATISTICS**

**STANDARD - NO BMPS**

		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 Mg/yr	ET Mg/yr	Avail. Precip Mg/yr	surface runoff Mg/yr	Avg.net recharge precip. Mg/yr	ISDS recharge Mg/yr	If 100% forested surface runoff Mg/yr	Lost recharge from 100% forested Mg/yr	
Bradford	Current																	
WHPA	Land Use	45	18	27	6.0	21.0	0.6	22%	78%	839	336	504	112	391	10	42	70	
Crandall	Current																	
WHPA	Land Use	45	18	27	9.4	17.6	0.1	35%	65%	2353	941	1412	492	919	6	187	305	
Noyes	Current																	
WHPA	Land Use	45	18	27	15.1	11.9	0.5	56%	44%	300	120	180	101	79	4	10	91	
Whiterock	Current																	
WHPA	Land Use	45	18	27	9.7	17.3	0.6	36%	64%	1337	535	802	288	514	18	41	247	
Bradford	Future Land Use																	
WHPA	Use	45	18	27	7.0	20.0	0.7	26%	74%	842	337	505	131	374	14	42	89	
Crandall	Future Land Use																	
WHPA	Use	45	18	27	10.4	16.6	0.2	39%	61%	2357	943	1414	545	869	10	187	357	
Noyes	Future Land Use																	
WHPA	Use	45	18	27	16.2	10.8	0.6	60%	40%	302	121	181	109	73	4	12	97	
Whiterock	Future Land Use																	
WHPA	Use	45	18	27	13.1	13.9	0.8	48%	52%	1356	542	814	394	420	24	59	335	

		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 Mg/yr	ET Mg/yr	Avail. Precip Mg/yr	surface runoff Mg/yr	Avg.net recharge precip. Mg/yr	ISDS recharge Mg/yr	If 100% forested surface runoff Mg/yr	recharge from 100% forested Mg/yr	
Bradford	Current																	
WHPA	Land Use - Lawn Care	45	18	27	6.0	21.0	0.6	22%	78%	839	336	504	112	391	10	42	70	
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Whiterock	Current																	
WHPA	Land Use - Lawn Care	45	18	27	9.7	17.3	0.6	36%	64%	1337	535	802	288	514	18	41	247	
Bradford	Future Impervious Reduction 20%																	
WHPA	20%	45	18	27	6.7	20.3	0.7	25%	75%	842	337	505	125	380	14	42	83	
Whiterock	Future Impervious Reduction 20%																	
WHPA	20%	45	18	27	12.4	14.6	0.8	46%	54%	1356	542	814	375	439	24	59	316	
Bradford	Future Lawn Care																	
WHPA	Stormwater	45	18	27	7.0	20.0	0.7	26%	74%	842	337	505	131	374	14	42	89	
Whiterock	Current																	
WHPA	Stormwater	45	18	27	9.7	17.3	0.6	36%	64%	1337	535	802	288	514	18	41	247	