

APPENDIX B: DATA TABLES

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Table B.1: Proposed Low Priority Retrofit and New BMP Projects

BMP No./Site ID	Existing Practice Type	Proposed Practice Type
BMP #25	Extended Detention Dry Pond	Retention Pond (Wet Pond)
BMP #33	Extended Detention Dry Pond	Bioretention
BMP #116	Infiltration Basin	Sand Filter
BMP #208	Shallow Marsh	Micropool ED
BMP #268	Extended Detention Wet Pond	Micropool ED
BMP #386	Swale	Step Pool Storm Conveyance
BMP #419	Extended Detention Wet Pond	Micropool ED
BMP #496	Extended Detention Dry Pond	Micropool ED
BMP #616	Extended Detention Dry Pond	Micropool ED
CATO-2018-FBIO-0002	N/A	Bioretention
CATO-2018-FSND-0001	N/A	Sand Filter
CATO-2018-FSND-0003	N/A	Sand Filter
CATO-2018-FSND-0004	N/A	Sand Filter
CATO-2018-MRNG-0001	N/A	Rain Gardens
CATO-2018-SPSC-0006	N/A	Step Pool Storm Conveyance

Table B.2: Proposed Low Priority Stream Restoration Projects

Site ID	Functional Lift Potential	Proposed Restoration Approach
CATO-2018-STRE-0022	Geomorphic Level	Natural Channel Design and Legacy Sediment Removal
CATO-2018-STRE-0026	Geomorphic Level	Natural Channel Design
CATO-2018-STRE-0029	Geomorphic Level	Natural Channel Design or Legacy Sediment Removal
CATO-2018-STRE-0030	Geomorphic Level	Natural Channel Design
CATO-2018-STRE-0031	Geomorphic Level	Natural Channel Design
MIDD-2018-STRE-0009	Physicochemical Level	Natural Channel Design or Legacy Sediment Removal
MIDD-2018-STRE-0010	Geomorphic Level	Natural Channel Design or Legacy Sediment Removal

Table B.3: Low Priority Project Prioritization Scores

BMP Site/Site ID	Proposed Practice Type	Nutrient & Impervious Acre Credit	Cost	Construction	Community & Watershed Impacts	Total Combined Score
		(Max = 60)	(Max = 60)	(Max = 60)	(Max = 60)	(Max = 240)
Pond Retrofits and New BMP Projects						
BMP #25	Retention Pond (Wet Pond)	30	52	41	24	147
BMP #33	Bioretention	30	50	36	32	148
BMP #116	Sand Filter	30	48	43	30	151
BMP #208	Micropool ED	30	50	47	22	149
BMP #268	Micropool ED	32	52	44	22	150
BMP #386	Step Pool Storm Conveyance	30	32	49	32	143
BMP #419	Micropool ED	30	48	44	24	146
BMP #496	Micropool ED	30	48	36	22	136
BMP #616	Micropool ED	30	54	47	26	157
CATO-2018-FBIO-0002	Bioretention	40	26	41	32	139
CATO-2018-FSND-0001	Sand Filter	40	48	41	32	161
CATO-2018-FSND-0003	Sand Filter	40	32	38	32	142
CATO-2018-FSND-0004	Sand Filter	40	48	41	52	181
CATO-2018-MRNG-0001	Rain Gardens	40	32	39	32	143
CATO-2018-SPSC-0006	Step Pool Storm Conveyance	40	26	48	32	146
Stream Restoration Projects						
CATO-2018-STRE-0022	Stream Restoration	40	14	20	38	112
CATO-2018-STRE-0026	Stream Restoration	20	20	24	44	108
CATO-2018-STRE-0029	Stream Restoration	20	20	22	46	108
CATO-2018-STRE-0030	Stream Restoration	20	20	18	44	102
CATO-2018-STRE-0031	Stream Restoration	20	20	18	46	104
MIDD-2018-STRE-0009	Stream Restoration	20	20	22	47	109
MIDD-2018-STRE-0010	Stream Restoration	20	20	24	40	104

Table B.4: Estimated Impervious Area Treatment and Pollutant Reductions for Low Priority Retrofit/New Stormwater Opportunity Projects

BMP Site	Design Approval Date	Existing Practice Type	Proposed Practice Type	Estimated Treatment for Proposed Conditions							
				Drainage Area (ac)	Impervious Area Treated (ac)	Pollutant Reductions (EOS)			Pollutant Reductions (EOT)		
						TN	TP	TSS	TN	TP	TSS
						(lbs/yr)			(lbs/yr)		
BMP #25	2/29/1988	Extended Detention Dry Pond	Retention Pond (Wet Pond)	25.96	2.79	120.85	20.07	11,606.41	93.01	13.17	6,312.45
BMP #33	3/31/2000	Extended Detention Dry Pond	Bioretention	2.13	0.64	11.57	1.51	2,603.25	7.68	0.94	1,461.70
BMP #116	12/7/1989	Infiltration Basin	Sand Filter	3.91	2.43	25.21	2.58	6,653.48	16.73	1.61	3,735.87
BMP #208	4/23/2001	Shallow Marsh	Micropool ED	17.73	2.15	81.05	13.39	8,264.94	62.20	8.78	4,495.07
BMP #268	5/7/2001	Extended Detention Wet Pond	Micropool ED	16.87	1.95	85.56	12.78	15,669.47	114.67	6.56	12,227.94
BMP #386	3/13/1990	Swale	Step Pool Storm Conveyance	5.69	1.06	30.38	4.27	6,035.36	25.25	2.51	1,393.16
BMP #419	8/17/1995	Extended Detention Wet Pond	Micropool ED	9.42	2.07	28.77	5.28	5,236.99	21.62	3.48	2,848.92
BMP #496	3/31/1997	Extended Detention Dry Pond	Micropool ED	12.97	2.65	66.80	9.34	7,701.26	50.92	6.13	4,190.41
BMP #616	6/23/1997	Extended Detention Dry Pond	Micropool ED	11.74	1.03	62.05	9.69	5,447.54	47.71	6.37	2,963.67
CATO-2018-FBIO-0002	N/A	N/A	Bioretention	5.74	1.83	26.57	3.64	3,776.60	19.97	2.38	2,054.24
CATO-2018-FSND-0001	N/A	N/A	Sand Filter	3.94	3.12	28.34	2.36	7,905.16	18.82	1.47	4,440.38
CATO-2018-FSND-0003	N/A	N/A	Sand Filter	2.11	1.22	13.47	1.40	3,418.78	8.94	0.87	1,919.60
CATO-2018-FSND-0004	N/A	N/A	Sand Filter	7.54	3.88	43.44	5.17	5,864.11	33.33	3.39	3,189.32
CATO-2018-MRNG-0001	N/A	N/A	Rain Gardens	0.22	0.11	1.27	0.14	335.44	0.84	0.09	188.35
CATO-2018-SPSC-0006	N/A	N/A	Step Pool Storm Conveyance	17.11	1.87	81.42	12.96	7,824.73	62.46	8.50	4,256.43

Table B.5: Estimated Impervious Area Treatment and Nutrient Reductions for Low Priority Stream Restoration Projects

Site ID	Estimated Treatment for Proposed Conditions				
	Linear Feet	Impervious Acre Credit	Pollutant Reductions		
	(ft)	(ac)	TN	TP	TSS
	(lbs/yr)				
CATO-2018-STRE-0022	2,513	25.13	188	171	112,797
CATO-2018-STRE-0026	718	7.18	54	49	32,231
CATO-2018-STRE-0029	942	9.42	71	64	42,279
CATO-2018-STRE-0030	165	1.65	12	11	7,418
CATO-2018-STRE-0031	154	1.54	12	10	6,893
MIDD-2018-STRE-0009	917	9.17	69	62	41,177
MIDD-2018-STRE-0010	416	4.16	31	28	18,655

Table B.6: Estimated Planning Level Costs for Low Priority Retrofit/New Stormwater Opportunity Projects

BMP Site	Total Treated Impervious within Drainage Area (Ac.)	Design Approval Date	Existing Practice	Proposed Practice	Construction Cost ¹	Contingency ²	Total Construction Cost ³	D&E ⁴	Inspection ⁵	Project Management ⁶	Site Improvement ⁷	Total Cost ⁸	Cost/Impervious Acre ⁹
BMP #25	2.79	2/29/1988	Extended Detention Dry Pond	Retention Pond (Wet Pond)	\$61,380.00	\$6,138.00	\$67,518.00	\$19,641.60	\$6,138.00	\$4,051.08	\$4,910.40	\$102,259.08	\$36,652
BMP #33	0.64	3/31/2000	Extended Detention Dry Pond	Bioretention	\$14,080.00	\$1,408.00	\$15,488.00	\$4,505.60	\$1,408.00	\$929.28	\$1,126.40	\$23,457.28	\$36,652
BMP #116	2.43	12/7/1989	Infiltration Basin	Sand Filter	\$53,460.00	\$5,346.00	\$58,806.00	\$17,107.20	\$5,346.00	\$3,528.36	\$4,276.80	\$89,064.36	\$36,652
BMP #208	2.15	4/23/2001	Shallow Marsh	Micropool ED	\$47,300.00	\$4,730.00	\$52,030.00	\$15,136.00	\$4,730.00	\$3,121.80	\$3,784.00	\$78,801.80	\$36,652
BMP #268	1.95	5/7/2001	Extended Detention Wet Pond	Micropool ED	\$42,900.00	\$4,290.00	\$47,190.00	\$13,728.00	\$4,290.00	\$2,831.40	\$3,432.00	\$71,471.40	\$36,652
BMP #386	1.06	3/13/1990	Swale	Step Pool Storm Conveyance	\$70,200.00	\$7,020.00	\$77,220.00	\$22,464.00	\$7,020.00	\$4,633.20	\$5,616.00	\$116,953.20	\$110,333
BMP #419	2.07	8/17/1995	Extended Detention Wet Pond	Micropool ED	\$45,540.00	\$4,554.00	\$50,094.00	\$14,572.80	\$4,554.00	\$3,005.64	\$3,643.20	\$75,869.64	\$36,652
BMP #496	2.65	3/31/1997	Extended Detention Dry Pond	Micropool ED	\$58,300.00	\$5,830.00	\$64,130.00	\$18,656.00	\$5,830.00	\$3,847.80	\$4,664.00	\$97,127.80	\$36,652
BMP #616	1.03	6/23/1997	Extended Detention Dry Pond	Micropool ED	\$22,660.00	\$2,266.00	\$24,926.00	\$7,251.20	\$2,266.00	\$1,495.56	\$1,812.80	\$37,751.56	\$36,652
CATO-2018-FBIO-0002	1.83	N/A	N/A	Bioretention	\$137,250.00	\$13,725.00	\$150,975.00	\$43,920.00	\$13,725.00	\$9,058.50	\$10,980.00	\$228,658.50	\$124,950
CATO-2018-FSND-0001	3.12	N/A	N/A	Sand Filter	\$68,640.00	\$6,864.00	\$75,504.00	\$21,964.80	\$6,864.00	\$4,530.24	\$5,491.20	\$114,354.24	\$36,652
CATO-2018-FSND-0003	1.22	N/A	N/A	Sand Filter	\$91,500.00	\$9,150.00	\$100,650.00	\$29,280.00	\$9,150.00	\$6,039.00	\$7,320.00	\$152,439.00	\$124,950
CATO-2018-FSND-0004	3.88	N/A	N/A	Sand Filter	\$48,000.00	\$4,800.00	\$52,800.00	\$15,360.00	\$4,800.00	\$3,168.00	\$3,840.00	\$79,968.00	\$124,950
CATO-2018-MRNG-0001	0.11	N/A	N/A	Rain Gardens	\$8,250.00	\$825.00	\$9,075.00	\$2,640.00	\$825.00	\$544.50	\$660.00	\$13,744.50	\$124,950
CATO-2018-SPSC-0006	1.87	N/A	N/A	Step Pool Storm Conveyance	\$216,000.00	\$21,600.00	\$237,600.00	\$69,120.00	\$21,600.00	\$14,256.00	\$17,280.00	\$359,856.00	\$192,436

¹Construction Cost = BMP Estimated Construction Cost * Impervious Acres

²Contingency = 10% of Construction Cost

³Total Construction Costs = Construction Cost + Contingency

⁴D&E = 32% of Construction Cost

⁵Inspection = 10% of Construction Cost

⁶Project Management = 5% of (D&E + Construction Cost)

⁷Site Improvement = 8% of Construction Cost

⁸Total Cost = Total Construction Cost + D&E + Inspection + Project Management + Site Improvement

⁹Cost per Impervious Acre = Total Cost / Impervious Acres

*New BMP Opportunity

Table B.7: Estimated Planning Level Costs for Low Priority Stream Restoration Projects

Site ID	Impervious Acre Credit (Ac.)	Construction Cost ¹	Contingency ²	Total Construction Cost ³	D&E ⁴	Inspection ⁵	Project Management ⁶	Site Improvement ⁷	Total Cost ⁸	Cost/Impervious Acre ⁹
CATO-2018-STRE-0022	25.13	\$879,656.37	\$87,965.64	\$967,622.00	\$281,490.04	\$87,965.64	\$58,057.32	\$70,372.51	\$1,465,507.50	\$58,310.00
CATO-2018-STRE-0026	7.18	\$251,357.89	\$25,135.79	\$276,493.68	\$80,434.52	\$25,135.79	\$16,589.62	\$20,108.63	\$418,762.24	\$58,310.00
CATO-2018-STRE-0029	9.42	\$329,718.03	\$32,971.80	\$362,689.83	\$105,509.77	\$32,971.80	\$21,761.39	\$26,377.44	\$549,310.23	\$58,310.00
CATO-2018-STRE-0030	1.65	\$57,849.58	\$5,784.96	\$63,634.53	\$18,511.86	\$5,784.96	\$3,818.07	\$4,627.97	\$96,377.39	\$58,310.00
CATO-2018-STRE-0031	1.54	\$53,754.47	\$5,375.45	\$59,129.92	\$17,201.43	\$5,375.45	\$3,547.80	\$4,300.36	\$89,554.95	\$58,310.00
MIDD-2018-STRE-0009	9.17	\$321,119.58	\$32,111.96	\$353,231.53	\$102,758.26	\$32,111.96	\$21,193.89	\$25,689.57	\$534,985.21	\$58,310.00
MIDD-2018-STRE-0010	4.16	\$145,483.31	\$14,548.33	\$160,031.64	\$46,554.66	\$14,548.33	\$9,601.90	\$11,638.66	\$242,375.19	\$58,310.00

¹Construction Cost = BMP Estimated Construction Cost * Impervious Acres

²Contingency = 10% of Construction Cost

³Total Construction Costs = Construction Cost + Contingency

⁴D&E = 32% of Construction Cost

⁵Inspection = 10% of Construction Cost

⁶Project Management = 5% of (D&E + Construction Cost)

⁷Site Improvement = 8% of Construction Cost

⁸Total Cost = Total Construction Cost + D&E + Inspection + Project Management + Site Improvement

⁹Cost per Impervious Acre = Total Cost / Impervious Acre Credit