

Appendix 2-5: Annual Permit Report for the 8.5 Square Mile Area, S-357 Pump Station

Permit Report (September 20, 2013–April 30, 2015)
Permit Number: 0317442

Wossenu Abteu, Lucia Baldwin, and Richard Pfeuffer

Contributor: John Shaffer

SUMMARY

Based on Florida Department of Environmental Protection (FDEP) permit reporting guidelines, **Table 1** lists key permit-related information associated with this report. **Table 2** lists the attachments included with this report. **Table A-1** in Attachment A lists specific pages, tables, graphs, and attachments where project status and annual reporting requirements are addressed. This annual report satisfies the reporting requirements specified in the permit.

Table 1. Key permit-related information.

Project Name:	8.5 Square Mile Area, S-357 Pump Station
Permit Number:	0317442-002
Issue and Expiration Dates:	
0317442-001 (permit):	Issued: 9/20/2013; Expires: 9/20/2018
0317442-002 (minor modification):	Issued: 10/29/2014
Permit Specific Condition Requiring Annual Report:	15
Reporting Period:	September 20, 2013–April 30, 2015
Report Lead:	Wossenu Abteu wabtew@sfwmd.gov 561-682-6326
Permit Coordinator:	John Shaffer jshaffe@sfwmd.gov 561-682-6308

Table 2. Attachments included with this report.

Attachment	Title
A	Specific Conditions and Cross-References
B	Water Quality Data
C	Hydrologic Data

PROJECT STATUS

The 8.5 Square Mile Area (SMA), S-357 Pump Station Project became operational on September 20, 2014, midway through Water Year 2014 (WY2014) (May 1, 2013–April 30, 2014). This is the first annual permit report for the project, covering the portion of WY2014 that the project was operational through the end of WY2015.

CONCLUSIONS REGARDING PROJECT SUCCESS

During WY2014 and WY2015, the project performed as designed, maintaining required water levels.

PROBLEMS ENCOUNTERED

No problems were encountered.

ACTIONS TO ADDRESS PROBLEMS

No problems were encountered.

INTRODUCTION

PROJECT OVERVIEW

Project Description

The 8.5 SMA, S-357 Pump Station Project is a component of the flood mitigation system that is part of the 8.5 SMA phase of the Modified Waters Deliveries to Everglades National Park (MWD) Project. After construction and operational testing of the S-357 pump station by the United States Army Corps of Engineers, the South Florida Water Management District (District or SFWMD) was issued Comprehensive Everglades Restoration Plan Regulation Act (CERPRA) Permit Number 0317442-001 by FDEP to operate and maintain the 8.5 SMA, S-357 Pump Station Project and associated flood mitigation features (**Figure 1**).

The purpose of the project is to provide flood mitigation to residents of the Las Palmas Community (also known as 8.5 SMA) within the interior of the outer levee (L-357W) resulting from increased flows to Everglades National Park (ENP) as future phases of the MWD Project are implemented. The current operational objective of the S-357 pump station is to control the stage of the C-357 seepage canal to maintain the groundwater levels within the interior area of the L-357W levee at the same levels that existed prior to the implementation of the MWD Project.

The 8.5 SMA, S-357 Pump Station Project encompasses approximately ten square miles and is located 20 miles southwest of Miami, approximately ten miles north of Homestead, and 6.6 miles south of U.S. Highway 41 (Tamiami Trail) in Miami-Dade County.

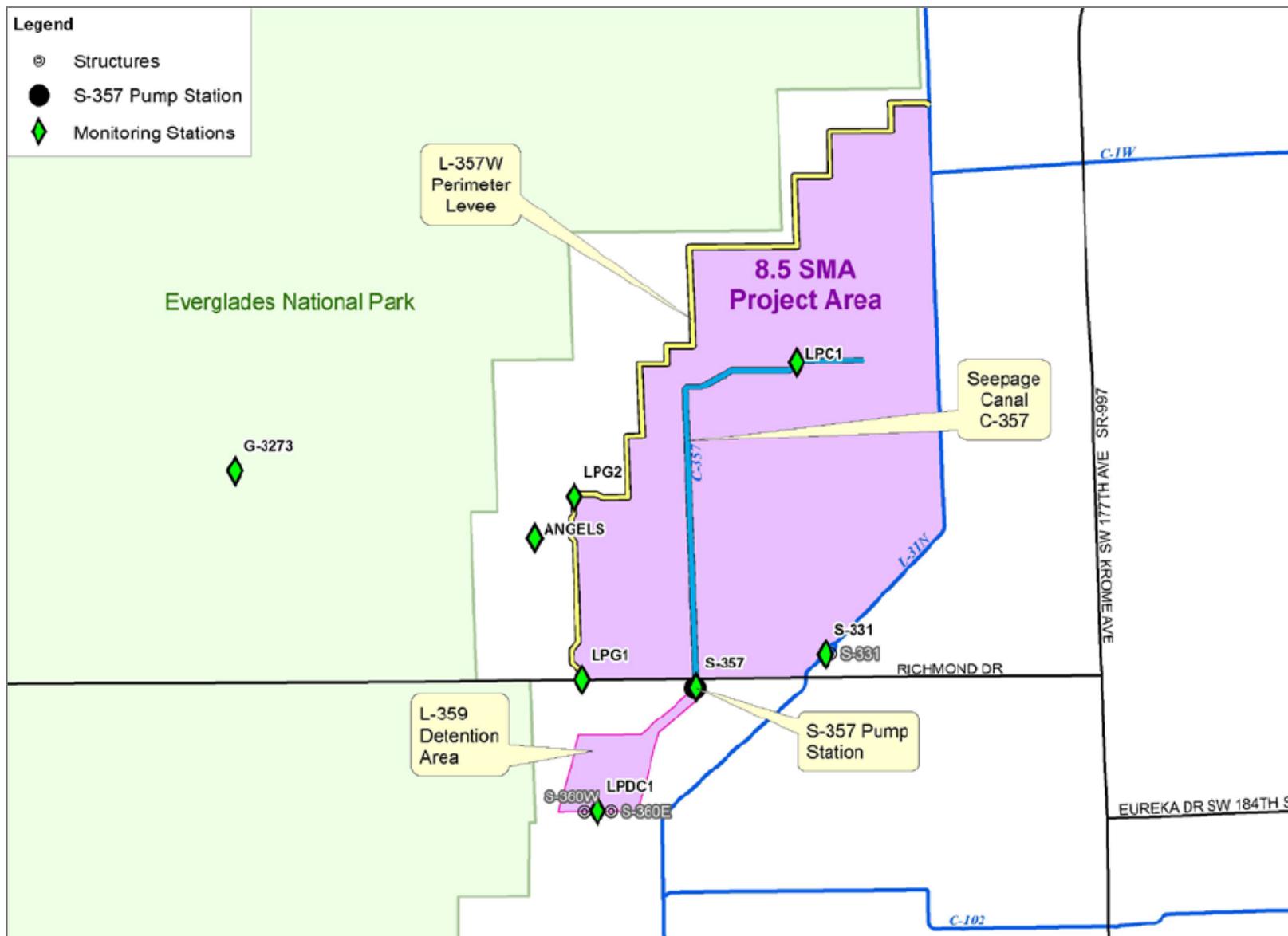


Figure 1. Project area for the 8.5 SMA, S-357 Pump Station Project.

Project Components

The 8.5 SMA, S-357 Pump Station Project components include a pump station, overflow weirs, levees, a seepage canal, culverts, and a detention area (**Figure 1** and **Table 3**).

Table 3. Structures of the 8.5 SMA, S-357 Pump Station Project

Structure	Type	Function
S-357	4 x 125 cubic feet per second (cfs) pump; 1 x 75 cfs pump	Seepage pumping
S-360W	Weir	Outflow from L-359 detention area
S-360E	Weir	Outflow from L-359 detention area
S-358A	10-foot (ft) Culvert (135 ft long)	Flow under SW 197th Avenue
S-358B	10-ft Culvert (135 ft long)	Flow under SW 199th Avenue
S-358C	10-ft Culvert (149 ft long)	Flow under SW 136th Street
S-358D	10-ft Culvert (149 ft long)	Flow under SW 152th Street
S-358E	10-ft Culvert (149 ft long)	Flow under SW 168th Street
L-357W Levee	7 mile levee	Perimeter levee (west)
L-357 Levee	3.5 mile levee	Embankment for C-357 canal
L-359 Levee	Levee	Embankment for L-359 detention basin

The S-357 pump station is located at the southern terminus of the L-357 and C-357 levee/canal system. The station conveys seepage water from the C-357 seepage canal and discharges water into a flow-way and the L-359 detention area located southwest of the pump station. The S-357 pump station is operated to maintain a daily average water level in the C-357 seepage canal at the Las Palmas C1 (LPC1) surface water gauge, or S-357 headwater staff gauge, between 5.7 and 6.2 feet (ft) National Geodetic Vertical Datum of 1929 (NGVD29) and to maintain a north-south groundwater gradient between the Angel's Well water level and stage at LPG1. The design capacity of the station is 500 cubic feet per second (cfs), which is achieved through operation of four 125-cfs diesel engine-driven pumps (**Table 3**). A single 75-cfs electric pump is utilized in low flow conditions or when the diesel pumps are not available; for example, when the 125-cfs pumps are outside their pump curve.

The L-359 Detention Area consists of about 18 acres of flow-way that connect directly to the detention area (~180 acres). The detention area is surrounded by a perimeter levee embankment known as the L-359 levee that contains two broad crested overflow weirs, S-360W and S-360E, elevated 4 and 3.5 ft, respectively, above the adjacent ground located along the southernmost part of the L-359 Detention Area. The detention area prevents water from discharging directly into ENP. The S-360E weir has a top elevation of 10.5 ft NGVD29, and the S-360W weir has a top elevation of 11 ft NGVD29. If stages in the southern section of the detention area are within 0.5 ft of the crest of the S-360E passive weir, as measured by the Las Palmas Detention Cell Gauge 1 (LPDC1) being

above 10 ft NGVD29, the operations plan requires shutting down the pumps, which prevents discharges from the detention area to ENP.

The C-357 Seepage Canal provides approximately 3.5 miles of conveyance into the L-359 detention area. It functions to intercept seepage coming from the west due to higher stages in ENP and contains the L-357 levee embankment that runs parallel on both sides of the canal to prevent surface water runoff from directly entering the seepage canal. The depth of the seepage canal is from 12.5 to 14 ft, and width varies from 25 to 30 ft.

The L-357W levee is a perimeter levee, approximately 7 miles long, whose purpose is to mitigate for the remainder of the 8.5 SMA from increased surface water stages within ENP, and in the future, to mitigate for increased flood waters into the area from implementation of higher L-29 canal stages.

PERMIT HISTORY

The original CERPRA permit and all modifications issued to SFWMD are as follows:

- 0317442-001, issued September 20, 2013, with an expiration date of September 20, 2018, is the original permit for operations of the project.
- 0317442-002, issued October 29, 2014, is a minor modification that changed the requirement for the post-construction inspection plan and reports from annual to once every five years.
- On November 14, 2014, FDEP approved a request by the SFWMD to terminate other toxicants monitoring requirements in the permit. The revised monitoring plan (SFWMD-FIELD-CMP-014-01) reflects these changes (SFWMD 2014).

FACILITY OPERATIONS

The S-357 operational protocol states that the objective of the S-357 pump station is to assist the S-331 pump station with providing flood mitigation to the 8.5 SMA. S-357 is operated to maintain an average daily water level between 5.7 and 6.2 ft NGVD29 in the C-357 seepage canal at the S-357 headwater. S-357 may be operated when the S-357 headwater reaches or exceeds 5.7 ft NGVD29. The pump shutoff criteria are when S-357 headwater is below 5.7 ft NGVD29; when the groundwater gradient between Angel's Well and LPG1 is less than 0.1 ft NGVD29; and when the detention area stage exceeds 10 ft NGVD29.

Pumping constraints are as follows:

1. If the groundwater gradient between Angel's Well and LPG1 is greater than or equal to 0.2 ft, then S-357 can be operated up to 250 cfs;
2. If the groundwater gradient between Angel's Well and LPG1 is between 0.1 and 0.2 ft, then S-357 is limited to a maximum of 250 acre-feet (ac-ft) per day; and
3. If the groundwater gradient between Angel's Well and LPG1 is less than 0.1 ft, then S-357 remains off for a minimum of 24 hours and until the gradient equals or exceeds 0.2 ft. Under normal conditions, the intent is to limit the pumping capacity of S-357 to 250 ac-ft per day.

The S-357 pumps have been in operation since April 14, 2009. There was pumping on about 25 percent of the days between April 14, 2009, and April 30, 2015. There was no discharge through weirs S-360E and S-360W from April 2009 to end of April 2015. Stage in the detention area at site LPDC1 (**Figure 1**) never rose above 10 ft NGVD29, the level that would require shutting down pumping to prevent discharge into ENP. The maximum stage at LPDC1 was 7.06 ft NGVD29 on September 30, 2014.

HYDROMETEOROLOGIC MONITORING

Hydrologic data were collected and processed in accordance with permit requirements, and are available in Attachment C. Flow rating calculations follow the District's flow management assessment quality assurance/quality control processes. Flow, stage, and rainfall monitoring stations and their DBHYDRO database DBkeys are shown in **Table 4**.

Table 4. Monitoring stations and data access DBkeys.

Station	Data Type	DBHYDRO DBKey
S-357_P	Flow	WN410
S-357_H	Stage	WN173
S-357_T	Stage	WN175
LPG1	Stage	37737
S-331W	Rainfall	16261
LPDC1	Stage	37736
Angel's Well	Well level	07103

Flow was monitored at the S-357 pump station, and rainfall was monitored at sites close to the project area. Hydrology for the operational period of WY2014 and for WY2015 is summarized in **Tables 5A** and **5B**. In WY2014, November and December 2013 were the wettest months monitored. Rainfall for WY2015 was more than 2 inches below the historical average for the area. Daily rainfall is shown in **Figure 2**. The region was generally drier, and S-357 pump operation was limited to a few months (**Figures 3** and **4**).

Table 5A. Monthly hydrology summary for partial WY2014 (September 20, 2013, to April 30, 2014) for the 8.5 SMA, S-357 Pump Station Project.

Year	Month	Rainfall (inches)	S-357 Flow (ac-ft)
2013	September (9/20–9/30)	0.47	910
	October	2.05	0
	November	6.46	0
	December	4.13	726
2014	January	1.68	52
	February	1.54	68
	March	2.01	0
	April	2.05	0
Total		20.39	1,756

Table 5B. Monthly hydrology summary for WY2015 for the 8.5 SMA, S-357 Pump Station Project.

Year	Month	Rainfall (inches)	S-357 Flow (ac-ft)
2014	May	2.05	1
	June	11.82	1
	July	12.38	1,666
	August	4.61	2,151
	September	9.24	2,664
	October	3.09	818
	November	2	1
	December	0.72	1
2015	January	0.45	0
	February	1.34	0
	March	0.86	0
	April	4.48	0
Total		53.04	7,303

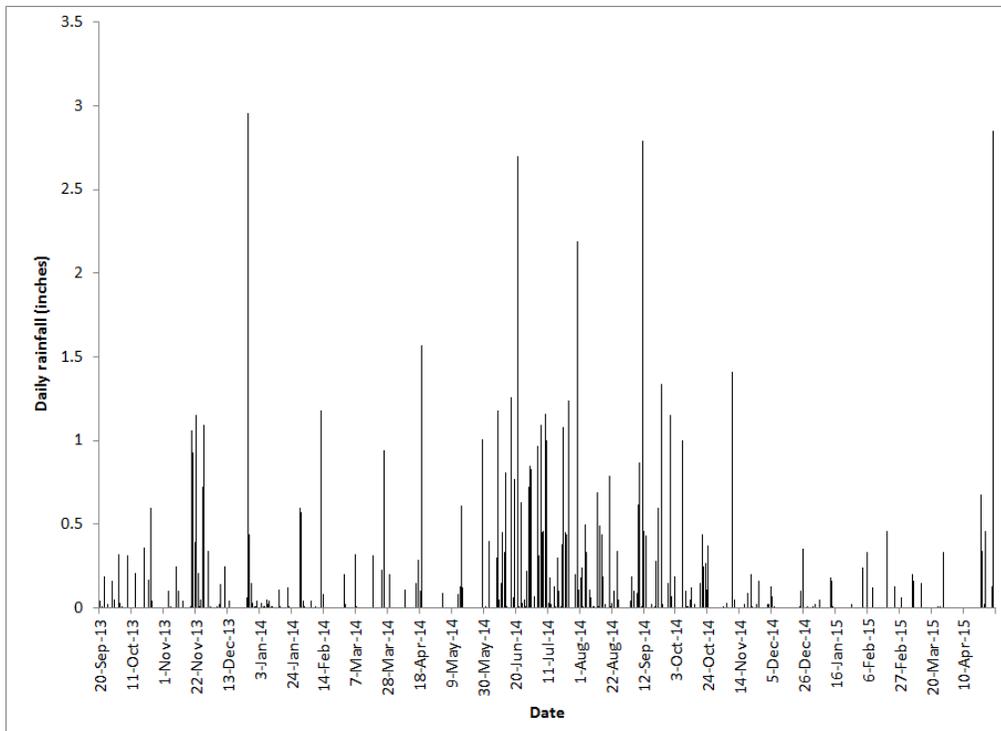


Figure 2. Daily rainfall for the 8.5 SMA, S-357 Pump Station Project during partial WY2014 and WY2015.

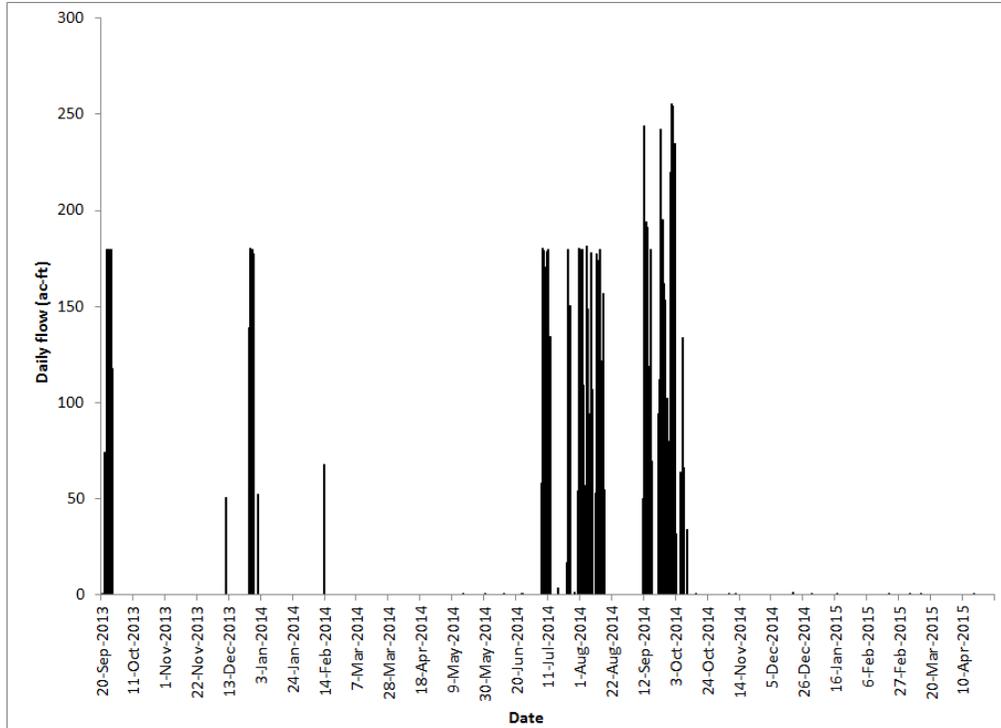


Figure 3. Daily flow at the S-357 pump station during partial WY2014 and WY2015.

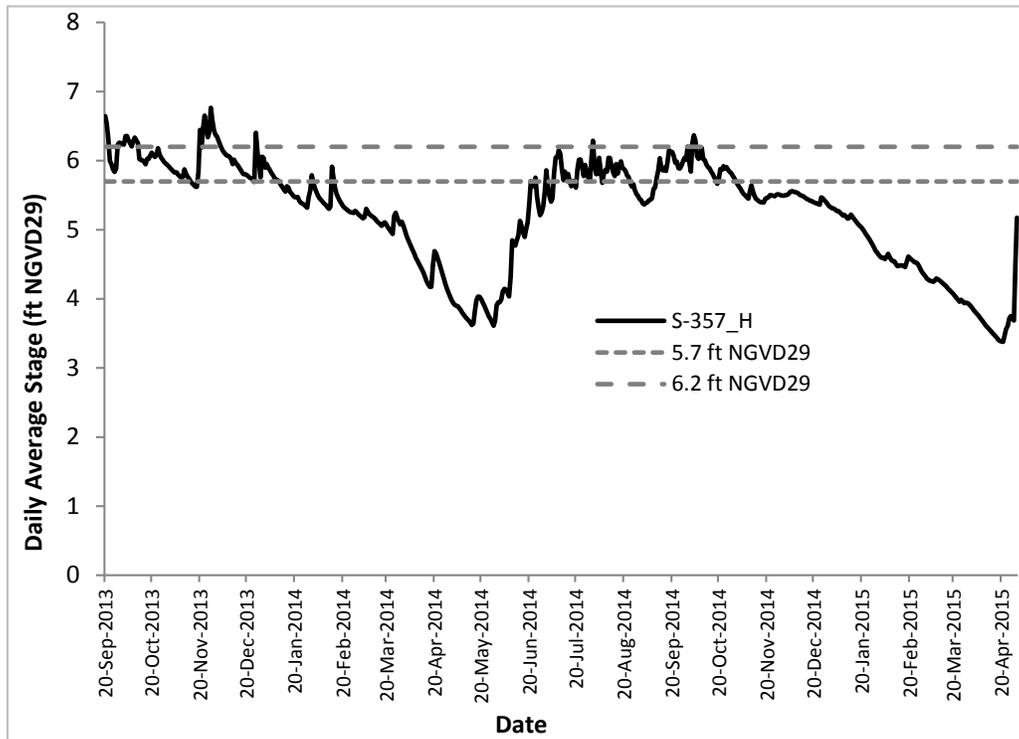


Figure 4. Water levels in the C-357 canal during partial WY2014 and WY2015.

Operation of the S-357 pump station generally followed the requirement of maintaining a daily average water level in the C-357 canal at Las Palmas between 5.7 and 6.2 ft NGVD29, as measured by S-357 headwater when water was available (**Figure 4**). Since the region was drier than normal, water levels were generally low. The pump shutoff criteria of 10 ft NGVD29 at LPDC1 was never reached (**Figure 5**). The second pump shutoff criteria of S-357 headwater below 5.7 ft NGVD29 was also maintained (**Figures 3 and 4**). The project goal of maintaining a north-south groundwater gradient between the Angel’s Well water level and stage at LPG1 was achieved (**Figure 6**).

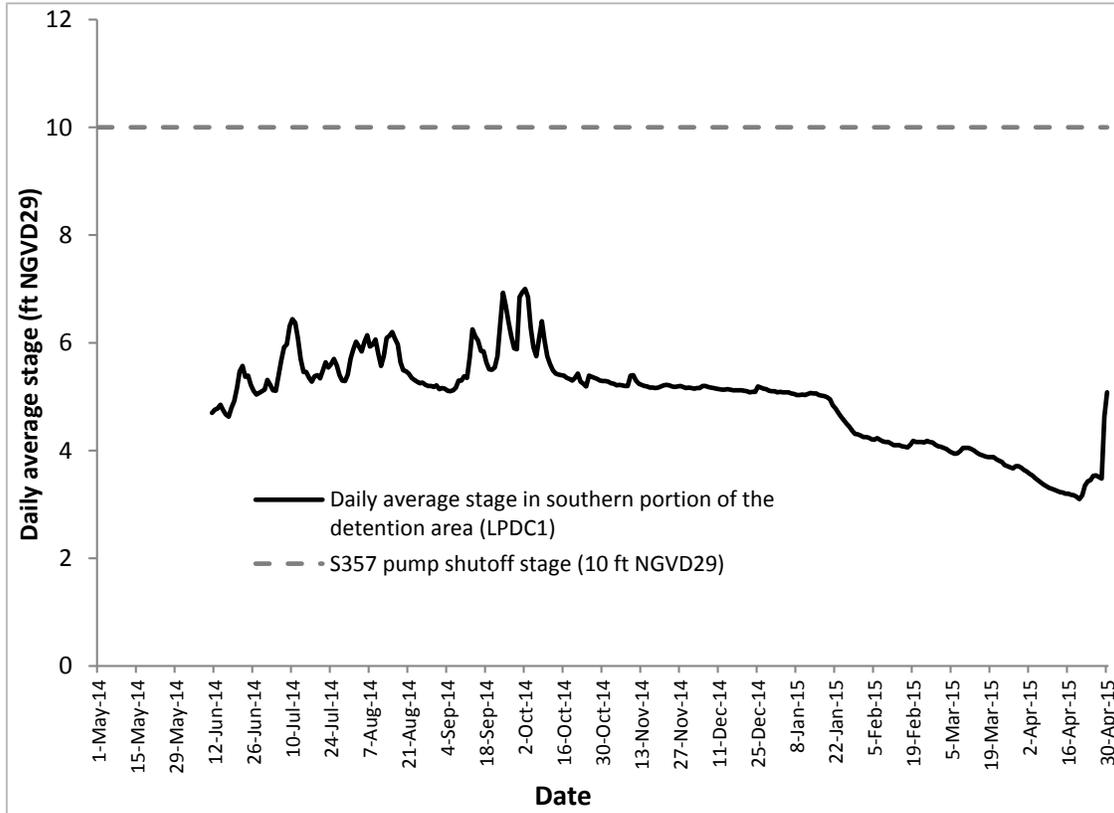


Figure 5. Daily average stage in the southern portion of the detention area (LPDC1) during partial WY2014 and WY2015. Note: Stage data for this site are unavailable prior to June 11, 2014.

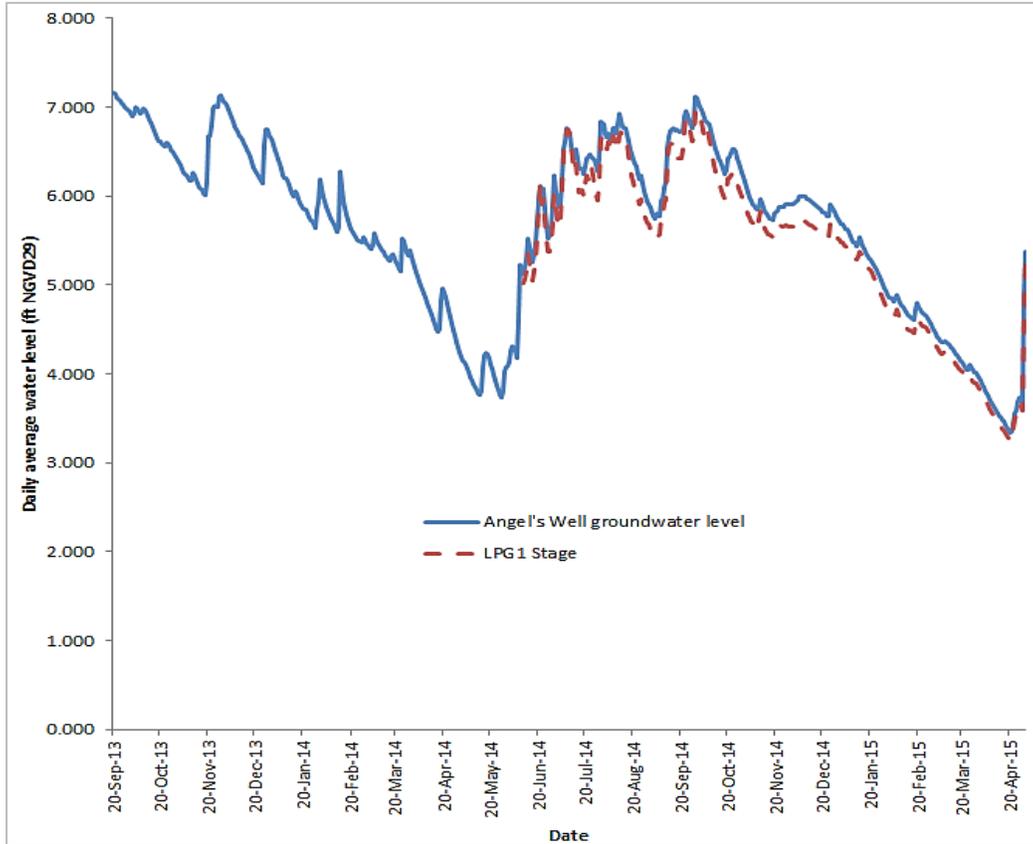


Figure 6. North-south groundwater gradient between Angel's Well water level and stage at LPG1 during partial WY2014 and WY2015.

WATER QUALITY MONITORING

Water quality monitoring for the project began in 2013. All permit mandated project monitoring is outlined in the Water Quality Permit Monitoring Plan for S-357 Pump Station & L-359 Detention Area Interim Operations (SFWMD 2014). The plan is reviewed annually and revised as needed in response to modifications of the project's operation and permit requirements. Water quality data for this report are included in Attachment B.

SAMPLING METHODS

Sampling and monitoring data are collected, analyzed, reported, and retained in accordance with Chapter 62-160, Florida Administrative Code (F.A.C.), and SFWMD procedures. Samples were collected using the grab method outlined in the District's Field Sampling Quality Manual (SFWMD 2015b), and in accordance with FDEP standard operating procedures. Samples were analyzed by the District's water quality laboratory in accordance with its Chemistry Laboratory Quality Manual (SFWMD 2015a).

Before November 17, 2014, grab samples were collected at the S-357 pump station quarterly for other toxicants (see the *Other Toxicants and Monitoring Requirements* section for more information). For other parameters, weekly grab samples were collected when flowing (**Figure 1**). Samples at S-360E and S-360W are supposed to be collected when S-357 has recorded flow; samples were not collected at these sites during WY2015 because there was not enough water in the cell to sample.

SAMPLING RESULTS

Physical and Chemical Parameters

From the beginning of operations in WY2014 through WY2015, water quality grab samples were collected at S-357 during days with flow. The required sampling frequency of weekly measurements during days with flow was achieved beyond the 95 percent completeness target. S-357 grab and no bottle samples (NOB) by month for WY2014 and WY2015 are listed in **Tables 6A** and **6B**. NOB indicates site visits where it was not possible to collect a sample because the water level was too low. The number of grab samples plus NOB samples per month was between 4 and 5, which indicates weekly site visits. Because operations began on September 20, 2013, there were only two weeks of sampling for that month.

Table 6A. Grab samples and NOB samples by month at S-357 in WY2014

Year	Month	Grab Samples	NOB
2013	September	2	0
	October	1	3
	November	0	4
	December	2	3
2014	January	1	3
	February	2	2
	March	0	5
	April	1	3

Table 6B. Grab samples and NOB samples by month at S-357 in WY2015.

Year	Month	Grab Samples	NOB
2014	May	0	4
	June	0	5
	July	4	0
	August	3	1
	September	3	2
	October	2	2
	November	0	4
	December	0	5
2015	January	1	3
	February	0	4
	March	2	3
	April	1	3

Permit mandated physical water quality parameters (dissolved oxygen [DO], pH, specific conductance, and water temperature) were measured in situ. Chemical water quality parameters, (nitrate + nitrite, total Kjeldahl nitrogen, sulfate, and total phosphorus) were analyzed in the laboratory. All parameters were measured and analyzed in accordance with FDEP's Quality

Assurance Rule, 62-160 F.A.C. Measurements and analytical results were stored in the District's DBHYDRO database. A summary of these data for WY2014 and WY2015, including a comparison with Class III freshwater criteria, is provided in **Tables 7A** and **7B**. The Class III freshwater criterion for DO is based on percent DO saturation, which is calculated from the DO, water temperature, and salinity measurements for each sample. A summary of calculated percent DO saturation values was added to the list of physical parameters in **Tables 7A** and **7B**. pH is the negative log of the hydrogen ion activity in a solution; therefore, an arithmetic mean and standard deviation are not appropriate statistics for this parameter and have not been included in **Tables 7A** and **7B**.

During partial WY2014 and WY2015, the only parameter that did not meet its Class III freshwater criterion was percent DO saturation. During WY2014, about 22 percent (2 out of 9) measurements were lower than the corresponding calculated percent DO saturation limit. During WY2015, approximately 31 percent of measurements (5 out of 16) were lower than the limit. Pursuant to Section 62-302.533, F.A.C., annual DO saturations not meeting the threshold value more than 10 percent of the time are deemed to be out of compliance. DO compliance analyses are available in Attachment B. **Figure 7** presents percent DO saturation, minimum percent DO saturation limit, and mean daily flow at station S-357 during WY2014 and WY2015. The figure also shows NOB time series in order to highlight the long periods where the water level was below the minimum depth required for sample collection (i.e. below 1.64 ft). In general, DO saturation values lower than the required threshold (circled in red in **Figure 7**) occurred on days with flow and also seem to have occurred on days when the mean daily stage at the headwater was more than 1 ft lower than at the tailwater. The low DO values appear to be associated with pumping events. It is also possible that these low DO values are associated with anoxic sources such as pore water, groundwater, or stagnant water conditions.

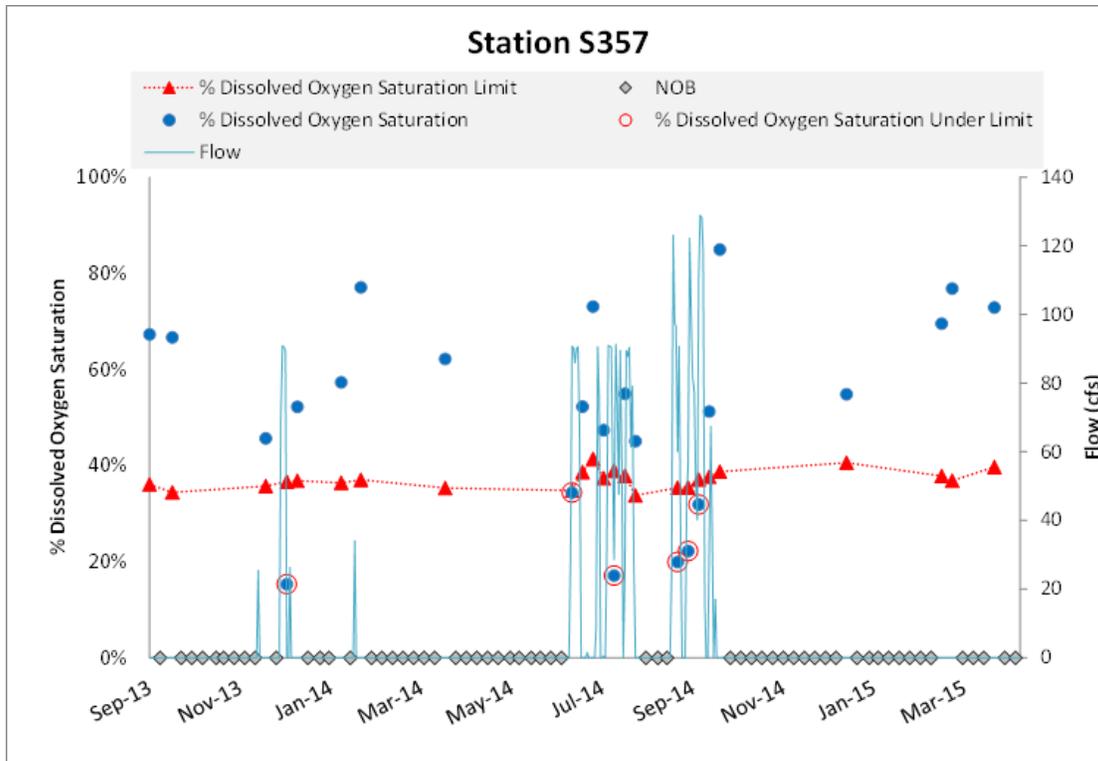


Figure 7. Percent DO saturation, minimum percent DO saturation limit, NOB samples, and mean daily flow at station S-357 during WY2014 and WY2015.

Table 7A. Summary of water quality parameters measured at S-357 during WY2014 and comparisons with Class III standards for fresh waters.^a

Parameter	Unit ^b	Class III Criterion (Fresh Water)	Samples	Mean	Std Dev	Min	Med	Max	Excursions	Percent Excursions
Dissolved Oxygen	mg/L	(see below)	9	4.4	1.6	1.3	4.8	6.6	NA ^c	NA
Percent Dissolved Oxygen Saturation	%	Not under %DO saturation limit more than 10% of the time	9	53%	19%	15%	57%	77%	2	22%
pH		6.0 ≤ pH ≤ 8.5	8	NA	NA	7.20	7.40	7.80	0	0%
Specific Conductance	µS/cm	≤ 1,275	9	497	12	477	502	512	0	0%
Water Temperature	°C	None	9	24.9	1.6	22.8		27.1	NA	NA
Nitrate + Nitrite	mg/L	None	7	0.016	0.006	0.005	0.017	0.024	NA	NA
Total Kjeldahl Nitrogen	mg/L	None	8	0.7	0.03	0.7	0.7	0.8	NA	NA
Sulfate	mg/L	None	8	0.5	0.5	0.1	0.4	1.2	NA	NA
Total Phosphorus	mg/L	None	8	0.004	0.001	0.004	0.004	0.006	NA	NA

a. Std Dev – Standard Deviation; Min – Minimum; Med – Median; and Max – Maximum.
 b. mg/L – milligrams per liter; µS/cm – microsiemens per centimeter; and °C – degrees Celsius.
 c. NA – Not applicable.

Table 7B. Summary of water quality parameters measured at S-357 during WY2015 and comparisons with Class III standards for fresh waters.^a

Parameter	Unit ^b	Class III Criterion (Fresh Water)	Samples	Mean	Std Dev	Min	Med	Max	Excursions	Percent Excursions
Dissolved Oxygen	mg/L	(see below)	16	4	1.7	1.4	4.1	6.7	NA ^c	NA
Percent Dissolved Oxygen Saturation	%	Not under %DO saturation limit more than 10% of the time	16	51%	21%	17%	52%	85%	5	31%
pH		6.0 ≤ pH ≤ 8.5	16	NA	NA	7.2	7.4	7.8	0	0%
Specific Conductance	µS/cm	≤ 1,275	16	515	13	481	519	527	0	0%
Water Temperature	°C	None	16	26.6	1.3	24.8	26.4	28.9	NA	NA
Nitrate + Nitrite	mg/L	None	14	0.014	0.011	0.005	0.01	0.036	NA	NA
Total Kjeldahl Nitrogen	mg/L	None	16	0.8	0	0.7	0.8	0.8	NA	NA
Sulfate	mg/L	None	16	0.6	0.5	0.1	0.5	1.3	NA	NA
Total Phosphorus	mg/L	None	16	0.005	0.002	0.003	0.004	0.01	NA	NA

a. Std Dev – Standard Deviation; Min – Minimum; Med – Median; and Max – Maximum.

b. mg/L – milligrams per liter; µS/cm – microsiemens per centimeter; and °C – degrees Celsius.

c. NA – Not applicable.

Other Toxicants and Monitoring Requirements

Specific Condition 10 of the permit requires SFWMD to conduct monitoring for other toxicants (metals and pesticides) in accordance with the final approved water quality monitoring plan.

For partial WY2014 (September 20, 2013 to April 30, 2014), surface water sampling for pesticides occurred in October 2013, and January and April 2014. No pesticides were detected. Samples for copper analysis were collected in September and October of 2013 and February and April 2014. Copper was not detected in any of the samples.

Based on an assessment of sampling data, which showed that the required evaluation criteria had been met, a request to terminate other toxicants monitoring for the project was submitted to FDEP on September 29, 2014, and on November 14, 2014, FDEP issued concurrence to terminate other toxicants monitoring for the permit. A revised water quality monitoring plan (SFWMD-FIELD-CMP-014-01) was submitted on November 17, 2014, reflecting this change (SFWMD 2014). Consequently, other toxicants data collected up to the termination date are included in this report, but are not available beyond this date. This is the final annual permit report for this project to include other toxicants data.

The monitoring plan lists the S-357 pump station surface water collection matrix, along with locations, methods, frequencies, and parameters. Other toxicants parameters required prior to November 14, 2014, are summarized in **Table 8**. Surface water sampling locations are shown in **Figure 1**.

Table 8. S-357 Pump Station Phase 2 – Tier 1:
Routine Monitoring during Stabilization Period.

Matrix	Location	Collection Method	Frequency	Parameters ^a
Surface Water	S-357 S-360E S-360W	Grab	Quarterly	2,4-D, 2,4,5-T, 2,4,5-TP, acifluorfen, alachlor, aldrin, ametryn, atrazine, atrazine desethyl, atrazine desisopropyl, azinphos methyl, bentazon, bromacil, butylate, carbophenothion, alpha BHC, beta BHC, delta BHC, gamma BHC, chlordane, chlorothalonil, chlorpyrifos ethyl, chlorpyrifos methyl, cypermethrin, p,p'-DDD, p,p'-DDE, p,p'-DDT, demeton, diazinon, dicofol, dieldrin, disulfoton, diuron, endosulfan alpha, endosulfan beta, endosulfan sulfate, endrin, endrin aldehyde, ethion, ethoprop, fenamiphos, fonofos, heptachlor, heptachlor epoxide, hexazinone, imidacloprid, linuron, malathion, metalaxyl, methoxychlor, metolachlor, metribuzin, mevinphos, mirex, naled, norflurazon, parathion ethyl, parathion methyl, PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260, permethrin, phorate, prometon, prometryn, simazine, toxaphene, trifluralin, and copper

a. Key to parameters:

- 2,4-D – 2,4-dichlorophenoxyacetic acid
- 2,4,5-T – 2,4,5-trichlorophenoxyacetic acid
- 2,4,5-TP – 2-(2,4,5-trichlorophenoxy) propionic acid
- BHC – hexachlorocyclohexane
- o,p'-DDD – ortho para dichlorodiphenyldichloroethane
- o,p'-DDE – ortho para dichlorodiphenyldichloroethylene
- o,p'-DDT – ortho para dichlorodiphenyltrichloroethane
- p,p'-DDD – para para dichlorodiphenyldichloroethane
- p,p'-DDE – para para dichlorodiphenyldichloroethylene
- p,p'-DDT – para para dichlorodiphenyltrichloroethane
- PCB – polychlorinated biphenyl

Surface water sampling was performed under project code S357P. Only two quarters of sampling were performed during WY2015 before other toxicants monitoring was terminated, and samples were only collected at S-357 because sites S-360W and S-360E were always dry. Surface water sampling for pesticides occurred on July 14 and November 3, 2014. No pesticides were detected. Surface water sampling for copper occurred on July 21 and October 13, 2014. Copper was only detected during the October sampling event at 2.5 micrograms per liter ($\mu\text{g/L}$), a concentration below the water quality standard of 18.2 $\mu\text{g/L}$.

LITERATURE CITED

- SFWMD. 2014. Water Quality Permit Monitoring Plan for S-357 Pump Station & L-359 Detention Area Interim Operations (SFWMD-FIELD-CMP-014-01), South Florida Water Management District, West Palm Beach, FL.
- SFWMD. 2015a. Chemistry Laboratory Quality Manual, SFWMD-LAB-QM-2015-01. South Florida Water Management District, West Palm Beach, FL. Effective February 6, 2015.
- SFWMD. 2015b. Field Sampling Quality Manual. SFWMD-FIELD-QM-001-08.2. South Florida Water Management District, West Palm Beach, FL. Effective January 15, 2015.

Attachment A: Specific Conditions and Cross-References

Table A-1. Specific conditions, actions taken, and cross-references presented in this report for the 8.5 Square Mile Area, S-357 Pump Station (CERPRA permit 0317442-002).

Specific Condition	Description	Applicable Phase	Action Taken	Reported in the 2016 SFER Vol. III, App. 2-5 in:			
				Narrative (page #s)	Figure	Table	Attachment
1	Addresses: Reports and Notices Submitted to FDEP in Accordance with This Permit	Operation	Reports and notices were submitted as required.	---	---	---	---
11	Water Quality Monitoring	Operation	Conducted water quality sampling as required. Utilized water quality monitoring data to determine total phosphorus mass balance.	10-16	1, 7	6-8	B
14	Stage & Flow Monitoring	Operation	Conducted stage and flow monitoring as required.	5-10	1-7	2-5	C
15	Dike and Pump Station Inspection	Operation	The last levee inspection and report was submitted to FDEP on February 4, 2014. The next report is due in 2019.	5	---	---	---
20	Annual Status Report	Operation	Completed report as required.	ALL	ALL	ALL	ALL
21	Data Quality	Operation	Sampling and analysis were performed according to permit requirements and per Chapter 62-160, F.A.C., and the District's water quality monitoring plan.	6, 10	---	A-1	B-C

Attachment B: Water Quality Data

This project information is required by Specific Condition 15 of the
8.5 Square Mile Area, S-357 Pump Station permit (0317442-001)
and is available upon request.

Attachment C: Hydrologic Data

This project information is required by Specific Condition 15 of the
8.5 Square Mile Area, S-357 Pump Station permit (0317442-001)
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