

Designing and Maintaining LID/GI and Proprietary BMPs



Maintenance of Stormwater BMPS

September 13, 2019 - Tampa, FL / FSA Seminar

Stormwater Maintenance Best Management Practices - Quality of Life

What is wrong with this picture?



Stormwater Maintenance

Erosion Cost



Stormwater Maintenance



Stormwater Maintenance

Why does
drainage
maintenance
cost so much?



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Stormwater Maintenance



Recycled Concrete



Stormwater Maintenance



Stormwater Maintenance

Task Summary Report with Core Service

7/31/2019

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Task	CS	**WOs	Units	UOM	*Total Cost	*Avg. Cost/Unit
DADM ADMINISTRATIVE FOR DRAINAGE	6	94	11,023.25	Hours	\$350,723.06	\$31.82
DCI COMPLAINT INVESTIGATION DR	6	47	52.00	Each	\$3,193.96	\$61.42
DCIB CLEAN INLET BASKET	6	7	324.00	Each	\$6,207.11	\$19.16
DCWR CLEAN WASH RACK	6	6	6.00	Each	\$1,381.63	\$230.27
DDC DITCH CLEANING	6	35	429,384.00	Square Ys	\$25,102.63	\$0.06
DDI DRAINAGE INSPECTIONS	6	59	24,558.50	Each	\$19,617.78	\$0.80
DDM DITCH MOWING	6	178	3,818,845.00	Square Ys	\$93,669.06	\$0.02
DDR DITCH REPAIR	6	33	12,101.00	Square Ys	\$47,149.29	\$3.90
DDS DITCH SPRAYING	6	74	1,379,451.00	Square Ys	\$31,217.34	\$0.02
DIC INLET CLEAN	6	78	2,252.00	Each	\$38,096.62	\$16.92
DIN INLET NEW	6	7	9.00	Each	\$20,978.76	\$2,330.97
DIR INLET REPAIR	6	25	90.00	Each	\$28,368.97	\$315.21
DITR INLET TOP REPLACE	6	2	5.00	Each	\$2,029.47	\$405.89
DLC LAKE CLEAN	6	4	930.00	Square Ys	\$14,553.36	\$15.65
DLR LAKE REPAIR	6	4	104.00	Square Ys	\$2,568.40	\$24.70
DLS LAKE SPRAY	6	21	282,158.00	Square Ys	\$6,198.63	\$0.02
DLSM LAKESHORE MOW	6	19	144,567.00	Square Ys	\$2,670.43	\$0.02
DPCD CLEAN PCD	6	10	290.00	Each	\$18,561.00	\$64.00
DRPC RETENTION POND CLEAN	6	21	201,626.00	Square Ys	\$31,365.03	\$0.16
DRPM RETENTION POND MOW	6	145	2,468,130.00	Square Ys	\$52,387.13	\$0.02
DRPR RETENTION POND REPAIR	6	13	3,466.00	Square Ys	\$7,677.67	\$2.22
DRPS RETENTION POND SPRAY	6	80	1,750,551.00	Square Ys	\$22,306.11	\$0.01
DSPC STORM PIPE CLEAN	6	181	95,504.50	Linear Feet	\$138,380.53	\$1.45
DSPN STORMPIPE NEW/REPLACE	6	6	372.00	Linear Feet	\$50,166.27	\$134.86
DSPR STORMPIPE REPAIR	6	39	257.00	Each	\$102,158.28	\$397.50
DSS STREETSWEEEPING	1	184	15,168.45	Lane Mile:	\$468,010.23	\$30.85
DSSPL STREETSWEEEPING PARKING LOTS AND FACILITIES	1	117	967.40	Lane Mile:	\$48,043.67	\$49.66
DTRN TRAINING	6	10	15.25	Each	\$3,929.65	\$257.68
DTSO TRANSFER STATION OPERATIONS	6	34	639.50	Each	\$79,016.08	\$123.56
DTV TELEVISIONING LINES	6	107	68,750.00	Linear Feet	\$61,599.73	\$0.90
DWALL RETAINING/HEAD WALL	6	3	268.00	Square Feet	\$11,069.34	\$41.30
LADMIN Administrative Work	0	256	7,110.50	Hours	\$278,475.37	\$39.16
LAPM Aquatic Plant Management	0	147	3,868.75	Hours	\$104,718.06	\$27.07
LEDUC Education/Public Outreach Events	0	33	148.50	Each	\$6,535.76	\$44.01
LFLOOD Flood Control Structure Inspection	0	16	58.50	Hours	\$2,237.79	\$38.25
LIDPR Illicit Discharge Investigation - Proactive	0	2	2.00	Each	\$76.14	\$38.07
LIDRE Illicit Discharge Investigation - Reactive	0	16	27.00	Each	\$1,365.17	\$50.56
LMOI Major Outfall Inspection	0	4	54.00	Each	\$1,152.72	\$21.35
LSAMP Water Quality Sampling	0	30	164.00	Hours	\$5,453.50	\$33.25
LSHLAS Shoreline Assessment	0	13	849,287.00	Linear Feet	\$3,462.13	\$0.00
LSPM Special Projects - Maintenance	0	26	467.00	Hours	\$13,665.36	\$29.26
LSPP Special Projects - Prep/Planning/Oversight	0	23	145.00	Hours	\$5,647.60	\$38.95
LSTR Training / Professional Development	0	30	530.25	Hours	\$21,405.31	\$40.37
LSWURA Storm Water Utility Review - Admin	0	42	1,346.50	Hours	\$57,902.89	\$43.00
LTRAEX Training (NPDES) - External	0	5	70.00	Hours	\$2,051.15	\$29.30
LTRAIN Training (NPDES) - Internal	0	7	39.00	Hours	\$1,298.22	\$33.29
LWLMON Water Quality Monitoring	0	68	1,209.25	Hours	\$44,434.15	\$36.75
SAC ALLEY CLEAN	5	99	509,503.00	Square Ys	\$28,259.63	\$0.06
SADA INSTALL CURB RAMP	2	3	6.00	Each	\$8,789.83	\$1,464.97
SADM ADMINISTRATIVE	0	144	21,159.75	Hours	\$826,176.00	\$39.04