Village of Royal Palm Beach
MS4 Permit No. FLS000018-004
Part V. – Monitoring Requirements; Sub-part A. – Assessment Program

Assessment Program Objective

The purpose of this assessment program is to provide information for the Village of Royal Palm Beach to determine the overall effectiveness of its Stormwater Management Program (SWMP) in reducing stormwater pollutant loadings from its Municipal Separate Storm Sewer System (MS4) to receiving water bodies.

Assessment Program Components

As required by the MS4 Permit, the following parts make up this Assessment Program:

A. **A Water Quality Monitoring Plan** – The water quality monitoring plan is intended to identify local sources where urban stormwater is adversely affecting surface water resources
B. **A Pollutant Loading Estimate Plan** – The pollutant loading exercise is to estimate the Pollutant Loading from the MS4 contributing area, based on land uses and BMPs
C. **An Evaluation and Response Plan** – The response plan is the plan of action to be taken based on the results from A. and B. and will be used to:
    1. evaluate trends in pollutants loading from the MS4
    2. evaluate trends in water quality (of discharge from the MS4)
    3. identify portions of the MS4 to be targeted for loading reduction/corrective action

Part A – Water Quality Monitoring Plan

As a co-permittee, the Village of Royal Palm Beach uses the ambient water quality data obtained through the Palm Beach County NPDES program, where Northern Palm Beach County Improvement District is the Lead Permittee.

Monitoring Locations

Based on the location of the outfalls of our MS4, two (2) monitoring stations have been selected. The following table identifies these monitoring stations, along with relevant information about each location.

MS4 Monitoring Stations Table

Monitoring Station Number	Location Description	Latitude/ Longitude	Receiving Water Body	Verified Impaired?	Adopted TMDL?
38B	*	*	C-51W	No	No
37B	*	*	C-51E	No	No

* See attached Table 5-1 & Figure 5-1 from the Joint Annual Report, Cycle 3 – Year 6, prepared by Mock-Roos for monitoring station location information.

Sampling Method & Monitoring Parameters

Information on the method of sample collection and monitoring parameters is contained in the group Joint Annual Report, which can be found at www.pbc-npdes.org under Annual Reporting.

Part B – Pollutant Loading Estimate Plan

The Palm Beach County MS4 permittee group will be developing pollutant loading estimates during the 3rd year of this permit cycle, using the SIMPLE protocol. In order to provide each permittee with pollutant loading estimates that reflect their respective MS4 areas, the group effort will provide the loading estimates "by MS4," in addition to "by watershed" (as was done in past permit cycles). Prior to Year 3, the Village of Royal Palm Beach will participate in this effort by reviewing its MS4 contributing areas to each receiving water, and will provide updated information on the area extents and the land uses located therein. In addition, any water quality best management practices (BMPs) that are in place within the MS4 area, will be identified, along with their geospatial extent.

Information on pollutant loading estimates and event mean concentration values for various land uses is reported in the group's Joint Annual Report, which can be found at www.pbc-npdes.org under Annual Reporting.

The group's estimated pollutant loading results will be provided to each permittee for use in this assessment effort.

To determine a practical estimate of the current pollutant loading, the Village of Royal Palm Beach will use the land use based pollutant loading estimates provided by the group as the starting point from which pollutant load reductions will be subtracted. The pollutant load reductions will be estimated based on the BMPs that have been put in place within the MS4 contributing areas. In this way, when future estimates are done, and potentially additional reduction measures or BMPs are put in place, the estimated pollutant loading will reflect the reductions.

Part C – Evaluation and Response Plan

Once the Assessment Program is approved by FDEP, presumably sometime during Year 2 of the permit cycle, Village of Royal Palm Beach will extract information for site 38B in C-51W Watershed and 37B in C-51E Watershed from prior Joint Annual Reports for use in moving forward. The first annual report on the Assessment Program will be concurrent with the Year 3 Annual Report Form (March 2020).

Water quality monitoring results will be available annually, and the most recent year's data will be compared to that which came before, with respect to our MS4 which discharges to the C-51W and C-51E Watersheds and are sampled at site 38B and 37B, respectively. A summary of the water quality monitoring data, with respect to our MS4 will be developed and included in Assessment Program Annual Report.

The pollutant loading estimates developed during Year 3 of the permit cycle will be reviewed, and if possible, compared with previous permit cycles, with respect to our MS4 and will be adjusted based on the Village's stormwater management programs such as litter control, public education, etc. A discussion of the comparison will be included in the Assessment Program Annual Report.

Receiving water trending reports/graphs for various parameters, as presented in the Joint Annual Report, will be reviewed, and a discussion will be included in the Village of Royal Palm Beach's annual Assessment Report.

Based on the data from the water quality monitoring and the pollutant loading estimates, an effort will be made to determine if one portion of the MS4 should be targeted for additional loading reduction efforts, or additional pollutant control measures.

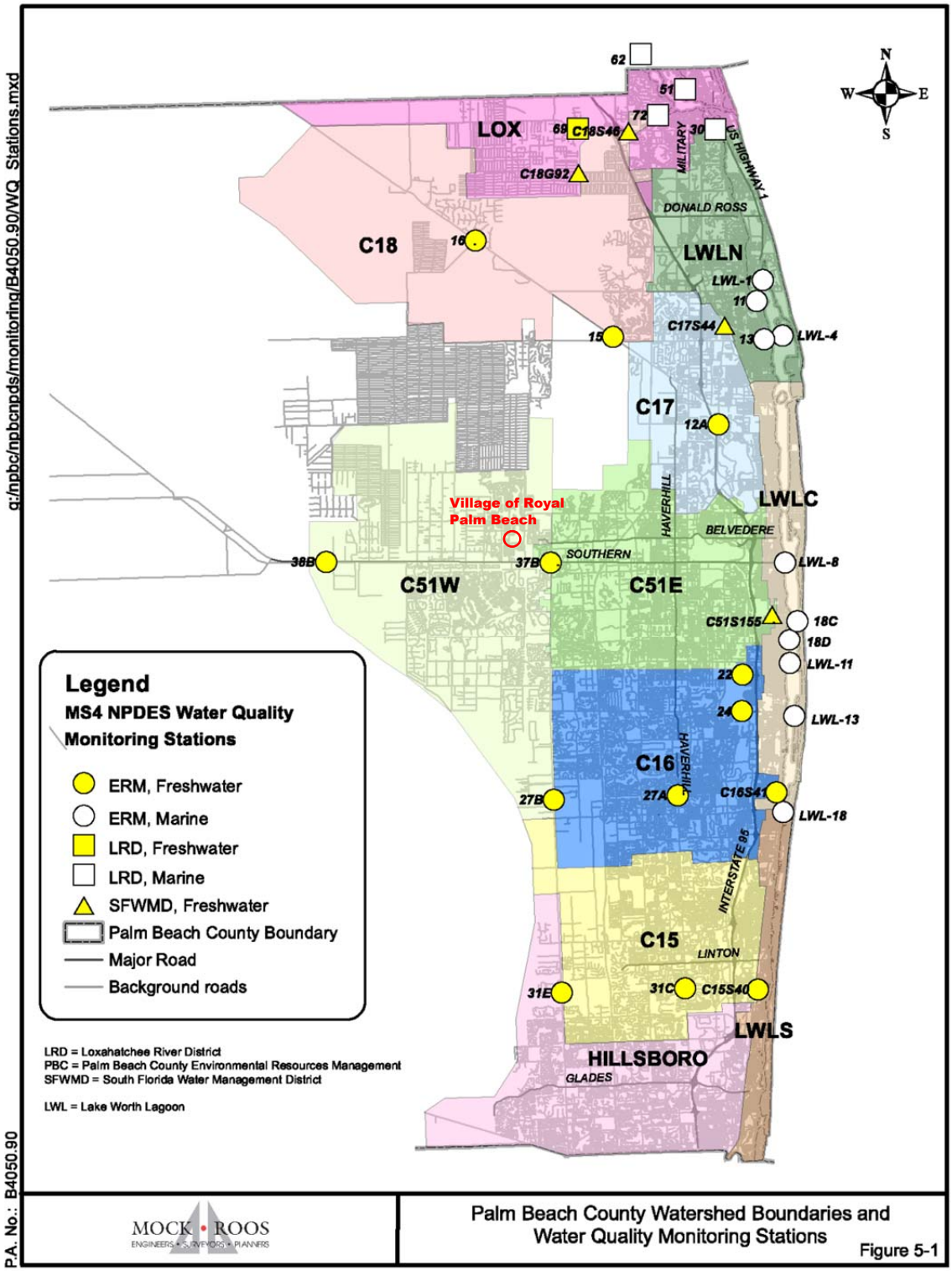
g:\npbc\npbcnpds\monitoring\B4050.90\WQ_Stations.mxd
P.A. No.: B4050.90
N
W
E
S
LOX
C18
C17
C16
C15
LWLN
LWLC
LWLS
C51W
C51E
HILLSBORO
GLADES
LINTON
DONALD ROSS
BELVEDERE
SOUTHERN
HAVERHILL
MILITARY
US HIGHWAY 1
INTERSTATE 95
Village of Royal Palm Beach
C18S46
C18G92
C17S44
C51S155
C16S41
C15S40
LWL-1
LWL-4
LWL-8
LWL-11
LWL-13
LWL-18
62
51
72
69
30
16
15
13
12A
38B
37B
18C
18D
22
24
27B
27A
31E
31C
Legend
MS4 NPDES Water Quality Monitoring Stations
ERM, Freshwater
ERM, Marine
LRD, Freshwater
LRD, Marine
SFWMD, Freshwater
Palm Beach County Boundary
Major Road
Background roads
LRD = Loxahatchee River District
PBC = Palm Beach County Environmental Resources Management
SFWMD = South Florida Water Management District
LWL = Lake Worth Lagoon
MOCK • ROOS
ENGINEERS • SURVEYORS • PLANNERS
Palm Beach County Watershed Boundaries and Water Quality Monitoring Stations
Figure 5-1

Table 5-1
Water Quality Monitoring Site Locations

Watershed	Surface Water Classification	Site Designation	Agency	Marine/ Freshwater	Northing	Easting
C-15	III (Fresh)	31E	ERM	Freshwater	760549.91	916736.89
		31C	ERM	Freshwater	760879.83	943443.02
		C15S40	SFWMD	Freshwater	760236.00	959269.79
C-16	III (Fresh)	22	ERM	Freshwater	828280.34	957602.68
		24	ERM	Freshwater	820399.97	957270.70
		27B	ERM	Freshwater	802276.58	916052.08
		27A	ERM	Freshwater	802545.25	942880.04
		C16S41	SFWMD	Freshwater	802739.87	964316.28
C-17	III (Fresh)	12A	ERM	Freshwater	882520.57	953672.56
		C17S44	SFWMD	Freshwater	903830.19	955552.70
C-18	I (Fresh)	16	ERM	Freshwater	923477.26	902076.42
		15	ERM	Freshwater	901986.07	931378.31
		C18G92	SFWMD	Freshwater	937389.78	924697.78
		C18S46	SFWMD	Freshwater	946198.14	935782.17
C-51 W	III (Fresh)	38B	ERM	Freshwater	854963.27	867962.99
C-51 E	III (Fresh)	37B	ERM	Freshwater	853637.29	916592.84
		C51S155	SFWMD	Freshwater	841132.85	964349.43
Lox	III (Fresh)	69	LRD	Freshwater	947071.77	924822.40
	III (Marine)	30	LRD	Marine	961625.76	961625.76
		51	LRD	Marine	954939.97	948224.55
		62	LRD	Marine	938898.36	961525.58
	II	72	LRD	Marine	946223.78	954573.37
LWL-N	III (Marine)	LWL-1	ERM	Marine	913398.12	964095.22
		11	ERM	Marine	908969.28	962655.71
		13	ERM	Marine	900706.79	964049.58
		LWL-4	ERM	Marine	898346.67	970040.36
LWL-C	III (Marine)	LWL-8	ERM	Marine	856238.64	968284.93
		18C	ERM	Marine	839740.15	969747.03
		18D	ERM	Marine	835593.23	967942.19
		LWL-11	ERM	Marine	830580.53	967926.64
		LWL-13	ERM	Marine	819086.28	968516.09
LWL-S	III (Marine)	LWL-18	ERM	Marine	798402.11	965585.04