APPENDIX-H: OPTI-TOOL SCM PERFORMANCE CURVES FOR E. COLI
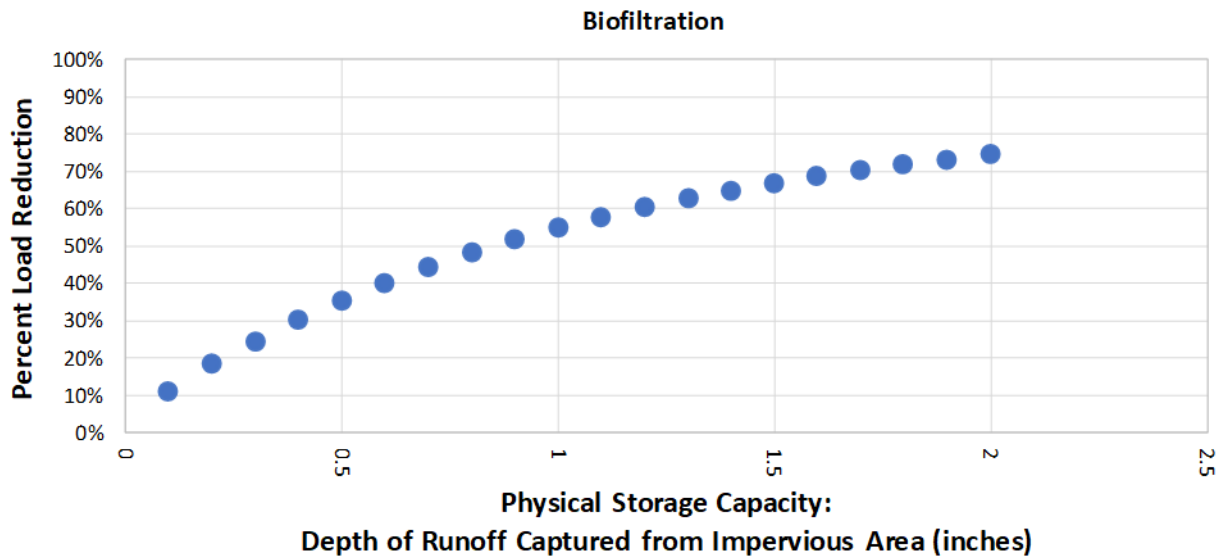
Figure H-1. Biofiltration performance curve for annual average E. coli load reduction.
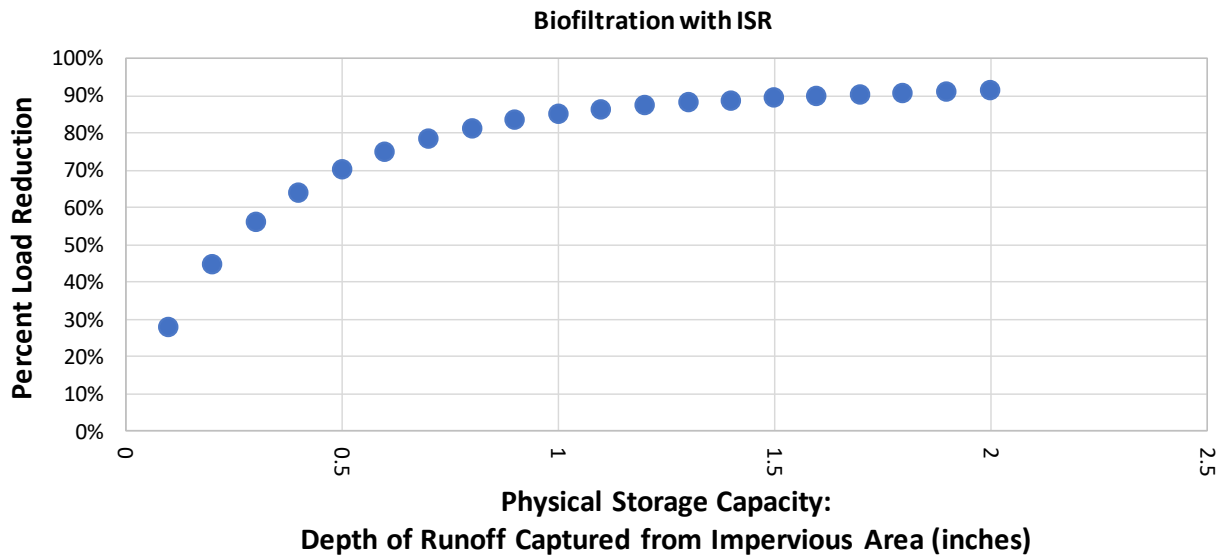

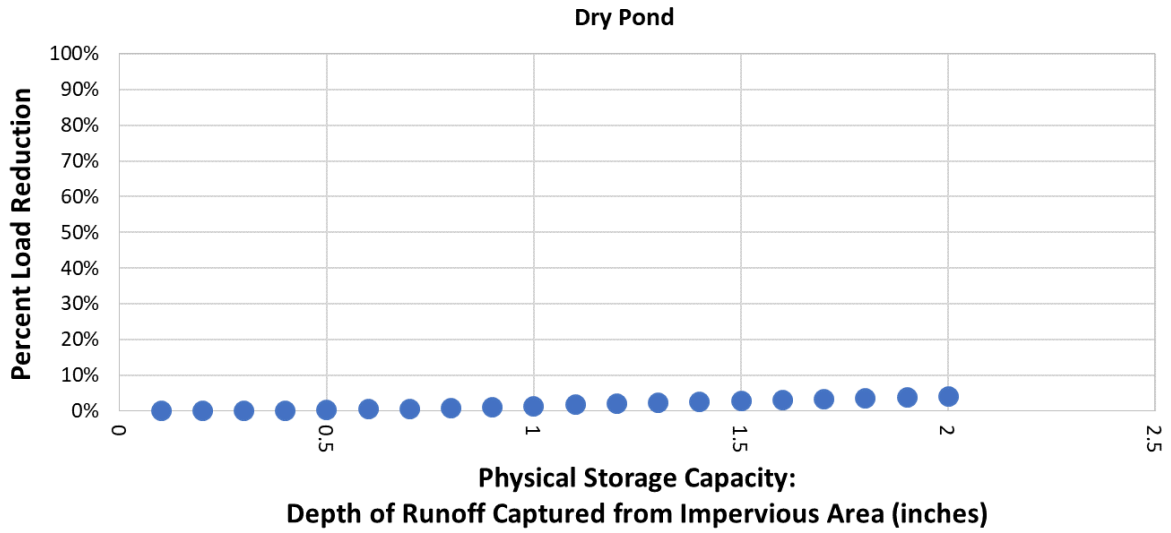Figure H-2. Biofiltration with ISR performance curve for annual average E. coli load reduction.

Dry Pond

Figure H-3. Dry Pond performance curve for annual average E. coli load reduction.
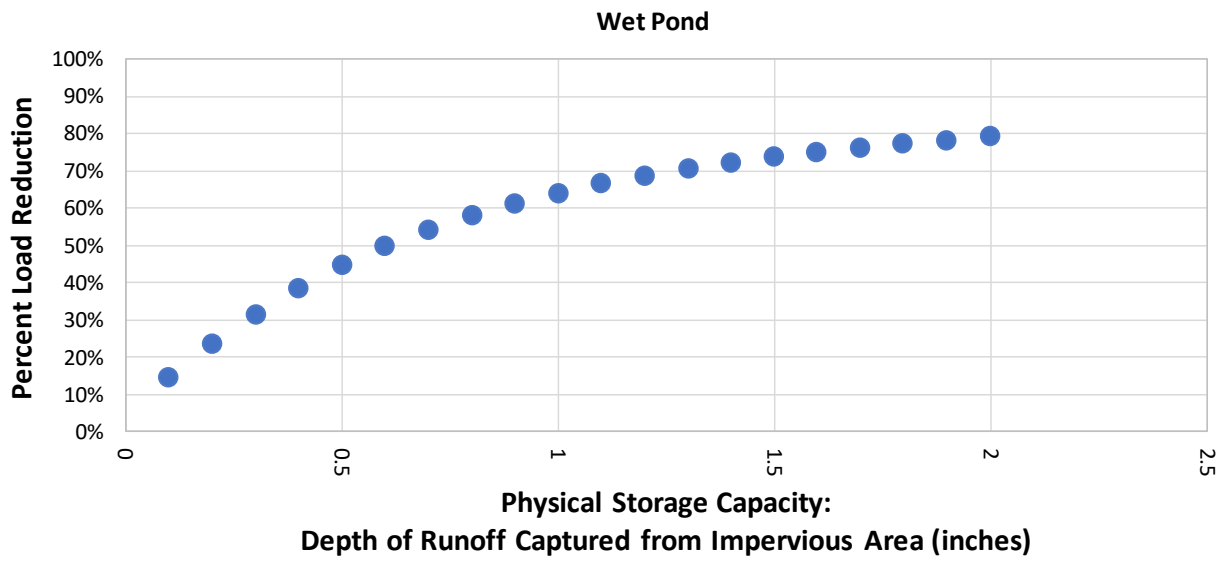
Wet Pond

Figure H-4. Wet Pond performance curve for annual average E. coli load reduction.

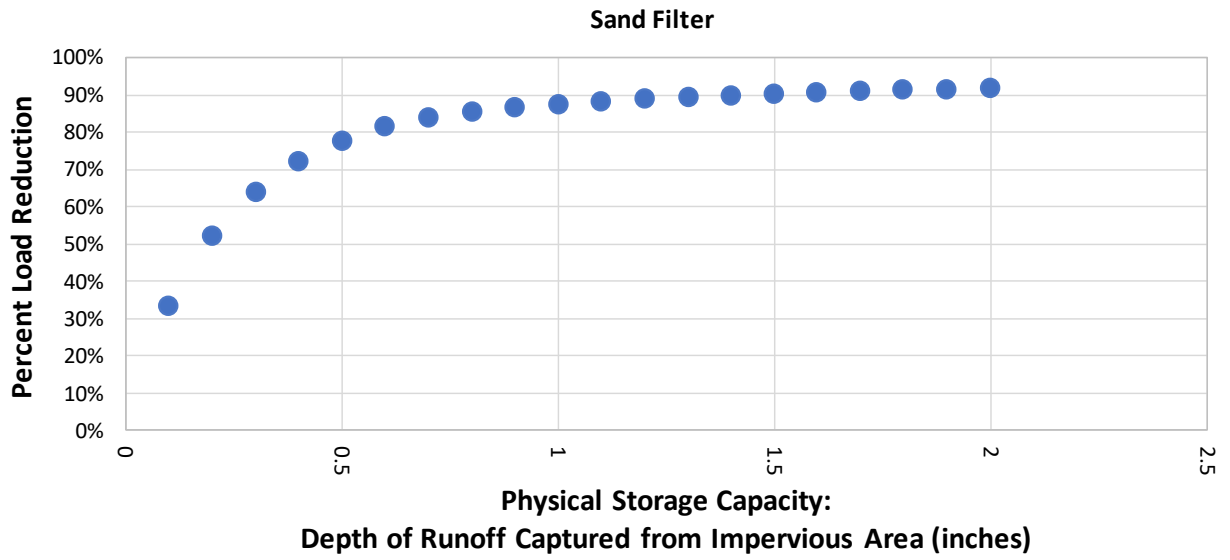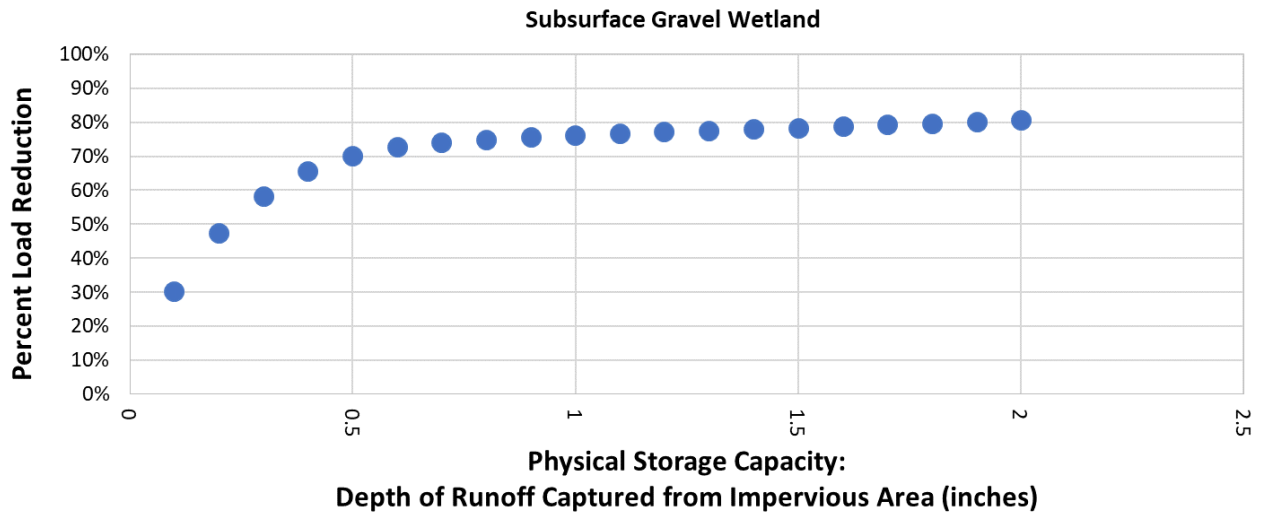Figure H-5. Sand Filter performance curve for annual average E. coli load reduction.

Figure H-6. Subsurface Gravel Wetland performance curve for annual average E. coli load reduction.

Figure H-7. Infiltration Basin (0.17 in/hr) performance curve for annual average E. coli load reduction.

Figure H-8. Infiltration Basin (0.27 in/hr) performance curve for annual average E. coli load reduction.

Figure H-9. Infiltration Basin (0.52 in/hr) performance curve for annual average E. coli load reduction.
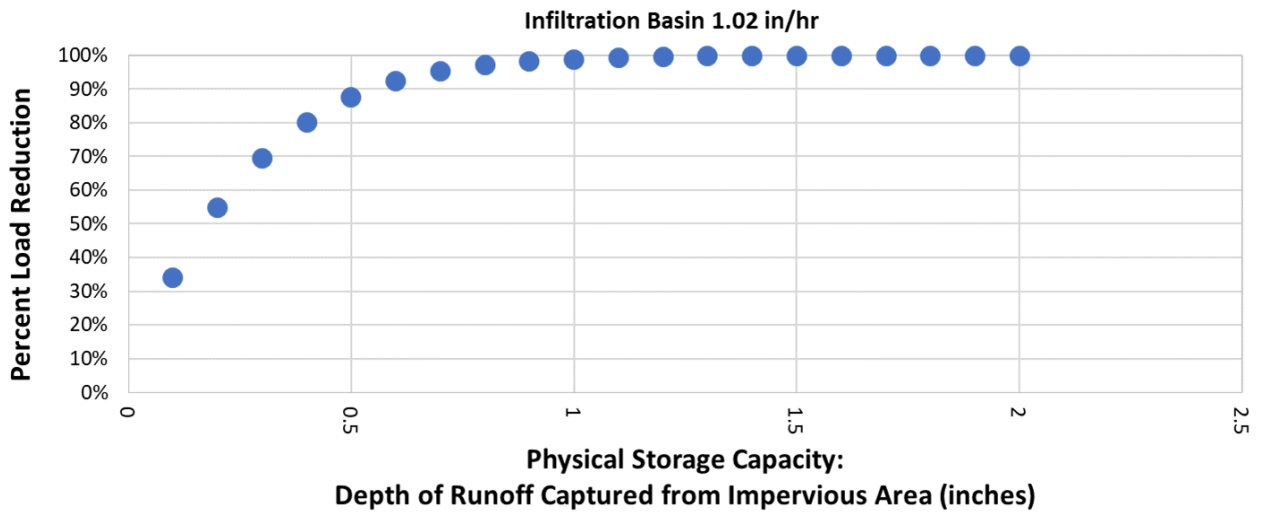
Figure H-10. Infiltration Basin (1.02 in/hr) performance curve for annual average E. coli load reduction.
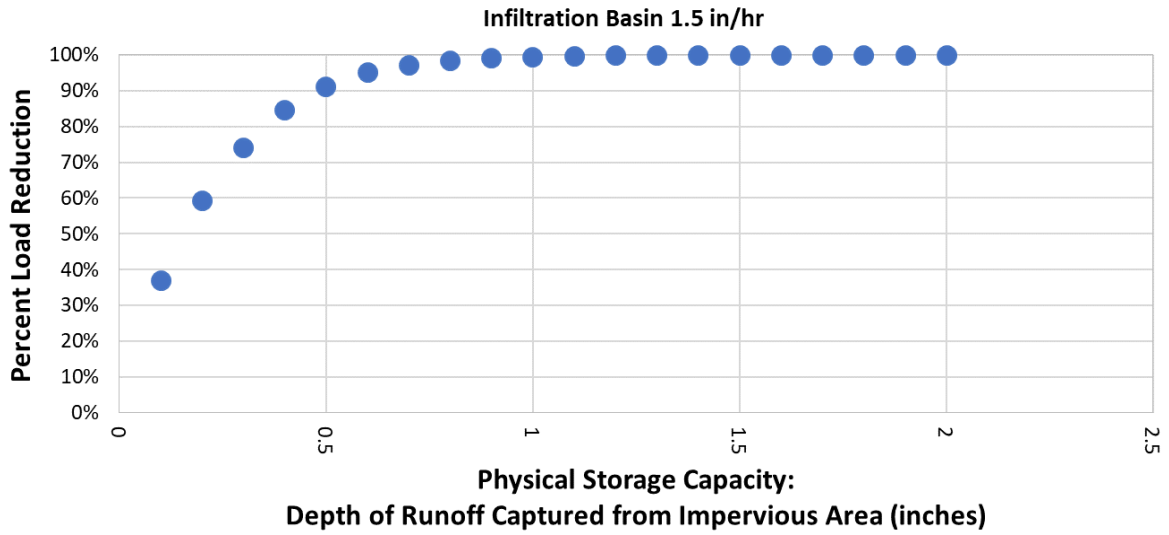
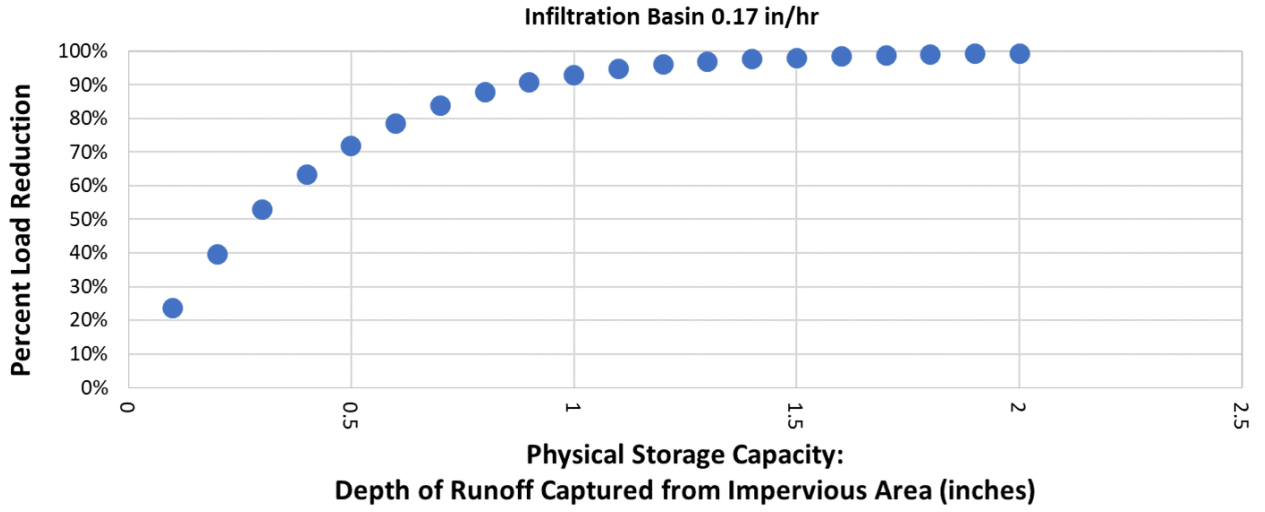Figure H-11. Infiltration Basin (1.50 in/hr) performance curve for annual average E. coli load reduction.
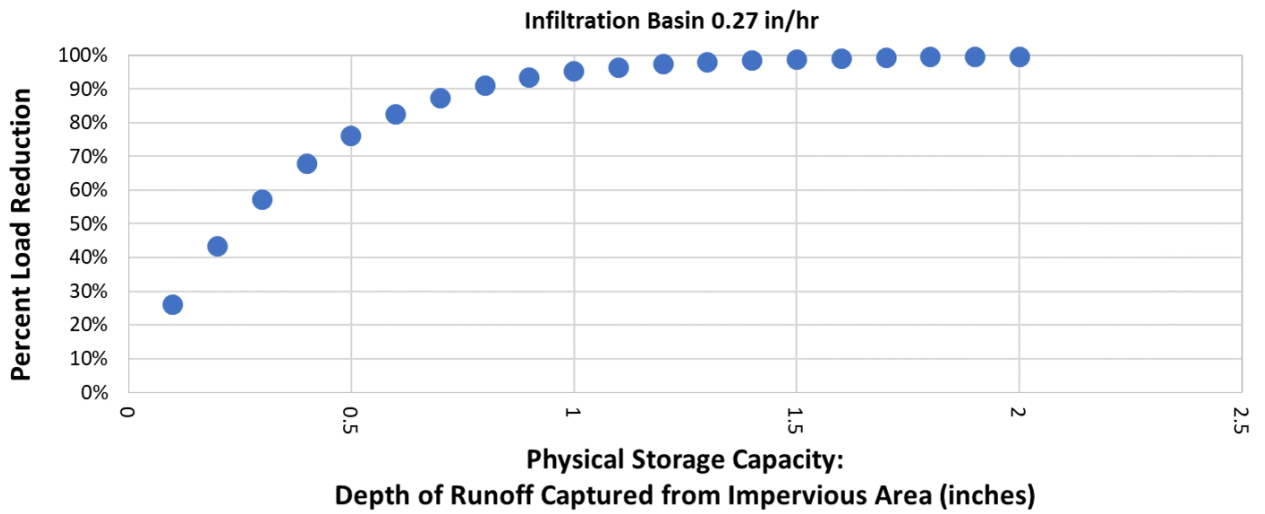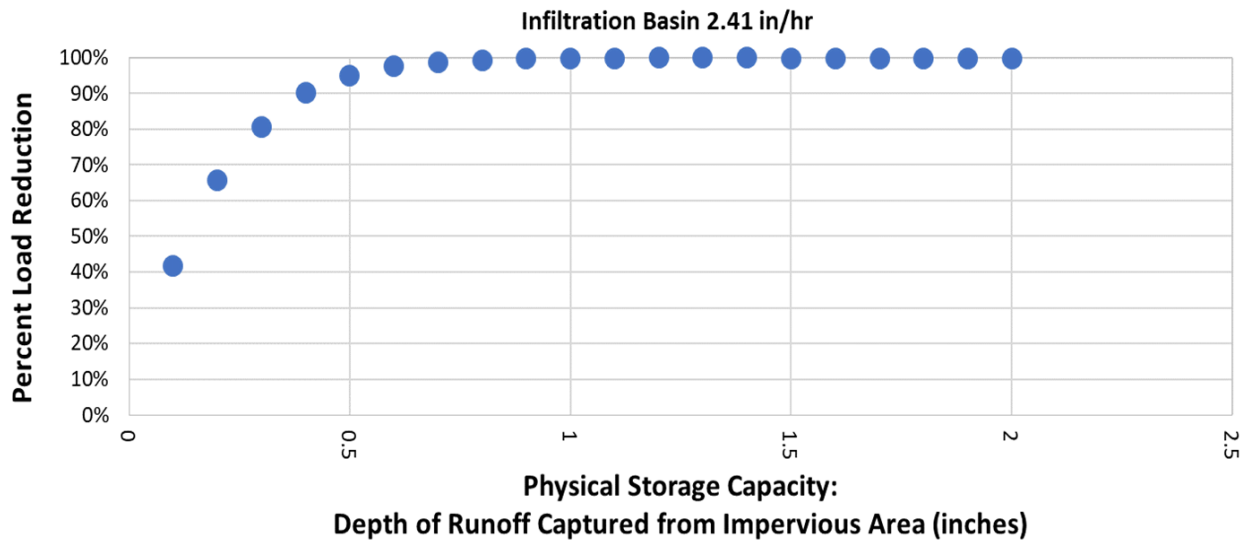

Figure H-12. Infiltration Basin (2.41 in/hr) performance curve for annual average E. coli load reduction.
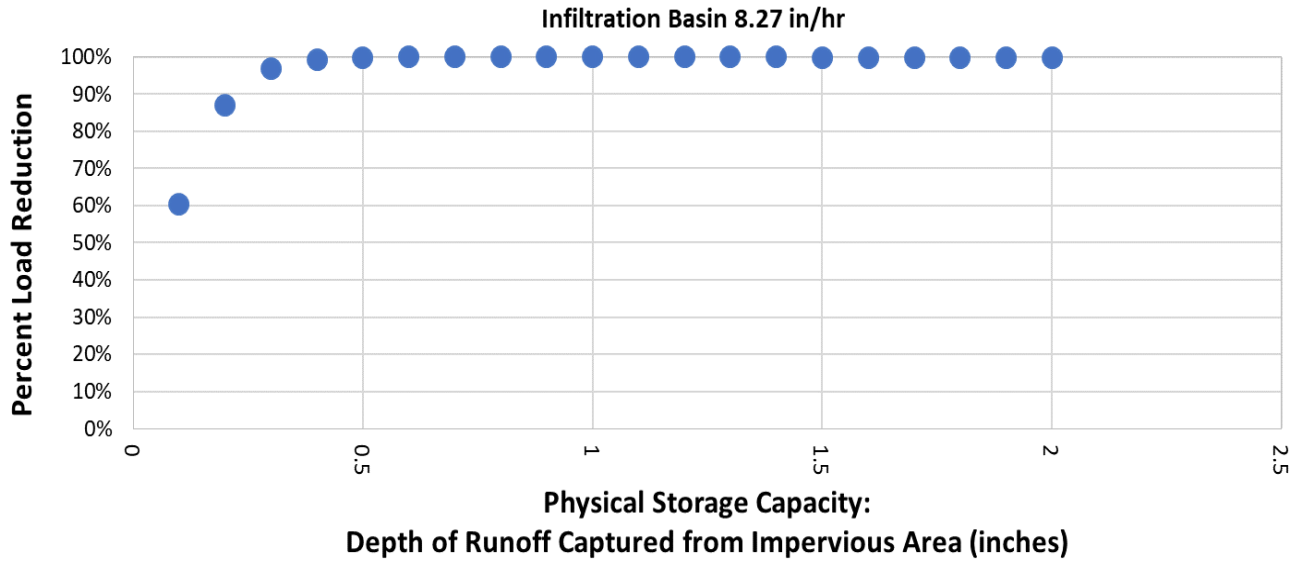
Figure H-13. Infiltration Basin (8.27 in/hr) performance curve for annual average E. coli load reduction.
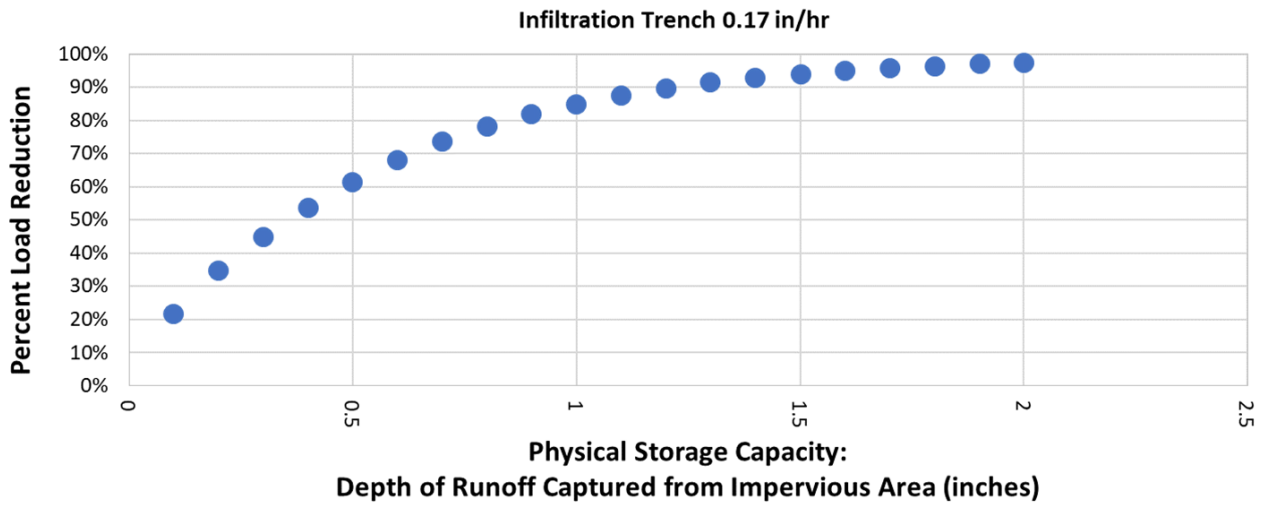
Figure H-14. Infiltration Trench (0.17 in/hr) performance curve for annual average E. coli load reduction.
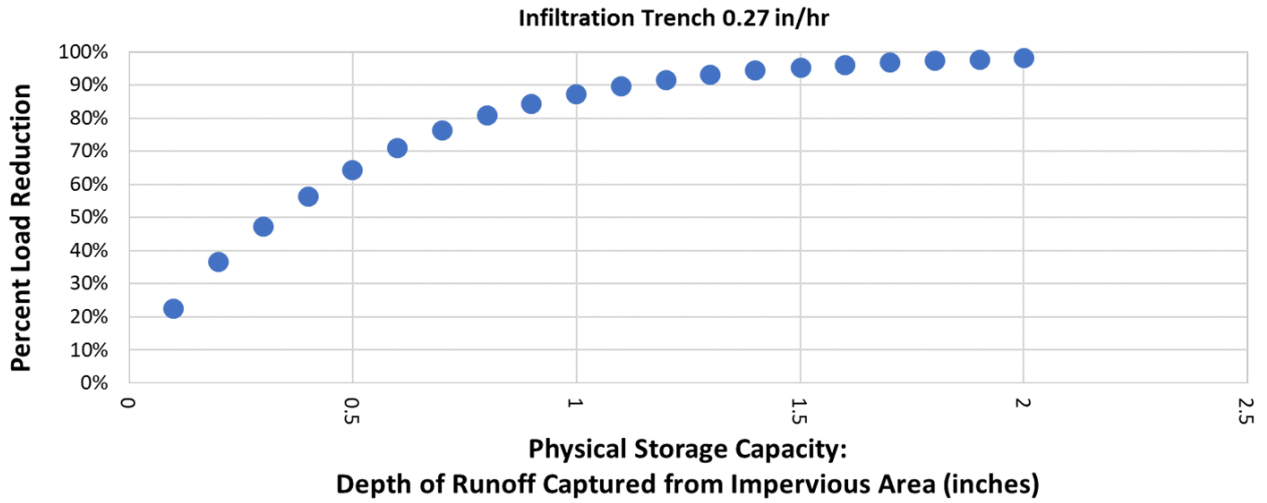
Figure H-15. Infiltration Trench (0.27 in/hr) performance curve for annual average E. coli load reduction.

Figure H-16. Infiltration Trench (0.52 in/hr) performance curve for annual average E. coli load reduction.

Figure H-17. Infiltration Trench (1.02 in/hr) performance curve for annual average E. coli load reduction.
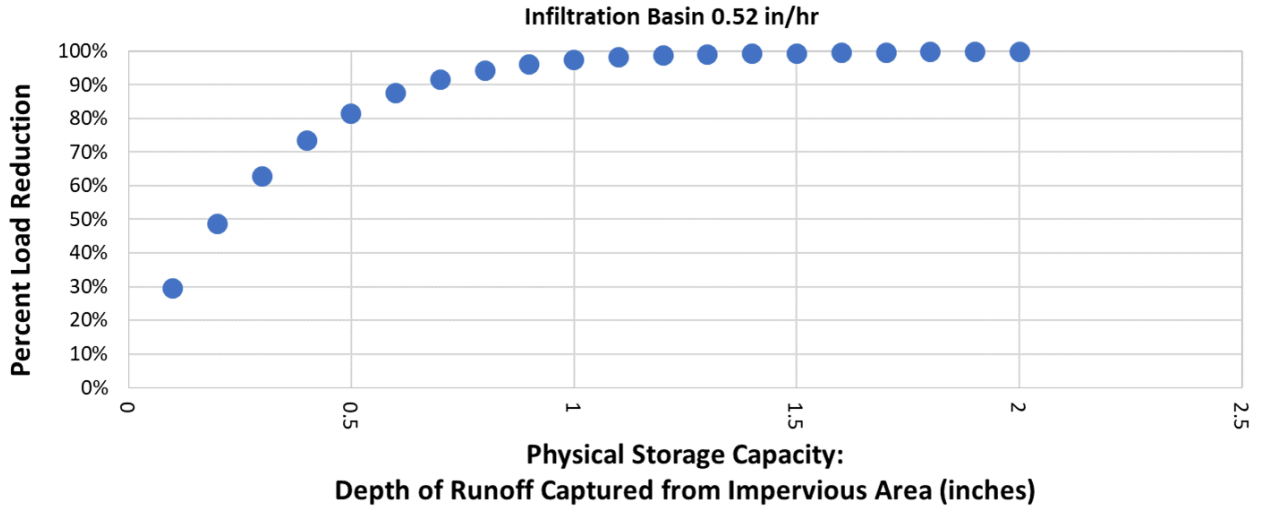

Figure H-18. Infiltration Trench (1.50 in/hr) performance curve for annual average E. coli load reduction.
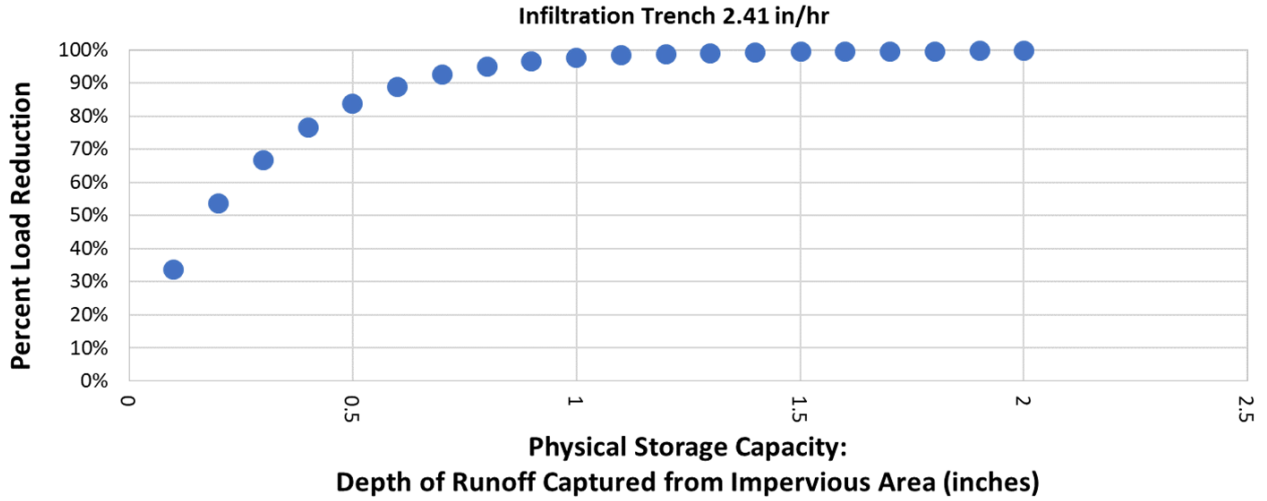
Figure H-19. Infiltration Trench (2.41 in/hr) performance curve for annual average E. coli load reduction.
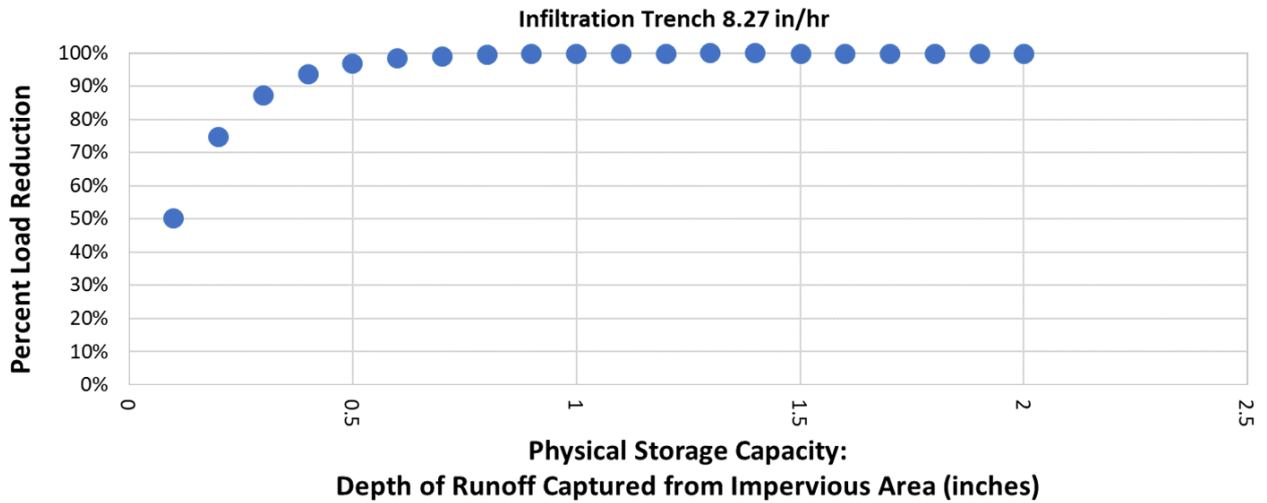
Figure H-20. Infiltration Trench (8.27 in/hr) performance curve for annual average E. coli load reduction.
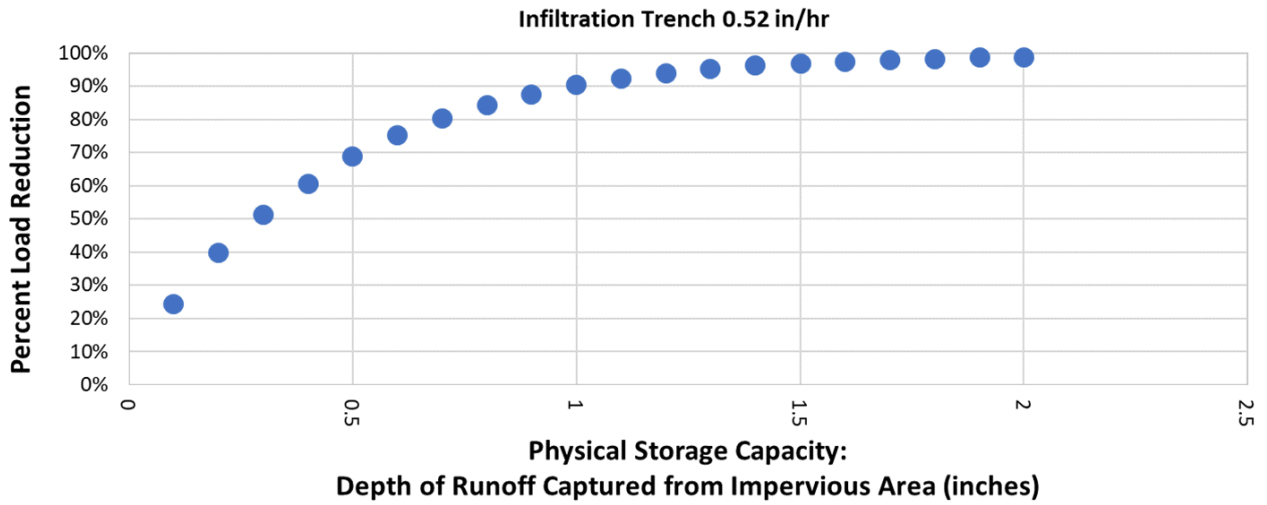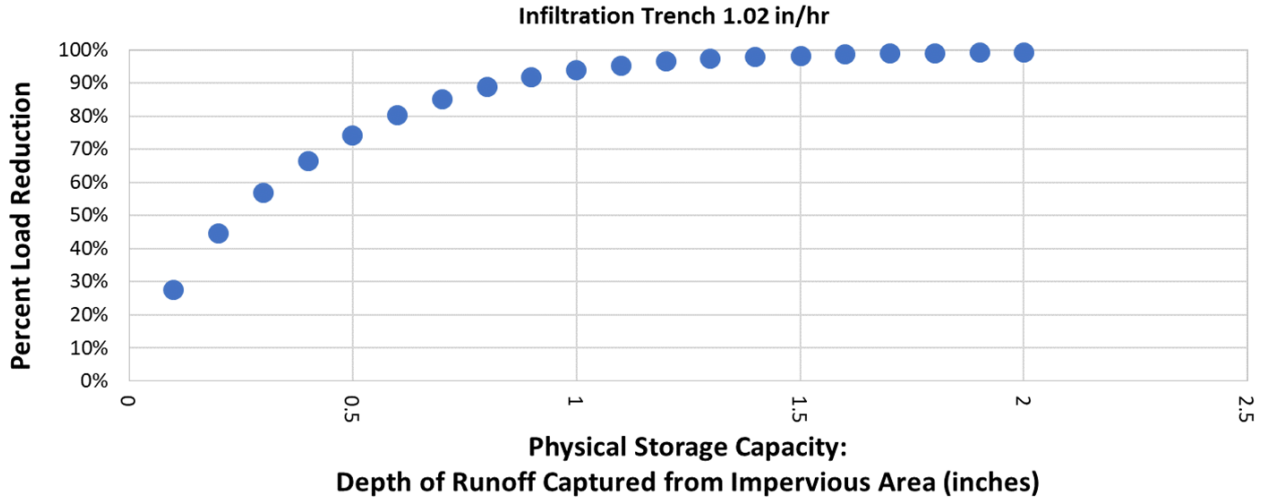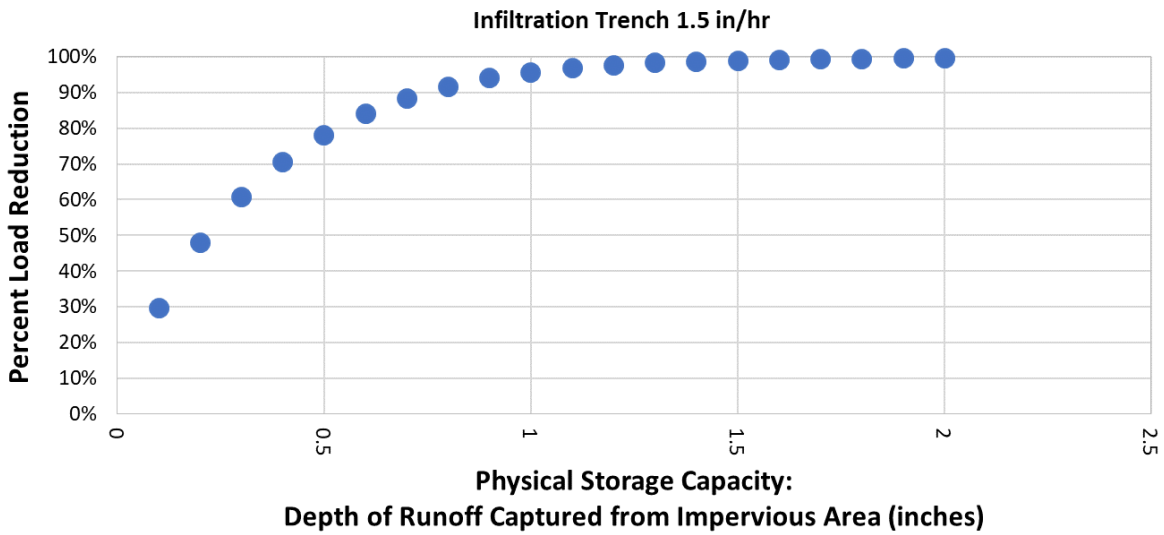
Table H-1. E. coli average annual load reductions (%) for Biofiltration, Biofiltration with ISR, Dry Pond, Wet Pond, Sand Filter, and Subsurface Gravel Wetland

Runoff Capture Depth (inches)	E. coli Average Annual Load Reduction (%)					
	Biofiltration	Biofiltration with ISR	Dry Pond	Wet Pond	Sand Filter	Subsurface Gravel Wetland
0.1	10.99%	27.89%	0.00%	14.52%	33.64%	30.29%
0.2	18.50%	44.92%	0.00%	23.70%	52.20%	47.21%
0.3	24.54%	56.12%	0.02%	31.56%	64.01%	58.14%
0.4	30.21%	64.16%	0.07%	38.59%	72.22%	65.51%
0.5	35.44%	70.24%	0.20%	44.69%	77.86%	70.07%
0.6	40.15%	74.98%	0.40%	49.94%	81.68%	72.63%
0.7	44.44%	78.61%	0.61%	54.40%	84.11%	74.00%
0.8	48.36%	81.41%	0.85%	58.17%	85.74%	74.80%
0.9	51.92%	83.50%	1.10%	61.39%	86.84%	75.51%
1.0	55.04%	85.14%	1.37%	64.16%	87.68%	76.07%
1.1	57.86%	86.36%	1.65%	66.57%	88.32%	76.51%
1.2	60.49%	87.38%	1.95%	68.68%	88.91%	77.06%
1.3	62.79%	88.19%	2.23%	70.54%	89.38%	77.52%
1.4	64.93%	88.85%	2.51%	72.21%	89.84%	77.92%
1.5	66.81%	89.39%	2.80%	73.69%	90.22%	78.39%
1.6	68.57%	89.86%	3.09%	75.01%	90.58%	78.87%
1.7	70.20%	90.27%	3.37%	76.22%	90.94%	79.31%
1.8	71.69%	90.65%	3.65%	77.29%	91.28%	79.77%
1.9	73.15%	91.00%	3.96%	78.27%	91.60%	80.22%
2.0	74.70%	91.29%	4.26%	79.20%	91.90%	80.67%

Table H-2. E. coli average annual load reductions (%) for Infiltration Basin

Runoff Capture Depth (inches)	E. coli Average Annual Load Reduction (%) for Background Infiltration Rates						
	0.17 (in/hr)	0.27 (in/hr)	0.52 (in/hr)	1.02 (in/hr)	1.50 (in/hr)	2.41 (in/hr)	8.27 (in/hr)
0.1	23.58%	25.88%	29.56%	33.99%	36.93%	41.68%	60.24%
0.2	39.65%	43.40%	48.64%	54.79%	59.17%	65.64%	87.09%
0.3	52.82%	57.15%	62.71%	69.39%	74.05%	80.66%	96.90%
0.4	63.39%	67.71%	73.38%	80.00%	84.44%	90.06%	99.20%
0.5	71.91%	76.09%	81.52%	87.49%	91.08%	95.08%	99.76%
0.6	78.52%	82.48%	87.41%	92.30%	94.99%	97.59%	99.94%
0.7	83.76%	87.34%	91.44%	95.32%	97.20%	98.74%	99.99%
0.8	87.78%	90.86%	94.21%	97.12%	98.31%	99.34%	100.00%
0.9	90.70%	93.36%	96.05%	98.16%	98.98%	99.64%	100.00%
1.0	92.94%	95.16%	97.28%	98.77%	99.36%	99.82%	100.00%
1.1	94.65%	96.43%	98.08%	99.19%	99.62%	99.89%	100.00%
1.2	95.93%	97.34%	98.63%	99.46%	99.76%	99.93%	100.00%
1.3	96.87%	98.00%	99.01%	99.64%	99.83%	99.97%	100.00%
1.4	97.56%	98.49%	99.28%	99.74%	99.89%	99.99%	100.00%
1.5	98.10%	98.86%	99.47%	99.82%	99.94%	100.00%	100.00%
1.6	98.50%	99.14%	99.60%	99.88%	99.97%	100.00%	100.00%
1.7	98.81%	99.35%	99.70%	99.93%	99.98%	100.00%	100.00%
1.8	99.07%	99.51%	99.79%	99.95%	99.99%	100.00%	100.00%
1.9	99.28%	99.63%	99.85%	99.97%	100.00%	100.00%	100.00%
2.0	99.45%	99.72%	99.89%	99.98%	100.00%	100.00%	100.00%

Table H-3. E. coli average annual load reductions (%) for Infiltration Trench

Runoff Capture Depth (inches)	E. coli Average Annual Load Reduction (%) for Background Infiltration Rates						
	0.17 (in/hr)	0.27 (in/hr)	0.52 (in/hr)	1.02 (in/hr)	1.50 (in/hr)	2.41 (in/hr)	8.27 (in/hr)
0.1	21.59%	22.40%	24.42%	27.49%	29.70%	33.56%	50.19%
0.2	34.63%	36.48%	39.88%	44.54%	48.02%	53.55%	74.76%
0.3	44.86%	47.32%	51.17%	56.74%	60.77%	66.74%	87.14%
0.4	53.68%	56.34%	60.69%	66.50%	70.55%	76.44%	93.67%
0.5	61.44%	64.24%	68.73%	74.27%	78.13%	83.70%	96.77%
0.6	68.09%	70.95%	75.15%	80.39%	84.00%	88.83%	98.37%
0.7	73.54%	76.33%	80.17%	85.09%	88.39%	92.45%	99.07%
0.8	78.04%	80.69%	84.28%	88.85%	91.64%	94.90%	99.44%
0.9	81.79%	84.26%	87.60%	91.68%	93.99%	96.57%	99.64%
1.0	84.91%	87.18%	90.30%	93.77%	95.67%	97.59%	99.74%
1.1	87.49%	89.57%	92.38%	95.34%	96.84%	98.29%	99.81%
1.2	89.62%	91.52%	93.97%	96.47%	97.65%	98.75%	99.88%
1.3	91.36%	93.09%	95.24%	97.30%	98.24%	99.08%	99.93%
1.4	92.80%	94.38%	96.24%	97.93%	98.65%	99.33%	99.95%
1.5	94.03%	95.42%	97.01%	98.37%	98.96%	99.50%	99.96%
1.6	95.03%	96.26%	97.60%	98.71%	99.20%	99.61%	99.97%
1.7	95.85%	96.90%	98.05%	98.98%	99.37%	99.68%	99.98%
1.8	96.52%	97.44%	98.40%	99.19%	99.50%	99.74%	99.98%
1.9	97.08%	97.88%	98.70%	99.34%	99.60%	99.79%	99.99%
2.0	97.55%	98.22%	98.92%	99.46%	99.67%	99.83%	99.99%