Annual Report Form
For Individual NPDES Permits For
Municipal Separate Storm Sewer Systems
(RULE 62-624.600(2), F.A.C.)

- This Annual Report Form must be completed and submitted to the Department to satisfy the annual reporting requirements established in Rule 62-621.600, F.A.C.
- Submit this fully completed and signed form and any REQUIRED attachments by email to the NPDES Stormwater Program Administrator or to the MS4 coordinator (http://www.dep.state.fl.us/water/stormwater/npdes/contacts.htm). Files larger than 10MB may be placed on the FTP site at: ftp://ftp.dep.state.fl.us/pub/NPDES_Stormwater/. After uploading files, email the MS4 coordinator or NPDES Program Administrator to notify them the report is ready for downloading; or by mail to the address in the box at right.
- Refer to the Form Instructions for guidance on completing each section.
- **Please print or type information in the appropriate areas below.**

Submit the form and attachments to:
Florida Department of Environmental Protection
Mail Station 3585
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SECTION I. BACKGROUND INFORMATION			
A.	Permittee Name: Town of Glen Ridge		
B.	Permit Name: Palm Beach County MS4		
C.	Permit Number: FLS000018-004		
D.	Annual Report Year: ☐ Year 1 ☒ Year 2 ☐ Year 3 ☐ Year 4 ☐ Year 5 ☐ Other, specify Year:		
E.	Reporting Time Period (month/year): 10/1/17/ through 9/30/18		
F.	Name of the Responsible Authority: John J. Deal		
	Title: Manager		
	Mailing Address: 1501 Glen Road		
	City: Glen Ridge	Zip Code: 33406	County: Palm Beach
	Telephone Number: (561) 6978868	Fax Number: (561) 697-1755	
	E-mail Address: glenridgetownof@bellsouth.net		
G.	Name of the Designated Stormwater Management Program Contact (if different from Section I.F above): John J. Deal		
	Title: Manager		
	Department: Administration		
	Mailing Address: 1501 Glen Road		
	City: Glen Ridge	Zip Code: 33406	County: Palm Beach
	Telephone Number: (561) 697-8868	Fax Number: (561) 697-1755	
	E-mail Address: glenridgetownof@bellsouth.net		

SECTION II. MS4 MAJOR OUTFALL INVENTORY (Not Applicable in Year 1)	
A.	Number of outfalls ADDED to the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? ☐ Yes ☐ No X Not Applicable)
B.	Number of outfalls REMOVED from the outfall inventory in the current reporting year (insert "0" if none): 0 (Does this number include non-major outfalls? ☐ Yes ☐ No X Not Applicable)
C.	Is the change in the total number of outfalls due to lands annexed or vacated? ☐ Yes ☐ No X Not Applicable

SECTION III.	PART V.B. ASSESSMENT PROGRAM
A.	Provide a brief statement as to the status of water quality monitoring plan implementation. Status may include sampling frequency changes, monitoring location changes, or sampling waiver conditions. *DEP Note: If permittee participates in a collaborative monitoring plan, permittee may refer to a joint response as defined by the interlocal agreement.* Name and date of the approved plan: Current approved plan for the Group Monitoring Plan is September 8, 2016 (with issuance of the Cycle 4 permit). The Town of Glen Ridge Assessment was submitted on September 18, 2017; comments from FDEP were received May 15, 2018; FDEP comments were incorporated into the Town Assessment Plan and re-submitted on June 14, 2018. Status: The Group Monitoring Report is included in the Cycle 4 Joint Annual Reports. The Town of Glen Ridge Assessment is still awaiting approval.
B.	Provide a brief discussion of the monitoring and loading results to date which includes a summary of the water quality monitoring data and / or stormwater pollutant loading changes from the reporting year. *DEP Note: Results must be specific to the permittee's SWMP.* Please refer to the Cycle 4 Joint Annual Reports for a summary of the Group's water quality monitoring results for the reporting period. Refer to Cycle 3, Year 6 Joint Annual Report for proposed pollutant loading analysis changes. The best available information on existing pollutant loading estimates is documented in the Cycle 3, Year 3 Joint Annual Report. Attached is the Town of Glen Ridge 'Water Quality Monitoring Report'.
C.	Attach a monitoring data summary as required by the permit. An analysis of the data discussing changes in water quality and/or stormwater pollutant loading from previous reporting years. *DEP Note: Analysis must be specific to the permittee's SWMP.* See response for Section III.B. above

SECTION IV.	FISCAL ANALYSIS
A.	Total expenditures for the NPDES stormwater management program for the current reporting year: $ 2893
B.	Total budget for the NPDES stormwater management program for the subsequent reporting year: $ 10,925
C.	Did the current reporting year resources decrease from the previous year? Y **X** / N ☐ If program resources decreased, provide a discussion of the impacts on the implementation of the SWMP. It is estimated that the Town expended $5350 in FY 16/17 for the NPDES program and stormwater drainage system. The Town only expended $2893 for the same purposes in FY 17/18. The difference in expenditures/resources is due the Town having a part-time Manager in FY 17/ 18. The implementation of the NPDES program was not hindered because of the changes and no significant impacts occurred as a result. The Town has budgeted a substantial increase to the Manager's salary for FY18/19 and has hired a consultant to facilitate the NPDES program. These increases in staff and personnel will increase resources for FY 18/19.

SECTION V. MATERIALS TO BE SUBMITTED WITH THIS ANNUAL REPORT FORM

Only the following materials are to be submitted to the Department along with this fully completed and signed Annual Report Form (check the appropriate box to indicate whether the item is attached or is not applicable):

Attached	N/A	Required Attachments	Permit Citation	Attachment Number/Title
	X	Any additional information required to be submitted in this current annual reporting year in accordance with Part III.A of your permit that is not otherwise included in Section VII below.	Part III.A	
☐	X	An explanation of why the minimum inspection frequency in Table II.A.1.a. was not met, if applicable.	Part II.A.1	
☐	X	A list of the flood control projects that did not include stormwater treatment and an explanation for each of why it did not (if applicable).	Part III.A.4	
X	☐	A monitoring data summary as directed in Section III.C above and in accordance with Rule 62-624.600(2)(c), F.A.C.	Part V.B.3	Attachment 1 - Water Quality Monitoring Report'
☐	X	YEAR 1 ONLY: An inventory of all known major outfalls and a map depicting the location of the major outfalls (hard copy or CD-ROM) in accordance with Rule 62-624.600(2)(a), F.A.C.	Part III.A.1	
X	☐	YEAR 2: A summary review of codes and regulations to reduce the stormwater impact from development.	Part III.A.2	Attachment 2 -Land Development Regulations and Code Review
	X	Year 3 ONLY: The estimates of pollutant loadings and event mean concentrations for each major outfall or each major watershed in accordance with Rule 62-624.600(2)(b), F.A.C.	Part V.A	
☐	X	YEAR 3: Summary of TMDL Monitoring Results (if applicable).	Part VIII.B.2	
☐	X	YEAR 3: Bacteria Pollution Control Plan (if applicable).	Part VIII.B.3	
☐	X	YEAR 4: A follow-up report on plan implementation of changes to codes and regulations to reduce the stormwater impact from development.	Part III.A.2	
☐	X	YEAR 4: A report on any amendments to the applicable legal authority (if applicable).	Part III.A.7.a	
☐	X	YEAR 4: Permit re-application information in accordance with Rule 62-624.420(2), F.A.C. • The monitoring plan (with revisions, if applicable). • If the total annual pollutant loadings have not decreased over the past two permit cycles, revisions to the SWMP, as appropriate.	Part V.B.3 Part V.A.3	
☐	X	YEAR 4: TMDL Supplemental SWMP (if applicable).	Part VIII.B.3	

DO NOT SUBMIT ANY OTHER MATERIALS
(such as records and logs of activities, monitoring raw data, public outreach materials, etc.)

SECTION VI. CERTIFICATION STATEMENT AND SIGNATURE

The Responsible Authority listed in Section I.F above must sign the following certification statement, as per Rule 62-620.305, F.A.C:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name of Responsible Authority (type or print): John J. Deal

Title: Manager

Signature: John J. Deal Date: 12/ 17 / 18

SECTION VII.	STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE								
A.	B.						C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity						Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
Part III.A.1	Structural Controls and Stormwater Collection Systems Operation									
	Report the current known inventory. Report the number of inspection and maintenance activities conducted for each applicable type of structure included in Table II.A.1.a, and the percentage of the total inventory of each type of structure inspected and maintained. *Note: Delete structures that are not in your MS4's inventory. The permittee may choose its own unit of measurement for each structural control to be consistent with the unit of measurement in the documentation. Unit options include: miles, linear feet, acres, etc.*									
	Type of Structure	**Number of Structures**	**Number of Inspections**	**Percent Inspected**	**Number of Maintenance Activities**	**Percent Maintained**				
	Wet detention systems	1	1	100	0	100		Wet Detention System-Structural Control Inspection Form	Jack Horniman, Town Planning Consultant	FY 17/18 Log
	Conveyance swales (miles)	5	12	100	0	100		Conveyance Swale-Structural Control Inspection Form	Town Manager; Town Planning Consultant	FY 17/18 Log
	Major outfalls	1	1	100	0	100		Major Stormwater Outfall-Structural Control Inspection Form	Town Planning Consultant	FY 17/18 Log
	Weirs or other control structures	1	1	100	0	100			Town Planning Consultant	FY 17/18 Log
	Pipes / culverts (lf)		1	100	0	100		Pipes/Culverts-Structural Control Inspection Form	Town Planning Consultant	FY 17/18 Log
	Inlets / catch basins / grates	4	4	100	0	100		Inlet/Catch Basin/Grates-Structural Control	Town Planning Consultant	FY 17/18 Log

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE									
A.	B.					C.	D.	E.	F.
Permit Citation/ SWMP Element	Permit Requirement/Quantifiable SWMP Activity					Number of Activities Performed	Documentation / Record	Entity Performing the Activity	Comments
							Inspection Form		
	If the minimum inspection frequencies set forth in Table II.A.1.a. were not met, provide as an attachment an explanation of why they were not and a description of the actions that will be taken to ensure that they will be met.	See above					All documentation listed above	Town Planning Consultant	All minimum inspections met or exceeded

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Part III.A.1 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: Structural controls in good operating condition				
	Limitations: None				
	SWMP revisions implemented to address limitations: None needed				
Part III.A.2	**Areas of New Development and Significant Redevelopment**				
	Report the number of significant development projects, including new and redevelopment, reviewed and approved by the permittee for post-development stormwater considerations.				
	Number of significant development projects reviewed	0			No new significant development during permit year
	Number of significant development projects approved	0			Not Applicable (N/A)
	Provide in the Year 2 Annual Report the summary report of the review activity. Provide in the Year 4 Annual Report the follow-up report on plan implementation.				
	Year 2 ONLY: Attach the summary report of the review activity	0			N/A
	Year 4 ONLY: Attach the follow-up report on plan implementation	0			N/A
Part III.A.2 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: Glen Ridge is primarily a low density residential community that is nearly built-out; only two (2) non-residential developed sites in Town (1 commercial property and 1 charter school) which are both on private systems and not part of the MS4				
	Limitations: None identified				
	SWMP revisions implemented to address limitations: None				
Part III.A.3	**Roadways**				
	Report on the litter control program, including the frequency of litter collection, an estimate of the total number of road miles cleaned or amount of area covered by the activities, and an estimate of the quantity of litter collected. *Note: If the permittee does not contract activities, delete CONTRACTOR activities.*				
	PERMITTEE Litter Control: Frequency of litter collection	Monthly/12	Safety Inspection Log	Individual Property Owners/ Residents	Property owners/ residents responsible for litter and trash removal in swale
	PERMITTEE Litter Control: Estimated amount of area maintained (miles)	5	Town Map	John Deal, Town Manager	

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
	PERMITTEE Litter Control: Estimated amount of litter collected (bags)	2	Safety Inspection Log	Town Manager	
	OPTIONAL: If an Adopt-A-Road or similar program is implemented, report the total number of road miles cleaned and an estimate of the quantity of litter collected. If you do not participate in an Adopt-A-Road program, report "0".				
	Trash Pick-up Events: Total miles cleaned	0			No program needed; all local streets
	Trash Pick-up Events: Estimated amount of litter collected (cy)	0			N/A
	Adopt-A-Road: Total miles cleaned	0			No adopt a road program
	Adopt-A-Road: Estimated amount of litter collected (cy)	0			N/A
	Report on the street sweeping program, including the frequency of the sweeping, total miles swept, an estimate of the quantity of sweepings collected, and the total nitrogen and total phosphorus loadings that were removed by the collection of sweepings. If no street sweeping program is implemented, provide the explanation of why not in column F.				
	Frequency of street sweeping	0			No street sweeping; there are no curb and gutters in Town; roadway system is entirely served by roadway conveyance swales
	Total miles swept	0			N/A
	Estimated quantity of sweeping material collected (cy / tons)	0			N/A
	Total phosphorous loadings removed (pounds)	0			N/A
	Total nitrogen loadings removed (pounds)	0			N/a
	Report the equipment yards and maintenances shops that support road maintenance activities, and the number of inspections conducted for each facility.				
	Name of Facility	**Number of Inspections**			
	N/A	0			No municipal facilities; the Town street system is

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					entirely served by grass swales; there are no curb and gutters.
Part III.A.3 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: Roadways consist of local streets; litter control performed by individual property owners/residents requiring no contracted services; Town size (100 acres) and small population create minimal issues.				
	Limitations: None				
	SWMP revisions implemented to address limitations: None				
Part III.A.4	**Flood Control Projects**				
	Report the total number of flood control projects that were constructed by the permittee during the reporting period and the number of those projects that did NOT include stormwater treatment. The permittee shall provide a list of the projects where stormwater treatment was not included with an explanation for each of why it was not. Report on any stormwater retrofit planning activities and the associated implementation of retrofitting projects to reduce stormwater pollutant loads from existing drainage systems that do not have treatment BMPs.				
	Flood control projects completed during the reporting period	**0**			No flood control projects during permit year.
	Flood control projects completed that did <u>not</u> include stormwater treatment	0			N/A
	Stormwater retrofit projects planned/under construction	0			None planned
	Stormwater retrofit projects completed	0			N/A
	If there were projects that did not include stormwater treatment, provide as an attachment a list of the projects and an explanation for each of why it did not.	N/A			
Part III.A.4 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: There are no imminent, or identifiable, flood control project needs at the present time				
	Limitations: N/A				
	SWMP revisions implemented to address limitations: None identified				

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Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
Part III.A.5	**Municipal Waste Treatment, Storage, and Disposal Facilities Not Covered by an NPDES Stormwater Permit**				
	Report the applicable facilities and the number of the inspections conducted for each facility.				
	Name of Facility	**Number of Inspections**			
	N/A	0			No municipal TSD facilities
Part III.A.5 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: There are no Waste TSD facilities in Town				
	Limitations: N/A				
	SWMP revisions implemented to address limitations: N/A				
Part III.A.6	**Pesticides, Herbicides, and Fertilizer Application**				
	Report the number of permittee personnel applicators and contracted commercial applicators of pesticides and herbicides who are FDACS certified / licensed. Report the number of permittee personnel who have been trained through the Green Industry BMP Program and the number of contracted commercial applicators of fertilizer who are FDACS certified / licensed.				
	PERSONNEL: FDACS public applicators of pesticides/herbicides	1	State License	Town Manager	FY 17/18 Log
	CONTRACTORS: FDACS commercial applicators of pesticides/ herbicides	2	State Licenses	Greenworks ; Larry Ertel	FY 17/18 Log
	PERSONNEL: Green Industry BMP Program training completed	1	State License	Town Manager	FY 17/18 Log
	CONTRACTORS: FDACS certified / licensed applicators of fertilizer	2	State Licenses	Greenworks; Larry Ertel	FY 17/18 Log
	Provide a copy of the adopted ordinance with the Year 2 Annual Report. If this provision is not applicable because the permittee is not within the watershed of a nutrient-impaired water body, indicate that in Column F.				
	Year 2 ONLY: Attach copy of adopted Florida-friendly ordinance	N/A			
	Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage citizens to reduce their use of pesticides, herbicides and fertilizers including the type and number of activities conducted, the type and number of materials distributed, and the number of Web site visits (if applicable).				
	Public Education and Outreach Program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			
	Brochures/Flyers/Fact sheets distributed	32	Brochures/ Flyers	Palm Beach County (PBC) Stormwater Systems Group; PBC Solid Waste Authority	FY 17/18 Log

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				(PBCSWA); Florida Department of Environmental Protection (FDEP); Town Manager	
	Public displays (e.g. kiosks, storyboards, posters, etc.)	1	Display Table in Town Hall	Town Manager	
Part III.A.6 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: Good public information system is being implemented				
	Limitations: None identified				
	SWMP revisions implemented to address limitations: None				
Part III.A.7.a	**Illicit Discharges and Improper Disposal — Inspections, Ordinances, and Enforcement Measures**				
	Report amendments in Year 4.				
	Year 4 ONLY: Attach a report on amendments to applicable legal authority	N/A			
Part III.A.7.c	**Illicit Discharges and Improper Disposal — Investigation of Suspected Illicit Discharges and/or Improper Disposal**				
	Report on the proactive inspection program, including the number of inspections conducted by the permittee, the number of illicit activities found, and the number and type of enforcement actions taken.				
	Proactive inspections for suspected illicit discharges	52	Monthly Safety Inspection Log	Town Manager	Weekly inspections performed by Town; FY 17/18
	Illicit discharges found during a proactive inspection	0			None found

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	NOV/WL/citation/fines issued for illicit discharges found during proactive inspection	0			None issued
	Report on the reactive investigation program as it relates to responding to reports of suspected illicit discharges, including the number of reports received, the number of investigations conducted, the number of illicit activities found, and the number and type of enforcement actions taken.				
	Reports of suspected illicit discharges received	0			No reports received
	Reactive investigations of reports of suspected illicit discharges etc.	0			No investigations
	Illicit discharges etc. found during reactive investigation	0			None found
	NOV/WL/citation/fines issued for illicit discharges etc. found during reactive investigation	0			None issued
	Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training) within the reporting year.				
	Personnel trained	2	Illicit Discharge Detention Elimination (IDDE) video	Town Manager; Town Planning Consultant	
	Contractors trained	0			No contractors used for these purposes
Part III.A.7.d	**Illicit Discharges and Improper Disposal — Spill Prevention and Response**				
	Report on the spill prevention and response activities, including the number of spills addressed.				
	Hazardous and non-hazardous material spills responded to				
	Report the type of training activities, and the number of permittee personnel and contractors trained (both in-house and outside training) within the reporting year.				
	Personnel trained	0	PBC Fire Incident Report	PBC Fire Rescue Department	No hazardous during the permit year
	Contractors trained	0			No contractors used for these purposes
Part III.A.7.e	**Illicit Discharges and Improper Disposal — Public Reporting**				
	Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the public reporting of suspected illicit discharges and improper disposal of materials, including the type and number of activities conducted, the type and number of materials distributed, and the number of Web site visits (if applicable).				
	Public Education and Outreach Program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			

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	Brochures/Flyers/Fact sheets distributed	32	Brochures/ Flyers	PBC Stormwater Systems Group; PBCSWA; FDEP; Town Manager	FY 17/18 Log
	Public displays (e.g. kiosks, storyboards, posters, etc.)	1	Display Table in Town Hall	Town Manager	
Part III.A.7.f	**Illicit Discharges and Improper Disposal — Oils, Toxics, and Household Hazardous Waste Control**				
	Report on the public education and outreach activities that are performed or sponsored by the permittee within the permittee's jurisdiction to encourage the proper use and disposal of oils, toxics, and household hazardous waste, including the type and number of activities conducted, the type and number of materials distributed, the amount of waste collected / recycled / properly disposed, and the number of Web site visits (if applicable).				
	Public Education and Outreach Program	The public outreach and education plan is carried out as a joint effort by the Palm Beach County Co-permittees. Please see the Palm Beach County Joint Annual Report for the public education and outreach information.			
	Brochures/Flyers/Fact sheets distributed	32	Brochures/Flyers	PBC Stormwater Systems Group; PBCSWA; FDEP: Town Manager	FY 17/18
	Public displays (e.g. kiosks, storyboards, posters, etc.)	1	Display Table in Town Hall	Town Manager	

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Part III.A.7.g	**Illicit Discharges and Improper Disposal — Limitation of Sanitary Sewer Seepage**				
	Report on the type and number of activities undertaken to reduce or eliminate SSOs and inflow/ infiltration, the number of SSOs or inflow / infiltration incidents found and the number resolved, and the name of the owner of the sanitary sewer system within the permittee's jurisdiction. Report only the SSOs and inflow / infiltration incidents into the MS4.				
	Owner of the sanitary sewer system	No central sanitary sewer system in MS4			
	Activity to reduce/eliminate SSOs and I&I: (description)	0			N/A
	Activity to reduce/eliminate SSOs and I&I: (description)	0			N/A
	SSO incidents discovered	0			N/A
	SSO incidents resolved	0			N/A
	Inflow / infiltration incidents discovered	0			N/A
	Inflow / infiltration incidents resolved	0			N/A
Part III.A.7 Summary	For activities required by Part III.A.7: Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: No illicit discharges or improper disposal reported during the permit year; Town Manager and Town Planning Consultant have been trained; good public information being implemented				
	Limitations: None identified				
	SWMP Revisions implemented to address limitations: None				
Part III.A.8.a	**Industrial and High-Risk Runoff — Identification of Priorities and Procedures for Inspections**				
	Report on the high-risk facilities inventory, including the type and total number of high risk facilities and the number of facilities newly added each year. Report on the high-risk facilities inspection program, including the number of inspections conducted and the number and type of enforcement actions taken.				

Type of Facility	**Number of Facilities**	**Number of Inspections**	**Enforcement Actions**			
Operating municipal landfills	**0**					No municipal Landfills in Town
Hazardous waste treatment, storage, disposal and recovery (HWTSDR) facilities	**0**					No HWTSDR facilities

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	EPCRA Title III, Section 313 facilities (TRI)	**0**					No EPCRA facilities
	Facilities determined as high risk by the permittee	**0**					No high-risk facilities
Part III.A.8.b	**Industrial and High-Risk Runoff — Monitoring for High Risk Industries**						
	Report the number of high risk facilities sampled.						
	High risk facilities sampled		0				No high facilities
Part III.A.8 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.						
	Strengths: No municipal landfills, HWTSDR EPCRA or high-risk facilities in Town facilities;						
	Limitations: None						
	SWMP revisions implemented to address limitations: None						
Part III.A.9.a	**Construction Site Runoff — Site Planning and Non-Structural and Structural Best Management Practices**						
	Report the number of permittee and private pre-construction site plans reviewed for stormwater, erosion, and sedimentation controls, and the number approved.						
	PERMITTEE SITES: Construction site plans reviewed		0				No new permittee construction site plans reviewed during permit year
	PERMITTEE SITES: Construction site plans approved		0				N/A
	PRIVATE SITES: Construction site plans reviewed		0				No private site construction site plans reviewed during permit year
	PRIVATE SITES: Construction site plans approved		0				N/A
	Report the number of development permit applicants notified of the ERP and CGP, and the number of applicants who confirmed ERP and CGP coverage.						
	Notified of ERP stormwater permit requirements		0				No new permittee development or redevelopment during permit year; therefore, no ERP permits

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE					
A.	**B.**	**C.**	**D.**	**E.**	**F.**
Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
					required
	Confirmed ERP coverage	0			N/A
	Notified of CGP stormwater permit requirements	0			N/A
	Confirmed CGP coverage	0			N/A
Part III.A.9.b	**Construction Site Runoff — Inspection and Enforcement**				
	Report on the inspection program for privately-operated and permittee-operated construction sites, including the number of active construction sites during the reporting year, the number of inspections of active construction sites, the percentage of active construction sites inspected, and the number and type of enforcement actions / referrals taken.				
	PERMITTEE SITES: Active construction sites	0			No new permittee site construction during the permit year
	PERMITTEE SITES: Pre-, During, and Post inspections of active construction sites for E&S and waste control BMPs	0			N/A
	PERMITTEE SITES: Percentage of active construction sites inspected	0			N/A
	PRIVATE SITES: Active construction sites	0			No new private site development during permit year
	PRIVATE SITES: Pre-, During, and Post inspections of active construction sites for E&S and waste control BMPs	2	Inspection Card	Bill Denison, Building Official	FY 17/18 Log
	PRIVATE SITES: Percentage of active construction sites inspected	100	Inspection Card	Building Official	FY 17/18 Log
	Enforcement Action	0			None required
Part III.A.9.c	**Construction Site Runoff — Site Operator Training**				
	Report the type of training activities, the number of inspectors, site plan reviewers and site operators trained (both in-house and outside training).				
		DEP Certification	**Annual Training**		
	Permittee construction site inspectors	**1**	2	Soil and Erosion Control (SEC) video	Town Manager; Town Planning Consultant	
	Permittee construction site plan reviewers		0			No new site plan reviewer's training during permit year
	Permittee construction site operators		0			Contracted out

SECTION VII. STORMWATER MANAGEMENT PROGRAM (SWMP) SUMMARY TABLE					
A.	**B.**	**C.**	**D.**	**E.**	**F.**
Permit Citation/ SWMP Element	**Permit Requirement/Quantifiable SWMP Activity**	**Number of Activities Performed**	**Documentation / Record**	**Entity Performing the Activity**	**Comments**
Part III.A.9 Summary	Provide an evaluation of the Stormwater Management Program according to Part VI.B.2 of the permit.				
	Strengths: No new construction during permit year				
	Limitations: N/A				
	SWMP revisions implemented to address limitations: N/A				

SECTION VIII. CHANGES TO THE STORMWATER MANAGEMENT PROGRAM (SWMP) ACTIVITIES (Not Applicable in Year 4)		
A.	**Permit Citation/ SWMP Element**	**Proposed Changes to the Stormwater Management Program Activities Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change) — REQUIRES DEP APPROVAL PRIOR TO CHANGE IF PROPOSING TO REPLACE OR DELETE AN ACTIVITY.**
	N/A	N/A
B.	**Permit Citation/ SWMP Element**	**Changes to the Stormwater Management Program Activities NOT Established as Specific Requirements Under Part III.A of the Permit (Including the Rationale for the Change)**
	N/A	N/A

SECTION IX. TMDL Status Report

A. YEAR 1 Provide a table summarizing the status of the TMDL process. Include a list of prioritized TMDLs and their monitoring and implementation schedule; and include the Identification number of the outfall prioritized for TMDL monitoring.

WBID Number	Segment/ Waterbody/ Basin	Pollutant of Concern	TMDL DEP / EPA	Percent Reduction (WLA)	Priority Rank	Priority Outfall	Monitoring Summary / BPCP Due Date	Supplemental SWMP Due Date
N/A			☐ / ☐					
			☐ / ☐					
			☐ / ☐					

B. YEAR 3 and annually thereafter, provide a summary of the estimated load reductions that have occurred for the pollutant(s) of concern being discharged from the MS4 to the TMDL water body during the reporting period and cumulatively since the date the Supplemental SWMP was implemented.

Year 3: Submit a Monitoring data summary or BPCP (if applicable).

Year 4: Submit a Supplemental SWMP (if applicable).

WBID Number	Pollutant of Concern	Monitoring Summary / BPCP Submitted	Supplemental SWMP Submitted	Projected load reductions OR Actual load reductions to date
N/A				

C. Provide a brief statement as to the status of TMDL implementation according to Part VIII.B of the permit (e.g. status of monitoring to validate WLA):

Town of Glen Ridge
(NPDES Stormwater Permitting Program)

'Water Quality Monitoring Report'

(submitted as **Attachment 1** to the Town of Glen Ridge, Florida Permit Year 2, Fourth Term Annual NPDES Report)

Prepared by JLH Associates
November 2018

'Water Quality Monitoring Report'

Purpose

The purpose of the 'Water Quality Monitoring Report' is to provide information for the Town of Glen Ridge to determine the overall effectiveness of its stormwater management program in reducing stormwater pollutant loadings from its Municipal Separate Sewer System (MS4) to receiving bodies.

The following items and concerns are examined as part of this water quality monitoring report:

A. **Impaired Water Bodies** - The Florida Department of Environmental Protection (FDEP) assessment program for water body impairments will be analyzed and Cloud Lake's contribution, if any, to those impairments will be assessed.

B. **Water Quality Monitoring Program** - The water quality monitoring program is intended to identify local sources where urban stormwater is affecting surface water resources.

C. **Water Quality Trend Analysis** – Using the water quality monitoring results trends can be identified and evaluated.

D. **Pollutant Loading Estimates/Results** - Pollutant loadings and results are reported.

E. **Conclusions** - Final conclusions are made regarding water quality and nutrient loading impacts.

Impaired Water Bodies

The Florida Department of Environmental Protection (FDEP) has an ambient water quality and assessment program for water body impairments. The State is divided into five (5) working groups, with each group cycling through a 5-year assessment cycle. The 5-year cycle includes planning, water quality, monitoring, preliminary evaluation, public meetings, final evaluation, and Secretarial (State) adoption of the verified lists. The Town of Glen Ridge is in Group 3. The latest (Cycle 3) assessment occurred in 2017. Based on the FDEP verified assessment listing, Cloud Lake is in Water Body Identification (WBID 3245F) of the Lake Worth Lagoon. Based on this assessment, there is no identified impairments for this WBID. As such, there are no projected TMDLs for this WBID.

Water Quality Monitoring Program

As a co-permittee, the Town of Glen Ridge uses the ambient water quality data provided by Palm Beach County MS4 Group.

Based on the location of outfall of the Glen Ridge MS4, two (2) monitoring stations have been established. Station 37B is a Palm Beach County Environmental Resource Monitoring Site and Station C51S155 is a South Florida Water Management Monitoring Site. The following Table identifies these monitoring stations along with relevant information about the locations. More specifically, Station 37B is located upstream approximately eight (8) miles west of Glen Ridge at the intersection of SR7 and Southern Boulevard (SR80). Station C51S155 is located east of Dixie Highway at the discharge point into Lake Worth (Intracoastal Waterway) approximately two (2) miles south and east of the Town of Glen Ridge.

Table 1
MS4 Monitoring Stations

Monitoring Station Number	Location Description	Northing/ Easting	Receiving Water Body
37B	C-51 Basin	853637.29/ 916592.84	C-51 Stub Canal
C51S155	C-51 Basin	841132.85/ 964349.43	C-51 Stub Canal

The primary concern that FDEP has regarding the stormwater permitting program is related to nutrients and what impacts are created by nutrients into the stormwater system. The Town of Glen Ridge has evaluated nutrient monitoring results at the above two locations; the same locations used by the Town of Cloud Lake. The Town of Glen Ridge and Town of Cloud Lake systems are interconnected by Gem Lake which lies partly in Glen Ridge and partly in Cloud Lake which feeds into Cloud Lake's detention lake for eventual discharge. The 10-year trend referenced in the Palm Beach County MS4 Year 1, Cycle 4 Joint Report is used for evaluating the nutrient levels. Specifically, Total Nitrogen (TN), Total Phosphorus (TP) and Chlorophyll-A (a surrogate for nutrient enrichment) are analyzed and evaluated below. Data for monitoring stations in the C-51 watershed are examined.

At this time the State does not have any numeric nutrient criteria established for the C51 Canal (South Florida Region) for TN or TP. Chlorophyll-A has criteria of less than or equal to 20 ug/l.

Based on information provided in the PBC Cycle 4 Year 1 Joint Annual Report, water quality monitoring results for the last 10 years (2008-2017) is provided in Tables 2, 3, 4, respectively for TN, TP and Chlorophyll-A. Review of the results indicate a general reduction in values from west (Station 37B) to east (Station C51S155). Reported Chlorophyll-A values are well below the standard of 20 ug/l, indicating that the C-51 Canal is not nutrient impaired and Cloud Lake an eastern contributor is not adversely affecting nutrient levels.

Table 2 Annual Geometric Mean Total Nitrogen Concentration (mg/l) C-51 Watershed		
Year	Station 37B	Station C51S155
2008	1.28	0.90
2009	No Record	1.18
2010	1.60	1.25
2011	1.26	0.88
2012	0.76	0.95
2013	1.26	1.96
2014	1.16	0.73
2015	1.09	0.97
2016	1.02	1.14
2017	0.80	0.79

Table 3 Annual Geometric Mean Total Phosphorus Concentration (mg/l) C-51 Watershed		
Year	Station 37B	Station C51S155
2008	0.08	0.05
2009	No Record	No Record
2010	0.11	0.07
2011	0.06	0.04
2012	0.04	0.03
2013	0.08	0.06
2014	0.14	0.06
2015	0.08	0.08
2016	0.09	0.06
2017	0.05	0.06

Table 4 Annual Geometric Mean Chlorophyll-A Concentration (ug/l) C-51 Watershed		
Year	Station 37B	Station C51S155
2008	10.88	No Record
2009	No Record	No Record
2010	8.25	No Record
2011	4.84	No Record
2012	4.21	No Record
2013	4.36	No Record
2014	2.79	0.03
2015	2.06	No Record
2016	3.93	No Record
2017	3.98	No Record
Source: Extracted from Table 5-10, p. 109 of the Year 1, Cycle 4, PBC Joint Annual Report. NC - No Criteria		

Water Quality Trends

To evaluate nutrient trends the water quality data for the last 10 years shown in graphs (Figures 1-3) depict the trends respectively for TN, TP and Chlorophyll-A. Each figure contains the separate plots for Stations 37B and C51S155.

Review of the graphs indicate a general declining trend for all three water quality monitoring parameters except for total phosphorous at Station C51S155. Typically, the nutrient concentrations are lower from west to east. Any numeric nutrient impairment is based on chlorophyll-a values exceeding 20 ug/l. The data graphs indicate the chlorophyll-a values are well below the State criteria. In regard to TP, Glen Ridge has a very effective Best Management Practice in place that has a high level of reduction as noted in the below pollutant loading section.

Pollutant Loading Estimates/Results

At this time the Town does not have information on the loading contributions for Glen Ridge into the C-51 watershed. The Palm Beach County (PBC) MS4 group will be estimating pollutant loadings and reporting the information in the 3rd year report. This information is likely to be provided to the Town of Glen Ridge and documented in the 3rd year report.

Glen Ridge has in place stormwater management programs that reduces the nutrient loading into the C-51 watershed/WBID 3245F. These programs include maintenance of conveyance swales, detention lake, public education (brochures and flyers for public distribution, MS4group activities and an adopted Fertilizer Ordinance).

All stormwater runoff from the Glen Ridge MS4 system discharges into the Town of Glen Ridge and Town of Cloud Lake on-site lake detention system prior to discharging into the West Palm Beach Stub Canal. The estimated load reductions for this Best Management Practice (BMP) per FDEP BMP efficiencies table is 50% for Total Nitrogen (TN) and 80% for Total Phosphorus (TP).

Conclusions

The Town of Glen Ridge stormwater management programs are effective in reducing nutrient loadings. This is supported by the water quality monitoring program (both FDEP and the MS4 group information) and pollutant loading information. At this time there is no need to develop further stormwater management programs.

Location Map for Water Quality Monitoring Sites

Figure 5-1
Annual Geometric Mean Total Nitrogen Concentration (mg/l)
C-51 Stations

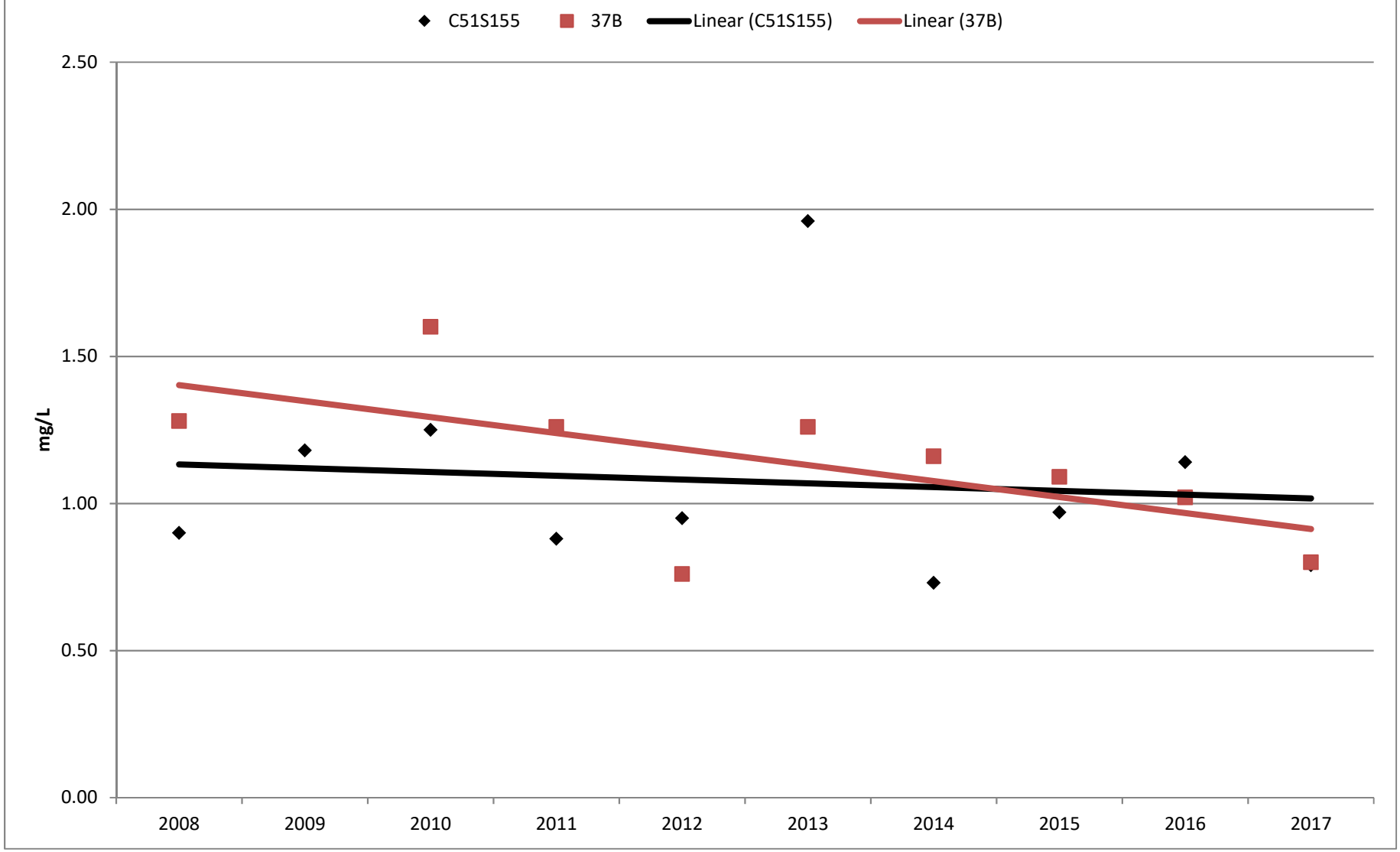


Figure 5-2
Annual Geometric Mean Total Phosphorous Concentration (mg/l)
C-51 Stations

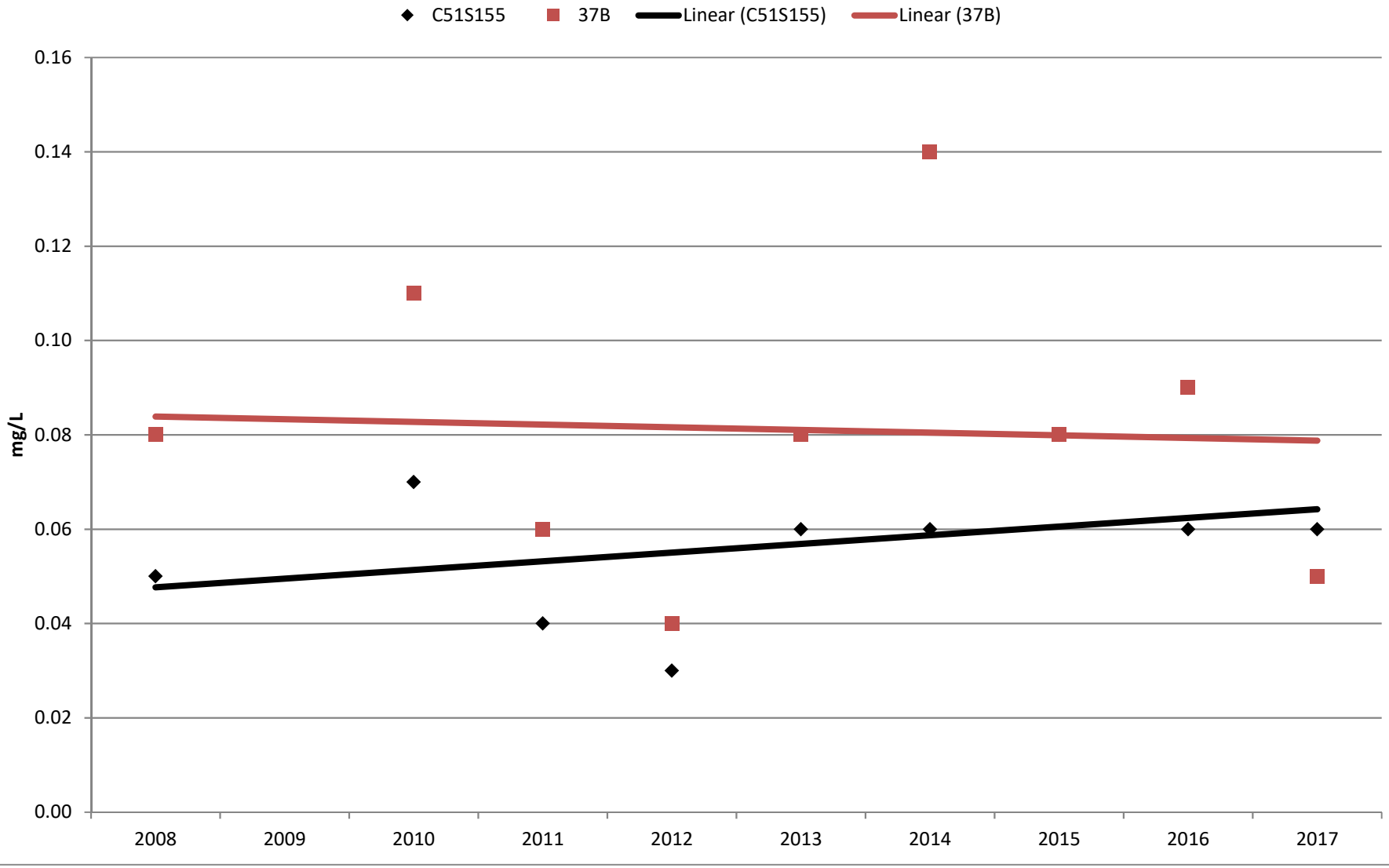
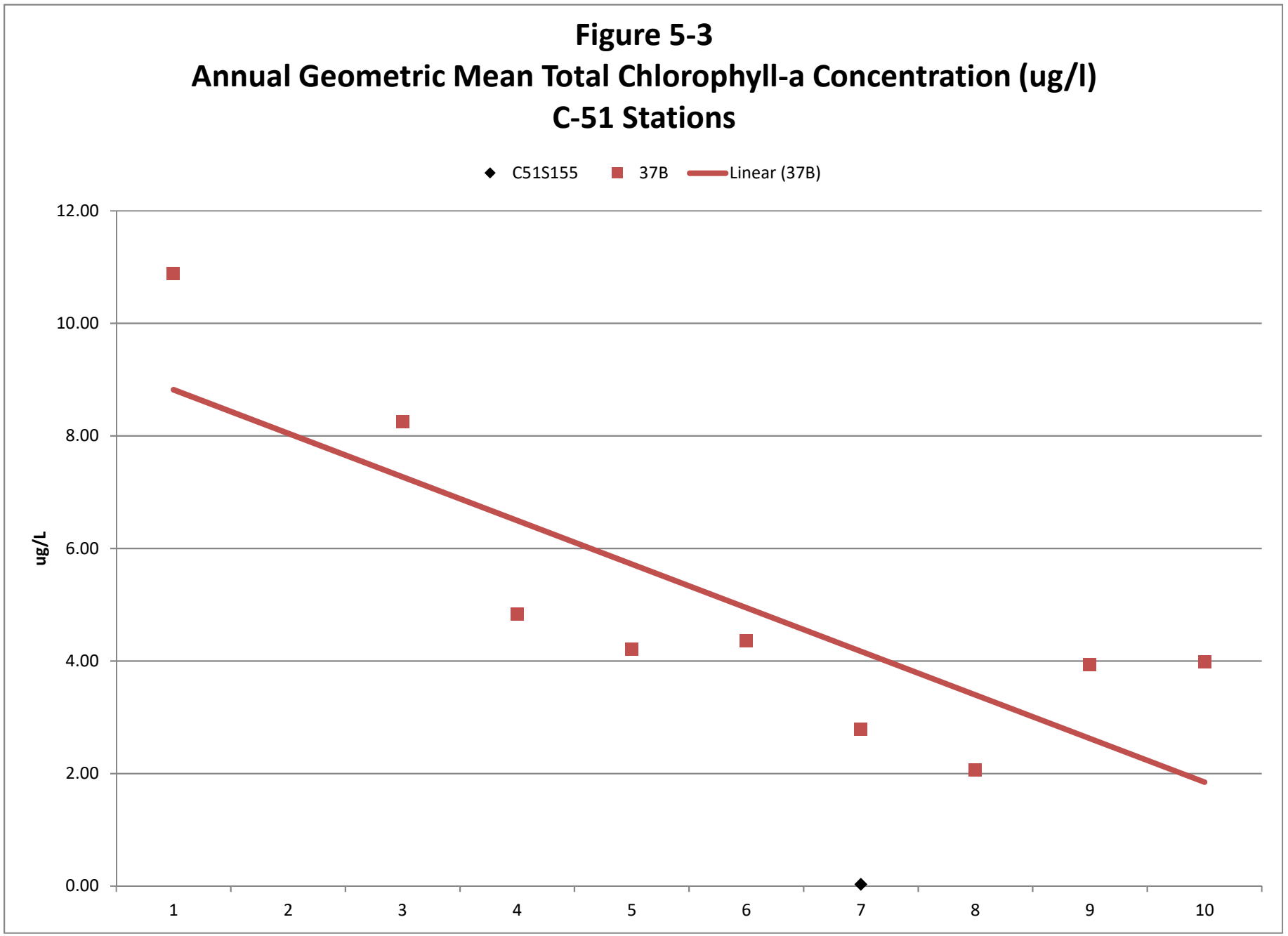


Figure 5-3
Annual Geometric Mean Total Chlorophyll-a Concentration (ug/l)
C-51 Stations



Summary Report

"Land Development Regulations and Code Review Aimed at Low Impact Design and Other Innovative Design Techniques"

(Submitted as **Attachment 2** to the Town of Glen Ridge, Florida Permit Year 2, Fourth Term NPDES Annual Report)

Prepared by the Town of Glen Ridge
and
JLH Associates

December, 2012
Revised/Updated November, 2018

EXECUTIVE SUMMARY

The Town of Glen Ridge has undertaken a complete review of its codes and land development regulations (LDRs) in regard to Low Impact Design (LID) and other innovative design techniques. Determinations are made as to the adequacy of these regulations, the current status of these regulations and recommendations for future actions, if, and when, deemed appropriate. Chapters of the Glen Ridge Code of Ordinances are identified which were determined to be relevant to this review. Specific sub-sections and paragraphs are cited, and in many cases quoted or discussed. LIDs relevant to this low density, single family community are identified. They include regulations and techniques governing conveyance swales; pervious and impervious surfaces; landscaping, including the Florida Yards and Neighborhood (FYN) program, and conservation; refuse, garbage, toxic wastes and other nuisances; and, a review of the adopted Town of Glen Ridge Comprehensive Plan. It has been determined that the regulations governing these subject areas are meeting the needs of this nearly developed community. The Town adopted a Fertilizer Ordinance in FY12/13. It is recommended that Glen Ridge make available to its residents the myriad of information regarding landscaping and 'water conservation' practices available through the FYN Florida Friendly Landscaping Program.

COMMUNITY PROFILE

The Town of Glen Ridge is located in the central portion of eastern Palm Beach County. The Town is basically land locked in that there is no land areas adjacent to it where Glen Ridge could expand its corporate limits. The Town of Glen Ridge abuts the western and southern limits of Cloud Lake. Palm Beach International Airport owns the property north of Glen Ridge which eliminates, at the present time, possible expansion area for the Town.

The Town of Glen Ridge is approximately 98 % built-out at the present time. Glen Ridge is developed primarily as a low density residential, single family community. Low density is primarily represented by single family detached dwellings. However, some duplexes on large lots fall into the low density residential category.

There are only two (2) developed parcels in Glen Ridge, both located south and adjacent to Southern Boulevard (SR 80) .

Gem Lake and the wet detention Pond in the Glen Ridge are major identifiable features in the community. The lake and pond are major stormwater management features and are classified as Conservation use for these purposes. A portion of Gem Lake lies within the corporate limits of Cloud; thus, interconnecting the water bodies and stormwater drainage systems.

Other land uses are identified in the Town. The Town Hall is the only Public Building located within Glen Ridge; there is a Recreational and Open Space use (park) and a Charter Scool located at the southern most extremity of Glen Ridge south of Summit Boulevard. The local streets in Glen Ridge are identified as Transportation uses.

PURPOSE

Low Impact Development is defined as," a stormwater and land use management strategy that strives to mimic pre-disturbance hydrologic processes of infiltration, filtration, storage, evaporation and transpiration by emphasizing conservation, use of on-site natural features, site planning and distributed stormwater management practices that are integrated into a project design" (Integrating LID into Local Codes: A Guidebook for Local Governments, prepared by AHBL for Puget Sound Partnership, Final Draft, November, 2011).

All land development regulations (LDRs) contained within the Town of Glen Ridge Code of Ordinances have been reviewed as part of this Summary Report. The purpose of this review was to identify what Low Impact Design (LID) techniques and other innovative planning techniques are adopted and being implemented and to determine what changes may be necessary to reduce stormwater impacts of new development and areas of significant development. A description of innovative planning techniques recommended for possible future inclusion into the Town's codes and regulations will be identified, and a description of the plan for implementing proposed changes will be cited.

As discussed in the MS4 Permitting Resource Manual, the Town will focus on changes that will promote, or at least not discourage, LIDs such as conveyance swales, pervious surfaces, minimum values for green/open spaces and/or maximum allowances for ground coverage, native landscaping/Florida Yards and Neighborhoods program, irrigation conservation, retention of stormwater runoff, increase in natural hydrology and other innovative LID principles.

CODES AND LAND DEVELOPMENT REGULATIONS REVIEW

The Town of Glen Ridge adopted its first Zoning Ordinance in 1977 to promote and protect the public health, safety, comfort, convenience, and general welfare of the inhabitants of the Town of Glen Ridge by encouraging the proper use of land and natural resources by establishing standards for physical development in accordance with the comprehensive plan of the Town.

The Town of Glen Ridge current Code of Ordinances was reviewed to determine where changes can be made to reduce the stormwater impacts of new development and areas of significant development. The purpose is to review Low Impact Design (LID) Technques and Practices. The key areas of focus during the review included:

1. Low impact development principles.
2. Use of conveyance swales.
3. Reduction in impervious surfaces.
4. Reduction in flow and volume of stormwater.
5. Principles of the Florida Yards and Neighborhoods program in new landscaping.

All codes and regulations adopted by the Town are contained in the Town of Glen Ridge Code of Ordinances. The following Articles and Chapters were deemed relevant to this review and analyzed for purposes of this Summary Report. Specific Sections and Subsections within Chapters are referenced in the discussions herein.

1. APPENDIX A.- Zoning Ordinance
2. Article V. Zoning Districts, Map and Schedule of Regulations.
3. Article VITI. Landscape Provisions
4. Article IX. Site Plan Review
5. Article XVI. Stormwater Management

The Town of Glen Ridge Comprehensive Plan is also reviewed as part of this analysis; particulary, the Stormwater Management sub-element of the Infrastructure element.

LOW IMPACT DESIGN (LID) TECHNIQUES AND PRACTICES

A variety of LIDs are already being employed and implemented by the Town of Glen Ridge. An identification and discussion of those techniques/practices are presented below. The Status of their use and effectiveness are stated and recommendations are put forth, where necessary and appropriate, to further implement LIDs in the Town.

Conveyance Swales

The entire Town of Glen Ridge is served by 2-lane local residential streets with conveyance swales. There are no curb and gutters within the Town. It has been a policy of the Town to require that individual property owners shall be responsible for maintaining their lots up to the paved area of the streets they front upon. However, there is no established regulations to enforce this policy. Swale areas could be strictly regulated and subject to Town review and permitting requirements by officially adopting regulations for the landscaping and maintenance of swale areas. The following requirements and regulations could meet this end:

- the Town encourages the installation of sod within the swale areas of Town right-of-way and accordingly no permit shall be required for the installation of sod within such areas;

- No person shall place or plant any vegetative landscape material within the Town right-of-way (swale areas abutting public streets) without first obtaining a permit from the Town. In determining whether a permit for vegetative landscape material should be issued, the Town Clerk, or other qualified designee, shall consider whether the proposed installation:

1. Interferes with or impairs the Town stormwater drainage system;
2. Creates a safety hazard to vehicular or pedestrian traffic;
3. Otherwise impairs the health, safety or welfare of the citizens and visitors to Town.

- No person shall grade or re-grade any lands within the Town right-of-way without first obtaining a permit from the Town Clerk, or appropriate designee of the Town.

- It shall be unlawful for any individual to place or have placed any impervious material including, but not limited to, asphalt, concrete crushed rock, landscape stone, brick pavers or other similar materials within the Town right-of-way. This subsection shall not preclude the installation of paved driveways extending from a public roadway to the privately-owned property; provided, the width of any such entry driveway(s) shall not exceed the allowable width for any lot or combination of lots improved with a residential structure.

Status: Since the Town of Glen Ridge is almost entirely built-out, the current policy of requiring property owners to maintain landscaped areas in conveyance swales adjacent to the paved streets has been employed. However, the Town has not adopted regulations regarding the landscaping and maintenance of conveyance swale areas.

Recommendation: ***It is recommended that the Town consider adopting the regulations for maintenance of conveyance swale areas by property owners similar to those suggested above. The Town should review these suggested regulations during the third year of the current NPDES stormwater permit and take appropriate actions for inclusion in Town regulations, where appropriate.***

Pervious/Impervious Surfaces

The issue of 'pervious and impervious surfaces' is addressed in the Residential zoning districts R1-A, R-1 and R-2 9 (**Ref.ARTICLE V., Sections 5-2, 5-3 and 5-4, respectively in the Town of Glen Ridge Zoning Ordinance)** and in the C-1 Specialized Commercial zoning district **(Ref. ARTICLE V., Section 5-5, Zoning Ordinance).** Lot Coverage is defined in **ARTICLE XI - Definitions of the Town Zoning Ordinance** as, "That portion of the area of the lot expressed as a percentage, occupied by all buildings or structures which are roofed or are otherwise covered...". District R-1A is identified on the Future Land Use Map as a low density residential area which allow single family residences only. The Town Hall (Public Building) is also a permitted use in this district. Lot Coverage is limited to a maximum 25% of the lot area in District R-1A and to 30% of the lot area in Districts R-1 and R-2. The Maximum Lot Coverage allowed in the BP - Business and Professional zoning district is 40%. The maximum allowable percentage of lot coverage does not necessarily regulate–the maximum amount of 'impervious surfaces' that can be imposed on individual lots. Other non-roofed areas such as driveways, patios, pool decks and other structures and uses are typically 'impervious' areas. Fortunately, most lots in the Residential districts are not developed to the maximum allowable lot coverage percentage, therefore, allowing for more 'pervious surfaces'.

Front, side and rear yards are established in the Town Zoning Ordinance. 'Yard' is defined as, "an open space on the same lot with a building, unoccupied and unobstructed from the ground upward..." (**Ref. ARTICLE XI - Definitions of the Zoning Ordinance).** In accordance with the R-1A zoning district regulations for 'Yards', the following minimums are established **(Ref. ARTICLE V., Section 5-2, Zoning Ordinance)**

Front Yard - Thirty (30) feet, canal lots - fifty (50) feet
Side Yard - Fifteen (15) feet
Rear Yard - twenty (20) feet; except waterfront, thirty (30) feet

The Yards are the same in R-1, R-1A and R-2 with the exception of canal lot setbacks.

The Yards In accordance with the C-1; Specialized Commercial zoning district regulations for 'Yards', the following minimums are established or **(Ref. ARTICLE V., Section 25-5).**

Front Yard - Twenty (20) feet
Side Yard - 10 feet
Rear Yard - Fifteen (15) feet

Status: The regulations cited above establish some limitations to the amount of land area that can be developed as 'impervious' areas in the Town of Glen Ridge. Other regulations could be instituted that would further restrict the amount of 'impervious' surfaces permitted on developable lots while requiring significant 'pervious' areas on those lots.

Recommendation: It is recommended that definitions for 'impervious' and 'pervious' areas be established in Article XI - Definitions of the Zoning Ordinance. Further, Maximum Lot Coverages established in the Residential zoning districts should be revised to establish that no greater than 50% of a lot shall contain 'impervious' areas. The Town should review these suggested revisions during the third year of the current NPDES stormwater permit and take appropriate actions for inclusion in Town regulations.

Landscaping/Florida Yards and Neighborhoods Program/Conservation

The Town of Glen Ridge Code of Ordinances requires vegetative buffers/filters, minimum value of green space, detention of runoff, infiltration trenches, conveyance swales and irrigation conservation to be implemented on all site plans before approval and does not discourage low impact design (LID) practices (Ref. ARTICLE VIII - Landscape Provisions and ARTICLE IX - Site Plan Review, Zoning Ordinance). In addition, all building permits require the prior approval of any and/or all outside entities with authority; for example, South Florida Water Management District (SFWMD), Florida Department of Environmental Protection (FDEP) and Palm Beach County.

A review of ARTICLE VIII - Landscape Provisions of the Zoning Ordinance reveals some excellent and necessary minimum standards that are required in a site plan application before a permit can be issued such as ground cover or other landscape treatment excluding paving on open areas, credit for existing plant material and the requirement to preserve all trees with a caliper of three (3) inches or more.

The use of native vegetation is emphasized. **Policy 7.2 in the Sanitary Sewer, Solid Waste, Stormwater Management, Potable Water and Natural Groundwater Aquifer Recharge element of the Town's Comprehensive Plan** specifically states, "South Florida Water Management District (SFWMD) xeriscape practices shall be encouraged by the Town when considering proposals for new development or redevelopment". Also, the Town assists the SFWMD in the implementation of the District's Water Shortage Plan. Policy 7.1 in the same Comprehensive Plan element states that, "The Town shall enforce Water Shortage Emergency Provisions established under Ch.40E-21, Florida Administrative Code. upon declaration of a water shortage emergency by the South Florida Water Management District". The declaration of this Chapter and Division shall apply to all persons using the

water resource within the Town as determined by the SFWMD. The declaration of a water shortage or water shortage emergency by the SFWMD shall invoke these provisions. Water use restrictions adopted by the SFWMD shall be subject to enforcement action.

The Palm Beach County (PBC) NPDES Steering Committee developed a model Fertilizer Ordinance, in coordination with FDEP, as part of its MS4 stormwater permitting program. It was developed for use as a guide for adaptation to each co-permittees entity. The Town adopted a Fertilizer Ordinance in FY 12/13 following this guide. Only those entities whose stormwater runoff discharge into 'nutrient impaired' waters are required to adopt a Fertilizer Ordinance. The Town discharges into FDEP WBID 3245F (Lake Worth Lagoon - C51). Based on FDEP 2017 Verified Listing if Impaired Waters for the Lake Worth Lagoon, WBID 3245F is not an impaired water body.

The Florida Yards and Neighborhoods (FYN) Florida Friendly Landscaping program offers educational and suggested LID practices and principles that will help protect ground water , surface waters and the natural environment. It is important to reduce water usage and runoff and to use plants in landscaping that will flourish on the amount of rainfall received in Palm Beach County. Healthy plants filter runoff and slow erosion. FYN Florida Friendly program offers suggestions on 'water conservation' and as well as suggested materials to slow and clean runoff and to use materials such as mulch to retain water moisture which reduces competition for water between plant species. Other irrigation conservation practices include watering plants and landscaping early in the morning so plants are not wet overnight. This reduces water loss and the chances of disease. The use of rain sensors on irrigation systems are used to turn off irrigation when not in use while using mulch helps to retain soil moisture which reduces competition for water between plant materials.

Status: The landscaping regulations adopted by the Town of Glen Ridge have been adequate to monitor and enforce good LID practices, principles and techniques. The Town has an adopted a Fertilizer Ordinance. Applicators will have to be appropriately trained and certified in fertilizer application. The contractors used by the Town for fertilizer (and pesticide) application have appropriate certifications and licenses that qualify the Town in these applications.

Recommendation: ***It is not necessary to recommend any changes to the Town of Glen Ridge existing landscaping regulations. The Town is nearly built-out, and the existing landscaping regulations should be adequate. It is recommended that the Town provide as much information to its residents (in the form of flyers, brochures, web sites and other available educational aides) to educate its community about the use and application of plant types and materials, use of fertilizers and pesticides, use of 'water conservation' techniques (e.g. pavers, stones, gravel, mulch, rain sensors on irrigation systems and others) and the myriad of useful information provided through the FYN Florida Friendly Landscaping program.***

Refuse, ,Garbage, Toxic Materials and Other Nuisances

The Town of Cloud Lake regulates the collection and containment of refuse, garbage , litter and toxic materials at residential, non-residential and construction sites. Specifically, **Chapter 10, Environment, ARTICLE II - Nuisances, Section 10-19 (b) and (d), Code of**

Ordinances address issues such as the accumulation of trash and filth and the obstruction or interference of vegetation with road and drainage systems. **Section 10-19 (b)** declares that all lands in the Town shall be free from the accumulation of trash and filth while **Section 10-19 (d)** declares that all roads and road right-of-ways shall be free of vegetation and yard trash that may obstruct roads and, by inference, runoff into conveyance swales and other stormwater structures.

The Town does not handle the disposal of toxic and hazardous materials. This function, when necessary, is deferred to the PBC Fire Rescue Department who trained staff and equipment to dispose of these types of materials.

Status: The Town of Glen Ridge is adequately addressing and enforcing appropriate regulations regarding the collection, disposal and containment of garbage, refuse, dust and particulate matter, and toxic and hazardous materials at construction sites as well as at individual residences and non-residential areas.

Recommendation: ***No changes to regulations regarding the collection, disposal and containment practices for garbage, refuse, litter and particulates matter is proposed because of the limited development potential of any already nearly developed community. The handling of toxic and hazardous substances is the responsibility of other jurisdictions as identified in the Town of Glen Ridge Annual NPDES Report. These efforts should be closely coordinated with those entities.***

Stormwater Management

ARTICLE XVI - Stormwater Management of the Town Zoning Ordinance addresses stormwater management in order to protect, maintain and enhance the health, safety and general welfare of the citizens of the Town of Glen Ridge. The ordinance has the following objectives:

1. Implement those Policies and Objectives found in the Drainage sub-element of the Infrastructure element in the Town's Comprehensive Plan[

2. Reduce the pollutant loads in stormwater runoff entering the C-51 Canal, its tributaries, watershed and other water bodies;

3. Protect, restore and maintain the chemical, physical and biological quality of the ground and surface waters;

4. Protect, restore and maintain the natural habitats of fish and wildlife;

5. Minimize loss of valuable topsoils by erosion and prevent sedimentation of the C-51 Canal and its tributaries;

6. To direct individuals, business organizations and governments to community activities which improve and not adversely effect water resources;

7. Encourage the construction of drainage systems which aesthetically and functionally approximate the natural systems;

8. Reduce damage from flooding while recognizing the natural fluctuations in water levels, both daily and seasonal are beneficial;

9. Reduce capital expenditures for flood protection while reducing destruction of private and public property in the event of floods;

10. Increase stormwater infiltration, settling of suspended solids and removal of pollutants from runoff prior to discharge into surface waters;

11. Minimize adverse impacts of development on the water resources of the region;

12..Ensure the attainment of these objectives by requiring approval and implementation of stormwater management practices;

13. Prevent the lowering of existing water table elevations to the detriment of these other stated objectives.

There are various Objectives and Policies established in the **Sanitary Sewer, Solid Waste, Stormwater Management, Potable Water and Natural Groundwater Aquifer Recharge element of the Glen Ridge Comprehensive Plan** that are aimed at implementing the Town's stormwater management permitting program. **Policy 1.1** of this element references **Table 6.6-1** which establishes a Design Storm Level of Service (LOS) standard for the stormwater system:

Design Storm

Drainage : Three (3) year, 24 hour frequency; rainfall intensity curve

Policy 3.2, item 5 of the same element specifically references the Town's participation if the PBC National Pollutant Discharge Elimination System (NPDES) Stormwater Permitting Program.: "The Town shall continue to participate in the Palm Beach Countywide NPDES Stormwater Permitting Program. The Annual NPDES Report will be utilized in monitor the stormwater management system on a regular basis, to identify deficiencies in the system, to educate the public, to project future needs and capital costs and other general matters and requirements of the program".

Policies 5.2 and 5.3 of the element address the septic tank issue as it effects the on-going stormwater management program:

Policy 5.2: The use of existing properly constructed and functioning septic tank systems within the Town are acceptable; however, when analysis indicates that septic tank systems are adversely impacting the environment according to State Water Quality Stan- dards (Ch. 62-302, FAC for surface water, Ch. 62-520, FAC for groundwater and Ch. 100-6, FAC for bathing places) and the public health standards are endangered, septic tank systems causing the situation will be repaired or replaced.

Policy 5.3: When a central sanitary sewer system becomes available to currently unsewered areas, ; and, made the and the current septic tank systems fail to meet State Water Quality Standards and endanger the public health, hook-up to the central system shall be required.

The review revealed that the Town of Glen Ridge is approximately 98% built-out, but had the forward thinking to include language in **ARTICLE XVI - Stormwater Management of the Zoning Ordinance** requiring a permit for any activities that may alter or disrupt existing stormwater runoff patterns. For example, activities such as:

1. Clearing and/or drainage of land.
2. Subdividing land.
3. Replatting recorded subdivisions and development of recorded and unrecorded subdivisions.
4. Changing the use of land and/or the construction of a structure or a change in the size of one or more structures.
5. Altering shoreline or banks of any surface water body.
6. Altering of any ditches, terraces, berms, swales, or other water management facility.
7. Increasing the impervious area of any tract, lot or parcel of land.
8. Removal of earth or moving of earth on a parcel.
9. Permanent (long period) lowering of water table.

Status: The Town's on-going participation in the PBC NPDES Stormwater Permitting Program has kept the Town keenly aware of stormwater management issues; prompted regular maintenance and inspections of the stormwater drainage system serving Glen Ridge; increased the awareness if its residents through effective public educational materials; identified individual septic tank systems as a stormwater management concern; and, generally, increased awareness of the importance of improving surface and ground waters.

Recommendation: Continue to improve the NPDES Stormwater Permitting Program as new information and data become available and as the program demands.