POLK CITY

City Commission Meeting

May 15, 2017 | Polk City Government Center, 123 Broadway Blvd., SE | 7:00 P.M.

CALL TO ORDER – Mayor Joe LaCascia

INVOCATION – Pastor Walter Lawlor, New Life Community Church

PLEDGE OF ALLEGIANCE – Mayor Joe LaCascia

ROLL CALL – Assistant to the City Manager Sheandolen Dunn

APPROVE CONSENT AGENDA

PRESENTATIONS AND RECOGNITIONS - None

PUBLIC COMMENT – **ITEMS NOT ON AGENDA** (limit comments to 3 minutes)

AGENDA

1. **PUBLIC HEARING - Ordinance 2017-01** - Amending the Polk City Comprehensive Plan; revising the infrastructure, conservation, intergovernmental coordination and capital improvements elements based on the City's ten-year water supply facilities work plan-**First Reading**

2. Community Event (Competitive Mini Grant)

3. **PUBLIC HEARING - Resolution 2017-02** – A Resolution of the City Commission of Polk City, Florida; approving the Polk City, Florida Reclaimed Water Reuse Planning Document; providing an effective date.

4. Voyles Loop Lift Station – 20 hp 4" Flygyt Pump Purchase

CITY MANAGER ITEMS

CITY ATTORNEY ITEMS

COMMISSIONER ITEMS

Vice Mayor Harris
Commissioner Blethen
Commissioner Kimsey
Mayor LaCascia

ANNOUNCEMENTS

ADJOURNMENT

CONSENT AGENDA
May 15, 2017

MAY ALL BE APPROVED BY ONE VOTE OF COMMISSION TO ACCEPT CONSENT AGENDA. Commission Members may remove a specific item below for discussion, and add it to the regular agenda under New or Unfinished Business, whichever category best applies to the subject.

A. CITY CLERK

1. Accept minutes – April 17, 2017 – Regular City Commission Meeting

B. REPORTS

1. Building Report – April 2017
2. Finance Report – April 2017
3. Library Report – April 2017
4. Polk Sheriff's Report – April 2017
5. Public Works Report – April 2017
6. Utilities Report – April 2017

C. OTHER

1) 517 Edgewater Drive Boat Dock

Please note: Pursuant to Section 286.0105, Florida Statutes, if a person decides to appeal any decision made by the City Commission with respect to any matter considered during this meeting, he or she will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

In accordance with the American with Disabilities Act, a person with disabilities needing any special accommodations to participate in city meetings should contact the Office of the City Clerk, Polk City Government Center, 123 Broadway, Polk City, Florida 33868 Telephone (863) 984-1375. The City of Polk City may take action on any matter during this meeting, including items that are not set forth within this agenda.

Minutes of the City Commission meetings may be obtained from the City Clerk's office. The minutes are recorded, but are not transcribed verbatim. Persons requiring a verbatim transcript may arrange with the City Clerk to duplicate the recordings, or arrange to have a court reporter present at the meeting. The cost of duplication and/or court reporter will be at the expense of the requesting party.

Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: Consent Agenda

Subject: Accept minutes for April 17, 2017 – Regular City Commission Meeting			
Department: Administrative			
Summary:			
Requested Commission Action: Approval of Minutes			
Financial Impact: None			
Attachments:	X	**Supporting Documents Reviewed**	X
Submitting Department Head: Patricia Jackson, City Manager		**Date:** 5/10/2017	
Approved by City Manager:		**Date:**	

CITY COMMISSION MINUTES

April 17, 2017

Mayor Joe LaCascia called the meeting to order at 7:00 p.m.

Phillip Huntt, New Life Community Church, gave the invocation.

Those present recited the Pledge of Allegiance led by Mayor Joe LaCascia.

ROLL CALL – Assistant to the City Manager Sheandolen Dunn

Present: Mayor Joe LaCascia, Vice Mayor Wanda Harris, Commissioner Don Kimsey, Commissioner Mike Blethen, City Attorney Thomas Cloud and City Manager Patricia Jackson

APPROVE CONSENT AGENDA

Motion by Vice Mayor Harris to approve the Consent Agenda; motion was seconded by Commissioner Blethen. **Motion carried unanimously.**

PRESENTATIONS AND RECOGNITIONS

1) Mayor LaCascia read a Proclamation for Water Conservation Month

2) Ken Fields, City Manager, Lake Wales presented a certificate to City Manager Jackson and the City Commission in recognition of Polk City's 35th anniversary of being a Commission-Manager form of government by the International City Manager's Association

PUBLIC COMMENT

1) Sandra Cutts (315 Central Avenue) – Spoke in regards to the Bryant Property purchase, Polk City's Special Election, City Commission Meeting Agenda posting

2) Michael HoShing (505 Orange Blvd) – Conservation throughout Polk City

ORDER OF BUSINESS

Election of Mayor

Motion by Vice Mayor Harris to nominate Joe LaCascia to serve another one-year term as Mayor; this motion was seconded by Commissioner Kimsey.

Motion carried unanimously by voice vote.

Election of Vice Mayor

Motion by Commissioner Kimsey to nominate Wanda Harris to serve another one-year term as Vice Mayor; this motion was seconded by Commissioner Blethen.

Motion carried unanimously by voice vote.

Vacancy of City Commission Seat #3 – Interview candidates w/letters of interest

City Manager Jackson discussed letters of interests that were received to fill the vacancy of Seat #3. Letters were received from: Robert Baker, Rodney Brooks, Randy Carroll and Donald Syme.

Each candidate spoke to the City Commission expressing their interest in filling this position.

After thorough review, a **motion was made by Vice Mayor Harris** selecting Randy Carroll to fill the Seat #3 vacancy; this motion was seconded by Commissioner Blethen.

Motion carried unanimously by voice vote.

Administration of Oath of Office for Incoming City Commissioner
The Oath of Office was administered by City Manager Jackson to Commissioner Randy Carroll

Brief ten minute Recess – Mayor LaCascia left the meeting

Vice Mayor Harris reconvened.

PUBLIC HEARING - Ordinance 2017-01 - Amending the Polk City Comprehensive Plan; revising the infrastructure, conservation, intergovernmental coordination and capital improvements elements based on the City's ten-year water supply facilities work plan-First Reading

Vice Mayor Harris read the Ordinance by title only. Vice Mayor Harris opened the public hearing.

The following persons spoke in regards to Ordinance 2017-01:

Sandra Cutts (315 Central Avenue); Al Schneider (775 Teaberry Trail); Don Syme (310 Nolane Lane)

Jeff Smucker, CFRPC discussed details regarding Amending Polk City's Comprehensive Plan based on the ten-year water supply plan update.

City Manager Jackson and City Attorney Cloud further explained the Comprehensive Plan (dating back to 1984) and the projected growth in Polk City and water use per day. Policies have to be in place to handle such water use. This projection is approximately 20 years in the future.

Vice Mayor Harris closed the public hearing.

Lengthy discussion and comments ensued.

Motion by Commissioner Kimsey to transmit Ordinance 2017-01 to the Department of Economic Opportunity for review; this motion was seconded by Commissioner Carroll.

Vote: Vice Mayor Harris – aye; Commissioner Carroll – aye; Commissioner Kimsey - nay; Commissioner Blethen - nay

Motion failed 3/2.

Purchase of John Deere 5075E Utility Tractor

Keith Prestage, Public Works Director discussed the purchase of a John Deere 5075E Utility Tractor. The Public Works Department is responsible for mowing seven (7) miles of roadway and 125 acres of property. Currently, staff uses a 1997 John Deere 5300 tractor which has become costly in repairs and maintenance. Since 2014 we have set aside $10,000.00 per year in the budget for the purchase of a new tractor.

Staff recommended that Polk City purchase a new John Deere 5075E Utility Tractor on state contract. The financial impact is $26,161.65 (currently in the budget).

Lengthy discussion and comments ensued.

Motion by Commissioner Kimsey to purchase a new John Deere 5075E Utility Tractor; this motion was seconded by Commissioner Blethen.

Motion passed unanimously.

Fire Flow Water Service Agreement – Auburndale and Fantasy of Flight

City Attorney Cloud stated Fantasy of Flight's fire consultant came to Polk City and Auburndale two years ago asking for supplemental fire flow. Gerry Hartman did an analysis and there were two options. One way is a twelve inch pipeline that will be connected to Auburndale and Polk City's water system. The other way would be to pull water out of the lake, which is very expensive. This is an aspirational supplemental fire flow. Since the property owner (Kermit Weeks) is willing to pay for this, the two cities are willing to have an agreement for the cooperative provision.

The proposed Agreement was prepared by Polk City Attorney Tom Cloud and

reviewed by the Auburndale City Manager, City Attorney and Public Works Director. The consulting engineer Chastain Skillman has also reviewed the Agreement as to the technical and engineering matters.

Staff recommended approval of the Fire Flow Water Service Agreement with Auburndale and Fantasy of Flight.

Motion by Commissioner Kimsey to approve the Fire Flow Water Service Agreement with Auburndale and Fantasy of Flight; this motion was seconded by Commissioner Blethen.

Motion passed unanimously by voice vote.

CITY MANAGER ITEMS

Skate Park – Staff is getting quotes for equipment based on the space available as well as fencing.

Bucket truck purchase - will allow City staff to do things such as trimming trees, light fixtures, roofing, and pressure washing.

Purchase of two PR 15 Gators - City will trade-in two surplus gators and one that is dilapidated. Original cost of two Gators is just over $14,000.

The current F-150 pick-up will be used as a trade in to purchase a vehicle for City Hall staff use.

Bushog Purchase – 8 foot bushog attachment for the new John Deere tractor

Purchase of a large shed at the Cardinal Plant for more secured storage

Planning Workshop for Water and Wastewater scheduled for May 2017

CDBG Project application has been submitted.

City Manager will be on vacation April 20 – May 8.

CITY ATTORNEY ITEMS

Polk City has drawn legal proceedings in the Labor area. Please advise if you want Gray Robinson to represent Polk City or if you wish to have the insurance company's legal team provide representation. At this time we are not sure if the insurance company will provide coverage for this. Polk City's former librarian is claiming loss wages from 2008. Polk City has fourteen (14) days to respond. After brief discussion, it

was the consensus of the Commission to have Susan Spradley at Gray Robinson handle this on behalf of Polk City.

COMMISSIONER ITEMS

Vice Mayor Harris – Thanked everyone for coming. Thanked Public Works Director for his work. We will begin to see major improvements so far. Welcomed Commissioner Carroll.
Commissioner Blethen – Thanked everyone for coming
Commissioner Kimsey – Thanked everyone for coming
Commissioner Carroll – Would like to see more beautification around Polk City. Thanked everyone for their confidence in him to serve on the City Commission.
Mayor LaCascia – None

City Manager Jackson discussed the Water Meter Replacement Program from 2014. We now have to upgrade the software. Master Meter will no longer support the program. Upgrading to a software that will support the current 3G program. In an effort to remain current, we are heading into 4G meters that will be supported.

ANNOUNCEMENTS - None

ADJOURNMENT – 9:35 pm

Patricia Jackson, City Manager

Joe LaCascia, Mayor

CONSENT AGENDA
March 20, 2017

MAY ALL BE APPROVED BY ONE VOTE OF COMMISSION TO ACCEPT CONSENT AGENDA. Commission Members may remove a specific item below for discussion, and add it to the regular agenda under New or Unfinished Business, whichever category best applies to the subject.

A. CITY CLERK

1 Accept minutes – February 20, 2017 - City Commission Regular Meeting

B. REPORTS

1. Building Report – February 2017
2. Code Enforcement Report – February 2017
3. Finance Report – February 2017
4. Library Report – February 2017
5. Sheriff's Office Report – February 2017
5. Utilities Report – February 2017

C. OTHER

Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: Consent Agenda

Subject: Departmental Monthly Reports			
Department: Various Departments			
Summary: Monthly Department Reports for Building, Finance, Library, Sheriff's Office, Public Works, Utilities			
Requested Commission Action: Approval of Department Reports via Consent Agenda			
Financial Impact: None			
Attachments: X		**Supporting Documents Reviewed** X	
Submitting Department Head: Patricia Jackson, City Manager		**Date:** 5/10/2017	
Approved by City Manager:		**Date:**	

Polk City Permits Added
April 2017

Worktype & Permit Number	Address	Declared Value	Date Added
1 & 2 FAMILY			
382165	8715 HINSDALE HEIGHTS DR POLK CITY	$200,000.00	04/26/2017
382135	360 NOLANE LN POLK CITY	$250,000.00	04/26/2017
		$450,000.00	
COMMERCIAL NEW			
380915	104 COMMONWEALTH AVE SW POLK CITY	$250,000.00	04/20/2017
		$250,000.00	
DEMOLITION/COMMERCIAL			
381547	104 COMMONWEALTH AVE SW POLK CITY	$5,000.00	04/24/2017
		$5,000.00	
MECH HEATING, VENTILATION, A/C			
377832	7194 BERKLEY RD POLK CITY	$3,600.00	04/04/2017
		$3,600.00	
IRRIGATION RESIDENTIAL			
378975	209 HYDRANGEA AVE POLK CITY	$1,250.00	04/10/2017
		$1,250.00	
RESIDENTIAL ADDITION/REMODEL			
379362	7194 BERKLEY RD POLK CITY	$5,000.00	04/12/2017
		$5,000.00	
RESIDENTIAL ACCESSORY STRUCTRE			
381042	730 3RD ST POLK CITY	$2,300.00	04/20/2017
377619	101 BAYBERRY DR POLK CITY	$29,000.00	04/03/2017
		$31,300.00	
SLAB/FOOTER			
381498	315 COMMONWEALTH AVE POLK CITY	$3,975.00	04/24/2017
		$3,975.00	
		$750,125.00	

36 SFR to date

POLK CITY
GENERAL FUND
BALANCE SHEET
AS OF: 04/30/2017

Account Id	Account Description	2017
Assets		
01-101-100	Cash - Checking	1,106,849.49
01-101-800	Cash - Impact Fee Account	340,044.14
01-101-911	USDA - Loan Payments - Sinking Fund	68,059.12
01-101-931	USDA - Reserves	102,090.00
01-101-990	Van Fleet Cycling Challenge	859.09
01-102-100	Cash on Hand	575.00
01-115-120	Accounts Receivable - Local Bus Licenses	1,826.58
01-117-100	Allowance for Bad Debt	-13,249.30
01-117-200	Allowance for Uncollectible A/R	-3,179.50
01-131-500	Due from Enterprise Fund	34,319.38
01-153-302	Restricted Cash - New Local Opt Gas Tax	105,009.19
01-153-303	Restricted Cash - Building and Codes	2,000.00
01-160-902	Reserve Account	177,764.59
01-160-903	Reserve Acct - Emergencies & Contingency	62,924.00
01-169-900	CIP - Construction Costs	4,000.00
	Total	1,989,891.78
ACCOUNTS RECEIVABLE		
01-115-100	Accounts Receivable - Utilities	23,778.37
01-115-130	Accounts Receivable - Readiness to Serve	3,457.68
	Total ACCOUNTS RECEIVABLE	27,236.05
	Total Assets	**2,017,127.83**
Liabilities & Fund Balance		
01-202-100	Accounts Payable	155.00
01-202-900	Customer Deposits	3,100.00
01-207-800	Due to Enterprise Fund	138.92
01-208-300	Due to County - Impact Fees	62,632.60
01-208-305	Due to County - Public Srv Tax	3,863.22
01-208-310	Due to DCA - Bldg Permit Surcharge	462.71
01-208-320	Due to Dept of Business - License Fees	462.71
01-208-330	Due to PCSO - Police Education Revenue	102.00
01-217-100	Accrued Payroll Taxes	1,074.37
01-217-200	Accrued Sales Tax	27.50
01-218-200	FRS Retirement Payable	1,361.85
01-218-400	Dental Plan Payable	624.67
01-218-410	Vision Plan Payable	207.28
01-243-100	Encumbrances Payable	-7,299.20
	Total Liabilities	**66,913.63**
01-245-100	Reserved for Encumbrances	7,299.20
01-271-100	Fund Balance Unreserved	1,942,915.00
	Total Fund Balance	**1,950,214.20**
	Total Liabilities & Fund Balance	***2,017,127.83***

Revenue Account Range: 01-000-000 to 01-999-999
Expend Account Range: 01-000-000 to 01-999-999
Print Zero YTD Activity: No

Include Non-Anticipated: Yes
Include Non-Budget: No

Year To Date As Of: 04/30/17
Current Period: 04/01/17 to 04/30/17
Prior Year As Of: 04/30/16

Revenue Account	Description	Prior Yr Rev	Anticipated	Current Rev	YTD Revenue	Cancel	Excess/Deficit	% Real
01-311-100	Ad Valorem Taxes	475,500.02	550,828.00	41,756.94	522,891.88	0.00	27,936.12-	95
01-312-300	9th Cent Gas Tax	5,456.85	13,568.00	1,018.34	5,669.77	0.00	7,898.23-	42
01-312-400	Local Option Gas Tax	36,084.50	77,425.00	6,082.52	37,576.61	0.00	39,848.39-	49
01-312-410	New Local Option Gas Tax	23,258.82	47,147.00	3,976.54	24,031.16	0.00	23,115.84-	51
	Account Total	64,800.17	138,140.00	11,077.40	67,277.54	0.00	70,862.46-	49
01-314-100	Electric - Utility Tax	37,588.82	74,847.00	6,241.19	36,409.85	0.00	38,437.15-	49
01-314-300	Water - Utility Tax	20,446.87	43,773.00	4,052.51	27,547.16	0.00	16,225.84-	63
01-314-301	Water - Utility Tax - Readiness to Serve	5,763.32	4,904.00	10.26	4,002.98	0.00	901.02-	82
01-314-400	Gas - Utility Tax	1,717.55	3,300.00	629.30	2,402.19	0.00	897.81-	73
	Account Total	65,516.56	126,824.00	10,933.26	70,362.18	0.00	56,461.82-	55
01-315-100	Communications Services Tax	74,477.20	140,000.00	14,639.75	87,359.45	0.00	52,640.55-	62
01-316-100	Local Business Licenses	542.57	11,800.00	32.20	106.15	0.00	11,693.85-	1
01-322-100	Building Permits	21,655.56	30,000.00	10,100.63	49,461.71	0.00	19,461.71	165
01-322-101	Bldg Permit - Plan Checking	11,763.74	15,000.00	5,533.64	26,066.09	0.00	11,066.09	174
01-322-102	Bldg Permit - Admin Fee	960.00	1,500.00	340.00	1,640.00	0.00	140.00	109
01-322-103	Bldg Permit - Electrical	3,200.00	5,200.00	1,520.00	6,365.00	0.00	1,165.00	122
01-322-104	Bldg Permit - Plumbing	2,825.00	5,000.00	1,250.00	5,950.00	0.00	950.00	119
01-322-105	Bldg Permit - Mechanical	2,750.00	4,900.00	1,250.00	6,395.00	0.00	1,495.00	131
01-322-107	Bldg Permit - Cert of Occupancy	750.00	1,000.00	90.00	1,320.00	0.00	320.00	132
01-322-108	Bldg Permit - Inspections	17,005.00	20,000.00	2,835.00	38,465.00	0.00	18,465.00	192
	Account Total	60,909.30	82,600.00	22,919.27	135,662.80	0.00	53,062.80	164
01-323-100	Electric - Franchise Fee	20,371.89	55,000.00	9,068.77	18,350.91	0.00	36,649.09-	33
01-323-300	Solid Waste - Franchise Fee	13,790.03	30,149.00	2,250.00	14,806.33	0.00	15,342.67-	49
	Account Total	34,161.92	85,149.00	11,318.77	33,157.24	0.00	51,991.76-	39
01-324-100	Police - Public Safety Impact Fee	0.00	0.00	5,804.91	27,089.58	0.00	27,089.58	0

Revenue Account	Description	Prior Yr Rev	Anticipated	Current Rev	YTD Revenue	Cancel	Excess/Deficit	% Real
01-324-110	Fire/Rescue - Public Safety Impact Fee	5,940.60	17,822.00	3,105.99	14,494.62	0.00	3,327.38-	81
01-324-610	Parks & Recreation Impact Fee	6,240.96	18,723.00	9,361.44	43,686.56	0.00	24,963.56	233
01-324-710	Public Facilities Impact Fee	10,488.06	31,464.00	15,732.09	73,416.42	0.00	41,952.42	233
	Account Total	22,669.62	68,009.00	34,004.43	158,687.18	0.00	90,678.18	233
01-331-510	CDBG	0.00	15,402.00	0.00	0.00	0.00	15,402.00-	0
01-331-700	FRDAP Grants	0.00	50,000.00	0.00	0.00	0.00	50,000.00-	0
	Account Total	0.00	65,402.00	0.00	0.00	0.00	65,402.00-	0
01-334-201	Justice Assistance Grant (JAG)	4,632.70	5,113.00	0.00	0.00	0.00	5,113.00-	0
01-335-120	MRS - State Sales Tax	32,958.64	57,116.00	4,700.10	32,894.58	0.00	24,221.42-	58
01-335-122	SRS - 8th Cent. Motor Fuel Tax	10,238.82	17,832.00	1,467.40	10,269.87	0.00	7,562.13-	58
01-335-123	MRS - Municipal Fuel Tax	4.31	7.00	0.61	4.28	0.00	2.72-	61
01-335-140	Mobile Home License	4,105.43	5,000.00	138.25	3,980.04	0.00	1,019.96-	80
01-335-150	Alcoholic Beverage License	1,027.82	1,028.00	1,101.24	1,101.24	0.00	73.24	107
01-335-180	Half-Cent Sales Tax	48,463.32	100,496.00	8,531.33	49,829.51	0.00	50,666.49-	50
	Account Total	96,798.34	181,479.00	15,938.93	98,079.52	0.00	83,399.48-	54
01-337-100	Library Coop Funding	28,711.90	28,712.00	0.00	18,014.30	0.00	10,697.70-	63
01-337-800	Municipal Board of Examiners Funds	1,000.00	0.00	0.00	1,000.00	0.00	1,000.00	0
	Account Total	29,711.90	28,712.00	0.00	19,014.30	0.00	9,697.70-	66
01-340-400	Solid Waste	122,504.06	251,735.00	21,888.40	149,624.67	0.00	102,110.33-	59
01-340-700	Stormwater Utility Fees	8,838.96	18,194.00	1,582.31	11,020.22-	0.00	29,214.22-	61-
01-340-900	Notary Fees	0.00	0.00	0.00	5.00	0.00	5.00	0
	Account Total	131,343.02	269,929.00	23,470.71	138,609.45	0.00	131,319.55-	51
01-344-900	FDOT Maintenance Agreement	7,124.30	16,303.00	0.00	7,638.11	0.00	8,664.89-	47
01-347-100	Library Income	3,326.45	6,500.00	505.25	3,050.66	0.00	3,449.34-	47
01-351-200	Fines, Penalties, and Forfeitures	180.92	200.00	189.57	2,176.07	0.00	1,976.07	***
01-359-200	Non Sufficient Funds	0.00	0.00	0.00	30.00	0.00	30.00	0

Revenue Account	Description	Prior Yr Rev	Anticipated	Current Rev	YTD Revenue	Cancel	Excess/Deficit	% Real
01-359-300	Late Fees	73.50	126.00	31.50	105.00	0.00	21.00-	83
	Account Total	73.50	126.00	31.50	135.00	0.00	9.00	107
01-361-100	Interest Income	62.51	62.00	27.09	181.58	0.00	119.58	293
01-362-100	Activity Center Rentals	800.00	500.00	600.00	1,100.00	0.00	600.00	220
01-362-200	Donald Bronson Community Center Rentals	1,110.74	2,000.00	300.00	2,000.00	0.00	0.00	100
	Account Total	1,910.74	2,500.00	900.00	3,100.00	0.00	600.00	124
01-365-100	Sales of Surplus Property	1,766.28	500.00	0.00	918.43	0.00	418.43	184
01-366-101	Private Donations - Christmas	700.00	1,000.00	0.00	1,200.00	0.00	200.00	120
01-366-102	Private Donations - Halloween	500.00	700.00	0.00	1,250.00	0.00	550.00	179
01-366-104	Private Donations - Music Festival	1,850.00	1,500.00	0.00	2,900.00	0.00	1,400.00	193
01-366-110	Private Donations - Library	372.70	600.00	0.00	127.25	0.00	472.75-	21
	Account Total	3,422.70	3,800.00	0.00	5,477.25	0.00	1,677.25	68
01-369-100	Misc. Income	991.25	1,000.00	0.00	56.30	0.00	943.70-	6
01-369-102	Misc Income - Collection Allowance	2,970.48	2,000.00	2,523.02	7,362.69	0.00	5,362.69	368
01-369-120	Misc Income - Christmas	140.00	100.00	0.00	80.00	0.00	20.00-	80
01-369-130	Misc Income - Halloween	60.00	60.00	0.00	100.00	0.00	40.00	167
01-369-140	Misc Income - City Wide Yard Sale	150.00	100.00	0.00	0.00	0.00	100.00-	0
01-369-150	Misc Income - Music Festival	350.00	0.00	326.00	506.00	0.00	506.00	0
01-369-500	Refund of State Gas Tax	286.48	250.00	69.94	129.79	0.00	120.21-	52
	Account Total	4,948.21	3,510.00	2,918.96	8,234.78	0.00	4,724.78	220
01-381-400	Transfer From Enterprise Fund	0.00	25,000.00	0.00	0.00	0.00	25,000.00-	0
01-381-900	Cash Carry Forward	0.00	161,000.00	0.00	0.00	0.00	161,000.00-	0
	Account Total	0.00	186,000.00	0.00	0.00	0.00	186,000.00-	0
	GENERAL FUND Revenue Total	1,083,878.93	1,973,486.00	190,664.03	1,362,119.57	0.00	611,366.43-	69

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-000-000	GENERAL FUND EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-500-000	GENERAL FUND EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-511-100	LEGISLATIVE - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-511-120	Regular Salary - Wages - Legislative	3,158.75	5,415.00	386.11	3,028.47	0.00	2,386.53	56
01-511-160	Bonuses and Gift Certificates - Legislat	1,082.85	2,331.00	0.00	2,165.65	0.00	165.35	93
01-511-210	Fica Taxes - Legislative	324.49	491.00	29.54	397.33	0.00	93.67	81
01-511-240	Worker's Compensation - Legislative	13.54	15.00	0.00	12.45	0.00	2.55	83
01-511-300	LEGISLATIVE - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-511-310	Professional Services - Legislative	0.00	450.00	0.00	0.00	0.00	450.00	0
01-511-400	Travel and Training - Legislative	644.07	4,500.00	0.00	180.00	0.00	4,320.00	4
01-511-480	Promo Activities & Legal Ads - Legislati	560.98	2,500.00	0.00	704.27	0.00	1,795.73	28
01-511-490	Other Current Charges - Legislative	2,154.18	2,500.00	993.22	1,093.22	0.00	1,406.78	44
01-511-510	Office Supplies - Legislative	113.10	200.00	0.00	94.00	0.00	106.00	47
01-511-520	Operating Supplies - Legislative	272.82	1,000.00	0.00	54.69	0.00	945.31	5
01-511-540	Books, Pub., Sub., & Memberships - Legis	3,414.00	5,840.00	0.00	4,604.00	0.00	1,236.00	79
	Department Total	11,738.78	25,242.00	1,408.87	12,334.08	0.00	12,907.92	49
01-512-100	EXECUTIVE - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-512-120	Regular Salary - Wages - Executive	66,783.51	119,500.00	9,192.31	66,739.92	0.00	52,760.08	56
01-512-130	Other Salaries and Wages - Executive	2,600.00	4,800.00	369.24	2,769.30	0.00	2,030.70	58
01-512-140	Overtime - Executive	454.42	837.00	0.00	395.51	0.00	441.49	47
01-512-160	Bonuses and Gift Certificates - Executiv	14,131.02	12,650.00	0.00	12,344.32	0.00	305.68	98
01-512-210	Fica Taxes - Executive	6,470.51	11,552.00	719.66	6,377.14	0.00	5,174.86	55
01-512-220	Retirement Contribution - Executive	11,217.96	19,879.00	1,524.36	11,420.86	0.00	8,458.14	57
01-512-230	Life & Health Insurance - Executive	10,551.84	20,889.00	3,361.49	13,872.30	0.00	7,016.70	66
01-512-240	Worker's Compensation - Executive	309.02	310.00	0.00	287.81	0.00	22.19	93
01-512-300	EXECUTIVE - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-512-310	Professional Services - Executive	0.00	0.00	142.75	142.75	0.00	142.75-	0
01-512-400	Travel and Training - Executive	1,559.06	3,200.00	50.35	1,527.33	0.00	1,672.67	48
01-512-410	Communication Services - Executive	0.00	0.00	46.29	46.29	0.00	46.29-	0
01-512-470	Printing and Reproduction - Executive	0.00	250.00	0.00	0.00	0.00	250.00	0
01-512-480	Promo Activities & Legal Ads - Executive	0.00	1,000.00	0.00	69.84	0.00	930.16	7
01-512-490	Other Current Charges - Executive	1,198.96	2,500.00	0.00	1,291.11	0.00	1,208.89	52
01-512-510	Office Supplies - Executive	224.74	550.00	100.99	633.04	0.00	83.04-	115
01-512-520	Operating Supplies - Executive	243.48	300.00	0.00	42.35	0.00	257.65	14
01-512-540	Books, Pub., Sub., & Memberships - Execu	720.15	1,200.00	0.00	712.29	0.00	487.71	59
	Department Total	116,464.67	199,417.00	15,507.44	118,672.16	0.00	80,744.84	60

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-513-300	CITY CLERK - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-513-400	Travel and Training - City Clerk	10.00	2,500.00	0.00	0.00	0.00	2,500.00	0
01-513-470	Printing and Reproduction - City Clerk	700.00	3,000.00	0.00	950.00	0.00	2,050.00	32
01-513-490	Other Current Charges - City Clerk	0.00	3,000.00	492.80	492.80	0.00	2,507.20	16
01-513-492	Recording & Other Fees - City Clerk	0.00	600.00	0.00	700.00	0.00	100.00-	117
01-513-510	Office Supplies - City Clerk	234.25	800.00	58.44	131.40	0.00	668.60	16
01-513-520	Operating Supplies - City Clerk	0.00	200.00	0.00	0.00	0.00	200.00	0
01-513-540	Books, Pub., Sub., & Memberships - City	235.00	725.00	0.00	175.00	0.00	550.00	24
	Department Total	1,179.25	10,825.00	551.24	2,449.20	0.00	8,375.80	23
01-514-300	LEGAL COUNSEL - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-514-310	Professional Services - Legal Counsel	26,414.90	55,000.00	7,317.00	18,374.17	0.00	36,625.83	33
01-514-480	Promo Activities & Legal Ads - Legal Cou	2,531.89	6,000.00	741.62	3,332.97	0.00	2,667.03	56
	Department Total	28,946.79	61,000.00	8,058.62	21,707.14	0.00	39,292.86	36
01-515-300	COMPREHENSIVE PLANNING - OPERATING EXPEN	0.00	0.00	0.00	0.00	0.00	0.00	0
01-515-310	Professional Services - Comp Planning	13,500.00	18,000.00	0.00	4,500.00	0.00	13,500.00	25
01-515-312	Professional Services-Other- Comp Planni	0.00	3,500.00	0.00	2,625.00	0.00	875.00	75
	Department Total	13,500.00	21,500.00	0.00	7,125.00	0.00	14,375.00	33
01-516-100	FINANCE AND ACCOUNTING - PERSONNEL EXPE	0.00	0.00	0.00	0.00	0.00	0.00	0
01-516-120	Regular Salary - Wages - Fin & Acctng	29,491.41	53,224.00	4,175.29	29,691.91	0.00	23,532.09	56
01-516-140	Overtime - Fin & Acctng	289.07	920.00	0.00	481.77	0.00	438.23	52
01-516-210	Fica Taxes - Fin & Acctng	2,196.44	4,142.00	303.02	2,239.75	0.00	1,902.25	54
01-516-220	Retirement Contribution - Fin & Acctng	1,948.87	3,931.00	313.99	2,245.09	0.00	1,685.91	57
01-516-230	Life & Health Insurance - Fin & Acctng	5,162.55	10,285.00	1,670.66	6,889.75	0.00	3,395.25	67
01-516-240	Worker's Compensation - Fin & Acctng	135.36	210.00	0.00	124.53	0.00	85.47	59
01-516-300	FINANCE AND ACCOUNTING - OPERATING EXPEN	0.00	0.00	0.00	0.00	0.00	0.00	0
01-516-310	Professional Services - Fin & Acctng	552.83	0.00	0.00	945.95	0.00	945.95-	0
01-516-400	Travel and Training - Fin & Acctng	250.00	3,321.00	0.00	0.00	0.00	3,321.00	0
01-516-420	Education Reimbursement - Fin & Acctng	1,500.00	0.00	0.00	0.00	0.00	0.00	0
01-516-470	Printing and Reproduction - Fin & Acctng	148.97	500.00	0.00	364.12	0.00	135.88	73
01-516-510	Office Supplies - Fin & Acctng	444.51	1,200.00	255.60	812.86	0.00	387.14	68
01-516-520	Operating Supplies - Fin & Acctng	0.00	1,000.00	0.00	55.97	0.00	944.03	6
01-516-540	Books, Pub., Sub., & Memberships - Fin &	35.00	300.00	0.00	35.00	0.00	265.00	12

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
	Department Total	42,155.01	79,033.00	6,718.56	43,886.70	0.00	35,146.30	56
01-517-700	DEBT SERVICE PAYMENTS	0.00	0.00	0.00	0.00	0.00	0.00	0
01-517-710	Principal - Debt Service Pmts	0.00	43,700.00	0.00	0.00	0.00	43,700.00	0
01-517-720	Interest - Debt Service Pmts	0.00	58,389.00	0.00	0.00	0.00	58,389.00	0
	Department Total	0.00	102,089.00	0.00	0.00	0.00	102,089.00	0
01-521-300	LAW ENFORCEMENT - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-521-305	Contract Labor - Law Enf	93,208.50	95,454.00	23,863.50	71,590.50	0.00	23,863.50	75
01-521-440	Rentals and Leases - Law Enf	337.78	582.00	48.26	290.24	0.00	291.76	50
01-521-460	Repairs and Maintenance - Law Enf	3.31	500.00	0.00	0.00	0.00	500.00	0
01-521-520	Operating Supplies - Law Enf	0.00	100.00	0.00	0.00	0.00	100.00	0
01-521-529	Operating Supplies - JAG Grant - Law Enf	4,632.70	5,113.00	0.00	0.00	0.00	5,113.00	0
01-521-600	LAW ENFORCEMENT - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
01-521-649	Machinery & Equip - JAG Grant - Law Enf	0.00	0.00	0.00	4,412.85	0.00	4,412.85-	0
	Department Total	98,182.29	101,749.00	23,911.76	76,293.59	0.00	25,455.41	75
01-524-100	BUILDING AND ZONING - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-524-120	Regular Salary - Wages - Bldg & Zoning	25,644.49	47,476.00	3,509.24	26,839.20	0.00	20,636.80	57
01-524-140	Overtime - Bldg & Zoning	0.00	0.00	0.00	447.86	0.00	447.86-	0
01-524-210	Fica Taxes - Bldg & Zoning	1,939.89	3,632.00	259.10	2,084.37	0.00	1,547.63	57
01-524-220	Retirement Contribution - Bldg & Zoning	1,905.95	3,570.00	263.90	2,020.26	0.00	1,549.74	57
01-524-230	Life & Health Insurance - Bldg & Zoning	5,185.52	10,363.00	1,674.61	6,858.54	0.00	3,504.46	66
01-524-240	Worker's Compensation - Bldg & Zoning	1,122.25	117.00	0.00	582.96	0.00	465.96-	498
01-524-300	BUILDING AND ZONING - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-524-310	Professional Services - Bldg & Zoning	17,899.58	42,000.00	0.00	38,438.75	0.00	3,561.25	92
01-524-311	Engineering Services - Bldg & Zoning	0.00	1,000.00	0.00	0.00	0.00	1,000.00	0
01-524-400	Travel and Training - Bldg & Zoning	0.00	500.00	0.00	0.00	0.00	500.00	0
01-524-510	Office Supplies - Bldg & Zoning	0.00	200.00	0.00	354.99	0.00	154.99-	178
01-524-520	Operating Supplies - Bldg & Zoning	0.00	100.00	0.00	0.00	0.00	100.00	0
	Department Total	53,697.68	108,958.00	5,706.85	77,626.93	0.00	31,331.07	71
01-529-300	CODE ENFORCEMENT - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-529-400	Travel and Training - Code Enf	0.00	500.00	0.00	0.00	0.00	500.00	0
01-529-464	Vehicle Fuel - Code Enf	0.00	250.00	0.00	0.00	0.00	250.00	0
01-529-480	Promo Activities & Legal Ads - Code Enf	0.00	150.00	0.00	0.00	0.00	150.00	0
01-529-490	Other Current Charges - Code Enf	0.00	100.00	0.00	0.00	0.00	100.00	0

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-529-510	Office Supplies - Code Enf	0.00	100.00	0.00	0.00	0.00	100.00	0
01-529-520	Operating Supplies - Code Enf	0.00	100.00	0.00	0.00	0.00	100.00	0
	Department Total	0.00	1,200.00	0.00	0.00	0.00	1,200.00	0
01-534-300	REFUSE/SANITATION - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-534-341	Refuse Disposal - Residential - Refuse/S	57,796.32	121,256.00	10,673.72	66,938.40	0.00	54,317.60	55
01-534-342	Refuse Disposal - Commercial - Refuse/Sa	42,474.82	79,740.00	42.99	40,055.23	0.00	39,684.77	50
	Department Total	100,271.14	200,996.00	10,716.71	106,993.63	0.00	94,002.37	53
01-538-300	STORMWATER - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-538-311	Engineering Services - Stormwater	0.00	5,000.00	0.00	0.00	0.00	5,000.00	0
01-538-315	Inmate Labor - Stormwater	4,312.26	5,750.00	0.00	4,312.26	0.00	1,437.74	75
01-538-400	Travel and Training - Stormwater	0.00	500.00	0.00	0.00	0.00	500.00	0
01-538-460	Repairs and Maintenance - Stormwater	21,845.00	14,000.00	0.00	11,291.38	0.00	2,708.62	81
01-538-492	Recording & Other Fees - Stormwater	100.00	500.00	0.00	100.00	0.00	400.00	20
01-538-540	Books, Pub., Sub., & Memberships - Storm	0.00	366.00	0.00	500.00	0.00	134.00-	137
	Department Total	26,257.26	26,116.00	0.00	16,203.64	0.00	9,912.36	62
01-539-300	GEN GOV'T BUILDINGS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-539-310	Professional Services - Gen Gov't Bldgs	7,427.14	14,000.00	1,563.00	10,182.82	0.00	3,817.18	73
01-539-312	Professional Services - Other - Gen Gov'	325.00	600.00	0.00	300.00	0.00	300.00	50
01-539-315	Inmate Labor - Gen Gov't Bldgs	4,312.26	5,750.00	0.00	4,312.26	0.00	1,437.74	75
01-539-411	City Hall - Communication - Gen Gov't Bl	8,451.54	12,700.00	1,083.52	8,453.98	0.00	4,246.02	67
01-539-414	Bronson Community Center-Communications	1,103.01	1,680.00	137.87	1,272.34	0.00	407.66	76
01-539-431	City Hall - Utilities - Gen Gov't Bldgs	5,634.32	12,800.00	834.54	6,116.15	0.00	6,683.85	48
01-539-432	Activity Center - Utilities - Gen Gov't	760.80	2,800.00	141.24	937.56	0.00	1,862.44	33
01-539-433	Public Works - Utilities - Gen Gov't Bld	1,063.27	2,200.00	155.81	948.42	0.00	1,251.58	43
01-539-434	Bronson Community Center-Utilities	1,321.07	6,250.00	309.82	1,862.81	0.00	4,387.19	30
01-539-440	Rentals and Leases - Gen Gov't Bldgs	5,171.06	6,600.00	553.88	3,418.77	0.00	3,181.23	52
01-539-461	City Hall - Repairs & Maint - Gen Gov't	3,255.32	4,500.00	25.00	3,613.75	0.00	886.25	80
01-539-462	Activity Center - Repairs & Maint - Gen	471.46	800.00	531.88	597.57	0.00	202.43	75
01-539-463	Public Works - Repairs & Maint - Gen Gov	508.27	1,000.00	168.08	258.90	0.00	741.10	26
01-539-464	Bronson Community Center-Repairs & Maint	6,182.83	2,000.00	0.00	37.17	0.00	1,962.83	2
01-539-490	Other Current Charges - Gen Gov't Bldgs	146.13	500.00	269.98	328.83	0.00	171.17	66
01-539-510	Office Supplies - Gen Gov't Bldgs	3.60	0.00	0.00	0.00	0.00	0.00	0
01-539-521	City Hall - Operating Supplies - Gen Gov	457.94	1,200.00	203.09	824.60	0.00	375.40	69
01-539-522	Activity Center - Operating Supplies - G	126.84	300.00	60.92	120.79	0.00	179.21	40

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-539-523	Public Works - Operating Supplies - Gen	0.00	300.00	0.00	0.00	0.00	300.00	0
01-539-524	Bronson Community Center-Opertg Supplies	769.57	1,300.00	60.92	120.80	0.00	1,179.20	9
01-539-600	GEN GOV'T BUILDINGS - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
01-539-620	Buildings - Gen Gov't Bldgs	0.00	12,500.00	0.00	12,500.00	0.00	0.00	100
01-539-631	City Hall - Improv. O/T Bldgs - Gen Gov'	0.00	27,413.00	429.00	13,129.10	0.00	14,283.90	48
01-539-632	Activity Center - Improv. O/T Bldgs - Ge	0.00	20,000.00	0.00	0.00	0.00	20,000.00	0
01-539-644	Bronson Community Center -Mach/Equip	1,062.90	0.00	0.00	0.00	0.00	0.00	0
	Department Total	48,554.33	137,193.00	6,528.55	69,336.62	0.00	67,856.38	51
01-541-100	ROADS & STREETS - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-541-120	Regular Salary - Wages - Roads & Streets	41,483.61	139,100.00	11,192.38	54,583.16	0.00	84,516.84	39
01-541-140	Overtime - Roads & Streets	345.56	1,602.00	0.00	1,070.67	0.00	531.33	67
01-541-210	Fica Taxes - Roads & Streets	3,208.74	10,762.00	844.66	4,308.04	0.00	6,453.96	40
01-541-220	Retirement Contribution - Roads & Street	2,595.09	9,805.00	783.38	3,842.32	0.00	5,962.68	39
01-541-230	Life & Health Insurance - Roads & Street	10,132.15	32,406.00	5,103.40	16,175.68	0.00	16,230.32	50
01-541-240	Worker's Compensation - Roads & Streets	4,742.12	11,736.00	0.00	5,450.85	0.00	6,285.15	46
01-541-300	ROADS & STREETS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-541-311	Engineering Services - Roads & Streets	0.00	800.00	0.00	3,290.00	0.00	2,490.00-	411
01-541-315	Inmate Labor - Roads & Streets	12,936.84	18,249.00	0.00	12,936.84	0.00	5,312.16	71
01-541-400	Travel and Training - Roads & Streets	0.00	300.00	0.00	0.00	0.00	300.00	0
01-541-410	Communication Services - Roads & Streets	330.34	540.00	101.13	289.07	0.00	250.93	54
01-541-430	Utilities - Roads & Streets	11,381.12	25,000.00	1,846.94	12,550.36	0.00	12,449.64	50
01-541-460	Repairs and Maintenance - Roads & Street	5,169.11	8,000.00	592.47	791.99	0.00	7,208.01	10
01-541-461	Repairs & Maintenance-Equipment - Roads	2,442.58	4,000.00	2,026.59	3,891.12	0.00	108.88	97
01-541-464	Vehicle Fuel - Roads & Streets	1,718.79	5,000.00	452.88	1,781.40	0.00	3,218.60	36
01-541-465	Vehicle Maintenance - Roads & Streets	222.18	4,500.00	407.05	2,141.35	0.00	2,358.65	48
01-541-492	Recording & Other Fees - Roads & Streets	39.30	0.00	0.00	0.00	0.00	0.00	0
01-541-493	Equipment Rental - Roads & Streets	0.00	1,000.00	0.00	0.00	0.00	1,000.00	0
01-541-510	Office Supplies - Roads & Streets	499.94	250.00	433.60	532.60	0.00	282.60-	213
01-541-520	Operating Supplies - Roads & Streets	3,791.79	10,000.00	2,318.17	4,942.12	0.00	5,057.88	49
01-541-524	Chemicals - Roads & Streets	0.00	500.00	0.00	0.00	0.00	500.00	0
01-541-525	Uniforms - Roads & Streets	0.00	0.00	47.94	47.94	0.00	47.94-	0
01-541-530	Road Materials & Supplies - Roads & Stre	1,778.80	6,500.00	1,467.36	3,687.34	0.00	2,812.66	57
01-541-540	Books, Pub., Sub., & Memberships - Roads	0.00	0.00	0.00	89.94	0.00	89.94-	0
01-541-600	ROADS & STREETS - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
01-541-630	Improvements Other than Building - Roads	0.00	122,147.00	9,987.50	13,935.50	0.00	108,211.50	11
01-541-640	Machinery & Equipment - Roads & Streets	2,899.99	22,400.00	24,234.75	49,088.66	0.00	26,688.66-	219
	Department Total	105,718.05	434,597.00	61,840.20	195,426.95	0.00	239,170.05	45

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-571-100	LIBRARY - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-571-120	Regular Salary - Wages - Library	31,752.05	51,400.00	3,799.38	28,086.51	0.00	23,313.49	55
01-571-140	Overtime - Library	268.77	950.00	0.00	786.83	0.00	163.17	83
01-571-210	Fica Taxes - Library	2,448.76	4,005.00	277.80	2,185.06	0.00	1,819.94	55
01-571-220	Retirement Contribution - Library	2,375.38	3,176.00	228.16	1,791.71	0.00	1,384.29	56
01-571-230	Life & Health Insurance - Library	11,046.12	21,839.60	3,330.05	13,642.81	0.00	8,196.79	62
01-571-240	Worker's Compensation - Library	141.93	150.00	0.00	115.81	0.00	34.19	77
01-571-300	LIBRARY - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-571-310	Professional Services - Library	0.00	800.00	171.00	371.00	0.00	429.00	46
01-571-312	Professional Services - Other - Library	0.00	3,200.00	0.00	520.00	0.00	2,680.00	16
01-571-400	Travel and Training - Library	186.77	1,200.00	79.30	151.31	0.00	1,048.69	13
01-571-410	Communication Services - Library	746.81	2,200.00	169.78	1,188.26	0.00	1,011.74	54
01-571-430	Utilities - Library	1,614.71	5,000.00	191.70	1,352.15	0.00	3,647.85	27
01-571-460	Repairs and Maintenance - Library	195.86	1,000.00	0.00	237.33	0.00	762.67	24
01-571-480	Promo Activities & Legal Ads - Library	851.32	1,500.00	20.55	716.84	0.00	783.16	48
01-571-510	Office Supplies - Library	521.27	950.00	30.18	792.16	0.00	157.84	83
01-571-520	Operating Supplies - Library	1,452.57	9,400.00	113.01	1,155.33	0.00	8,244.67	12
01-571-540	Books, Pub., Sub., & Memberships - Libra	405.20	800.00	49.00	394.99	0.00	405.01	49
01-571-600	LIBRARY - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
01-571-630	Improvements Other than Building - Libra	0.00	0.00	0.00	920.09	0.00	920.09-	0
01-571-660	Books, Pub.& Library Materials - Library	6,562.26	13,000.00	1,299.71	5,501.03	0.00	7,498.97	42
	Department Total	60,569.78	120,570.60	9,759.62	59,909.22	0.00	60,661.38	50
01-572-300	PARKS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-572-310	Professional Services	0.00	0.00	60.00	360.00	0.00	360.00-	0
01-572-315	Inmate Labor - Parks	4,312.29	5,750.00	0.00	4,312.29	0.00	1,437.71	75
01-572-430	Utilities - Parks	3,514.98	8,000.00	1,087.89	9,379.36	0.00	1,379.36-	117
01-572-460	Repairs and Maintenance - Parks	2,669.46	58,000.00	14,971.00	46,850.83	0.00	11,149.17	81
01-572-520	Operating Supplies - Parks	167.61	1,200.00	130.43	190.23	0.00	1,009.77	16
01-572-600	PARKS - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
01-572-630	Improvements Other than Building - Parks	0.00	11,000.00	0.00	0.00	0.00	11,000.00	0
	Department Total	10,664.34	83,950.00	16,249.32	61,092.71	0.00	22,857.29	73
01-574-300	SPECIAL EVENTS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-574-310	Professional Services - Spec Events	696.00	800.00	0.00	1,853.00	0.00	1,053.00-	232
01-574-440	Rentals and Leases - Spec Events	1,103.50	1,300.00	0.00	475.04	0.00	824.96	37
01-574-470	Printing and Reproduction - Spec Events	680.00	900.00	0.00	823.44	0.00	76.56	91

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
01-574-480	Promo Activities & Legal Ads - Spec Even	32.99	200.00	0.00	815.75	0.00	615.75-	408
01-574-520	Operating Supplies - Spec Events	4,902.65	6,000.00	0.00	3,019.73	0.00	2,980.27	50
	Department Total	7,415.14	9,200.00	0.00	6,986.96	0.00	2,213.04	76
01-590-300	NON-DEPARTMENTAL - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-590-310	Professional Services - Non-Dept	0.00	5,318.00	5,391.00	5,391.00	0.00	73.00-	101
01-590-311	Engineering Services - Non-Dept	3,285.00	5,000.00	0.00	0.00	0.00	5,000.00	0
01-590-312	Professional Services - Other - Non-Dept	8,933.29	5,000.00	0.00	2,015.05	0.00	2,984.95	40
01-590-320	Accounting and Auditing - Non-Dept	8,430.93	13,682.00	0.00	12,347.40	0.00	1,334.60	90
01-590-450	Liability Insurance - Non-Dept	33,015.49	32,209.00	0.00	35,336.50	0.00	3,127.50-	110
01-590-528	Postage - Non-Dept	81.54	3,000.00	32.51	203.34	0.00	2,796.66	7
01-590-900	NON-DEPARTMENTAL - OTHER USES	0.00	0.00	0.00	0.00	0.00	0.00	0
01-590-940	Reserves - Unrestricted Reserves - Non-D	0.00	22,477.00	0.00	0.00	0.00	22,477.00	0
01-590-941	Reserves - Emergencies & Contingencies -	0.00	0.00	0.00	2,211.19	0.00	2,211.19-	0
01-590-991	Aids to Private Organizations - Non-Dept	250.00	500.00	250.00	250.00	0.00	250.00	50
01-590-992	Unemployment Claims - Non-Dept	0.00	2,500.00	0.00	1,375.00	0.00	1,125.00	55
01-590-995	Refund of Overpayments	94.90	0.00	0.00	0.00	0.00	0.00	0
01-590-996	Bad Debt - Non-Dept	0.00	3,000.00	0.00	0.00	0.00	3,000.00	0
01-590-999	Other - Non-Operating Charges - Non-Dept	2,020.50	5,500.00	841.36	1,294.88	0.00	4,205.12	24
	Department Total	56,111.65	98,186.00	6,514.87	60,424.36	0.00	37,761.64	62
	GENERAL FUND Expend Total	781,426.16	1,821,821.60	173,472.61	936,468.89	0.00	885,352.71	51

Fund	Description	Prior Revenue	Curr Revenue	YTD Revenue	Prior Expended	Curr Expended	YTD Expended	Total Available Revenues
01	GENERAL FUND	1,083,878.93	190,664.03	1,362,119.57	781,426.16	173,472.61	936,468.89	425,650.68

Fund	Description	Prior Revenue	Curr Revenue	YTD Revenue	Prior Expended	Curr Expended	YTD Expended	Total Available Revenues
	Final Total	1,083,878.93	190,664.03	1,362,119.57	781,426.16	173,472.61	936,468.89	425,650.68

POLK CITY
ENTERPRISE FUND
BALANCE SHEET
AS OF: 04/30/2017

Account Id	Account Description	2017
Assets		
05-101-100	Cash - Checking	979,556.74
05-101-710	Cash - Enterprise Fund Capital Imprvmnts	52,898.45
05-101-800	Cash - Sewer Impact Fee Account	578,487.63
05-101-900	Cash - Water Impact Fee Account	307,812.29
05-101-913	DEP Loan - Sinking Fund	14,517.34
05-101-914	Fifth Third Bank - Sinking Fund	271,541.93
05-101-915	Tax Exempt Leasing - Sinking Fund	13,699.39
05-101-920	Cash - Customer Deposits	251,288.94
05-101-934	Fifth Third Bank - Reserves	610,967.73
05-101-935	Fifth Third Bank - Renewal & Replacement	150,000.00
05-115-105	Accounts Receivable - Invoicing	863.75
05-117-100	Allowance for Bad Debt	-46,609.45
05-117-200	Allowance for Uncollectible A/R	-89,082.18
05-131-100	Due from General Fund	138.92
05-159-100	Deferred Outflows - Related to Pension	34,007.35
05-160-902	Reserve Account	225,392.00
05-160-903	Reserve Acct - Emergencies & Contingency	48,044.00
05-160-904	Reserve Acct - CIP Purchases	25,778.78
05-161-900	Fixed Assets - Land	2,730,735.50
05-164-100	Utility Plant in Service	12,073,316.62
05-164-900	Improvements Other than Buildings	-33,331.74
05-164-910	Improvements Other than Buildings - MOSN	33,331.74
05-166-900	Equipment & Furniture	278,988.69
05-167-900	Accumulated Depreciation - Equipment	-3,196,588.95
	Total	15,315,755.47
ACCOUNTS RECEIVABLE		
05-115-100	Accounts Receivable - Utilities	70,167.10
05-115-130	Accounts Receivable - Readiness to Serve	90,278.88
	Total ACCOUNTS RECEIVABLE	160,445.98
	Total Assets	**15,476,201.45**
Liabilities & Fund Balance		
05-202-900	Customer Deposits	251,288.94
05-203-100	Accumulated Interest Payable	72,919.88
05-203-600	SRF Loan	2,418,116.67
05-203-700	Fifth Third Bank 2011 Revenue Note	9,270,000.00
05-203-750	Tax Exempt Leasing Loan	108,201.89
05-203-900	Unamortized Bond Premiums	-133,730.00
05-207-400	Due to General Fund	48,907.52
05-225-100	Deferred Inflows - Related to Pension	9,554.79
05-234-100	L-T-D - Current Portion	352,096.02
05-234-901	Less: Current Portion of LTD	-352,096.02
05-235-900	Net Pension Liability	52,236.12
05-243-100	Encumbrances Payable	-5,298.92
	Total Liabilities	**12,092,196.89**

05-245-100	Reserved for Encumbrances	5,298.92
05-250-100	Contributed Capital	598,715.40
05-255-100	Change in Fund Balance	36,514.20
05-271-100	Fund Balance Unreserved	2,018,994.45
05-271-200	Net Asset Adjustment Account	-10,071.23
05-272-100	Retained Earnings	734,552.82
	Total Fund Balance	**3,384,004.56**
	Total Liabilities & Fund Balance	***15,476,201.45***

ENTERPRISE FUND
BALANCE SHEET
AS OF: 04/30/17

Revenue Account Range: 05-000-000 to 05-999-999
Expend Account Range: 05-000-000 to 05-999-999
Print Zero YTD Activity: No

Include Non-Anticipated: Yes
Include Non-Budget: No

Year To Date As Of: 04/30/17
Current Period: 04/01/17 to 04/30/17
Prior Year As Of: 04/30/16

Revenue Account	Description	Prior Yr Rev	Anticipated	Current Rev	YTD Revenue	Cancel	Excess/Deficit	% Real
05-324-210	Water Impact Fees	44,804.00	34,940.00	9,027.00	48,410.00	0.00	13,470.00	139
05-324-220	Sewer Impact Fees	116,207.00	88,300.00	33,815.00	151,440.00	0.00	63,140.00	172
	Account Total	161,011.00	123,240.00	42,842.00	199,850.00	0.00	76,610.00	162
05-325-111	Connection Fees - Wtr:Permits Cash Basis	16,965.00	16,965.00	7,830.00	35,735.00	0.00	18,770.00	211
05-325-112	Connection Fees - Wtr:Utlty Bill Accrual	2,175.00	0.00	435.00	1,305.00	0.00	1,305.00	0
05-325-210	Readiness to Serve Charge - Sewer	100,630.00	94,452.00	208.20	68,254.96	0.00	26,197.04-	72
05-325-211	Readiness to Serve Charge - Water	57,576.17	49,014.00	102.54	39,923.97	0.00	9,090.03-	81
	Account Total	177,346.17	160,431.00	8,575.74	145,218.93	0.00	15,212.07-	91
05-329-200	Other Lic./Fees/Permits	2,782.80	1,000.00	0.00	4,632.27	0.00	3,632.27	463
05-340-300	Water Utility Revenue	450,919.79	914,428.00	81,252.53	494,409.92	0.00	420,018.08-	54
05-340-500	Sewer Utility Revenue	441,403.24	896,848.00	79,509.00	465,824.86	0.00	431,023.14-	52
	Account Total	892,323.03	1,811,276.00	160,761.53	960,234.78	0.00	851,041.22-	53
05-359-100	Other Fines and/or Forfeitures	18,250.00	30,038.00	1,290.00	22,490.00	0.00	7,548.00-	75
05-359-200	Non Sufficient Funds	630.00	900.00	40.00	500.00	0.00	400.00-	56
05-359-300	Late Fees	15,918.00	30,000.00	2,509.50	16,810.50	0.00	13,189.50-	56
	Account Total	34,798.00	60,938.00	3,839.50	39,800.50	0.00	21,137.50-	65
05-369-100	Misc. Income	705.32	500.00	0.00	371.80	0.00	128.20-	74
05-369-700	Misc Income - Reimbursement - Invoiced	1,594.46	0.00	784.54	784.54	0.00	784.54	0
	Account Total	2,299.78	500.00	784.54	1,156.34	0.00	656.34	74
05-381-900	Cash Carry Forward	0.00	5,000.00	0.00	0.00	0.00	5,000.00-	0
	ENTERPRISE FUND Revenue Total	1,270,560.78	2,162,385.00	216,803.31	1,350,892.82	0.00	811,492.18-	62

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
05-530-400		0.00	0.00	0.00	0.00	0.00	0.00	0
05-533-100	WATER OPERATIONS - PERSONNEL EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
05-533-120	Regular Salary - Wages - Water Oper	35,148.23	60,824.00	4,657.81	33,755.50	0.00	27,068.50	56
05-533-140	Overtime - Water Oper	164.30	1,170.00	0.00	441.83	0.00	728.17	38
05-533-210	Fica Taxes - Water Oper	2,712.02	4,744.00	348.63	2,647.86	0.00	2,096.14	56
05-533-220	Retirement Contribution - Water Oper	2,568.99	4,663.00	350.28	2,713.68	0.00	1,949.32	58
05-533-230	Life & Health Insurance - Water Oper	10,326.94	20,321.00	1,688.75	12,420.55	0.00	7,900.45	61
05-533-240	Worker's Compensation - Water Oper	149.78	210.00	0.00	142.59	0.00	67.41	68
05-533-300	WATER OPERATIONS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
05-533-305	Contract Labor - Water Oper	127,145.85	231,250.00	38,647.68	154,272.70	0.00	76,977.30	67
05-533-310	Professional Services - Water Oper	441.92	4,100.00	495.00	1,604.90	0.00	2,495.10	39
05-533-311	Engineering Services - Water Oper	3,159.50	25,000.00	76.00	266.00	0.00	24,734.00	1
05-533-312	Professional Services - Other - Water Op	7,260.55	20,000.00	167.70	3,230.22	0.00	16,769.78	16
05-533-315	Inmate Labor - Water Oper	8,624.55	11,499.00	0.00	8,624.55	0.00	2,874.45	75
05-533-400	Travel and Training - Water Oper	21.72	500.00	0.00	0.00	0.00	500.00	0
05-533-410	Communication Services - Water Oper	667.45	1,500.00	76.03	562.11	0.00	937.89	37
05-533-431	Mt. Olive WTP - Utilities - Water Oper	2,394.18	6,600.00	375.12	2,483.21	0.00	4,116.79	38
05-533-432	Commonwealth WTP - Utilities - Water Ope	2,100.94	4,650.00	27.74	159.88	0.00	4,490.12	3
05-533-433	V.Matt Williams WTP - Utilities - Water	3,608.91	11,000.00	796.81	5,089.98	0.00	5,910.02	46
05-533-460	Repairs and Maintenance - Water Oper	6,923.48	30,000.00	0.00	13,355.68	0.00	16,644.32	45
05-533-461	Mt. Olive WTP - Repairs and Maint - Wate	83.45	0.00	0.00	571.64	0.00	571.64-	0
05-533-462	Commonwealth WTP - Repairs and Maint - W	0.00	22,000.00	0.00	6.95	0.00	21,993.05	0
05-533-463	V.Matt Williams WTP - Repairs and Maint	3,148.02	35,000.00	0.00	13.90	0.00	34,986.10	0
05-533-464	Vehicle Fuel - Water Oper	424.56	6,600.00	96.31	405.58	0.00	6,194.42	6
05-533-465	Vehicle Maintenance - Water Oper	56.32	4,000.00	0.00	2,857.13	0.00	1,142.87	71
05-533-470	Printing and Reproduction - Water Oper	1,015.09	600.00	0.00	0.00	0.00	600.00	0
05-533-492	Recording & Other Fees - Water Oper	0.00	2,500.00	0.00	0.00	0.00	2,500.00	0
05-533-493	Equipment Rental - Water Oper	0.00	4,000.00	0.00	0.00	0.00	4,000.00	0
05-533-510	Office Supplies - Water Oper	222.72	500.00	13.66	263.76	0.00	236.24	53
05-533-520	Operating Supplies - Water Oper	22,038.84	20,000.00	14,138.56	46,367.99	0.00	26,367.99-	232
05-533-540	Books, Pub., Sub., & Memberships - Water	0.00	2,500.00	0.00	210.86	0.00	2,289.14	8
05-533-600	WATER OPERATIONS - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
05-533-640	Machinery & Equipment - Water Oper	0.00	7,500.00	16,234.74	16,234.74	0.00	8,734.74-	216
05-533-700	WATER OPERATIONS - DEBT SERVICE	0.00	0.00	0.00	0.00	0.00	0.00	0
05-533-710	Principal - Water Oper	19,910.55	69,529.00	0.00	20,466.06	0.00	49,062.94	29
05-533-720	Interest - Water Oper	53,266.89	100,966.00	0.00	51,992.55	0.00	48,973.45	52
05-533-733	Mandated Reserve - Water Oper	3,993.50	0.00	0.00	0.00	0.00	0.00	0
	Department Total	317,579.25	713,726.00	78,190.82	381,162.40	0.00	332,563.60	53

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
05-535-300	SEWER OPERATIONS - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
05-535-305	Contract Labor - Sewer Oper	127,145.83	231,250.00	38,541.66	154,166.66	0.00	77,083.34	67
05-535-310	Professional Services - Sewer Oper	0.00	2,500.00	2,475.00	3,165.00	0.00	665.00-	127
05-535-311	Engineering Services - Sewer Oper	8,122.50	18,000.00	2,561.00	6,696.00	0.00	11,304.00	37
05-535-312	Professional Services - Other - Sewer Op	400.00	14,000.00	0.00	2,190.00	0.00	11,810.00	16
05-535-315	Inmate Labor - Sewer Oper	8,624.55	11,499.00	0.00	8,624.55	0.00	2,874.45	75
05-535-400	Travel and Training - Sewer Oper	0.00	500.00	0.00	0.00	0.00	500.00	0
05-535-410	Communication Services - Sewer Oper	476.40	900.00	59.53	476.27	0.00	423.73	53
05-535-411	Cardinal Hill WWTP - Comm Srvcs - Sewer	268.95	1,000.00	39.02	272.99	0.00	727.01	27
05-535-412	Mt. Olive WWTP - Comm Srvcs - Sewer Oper	1,588.00	2,400.00	198.45	1,587.65	0.00	812.35	66
05-535-430	Utilities - Sewer Oper	1,895.52	3,300.00	233.31	1,731.59	0.00	1,568.41	52
05-535-431	Cardinal Hill WWTP - Utilities - Sewer O	8,897.75	18,000.00	1,434.16	10,498.97	0.00	7,501.03	58
05-535-432	Mt. Olive WWTP - Utilities - Sewer Opera	5,002.23	10,000.00	687.21	4,966.78	0.00	5,033.22	50
05-535-440	Rentals and Leases - Sewer Oper	0.00	0.00	0.00	4,033.05	0.00	4,033.05-	0
05-535-460	Repairs and Maintenance - Sewer Oper	18,933.99	70,000.00	1,576.96	39,776.69	0.00	30,223.31	57
05-535-461	Cardinal Hill - Repairs and Maint - Sewe	684.50	20,000.00	0.00	120.91	0.00	19,879.09	1
05-535-464	Vehicle Fuel - Sewer Oper	284.37	5,000.00	96.34	405.77	0.00	4,594.23	8
05-535-465	Vehicle Maintenance - Sewer Oper	56.36	3,400.00	2,025.90	4,717.51	0.00	1,317.51-	139
05-535-470	Printing and Reproduction - Sewer Oper	930.74	0.00	0.00	0.00	0.00	0.00	0
05-535-492	Recording & Other Fees - Sewer Oper	0.00	1,500.00	0.00	0.00	0.00	1,500.00	0
05-535-493	Equipment Rental - Sewer Oper	0.00	4,000.00	0.00	0.00	0.00	4,000.00	0
05-535-510	Office Supplies - Sewer Oper	111.83	550.00	95.86	127.81	0.00	422.19	23
05-535-520	Operating Supplies - Sewer Oper	482.26	2,000.00	443.02	847.25	0.00	1,152.75	42
05-535-600	SEWER OPERATIONS - CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
05-535-640	Machinery & Equipment - Sewer Oper	43,071.23	13,317.00	14,657.78	14,657.78	0.00	1,340.78-	110
05-535-641	Cardinal Hill - Mach & Equip - Sewer Ope	0.00	7,500.00	0.00	0.00	0.00	7,500.00	0
05-535-700	SEWER OPERATIONS - DEBT SERVICE	0.00	0.00	0.00	0.00	0.00	0.00	0
05-535-710	Principal - Sewer Oper	56,593.62	282,566.00	0.00	57,965.74	0.00	224,600.26	21
05-535-720	Interest - Sewer Oper	198,576.62	388,848.00	0.00	194,773.33	0.00	194,074.67	50
05-535-733	Mandated Reserve - Sewer Oper	13,506.50	0.00	0.00	0.00	0.00	0.00	0
	Department Total	495,653.75	1,112,030.00	65,125.20	511,802.30	0.00	600,227.70	46
05-536-000		0.00	0.00	0.00	0.00	0.00	0.00	0
05-590-300	NON-DEPARTMENTAL - OPERATING EXPENSES	0.00	0.00	0.00	0.00	0.00	0.00	0
05-590-310	Professional Services - Non-Dept	0.00	0.00	0.00	6,082.04	0.00	6,082.04-	0
05-590-312	Professional Services - Other - Non-Dept	14,141.64	24,300.00	0.00	95.51	0.00	24,204.49	0
05-590-320	Accounting and Auditing - Non-Dept	17,117.66	13,880.00	0.00	25,068.85	0.00	11,188.85-	181
05-590-420	Education Reimbursement - Non-Dept	0.00	27,306.00	0.00	0.00	0.00	27,306.00	0

Expend Account	Description	Prior Yr Expd	Budgeted	Current Expd	YTD Expended	Cancel	Balance	% Expd
05-590-440	Rentals and Leases - Non-Dept	8,341.37	4,074.00	346.02	2,097.59	0.00	1,976.41	51
05-590-450	Liability Insurance - Non-Dept	46,104.51	45,841.00	0.00	35,042.50	0.00	10,798.50	76
05-590-492	Recording & Other Fees - Non-Dept	0.00	2,300.00	0.00	2,300.00	0.00	0.00	100
05-590-528	Postage - Non-Dept	0.00	3,000.00	0.00	0.00	0.00	3,000.00	0
05-590-600	CAPITAL OUTLAY	0.00	0.00	0.00	0.00	0.00	0.00	0
05-590-630	Improvements Other than Bldg - Non-Dept	0.00	34,638.00	871.00	2,525.90	0.00	32,112.10	7
05-590-900	NON-DEPARTMENTAL - OTHER USES	0.00	0.00	0.00	0.00	0.00	0.00	0
05-590-920	Transfer to General Fund - Non-Dept	0.00	25,000.00	0.00	0.00	0.00	25,000.00	0
05-590-930	Transfer to Water Impact Fee Reserves	0.00	34,940.00	0.00	0.00	0.00	34,940.00	0
05-590-931	Transfer to Sewer Impact Fee Reserves	0.00	78,300.00	0.00	0.00	0.00	78,300.00	0
05-590-992	Unemployment Claims - Non-Dept	0.00	1,500.00	0.00	0.00	0.00	1,500.00	0
05-590-994	Bank Fees - Non-Dept	126.19	1,550.00	0.00	0.00	0.00	1,550.00	0
05-590-995	Refund of Overpayments - Non-Dept	4,622.38	0.00	0.00	0.00	0.00	0.00	0
05-590-996	Bad Debt - Non-Dept	0.00	40,000.00	0.00	0.00	0.00	40,000.00	0
05-590-999	Other - Non-Operating Charges - Non-Dept	5,252.11	0.00	0.00	150.00-	0.00	150.00	0
	Department Total	95,705.86	336,629.00	1,217.02	73,062.39	0.00	263,566.61	22
	ENTERPRISE FUND Expend Total	908,938.86	2,162,385.00	144,533.04	966,027.09	0.00	1,196,357.91	45

Fund	Description	Prior Revenue	Curr Revenue	YTD Revenue	Prior Expended	Curr Expended	YTD Expended	Total Available Revenues
05	ENTERPRISE FUND	1,270,560.78	216,803.31	1,350,892.82	908,938.86	144,533.04	966,027.09	384,865.73

Fund	Description	Prior Revenue	Curr Revenue	YTD Revenue	Prior Expended	Curr Expended	YTD Expended	Total Available Revenues
	Final Total	1,270,560.78	216,803.31	1,350,892.82	908,938.86	144,533.04	966,027.09	384,865.73

Library Reports 10/2016 - 09/2017

	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Totals
						Circulation							
Adult Books	926	964	933	974	998	991	927						6,713
Juvenile Books	730	633	518	501	808	671	706						4,567
DVD'S	1024	992	936	898	982	1103	853						6,788
Total Circulation	**2680**	**2589**	**2387**	**2373**	**2788**	**2765**	**2486**						***18,068***
						New Borrowers							
In City	5	15	7	12	12	7	7						65
In County	1	1	4	3	7	2	5						23
Total New Borrowers	**6**	**16**	**11**	**15**	**19**	**9**	**12**						**88**
						Number of Programs							
Adult	1	1	0	1	1	1	2						7
Juvenile	1	2	2	2	2	1	2						12
Young Adult	1	1	0	1	1	0	1						5
Total Programs	**3**	**4**	**2**	**4**	**4**	**2**	**5**						**24**
						Program Attendance							
Adult	7	7	98	12	9	7	51						191
Juvenile	60	17	163	19	12	11	37						319
Young Adult	10	8	28	2	9	0	21						78
Total Attendance	**77**	**32**	**289**	**33**	**30**	**18**	**109**						**588**
						Reference Questions							
Phone Calls	237	254	213	292	201	190	175						**1,562**
						Number of Computer Users							
	425	436	349	378	315	399	402						**2,704**
						Total Patrons							
	1613	1484	1566	1324	1383	1424	1453						**10,247**

NOTE: Books By Mail check outs are now included in the monthly total.

POLK COUNTY SHERIFF'S OFFICE
DEPARTMENT OF LAW ENFORCEMENT

STATISTICAL DATA

West **Division**

May 3, 2017 Northwest District

To: Patricia Jackson , City Manager

From: Deputy Christina Poindexter #7376

Subject: Statistical report for April, 2017.

ACTIVITY	
FELONY ARREST	0
AFFIDAVITS FELONY	0
MISDEMEANOR ARREST	0
AFFIDAVITS MISDEMEANOR	0
OUT OF COUNTY/STATE WARRANT ARRESTS	0
PROCAP WARRANT ARREST	0
TOTAL ARRESTS	0
SEARCH WARRANTS	0
FIELD INTERROGATION REPORTS	0
TRAFFIC CITATIONS	0
INTELLIGENCE REPORTS	0
STOLEN PROPERTY RECOVERED	$0
HRS. TRANSPORTING/ AGENCIES/DIVISIONS	0
OFFENSE REPORTS	2
NARCOTICS SEIZED	$.00
ASSETS SEIZED	$.00
PATROL NOTICES	2
FOXTROT REPORTS	2
TOW-AWAY NOTICES	0
COMMUNITY CONTACTS	125
TRAFFIC STOPS	1
TOTAL DISPATCHED CALLS FOR SERVICE	24

In April 2017, there were two (2) PROCAP captured crimes as compared to six (6) in 2016. During the month a Petit Theft occurred at 205 Commonwealth Avenue, Circle K. It appears the victim left her cellular phone in the restroom, when she returned to look for it the phone had been stolen. A Grand Theft occurred at 125 Carter Blvd at the Dollar Market where the manager is advising 7 bales of compressed card bored was stolen from near the trash dumpster. At this time no subjects from these cases have been identified or arrested at this point of the investigations.

Case No.	Inc From	Inc To	Day	Location	Narrative	Report	CASE STATUS	Det
				GRAND THEFT				
PCSO-170018781	2017-04-22 / 0027hrs	2017-04-22 / 0040hrs	Sat	125 CARTER BLVD DOLLAR GENERAL	7 bales of cardboard were stolen from loading dock area / a large white box type truck with white or silver cargo box & hydraulic lift gate was observed leaving scene			
				PETIT THEFT				
PCSO-170015119	2017-04-01 / 0840hrs	2017-04-01 / 1020hrs	Sat	205 COMMONWEALTH AVE N CIRCLE K	unk susp removed the victs blue ZTE Z981 Android cell phone in purple case ser#863461034499301 from the bathroom of store (no camera views of bathroom doors)			Leblanc

Department of Law Enforcement
Polk City - 2016-2017

	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec		YTD Totals		Monthly	YTD Average	
	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	'16	'17	Change	'16	'17
Robbery	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0%	0.0	0.0
Burg. Business	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	100%	0.0	0.3
Burg. Residence	0	2	0	0	0	1	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	1	2	0%	0.3	0.5
Burg. Structure	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	-100%	0.0	0.3
Burg. Conveyance	0	1	0	0	0	0	2	0	3	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	2	1	0%	0.5	0.3
Vehicle Theft	1	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	2	1	-100%	0.5	0.3
Grand Theft	0	0	0	1	0	2	1	1	0	0	0	0	0	0	1	0	0	0	3	0	0	0	1	0	1	4	100%	0.3	1.0
Petit Theft	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	2	-100%	0.0	0.5
Mail Theft	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0%	0.3	0.0
Retail Theft	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0%	0.5	0.0
Criminal Mischief	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0	1	0	0	1	-100%	0.0	0.3
Totals	**2**	**3**	**0**	**5**	**1**	**3**	**6**	**2**	**4**	**0**	**7**	**0**	**1**	**0**	**2**	**0**	**2**	**0**	**5**	**0**	**6**	**0**	**6**	**0**	**9**	**13**	**-40%**	**2.3**	**3.3**
% Change	**50%**		**500%**		**200%**		**-67%**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**N/A**		**44%**			**44%**	

PUBLIC WORKS
Monthly Report

REPORT PERIOD
April 1-30, 2017

PREPARED BY
Keith Prestage
Public Works Director

STATUS SUMMARY

List of projects started and/or finished during the month of April.

PROJECT OVERVIEW

TASK	% COMPLETE	DATE	NOTES
Cleaned, mowed and Weed eat 125 acres and 7 miles of roadside	Ongoing	April 4th	
Cleaned out dead plant and Trees from streetscape north Restoring landscape	25%	April 6th	
Cleaned and replaced Sprinkler heads in street- Scape north zones 1-7	75%	April 6th	
Installed new safety rail at Women's Center parking lot	100%	April 10th	
Cleaned and restored picnic tables at fishing pier.	100%	April 12th	Damaged from vandalism
Trim trees, raked and cleared leaves, edged And cleaned walkways at fishing pier.	100%	April 17th	
Cleaned and patched pot holes on Bougainvilla Avenue	100%	April 20th	
Cleaned out dead plant and trees from streetscape north restoring landscape	50%	April 24th	
Pressure washed sidewalks and restored landscape at government building.	100%	April 26th	
Complete construction at Basketball/Tennis courts	100%	April 27th	

Aquarina Waterworks, Inc.
2517 Elm Circle
Lake Wales, FL 33898
Kevin Burge (772) 708-7946
Keith Burge (772) 201-3299
aquarinawaterworks@bellsouth.net (Kevin Burge)
Burkimwater@aol.com (Keith Burge)

City of Polk City

Polk City Commissioners

April 2017 Utility Operations Summary

Executive Summary

The following points are presented as an overall summary of water and wastewater utility department activities and events that occurred during the month of April, 2017:

- All monthly testing and reports that were due have been completed and turned into the proper regulatory agency.

- On April 24, 2017 Keith Prestage called me about a potential sink hole on Narrow Pond Road. We responded at 9:32 am and found sewer main had been damaged by a directional bore from Frontier Communications. Garner Complete Site fixed the line and repaired the road way.

- Continued to perform daily routine cleaning and maintenance on all the City's lift stations.

- Continued with the weekly monitoring of all the City's generators.

- Checked in with Polk County's storm water contractor at lift station #10 to see how the installation of the conflict box was coming along. It had not been installed yet. This work was completed in the first week of May.

- Had a meeting with Fountain Park's supervisor about how they needed to expose the water whips so that it would be easier for City employees to install requested meters.

- On April 27, 2017 we were alerted to an issue at Voyles Loop LS. All the pumps were not pumping down the wet well. Gt a bypass on site that is working. Consulting with engineers to solve the problem. May need bigger pumps.

- On April 25, 2017 we picked up some sod for the Public Works department to be installed around the tennis courts.

- On April 24, 2017 we were informed about possible water theft at Hammock Loop. We went out to the site with the Sheriff's Department and found the source of water theft. It has been corrected.

- We continue to seek out painting contractors for quotes on painting the cardinal hill facility.

- We have continued to assess the Ruth Road LS and have sent out the scope of services to (4) area contractors. Update: Have two quotes in and waiting on a third.

Operations and Maintenance Activities

- April 5, 2017 adjusted the wet well floats at LS #10.
- April 7, 2017 took the Ford F-550 to Weikert Ford in Lake Wales to have the exhaust manifold repaired.
- April 11, 2017 Central Electric replaced a soft start at the Mt. Olive WTF.
- April 12, 2017 cleaned out the chlorine contact chamber at the Cardinal Hill WWTF.
- April 13, 2017 pulled pumps at LS #10
- April 13, 2017 pulled pumps at LS #11
- April 15, 2017 pulled pumps at LS #10
- April 15, 2017 responded to a water leak at Polk City Villas at apartment #27. Two inch water main.
- April 16, 2017 pulled LS #11 pumps
- April 19, 2017 pulled LS #11 pumps
- April 20, 2017 painted most of the fire hydrants in Mt. Olive North Phase 1.
- April 21, 2017 pulled pumps at LS #11
- April 21, 2017 pulled pumps at LS #10
- April 21, 2017 read meters on 2nd Street
- April 24, 2017 pulled pumps at LS #10
- In the month of April we have changed the blower oil and cleaned the blower exhaust at the Cardinal Hill WWTF.

Miscellaneous Job Order Completions

- 48 turn on/off
- 2 locates
- 0 new meter installs
- 5 Meter maintenance
- 0 meter register change-outs
- 0 customer service calls
- 45 Meter reads
- 1 Laptop tests
- 2 Meter change-outs
- 0 new irrigation meter installs.
- 103 total work orders completed during the month of April 2017

Planned May Monthly Activities

- Meet with painting contractors at Cardinal Hill WWTP
- Continue to inspect sanitary sewer lines and manholes.
- Meet with underground contractors about Ruth Road lift station.
- Check sanitary sewer collection system for inflow infiltration.
- Start to meet with City officials to talk about the upcoming budget.
- Gather quotes to replace (2) hydro pneumatic tanks at Mt. Olive WTP.

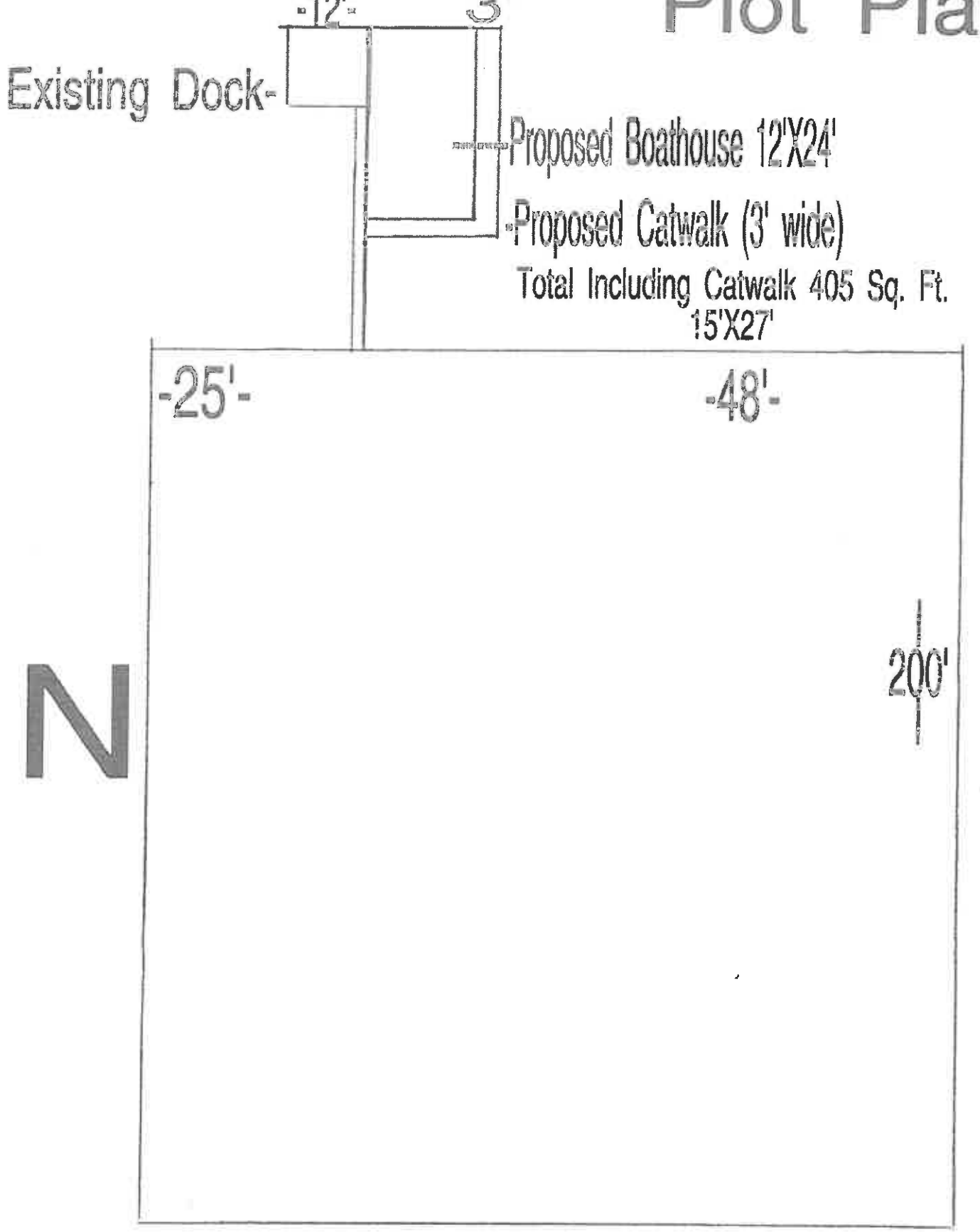
Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: Consent (C-1)

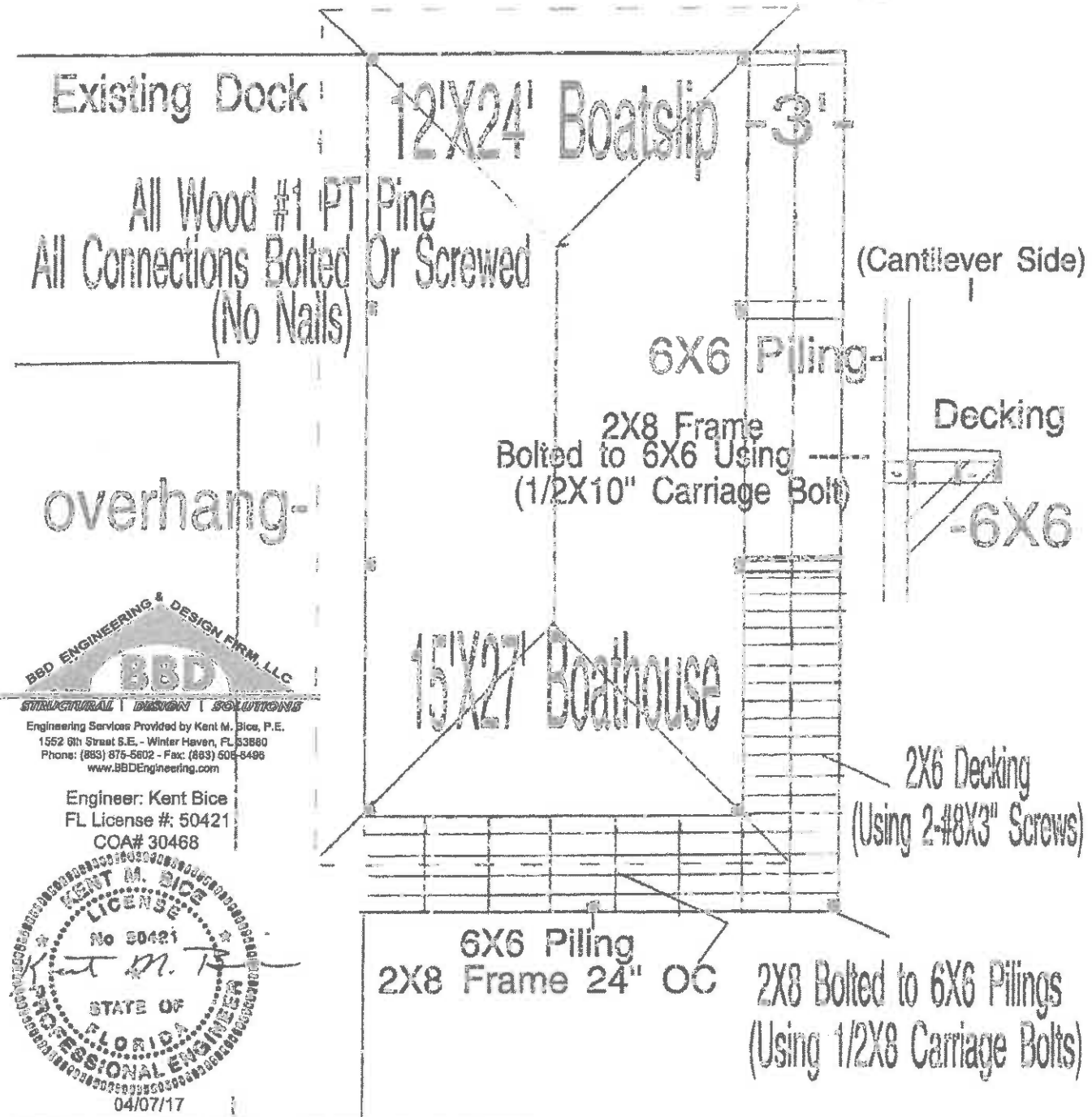
Subject: Boat Dock located at 517 Edgewater Drive			
Department: Community Development			
Summary: Per section 2.05.02 of Polk City's Land Development Regulations boat docks are permitted in all districts as accessory uses, but must have City Commission approval. An application has been received for construction of a boat dock at 517 Edgewater Drive. The proposed dock meets all requirements for issuance of a building permit. The applicant has also obtained the appropriate approval from DEP.			
Requested Commission Action: Staff recommends approval of the proposed dock at 517 Edgewater Drive.			
Financial Impact: None			
Attachments: X		**Supporting Documents Reviewed** X	
Submitting Department Head: Kathy Delp, Development Services Director		**Date:** 5/10/2017	
Approved by City Manager: Patricia R. Jackson, City Manager		**Date:** 5/10/2017	

Mellock

Plot Plan



Mellock Framing Plan



BBD ENGINEERING & DESIGN FIRM, LLC
BBD
STRUCTURAL | DESIGN | SOLUTIONS
Engineering Services Provided by Kent M. Bice, P.E.
1552 6th Street S.E. - Winter Haven, FL 33880
Phone: (863) 875-5602 - Fax: (863) 508-8496
www.BBDEngineering.com

Engineer: Kent Bice
FL License #: 50421
COA# 30468

KENT M. BICE LICENSE No 50421 STATE OF FLORIDA PROFESSIONAL ENGINEER

04/07/17

DESIGN CONFORMS WITH 2014 FLORIDA BUILDING CODE
(BUILDING & RESIDENTIAL) DESIGN 5TH EDITION
CRITERIA FOR 140 MPH WIND FORCES PER
ASCE/SEI 7-10 MINIMUM DESIGN LOADS FOR
BUILDINGS AND OTHER STRUCTURES
EXPOSURE CATEGORY C
RISK CATEGORY II

Mellock

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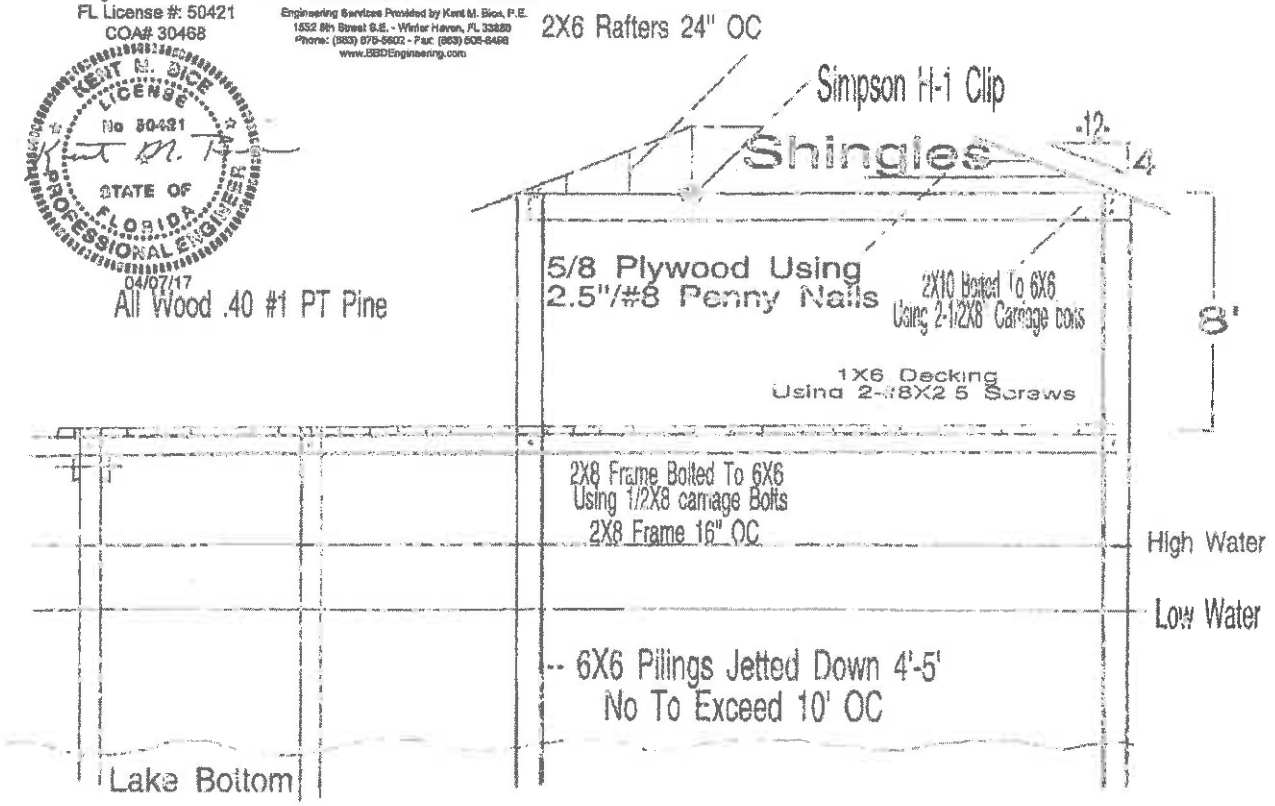
KENT M. BICE
LICENSE
No 50421
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
04/07/17

All Wood .40 #1 PT Pine

Elevation



Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway, Suite 101
Temple Terrace, FL 33637-0926

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

April 24, 2017

Derek Vann Pyle
Decks and Docks by Derek, LLC
1350 Ward Loop Rd
Babson Park, FL 33827
DPY51@hotmail.com

File No.: 53-0352681-001-EE, Polk County

Dear Mr. Pyle:

On March 30, 2017, we received your request for verification of exemption to perform the following activities:

The construction of a 405-square foot private residential single family covered boat house adjacent to an existing approximately 300 square foot dock on Lake Agnes, a Class III Florida waterbody. The project is located at 517 Edgewater Drive, Polk City, Section 5, Township 27 South, Range 25 East, Polk County.

Your request has been reviewed to determine whether it qualifies for (1) regulatory exemption, (2) proprietary authorization (related to state-owned submerged lands), and (3) federal approval that may be necessary for work in wetlands or waters of the United States.

Your project qualifies for all three. However, this letter does not relieve you from the responsibility of obtaining other federal, state, or local authorizations that may be required for the activity.

1. Regulatory Review –Verified

Based on the information submitted, the Department has verified that the dock activity as proposed is exempt under Chapter 62-330.051(b), Florida Administrative Code, from the need to obtain a regulatory permit under Part IV of Chapter 373 of the Florida Statutes.

This exemption verification is based on the information you provided the Department and the statutes and rules in effect when the information was submitted. This verification may not be valid if site conditions materially change, the project design is modified, or the statutes or rules governing the exempt activity are amended. In the event you need to re-verify the exempt status for the activity, a new request and verification fee will be required. Any substantial modifications to the project design should be submitted to the Department for review, as changes may result in a permit being required.

2. Proprietary Review- Granted

The Department acts as staff to the Board of Trustees of the Internal Improvement Trust Fund (Board of Trustees) and issues certain authorizations for the use of sovereign submerged lands. The Department has the authority to review activities on sovereign submerged lands under Chapters 253 and 258 of the Florida Statutes, and Chapters 18-20 and 18-21 of the Florida Administrative Code.

The activity may be located on sovereign submerged lands owned by the Board of Trustees. The activity is not exempt from the need to obtain the applicable proprietary authorization. As staff to the Board of Trustees, the Department has reviewed the activity described above, and has determined that the activity qualifies for an automatic consent by rule under Rule 18-21.005(1)(b) and Section 253.77 of the Florida Statutes to construct and use the activity on the specified sovereign submerged lands, as long as the work performed is located within the boundaries as described herein and is consistent with the terms and conditions herein. No further application is required for this consent by rule.

Special Consent Conditions

1. The applicant agrees to indemnify, defend and hold harmless the Board of Trustees and the State of Florida from all claims, actions, lawsuits and demands in any form arising out of the authorization to use sovereignty submerged lands or the applicant's use and construction of structures on sovereignty submerged lands. This duty to indemnify and hold harmless will include any and all liabilities that are associated with the structure or activity including special assessments or taxes that are now or in the future assessed against the structure or activity during the period of the authorization.

2. Failure by the Board of Trustees to enforce any violation of a provision of the authorization or waiver by the Board of Trustees of any provision of the authorization will not invalidate the provision not enforced or waived, nor will the failure to enforce or a waiver prevent the Board of Trustees from enforcing the unenforced or waived provision in the event of a violation of that provision.

3. Applicant binds itself and its successors and assigns to abide by the provisions and conditions set forth in the authorization. If the applicant or its successors or assigns fails or refuses to comply with the provisions and conditions of the authorization, the authorization may be terminated by the Board of Trustees after written notice to the applicant or its successors or assigns. Upon receipt of such notice, the applicant or its successors or assigns will have thirty (30) days in which to correct the violations. Failure to correct the violations within this period will result in the automatic revocation of this authorization.

4. All costs incurred by the Board of Trustees in enforcing the terms and conditions of the authorization will be paid by the applicant. Any notice required by law will be made by certified mail at the address shown on page one of the authorization. The applicant will notify the Board of Trustees in writing of any change of address at least ten days before the change becomes effective.

5. This authorization does not allow any activity prohibited in a conservation easement or restrictive covenant that prohibits the activity.

General Conditions for Authorizations for Activities

All authorizations granted by rule or in writing under Rule 18-21.005, F.A.C., except those for geophysical testing, shall be subject to the general conditions as set forth in paragraphs (a) through (i) below. The general conditions shall be part of all authorizations under this chapter, shall be binding upon the grantee, and shall be enforceable under Chapter 253 or 258, Part II, F.S.

(a) Authorizations are valid only for the specified activity or use. Any unauthorized deviation from the specified activity or use and the conditions for undertaking that activity or use shall constitute a violation. Violation of the authorization shall result in suspension or revocation of the grantee's use of the sovereignty submerged land unless cured to the satisfaction of the Board.

(b) Authorizations convey no title to sovereignty submerged land or water column, nor do they constitute recognition or acknowledgment of any other person's title to such land or water.

(c) Authorizations may be modified, suspended or revoked in accordance with their terms or the remedies provided in Sections 253.04 and 258.46, F.S., or Chapter 18-14, F.A.C.

(d) Structures or activities shall be constructed and used to avoid or minimize adverse impacts to sovereignty submerged lands and resources.

(e) Construction, use, or operation of the structure or activity shall not adversely affect any species which is endangered, threatened or of special concern, as listed in Rules 68A-27.003, 68A-27.004, and 68A-27.005, F.A.C.

(f) Structures or activities shall not unreasonably interfere with riparian rights. When a court of competent jurisdiction determines that riparian rights have been unlawfully affected, the structure or activity shall be modified in accordance with the court's decision.

(g) Structures or activities shall not create a navigational hazard.

(h) Structures shall be maintained in a functional condition and shall be repaired or removed if they become dilapidated to such an extent that they are no longer functional. This shall not be construed to prohibit the repair or replacement subject to the provisions of Rule 18-21.005, F.A.C., within one year, of a structure damaged in a discrete event such as a storm, flood, accident, or fire.

(i) Structures or activities shall be constructed, operated, and maintained solely for water dependent purposes, or for non-water dependent activities authorized under Paragraph 18-21.004(1)(f), F.A.C., or any other applicable law.

3. Federal Review -SPGP Approved

Your proposed activity as outlined in your application and attached drawings qualifies for Federal authorization pursuant to the State Programmatic General Permit V, and a **SEPARATE permit** or authorization **will not be required** from the Corps. Please note that the Federal authorization expires on July 26, 2021. However, your authorization may remain in effect for up to 1 additional year, if provisions of Special Condition B.27 of the SPGP V permit instrument are met. You, as

permittee, are required to adhere to all General Conditions and Special Conditions that may apply to your project." Special conditions required for your project are attached. A copy of the SPGP V with all terms and conditions and the General Conditions may be found at http://www.saj.usace.army.mil/Divisions/Regulatory/sourcebook.htm."

Authority for review - an agreement with the USACOE entitled "Coordination Agreement Between the U. S. Army Corps of Engineers (Jacksonville District) and the Florida Department of Environmental Protection, or Duly Authorized Designee, State Programmatic General Permit", Section 10 of the Rivers and Harbor Act of 1899, and Section 404 of the Clean Water Act.

Additional Information

Please retain this letter. The activities may be inspected by authorized state personnel in the future to ensure compliance with appropriate statutes and administrative codes. If the activities are not in compliance, you may be subject to penalties under Chapter 373, F.S., and Chapter 18-14, F.A.C.

Notice of Rights

This action is final and effective on the date filed with the Clerk of the Department unless a petition for an administrative hearing is timely filed under Sections 120.569 and 120.57, F.S., before the deadline for filing a petition. On the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice.

Petition for Administrative Hearing

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under Sections 120.569 and 120.57, F.S. Pursuant to Rule 28-106.201, F.A.C., a petition for an administrative hearing must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;
(b) The name, address, any email address, any facsimile number, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
(c) A statement of when and how the petitioner received notice of the agency decision;
(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
(e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;
(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action, including an explanation of how the alleged facts relate to the specific rules or statutes; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

The petition must be filed (received by the Clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Also, a copy of the petition shall be mailed to the applicant at the address indicated above at the time of filing.

Time Period for Filing a Petition

In accordance with Rule 62-110.106(3), F.A.C., petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under Section 120.60(3), F.S. must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under Section 120.60(3), F.S., however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. The failure to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the discretion of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

Extension of Time

Under Rule 62-110.106(4), F.A.C., a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline for filing a petition for an administrative hearing. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

Mediation

Mediation is not available in this proceeding.

FLAWAC Review

The applicant, or any party within the meaning of Section 373.114(1)(a) or 373.4275, F.S., may also seek appellate review of this order before the Land and Water Adjudicatory Commission under Section 373.114(1) or 373.4275, F.S. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Secretary of the Commission and served on the Department within 20 days from the date when the order is filed with the Clerk of the Department.

Judicial Review

Any party to this action has the right to seek judicial review pursuant to Section 120.68, F.S., by filing a Notice of Appeal pursuant to Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, M.S. 35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this action is filed with the Clerk of the Department.

Thank you for applying to the Submerged Lands and Environmental Resource Permit Program. If you have any questions regarding this matter, please contact Annemarie Hammond at the letterhead address or at 813-470-5908, email Annemarie.Hammond@dep.state.fl.us.

Executed in Hillsborough County, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Sincerely,

Gerald Loesch

Gerald "J.J." Loesch
Environmental Consultant
Permitting and Waste Cleanup Program
Southwest District

Enclosures: Chapter 62-330.051(5)(b) F.A.C. and Section 403.813(1)(b), F.S.
Special Conditions Related to All Review and Authorizations
General Conditions for Federal Authorization for SPGP V
Department of the Army Permit Transfer for SPGP V
Project Drawing and location Map

cc: Annemarie Hammond, FDEP SWD, Annemarie.Hammond@dep.state.fl.us
DEP Southwest, SWD_clerical@dep.state.fl.us
DEP Southwest, SW_ERP@dep.state.fl.us
U.S. Army Corps of Engineers (tampareg@usace.army.mil)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this determination, including all copies, was mailed before the close of business on April 24, 2017, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(7), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Mandakini Patel — April 24, 2017
Clerk — Date

62-330.051(5)(b) F.A.C.

(b) Installation of private docks, piers, and recreational docking facilities, and installation of local governmental piers and recreational docking facilities, in accordance with Section 403.813(1)(b), F.S. This includes associated structures such as boat shelters, boat lifts, and roofs, provided:
1. The cumulative square footage of all structures located over wetlands and other surface waters does not exceed the limitations in Section 403.813(1)(b), F.S.;
2. No structure is enclosed on more than three sides with walls and doors;
3. Structures are not used for residential habitation or commercial purposes, or storage of materials other than those associated with water dependent recreational use; and
4. Any dock and associated structure shall be the sole dock as measured along the shoreline for a minimum distance of 65 feet, unless the parcel of land or individual lot as platted is less than 65 feet in length along the shoreline, in which case there may be one exempt dock allowed per parcel or lot.

403.813(1)(b), F.S.

(b) The installation and repair of mooring pilings and dolphins associated with private docking facilities or piers and the installation of private docks, piers and recreational docking facilities, or piers and recreational docking facilities of local governmental entities when the local governmental entity's activities will not take place in any manatee habitat, any of which docks:
1. Has 500 square feet or less of over-water surface area for a dock which is located in an area designated as Outstanding Florida Waters or 1,000 square feet or less of over-water surface area for a dock which is located in an area which is not designated as Outstanding Florida Waters;
2. Is constructed on or held in place by pilings or is a floating dock which is constructed so as not to involve filling or dredging other than that necessary to install the pilings;
3. Shall not substantially impede the flow of water or create a navigational hazard;
4. Is used for recreational, noncommercial activities associated with the mooring or storage of boats and boat paraphernalia; and
5. Is the sole dock constructed pursuant to this exemption as measured along the shoreline for a distance of 65 feet, unless the parcel of land or individual lot as platted is less than 65 feet in length along the shoreline, in which case there may be one exempt dock allowed per parcel or lot.

Special Conditions Related to All Review and Authorizations

In addition to the conditions specified above, the following Special Conditions apply to all projects reviewed and/or authorized under the SPGP V.

1. The District Engineer reserves the right to require that any request for authorization under this SPGP V be evaluated as an Individual Permit. Conformance with the terms and conditions of the SPGP V does not automatically guarantee Federal authorization.

2. On a case-by-case basis the Corps may impose additional Special Conditions which are deemed necessary to minimize adverse environmental impacts.

3. Failure to comply with all conditions of the Federal authorizations under the SPGP V would constitute a violation of the Federal authorization.

4. No structure or work shall adversely affect or disturb properties listed in the National Register of Historic Places or those eligible for inclusion in the National Register. Prior to the start of work, the Applicant/Permittee or other party on the Applicant's/Permittee's behalf, shall conduct a search of known historical properties by contracting a professional archaeologist, and contacting the Florida Master Site File at 850-245-6440 or SiteFile@dos.state.fl.us. The Applicant/Permittee can also research sites in the National Register Information System (NRIS). Information can be found at http://www.cr.nps.gov/nr/research.

a. If, during the initial ground disturbing activities and construction work, there are archaeological/cultural materials unearthed (which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work in the vicinity and notify the Compliance and Review staff of the State Historic Preservation Office at 850-245-6333 and the Corps Regulatory Project Manager to assess the significance of the discovery and devise appropriate actions, including salvage operations. Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7.

b. In the unlikely event that human remains are identified, they will be treated in accordance with Section 872.05, Florida Statutes; all work in the vicinity shall immediately cease and the local law authority, the State Archaeologist (850-245-6444), and the Corps Regulatory Project Manager shall immediately be notified. Such activity shall not resume unless specifically authorized by the State Archaeologist and the Corps.

5. No work shall be authorized under the SPGP V which proposes the use of prefabricated modules for habitat creation, restoration, or enhancement except as allowed in Special Condition 15 for *Living Shorelines* of the *Shoreline Stabilization category*.

6. The Design and construction of a Project must comply with the following.

a. Where aquatic vegetation is present, adverse impacts to aquatic vegetation from construction of piling-supported structures may be avoided/minimized by adherence to, or employing alternative construction techniques that provide a higher level of protection than, the protective criteria in the joint U.S. Army Corps of Engineers'/National Marine Fisheries

Service's "*Construction Guidelines in Florida for Minor Piling-Supported Structures Constructed in or over Submerged Aquatic Vegetation (SAV), Marsh or Mangrove Habitat*" U.S. Army Corps of Engineers/National Marine Fisheries Service August 2001 (updated June 2008). Unless otherwise specifically approved by the National Marine Fisheries Service, where aquatic vegetation is present, piling-supported structures authorized under the SPGP V must comply with, or provide a higher level of protection than, the criteria contained in the referenced construction guidelines. Mangrove impacts are limited to the removal of mangroves along 4 linear feet of shoreline to accommodate a 4-ft-wide access walkway associated with a dock that meets the above guidelines.

b. Additionally, because of concerns about adverse impacts to the endangered Johnson's seagrass (*Halophila johnsonii*) in the lagoon and canal systems on Florida's east coast from Sebastian Inlet (Brevard County) south to and including central Biscayne Bay (Miami-Dade County), the following requirements must be met:

(1) Piling-supported structures must comply with, or provide a higher level of protection than, the criteria contained in the construction guidelines titled "*Key for Construction Conditions for Docks or Other Minor Structures Constructed in or Over Johnson's seagrass (Halophila johnsonii)*" National Marine Fisheries Service/U.S. Army Corps of Engineers - February 2002 (updated October 2002)."

(2) Removal of derelict vessels must comply with the practices of Special Condition 18.

(3) All other activities will have no effect on Johnson's seagrass, i.e., no seagrass is present.

c. The presence of seagrass will be determined utilizing the attached "*Submerged Aquatic Vegetation Survey Guidelines*".

7. For projects in waters accessible to sea turtles, Smalltooth sawfish, Gulf sturgeon, or Shortnose sturgeon, the Permittee will utilize the "*Sea Turtle and Smalltooth Sawfish Construction Conditions*" and the following additions:

a. Any collision(s) with and/or injuries to any whale, or sturgeon occurring during the construction of a project, shall be reported immediately to NMFS's Protected Resources Division (PRD) at (727-824-5312).

b. Reports to NMFS's Protected Resources Division (PRD) may be made by email to takereport.nmfsser@noaa.gov.

c. Sea turtle and marine mammal stranding/rescue organizations' contact information is available by region at http://www.nmfs.noaa.gov/pr/health/networks.htm.

d. Smalltooth sawfish encounters shall be reported to http://www.flmnh.ufl.edu/fish/sharks/sawfish/sawfishencounters.html.

e. All work must occur during daylight hours.

8. The Permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or

the Bald and Golden Eagle Protection Act. The Permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

9. The Permitee is responsible for compliance with 50 CFR 224.103(c) prohibiting approach within 500 yards of a right whale, with limited exceptions.

10. Turbidity control measures shall be used throughout construction to control erosion and siltation to ensure there are no violations of state or federal water quality standards. Turbidity control measures shall be: (1) for the smallest practicable area; (2) monitored daily to ensure listed species are not entangled or trapped in the project area; (3) shall be removed promptly upon project completion and the return of water quality conditions; (4) and shall not block entry to or exit from designated critical habitat. Siltation barriers shall be made of material in which listed species cannot become entangled (i.e., reinforced impermeable polycarbonate vinyl fabric [PVC]).

a. Turbidity curtains are not required where not practical in dynamic systems such as surf zones and could actually do more harm than good if the curtains become detached (e.g., they could entrap pelagic organisms and become entangled around benthic organisms, such as coral).

b. Turbidity barriers are not required if installation of single piling in deep water since is unlikely to adversely affect water quality.

11. In-water rope or chain must meet the following requirements: Industrial grade metal

chains or heavy cables that do not readily loop and tangle; All in-water lines (rope and cable) must be thick and taut and cannot have excess line in the water; Lines can be enclosed in a plastic or rubber sleeve/tube to add rigidity.

12. No work shall occur where hard bottom or any hard or coral including ESA-listed coral species are present within the footprint of the project.

13. No work shall occur that results in removal of mangroves (including prop roots), except:

a. as provided by Special Condition 6.a.; or,

b. for removal of mangroves growing at the foot or from an existing seawall whose removal needed to repair the seawall.

14. No work shall occur that results in impacts to seagrass except as provided by Special Condition 6.

15. (For *Docks, Piers, Associated Facilities, and Other Minor Piling-Supported Structures* and *Boat Ramps and Boat Launch Areas and Structures Associated with Such Ramps or Launch Areas.*)

a. Aids to Navigation and Private Aids to Navigation (e.g. attached to the structures authorized by the SPGP) must be approved by and installed in accordance with U.S. Coast Guard requirements.

b. Temporary structures associated with marine events will be removed and the site restored upon completion of the event.

c. (*For multi-family residential docks (e.g., condos, trailer parks, apartment complexes) designated for fishing or vessel storage, for temporary marine event pile-supported structures involving high speed vessel traffic or fishing, and for commercial or public boat ramps.*) Install educational signs as follows in a visible location to alert boaters of listed species in the area susceptible to vessel strikes or hook-and-line captures. NMFS website (http://sero.nmfs.noaa.gov/protected_resources/section_7/protected_species_educational_signs/index.html) provides sign installation guidance and most current version of the signs.

(1) All commercial and public boat ramps shall install the Save Sea Turtle, Sawfish, and Dolphin sign.

(2) If the Project occurs within the range of Gulf, Atlantic, or Shortnose sturgeon, the Permittee will install and maintain the *Report Sturgeon* sign.

(3) If the Project occurs within 14 miles of North Atlantic Right Whale critical habitat, the Permittee will install and maintain the *Help Protect North Atlantic Right Whales* sign.

d. Project construction will take place from uplands or from floating equipment (e.g., barge); prop or wheel-washing is prohibited.

16. (For *Transient activities.*)

a. Temporary structures shall not block access of species to an area such as preventing movement in or out of a river or channel.

b. (*For scientific sampling, measurement, and monitoring devices.*) No later than 24 months from initial installation, or upon completion of data acquisition, whichever comes first, the measuring device and any other structure or fills associated with that device (e.g., anchors, buoys, lines) must be removed and the site must be restored to pre-construction elevations.

17. (For *Living Shorelines* of the *Shoreline Stabilization category.)*

a. Only native plant species will be planted.

b. Not more than 500 linear feet in length, not more than 35 ft waterward of the hightide line.(note that FAC 62-330 limits to 10 feet of the mean high water line) or result in more than 0.5 ac area between the natural shoreline and the structure.

c. No discharge of earthen fill material, other than earthen material associated with vegetative planting, is not authorized.

d. Construction, maintenance and removal of approved permanent, shore-parallel wave attenuation structures are authorized. Approved permanent wave attenuation materials include oyster breakwaters (described above), clean limestone boulders, and prefabricated structures made of concrete and rebar that are designed in a manner that cannot trap sea turtles, Smalltooth sawfish, or sturgeon. Reef balls that are not open on the bottom, triangle structures with a top opening of at least 3 feet between structures, and reef discs stacked on a pile may be used.

e. (For oyster breakwaters).

(1) Reef materials shall be placed in a manner to ensure that materials (e.g., bagged oyster shell, oyster mats, loose cultch surrounded and contained by a stabilizing feature, reef balls, and reef cradles) will remain stable and prevent movement of materials to surrounding areas.

(2) Materials must be placed in designated locations (i.e., shall not be indiscriminately/randomly dumped) and shall not be placed outside of the total project limits.

18. (For *Subaqueous Utility Lines* of the *Transient Activities* category.)

a. A Frac-out Contingency Plan similar to the attached plan will be developed, submitted with the application and then followed.

b. All subaqueous transmission lines crossing over, under, or in flood control channels/canals in Federal projects (either federally or locally maintained) which are installed with horizontal direction drilling (HDD) shall ensure the top of the HDD boring is a minimum of 10 feet beneath the bottom of the channel plus a minimum 25 feet outside the channel edges and the estimated total drilling fluid pressure is less than 10 psi. Projects not in compliance with these criteria shall not be eligible for authorization under SPGP V.

c. The Permittee shall, upon completion of work, provide an as-built survey showing the horizontal and vertical location (X-Y-Z coordinates in NAD 83 and NAVD 88) of the object below the channel as it enters and exits the design edges of the authorized width of the channel, plus a minimum of 25 feet outside the channel edges.

19. (For R*emoval of Derelict Vessels* of the *Transient Activities* category.)

a. Removal of marine debris shall require visual confirmation (e.g., divers, swimmers, camera) that the item can be removed without causing further damage to aquatic resources.

b. If an item cannot be removed without causing harm to surrounding coral, the item will be disassembled as much as practicable so that it no longer can accidently harm or trap species.

c. Monofilament debris will be carefully cut loose from coral so as not to cause further harm. Under no circumstance will line be pulled through coral since this could cause breakage of coral.

d. Marine debris shall be lifted straight up and not be dragged through seagrass beds, coral, or hard bottom habitats. Debris shall be properly disposed of in appropriate facilities in accordance with applicable federal and state requirements.

20. For concrete piles installed by impact hammer:

a. The piles will be less than or equal to than 24 inches in diameter; and

b. Not more than 10 piles will be installed per day if in open water; or,

c. Not more than 5 piles will be installed per day in a *confined space*. A *confined space* is defined as any area that has a solid object (e.g., shoreline, seawall, jetty) or structure within 150 feet of the pile installation site that would effectively serve as a barrier or otherwise prevent

animals from moving past it to exit the area. This does not include objects such as docks or other pile-supported structures that would not stop animal movement or significantly reflect noise.

21. Metal piles will NOT be installed by impact hammer.

22. Projects within the boundary of the NOAA Florida Keys National Marine Sanctuary require prior approval from the Sanctuary.

23. The Permittee shall use only clean fill material. The fill material shall be upland sources and be free of items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

24. No blasting is authorized.

25. For Projects authorized under this SPGP V in navigable waters of the U.S., the Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

26. The SPGP V will be valid for five (5) years from the date of issuance unless suspended or revoked by issuance of a public notice by the District Engineer. The Corps, in conjunction with the Federal resource agencies, will conduct periodic reviews to ensure that continuation of the permit during the five-year authorization period is not contrary to the public interest. If revocation occurs, all future applications for activities covered by the SPGP V will be evaluated by the Corps.

27. If the SPGP V expires or is revoked prior to completion of the authorized work, authorization of activities which have commenced or are under contract to commence in reliance upon the SPGP V will remain in effect provided the activity is completed within twelve (12) months of the date the SPGP V expired or was revoked.

28. The General Conditions attached hereto are made a part of this SPGP V and must be attached to all authorizations processed under this SPGP V.

General Conditions for Federal Authorization for SPGP V

1. The time limit for completing the work authorized ends on July 26, 2021.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner on the enclosed form and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Further Information:

1. Limits of this authorization.

   a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

   b. This permit does not grant any property rights or exclusive privileges.

   c. This permit does not authorize any injury to the property or rights of others.

   d. This permit does not authorize interference with any existing or proposed Federal projects.

2. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

   a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or Construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

3. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

4. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 3 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

5. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CER 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date the enclosed form.

7. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the U.S. Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal, relocation or alteration.

Department of the Army Permit Transfer for SPGP V

PERMITEE: _____

PERMIT NUMBER: _____ DATE: _____

ADDRESS/LOCATION OF PROJECT:

_____

_____

(Subdivision) (Lot) (Block)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Branch, Post Office Box 4970, Jacksonville, FL 32232-0019.

_____ _____

(Transferee Signature) (Date)

_____

(Name Printed)

_____

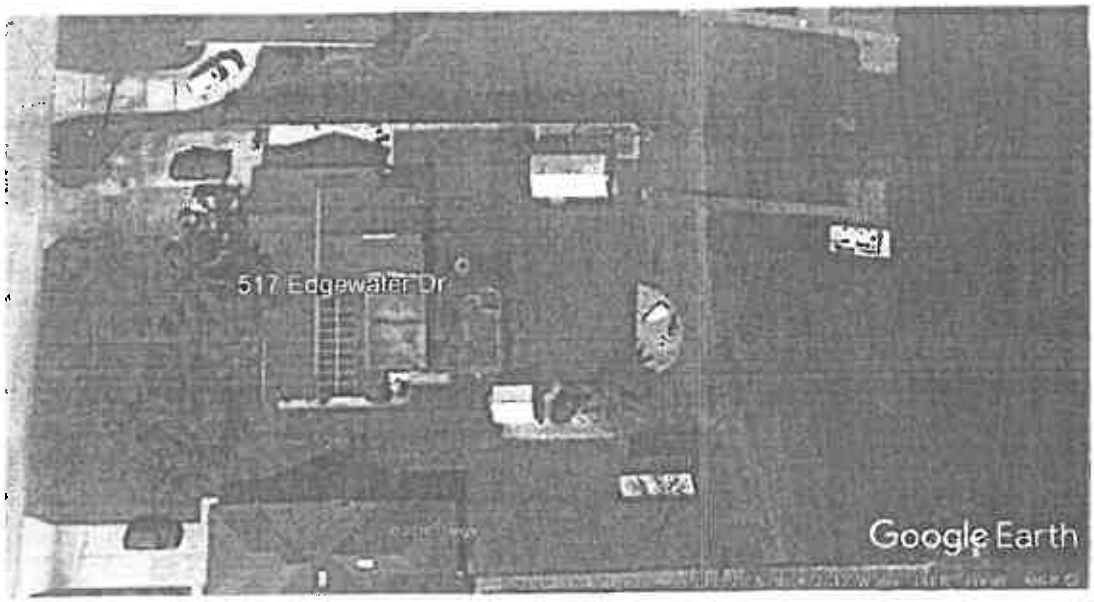
(Street address)

_____

(Mailing address)

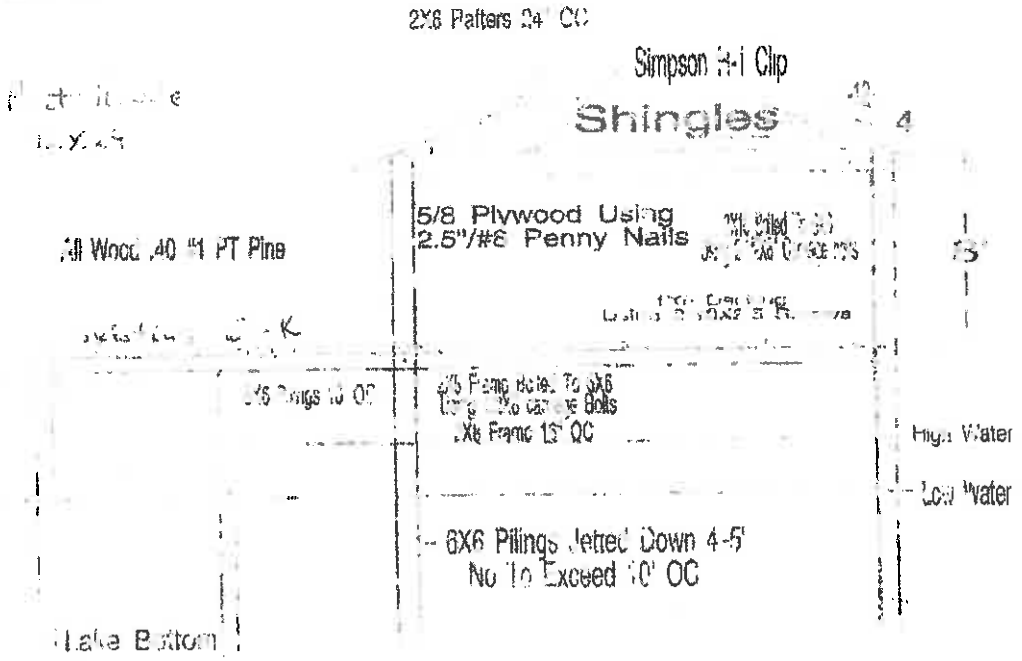
_____

(City, State, Zip Code)



Mellock

Elevation



Polk City
City Commission Agenda Form

Meeting Date: April 17, 2017
Item Number: 1

Subject:

Ordinance 2017-01 - Comp Plan Amendment

Department:
Administration

Summary:
Sections 163.3161 through 163.3215 of the Florida Statutes, which is the Community Planning Act, empowers and mandates Polk City to plan for future development and growth, and to adopt and amend comprehensive plans, or elements or portions thereof, to guide the future growth and development of the City. It is now time for Polk City to amend the Ten-Year Water Supply Facilities Work Plan. The Planning Commission recommended approval at their meeting on April 17, 2017.

Please refer to Exhibit A of 2017-01 to see what language has been deleted and/or added. In essence Polk City is continuing with Conservation changing "Xeriscaping" to "Florida-friendly landscaping practices; added Objection 11.1 – Maintain a potable water system to provide for the potable water needs of the City and its citizens, which is what we should be doing; under Conservation Element Amendments it includes the conservation programs we are doing through Polk Regional Water Cooperative (we are members); added Objective 9 – Polk City shall work with surrounding Governments and other agencies to ensure that meeting future potable water needs are coordinated on a regional basis – that is what we are doing through the PRWC so we need to include it in the update; under Objective 2 policies were added to coordinate land use decisions based on availability of fiscal resources to ensure the schedule of Capital Improvements can meet existing and future facility needs which maintain adopted level of service standards – this is what we need to do and are doing, but spelled out.

Requested Commission Action:

Approve transmittal of Ordinance 2017- 01 (with/without changes) to the Department of Economic Opportunity for review.

Financial Impact: None

Attachments: X	**Supporting Documents Reviewed** X

Submitting Department Head: Patricia Jackson, City Manager	**Date:** 5/10/17
Approved by City Manager: Patricia Jackson, City Manager	**Date:** 5/10/17

City Commission Action:

- ☐ Approved as Recommended
- ☐ Approved with Modifications
- ☐ Tabled to Time Certain Date:_____
- ☐ Denied

CITY OF POLK CITY

TEN-YEAR WATER SUPPLY FACILITIES WORK PLAN, RELATED COMPREHENSIVE PLAN AMENDMENTS

OVERVIEW REPORT

MAY 15, 2017

TO: CITY COMMISSION OF THE CITY OF POLK CITY

FROM: CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

SUBJECT: **Ordinance 2017-01:**
City-initiated request to amend the Comprehensive Plan, revising the Infrastructure, Conservation, Intergovernmental Coordination and Capital Improvements Elements, based on the City's Ten-Year Water Supply Facilities Work Plan.

AGENDA DATE:

April 17, 2017, 5:00 PM:	Planning Commission Meeting (Public Hearing)
April 17, 2017, 7:00 PM:	City Commission (Transmittal Public Hearing) (2-2 vote)
May 15, 2017, 7:00 PM:	**City Commission (Transmittal Public Hearing)**
July 2017 TBD:	City Commission (Adoption Public Hearing)

ATTACHMENTS:

- Ordinance 2017-01

OVERVIEW REPORT:

BACKGROUND:

In 2005, the Florida Legislature made significant changes to Chapters 163 and 373, F.S., to strengthen the link between land use and water supply planning. Water supply requirements have been adopted that affect local comprehensive planning programs:

- Ensuring intergovernmental coordination with regional water supply authorities;
- Ensuring that the local government's future land use plan and development approvals are based upon the availability of adequate water supplies;
- Identifying and including selected "alternative" water supply projects in the comprehensive plan, consistent with Southwest Florida Water Management District's Regional Water Supply Plan adopted December 2006 and updated in November 2015.

SUMMARY:

A Ten-Year Water Supply Facilities Work Plan has been prepared identifying existing water service providers and water supply facilities within the Polk City Public Water Service Area, identifying conservation practices and future water needs based on projected population estimates.

Based on the Ten-Year Water Supply Facilities Work Plan, amendments to various elements of the City's Comprehensive Plan have been drafted and are included in the attachment.

MOTION OPTIONS:

Options for motions are listed below.

1. I move the City Council **approve to transmit Ordinance 2017-01** to the Department of Economic Opportunity for review.
2. I move the City Council **approve to transmit Ordinance 2017-01 with changes** to the Department of Economic Opportunity for review.

ORDINANCE 2017-01

AN ORDINANCE OF POLK CITY, FLORIDA, AMENDING THE POLK CITY COMPREHENSIVE PLAN, REVISING THE INFRASTRUCTURE, CONSERVATION, INTERGOVERNMENTAL COORDINATION AND CAPITAL IMPROVEMENTS ELEMENTS BASED ON THE CITY'S TEN-YEAR WATER SUPPLY FACILITIES WORK PLAN INCORPORATED HEREIN; PROVIDING FOR TRANSMISSION TO THE FLORIDA DEPARTMENT OF ECONOMIC OPPORTUNITY FOR REVIEW AND COMPLIANCE; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICT; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, Sections 163.3161 through 163.3215, Florida Statutes, the Community Planning Act, empowers and mandates Polk City, Florida to plan for future development and growth and to adopt and amend comprehensive plans, or elements or portions thereof, to guide the future growth and development of the City; and

WHEREAS, Section 163.3177(6)(c), Florida Statutes, requires local governments, except where specifically exempted, to identify alternative water supply projects and traditional water supply projects and conservation and reuse necessary to meet the water needs within the local government's jurisdiction, and include a work plan, covering at least a 10-year planning period, for building public, private, and regional water supply facilities, including development of alternative water supplies, necessary to serve existing and new development; and

WHEREAS, the City Commission of Polk City has determined that it would be in the best interest of the public health, safety and general welfare of the residents and non-residential water customers of the City to amend the Comprehensive Plan consistent with the requirements of Section 163.3177(6)(c), Florida Statutes; and

WHEREAS, in exercise of its authority the City Commission has determined it necessary to adopt amendments to the City's Comprehensive Plan, which are attached hereto as **Exhibit "A"** and by this reference made a part hereof, to ensure that the Comprehensive Plan is in full compliance with the laws of the State of Florida; and

WHEREAS, in exercise of its authority the City Commission has determined that for the basis of adopting the said amendments in Exhibit "A," the City shall adopt its Ten-Year Water Supply Facilities Work Plan, incorporated herein as **Exhibit "B"**, and by this reference made a part hereof, to be included as Data and Analysis to support the Polk City Comprehensive Plan; and

WHEREAS, pursuant to Section 163.3184, Florida Statutes, the City Commission held public hearings on Ordinance 2017-01, with due public notice having been provided, to obtain public comment, and considered all written and oral comments received during public hearings, including support documents.

NOW, THEREFORE, BE IT ENACTED BY THE CITY COMMISSION OF POLK CITY, FLORIDA:

Section 1. The provisions set forth in the recitals to this Ordinance (whereas clauses) are hereby adopted by the City Commission as the legislative findings and intent pertaining to this Ordinance.

Section 2. Polk City hereby amends the following Elements of its Comprehensive Plan: Infrastructure Element, Conservation Element; Intergovernmental Coordination Element; and Capital Improvements Element. Said amendments are set forth in **Exhibit "A"** attached hereto and by this reference made a part hereof.

Section 3. The basis for adopting the said amendments is Polk City Ten-Year Water Supply Facilities Work Plan, incorporated herein as **Exhibit "B",** which is attached hereto and by this reference made a part hereof, said document to be included as Data and Analysis to support the Polk City Comprehensive Plan.

Section 4. This Ordinance shall be codified in the Code of Ordinances of Polk City, Florida. A certified copy of this enacting ordinance shall be located in the Office of the City Clerk of Polk City. The City Clerk shall also make copies available to the public for a reasonable publication charge.

Section 5. If any provision of this Ordinance is for any reason held to be invalid or unconstitutional by any court of competent jurisdiction, such provision and such holding shall not affect the validity of any other provision, and to that end the provisions of this Ordinance are hereby declared severable.

Section 6. All ordinances or parts of ordinances in conflict herewith are hereby repealed to the extent of such conflict.

Section 7. The effective date of these amendments, if the amendments are not timely challenged, shall be 31 days after the State Land Planning Agency notifies the local government that the plan amendment package is complete. If timely challenged, the amendments shall become effective on the date the State Land Planning Agency or the Administration Commission enters a final order determining the adopted amendments to be in compliance. No development orders, development permits, or land uses dependent on these amendments may be issued or commence before it has become effective. If a final order of noncompliance is issued by the Administration Council, the amendments may nevertheless be made effective by adoption of a resolution affirming the effective status, a copy of which resolution shall be sent to the State Land Planning Agency.

INTRODUCED, PASSED on FIRST READING, this 17th day of April, 2017.

Joe LaCascia, Mayor

ATTEST:

Approved as to form and correctness

Sheandolen Dunn, Deputy City Clerk

Thomas A. Cloud, City Attorney

PASSED AND DULY ADOPTED ON SECOND READING, with a quorum present and voting by the City Commission of Polk City, Florida meeting in Regular Session this **15th** day of **May**, 2017.

Joe LaCascia, Mayor

ATTEST:

Sheandolen Dunn, Deputy City Clerk

ORDINANCE 2017-01
EXHIBIT "A"

PROPOSED AMENDMENTS

POLK CITY COMPREHENSIVE PLAN
GOALS, OBJECTIVES, AND POLICIES

TO PROVIDE POLICIES SPECIFIC TO WATER SUPPLY PLANNING

- The following amendments to the Polk City Comprehensive Plan are proposed consistent with the update to the Polk City Ten-Year Water Supply Facilities Work Plan.

- Text shown in gray shading as underlined is text to be added and text shown as ~~strikeout~~ is text to be removed. Amended text is based on the update to the City's Ten-Year Water Supply Facilities Work Plan.

I. INFRASTRUCTURE ELEMENT AMENDMENTS:

The following amendments are proposed to the Infrastructure Element of the Polk City Comprehensive Plan based on the Ten-Year Water Supply Facilities Work Plan.

OBJECTIVE 4: **CONSERVATION OF POTABLE WATER RESOURCES**

THE POLK CITY SHALL CONSERVE WATER RESOURCES.

~~***Measurable Targets: Number of gallons of water saved per capita per year; lowering of the LOS for potable water.***~~

Policy 4.4: The City will encourage use of native vegetation in landscaping, which requires minimal watering. ~~Xeriscaping~~ Florida-friendly landscaping practices, including the use of Florida native plants and the use of irrigation systems that conserve water shall be encouraged within the Green Swamp ACSC for all landscaped areas including residential and non-residential development, golf courses and publicly owned spaces.

OBJECTIVE 11.1: **MAINTAIN A POTABLE WATER SYSTEM TO PROVIDE FOR THE POTABLE WATER NEEDS OF THE CITY AND ITS CITIZENS.**

Policy 11.1: Polk City shall continue to maintain and update a water supply facilities plan covering at least a ten (10) year planning period, for construction of public, private, and regional water supply facilities, including development of alternative water supplies, which are identified as being necessary to serve existing and new development.

Policy 11.2: Polk City shall ensure that within 18 months after the board of the Southwest Florida Water Management District has approved an updated regional water supply plan, the Infrastructure Element, in the City's Comprehensive Plan, will incorporate any alternative water supply project or projects selected by the local government from those identified in the regional water supply plan.

Policy 11.3: The City hereby incorporates its Ten-Year Water Supply Facilities Work Plan as a technical support document into this Element, as required following adoption of the Southwest Florida Water Management District (SWFWMD) Regional Water Supply Plan, adopted November 2015. The adopted Ten-Year Water Supply Facilities Work Plan and all future amendments thereto, represent an update to the Polk City Comprehensive Plan. In implementing this Policy, the City shall annually assess the performance and effectiveness of its Ten-Year Water Supply Plan and update the status of project development and potential funding sources, consistent with the corresponding SWFWMD Regional Water Supply Plan and the policies of this Comprehensive Plan in order to maximize the use of existing facilities and provide for future needs.

II. CONSERVATION ELEMENT AMENDMENTS:

The following amendments are proposed to the Conservation Element of Polk City Comprehensive Plan based on the Ten-Year Water Supply Facilities Work Plan.

OBJECTIVE 8: **TO CONSERVE AND PROTECT THE CITY'S POTABLE WATER SOURCES AND NATURAL AQUIFER RECHARGE AREAS FROM ADVERSE IMPACTS THROUGH IMPLEMENTATION OF LAND DEVELOPMENT REGULATIONS AND INTERGOVERNMENTAL COORDINATION MECHANISMS.**

Policy 8.3: ~~The City will actively participate in water conservation programs of the City of Lakeland and Southwest Florida Water Management District.~~ The City shall continue to conduct audits of the municipal water system to determine areas that may be in need of repair and may be contributing to increased water consumption through leaking pipes, and prioritize accordingly.

Policy 8.12: The City shall encourage participation in the Florida Water Star^{SM} certification program as new development and redevelopment activities occur.

III. INTERGOVERNMENTAL COORDINATION ELEMENT AMENDMENTS:

The following amendments are proposed to the Intergovernmental Coordination Element of Polk City Comprehensive Plan based on the Ten-Year Water Supply Facilities Work Plan.

OBJECTIVE 9: **POLK CITY SHALL WORK WITH SURROUNDING GOVERNMENTS AND OTHER AGENCIES TO ENSURE THAT MEETING FUTURE POTABLE WATER NEEDS ARE COORDINATED ON A REGIONAL BASIS.**

Policy 9.1 Polk City shall continue to maintain and update a water supply facilities plan covering at least a ten (10) year planning period, for construction of public, private, and regional water supply facilities, including development of alternative water supplies, which are identified as being necessary to serve existing and new development.

Policy 9.2: The City hereby incorporates its Ten-Year Water Supply Facilities Work Plan as a technical support document into this Element, as required following adoption of the Southwest Florida Water Management District (SWFWMD) Regional Water Supply Plan, adopted November 2015. The adopted Ten-Year Water Supply Facilities Work Plan and all future amendments thereto, represent an update to the Polk City Comprehensive Plan. In implementing this Policy, the City shall annually assess the performance and effectiveness of its Ten-Year Water Supply Plan and update the status of project development and potential funding sources, consistent with the corresponding SWFWMD Regional Water Supply Plan and the policies of this Comprehensive Plan in order to maximize the use of existing facilities and provide for future needs.

Policy 9.3: The City shall continue coordination with Polk County and adjacent municipalities regarding cooperative water supply planning and joint-projects which may collectively conserve groundwater, enhance use of reclaimed water and explore opportunities for alternative sources of water. Coordination shall also include entities such as the Central Florida Water Initiative (CFWI), the Polk Regional Water Cooperative (PRWC) and the Heartland Water Alliance (HWA) which are parties reviewing and planning alternative water supply projects within Polk County.

IV. CAPITAL IMPROVEMENTS ELEMENT AMENDMENTS:

The following amendments are proposed to the Capital Improvements Element of Polk City Comprehensive Plan based on the Ten-Year Water Supply Facilities Work Plan.

OBJECTIVE 2: **LAND USE DECISIONS SHALL BE COORDINATED WITH THE AVAILABILITY OF FISCAL RESOURCES TO ENSURE THE SCHEDULE OF CAPITAL IMPROVEMENTS CAN MEET EXISTING AND FUTURE FACILITY NEEDS WHICH MAINTAIN ADOPTED LEVEL OF SERVICE STANDARDS.**

Policy 2.1: Polk City shall continue to maintain and update a water supply facilities plan covering at least a ten (10) year planning period, for construction of public, private, and regional water supply facilities,

including development of alternative water supplies, which are identified as being necessary to serve existing and new development.

Policy 2.2: Polk City shall ensure that within 18 months after the board of the Southwest Florida Water Management District has approved an updated regional water supply plan, the Infrastructure Element, in the City's Comprehensive Plan, will incorporate any alternative water supply project or projects selected by the local government from those identified in the regional water supply plan.

Policy 2.3: The City hereby incorporates its Ten-Year Water Supply Facilities Work Plan as a technical support document into this Element, as required following adoption of the Southwest Florida Water Management District (SWFWMD) Regional Water Supply Plan, adopted November 2015. The adopted Ten-Year Water Supply Facilities Work Plan and all future amendments thereto, represent an update to the Polk City Comprehensive Plan. In implementing this Policy, the City shall annually assess the performance and effectiveness of its Ten-Year Water Supply Plan and update the status of project development and potential funding sources, consistent with the corresponding SWFWMD Regional Water Supply Plan and the policies of this Comprehensive Plan in order to maximize the use of existing facilities and provide for future needs.

ORDINANCE 2017-01
EXHIBIT "B"

Polk City
Ten-Year Water Supply Plan

FACILITIES WORK PLAN

Prepared by the Central Florida Regional Planning Council for the City of Polk City
April 2017

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SECTION 1: INTRODUCTION

1.1 PURPOSE OF 2017 POLK CITY WATER SUPPLY PLAN

The City of Polk City (City) 2017 Water Supply Plan (WSP) has been developed in accordance with the requirements and guidelines contained in the Regional Water Supply Plan approved by the Southwest Florida Water Management District (SWFWMD) Governing Board in November 2015. The City has developed this 2017 WSP not only to meet regulatory requirements (cited in Chapter 163, Part II, Florida Statutes, whereby local governments are required to adopt Work Plans into their comprehensive plans after their Water Management District approves a regional water supply plan or its update); but also, to serve as a water resources planning document for the City's residents, businesses, interest groups, and public officials.

This plan provides information on the City's current and future water demands and supplies, discusses the water resources challenges that the City faces, and summarizes the major water resources initiatives that the City has taken to ensure a safe reliable water supply for its water customers. The 2017 Polk City WSP uses projected population estimates to determine potential impacts on future potable water demand. The projections explore growth over a 20-year period through the year 2035, with an emphasis placed on the immediate 10-year planning period. Specifically, the 2017 WSP details the City's water system, water demands, sources of water supplies, water quality, capital improvement projects, and potential multi-jurisdictional planning initiatives.

1.2 STATUTORY REQUIREMENTS (REVISED BY SWFWMD ON SEPTEMBER 12, 2014)

The City of Polk City has considered the following statutory provisions as put of the WSP update:

1. Coordinate appropriate aspects of its comprehensive plan with SWFWMD Regional Water Supply Plan [163.3177(4) (a), F.S.].

2. Ensure the Future Land Use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177 (6) (a), F.S.]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed Future Land Use Map amendments submitted for review.

3. Ensure that adequate water supplies and potable water facilities are available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent and consult with the applicable water supplier to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2), F.S.].

4. For local governments subject to a regional water supply plan, revise the General Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Aquifer Recharge Element (the "Infrastructure Element"), within 18 months after the water management district approves an updated regional water supply plan to:

   a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the SWFWMD Regional Water Supply Plan, or alternative project(s) proposed by the local government under s. 373.709(8)(b), F.S. [s. 163.3177(6)(c), F.S.];
   b. Identify the traditional and alternative water supply projects and the conservation and reuse programs necessary to meet water needs identified in the SWFWMD Regional Water Supply Plan [s. 163.3177(6)(c)3, F.S.]; and
   c. Update the Work Plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development [s. 163.3177(6) (c) 3, F.S.].

5. Revise the Five-Year Schedule of Capital Improvements to include water supply, reuse, and conservation projects and programs to be implemented during the five-year period [s. 163.3177(3)(a)4, F.S.].

6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period, considering the SWFWMD Water Supply Plan, as well as applicable consumptive use permit(s) [s.163.3177 (6) (d), F.S.]. The plan must address the water supply sources necessary to meet and 5 achieve the existing and projected water use demand for the established planning period, considering the applicable regional water supply plan [s.163.3167(9), F.S.].

7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the SWFWMD Regional Water Supply Plan [s.163.3177 (6) (h) 1., F.S.].

8. While an Evaluation and Appraisal Report is not required, local governments are encouraged to comprehensively evaluate, and as necessary, update comprehensive plans to reflect changes in local conditions. The evaluation could address the extent to which the local government has implemented the need to update their Work Plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, and conservation and reuse programs are meeting local water use demands [s.163.3191 (3), F.S.].

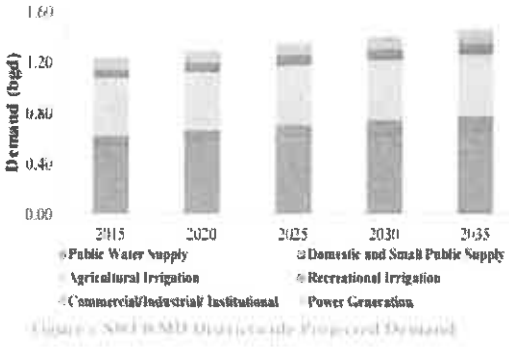
1.3 BACKGROUND INFORMATION OVERVIEW

Geography and Growth Patterns


Polk City Fishing Pier

The City of Polk City is located in north central Polk County, Florida, generally centered around the intersection of SR 33 (Commonwealth Blvd) and SR 655 (Berkley Rd.). The utility service area of Polk City borders the utility service areas of the City of Lakeland to the west, the City of Auburndale to the south, and the City of Lake Alfred to the southeast. The City is also located within the Green Swamp Area of Critical State Concern. The popular National Recreation trail, General James A. Van Fleet State Trail, is located within the City boundaries. Polk City is one of 17 incorporated municipalities in Polk County. The City's 2016 population estimate is 1,670 persons, according to estimates provided by the University of Florida Bureau of Economic and Business Research

Relevant Regional Issues



According to the 2015 Florida Department of Environmental Protection Regional Water Supply Planning Report, the total water use this year, in the SWFWMD was about 1,240 mgd (Figure 1). By 2035, the SWFWMD expects water use to increase to about 1,460 mgd, which is nearly 18 percent more than 2015 water use. The SWFWMD estimated that public supply and agricultural irrigation will remain the two largest use sectors, even though agricultural irrigation is projected to grow about 4 percent. The Report identified approximately 838 mgd of water available from the following sources: surface water, reclaimed water, desalination, fresh

groundwater, and water conservation. Approximately 108 mgd of that total is expected to be provided through implementation of water conservation measures.

1.4 CENTRAL FLORIDA WATER INITIATIVE (CFWI)

The Central Florida Water Initiative (CFWI) is a collaborative water supply planning effort among the state's three largest water management districts, the Florida Department of Environmental Protection (DEP), the Florida Department of Agriculture and Consumer Services (DACS), water utilities, environmental groups, business organizations, agricultural communities and other stakeholders.

The CFWI Planning Area covers five counties, including Orange, Osceola, Polk, Seminole and southern Lake (See Map 1 for CFWI Boundary). The boundaries of the three water management districts – St. Johns River Water Management District, South Florida Water Management District and Southwest Florida Water Management District – meet in an area known as the Central Florida Coordination Area (CFCA), which includes Polk County and within it, portions of the City of Polk City.

The purpose of the CFWI is to implement effective and consistent water resource planning through the Central Florida region. As part of the initiative, in 2015, the CFWI adopted a multi-district Regional Water Supply Plan to ensure the protection of water resources and related natural systems and identify sustainable water supplies for all water uses in the coordination area through 2035. In April of 2016, the CFWI adopted the 2020 Guiding Principles to:

- Review and update the 2015 CFWI Regional Water Supply Plan (RWSP), as well as the sustainable quantities of traditional groundwater sources available in the CFWI area that can be used without causing unacceptable harm to the water resources and associated natural systems.
- Monitor progress of regional strategies and solutions identified in the 2015 CFWI Plan; review and update strategies to meet water demands that are in excess of the sustainable yield of existing traditional groundwater sources.
- Establish consistent rules and regulations for the three water management districts that meet the Collaborative Process Goals and implement the results of this Central Florida Water Initiative.
- Encourage funding for regional strategies necessary to achieve the objectives of the CFWI.

The adoption of the City's WSP must be consistent with the CFWI Regional Water Supply Plan, be financially feasible and it must include the necessary provisions to ensure that potable water LOS standards are maintained for expected population growth.

1.5 POLK COUNTY REGIONAL WATER COOPERATIVE (PRWC)

The City of Polk City is part of the Polk Regional Water Cooperative (PRWC). This county-wide effort was established to bring the local governments of Polk County together to work in tandem to qualify for state and water management district funding to help pay for water resource projects that will be developed over the next decade to ensure an adequate water supply in the future. As a planning effort with a broad-based approach, the PRWC focuses on analyzing where alternative supplies are available and where demand is located. The priority projects identified by the cooperative correspond to those prioritized through the efforts of the CFWI. These include withdrawals from the lower Floridan aquifer at well complexes east of Lake Wales and northwest of Lakeland, and increasing aquifer recharge in the Peace Creek Basin in the Winter Haven area to get groundwater credits to allow increased withdrawals from existing wells.

Phase I of the effort is underway with a Water Supply Assessment being finalized. Phase II will be the development of implementation agreements to further prioritize and identify funding options for the chosen projects.

1.6 HEARTLAND WATER ALLIANCE (HWA)

In June of 2002, the Heartland Water Alliance (HWA), which consists of Polk, Hardee, Highlands, and DeSoto Counties, was formed to address water supply concerns identified in the Heartland region. A three-phased work plan was developed to identify existing and proposed water demands through 2025 and potential water supply projects to meet the goals of the plan. The goal of the HWA work plan is to ensure that adequate water resources are planned for and available to meet the water needs of the four-county HWA area through the year 2025. The City of Polk City will continue to work with the HWA and other agencies to ensure adequate water supplies are available.

1.7 DESCRIPTION OF THE CITY'S WATER SYSTEM

Water Sources

The primary source of water extraction for City is fresh groundwater from the Upper Floridan Aquifer (UFA). Although water utilities in the region are increasingly implementing conservation measures and exploring alternative sources for public supply, Polk City's water source is still obtained exclusively from the UFA. SWFWMD's 2015 Regional Water Supply Plan indicated that approximately 97 percent of water used in the region was from groundwater sources. Limited options for alternative water supply exist within the Central Florida Heartland region. As a non-coastal area, desalination of water is currently not an option.

Water Use

The City's potable water distribution system is operated by the City's Public Work-Water Department, which operates and maintains the City's water and sewer systems in compliance with all state and federal requirements. Annually, the City presents a water quality report to inform all residents and businesses about the quality of water and services that are delivered every day and is regulated by the Florida Department of Environmental Protection (FDEP) and U.S. Department of Environmental Protection.

Not unlike many communities throughout the state, the City's primary source of for potable water comes from groundwater extraction in the Upper Floridan Aquifer (UFA). As with many communities, the City's dependency on groundwater use has increased over the past several decades. Although water utilities throughout the region are proactively exploring conservation methods and alternative water supply sources, Polk City's water, at this time, is still obtained exclusively from the UFA. The City will continue to coordinate with the CFWI and the PRWC on additional water resource issues, including options for alternative water resources.

As will be presented in more detail in Section 2, the City is projected to see considerable population growth over the next ten- and twenty-year planning periods. Polk City has installed 1,981 water meters with size ranging from ¾ - inch to 4-inch within the service area. There are also two fire protection meters; one located in the Lelynn RV resort mobile home park and one at the Fantasy of Flight attraction grounds.

Design Capacity of Production Facilities

The City has continually and proactively invested in its water supply system to maintain a reliable water supply for all uses. The City's public water supply area (22 acres) provide water for approximately 7,676 customers (See Map 2 for Service Area Boundary).

Additionally, the City of Polk City and the City of Auburndale have a 10-year Emergency Water Service Agreement in which to share water resources through an interconnection system. The interconnect is established to ensure the transfer of water between the two utilities as needed for use in emergencies or times of extraordinary water demand. The City of Polk City has a similar agreement with the City of Lakeland, which also establishes an emergency interconnection and sharing of water resources.

Potable Water System

The City of Polk City public water supply system is regulated by FDEP while water use (water consumption) is permitted by the SWFWMD. The City's FDEP Public Water System facility identification number is 6531424. The SWFWMD Water Use Permit (WUP) number is 8468.005. See *Section 2.1, Water Service Area* for additional information on the City's permit conditions.

The potable water system includes components to pump and treat raw water extracted from the Floridan Aquifer. The treated, "finished" water is stored and re-pumped into the distribution system for potable consumption by the City's end users. In addition, the water system provides fire protection for the City.

The system includes a total of four (4) public supply wells and two (2) water treatment plants. Each water plant has a groundwater storage tank (GST). There are four (4) high service pumps at the Polk City Plant. Tables 1 and 2 provide detailed information of the City's production facilities. See Map 3 for facilities locations. Storage and high-service pumping facilities are utilized at the City's water treatment plants.

Table 1: Inventory of Wells

Service Area	Well District ID# (Name)	Well Diameter (inches)	Well Pump Capacity (GPD)*	Well Depth TTL/ CSD FT (feet bls)*	Pump Motor (Horse* Power)
City of Polk City	Well #2 Commonwealth	10	276,600	600/156	40 HP
	Well #3 Matt William	12	286,000	680/168	50 HP
	Well #5 Mount Olive 2	12	99,000	583/UNK	50 HP
	Well #6 Mount Olive 1	12	99,00	800/130	75 HP

**Based on 2014 City of Polk City Water Use Permit*

Table 2: Inventory of Water Treatment /Storage Facilities

Storage	Location	Type	Total Design Capacity (MGD)
Commonwealth (#2)	Intersection of SR 33 and Berkley Road	N/A	576,000
Matt Williams (#3)	N. Bougainvillea Blvd	Hydro-pneumatic tank	936,000
Well #5 Mount Olive 2	Mount Olive Rd	Hydro-pneumatic tank	10,000
Well #6 Mount Olive 1	Mount Olive Rd	Hydro-pneumatic tank	10,000

Water Treatment Practices

A sodium hypochlorite system provides disinfection for all water production facilities. The hydro-pneumatic tank provides a pressure range used to manage flow to the water distribution system at the Matt William water facility. The Commonwealth water facility in addition to the sodium hypochlorite disinfection system also uses a chlorine contact tank to ensure proper contact time for disinfection. According to the City's 2011 Water and Wastewater Optimization Plan, the Commonwealth water facility is used as a back-up plant.

Reuse Facilities

The City's wastewater system is also regulated through FDEP under permit number FLA013011. The City of Polk City wastewater system consists of a collection system, lift stations and transmission mains, as well as two wastewater treatment facilities (WWTF), which provides treated wastewater effluent for reuse. The Polk City WWTFs dispose of treated wastewater effluent through a sprayfield and use of rapid infiltration basins (RIBs). Effluent disposal capacities include: 0.12 MGD via the sprayfield and 0.10 MGD through the RIBs.

SECTION 2: DATA AND ANALYSIS

2.1 WATER SERVICE AREA

Potable water is administered through a metered system serving both residential and non-residential users with an adopted LOS standard of 110 gallons per person per day (gpcd). The system is regulated and permitted by the FDEP and the SWFWMD. The City's permitted maximum flow (design capacity) for water extraction (as regulated through FDEP) is 1,512,000 gallons per day (gpd). The City's current permitted capacity for water use by the SWFWMD is 760,600 gpd. In 2014, the City renewed its water use permit and a new 20-year permit was issued with an expiration date of May 15, 2034.

Table 3 outlines the City's permitted capacity and current metered connections under the active WUP.

Table 3: Existing City Potable Water Customers

FDEP Public Water System (PWS)	WUP Permit No.	Permittee	Provider Type	WUP Permitted Capacity	Number of Residential Meters *	Number of Commercial/ Industrial/ Recreational Meters *
6531424	8468.005	City of Polk City	Potable Water	760,600 GPD	2,263	78

**Data Source: Polk City 2015 Public Supply Annual Report*

2.2 POPULATION INFORMATION AND WATER DEMAND PROJECTION

Historic Water Use by Sector

Planning for future water supply requires an understanding of past water use and the factors that influence future use over time. This section presents historical water use based on the 2011 and 2015 City of Polk City's Public Supply Annual Reports (PSARs). Figure 2 illustrates the City's annual average potable water use (in gallons per day) broken down into the following sectors: (1) single-family residential; (2) multifamily residential; (3) mobile home, (4) residential irrigation, (5) industrial/ commercial; (6) agricultural; (7) recreational/aesthetics; (8) golf course irrigation, and (9) fire and other accounted uses.

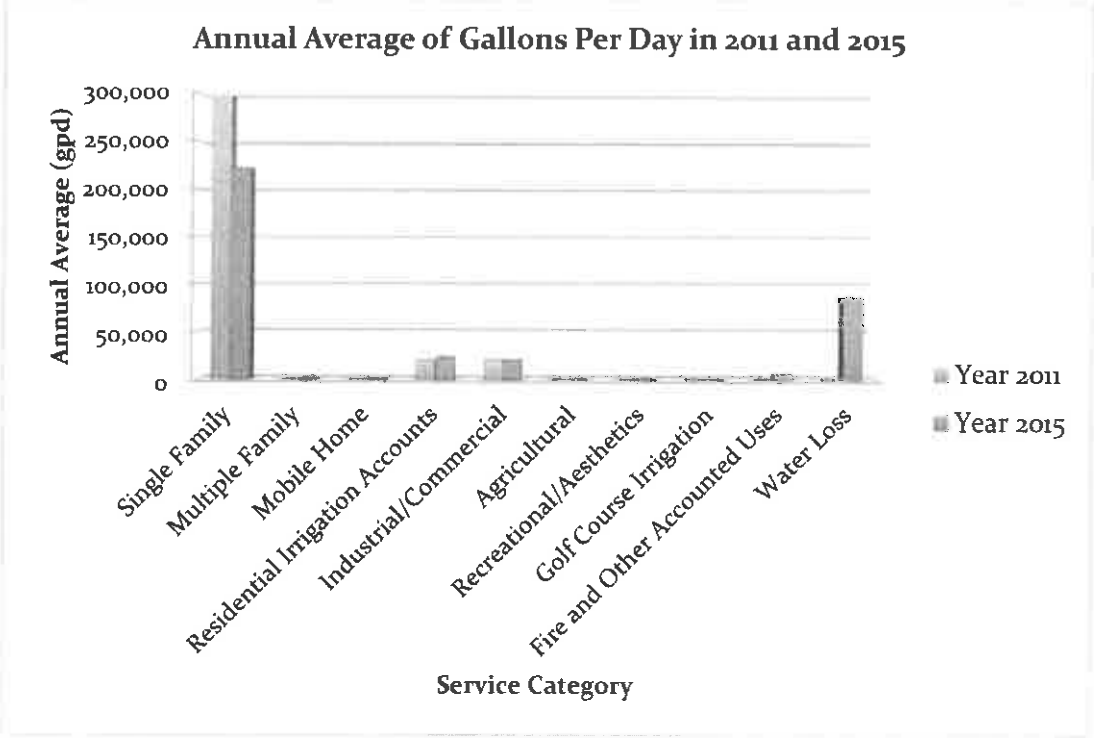


Figure 2: Annual Average of Gallons Per Day in 2011 and 2015

It is important to note the amount of documented water loss in the City's system since 2011. In the 2011, 2012, and 2013 PSARs, the City reported a water loss of less than 700 gpd. However, in 2014 and 2015, the City reported between 24 to 29 percent water loss (approximately 87,000 gpd). The SWFWMD is aware of the situation and completed an audit of the City's system in September of 2016. The audit confirmed that a large portion of the water loss was due to illegal connections at the Mt. Olive RV park. The findings in audit revealed that an estimated 13,000,000 gal/year were being used by the Mt. Olive RV park. Immediate actions were recommended by the SWFWMD to measure future unbilled water use (Additional information provided in Section 3: Goals, Objectives, and Policies. The City recognizes there may be other contributors to water loss (*i.e.*, aging infrastructure) and will continue working to reduce impacts on water resources through continual monitoring and infrastructure improvements.

Figures 3 and 4 reflect the City's overall percentage use of potable water for residential and non-residential users for 2011 and 2015. As shown, the vast majority of water consumers in the City are residential customers. However, residential water use, overall, has decreased slightly over the last 5 years, while non-residential use has increased.

Annual Average of Gallons Per Day in 2011

Figure 3: Historic Potable Water Use in 2011

Annual Average of Gallons Per Day in 2015

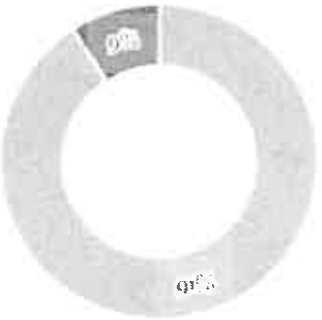


Figure 4: Historic Potable Water Use in 2015

5-year per Capita Demand

A calculation of the average per capita demand for potable water is necessary to monitor potential negative impacts on water resources and to ensure consumption rates do not exceed the City's adopted LOS standards of no greater. The average per capita demand is calculated based on the reported average daily water demand and the total consumption as measured by the City's functional population. The functional population is defined as

the total consuming end user, which includes permanent residents, seasonal residents, tourists, and net commuters as established by the SWFWMD. Table 4 outlines the 5-year per capita water demand. As shown in Table 4, the 5-year average demand is 58.7 gpcd which is below the City's adopted LOS standard.

Table 4: 5-Year Per Capita Water Demand

Service Area	Year	Adjusted Per Capita Demand (GPCD)*
City of Polk City	2011	57
	2012	64.3
	2013	61
	2014	55.4
	2015	56
5-year average per capita demand		58.7

**Data source: City of Polk City Public Supply Annual Report*

Population Projection

Population projections used in this document are based on a methodology developed by the SWFWMD. The SWFWMD uses medium projections disaggregated to land parcel level using a GIS methodology. The functional population figures are used to reasonably estimate the potential impacts on future potable water demands. A 20-year projection of the functional population, using the SWFWMD figures is provided in Table 5. 2015 is considered the base year consistent with the SWFWMD 2015 RWSP.

Table 5: Functional Population Projections of Polk City (2015-2035)

Year	Functional Population*
2015	7,676
2020	8,305
2025	9,024
2030	9,791
2035	10,577

** Data source: 2015 SWFWMD RWSP*

2.3 FUTURE NEED

The projected service area water demand from 2015 to 2035 for the City of Polk City is shown in Table 6 and Figure 5. In the immediate 10-year period from 2015-2025, the functional population is projected to increase from 7,676 to 9,024, reflecting an annual growth rate of 1.5 percent. Over the 20-year period (2015-2035), the functional population is projected to increase from 7,676 to 10,577, reflecting an annual growth rate of 1.1 percent. The projected growth rates shown here, which do not include any future land acquisitions (*i.e.,* City annexations), reflect a moderately-high growth rate over the 10- and 20-year planning periods, which are comparable to the ten- and twenty-year rates of other municipalities within Polk County (see Table 7 with annual average growth rates of other municipalities in Polk County).

Table 6: Projected Functional Population Annual Growth Rates

City of Polk City Projected Annual Growth Rates									
Year				2015-2020		2015-2025		2015-2035	
2015	2020	2025	2035	%Change	Annual Growth Rate	%Change	Annual Growth Rate	%Change	Annual Growth Rate
7,676	8,305	9,024	10,577	7.60	1.52	14.9	1.49	22.1	1.11

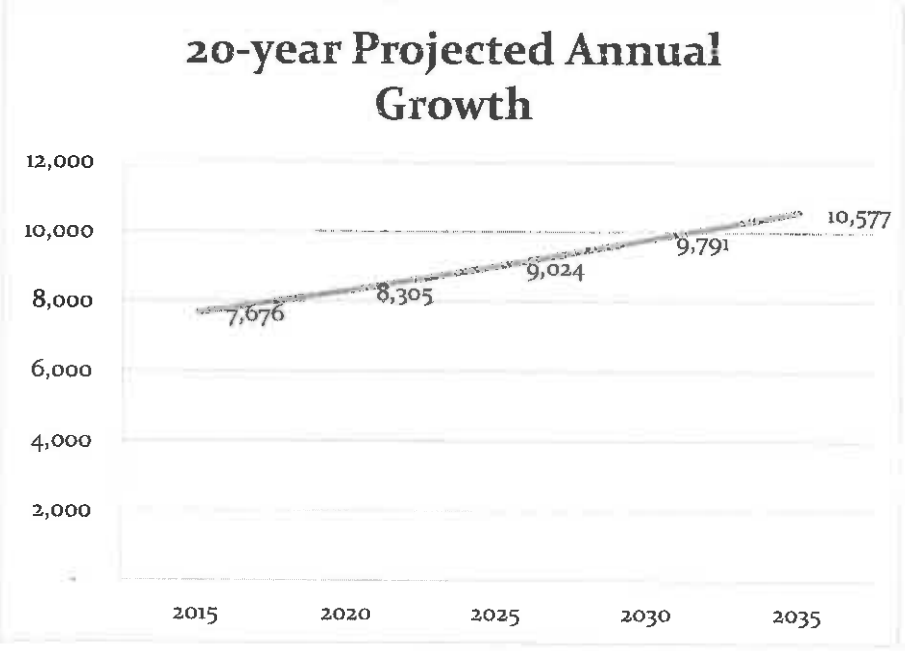


Figure 5: Projected Annual Growth

Table 7: Projected Annual Growth Rates for Municipalities in Polk County

Polk County Municipalities – Projected Annual Growth Rates										
Municipality	Years				2015-2020		2015-2025		2015-2035	
	2015	2020	2025	2035	% Change	Annual Growth Rate	% Change	Annual Growth Rate	% Change	Annual Growth Rate
Auburndale	33,507	35,388	37,614	41,472	5.32	1.06	10.92	1.09	19.21	0.96
Bartow	25,734	27,722	30,219	35,850	7.17	1.43	14.84	1.48	28.22	1.41
Davenport	5,900	6,667	7,485	9,141	11.50	2.30	21.18	2.12	35.46	1.77
Dundee	5,200	5,620	6,085	7,067	7.47	1.49	14.54	1.45	26.42	1.32
Eagle Lake	6,610	7,078	7,620	8,794	6.61	1.32	13.25	1.33	24.84	1.24
Frostproof	4,538	4,578	4,648	4,852	0.87	0.17	2.37	0.24	6.47	0.32
Haines City	29,462	32,952	36,624	43,153	10.59	2.12	19.56	1.96	31.73	1.59
Lake Alfred	8,746	9,382	10,008	11,230	6.78	1.36	12.61	1.26	22.12	1.11
Lake Hamilton	1,261	1,266	1,281	1,331	0.25	0.05	1.56	0.16	5.26	0.26
Lake Wales	25,310	27,431	29,653	34,162	7.73	1.55	14.65	1.46	25.91	1.30
Lakeland	166,521	175,480	184,846	203,345	5.11	1.02	9.91	0.99	18.11	0.91
Mulberry	4,528	4,528	4,528	4,528	0.00	0.00	0.00	0.00	0.00	0.00
Polk City	7,676	8,305	9,024	10,577	7.60	1.52	14.90	1.49	22.10	1.11
Winter Haven	72,542	78,444	84,566	95,203	7.52	1.50	14.22	1.42	23.80	1.19

Table 8 outlines projected water demand to permitted water supply based on functional population projections using the City's 5-year average consumption rate of 58.7 gpcd.

Table 8: Projected Water Demand – 5-Year Average Consumption Rate (2015-2035)

	2015	2020	2025	2030	2035
Functional Population	7,676	8,305	9,024	9,791	10,577
Average Per Capita Demand (GPCD)*	58.7	58.7	58.7	58.7	58.7
Projected Average Demand (GPD)	450,581	487,504	529,709	574,732	620,870
WUP Permitted Capacity (GPD)**	760,600	760,600	760,600	760,600	760,600
Surplus (Deficit) Demand (GPD)	310,019	273,097	230,891	185,868	139,730
Demand % of Permitted Capacity	59.24	64.09	69.64	75.56	81.63

The projections in Table 8 reveal a daily demand of 529,709 gpd by 2025 (10-year period) and 620,870 gpd by 2035 (20-year period). Considering the City's permitted capacity of 760,600 gpd (effective through 2034), the City is projected to maintain a water surplus within the ten-year and twenty-year planning periods. Based on the 5-year average demand, the City is expected to be able to serve projected growth.

SECTION 3: GOALS, OBJECTIVES, AND POLICIES

3.1. WATER CONSERVATION AND WATER REUSE

To promote long-term water resource planning and assure that adequate supplies are available to meet future water demands, the City recommends goals, objectives and policies, which are included in the Infrastructure, Conservation, Intergovernmental Coordination and Capital Improvements Elements of the City's Comprehensive Plan.

The City of Polk City will continue to promote water conservation and reuse in the service area. To date, the City has implemented a number of water conservation regulations and initiatives consistent with SWFWMD's requirement for implementation of a water conservation plan. Polk City will continue conservation effort through the following:

- Conduct audits of the municipal water system to determine areas that may be in need of repairs or contributing to increased water consumption through leaking pipes, and prioritize accordingly.
- Require the use of low volume plumbing fixtures for all new construction, to be enforced as part of the City's building code and other appropriate permitting regulations.
- Require the use of Florida Friendly landscaping techniques for all new development and continuous promotion of all new automatic landscape irrigation systems to be fitted with properly installed automatic shutoff devices.
- Participate in the Florida Water Star program which is entirely funded by SWFWMD to provide funding in rebates to builders who participate in a voluntary certification program.
- Maintain the water conserving rate structure.
- Educate residents in water conservation and best practices through outreach programs.

The SWFWMD recommended specific and tangible actions to address the City's significant water loss following the completion of the water audit in September 2016. These immediate tasks include:

- Replace thin wall poly service line on Citrus Grove by September 31, 2017
- Install a master meters at suspected problem subdivision to directly measure unbilled water use and address losses due to potential theft by December 31, 2017.
- Work with SWFWMD to conduct a leak detection survey of the South service area.
- Physically read and inspect each customer service meter to verify that the AMR system is operating correctly.

Additionally, the City will continue to coordinate water conservation efforts with the SWFWMD, the CFWI, the PRWC and the HWA to ensure that proper strategies are being utilized. The City will also continue to support and expand existing goals, objectives and policies in the comprehensive plan that promote water conservation in a cost-effective and environmentally-sensitive manner.

3.2. INTERGOVERNMENTAL COORDINATION

The City continues to coordinate with Polk County regarding water resource issues, including coordination on water supply plans. The City also recognizes its partnership and intergovernmental coordination with the CFWI, the PRWC and the HWA.

As part of the PRWC, Polk City is part of an inter municipal effort to seek state funding for projects to take care of public supply needs in the next twenty years. The estimated cost of the projects is $620 million and would produce at least 42 million gallons per day. Polk City is part of a group of municipalities that is currently working to reduce water consumption through a variety of conservation programs, which include toilet rebates and financial assistance with installation costs, rebates for landscaping of new development projects to reduce water use and information on improved irrigation projects.

The provision of emergency water supply involves collaboration and partnership between various levels of government. Polk City's current emergency water service agreements with the City of Auburndale and the City of Lakeland is a proactive measure as a response plan to lessen the impacts of any emergency such as natural disasters, terrorist attacks or other intentional actions.

3.3. CAPITAL IMPROVEMENTS

The City's Ten-Year Capital Improvements Plan (FY 16/17 – FY 26/27, adopted in December of 2016, identifies a total of $1,850,000 in improvements to the City's potable water system. The improvements, as follows, are scheduled projects planned through FY 22/23:

- Water Line Extension Phase II - Barfield Road Loop ($350,000)
- Water Line Extension Phase III - Tavares Rd., Rachel Cherie Dr., Steven Dr., Quinn Rd. 165 Lots ($1,500,000)
- Water Line Extension Phase IV - Berkley Road South, Rosewood to I-4 (*Developer initiated/funded*)

The City has also identified $1,500,000 in wastewater projects and two (2) additional developer initiated/funded projects scheduled through FY 21/22.

SECTION 4: CONCLUSION

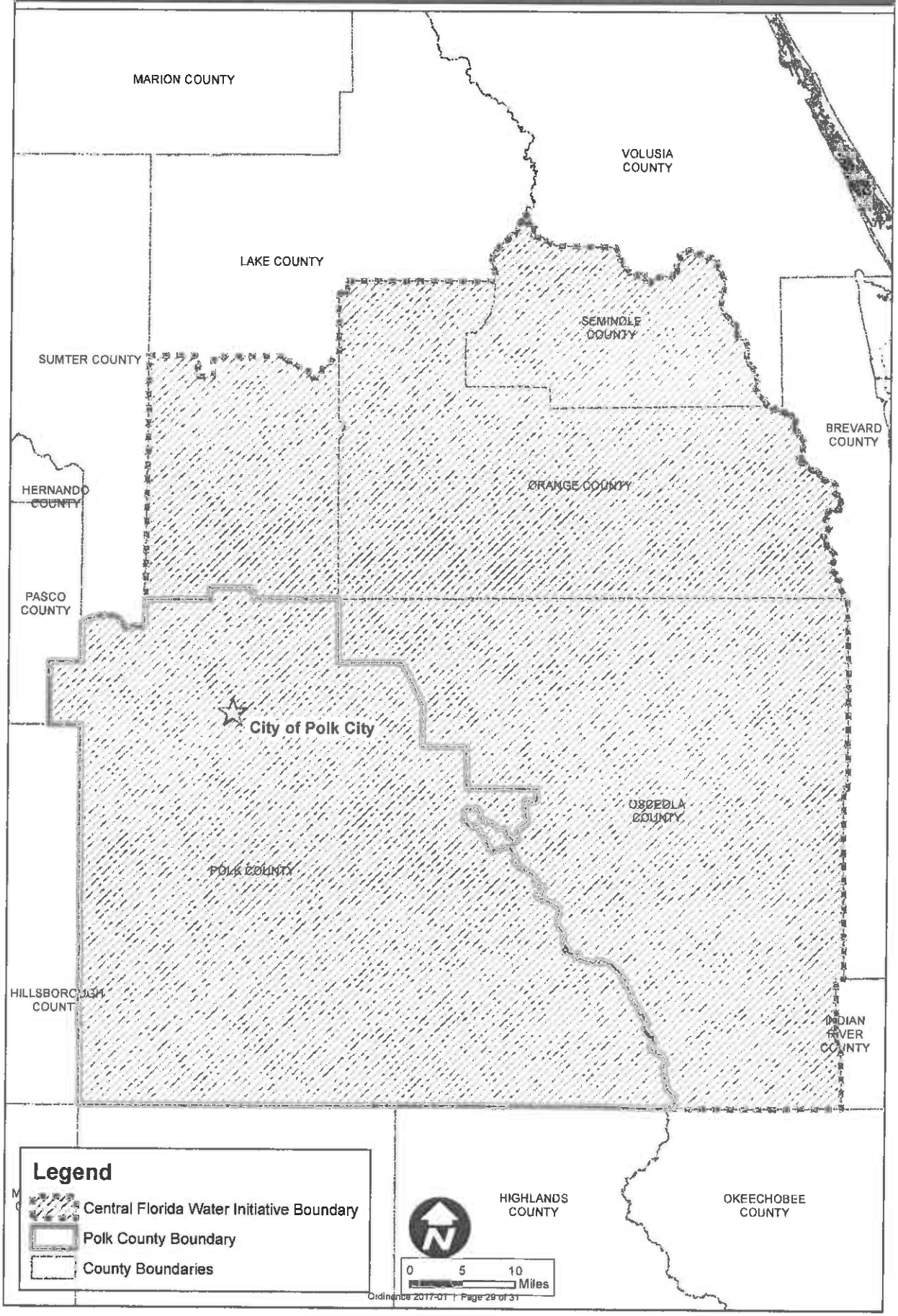
4.1. CONCLUSION

The City of Polk City maintains and operates a potable water (utility) system serving users both inside and outside of the corporate City limits. The City's adopted LOS for water consumption is 110 gpcd. Based on the 5-year average consumption rate (between 2011 to 2015), the City's average demand is 58.7 gpcd, which is within the adopted LOS standard of 110 gpcd.

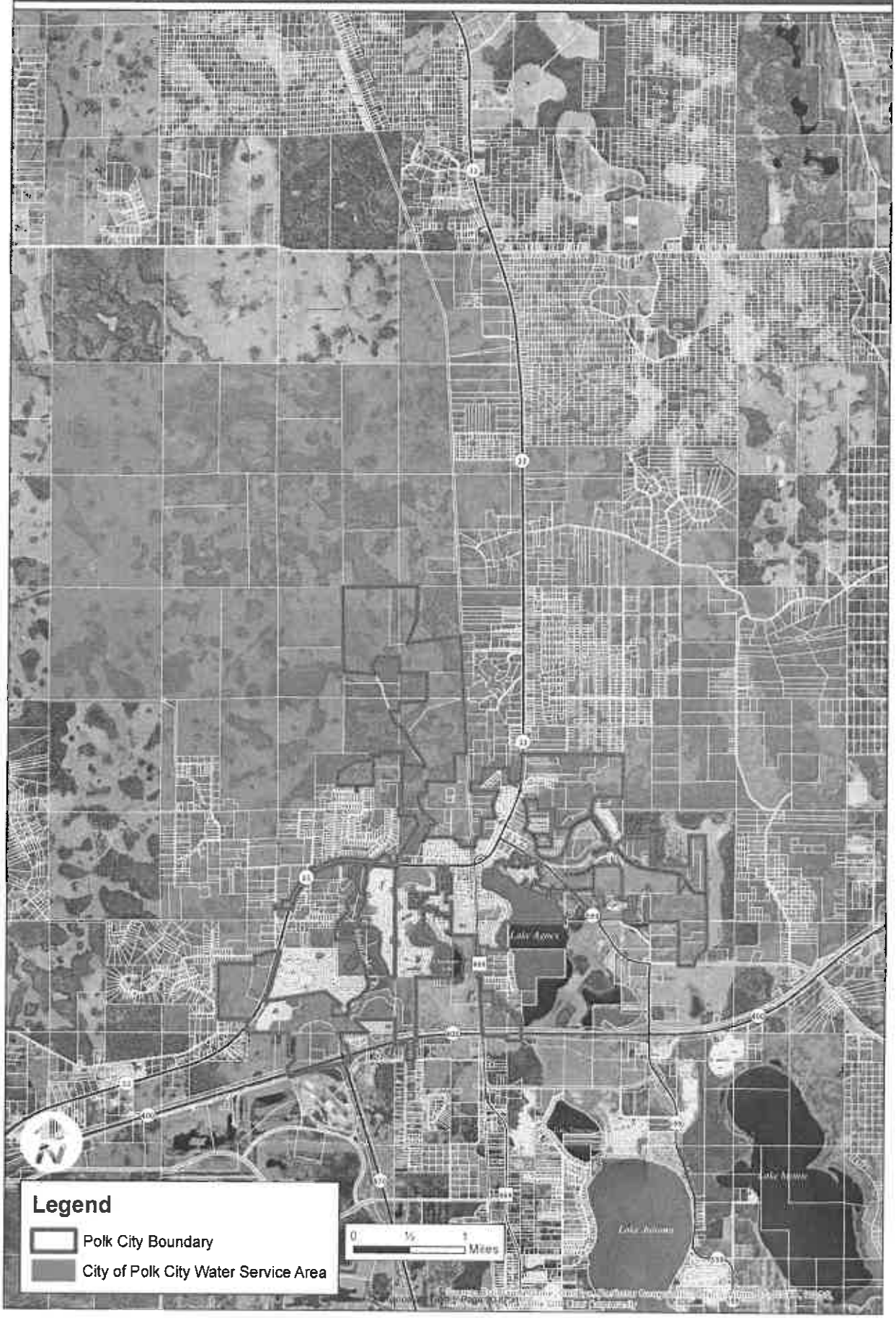
Based on the demand projections using the City's 5-year average consumption rate of 58.7 gpcd (Table 8), the projections reveal a daily demand of 529,709 gpd by 2025 (ten-year period) and 620,870 gpd by 2035 (twenty-year period). Considering the City's permitted capacity of 760,600 gpd (based on current WUP, effective through 2034) the City is anticipated to meet projected growth through 2025 (10-year period) and 2035 (20-year period).

The City will continue its monitoring of existing facilities to help reduce or eliminate future water loss, continue its conservation efforts through all available resources, continue to upgrade facilities and necessary infrastructure when and where improvements are needed, and continue to explore opportunities for alternative water supply resources and cooperate with the SWFWMD to implement tangible actions that will address the City's water loss identified in the 2016 water audit.

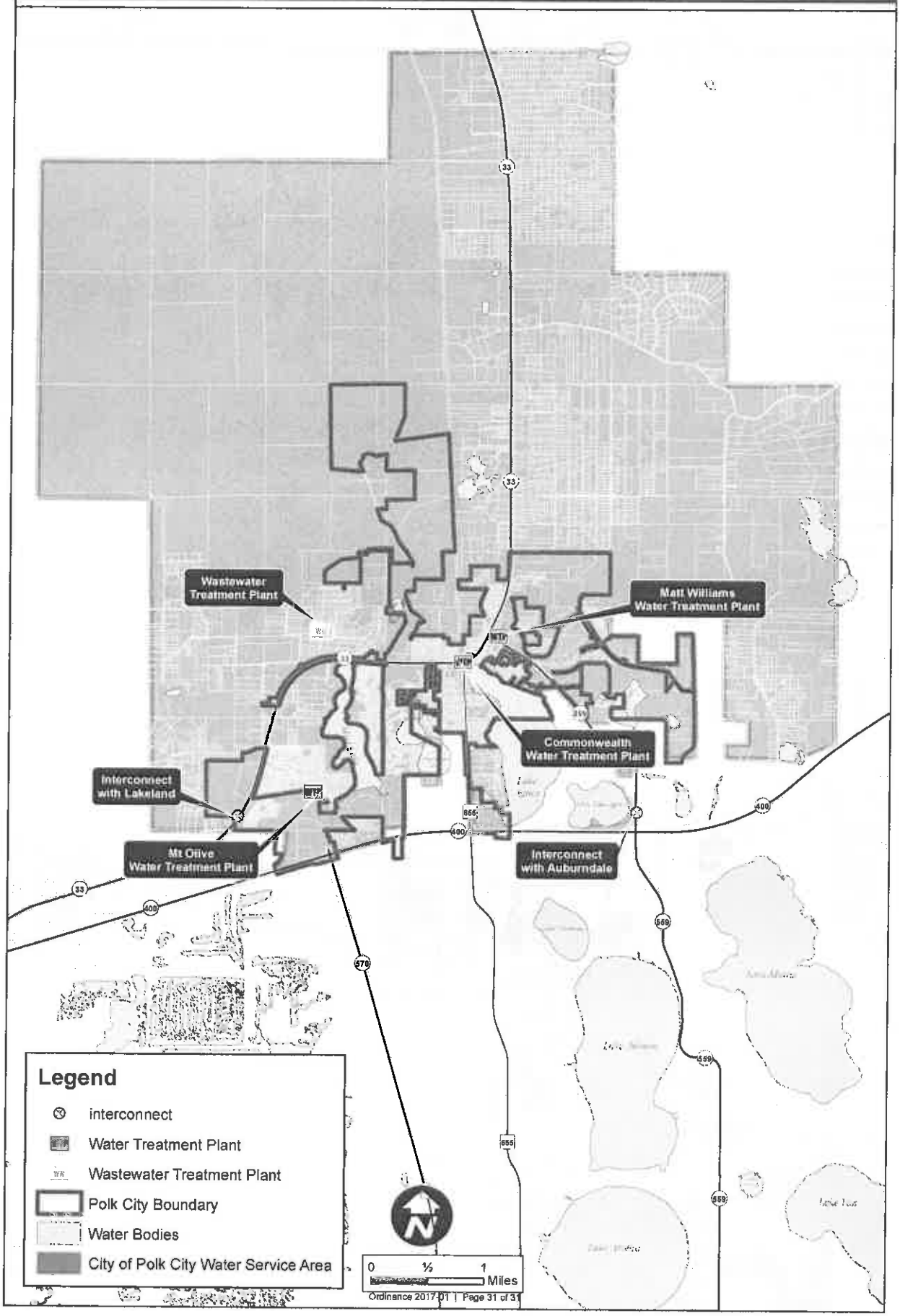
MAP 1
Central Florida Water Initiative (CFWI)



MAP 2
City of Polk City Public Water Supply Service Area



MAP 3
City of Polk City Facilities Location



Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: 2

Subject: Competitive Mini-Grant			
Department: Administration			
Summary: As part of the mini-grant awarded to the City by the Florida Department of Economic Opportunity - Competitive Florida Program, the City will host a Community Event to provide information about water conservation, Florida Friendly Landscaping, Green Swamp Facts, Mosquito Control, Low Impact Design, and Hurricane Preparedness.			
Requested Commission Action: For Information Purposes only			
Financial Impact: None			
Attachments: X		**Supporting Documents Reviewed** X	
Submitting Department Head: Patricia Jackson, City Manager		**Date:** 5/10/2017	
Approved by City Manager:		**Date:**	

CITY OF POLK CITY
WATERWISE SUMMER KICK-OFF
COMMUNITY EVENT PLANNED

OVERVIEW REPORT

MAY 15, 2017

TO: CITY COMMISSION OF THE CITY OF POLK CITY

FROM: CENTRAL FLORIDA REGIONAL PLANNING COUNCIL

SUBJECT: **As part of the mini-grant awarded to the City by the Florida Department of Economic Opportunity - Competitive Florida program, the City will host a community event to provide information about water conservation, Florida Friendly Landscaping, Green Swamp Facts, Mosquito Control, Low Impact Design, and Hurricane Preparedness.**

EVENT INFORMATION:

DATE: Saturday, June 10, 2017

TIME: 10:00 am to 1:00 pm

LOCATION: Bronson Community Center

PURPOSE: Community kick-off of summer with information and presentations about Water Conservation, Florida Friendly Landscaping, Green Swamp Facts, Mosquito Control, Low Impact Design, and Hurricane Preparedness.

Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: 3

Subject:

Public Hearing -- Resolution 2017-02 – Approving the Polk City Reclaimed Water Reuse Planning Document

Department: Utilities

Summary:

Polk City approved an Optimization Study in 2011, which contemplated that the City would develop a further plan for the distribution and application of the reclaimed water produced by the Cardinal Hill WWTP. Five potential reclaimed water reuse sites were identified, and Hartman Consultants was authorized to develop a reclaimed water reuse planning document to analyze and determine the best alternative for the distribution and application of reclaimed water in the City.

Hartman Consultants produced the Polk City, Florida Reclaimed Water Reuse Planning Document and presented it to the Commission in June 2016 and then a revised document April 14, 2017. The best side for the City is the Sand Mine Property that Polk City owns, and Hartman Consultants prepared a grant application and submitted it to the Florida Department of Environmental Protection Agency as directed by the City Commission in 2016. In order to qualify for State Grant Funds Polk City needs to adopt and approve the Planning Document.

As requested, additional documents have been provided for your review; due to the discussion at the last meeting Hartman Consultants is getting another assessment of Cardinal Hill, which will be presented at the meeting.

Requested Commission Action:

Approve Resolution 2017-02, which accepts, adopts and approves the Polk City, Florida Reclaimed Water Reuse Planning Document.

Financial Impact: None

Attachments: X	**Supporting Documents Reviewed** X
Submitting Department Head: Patricia Jackson, City Manager	**Date:** 5/10/17
Approved by City Manager: Patricia Jackson, City Manager	**Date:** 5/10/17

City Commission Action:

- ☐ Approved as Recommended
- ☐ Approved with Modifications
- ☐ Tabled to Time Certain Date:_____
- ☐ Denied

RESOLUTION 2017-02

A RESOLUTION OF THE CITY COMMISSION OF POLK CITY, FLORIDA; APPROVING THE POLK CITY, FLORIDA RECLAIMED WATER REUSE PLANNING DOCUMENT; PROVIDING AN EFFECTIVE DATE.

WHEREAS, Whereas, Polk City approved an Optimization Study in 2011 which called for the consolidation of debt at a lower rate, the construction of improvements to the Cardinal Hill WWTP, and the decommissioning of the Mount Olive South WWTP; and,

Whereas, the Optimization Study contemplated that the City would develop a further plan for the distribution and application of the reclaimed water produced by the Cardinal Hill WWTP; and,

Whereas, Polk City has identified five (5) potential reclaimed water reuse sites; and,

Whereas, Polk City authorized Hartman Consultants to develop a reclaimed water reuse planning document to analyze and determine the best alternative for the distribution and application of reclaimed water in the City; and,

Whereas, Hartman Consultants produced the Polk City, Florida Reclaimed Water Reuse Planning Document dated June 13, 2016, and revised April 14, 2017 (the "Planning Document"); and,

Whereas, in order to qualify for state grant funds, Polk City needs to adopt and approve the Planning Document.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF POLK CITY, FLORIDA:

SECTION 1. APPROVAL OF PLANNING DOCUMENT. The Polk City Commission hereby accepts, adopts, and approves the Polk City, Florida Reclaimed Water Reuse Planning Document dated June 13, 2016, and revised April 14, 2017, which is hereby incorporated in this Resolution in its entirety. City staff and consultants are requested and instructed to pursue available funding opportunities and take all actions to apply for and obtain the grants contemplated by the Planning Document and for implementation of the proposals designated therein. Polk City will, upon receipt of such funding or other necessary resources, seek to implement the proposals contained in the Planning Document.

SECTION 2. EFFECTIVE DATE. This Resolution shall take effect immediately upon its passage.

RESOLVED, PASSED, AND CERTIFIED AS TO PASSAGE THIS _____ DAY OF _____, 2017.

ATTEST:

Sheandolen P. Dunn, Deputy City Clerk

CITY COMMISSION OF POLK CITY, FLORIDA

Joe LaCascia, Mayor

APPROVED AS TO FORM & LEGALITY

Thomas A. Cloud, Esquire, City Attorney

Florida Department of Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Ryan E. Matthews
Interim Secretary

FLORIDA CATEGORICAL EXCLUSION NOTICE

Polk City, Florida

WW53140 – Effluent Disposal Facilities

May 4, 2017

Chapter 62-503, Florida Administrative Code (FAC), requires the Florida Department of Environmental Protection (DEP) to determine whether DEP decisions pursuant to providing a State Revolving Fund (SRF) loan for the construction of wastewater management facilities will have a significant adverse impact on the environment. One such decision is the approval of a facilities plan, or portion of such facilities plan, for projects that may be financed under the SRF Loan Program. The DEP, in making this determination, assumes that all facilities and actions recommended in the planning documents justifying these facilities will be implemented, whether or not SRF loan assistance is used to fund any of those facilities or actions. The construction involves water pollution control systems in areas where streets have been established, underground utilities installed, or building sites excavated. Therefore, the project qualifies for a Florida Categorical Exclusion Notice (FCEN).

The proposed project will decommission the SR 33 Sprayfield and the I-4 and Mount Olive South percolation ponds. The treated wastewater will be rerouted to the Smith Road Site where a series of rapid infiltration basins will be constructed. The new basins will increase the City's effluent disposal capacity and the elimination of the SR 33 Sprayfield will help to alleviate the nutrient impairments in Mud Lake. The total estimated construction cost is $1,300,000.

The DEP tentatively finds, based on a review of the "Polk City Reclaimed Water Reuse Planning Document", dated April 14, 2017, that the above described work is eligible for a categorical exclusion. Unless new information regarding adverse environmental impacts of the proposed project is made available to the Department, State financial assistance may be made available for construction. This FCEN does not commit any regulatory agency to issue permits that may be required for construction of the proposed project.

This determination may be rescinded if new information regarding adverse environmental impacts of the proposed project is made available to the Department. In order to be considered, comments must be submitted within 30 days of the date of this notice to Bryan Goff, State Revolving Fund Program, Department of Environmental Protection,

3900 Commonwealth Boulevard, Mail Station #3505, Tallahassee, Florida 32399-3000. Comments also may be offered by telephone at 850/245-2966.

The documentation to support this decision will be available for public inspection at City Hall, 123 Broadway Boulevard SE, Polk City, Florida and at the DEP office located at 3900 Commonwealth Boulevard, Room 456F, Tallahassee, Florida.

Tim Banks

Tim Banks, P.E. Administrator
Clean Water SRF Program

TB/bg

Polk City, Florida Reclaimed Water Reuse Planning Document

June 13, 2016 (Original)
April 14, 2017 (Revised)

Hartman Consultants, LLC
Project Number 14035.00

TABLE OF CONTENTS

SECTION 1

The 39.82 acres of sprayfield has a capacity of 185,000 gpd or about 4,650 gpd per acre. In contrast the percolation ponds (RIB) has a capacity of 100,000 gpd on four (4.0) acres or 25,000 gpd per acre. The RIB site takes over 500% (5 times) the flow per acre.

The Cardinal Hill WWTP has a permitted capacity of 300,000 gpd AADF which is slightly greater than the existing total operational reuse sites. The existing plant can be rerated, based upon the historical performance, to 350,000 gpd AADF without capital improvements.

The effluent disposal capacity of 285,000 gpd is the limiting factor for the wastewater system.

See Figure 1 for a map of the existing effluent disposal system.

In 2010 the AADF in the City's Wastewater System was approximately 120,000 gpd AADF. Today the AADF is approximately 155,000 gpd AADF. This planning document resolves the effluent reuse capacity as follows:

1.) Matching or exceeding the proposed rerated Cardinal Hill WWTP;

2.) Meeting the Mud Lake environmental goals as set forth by FDEP's studies;

3.) Making the effluent reuse more efficient for the City.

B.) Preliminary Plan

1.) Possible Sites for Use.

The possible sites for use are summarized below:

a.) Cardinal Hill

Present capacity 70,000 gpd. Same site as WWTP and effluent wet weather pond (1 MG) for equalization. Site has a hard pan which is not conducive to rapid rate applications. Site has gopher tortoise habitat and holes. Site is considered in the Green Swamp Area (generalized region). Site has steep incline which is not appropriate for higher loading rates (effluent is not allowed to run-off or mix with stormwater discharging the site). This site cannot accommodate 350,000 gpd AADF.

b.) I-4 RIBS

Present capacity 100,000 gpd AADF. Relatively small areas 2 parcels, no future economy of scale. Must maintain and monitor and sample with compliance well network. Most efficient active site.

c.) Mount Olive South Percolation Ponds

This site does not meet FDEP regulations for setbacks from surface water/canal and was required to be closed. Presently inactive. Excess property except for on-site pumping station (requires easement). I-4 pond 6" force main is across the site (easement or abandon in place). No capacity available.

d.) SR 33 Sprayfield

Largest active site at 30.32 acres. Most energy intensive site (pressure for spray guns). A lot of maintenance on irrigation system. Low capacity for acreage (only 115,000 gpd AADF) and within Mud Lake TMDL drainage basin. Not good for Mud Lake. Most valuable property for development. Adjacent to successful development.

e.) Smith Road RIBS

Largest site owned by the City. Restricted use as a sand mine or wastewater facility which includes effluent disposal. This site is unused by City, yet maintained and held for future wastewater use. The site can accommodate the full existing 300,000 gpd AADF, in the future the rerated 350,000 gpd AADF and in the distant future 500,000 gpd AADF. The site has low energy requirements (savings). Three (3) general effluent areas (four 4 parcels) could be eliminated in favor of this one (1) site and this site has at least double the capacity of the other 3 areas (SR 33 Sprayfield, Mount Olive South percolation ponds, and I-4 percolation ponds total 215,000 gpd versus 500,000 gpd Smith Road site buildout capacity).

FIGURE 2 MAP OF RECOMMENDED IMPROVEMENTS TO EFFLUENT DISPOSAL SYSTEM

I believe the above is a synopsis of the Planning Document.

Very truly yours,

Hartman Consultants, LLC

Gerald C. Hartman
Florida P.E. #27703
BCEE #88-10034
ASA #7542

SECTION 2
COST COMPARISON

2.1 Alternatives

The three alternatives are:

a) No action
b) Expand I-4 sites
c) Smith Road Site

2.2 No Action

This alternative would require nutrient removal at the basic secondary extended aeration Cardinal Hill WWTP. An anoxic basin and a chemical feed system would be necessary.

The capital costs of these facilities as well as the monitoring systems is summarized below:

a)	Yard Piping and Valves	$	49,600
b)	Relocation of Flow Meter	$	8,800
c)	Relocation of Sampling	$	1,500
d)	Anoxic Tank and Appurtenances	$	375,000
e)	Chemical Storage	$	30,000
f)	Chemical Feed Systems	$	29,900
g)	Contingencies	$	150,000
h)	Construction OH/Mgt.	$	116,000
i)	Engineering & Tech	$	160,000
	Total Capital	$	920,800

The additional operational and maintenance costs would include:

a) $40,700 higher energy costs and lab costs over Smith Road.

b) 130,700 higher chemical costs.

Present worth of higher O&M costs (ie. $54,400 annual (w/o escalation) @ 4% for 30 years) is $871,300.

Total of Capital and PV of O&M Cost is $1,792,100.

The existing 8" diameter force main at the SR 33 Sprayfield near Mud Lake would be extended east north east to the Smith Road site. The construction cost estimate is:

a)	15,200 LF Rural 8-inch Force Main	$	600,000
b)	Smith Road Site Improvements	$	300,000
c)	Decommission I-4, Mount Olive South, and SR 33 Sites	$	50,000
d)	Construction OH/Mgt.	$	110,000
e)	Contingencies	$	100,000
f)	Engineering Final Design, Hydrogeological Studies (Modeling) and Design and Permitting	$	160,000
	Total Planning Construction Cost Estimate	$	1,320,000

The additional operation and maintenance is $0 due to this alternative having the lowest energy, chemical, labor and environmental monitoring costs.

Total Construction Cost and Present Value of Additional O&M cost is: $1,320,000.

2.5 Cost Comparison Summary

Alternative	Total Cost [1]
No Action	$ 1,792,100
Expand I-4 Site	$ 1,742,200
Smith Road Site	$ 1,320,000

[1] Capital and Present Worth of Additional O&M.

SECTION 3
ENVIRONMENTAL EFFECTS

The environmental benefits of the project include:

1) Removing Secondary Effluent from the Mud Lake proposed TMDL basin.
2) Recharging the Floridan Aquifer (See Ardaman Preliminary Assessment Report).
3) Reduces energy consumption by transferring from spray irrigation to ROB's.
4) Utilizes an existing wastewater facilities site and reclaims an old sand mine.

Since the Smith Road site is a disturbed area, this project will not disturb an undisturbed area. Since the site was cleared and heavy construction vehicles used, there are no flora, fauna, threatened or endangered plant or animal species on the site. A rural settlement, rural residential area surrounds the old sand mine/Smith Road site. The area surrounding the site is disturbed. The site is surrounded by three (3) roadways covering the boundaries namely Orange Blvd, Smith Road and Barfield Road. See Figure 3-1.

There are no undisturbed areas.

There are no surface water bodies or prime agricultural lands.

On the site or adjacent or surrounding the site there are no wetlands. To the North and East some distance away there are wetlands.

At the end of this section is the US Fish and Wildlife project area review.

There will be no new human health or environmental effects on minority or low income communities. See City Manager's letter concerning Polk City at the end of this section following the US Fish and Wildlife response.

A preliminary assessment of the project area was accomplished by Ardaman and Associates, Inc. (See Attachment B).

The 100 year floodplain in the project area is shown on Figure 3-2. Adding three feet to that elevation shows the project area is not within a floodplain.

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities

FIGURE 3-2 100 YEAR FLOODPLAIN MAP FOR THE SITE (DERIVED FROM FIRM MAP DATED DECEMBER 2016)

FIGURE 3-4 AERIAL SITE PHOTO

SECTION 4
SELECTED ALTERNATIVE

4.1 Overview

The selected alternative is the Smith Road effluent reuse site which exhibits the following advantages:

- Lowest Cost
- Lowest energy use (most energy efficient)
- Lowest chemical use
- Lowest labor requirement
- Greatest Volume of Wet Weather Storage
- Greatest Operational Flexibility
- Reduction of aerosols
- One of two alternatives removing secondary effluent from the proposed Mud Lake TMDL basin
- Use of existing City owned wastewater property
- No WWTP process improvements required (only minor effluent pumps impeller replacement)
- Reduction of effluent reuse sites from five (5) (I-4 (2), Mount Olive South, SR 33 Sprayfield, and Cardinal Hill) to two (2) (Smith Rd and Cardinal Hill)
- Additional capacity from 285,000 gpd to 350,000 gpd AADF (70,000 gpd Cardinal Hill and 350,000 gpd Smith Rd)
- Potential future integration of DOC effluent disposal.
- Uses an environmentally disturbed area and reclaims an old sand mine
- Recharges the Floridan Aquifer for beneficial reuse

4.3 Cost Estimate

The planning level cost estimate is shown below:

a) Force Main

1)	8" FM 15,200 LF @	$32.96/LF	-	$500,992
2)	Valves 8" – 5 @	$2,600 ea	-	$13,000
	Construction @	$1,000 ea	-	$5,000
3)	8" Tee – Material & Install		-	$1,200
4)	Specials, Bends, etc.	32 @ $600	-	$19,200
5)	Bore and Jack Only	264/LF @ $106	-	$27,984
6)	Restoration		-	$18,000
7)	General Conditions, Ins, etc @ 3%		-	$15,030
		Total Estimate		**$600,406**

b) Smith Road Site

1)	Earth Work 50,000 y/d³ @ $3/yd³	-	$150,000
2)	660 LF 8" FM @ $32.96	-	$21,754
3)	2,440 LF 4" FM @ 19.97	-	$48,727
4)	Structures	-	$8,000
5)	Monitor Wells	-	$39,500
6)	Data Logger	-	$28,000
7)	General Conditions	-	$4,100
	Total		**$300,081**

c) Decommissioning Site Restoration

1)	I-4 - 9,680 yrd³ @ $1.52/yd³	-	$14,714
2)	Mount Olive So. – 8,990 yrd³ @ 1.52/yd³	-	$13,665
3)	SR 33 – 3 days @ 2,500/day	-	$7,500
4)	Waste Cost	-	$1,900
5)	Misc. Demolition Estimate	-	$5,000
6)	General Conditions	-	$1,500
7)	Permitting	-	$5,000
	Total Estimate		**$49,279**

Subtotal A+B+C = $949,766

FIGURE 4-1 MAP OF EXISTING EFFLUENT DISPOSAL SYSTEM

FIGURE 4-3 MAP OF RECOMMENDED IMPROVEMENTS TO EFFLUENT DISPOSAL SYSTEM

SECTION 5
PUBLIC PARTICIPATION PROCESS

5.1 Pre-Planning Document Activities

A) SRF/Grant Application

At three (3) public City Commission meetings, the agenda involved the discussion and the desire to apply, prepare and submit an application to FDEP for funding and provided authorization.

B) Conceptual Plan

A conceptual plan was presented and approved in an advertised City Commission meeting on June 13, 2016.

5.2 SRF Planning Document

A) April 17, 2017 Public Meeting at 6 pm at City Hall.

At the end of this section both the proof of advertisement and minutes from the meeting are included.

B) May 15, 2017 Public Meeting at 7 pm at City Hall.

At the end of this section both the proof of advertisement and minutes from the meeting are included.

SECTION 6

The current impact fees are #1,747 per ERC for water and $4,415 ERC for wastewater. The total is $6,162 per ERC.

6.4 Proposed User Charge System

Assuming an 80% forgiveness for the design phase and a similar amount for the construction phase the total loan portion would be $264,000. Assuming an interest rate of 4% and a term of 20 years results in a payment of approximately

Table 6-1
Polk City, Florida
Existing Rate Structure and Rates

		Water	Wastewater [1]	Irrigation
Base Monthly Charges				
Per ERC		$ 17.09	$ 34.70	$ 17.09
Usage Rate Per 1,000 gal.	**Block Limits**			(blocks vary
Residential [1]				By meter)
Block 1	6,000	$ 2.62	$ 9.74	$ 5.23
Block 2	12,000	$ 5.23	$ 19.47	$ 9.15
Block 3	18,000	$ 9.15	N/A	$ 14.63
Block 4	> 18,000	$ 14.63	N/A	N/A
Commercial				
Block 1	All Use	$ 5.23	$ 14.60	$ 5.23
Block 2	N/A	N/A	N/A	$ 9.15
Block 3	N/A	N/A	N/A	$ 14.63

Irrigation Blocks	**Block 1**	**Block 2**	**Block 3**
5/8 x 3/4 Inch	6,000	12,000	> 12,000
1.0 Inch	15,000	30,000	> 30,000
1.5 Inch	30,000	60,000	> 60,000
2.0 Inch	48,000	96,000	> 96,000
3.0 Inch	96,000	192,000	> 192,000
4.0 Inch	150,000	300,000	> 300,000

[1] Monthly wastewater billable currently capped at 12,000 for residential customers.

20,000 per year. In fiscal year 2020 a combined across the board rate increase of 2.5% would generate sufficient revenues to repay the loan portion at 20% of the cost.

In 2021 a combined rate increase of 2.2% would be required if a 100% loan, no grant was secured for the construction phase.

6.5 Capital Financing Plan

The City would ask for a loan anticipation note from its on-going bank following the FDEP decision for funding the Phase 1 Design and thereafter Phase 2 Construction to allow for timely payments to the necessary contractors.

6.6 FDEP Forms

Appended to this section.

6.7 City Audit Debt Summary Sheet

Appended to this section.

SCHEDULE OF PRIOR AND PARITY LIENS

List annual debt service beginning two years before the anticipated loan agreement date and continuing at least fifteen fiscal years. Use additional pages as necessary.

IDENTIFY EACH OBLIGATION

#1 9,720,000 **Polk City Florida Water and Sewer System Capital Improvement and Refunding Revenue Bonds Series 2011A** **Coverage % 25%** **Insured (Yes/No) Yes**	**#2 FDEP Loan** **Coverage % 25%** **Insured (Yes/No) No**	**#3 Equipment Lease** **Coverage % 0%** **Insured (Yes/No) No**
#4 N/A **Coverage %** **Insured (Yes/No)**	**#5 N/A** **Coverage %** **Insured (Yes/No)**	**#6 N/A** **Coverage %** **Insured (Yes/No)**

Fiscal Year	Annual Debt Service (Principal + Interest)						Total Non-SRF Debt Service w/coverage	Total SRF Debt Service w/coverage
	#1	#2	#3	#4	#5	#6		
2015	646,667	174,208	23,485				831,819	217,760
2016	645,517	174,208	23,485				830,381	217,760
2017	644,217	174,208	23,485				828,756	217,760
2018	647,767	174,208	23,485				833,194	217,760
2019	646,017	174,208	23,485				831,006	217,760
2020	647,967	174,208	23,485				833,444	217,760
2021	648,367	174,208	23,485 (3)				833,944	217,760
2022	648,367	174,208					810,459	217,760
2023	647,967	174,208					809,959	217,760
2024	647,167	174,208					808,959	217,760
2025	645,617	174,208					809,021	217,760
2026	643,292	174,208					804,115	217,760
2027	645,167	174,208					806,459	217,760
2028	645,992	174,208					807,490	217,760
2029	646,142	174,208					807,678	217,760
2030	645,100	174,208					806,375	217,760
2031	648,000	174,208					810,000	217,760
2032	644,000	174,208					805,000	217,760
2033	644,250	174,208 (2)					805,313	217,760
2034	643,500						804,375	
2035	646,750						808,438	
2036	643,750						804,688	
2037	644,750						805,938	
2038	644,500						805,625	
2039	648,000						810,000	
2040	645,000						806,250	
2041	645,750 (1)						807,188	

(1) Last P&I Non-SRF Payment.
(2) Last FDEP Payment
(3) Last Lease Payment

SCHEDULE OF PROJECTED REVENUES AND DEBT COVERAGE
FOR PLEDGED REVENUE
(Begin with the fiscal year preceding first anticipated semiannual loan payment)

		FY 2018	FY 2019	FY 2020[2]	FY 2021[2]	FY 2022
(a)	Operating Revenues (Identify)					
	Combined W & WW	2,120,586	2,164,198	2,263,165	2,359,429	2,406,617
	Sales/Rev.					
(b)	Interest Income	-0-	-0-	-0-	-0-	-0-
(c)	Other Incomes or Revenues (Identify)					
	Non-Operating	2,500	2,500	2,500	2,500	2,500
	Impact Fees[3]	250,000	250,000	250,000	250,000	250,000
(d)	Total Revenues	**2,373,086**	**2,416,698**	**2,515,665**	**2,611,929**	**2,659,117**
(e)	Operating Expenses[1], [4]	1,316,202	1,359,637	1,404,505	1,404,150[5]	1,400,487[6]
(f)	**Net Revenues (f = d - e)**	**1,056,884**	**1,057,061**	**1,111,160**	1,207,779	**1,258,630**
(g)	Existing Debt Service on Non-SRF Projects (including coverage)	833,194	831,006	833,444	833,944	810,459
(h)	Existing SRF Loan Debt Service (including coverage)	217,760	217,760	217,760	217,760	217,760
(i)	**Total Existing Debt Service (i = g + h)**	**1,050,954**	**1,048,766**	**1,051,204**	**1,051,704**	**1,028,219**
(j)	Projected Debt Service on Non-SRF Future Projects (including coverage)	-0-	-0-	-0-	-0-	-0-
(k)	Projected SRF Loan Debt Service (including coverage)	-0-	-0-	11,220[7]	35,502[8]	35,502[8]
(l)	**Total Debt Service (Existing and Projected) (l = i + j + k)**	**1,050,954**	**1,048,766**	**1,062,424**	**1,087,206**	**1,063,721**
(m)	**Net Revenues After Debt Service (m = f – l)**	**5,930**	**8,295**	**48,736**	**120,573**	**194,909**

Source: Hartman Consultants, LLC – Utility Projects

Notes: (i.e. rate increases, explanations, etc.)
1. For existing and proposed facilities, excluding interest on debt, depreciation, and other non-cash items.
2. Approx. 2.5% rate increase FY 2020 and 2.2% in FY 2021.
3. Growth at approx. 40 ERC's per year.
4. O&M increase at 3.3%/yr.
5. Savings O&M – New Reuse FY 2021 @ $46,704.
6. Savings labor FY 2022 @ $50,000.
7. From Page 1 Design for FY 2020.
8. Assumption 80% / 20% for Construction @ 20 yrs. @ 4%. **100% is** $97,128 x 1.25 = $121,410 x 20% = $24,282 Plus #7 above = $35,502.
9. At 100% Construction Loan = $132,630 (Design & Construction).

f Polk City

...nt Debt Schedule - Amounts include Principal and Interest

8/31/2016 (General Fund) Utility Utility Utility

		Series 2007 - 4.125% Interest	2.41% Interest	4.97% Interest	*Not a debt. Money set aside per bond requirements	2.78% Interest	
		Annual Payments	Semiannual Payments	Semiannual Payments	*Money set aside for renewal, replacement, and improvements	Annual Payments	
		1) USDA GF	2) DEP	3) Fifth Third Bank	3) Fifth Third Bank	4) Tax Exempt Leasing	Total Per Fiscal Year
FY	2017	$102,088.93	$174,208.08	$844,217.50		$23,484.89	$943,999.40
	2018	$102,089.30	$174,208.08	$847,787.50		$23,484.89	$947,549.77
	2019	$102,089.80	$174,208.08	$846,017.50		$23,484.89	$945,799.77
	2020	$102,088.88	$174,208.08	$847,987.50		$23,484.89	$947,749.36
	2021	$102,088.85	$174,208.08	$846,367.50		$23,484.89	$946,149.32
	2022	$102,088.88	$174,208.08	$846,367.50			$924,664.46
	2023	$102,088.50	$174,208.08	$847,987.50			$974,284.08
	2024	$102,089.12	$174,208.08	$847,167.50			$923,464.70
	2025	$102,088.05	$174,208.03	$845,817.50			$921,914.53
	2026	$102,089.11	$174,208.08	$843,292.50			$919,589.69
	2027	$102,088.62	$174,208.08	$845,167.50			$921,464.10
	2028	$102,088.98	$174,208.08	$845,992.50			$922,289.54
	2029	$102,088.99	$174,208.08	$845,142.50			$922,439.57
	2030	$102,089.02	$174,208.08	$845,100.00			$921,397.10
	2031	$102,088.28	$174,208.08	$846,000.00			$924,297.36
	2032	$102,088.78	$174,208.08	$844,000.00			$920,296.84
	2033	$102,089.32	$174,208.07	$844,250.00			$920,547.39
	2034	$102,088.80		$843,500.00			$745,588.80
	2035	$102,088.74		$846,750.00			$748,838.74
	2036	$102,089.14		$843,750.00			$745,839.14
	2037	$101,188.60		$844,750.00			$745,938.60
	2038			$844,500.00			$844,000.00
	2039			$846,000.00			$846,000.00
	2040			$846,000.00			$846,000.00
	2041			$845,750.00			$845,750.00
		$2,142,969.85	$2,691,637.35	$18,147,402.50	$0.00	$117,424.45	$21,369,129.95

SECTION 7
SCHEDULE

Event		Date
1	4/17 Public Meeting	4/17/2017 @ 6 pm
2	5/15 Public Meeting	5/15/2017 @ 7 pm
3	Adopting Resolution	5/15/2017
4	FDEP Submission	5/17/2017
5	SCH Review	8/2017
6	Contingent On Funding-Final Design and Permitting Contracts	9/2017
7	FDEP Loan/Grant Decision	10/2017
8	Interim Financing	10/2017
9	Final Design & Permitting Starts	10/2017
10	FDEP Permit Submittal	6/2018
11	FDEP Permit Issued	10/2018
12	Close-Out Design Loan/Grant	11/2018
13	Application for Construction Loan/Grant to FDEP	12/2018
14	Contingent of Funding Construction Contract	3/2019
15	FDEP Decision	4/2019
16	Bidding & Award	4 – 6/2019
17	Construction	7/2019 – 8/2020
18	Permit Close-Out/Record Drawings	8/2020
19	FDEP Loan/Grant Close-Out	11/2020
20	Beginning of Monthly Loan Portion Repayment	12/2020

SECTION 8
ADOPTING RESOLUTION

Following the two (2) public meetings concerning this planning document, the Polk City approved the adopting resolution as shown on the following pages.

SECTION I. The foregoing findings are incorporated herein by reference and made a part hereof.

SECTION II. The Polk City, Florida is adopting the recommendations in the Reclaimed Water Facilities Plan Update for the design and permitting of the recommended improvements.

SECTION III. All resolutions or part of Resolutions in conflict with any of the provisions of this Resolution are hereby repealed.

SECTION IV. If any section or portion of a section of this Resolution proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force, or effect of any other section or part of this Resolution.

SECTION V. This Resolution shall become effective immediately upon approval and adoption.

APPROVED AND ADOPTED by the City Commission of the Polk City, Florida, this 15th day of May, 2017.

POLK CITY, FLORIDA

_____
Joe LaCascia, Mayor

ATTEST:

_____
Patricia Jackson, City Manager

Florida Department of Environmental Protection

Southwest District Office
13051 North Telecom Parkway
Temple Terrace, FL 33637-0926

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

STATE OF FLORIDA
DOMESTIC WASTEWATER FACILITY PERMIT

PERMITTEE:
City of Polk City

RESPONSIBLE OFFICIAL:
Ms. Patricia Jackson, City Manager
123 Broadway Blvd. SE
Polk City, Florida 33868
(863) 984-1375
patricia.jackson@mypolkcity.org

PERMIT NUMBER: FLA189093
FILE NUMBER: FLA189093-004-DW2P/NR
EFFECTIVE DATE: March 21, 2017
EXPIRATION DATE: March 20, 2022

FACILITY:

Cardinal Hill Wastewater Treatment Facility (WWTF)
Steven Drive
Polk City, Florida 33868
Polk County
Latitude: 28° 11' 27" N Longitude 81°50' 41" W

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and applicable rules of the Florida Administrative Code (F.A.C.). This permit does not constitute authorization to discharge wastewater other than as expressly stated in this permit. The above named permittee is hereby authorized to operate the facilities in accordance with the documents attached hereto and specifically described as follows:

WASTEWATER TREATMENT:

Operation of an existing 0.30 million gallons per day (MGD) Annual Average Daily Flow (AADF) Type II extended aeration domestic wastewater treatment facility consisting of: one aerated surge tank of 75,000 gallons, one aeration basin of 300,000 gallons, two clarifiers of 158,600 gallons total volume with a total surface area of 1,500 ft2, two chlorine contact chambers of 8,400 gallons total volume, and one aerated biosolids holding tank of 45,000 gallons. This plant is operated to provide secondary treatment with basic disinfection. The permit capacity will be limited to the combined capacity of the two slow-rate restricted public access land application systems and the one rapid-rate land application system, for a total of 0.285 mgd, AADF.

REUSE:

Land Application R-001: Is an existing 0.185 MGD AADF permitted capacity Part II slow-rate restricted public access land application system (R-001). R-001 consists of a 9.5-acre spray field rated to handle 0.07 mgd AADF, with a 1-million-gallon lined storage pond located at the Cardinal Hill WWTF site at approximately 28° 11' 27" latitude N, longitude 81° 50' 41" W, and the 23-acre Mount Olive spray field rated to handle 0.115 MGD AADF with a storage pond of 0.102 million gallons of volume located at approximately latitude 28° 10' 30" N, longitude 81° 50' 30" W.

Land Application R-002: Is an existing 0.10 MGD AADF permitted capacity Part IV rapid-rate land application system (R-002). R-002 consists of a two-cell Rapid Infiltration Basin (RIB) with a total bottom surface area of 4.0 acres rated to handle 0.10 MGD AADF. R-002 is located approximately at latitude 28°11' 41" N, longitude 81°47' 13" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements, and other conditions set forth in this cover sheet and Part I through Part IX on pages 1 through 22 of this permit.

Acknowledgments

This study could not have been accomplished without contributions from staff in the Florida Department of Environmental Protection's Southwest District Office and the Division of Environmental Assessment and Restoration Office of Watershed Services. The Department also recognizes the Polk County Natural Resource Division for their contributions towards understanding the issues, history, and processes at work in the Mud Lake watershed.

Editorial assistance provided by Douglas Gilbert, Wayne Magley, Kevin Petrus, Ken Weaver, Margaret Vogel, and Daryll Joyner.

For additional information on the watershed management approach and impaired waters in the Withlacoochee Planning Units, contact:

Terry Hansen
Florida Department of Environmental Protection
Water Quality Restoration Program
Watershed Planning and Coordination Section
2600 Blair Stone Road, Mail Station 3565
Tallahassee, FL 32399-2400
Email: terry.hansen@dep.state.fl.us
Phone: (850) 245-8561
Fax: (850) 245-8434

Access to all data used in the development of this report can be obtained by contacting:

Pamela Flores
Florida Department of Environmental Protection
Water Quality Evaluation and TMDL Program
Watershed Evaluation and TMDL Section
2600 Blair Stone Road, Mail Station 3555
Tallahassee, FL 32399-2400
Email: pamela.flores@dep.state.fl.us
Phone: (850) 245-8457
Fax: (850) 245-8536

7.3 Implementation Considerations for Mud Lake

In addition to addressing reductions in watershed pollutant contributions to impaired waters during the implementation phase, it may also be necessary to consider the impacts of internal sources (e.g., sediment nutrient fluxes or the presence of nitrogen-fixing cyanobacteria) and the results of any associated remediation projects on surface water quality. In the case of Mud Lake, the recent phytoplankton monitoring results and analysis of lake nutrient results suggest that other factors besides watershed loading inputs, such as lake residence time, sediment nutrient fluxes and/or nitrogen fixation, may also be influencing the lake nutrient budgets and the growth of phytoplankton. Approaches for addressing these other factors should be included in a comprehensive management plan for the lake.

6/1/2016 Smith Road Site
Preliminary Assessment
by Ardaman & Associates, Inc.

ATTACHMENT B

Soil The Soil Survey of Polk County, Florida (*Ford, 1990*) shows the site is on the edge of the Lake Upland and the Winter Haven Ridge physiographic provinces. Figure 2 shows a map with the soil units identified. The soil unit on the majority of the site is identified as Candler sand, 0 to 5 percent slopes with a small portion of the northern edge identified as the Apopka fine sand, 0 to 5 percent slopes. The Candler sand is an excessively drained soil located on uplands and knolls on flatwoods. The Candler sand does not have a water table within 80 inches of land surface, and permeability is rapid between 12 and 40 feet/day. The Candler sand has less than 3% clay.

The Apopka fine sand is a well-drained soil located on uplands and knolls on flatwoods. The Apopka fine sand has about 7 inches of dark gray fine sand on surface, with a subsurface layer to a depth of about 51 inches of pale brown fine sand, a subsoil to a depth of about 61 inches of brownish yellow fine sandy loam with red mottles, and a red sandy clay to a depth of at least 80 inches. The high water table in the Apopka fine sand is greater than 80 inches in depth. The permeability of the Apopka is moderate with the upper soil having a 12 to 40 feet/day permeability and the subsoil having a 1.2 to 4.0 feet/day permeability. The Apopka fine sand has less than 3% clay in the upper 51 inches and between 18 and 37% clay in the subsoil.

Both of the sand units, Candler fine sand and the Apopka fine sand, are listed as having severe limitations for embankments, dikes, and levees and for pond reservoir areas due to the potential for seepage and piping.

Geology and Hydrogeology A well core performed approximately 1 mile to the west of the site was used to approximate geologic and hydrogeologic units for the site. The core identified as W-15347 (*Johnson, 1986*) was drilled in 1980 to a total depth of 1,398 feet below land surface (bls). The estimated elevation of the well was 135 feet NGVD. The lithology consists of 30 feet of undifferentiated sediments of sand and organic silt, which makes up the surficial aquifer system. Below the undifferentiated sediments lies the Hawthorn Group consisting of limestone interbedded with blue and green clay, and phosphatic sand. The Hawthorn Group here is approximately 90 feet thick and makes up the intermediate confining unit. The estimated top of the intermediate confining unit is about 105 feet NGVD. Below the Hawthorn Group lies the Ocala Limestone consisting of a soft micritic, fossiliferous limestone, which marks the top of the Floridan aquifer. The estimated top of the Floridan aquifer is about 15 feet NGVD.

Information gathered from the Southwest Florida Water Management District's DWRM (District Wide Regulation Model) groundwater flow model provides hydrologic parameter estimates for the site from the specific model cell covering the majority of the site area (*ESI, 2007*). The top and thickness of the surficial aquifer system (layer 1) in DWRM are 144 feet NGVD and 40.5 feet, respectively. The top and thickness of the intermediate confining unit (layers 2 and 3) in DWRM are 103 feet NGVD and 36 feet, respectively. For the upper Floridan aquifer (layer 4), the top and thickness are 40 feet NGVD and 965 feet, respectively.

The hydraulic conductivity of the surficial aquifer in DWRM is set at 19 feet/day, and transmissivity of the upper Floridan aquifer is set at 168,484 ft^2/day. Other reports on the Floridan aquifer estimate the transmissivity in the area to be around 5,000 to 10,000 ft^2/day (*Williams & Kuniansky, 2015*). The leakance value between the surficial aquifer and the intermediate confining unit in DWRM is moderately low at 0.0003 ft/day/ft, and between the intermediate confining unit and the upper Floridan aquifer is higher at 0.005 ft/day/ft. This indicates there is a potential for recharge from the surficial aquifer to the Floridan aquifer in this area.

regional flow gradient is towards the northwest, away from the Polk City High in the potentiometric surface of the upper Floridan aquifer.

Flow Directions Topographic elevations are higher on the properties located to the south and southwest of the site between 168 and 187 feet NGVD. Therefore, surficial aquifer groundwater flow direction is likely towards the north along the southern boundary of the site towards the low lying pits. With topographic elevations dropping from the site along the northwestern boundary to the low lying areas to the north-northwest (131 feet NGVD), the groundwater flow direction of western portion of the site is likely to the northwest. On the eastern portion of the site, the groundwater flow direction is likely towards the low lying areas to the east-northeast (133 feet NGVD). These surficial aquifer groundwater flow directions will continue with the loading of RIBs on the site and the generation of a groundwater mound below the RIBs. Depending upon the height of the groundwater mound, there will be some ground water that will move towards the south as the existing groundwater conditions are overcome by the height of the groundwater mound. The ground water will continue to flow towards the southwest to Lake Agnes (134 feet NGVD). The higher the groundwater mound rises below the RIB, the greater the hydraulic gradient increases and the effluent disposal capacity increases.

Horizontal and Vertical Hydraulic Conductivities The hydrologic data gathered for the site from the referenced sources shows that soils on the site identified as Candler fine sand and Apopka fine sand have hydraulic conductivity or permeability values ranging from 1.2 to 40 feet/day. The DWRM model shows the hydraulic conductivity in the surficial aquifer at 19 feet/day. With a leakance value of 0.0003 ft/day/ft between the surficial aquifer and the intermediate confining unit and an intermediate confining unit thickness of 35 feet, the vertical hydraulic conductivity is estimated at 0.01 feet/day. The greater the horizontal hydraulic conductivity of the surficial aquifer is in the area of the RIB site, the greater the effluent disposal capacity is for the RIB system. The greater the vertical hydraulic conductivity is in the surficial aquifer and the intermediate confining unit, the greater the vertical flow through the intermediate confining unit will be. Permeability testing will need to be performed on lithologic samples collected from the site to determine horizontal and vertical hydraulic conductivities to better assess the potential effluent disposal capacity for the site.

Aquifer Thickness Assuming a bottom elevation of 103 feet NGVD, the current estimate for aquifer thickness of the surficial aquifer on the site ranges from 24 to 73 feet. The thickness of the aquifer is even thinner in the area of the pits. The pits will likely have to be filled in to develop the site for a RIB system. Depending upon the required aquifer thickness and depth to seasonal high water table required for a RIB system to be successful, the amount of earthwork and fill material necessary will vary. The greater the aquifer thickness is for the RIB system, the greater the effluent disposal capacity will be. The actual aquifer thickness will need to be determined with site specific soil borings.

Recharge and Discharge Areas Recharge areas in the surficial aquifer are areas that have downward components of hydraulic head in the aquifer (*Fetter, 1988*). Infiltration moves downward through a permeable surface to deeper parts of an aquifer. Discharge areas are areas that have upward components of hydraulic head in the aquifer. Ground water flows toward the surface in a discharge area and may leave the aquifer as a spring, seep, or baseflow to a surface water body, or by evaporation and transpiration (*Fetter, 1988*). The topographic highs are generally the recharge areas and the surface water bodies and wetlands are the discharge areas in the surficial aquifer in the study area. For the upper Floridan aquifer, the general area is

- Sieve analyses should be performed on at least six samples (2 from each boring) to determine grain size distribution and to estimate permeability.

- Three additional soil samples should be remolded in the lab and permeability tests performed on them.

- A groundwater flow model should then be prepared for a mounding analysis to determine the pond acreage required and available disposal capacity for the proposed site using the lithologic and testing data from the site specific work.

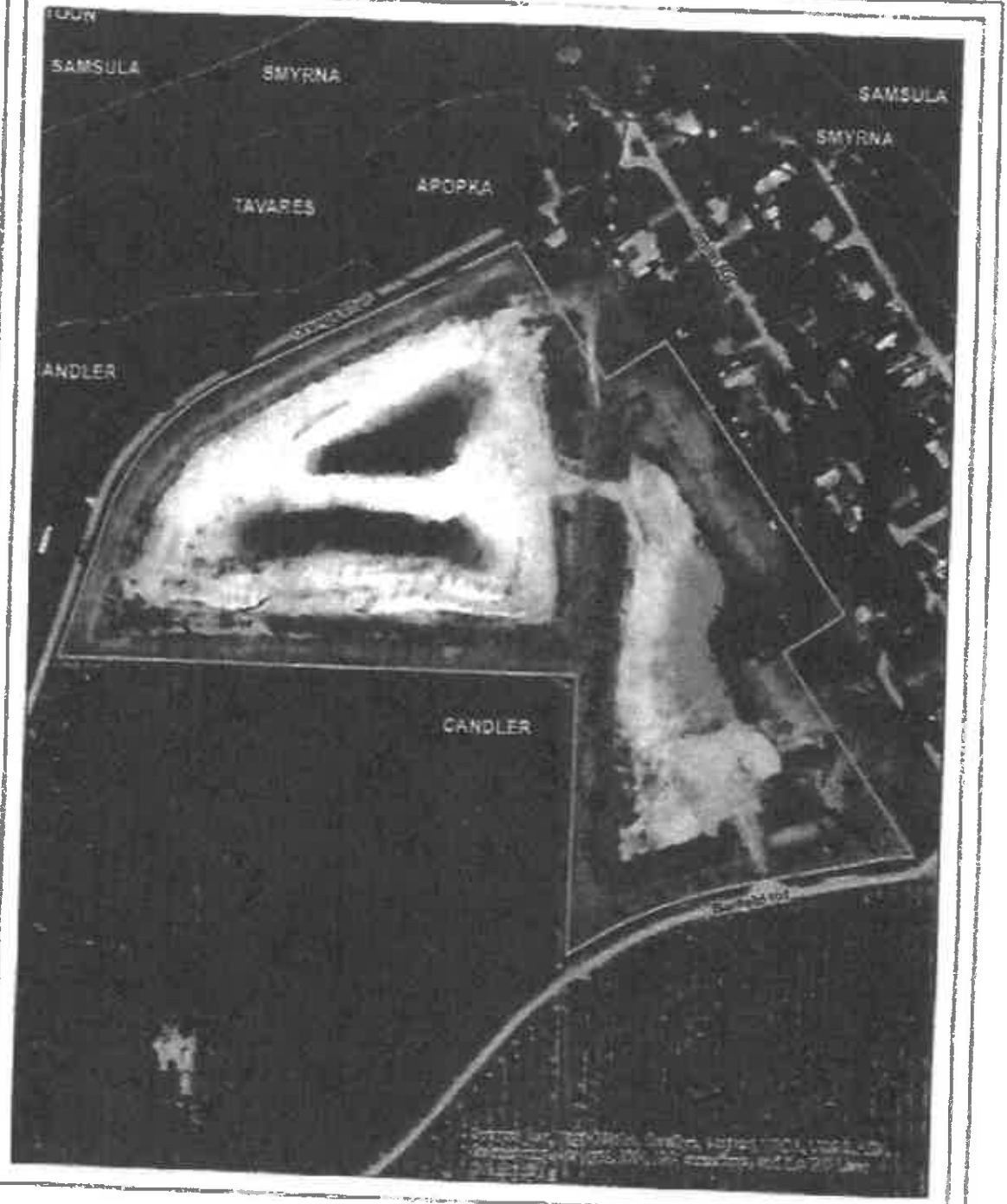
We appreciate the opportunity to provide these hydrogeologic services to Hartman Consultants, LLC for the City of Polk City Smith Road RIB System Analysis. Please do not hesitate to call us at (407) 855-3860 should you have questions or need additional information.

Very truly yours,
ARDAMAN & ASSOCIATES, INC
Certificate of Authorization 5950

Douglas P. Dufresne, P.G.
Project Director
Florida License No. 1527

DPD/dpd
Enclosures

FIGURES



Legend
Soil Type
Site Boundary

NCSS SOILS MAP
SMITH ROAD RIB SYSTEM ANALYSIS
POLK CITY, FLORIDA

Figure 2

TABLE 1
PRECIPITATION DISTRIBUTION AND
THORNTHWAITE POTENTIAL ET CALCULATION
CLIMATE DATA FROM WINTER HAVEN NOAA STATION (1981-2010)

MONTH	Precipitation (in)	DAILY AVG. TEMP.(F)	DAILY AVG. TEMP.(C)	HEAT INDEX in	Unadj. Potential ETmonth (in)	30 degree Latitude Daylight Factor	Adjusted Potential ETmonth (in)
January	2.48	60.80	16.00	5.82	1.34	0.90	1.21
February	2.83	63.50	17.50	6.86	1.72	0.87	1.49
March	3.57	67.90	19.94	8.12	2.46	1.03	2.54
April	2.48	72.20	22.33	9.64	3.37	1.08	3.64
May	2.90	77.70	25.39	11.71	4.80	1.18	5.66
June	7.71	82.00	27.78	13.41	6.15	1.17	7.20
July	7.50	82.90	28.28	13.78	6.46	1.20	7.75
August	7.86	83.20	28.44	13.90	6.57	1.14	7.49
Septeember	6.25	81.50	27.50	13.21	5.98	1.03	6.16
October	2.80	75.70	24.28	10.94	4.24	0.98	4.16
November	2.11	69.00	20.56	8.50	2.68	0.89	2.38
December	2.65	63.10	17.28	6.54	1.66	0.88	1.46
TOTAL RAIN	50.94					TOTAL ET	51.14

STATEMENT OF COMPLETION AND REQUEST FOR TRANSFER TO OPERATION ENTITY

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET, BROOKSVILLE, FL 34604-6899
(352) 796-7211 OR FLORIDA WATS 1 (800) 423-1476

Within 30 days after completion of construction of the surface water management system, the owner or authorized agent must submit the original plus one copy of this form and two complete sets of certified as-built drawings for the surface water management system structures and appurtenances. Upon receipt, this Statement of Completion will be reviewed and the system may be inspected for compliance with the approved permit and as-built drawings. The operation phase of this permit is effective when the Statement of Completion form is signed by an authorized District representative.

1. **SURFACE WATER MANAGEMENT SYSTEM INFORMATION:**

Permit No.: 44019799 County: Polk County

Project Name: Polk City Sand Mine (Byrd Mine) Permittee: Town of Polk City

Address: 123 Broadway Blvd., SE

City, State, Zip: Polk City, FL 33868 Telephone: (863) 9841375

2. **I HEREBY CERTIFY THAT** (please choose accurately and check only one box):

[✓] A. At the time of final inspection, the surface water management system was completed substantially in accordance with the permitted construction plans and information. Any minor deviations from the permitting plans and specifications will not prevent the system from functioning in compliance with the requirements of Chapters 40D-4 and 40D-40, Florida Administrative Code (F.A.C.). (The as-built drawings and information submitted to the District shall confirm this certification.)

[ ] B. At the time of final inspection, the system was NOT completed in substantial conformance with the permitted construction plans and information. (The registered professional engineer shall describe the deviation(s) in writing, and provide confirming depiction on the as-built drawings and information.)

This certification shall be verified by TWO COPIES of attached "as-built" drawings (as-built drawings must be signed, dated and sealed by a Florida Registered Professional Engineer or Professional Land Surveyor and Mapper, as required by State Law).

By: [signature]
Signature of Engineer of Record

Jules J. Amano, Jr.
Name (please type)

Fla. P.E. Reg. No.

\- AFFIX SEAL -

GAI Consultants, Inc.
Company Name

Date: 3/1/2013
mm/dd/yyyy

518 E. South Street, Suite 700
Company Address

Phone: (407) 4236398

Orlando, FL 32801
City, State, Zip

FORM 547.27/SOC (Rev. 02/07)
Rule 40D-1.659, F.A.C.

AS-BUILT DRAWINGS AND INFORMATION CHECKLIST

Following is a list of information that is to be verified and submitted by the Engineer of Record in support of the Statement of Completion.

1. On behalf of the permittee, the Engineer shall certify that:

   a. At the time of final inspection, the surface water management system was completed substantially in accordance with the permitted construction plans and information. Any minor deviations from the permitting plans and specifications will not prevent the system from functioning in compliance with the requirements of Chapters 40D-4 and 40D-40, F.A.C. (The as-built drawings and information submitted to the District shall confirm this certification.); or

   b. At the time of final inspection, the system was NOT completed in substantial conformance with the permitted construction plans and information. (The registered professional engineer shall describe the deviation(s) in writing, and provide confirming depiction on the as-built drawings and information.)

2. The Engineer's certification shall be based upon on-site observation of construction (scheduled and conducted by the professional engineer of record or by a project representative under direct supervision) and review of as-built drawings, with field measurements and verification as needed, for the purpose of determining if the work was completed in accordance with original permitted construction plans, information and specifications.

3. The as-built drawings are to be based on the District permitted construction drawings revised to reflect any changes made during construction. Both the original design and constructed condition must be clearly shown. The plans need to be clearly labeled as "as-built" or "record" drawings. As required by law, all surveyed dimensions and elevations depicted shall be verified and signed, dated and sealed by a Florida registered professional surveyor and mapper or professional engineer. The following information, at a minimum, shall be verified on the as-built drawings, and supplemental documents if needed:

   a. Discharge structures - Locations, dimensions and elevations of all, including weirs, orifices, gates, pumps, pipes, and all and grease skimmers;

   b. Side bank and underdrain filters, or exfiltration trenches - locations, dimensions and elevations of all, including clean-outs, pipes, connections to control structures and points of discharge to receiving waters;

   c. Storage areas for treatment and attenuation - dimensions, elevations, contours or cross-sections of all, sufficient to determine stage-storage relationships of the storage areas and the permanent pool depth and volume below the control elevation for normally wet systems;

   d. System grading - dimensions, elevations, contours, final grades or cross-sections to determine contributing drainage areas, flow directions and conveyance of runoff to the system discharge point(s);

   e. Conveyance - dimensions, elevations, contours, final grades or cross-sections of systems utilized to divert off-site runoff around or through the new system;

   f. Water levels - existing water elevation(s) and the date determined;

   g. Benchmark(s) - location and description (minimum of one per major water control structure); and

   h. Wetland mitigation or restoration areas - Show the plan view of all areas, depicting a spatial distribution of plantings conducted by zone (if plantings are required by permit), with a list showing all species planted in each zone, numbers of each species, sizes, date(s) planted and identification of source of material; also provide the dimensions, elevations, contours and representative cross-sections depicting the construction.

4. Submit the final subdivision plat or other legal documents, as recorded in the county public records, showing dedicated rights-of-way, easement locations and special use areas that are reserved for water management purposes and continuing operation and maintenance.

5. Additional information will be shown on the as-built drawings or otherwise provided as needed to verify and support the Statement of Completion (example: home owners association final documents, and other items required by permitting conditions.)

Ardaman & Associates, Inc.
Geotechnical, Environmental and
Materials Consultants

March 29, 2017
File Number 16-10-0407

Gerald C. Hartman, PE
Hartman Consultants, LLC
300 S. Interlachen Avenue, Unit #503
Winter Park, FL 32789

Subject: Proposal for Professional Hydrogeological Services for Smith Road Rapid Infiltration Basin System Analysis, Phase II – City of Polk City, Florida

Dear Mr. Hartman:

As requested, Ardaman & Associates, Inc. (Ardaman) is pleased to present this proposal for professional hydrogeological services for the Smith Road Rapid Infiltration Basin (RIB) System Analysis. We understand that the proposed location of the multiple-cell RIB system is the former Smith Road sand mine currently owned by the City of Polk City, Florida. A preliminary assessment was performed to gather site information and estimate project needs, and a summary report of the findings was provided dated June 1, 2016. As the project moves on to the next phase, a limited field and laboratory testing will be performed to collect site specific information. A mounding analysis will be performed using the field information collected to estimate the acreage needed to accommodate the required effluent disposal rate of 500,000 gallons per day (gpd). If the mounding analysis shows that the site is suitable for the RIB system, an engineering report will be prepared for submission to the FDEP. Design services will be provided to assist the engineer in the site design for the project. Monitor wells will be installed in the last phase of the project to be used once the site goes into operation. A detailed scope of services, compensation summary, and project schedule are provided below.

SCOPE OF SERVICES

1. LIMITED FIELD AND LAB TESTING

Ardaman will perform three continuous standard penetration test (SPT) soil borings; one will be performed to 50 feet and two will be performed to 25 feet. Sieve analyses will be performed on six samples (2 from each boring) to determine grain size distribution and to estimate permeability. Additional soil samples (3) will be remolded in the lab and permeability tests will be performed on them. The lithologic results from the soil borings and the lab testing will provide hydrogeologic information needed to construct the groundwater flow model for the mounding analysis.

2. MOUNDING ANALYSIS

A groundwater flow model will then be prepared for a mounding analysis to determine the pond acreage required and available disposal capacity for the proposed site. A report detailing the mounding analysis will be provided for review before the permitting phase is begun.

Specifically, Ardaman will provide the following services:

- Hydrogeologic Characteristics - For projects described in Rule 62-610.310(2), F.A.C., the Department will accept an abbreviated report from the permittee covering the hydrogeologic characteristics at the proposed site, based upon the best available information, in lieu of the more detailed hydrogeologic information. Ardaman will describe the existing information regarding water table depth, potentiometric surface elevations, hydrologic characterization of aquifers and confining zones, head relationships between aquifers, historical range of water levels at the site, and direction and rate of existing groundwater movement.
- Flood Prone Areas – Ardaman will map any flood prone areas on the proposed site and discuss flooding frequencies and magnitude, if necessary.
- Mounding analysis – The mounding analysis performed to evaluate the proposed site suitability and pond size will be included in the Engineering Report.

D. **Land Management** Based on information provided by the client, Ardaman will detail the intended proposed vegetative cover and management program and discuss the anticipated effluent characteristics including physical, chemical, and biological properties. The information will be used to detail water and nutrient balances for the proposed RIB system.

E. **Project Evaluation** Ardaman will prepare an evaluation of the long-term effect of the proposed RIB system. Specifically, the evaluation will included discussions of changes in water table, flow direction, and water quality; justification of setback distances, loading rates, and cycles; evaluation of risks to public health and safety; projections of flow and effluent characteristics; mapping of onsite operational features, inclusion of technical information and design criteria (loading, flow metering, monitoring points, concentrations); and discussion of operation and control strategies.

4. DESIGN SERVICES

Ardaman will provide design services to assist the engineer in the site design for the project. A total of 40 hours of design assistance has been added to the budget. If additional assistance is required beyond the estimated 40 hours, a change order for additional work will be required.

5. MONITOR WELL DESIGN AND CONSTRUCTION

Monitor well design and construction will be provided by Ardaman for the groundwater monitoring system for the effluent disposal facility. It is estimated that four (4) monitor wells will may be required constructed to a depth of 50 feet. The site investigation and design requirements may change as the project advances. If additional monitor wells are required or deeper wells are needed, a change order for the additional work will be required.

COMPENSATION

Table 1 summarizes the work breakdown schedule and estimated costs. Monthly invoices will be based on time expended, materials/equipment used and units performed in accordance with the enclosed fee schedule. The maximum budget not to be exceeded without further written authorization is $44,691. The budget does not include responses to request for additional information or permit application/preliminary design report review fees. If reviewed separately from the treatment facility, the preliminary design report review fee for the FDEP is $1,200.00. The costs per task are provided below:

TABLE 1
CITY OF POLK CITY
HYDROGEOLOGIC SERVICES FOR SMITH ROAD RAPID INFILTRATION BASIN SYSTEM ANALYSIS PHASE II
WORK BREAKDOWN SCHEDULE AND COST ESTIMATE

TASK	Description	Project Director $174.00 per hour		Project Hydrogeologist III $123.50 per hour		Project Hydrogeologist I $114.00 per hour		GIS Specialist III $87.00 per hour		Totals	
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Estimated Cost
1	**Limited Field and Lab Testing**										
	Support Field and Lab Services										$5,700
	Task 1 Subtotals										**$5,700**
2	**Mounding Analysis**										
	Records Review	2	$348.00	8	$988					10	$1,336
	Groundwater Mounding Analysis	12	$2,088.00	30	$3,705			2	$174	44	$5,967
	Report	4	$696.00	8	$988					12	$1,684
	Task 2 Subtotals	**18**	**$3,132**	**46**	**$5,681**			**2**	**$174**	**66**	**$8,987**
3	**Engineering Report**										
	Land Use Requirements	2	$348.00	10	$1,235	6	$684	4	$348	22	$2,615
	Soil Information	2	$348.00	6	$741	4	$456			12	$1,545
	Hydrogeologic Survey										
	Groundwater Monitoring Plan	4	$696.00	8	$988					12	$1,684
	Hydrogeologic Charecteristics	4	$696.00	12	$1,482	12	$1,368			28	$3,546
	Flood Prone Areas	2	$348.00	4	$494	2	$228	2	$174	10	$1,244
	Mounding Analysis	2	$348	4	$494					6	$842
	Land Management	4	$696	4	$494					8	$1,190
	Project Evaluation	8	$1,392	8	$988					16	$2,380
	Task 3 Subtotals	**28**	**$4,872**	**56**	**$6,916**	**24**	**$2,736**	**6**	**$522**	**114**	**$15,046**
4	**Design Services**										
	Design Services	20	$3,480.00	20	$2,470					40	$5,950
	Task 4 Subtotals	**20**	**$3,480**	**20**	**$2,470**					**40**	**$5,950**
5	**Monitor Well Design and Construction**										
	Monitor Well Design and Construction Observation	2	$348.00	4	$494	16	$1,824			22	$2,666
	Support Field Services										$5,500
	Report	2	$348.00	4	$494					6	$842
	Task 5 Subtotals	**4**	**$696**	**8**	**988**	**16**	**1,824**			**28**	**$9,008**
	TOTALS	**70**	**$12,180**	**130**	**$16,055**	**40**	**$4,560**	**8**	**$696**	**248**	**$44,691**

GENERAL CONDITIONS - FLORIDA

Parties And Scope Of Work – Ardaman & Associates, Inc. (hereinafter referred to as "A&A") shall include said company, its division, subsidiary, parent or affiliate performing the Work. "Work" means the specific services to be performed by A&A as set forth in A&A's proposal, the Client's acceptance thereof, both incorporated herein by this reference, and these General Conditions. "Client" refers to the person or business entity ordering the Work to be done by A&A. If the client is ordering the Work on behalf of a third party, the Client represents and warrants that the Client is the duly authorized agent of said third party for the purpose of ordering and directing said Work. In the event Client is not the authorized agent of said third party, Client agrees that he shall be individually liable hereunder. Further, Client shall disclose any such agency relationship to A&A in writing before the commencement of A&A's Work hereunder. Client agrees that A&A's professional duties are specifically limited to the Work as set forth in A&A's proposal. The Client assumes sole responsibility for determining whether the quantity and the nature of the Work ordered by the Client is adequate and sufficient for the Client's intended purpose. A&A's Work is for the exclusive use of client, and its properly disclosed principal. In no event shall A&A have any duty or obligation to any third party. Directing A&A to proceed with the Work shall constitute acceptance of the terms of A&A's proposal and these General Conditions.

On-Call Services – In the event A&A is retained to perform construction materials testing ("CMT"), including but not limited to proctor and soil density tests, concrete tests, etc., on an On-Call basis such that A&A is not retained to perform continuous observations of construction, Client assumes sole responsibility for determining the location and frequency of sampling and testing. In such On-Call testing, A&A's test results are only representative of conditions at the test location and elevation, and different conditions may exist at other locations and other elevations. Furthermore, in the event Client fails to properly determine the location or frequency of sampling and testing, under no circumstances will A&A assume any duty by performing its CMT services.

Right-of-Entry – Unless otherwise agreed, Client will furnish right-of-entry on the property for A&A to make the planned borings, surveys, and/or explorations. A&A will take reasonable precautions to minimize damage to the property caused by its equipment and sampling procedures, but the cost of restoration or damage which may result from the planned operations is not included in the contracted amount.

Damage to Existing Man-made Objects – It shall be the responsibility of the Client to disclose the presence and accurate location of all hidden or obscure man-made objects relative to field tests, sampling, or boring locations. Client waives any claim against A&A arising from any damage to existing man-made objects. In addition, Client shall defend, indemnify and hold A&A harmless from any third party claim arising from damage to existing man-made objects.

Warranty and Limitation of Liability - A&A shall perform services for Client in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of competent consultants practicing in the same or a similar locality as the project. In the event any portion of the services fails to comply with this warranty obligation and A&A is promptly notified in writing prior to one year after completion of such portion of the services, A&A will re-perform such portion of the services, or if re-performance is impracticable, A&A will refund the amount of compensation paid to A&A for such portion of the services. This warranty is in lieu of all other warranties. No other warranty, expressed or implied, including warranties of merchantability and fitness for a particular purpose is made or intended by the proposal for consulting services, by furnishing an oral response of the findings made or by any representations made regarding the services included in this agreement. In no event shall A&A be liable for any special, indirect, incidental, or consequential loss or delay or time-related damages. The remedies set forth herein are exclusive and the total liability of consultant whether in contract, tort (including negligence whether sole or concurrent), or otherwise arising out of, connected with or resulting from the services provided pursuant to this Agreement shall not exceed the total fees paid by Client or $50,000.00, whichever is greater. Client may, upon written request received within five days of Client's acceptance hereof, increase the limit of A&A's liability by agreeing to pay A&A an additional sum as agreed in writing prior to the commencement of A&A's services.

This charge is not to be construed as being a charge for insurance of any type, but is increased consideration for the greater liability involved. PURSUANT TO §558.0035, *FLORIDA STATUTES*, CONSULTANT'S INDIVIDUAL EMPLOYEES AND/OR AGENTS MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE ARISING OUT OF, CONNECTED WITH, OR RESULTING FROM THEIR SERVICES PROVIDED PURSUANT TO THIS AGREEMENT.

Sampling or Testing Location – Unless specifically stated to the contrary, the unit fees included in this proposal do not include costs associated with professional land surveying of the site or the accurate horizontal and vertical locations of tests. Field tests or boring locations described in our report or shown on our sketches are based on specific information furnished to us by others or estimates made in the field by our technicians. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in the report.

Sample Handling and Retention – Generally test samples or specimens are consumed and/or substantially altered during the conduct of tests and A&A, at its sole discretion, will dispose (subject to the following) of any remaining residue immediately upon completion of test unless required in writing by the Client to store or otherwise handle the samples. (a) NON HAZARDOUS SAMPLES: At Client's written request, A&A will maintain preservable test samples and specimens or the residue therefrom for thirty (30) days after submission of A&A's report to Client free of storage charges. After the initial 30 days and upon written request, A&A will retain test specimens or samples for a mutually acceptable storage charge and period of time. (b) HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES: In the event that samples contain substances or constituents hazardous or detrimental to human health, safety or the environment as defined by federal, state or local statutes, regulations, or ordinances ("Hazardous Substances" and "Hazardous Constituents", respectively), A&A will, after completion of testing and at Client's expense: (i) return such samples to Client; (ii) using a manifest signed by Client as generator, will have such samples transported to a location selected by Client for final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of such samples. Client recognizes and agrees that A&A is acting as a bailee and at no time does A&A assume title of said waste.

Discovery of Unanticipated Hazardous Materials – Hazardous materials or certain types of hazardous materials may exist at a site where there is no reason to believe they could or should be present. A&A and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. A&A and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for A&A to take immediate measures to protect health and safety. A&A agrees to notify Client as soon as practicable should unanticipated hazardous materials or suspected hazardous materials be encountered. Client encourages A&A to take any and all measures that, in A&A's professional opinion, are justified to preserve and protect the health and safety of A&A's personnel and the public. Client agrees to compensate A&A for the additional cost of working to protect employees' and the public's health and safety. In addition, Client waives any claim against A&A arising from A&A's discovery of unanticipated hazardous materials or suspected hazardous materials.

Indemnification – Client agrees to defend, indemnify and save harmless A&A from all claims, including negligence claims, suits, losses, personal injuries, death and property liability resulting from the actions or inactions of Client, Client's contractors, representatives, agents and employees.

Legal Jurisdiction – The parties agree that any actions brought to enforce any provision of this Agreement shall only be brought in a court of competent jurisdiction located in Orlando, Orange County, Florida. All causes of action, including but not limited to actions for indemnification, arising out of A&A's Work shall be deemed to have accrued and the applicable statutes of limitation shall commence to run not later than either the date of substantial completion of the Work for acts or failures to act occurring prior to substantial completion, or the date of issuance of A&A's final invoice for acts or failures to act occurring after substantial completion of the Work. Each of the parties hereto irrevocably waives any and all right to trial by jury in any legal proceeding arising out of or relating to this agreement.

Force Majeure - A&A shall not be held responsible for any delay or failure in performance caused by fire, flood, explosion, war, strike, embargo, government requirement, civil or military authority, acts of God, act or omission of subcontractors, carrier, clients or other similar causes beyond its control.

Drafting and Severability – This Agreement has been drafted by all Parties hereto and shall not be construed against one Party or in favor of any other Party. In the event that any provision of this Agreement is held invalid, the remainder of this Agreement shall be fully enforceable.

Hartman Consultants, LLC

www.hartmanconsultant.com

May 3, 2017

HC # 14035.00

Mrs. Patricia Jackson, City Manager
City of Polk City
123 Broadway Blvd, SE
Polk City, FL 33868

Re: Additional information concerning Cardinal Hill Spray Field site

Dear Mrs. Jackson:

The attached is but one of a few historical documents concerning this site as I stated at the 4/17/2017 Workshop meeting.

I stated that the site will-not work in my opinion. The Mayor asked if the site could meet the requirements of the system. I stated that it would not. I also stated that the leakance and the storage coefficient and the transmissivity were poor at the site. The Commissioners did not believe me.

In addition to the above, I stated that the environmental concerns of potential discharges to the designated Green Swamp areas are problematic. The historical concerns of gopher turtles, etc. also are a concern. I stated that other engineering firms and other hydrogeological firms have found that the high rate infiltration basins cannot be accommodated on this site.

Ardaman and Associates, Inc. is proceeding to provide a preliminary assessment of the Cardinal Hill site to me before the next public hearing on 5/15/2017 which I will present to the City. This assessment will address the Commission comments for the record and the public comment with superior information.

The site did not rise to the level of a feasible alternative and that is the reason that it was not included in the alternative analysis presented on 4/17.

I will ask that the Commission approve the sponsoring resolution at the 5/15 meeting.

Very truly yours,
Hartman Consultants, LLC

Gerald C. Hartman
PE, BCEE, ASA
Attachments

300 South Interlachen Ave • Unit #503 • Winter Park, FL 32789

From: Dufresne, Douglas DDufresne@ardaman.com
Subject: FW: Polk City Cardinal Hill Site Evaluation
Date: May 2, 2017 at 10:57 AM
To: Gerry Hartman, PE Gerry@HartmanConsultants.com

Gerry,

Here is an excerpt from the document I just sent to you:

Madrid Engineering Group, Inc. performed a limited geotechnical investigation of the site and a copy of the geotechnical report is included in Appendix A. The investigation included 12 soil borings, two double ring infiltrometer tests, four vertical permeability tests and installation of three piezometers. In general, the report indicated that the upper sands occurring at the site are suitable for a slow rate (spray irrigation) land application system. Preliminary analysis of 12 soil boring logs show that the site is overlain by approximately 2 to 4 feet of poorly graded sand. Underlying this sand unit is a low permeable unit consisting of clayey sand and clay, varying in thickness from 5 — 23 feet and averaging about 11.6 feet thick across the site. Below this low permeable unit is poorly graded sand (permeable) extending to approximately 50 feet below land surface (bls). Clay and limestone occurs at 48-50 feet bls based on one deep boring at the site.

Currently, the surficial aquifer occurs below the low permeable unit with water levels at approximately 13 feet bls. The surficial aquifer is currently semi-confined at this site. Preliminary hydraulic data show that the upper sand (above the sand and clay unit) is very permeable. Two double-ring infiltrometer tests conducted on the upper 1-2 feet of sand showed infiltration/percolation rates of 23.74 inches/hour and 26 inches per hour. The underlying clayey sand unit has low permeability. Four Shelby tube samples were collected from the low permeable unit at depths of 6-10 feet bls. Results of laboratory testing of the Shelby tubes indicate that vertical permeabilities ranged from 3.43 x 10-6 cm/sec to 3.4 x 10-4 cm/sec, averaging approximately 4 x 10-5 cm/sec.

The initial design of the disposal system included two rapid infiltration basins. A mounding analysis was completed for the proposed rapid rate disposal system, however, the analysis showed that mounding would occur while applying as little as 10,000 gallons per day (gpd) to the two basins. The wastewater treatment plant was proposed to treat flows of up to 300,000 gpd. Because of the limitations shown from the mounding analysis, a meeting was held with Bill Kelsey of the Florida Department of Environmental Protection (FDEP) on February 21, 2006 to discuss potential engineering solutions such as horizontal or vertical drains to increase the capacity of the rapid infiltration basins. The results of the meeting with FDEP indicated that the site is not suitable for rapid infiltration basins and that a slow rate system (spray irrigation) would be more suitable for the Polk City site due to the shallow confining unit. This led to an evaluation for spray irrigation disposal.

The currently available land for spray irrigation is approximately 9.5 acres. The setback from the southern property line where existing residences have potable water supply wells is 500 feet. Setbacks along the other boundaries are 100 feet.
The future available land area for spray irrigation is approximately 20.8 acres, assuming the residences along the southern boundary are connected to public water supply. Setbacks from the property line are 50 feet along the southern boundary where a buffer of planted pine trees

was left in place and 100 feet along the remaining property boundaries. Figure 1 shows the 39 acre site, proposed wastewater treatment plant, access road, and setbacks for the proposed 9.5 acre and 20.8 acre spray sites.

Douglas P. Dufresne, PG | **Senior Hydrogeologist/Project Director**
Main: 407.855 3860 (2020) | Cell: 407 416.0251 | Fax: 407 859.8121 | Email: DDufresne@Ardaman.com

Ardaman & Associates, Inc. | Water Resources Department
8008 South Orange Avenue | Orlando, FL 32809 | www.Ardaman.com

PBS&J

TECHNICAL MEMORANDUM

To: Craig Osmanski

CC: Robert Beltran

From: Marty Clasen
Mike Micheau

Date: April 25, 2006

Proj. No.: 68E300.01 EW10

Re: Supporting Data for Slow Rate Land Application – Polk City 39 Acre Site

INTRODUCTION

The City of Polk City Florida has proposed to build a domestic wastewater treatment plant on a 39 acre site located northwest of Polk City. This technical memorandum documents the hydrogeologic requirements including a proposed groundwater monitoring plan for the permitting of a slow rate land application system for disposal of the treated domestic effluent on the site. The site is located at approximately latitude 28 degrees 11' 27.36" and longitude 81 degrees 50' 41.26" north of Stevens Drive in Polk City.

SITE DESCRIPTION

The site is located on an upland ranging in elevation from approximately 155 feet above mean sea level (msl) to 132 feet msl. The site topography generally slopes to the north, east, and west, with wetlands occurring north

of the site. Data from the Soil Survey of Polk County, Florida (1990) show that approximately 90 % of the site is overlain by soil type 2 – Apopka fine sand. Apopka fine sand is a well drained soil that does not have a seasonal high water table within 80 inches. It is classified as hydrologic group A with a high water table greater than 6 feet. Group A soils have a high infiltration rate (low runoff potential) when thoroughly wet. They consist mainly of deep well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission. Approximately 10 % of the site is overlain by soil type 14- Sparr sand, type 15 – Tavares fine sand, and type 31 – Adamsville fine sand. These soils range from somewhat poorly drained to moderately well drained and have a seasonal high water table ranging from 20 inches to 80 inches for 1 to 6 months of the year. The majority of these soil types occur along the northern boundary of the site near the wetland boundary.

Madrid Engineering Group, Inc. performed a limited geotechnical investigation of the site and a copy of the geotechnical report is included in Appendix A. The investigation included 12 soil borings, two double ring infiltrometer tests, four vertical permeability tests and installation of three piezometers. In general, the report indicated that the upper sands occurring at the site are suitable for a slow rate (spray irrigation) land application system. Preliminary analysis of 12 soil boring logs show that the site is overlain by approximately 2 to 4 feet of poorly graded sand. Underlying this sand unit is a low permeable unit consisting of clayey sand and clay, varying in thickness from 5 – 23 feet and averaging about 11.6 feet thick across the site. Below this low permeable unit is poorly graded sand (permeable) extending to approximately 50 feet below land surface (bls). Clay and limestone occurs at 48-50 feet bls based on one deep boring at the site.

Currently, the surficial aquifer occurs below the low permeable unit with water levels at approximately 13 feet bls. The surficial aquifer is currently semi-confined at this site. Preliminary hydraulic data show that the upper sand (above the sand and clay unit) is very permeable. Two double-ring infiltrometer tests conducted on the upper 1-2 feet of sand showed infiltration/percolation rates of 23.74 inches/hour and 26 inches per hour. The underlying clayey sand unit has low permeability. Four Shelby tube samples were collected from the low permeable unit at depths of 6-10 feet bls. Results of laboratory testing of the Shelby tubes indicate that vertical

permeabilities ranged from 3.43 x 10-6 cm/sec to 3.4 x 10-4 cm/sec. averaging approximately 4 x 10-5 cm/sec.

The initial design of the disposal system included two rapid infiltration basins. A mounding analysis was completed for the proposed rapid rate disposal system, however, the analysis showed that mounding would occur while applying as little as 10,000 gallons per day (gpd) to the two basins. The wastewater treatment plant was proposed to treat flows of up to 300,000 gpd. Because of the limitations shown from the mounding analysis, a meeting was held with Bill Kelsey of the Florida Department of Environmental Protection (FDEP) on February 21, 2006 to discuss potential engineering solutions such as horizontal or vertical drains to increase the capacity of the rapid infiltration basins. The results of the meeting with FDEP indicated that the site is not suitable for rapid infiltration basins and that a slow rate system (spray irrigation) would be more suitable for the Polk City site due to the shallow confining unit. This led to an evaluation for spray irrigation disposal.

The currently available land for spray irrigation is approximately 9.5 acres. The setback from the southern property line where existing residences have potable water supply wells is 500 feet. Setbacks along the other boundaries are 100 feet.

The future available land area for spray irrigation is approximately 20.8 acres, assuming the residences along the southern boundary are connected to public water supply. Setbacks from the property line are 50 feet along the southern boundary where a buffer of planted pine trees was left in place and 100 feet along the remaining property boundaries. Figure 1 shows the 39 acre site, proposed wastewater treatment plant, access road, and setbacks for the proposed 9.5 acre and 20.8 acre spray sites.

LANDAP98 WATER BALANCE MODEL

The FDEP recommends using their water balance model (LANDAP98) to estimate application rates and to predict wet weather storage volumes required for spray irrigation sites. PBS&J worked closely with FDEP on the proposed Polk City site regarding effluent disposal options, site hydrogeology, and the LANDAP98 model. Both the LANDAP98 model and FDEP rule 62-610.423 recommend a maximum spray application rate of 2

inches per week because of typically high water tables in the rainy season in Florida. This is a conservative assumption. The site hydrologic capacity is the most sensitive parameter in the model and is also conservatively calculated. LANDAP98 recommends that the site hydrologic capacity should equal no more than a fraction of the loading rate as determined using the minimum average vertical permeability (Kv). It is recommended that the monthly maximum loading rate should not exceed 4 to 25 percent of the average Kv of the most restrictive layer above the ground water table. Using the average Kv from the site of 4 x 10-5 cm/sec (or 0.113 ft/day), 25% of 0.113 ft/day is 0.028 ft/day, or 0.34 inches/day.

The LANDAP98 model was run using the nearest weather data from the Lake Alfred Experimental Station, a site hydrologic capacity of 0.34 inches/day, a wetted area of 25 acres, a surface runoff coefficient of 0.30 (hilly woodlands with sandy soil), and varying application rates from 70,000 gallons per day (gpd) for the 9.5 acre site to 160,000 gpd for the 20.8 acre site.

For the currently available 9.5 acre site, an application rate of 70,000 gpd is equivalent to an average annual loading rate of 1.899 inches per week. The wet weather storage requirement from LANDAP98 is 14.38 days, or 1.007 million gallons.

At an application rate of 160,000 gpd over the 20.8 acres, the average annual loading was 2 inches/week which is the limiting factor of the model. At a loading rate of 160,000 gpd, the wet weather storage requirement from LANDAP98 is 17.6 days, or 2.82 million gallons. A storage tank or lined storage pond would be required to contain 2.82 million gallons. At an application rate of 130,000 gpd over the 20.8 acres, the wet weather storage requirement is 8.5 days, or 1.1 million gallons. The recommended application rates are 70,000 gpd for the 9.5 acre site and 130,000 gpd for the 20.8 acre site. The LANDAP98 model input and output files are included in Appendix B.

GROUND WATER FLOW CALCULATIONS

The site hydrologic capacity can also be estimated using a simple ground water flow calculation using Darcy's law of $Q = KAI$, where Q = groundwater flow across the site in cubic feet/day, K = the horizontal

hydraulic conductivity in ft/day, A = the cross-sectional area in ft squared, and I = gradient in ft/ft. The average vertical permeability of the upper sand unit from double-ring infiltrometer tests is 25 inches/hr (or 50 ft/day). Assuming a horizontal hydraulic conductivity of 2 times the vertical hydraulic conductivity (50 ft/day), 100 ft/day is estimated for K. The cross-sectional area is estimated as 3.5 feet (average thickness of upper sand) times 1,390 feet (width of spray site), or 4,865 square ft. The average gradient across the site was calculated based on three sections (0.058 ft/ft, 0.035 ft/ft, and 0.022 ft/ft) as 0.038 ft/ft. Using the above parameters, the site hydrologic capacity can be estimated as Q = (100 ft/day) (4,865 square ft) (0.038 ft/ft), = 18,487 cubic feet/day, or 138,283 gpd for the 20.8 acre site.

RECOMMENDATIONS

Based on the results of the LANDAP98 model, the Polk City 39 acre site conservatively can currently dispose of approximately 70,000 gpd, assuming 9.5 acres are available for spray irrigation. The wet weather disposal pond should be designed at 1.0 million gallons. This is based on a 500 foot setback along the southern boundary where residences currently have domestic supply wells.

If the residences along the southern boundary are connected to public supply, the entire 20.8 acre spray site could be used for disposal. Based on Darcy flow calculations and LANDAP98 modeling, the 20.8 acre spray site can be used to dispose of approximately 138,283 to 160,000 gpd using a spray irrigation system. It is recommended that the disposal system be designed at a rate of 130,000 gpd, which would require a wet weather storage tank or lined pond with a capacity of 1.0 million gallons. After the system is operating for one year, the site may be able to demonstrate an increased capacity or decreased capacity, based on operational data.

GROUND WATER MONITORING PLAN

Four groundwater monitoring wells are proposed be installed at the locations shown in Figure 1. Monitoring well MW-1 is located upgradient

of the spray site and wells MW-2, MW-3, and MW-4 are located downgradient of the spray site and monitoring well MW-5 is located near a sinkhole in the northeast part of the site. The purpose of well MW-1 is to measure background water quality. The purpose of wells MW-2, 3, and 4 are to detect potential impacts from the spray application site in the northwest, north, and northeast downgradient directions. Monitoring well MW-5 will monitor potential impacts to the sinkhole. The monitoring wells will be screened in the surficial aquifer, below the clayey sand confining unit. This zone varies in depth across the site. Based on data from the soil borings, the expected elevations and depths below land surface (bls) of the top 15 feet of the surficial aquifer are shown in Table 1. Actual screened intervals will be determined in the field based on split-spoon samples. Fifteen feet of 0.010 - slot 2-inch diameter PVC well screen will be installed using the hollow-stem auger or mud-rotary drilling method. The annular space around the screen will be filled with 20/30 sand pack to a depth 2 feet above the screen. Two feet of bentonite pellets will be placed above the sand pack and the remaining annulus will be grouted to land surface using the tremie method. Figure 2 shows an example monitoring well completion diagram.

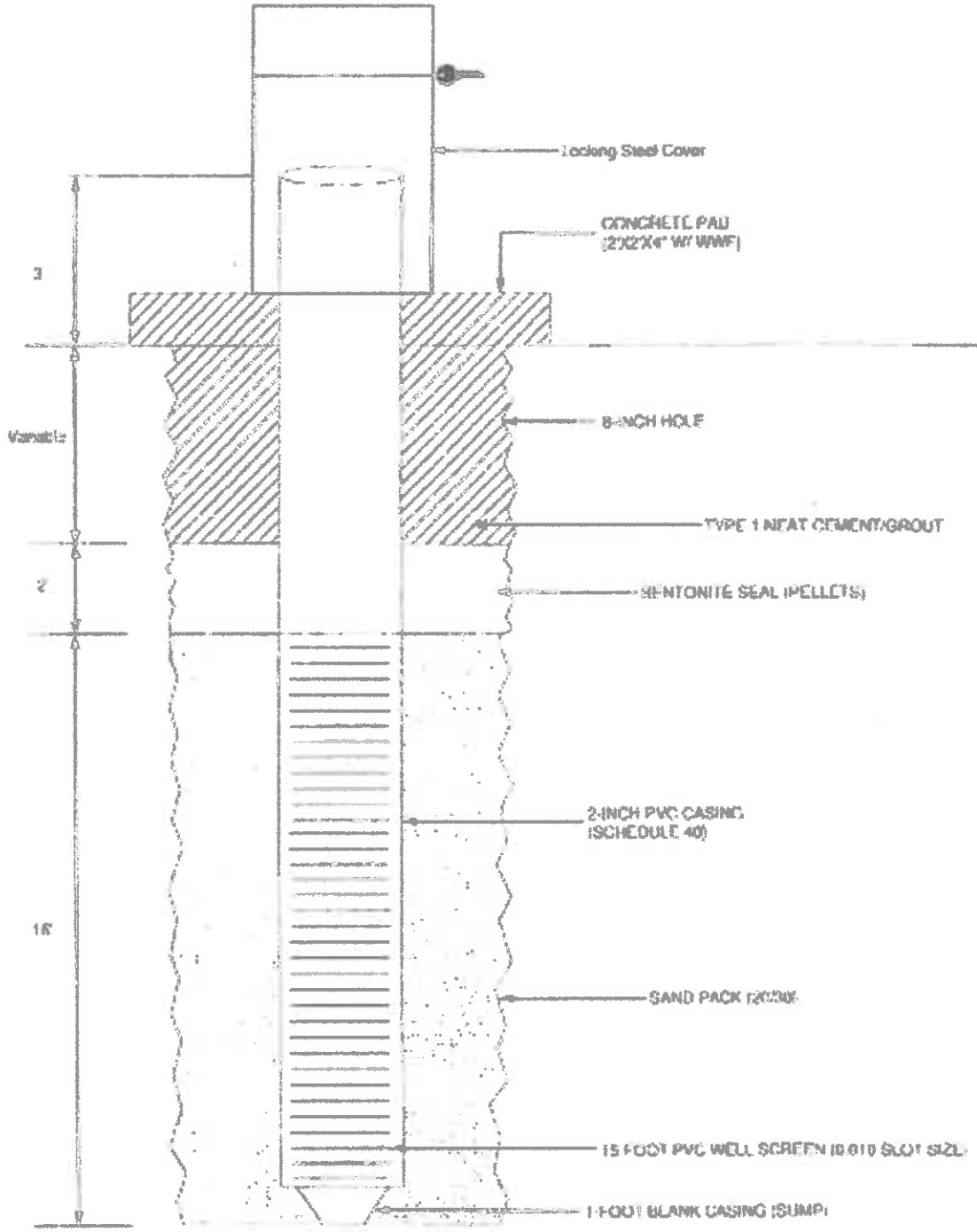
The top of casing will be surveyed to 0.10 ft and ground water elevations will be measured to determine groundwater flow direction. Based on topography, the ground water flow should be radially away from the high point of 155 feet in the south-central area of the site. Ground water should generally flow towards the wetlands located northwest, north, and northeast of the site.

Ground water sampling parameters for monitoring background will be established by FDEP based upon the quality of the reclaimed water to be discharged, site specific soil and hydrogeologic characteristics, and other considerations.

FIGURES


Monitor Wells
Spray Area
Access Road
Property Boundary
WWTP Site
200
Feet
NORTH

Figure 1



MONITOR WELL COMPLETION DIAGRAM

PBS|

Figure 2

TABLE -1

Monitoring Well Construction Details

Monitoring Well Number	Well Diameter (inches)	Ground Elevation (feet msl)	Well Screen Elevation (feet msl)	Well Screen Depth (feet bls)
MW-1	2	151	127-112	24 - 39
MW-2	2	145	133-118	12 – 27
MW-3	2	134	119-104	15 – 30
MW-4	2	136	130-115	6 - 21
MW-5	2	134	127-112	7 - 22

msl = mean sea level
bls = below land surface

APPENDIX A.

GEOTECHNICAL REPORT

Madrid Engineering Group, Inc.

Proposed Polk City Wastewater Treatment Plant - Rapid Infiltration Basins

James A. Johnson Property, Polk City, Florida

The Earth is our Business℠

Prepared for:

Mr. Ken Wilson, P. E.

and

P B S & J

Prepared by:

MADRID ENGINEERING GROUP, INC.
P.O. Box 2506
Bartow, FL 33831
863-533-9007

Project No. 4826
March 2006

CERTIFICATIONS

Engineering Certification

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Madrid Engineering Group, Inc. under license number EB 0006509 issued by the Florida Department of Business and Professional Regulation and the Board of Professional Engineers. I certify that I, or others under my direct supervision, have prepared the geotechnical engineering evaluations, findings, opinions and conclusions represented in this report.

Proposed Polk City Wastewater
Treatment Plant – Rapid Infiltration
Basins
MEG Project No. 4826

SIGNATURE: _____
NAME: Larry D. Madrid, P.E.
LICENSE #: 39559
DATE: 5/1/06

Geologic Certification

I hereby certify that I am a registered professional geologist in the State of Florida, practicing with Madrid Engineering Group, Inc. under license number GB 0000406, issued by the Florida Department of Business and Professional Regulation and the Board of Professional Geologists. I certify that I, or others under my direct supervision, have prepared the geologic evaluations, findings, opinions and conclusions represented in this report.

SIGNATURE: _____
NAME: Robert W. Stadt, P.G.
LICENSE #: 1782
[American Institute of Professional Geologists, AIPG 9276]
DATE: _____

TABLE OF CONTENTS

FIGURES

APPENDICES

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation of the James A. Johnson property located in Polk City, Florida. At the request of representatives of PBS&J, Madrid Engineering Group (MEG) performed a series of SPT borings designed to characterize the stratification, in-situ density and water table levels of the surficial soils. This study is intended to determine the suitability of this property for use by the city of Polk City as a site for the wastewater treatment plant's rapid infiltration basins.

1.1 Site Location and Description

The Johnson property is listed as parcel number 252630000000023000 with the Polk County Property Appraiser's Office. The property is located north of SR 33 and Stevens Drive in Polk City. Specifically, the site is located in Section 30, Township 26 South, Range 25 East, in Polk County, Florida at elevations ranging from approximately 125 to 155 feet above mean sea level. A site map is presented in **Figure 1**. A portion of the USGS Polk City Quadrangle topographic map is presented in **Figure 2**.

1.2 Soil Survey Map Review

Soils data from the 1990 *Soil Survey of Polk County, Florida* (USDA-NRCS) were reviewed as part of the investigation. Mapped soil units in the vicinity of the Johnson property include: 1) Apopka fine sand, 0 to 5 percent slopes (map unit 2). 2) Tavares fine sand, 0 to 5 percent slopes (map unit 15). 3) Smyrna and Myakka fine sands (map unit 17).

Apopka is a well-drained soil found on uplands and on knolls on flatwoods. This soil typically has a very dark gray fine sand surface layer approximately 7 inches thick. The subsurface material to a depth of 51 inches below ground surface (bgs) is pale brown fine sand and very pale brown sand. The subsoil, to a depth of 61 inches, is a brownish yellow fine sandy loam followed by red sandy clay to a depth of at least 80 inches. Apopka soil does not have a high water table within 80 inches of the surface. Permeability rates for Apopka soils are reportedly 6 to 20 inches per hour in the upper four feet and 0.6 to 2 inches per hour in the next four feet.

Tavares is a moderately well drained soil found on broad uplands and on knolls on flatwoods. This soil typically has a dark grayish brown fine sand surface layer approximately 8 inches thick. The underlying material is light yellowish brown fine sand to a depth of about 80 inches below ground surface (bgs). Under normal conditions Tavares soil has a seasonal high water table at a depth of 40 to 80 inches bgs for several months in most years. Permeability rates for Tavares soils are reportedly greater than 6 inches per hour in the upper 80 inches.

The Smyrna and Myakka soil map unit is poorly drained. It is typically found on broad areas on flatwoods. Permeability for this soil group varies from 6 to 20 inches per hour to 0.6 to 6 inches per hour depending on the soil horizon.

2.0 GEOTECHNICAL INVESTIGATION

2.1 Standard Penetration Test Borings

Six standard penetration test (SPT-1 to SPT-6) soil borings were completed at the Johnson property on October 11, 2005 and an additional six SPT borings (SPT-6 to SPT-12) were completed in January 2006. The total of 12 SPT borings were completed to various depths at the locations shown on **Figure 1**.

The borings were completed in accordance with ASTM standard D-1586 using the mud-rotary drilling method. Soil samples were collected from each borehole using a 1.4-inch I.D. split-spoon sampler driven with a 140-pound slide hammer falling a distance of 30 inches. An engineering technician familiar with soil classification and field evaluations logged the borings in the field, placed samples in sealed containers, and returned them to MEG's laboratory for further classification. Upon completion, the boreholes were filled from bottom to top with cement grout using the tremie method. Boring logs are included in **Appendix A**.

3.0 SUBSURFACE CONDITIONS

3.1 Description of Soils

In general, the 12 SPT borings encountered a loose surficial sand layer ranging from 2 to 12 feet in thickness with medium dense clayey sand underlying the surficial sand. Detailed boring logs are attached in **Appendix A**.

3.2 Piezometers

Piezometers were installed at four locations adjacent to the SPT-borings as shown on Figure 1. The piezometers were constructed of two-inch PVC with a two-inch silica sand pack placed in the annulus. The bottom 10 feet of the piezometer was slotted with the upper ten feet being blank casing. A nominal three feet of stick-up was allowed for each piezometer. Therefore, the piezometers extend a nominal 17 feet below ground surface (bgs).

After installation and while the sand pack was being placed in the annulus, the piezometers were purged with a bailer to ensure proper placement of the sand, and to develop each piezometer. Subsequent returns to the piezometers for further

development found the water level to be at the base of the piezometers. Depths to water from the top of the pipe are presented in the following table.

Depth to Water

Date	1/27/06	1/30/06
Piez 1	19.75'	19.77'
Piez 2	20.10'	20.10'
Piez 3	19.85'	19.86'
Piez 4	19.00'	18.92'

Note: Water levels are recorded from top of pipe, which is a nominal three feet above land surface.

3.3 Falling Head Permeability Tests

Four relatively undisturbed soil samples were obtained by Shelby tube methods for falling head permeability testing in the laboratory. The Shelby tubes were collected adjacent to the SPT borings with the intention of sampling the most hydraulically restrictive layer, which is a medium-dense clayey sand. Results of the testing are presented in the following table.

Falling Head Permeability Test Results

Location	Depth (ft.)	Permeability (cm/sec)	Comments
SPT-4	8-10	3.43E-06	
SPT-5	6-8	2.01 E-04	Sample loose in Shelby Tube
SPT-7	6-8	5.92E-06	
SPT-10	6-8	3.21E-04	Sample loose in Shelby Tube

Note: SPT-5 and SPT-10 soil samples were somewhat loose within the Shelby Tube. This is a reflection of the density of the material during sampling but if the sample is loose there is a potential pathway for by-pass during the testing. Thus, the results from these two tests would be considered maximum permeability values.

3.4 Double Ring Infiltration Tests

Two double ring infiltration tests were performed. DRI-1 was performed 20 feet east of SPT-7 and DRI-2 was performed 5 feet east of SPT-10. Both DRI tests were conducted at a depth of 12 inches below land surface. The DRI tests found a very high infiltration rate in both tests.

Double Ring Infiltration Tests

Test No.	Location	Infiltration Rate (inches/hr)
DRI-# 1	20 feet east of SPT-7	23.74
DRI # 2	5 ft. east of SPT-10	26

4.0 SUMMARY

The borings on site encountered from 2 to 12 feet of loose surficial sand underlain by medium dense clayey sand. One deep boring, SPT-8, encountered limestone bedrock at a depth of 48.5 feet bgs. The Double Ring Infiltration tests found very high infiltration rates in this surficial sand. The rates for both the tests are nearly the same (23.74 in/hr vs. 26 in/hr). This would indicate that the surficial sand across the site probably has very a high permeability. However, the surficial sand layer is very thin, generally 2 to 4 feet thick.

The falling head permeability tests indicate that the medium dense clayey sand under the surficial sand has a very low permeability. Two of the tests had loose samples in the Shelby tube and the values of 2.01E-04 cm/sec (0.28 in./hr) and 3.21E-04 cm/sec (0.45 in/hr) are probably maximum values. The other two falling head permeability tests had nominal values on the order of 0.008 in/hour to 0.005 in/hr. these are the more realistic values of permeability that could be used for design purposes.

The piezometers installed on site, after purging with a bailer, did not recover during the period of measurement. The water level measurements on January 27th and 30th, 2006 were approximately 16 to 17 feet below land surface. This could be an indication of the actual water table depth or, alternatively, the screened interval has such a low permeability that the groundwater infiltration rate into the piezometers was too low and the piezometers had not stabilized during the testing period. The mottling encountered in the clayey sand is indicative of a perched water table during some periods. The piezometers were left in place. If the elevation of the water table is of concern for the project it is recommended that long term monitoring be undertaken.

5.0 LIMITATIONS

The findings herein are based on the exploratory borings at the referenced site and our professional judgment. The soil conditions described within this report are accurate with respect to the location and extent that the soil borings were completed. Because soils vary from place to place, and with depth, subsurface conditions different from those encountered in our exploration may exist. In the event others make conclusions and/or recommendations based on our data, such conclusions and/or recommendations are not our responsibility unless we have been given an opportunity to review and concur with them. No warranty regarding this investigation is intended, nor should any be inferred.

APPENDIX B

MADRID ENGINEERING GROUP, INC.
P. O. BOX 2506
BARTOW, FL 33831
863/533-9007 FAX 533-8997

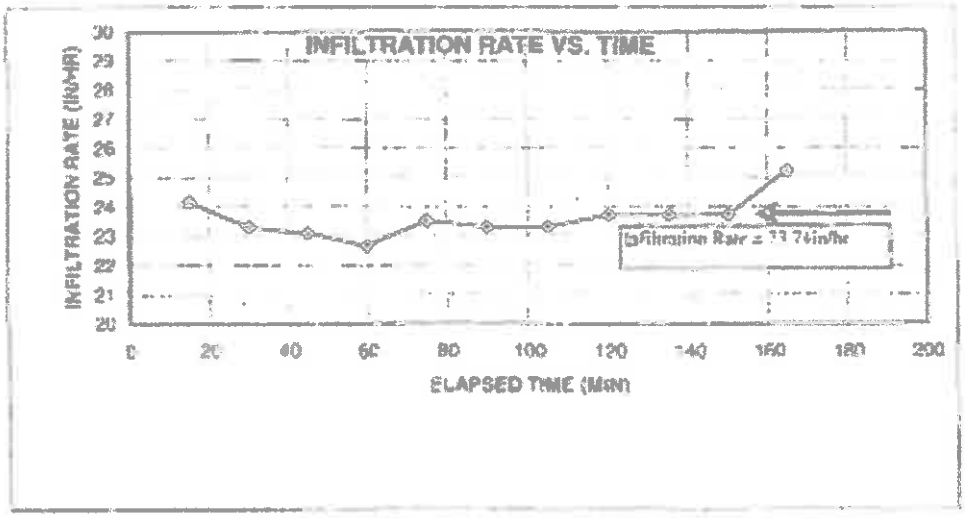
DOUBLE-RING INFILTRATION TEST

Project:	Polk City RIB		DRI #1
Project No.:	4826	Surface Description:	GRAY FINE SAND
Client	PBS&J		
Performed By:	HB/CB	Test Depth:	12"bgs
Date/Time	1/24/2006	Ring Size	12", 24"
Test No.:	#1	Constant Head:	3.5"

Located 20 ft. east of SPT-7

INNER RING FIELD TEST DATA

ELAPSED TIME (minutes)	QUANTITY H_2O (mL)	INFILTRATION RATE (in/hr)
15	11200	24.17
30	10800	23.30
45	10700	23.09
60	10500	22.65
75	10900	23.52
90	10800	23.30
105	10800	23.30
120	11000	23.74
135	11000	23.74
150	11000	23.74
165	11700	25.25



MADRID ENGINEERING GROUP, INC.
P. O. BOX 2506
BARTOW, FL 33831
863/533-9007 FAX 533-8997

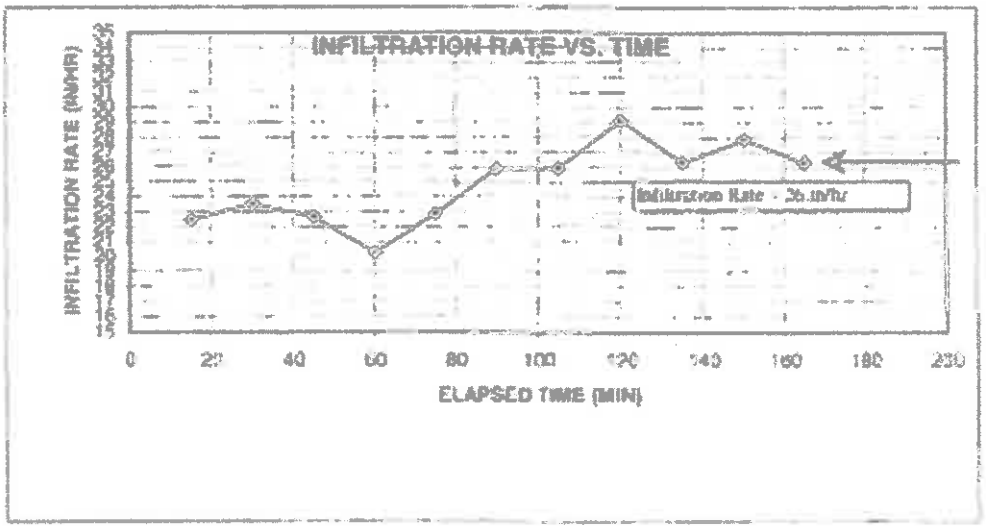
DOUBLE-RING INFILTRATION TEST

Project:	Polk City RIB		DRI # 2
Project No.	4826	Surface Description:	GRAY FINE SAND
Client:	PBS&J		
Performed By:	HB/PCF	Test Depth:	12"bgs
Date/Time	1/27/2006	Ring Size	12", 24"
Test No.:	#2	Constant Head:	4"

Located 5 ft. east of SPT-10

INNER RING FIELD TEST DATA

ELAPSED TIME (minutes)	QUANTITY H_2O (mL)	INFILTRATION RATE (in/hr)
15	10400	22.44
30	10900	23.52
45	10500	22.66
60	9400	20.28
75	10600	22.87
90	12000	25.89
105	12000	25.89
120	13500	29.13
135	12200	26.33
150	12900	27.84
165	12200	26.33



APPENDIX C

MADRID ENGINEERING GROUP, INC.
P.O. Box 2506
Bartow, FL 33831
863/533-9007 FAX 863/533-8997

FALLING HEAD PERMEABILITY TEST

Project:	Polk City WWTP	**Project No.:**	6826
Location:	Polk County, Florida	**Client:**	PBS&J
Sample No.:	SPT-4 8-10'	**Date of test:**	30-Jan-06
Soil Description:	Yellowish-brown clayey sand	**USCS Code:**	SC

A. Unit Weight Determination

1. Weight of permeameter + soil:		g
2. Weight of permeameter:		g
3. Weight of soil specimen:	0	g
4. Diameter of soil specimen, *D*:		cm
5. Cross-sectional area of soil specimen:	0.00	cm^2
6. Length of soil specimen in permeameter:		cm
7. Volume of soil specimen:	0.00	cm^3
8. Unit weight of soil specimen:		lbs/ft^3
9. Water content of soil specimen:		%
10. Dry unit weight of soil specimen:		lbs/ft^3

B. Permeability Test

1. Cross-sectional area of standpipe, *a*	41.8	cm^2
2. Length of soil specimen in permeameter,	43.18	cm
3. Cross-sectional area of soil specimen, *A*	41.80	cm^2

$$k_T = \frac{aL}{At} \cdot \ln \frac{h_1}{h_2}$$

Trial No.	Head, h_1 (cm)	Head, h_2 (cm)	Time, t (s)	Temp., T (C)	Permeability at T C, k_T (cm/s)	Ratio of Viscosity at T C / Viscosity at 20 C	Permeability at 20 C k20 (cm/s)
1	73	70.14	432000		3.99E-06	0.8598	3.43E-06
2							
3							

Average Permeability: 3.43E-06

MACTEC ENGINEERING GROUP, INC.
P.O. Box 2506
Bartow, FL 33831
863/533-9007 FAX 863/533-8997

FALLING HEAD PERMEABILITY TEST

Project:	Polk City WWTP	**Project No.:**	4826
Location:	Polk County, Florida	**Client:**	PBS&J
Sample No.:	SPT-5 6-8' (sample loose in Shelby tube)	**Date of test:**	30-Jan-06
Soil Description:	Yellowish-brown clayey sand	**USCS Code:**	SC

A. Unit Weight Determination

1. Weight of permeameter + soil:		g
2. Weight of permeameter:		g
3. Weight of soil specimen:	0	g
4. Diameter of soil specimen, *D*		cm
5. Cross-sectional area of soil specimen:	0.00	cm^2
6. Length of soil specimen in permeameter:		cm
7. Volume of soil specimen:	0.00	cm^3
8. Unit weight of soil specimen:		lbs/ft^3
9. Water content of soil specimen:		%
10. Dry unit weight of soil specimen:		lbs/ft^2

B. Permeability Test

1. Cross-sectional area of standpipe, *a*	41.8	cm^2
2. Length of soil specimen in permeameter,	39.37	cm
3. Cross-sectional area of soil specimen, *A*	41.80	cm^2

$$k_T = \frac{aL}{At} \cdot \ln \frac{h_1}{h_2}$$

Trial No.	Head, h_1 (cm)	Head, h_2 (cm)	Time, t (s)	Temp., T (C)	Permeability at T C, k_T (cm/s)	Ratio of Viscosity at T C / Viscosity at 20 C	Permeability at 20 C k20 (cm/s)
1	73	71.25	4080		2.34E-04	0.8598	2.01E-04
2							
3							

Average Permeability: 2.01E-04

MAD[redacted] ENGINEERING GROUP, I[redacted]
P.O. Box 2506
Bartow, FL 33831
863/533-9007 FAX 863/533-8997

FALLING HEAD PERMEABILITY TEST

Project:	Polk City WWTP	**Project No.:**	4826
Location:	Polk County, Florida	**Client:**	PBS&J
Sample No.:	SPT-7 6-8'	**Date of test:**	30-Jan-06
Soil Description:	Yellowish-brown clayey sand	**USCS Code:**	SC

A. Unit Weight Determination

1. Weight of permeameter + soil:		g
2. Weight of permeameter:		g
3. Weight of soil specimen:	0	g
4. Diameter of soil specimen, *D*:		cm
5. Cross-sectional area of soil specimen.		cm^2
6. Length of soil specimen in permeameter		cm
7. Volume of soil specimen:		cm^3
8. Unit weight of soil specimen:		lbs/ft^3
9. Water content of soil specimen.		%
10. Dry unit weight of soil specimen		lbs/ft^3

B. Permeability Test

1. Cross-sectional area of standpipe, *a*	41.8	cm^2
2. Length of soil specimen in permeameter,	39.37	cm
3. Cross-sectional area of soil specimen, *A*	41.80	cm^2

$$k_T = \frac{aL}{At} \cdot \ln \frac{h_1}{h_2}$$

Trial No.	Head, h_1 (cm)	Head, h_2 (cm)	Time, t (s)	Temp., T (C)	Permeability at T C, k_T (cm/s)	Ratio of Viscosity at T C / Viscosity at 20 C	Permeability at 20 C k20 (cm/s)
1	73	70.14	228600		6.88E-06	0.8598	5.92E-06
2							
3							

Average Permeability: 5.92E-06

MAD[illegible]D ENGINEERING GROUP, I[illegible]
P.O. Box 2506
Bartow, FL 33831
863/533-9007 FAX 863/533-8997

FALLING HEAD PERMEABILITY TEST

Project:	Polk City WWTP	**Project No.:**	4626
Location:	Polk County, Florida	**Client:**	PBS&J
Sample No.:	SPT-10 6-8' (sample loose in Shelby tube)	**Date of test:**	30-Jan-06
Soil Description:	Yellowish-brown clayey sand	**USCS Code:**	SC

A. Unit Weight Determination

1. Weight of permeameter + soil:		g
2. Weight of permeameter:		g
3. Weight of soil specimen:	0	g
4. Diameter of soil specimen, *D*:		cm
5. Cross-sectional area of soil specimen	0.00	cm^2
6. Length of soil specimen in permeameter.		cm
7. Volume of soil specimen	0.00	cm^3
8. Unit weight of soil specimen		lbs/ft^3
9. Water content of soil specimen		%
10. Dry unit weight of soil specimen		lbs/ft^3

B. Permeability Test

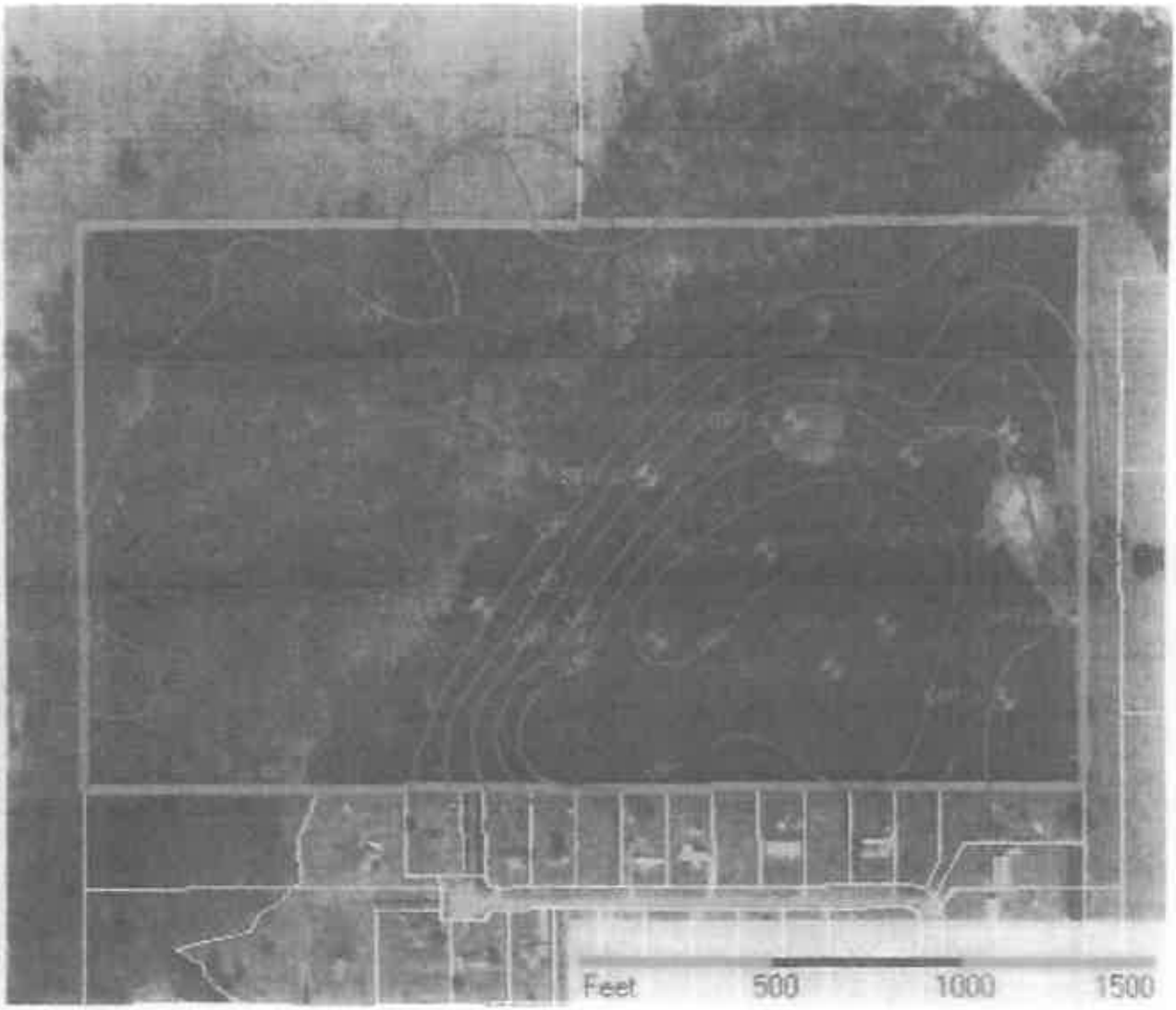
1. Cross-sectional area of standpipe, *a*	41.8	cm^2
2. Length of soil specimen in permeameter.	38.1	cm
3. Cross-sectional area of soil specimen, *A*	41.80	cm^2

$$k_T = \frac{aL}{At} \cdot \ln \frac{h_1}{h_2}$$

Trial No.	Head, h_1 (cm)	Head, h_2 (cm)	Time, t (s)	Temp., T (C)	Permeability at T C, k_T (cm/s)	Ratio of Viscosity at T C / Viscosity at 20 C	Permeability at 20 C k20 (cm/s)
1	73	70.14	4080		3.73E-04	0.8598	3.21E-04
2							
3							

Average Permeability: 3.21E-04

FIGURES



Original SPTs

Jan. 06 SPTs

Piezometer

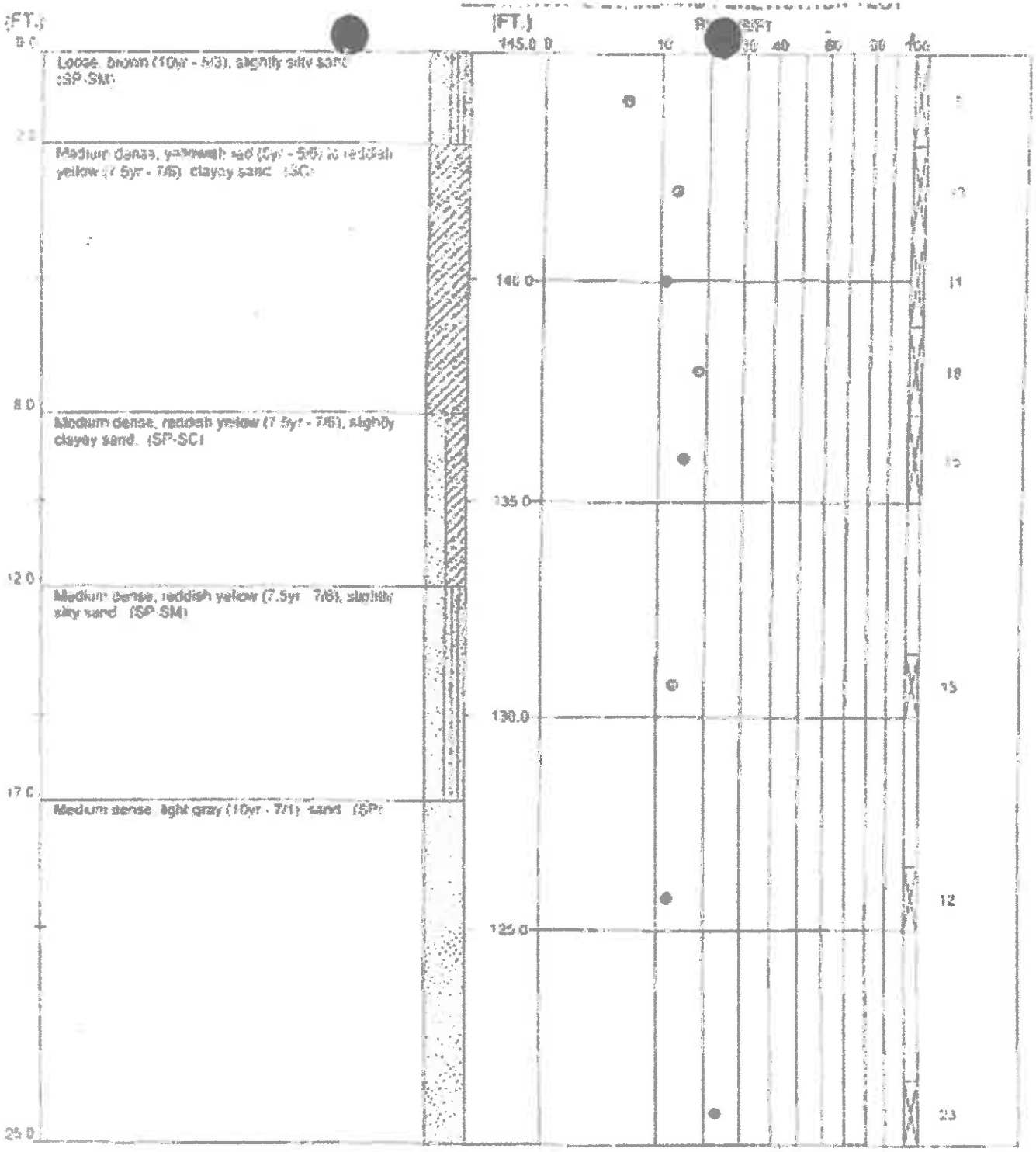
MADRID ENGINEERING GROUP, INC.
GEOENVIRONMENTAL CONSULTANTS

PBS & J

FIGURE 1
Site Map
Polk City WWTF
Polk City, Florida

DATE: November 2005

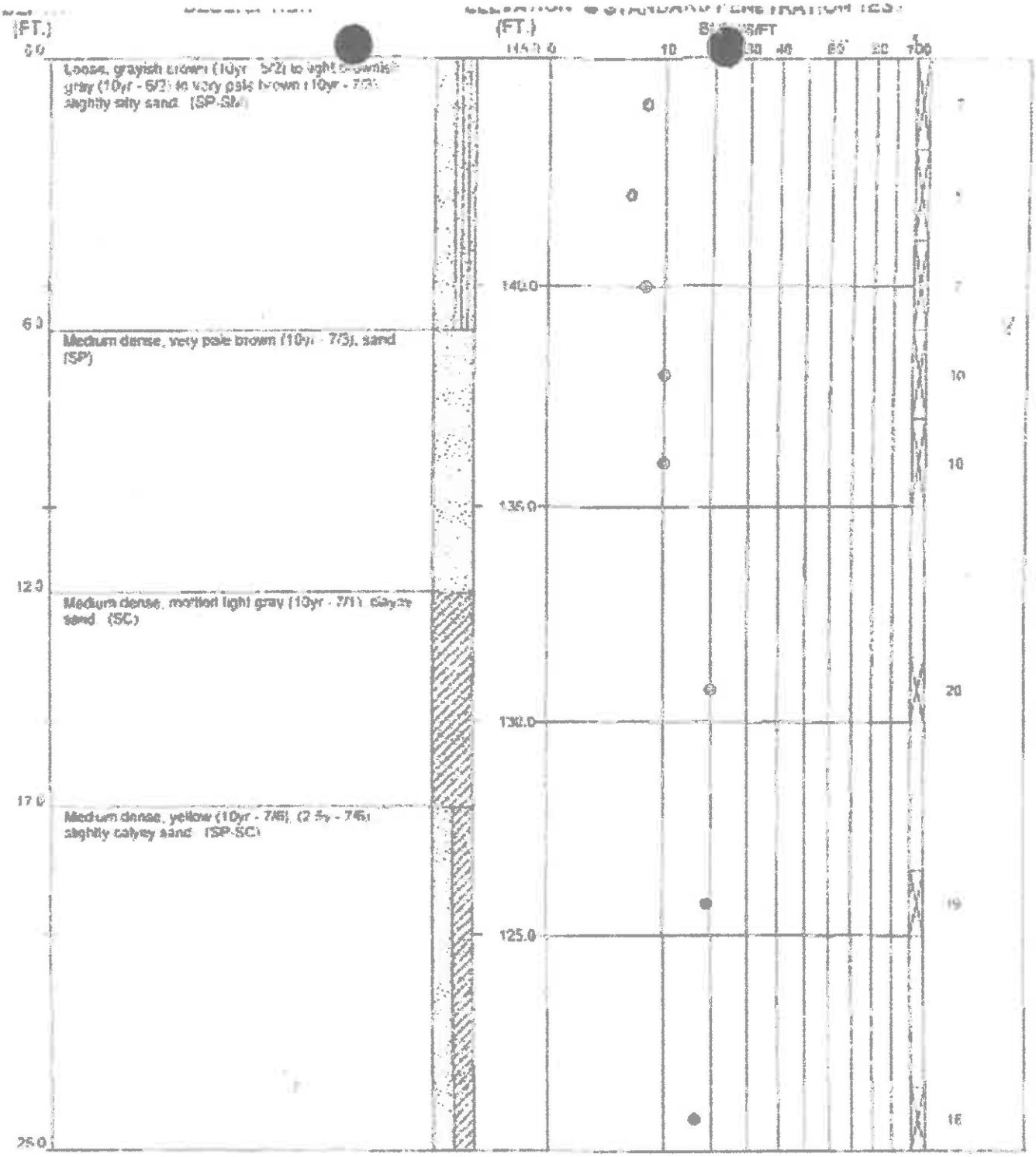
APPENDIX A



REMARKS:

BORING NUMBER	SPT-1
DATE DRILLED	10/11/2005
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

"The Earth is our business"



REMARKS

BORING NUMBER	SPT-2
DATE DRILLED	10/11/2005
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

M E G

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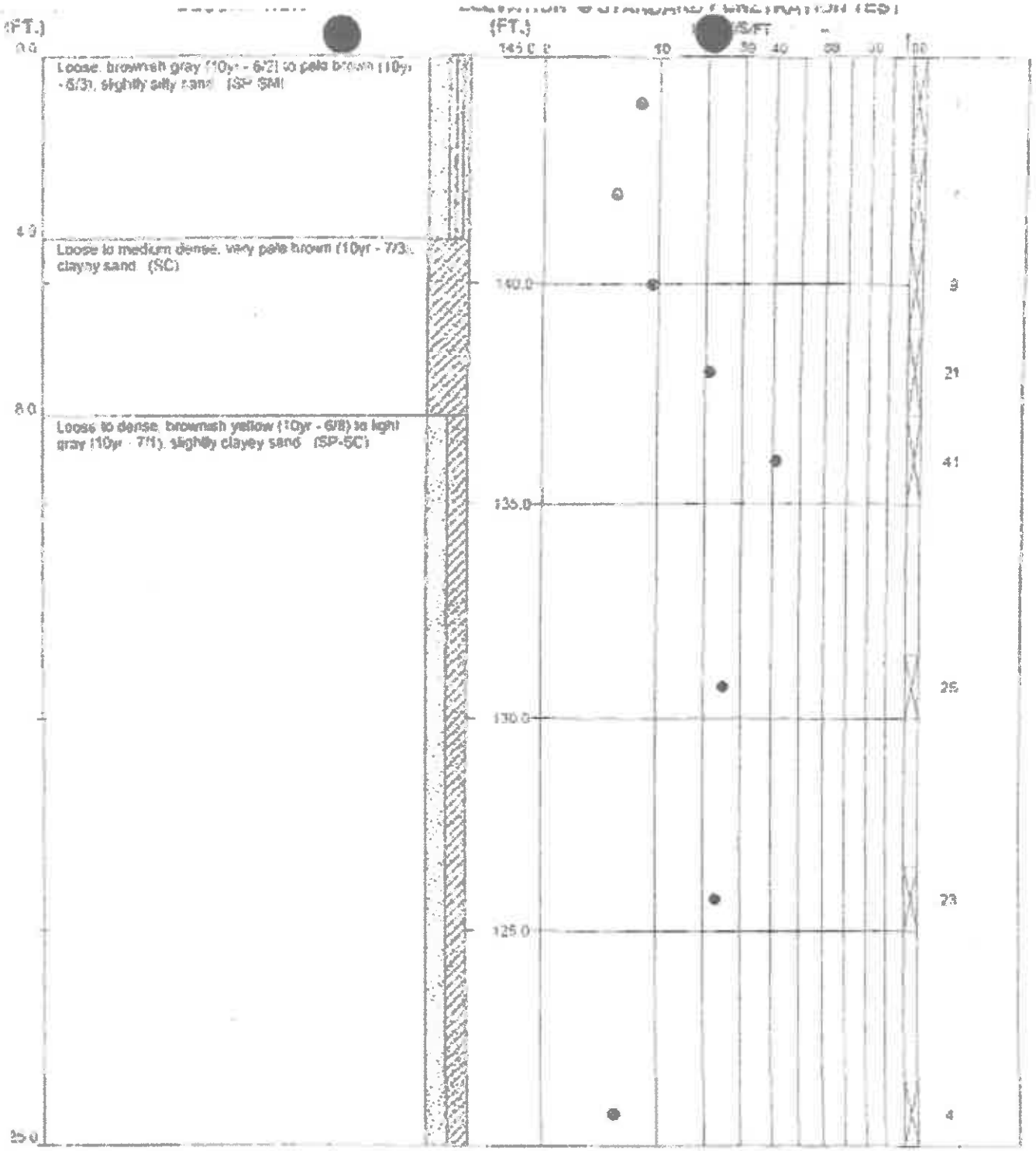

REMARKS:

M E G

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BORING NUMBER	SPT-3
DATE DRILLED	10/11/2005
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

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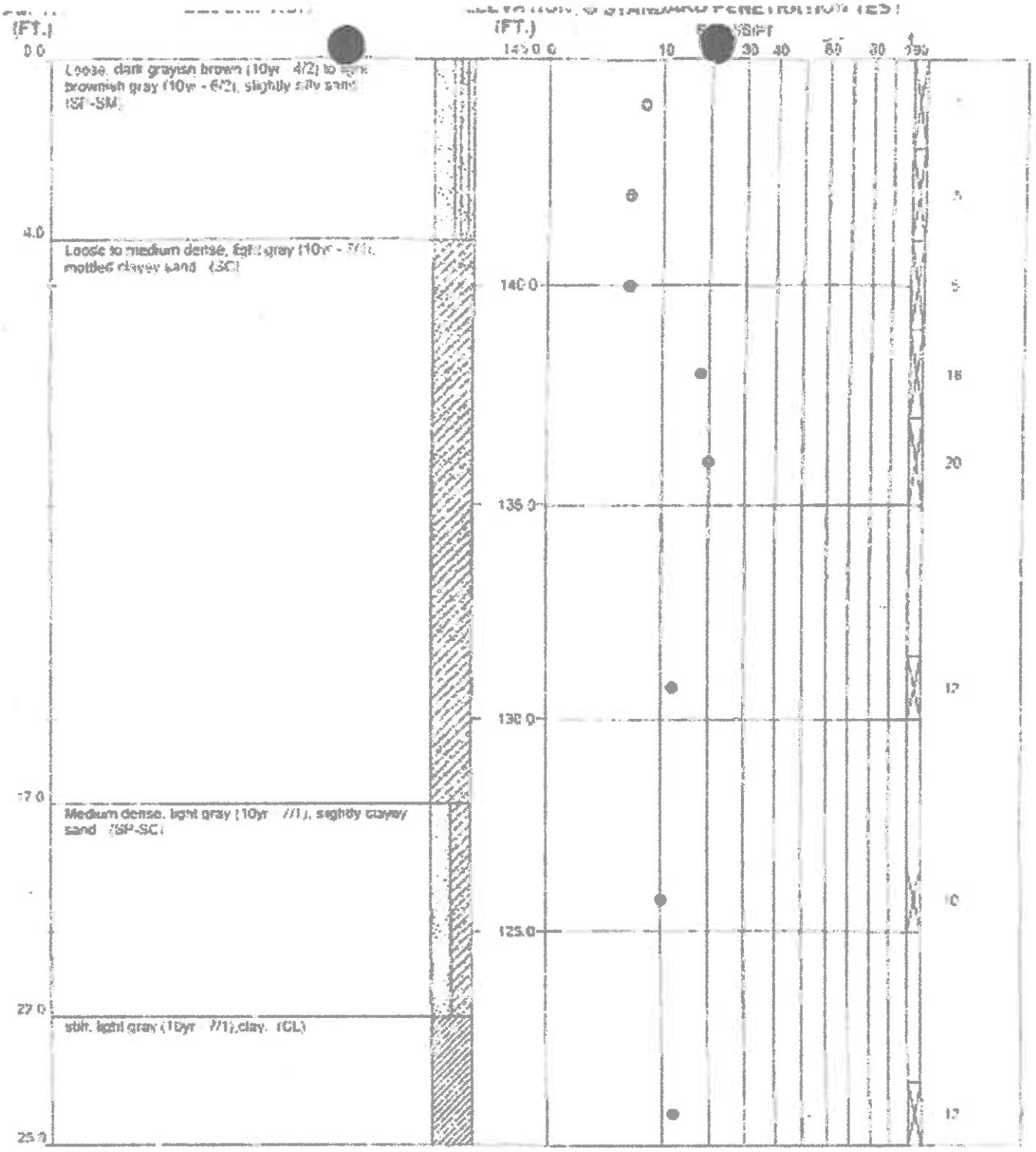

REMARKS:

BORING NUMBER	SP1-4
DATE DRILLED	10/11/2005
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

MEG

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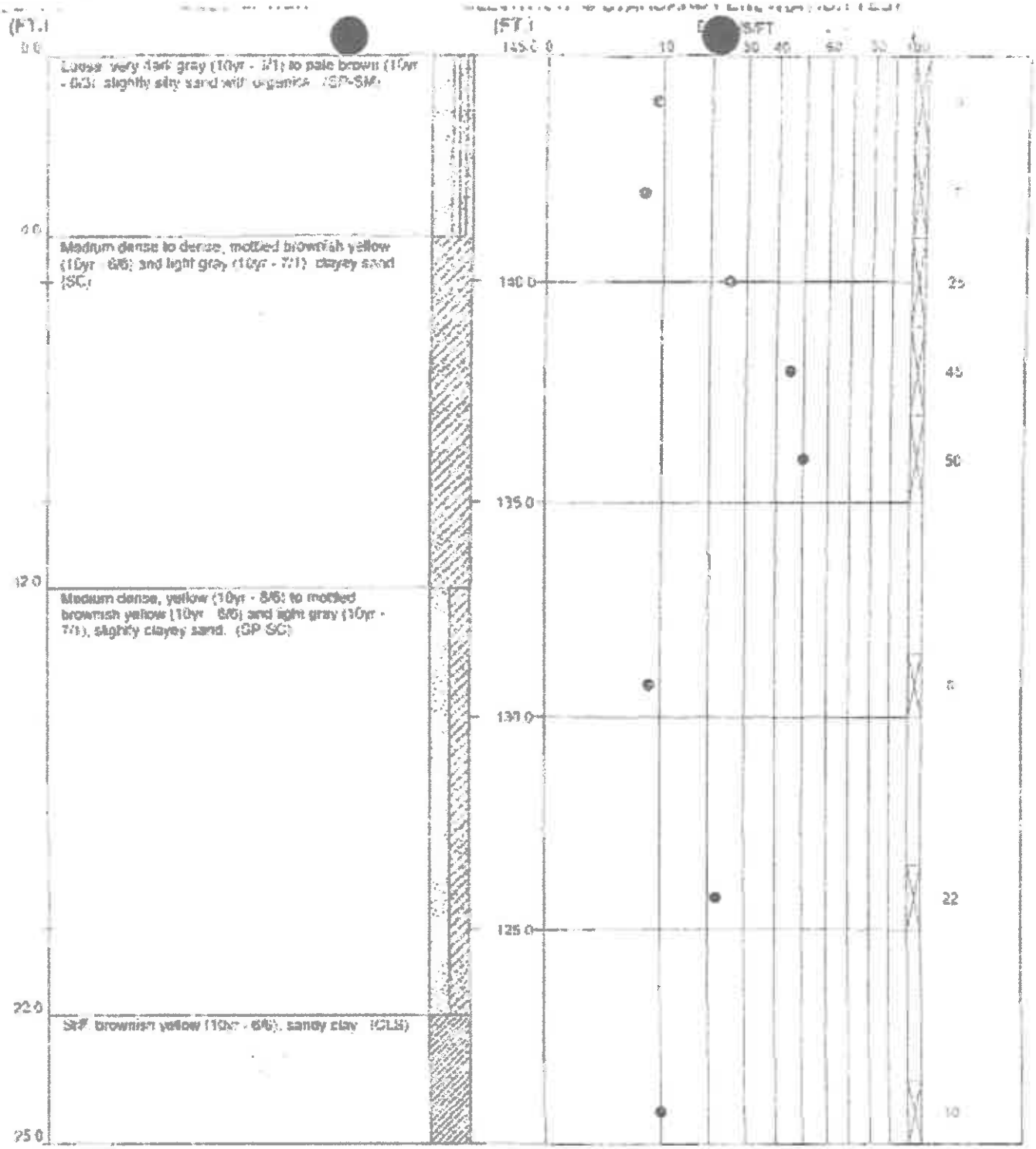

REMARKS:

M E G

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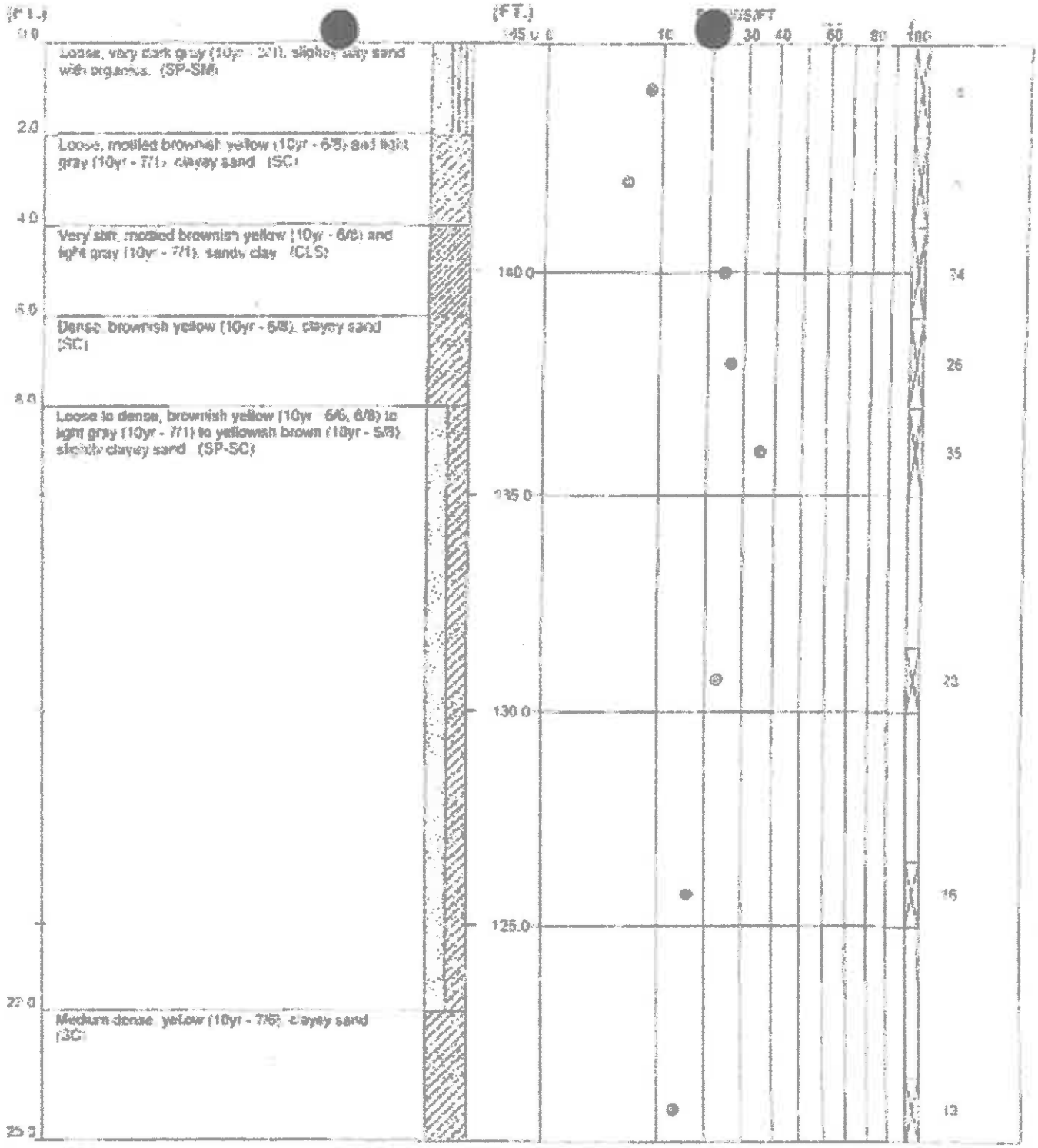
DATE DRILLED	10/11/2005
PROJECT NUMBER	4820
PROJECT	Polk City WWTP
PAGE 1 OF 1	



REMARKS:

BORING NUMBER	SPT-6
DATE DRILLED	10/11/2005
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

MEG

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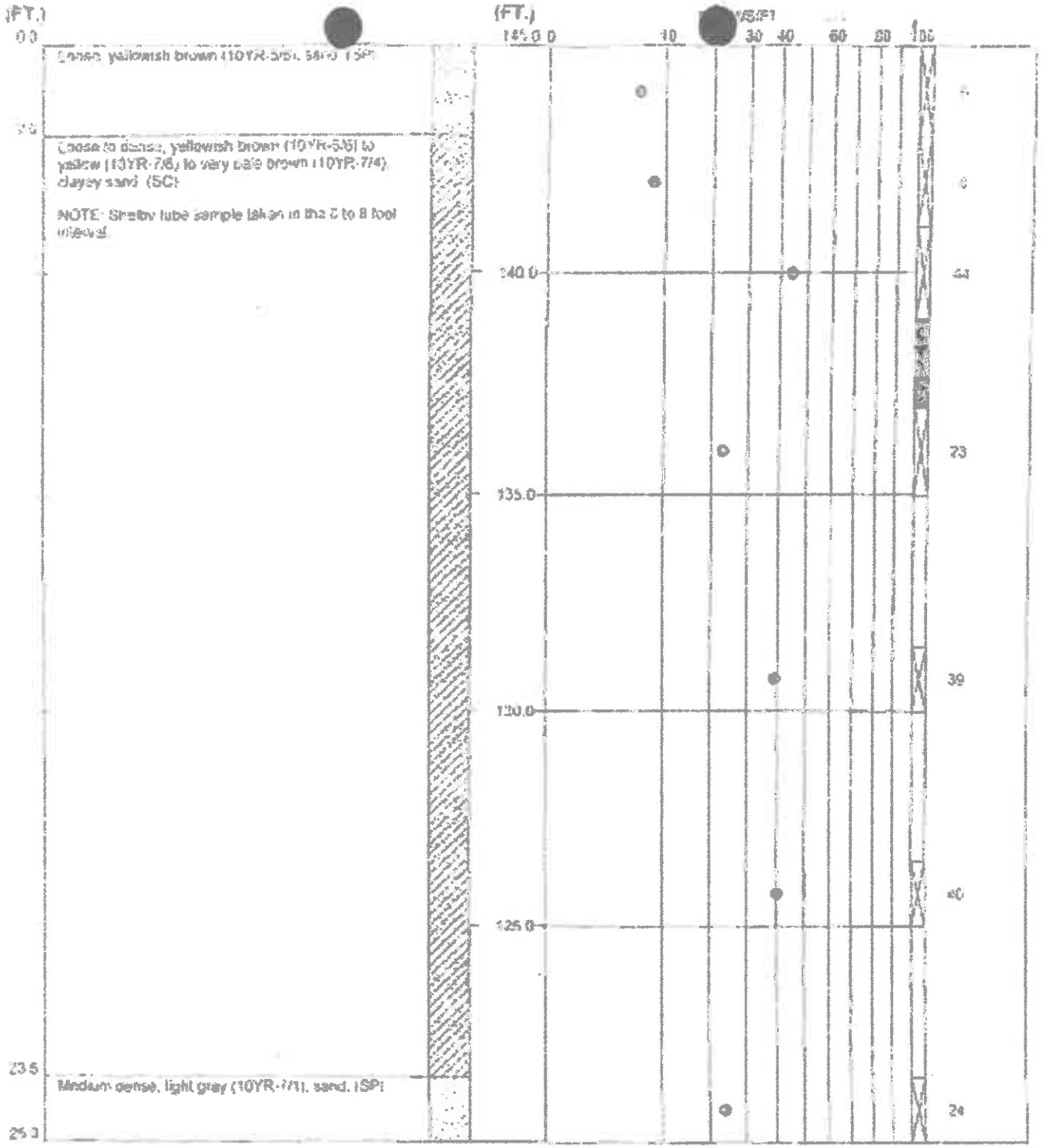

REMARKS: N 28° 11' 44.0"
W 81° 50' 17.4"

BORING NUMBER	SPT-7
DATE DRILLED	1/24/2006
PROJECT NUMBER	4826
PROJECT	Polk City WWTF
PAGE 1 OF 1	

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M E G

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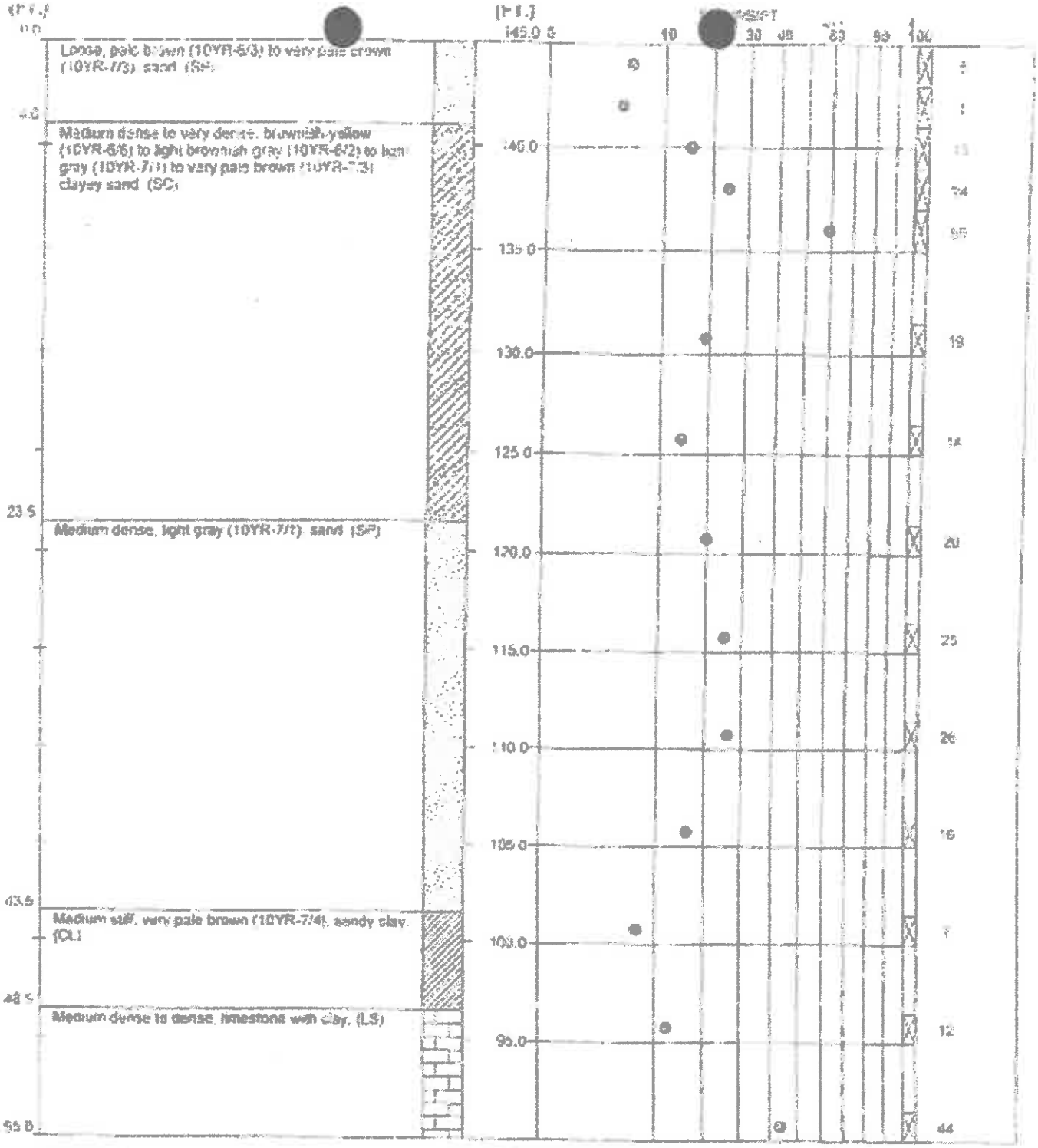

REMARKS:

M E G

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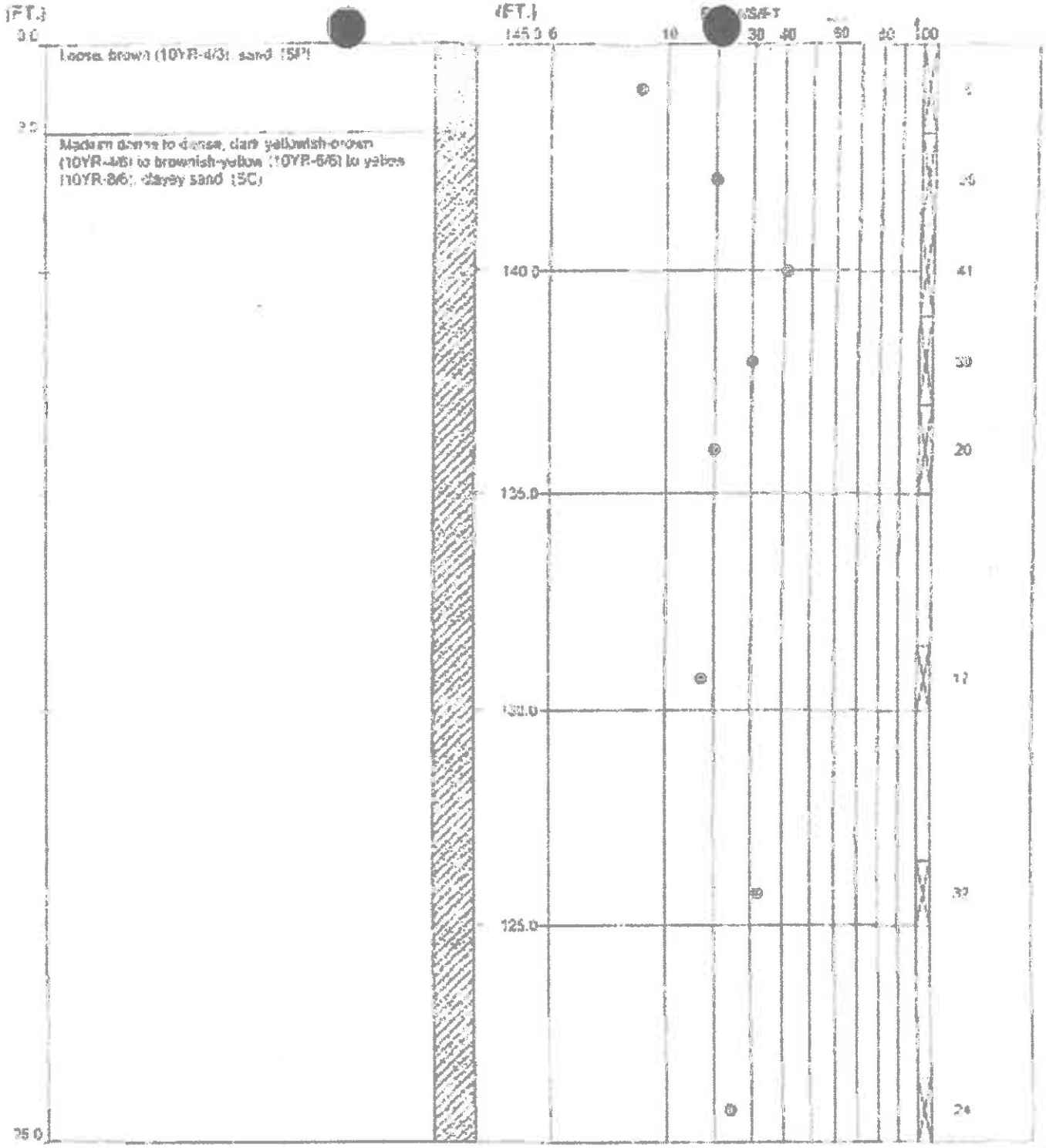
BORING NUMBER	SPT-8
DATE DRILLED	1/23/2006
PROJECT NUMBER	4826
PROJECT	Polk City WWTF
PAGE 1 OF 1	



REMARKS:

BORING NUMBER	SPT-9
DATE DRILLED	1/24/2006
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

Madrid Engineering Group, Inc.

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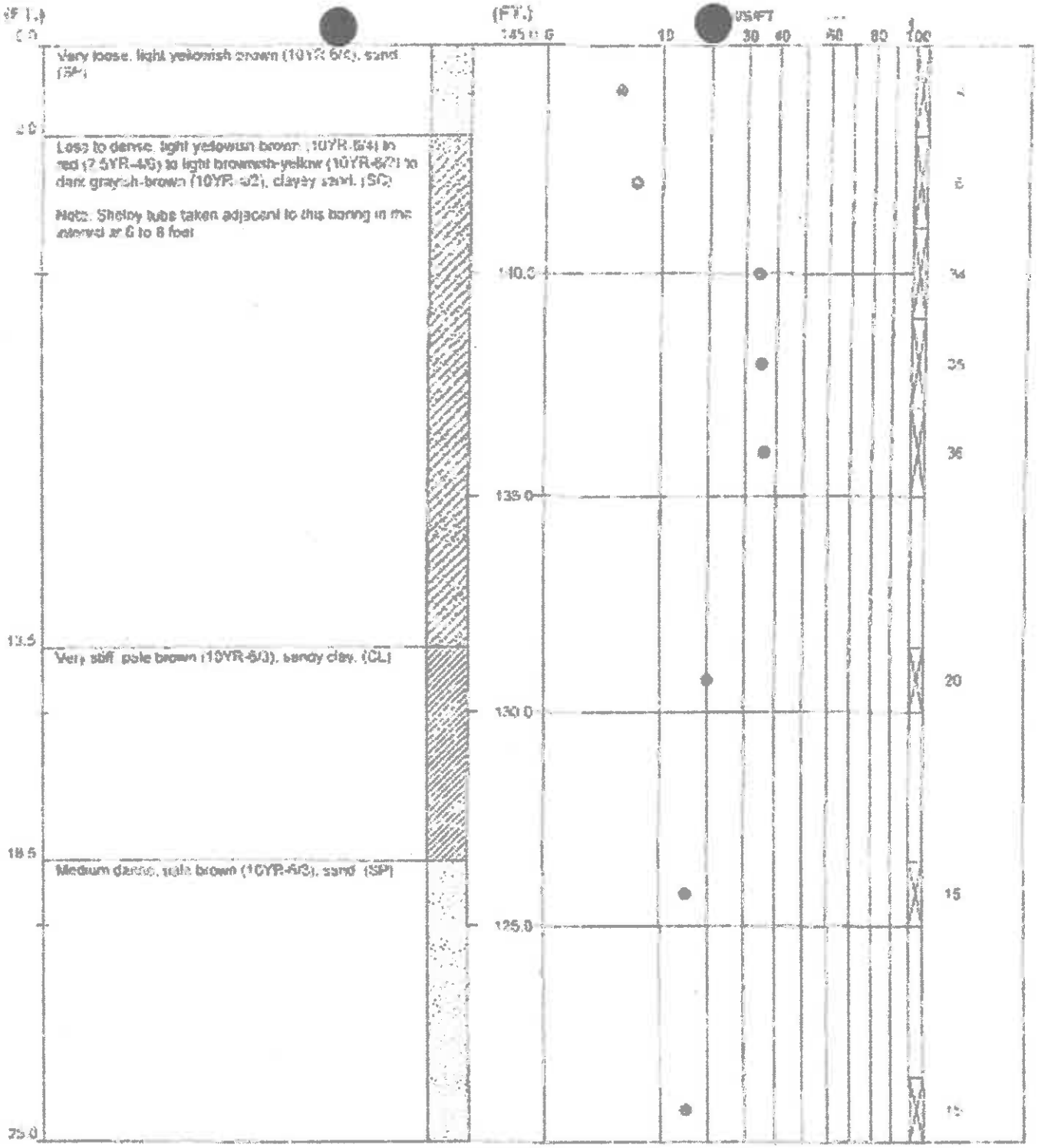

REMARKS:

BORING NUMBER	SPT-10
DATE DRILLED	1/23/2006
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

MEG
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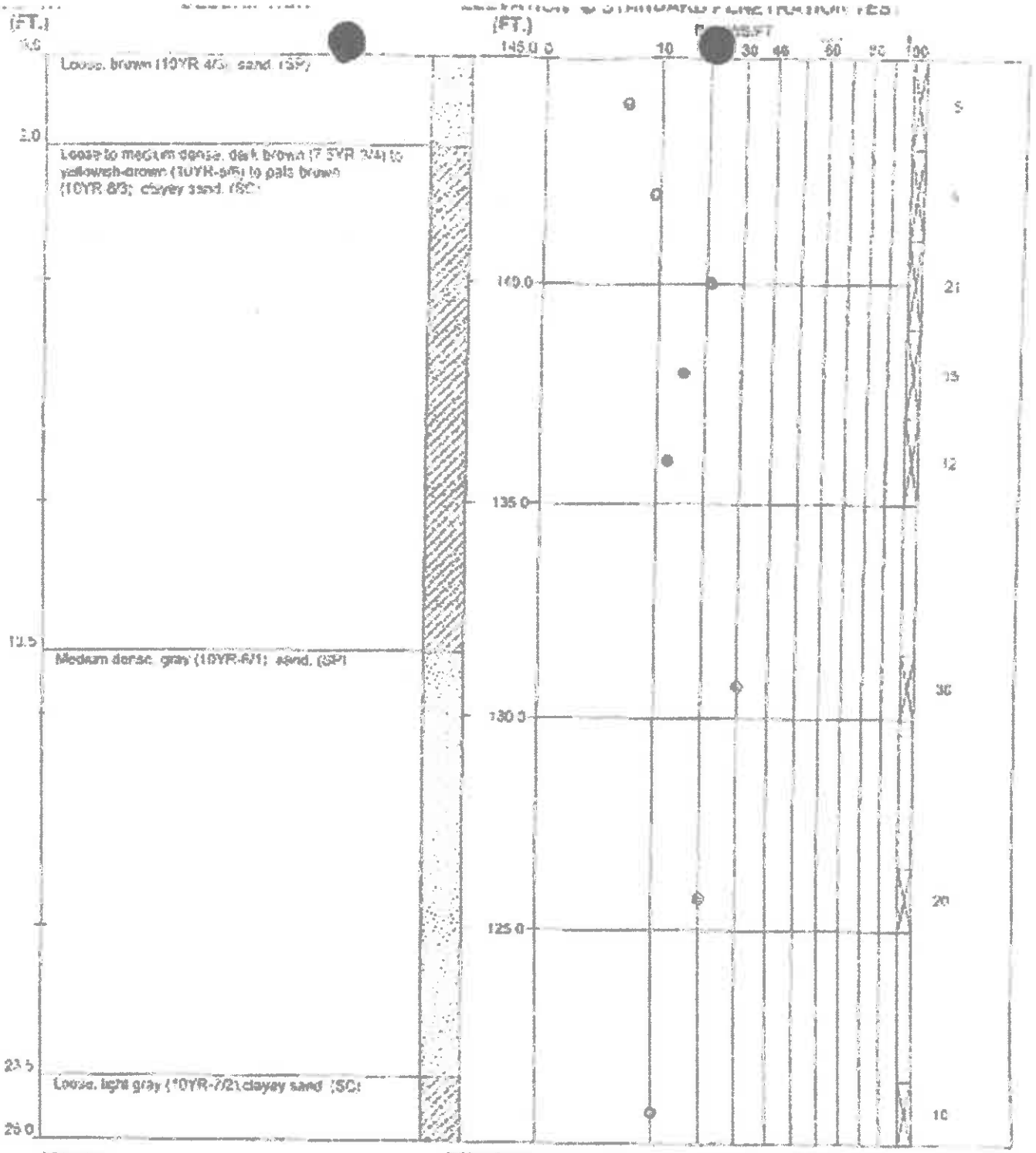

REMARKS

M E G

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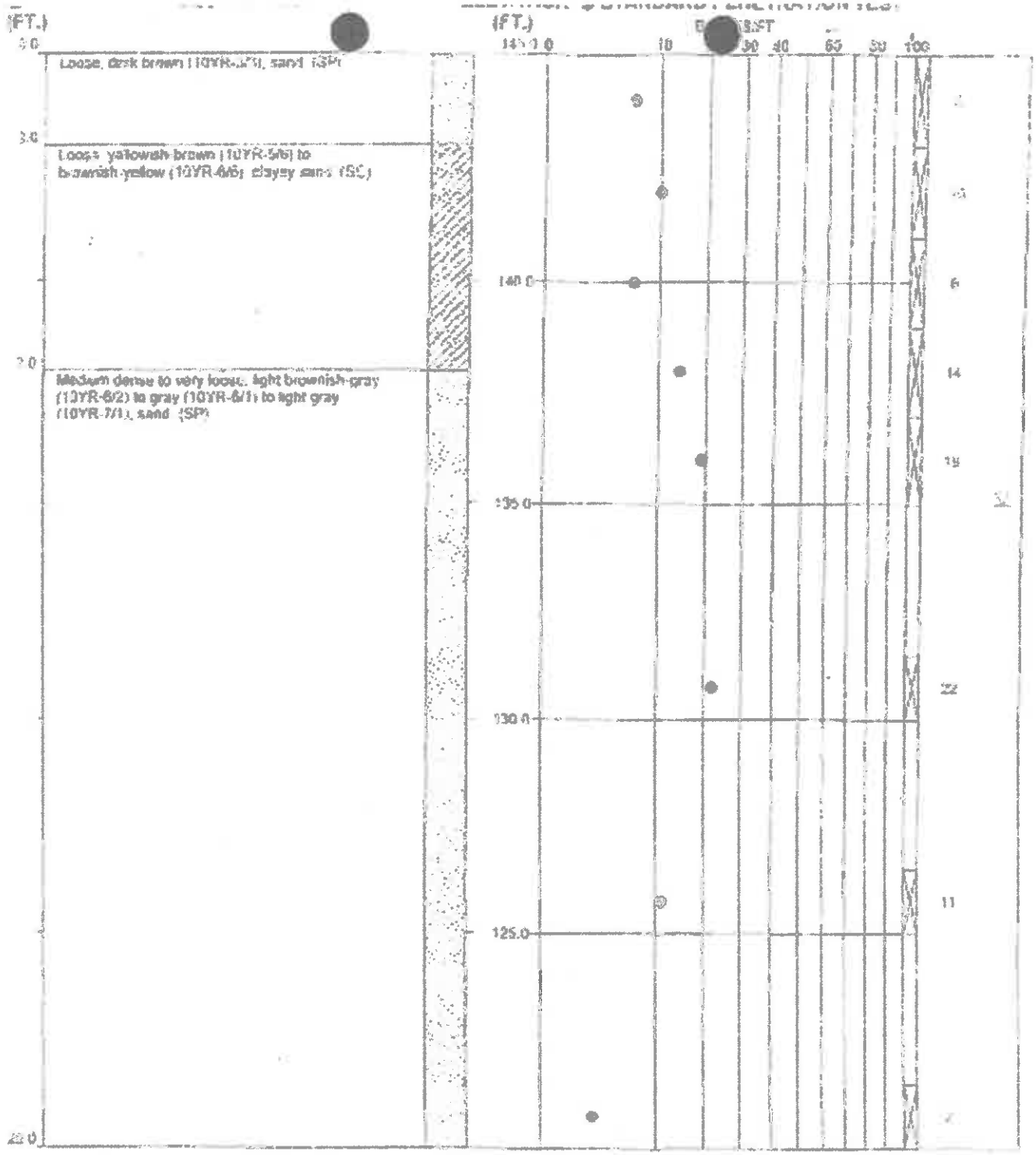
BORING NUMBER	SPT-1
DATE DRILLED	1/9/2008
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	



REMARKS:

BORING NUMBER	SPT-12
DATE DRILLED	1/9/2006
PROJECT NUMBER	4826
PROJECT	Polk City WWTP
PAGE 1 OF 1	

MEG

The Earth is our Business

Polk City
City Commission Agenda Form

Meeting Date: May 15, 2017
Item Number: 4

Subject: Voyles Loop Lift Station - 20hp 4" Flygt Pump Purchase	
Department: Public Works	
Summary: It is our recommendation that Polk City Upgrade the Voyles Loop Lift Station from a 10hp pump to a 20hp 4" Flygt NP3153 hard iron impeller submersible pump with startup service. This upgrade is necessary due to the growth of Fountain Park home development. Therefore, Staff is recommending Alternate #1 in the amount of $15,744.00 from Xylem Water Solutions USA quote.	
Requested Commission Action: Approve purchase of a 20hp 4" Flygt NP3153 for Voyles Loop Lift Station	
Financial Impact: $15,744.00	
Attachments: X	**Supporting Documents Reviewed** X
Submitting Department Head: Keith Prestage, Public Works Director	**Date:** 5/10/2017
Approved by City Manager: Patricia R. Jackson, City Manager	**Date:** 5/10/2017

Xylem Water Solutions USA Inc. / Flygt Products
2152 Sprint Blvd. Apopka, Florida 32703
Phone: 407-880-2900 • Fax: 407-880-2962

To: Polk City
C/o: Gerald Hartman

Date: May 2, 2017

Subject: Volyles Loop Pump Station, Polk City
Quote Number: 2017-APO-TBD

We are pleased to offer the following equipment:

Alternate 1

(1) 4" Flygt NP3153.185 463 Hard iron impeller, 20 H.P. submersible pump 3/460V with 50' motor cable, FLS enabled
(1) Start-up service

Price: $ 15,744.00

Alternate 2

(2) 4" Flygt NP3153.185 463 Hard iron impeller, 20 H.P. submersible pump 3/460V with 50' motor cable, FLS enabled
(1) Start-up service

Price: $ 30,438.00

Exclusions: WE DO NOT SUPPLY, PIPING, VALVES, GUIDE BARS, PRESSURE GAUGES, DISCONNECTS, JUNCTION BOXES, KELLUMS GRIPS, SURGE PROTECTION EQUIPMENT, SPARE PARTS, LABOR OR ANY OTHER ITEM NOT SPECIFICALLY LISTED ABOVE.

PLEASE MAKE PURCHASE ORDERS OUT TO: XYLEM WATER SOLUTIONS USA, INC.

Validity: THIS QUOTE IS VALID FOR NINETY (90) DAYS UNLESS LONGER TIME AGREED TO IN WRITING.

Taxes: State, local, and other applicable taxes are not included in this quotation.

Freight Terms: DAP; Jobsite - Full Freight Allowed (per Incoterms 2010)

Shortages: Xylem will not be responsible for apparent shipment shortages or damages incurred in shipment that are not reported within two weeks from delivery to jobsite. Damages should be noted on the receiving slip and the truck driver advised of the damages. Please contact our office as soon as possible to report damages or shortages so that replacement items can be shipped and the appropriate claims made.

Payment Terms: 100% NET 45 DAYS AFTER SHIPMENT DATE.
(Note: Partial billing will be made on partial shipments)

Xylem's payment shall not be dependent upon Purchaser being paid by any third party unless Owner denies payment due to reasons solely attributable to items related to the equipment being provided by FLYGT.

Schedule: Please consult your local Flygt branch for submittals and fabrication lead-times.

Back Charges: Buyer shall not make purchases nor shall Buyer incur any labor that would result in a back charge to Seller without prior written consent of an authorized employee of seller.

Terms & Conditions: *This order is subject to the Standard Terms and Conditions of Sale – Xylem Americas effective on the date the order is accepted which terms are available at http://www.xyleminc.com/en-us/Pages/terms-conditions-of-sale.apx and incorporated herein by reference and made part of the agreement between the parties.*

Xylem Water Solutions USA Inc. / Flygt Products
2152 Sprint Blvd. Apopka, Florida 32703
Phone: 407-880-2900 • Fax: 407-880-2962

We thank you for your interest in our equipment and look forward to being of service to you in the near future.

IN THE ABSENCE OF A FORMAL ISSUED PURCHASE ORDER, A SIGNED COPY OF THIS PROPOSAL IS ACCEPTABLE AS A BINDING CONTRACT.

Xylem Water Solutions USA, Inc.

Steve Dennis

Company Name: _____

Address: _____

_____

Accepted By: _____

Print Name: _____

Date: _____

Hartman Consultants, LLC

www.hartmanconsultant.com

May 2, 2017

HC 14035.00

Mrs. Patricia Jackson, City Manager
City of Polk City
123 Broadway Blvd. SE
Polk City, Florida 33868

Re: Voyles Loop Master Pump Station

Dear Mrs. Jackson:

As you know approximately one year ago, I recommended a phased pumping upgrade plan with the first phase to be completed in 2016.

I observed on May 1, 2017 that the City did not approve the improvements for 2016, yet budgeted for the improvements in 2019.

In 2016 my calculations, that were confirmed by in field flows and pressures, indicated that with only a minor addition of flow, the existing 10 HP pumps would not be able to meet the hydraulic conditions present. This is due to the relatively "flat" pump curves whose performance or flow drops off greatly with only a minor increase of total dynamic head required (energy). The calculations and performance showed that for lower head conditions the existing pumps would be fine. Nonetheless, the wet well can only equalize approximately 4 to 6 hours of flow before it overflows causing a pollution violation (which has occurred historically, but not under the Aquarina Waterworks operations due to the extra balancing and emergency rental pumps used).

A couple of days ago, during the dry season with no rain, the higher head conditions persisted again and the raw wastewater rose very high in the wet well causing alternative measures to be enacted by Aquarina. They rented a 70 horsepower (HP) emergency pump from Herts and constructed a bypass to avoid any overflow violations (possible fines of upto $10,000 per day). Since they knew I had previously recommended a necessary improvement, they acted in a way to keep the City from being fined.

I discussed the situation on 4/29 Sat; coordinated on 4/30Sun; and met with Keith Prestage, Keith Burge and Kevin Burge at City Hall at 3:20pm 5/1 and was out in the field observing the emergency operations until 6:25 pm with the Burges. The minimum scour velocity is 2 feet per second and requires 300 gpm from this pump station. The other pump station meeting at the Tee at Stevens Rd contributes approximately 300 gpm during such conditions. A total of 700 gpm peaking flow (short term) is needed to keep the pipeline from allowing excessive deposition of solids.

300 South Interlachen Ave • Unit #503 • Winter Park, FL 32789
Tel. 407-341-0970 • Fax 407-909-9882 • gerry@hartmanconsultant.com

Kevin reported that when the trash pump was installed, septic (black smelly) solids and sand were observed as the influent to the plant which will spike our nitrogen levels in the effluent possibly causing non-compliance in our groundwater monitoring wells at SR 38 near the Mud Lake TMDL regulated surface water body.. Efforts are being taken by Aquarina to maximize the nitrogen removal at the Cardinal Hill WWTP. Again non-compliance has a maximum of $10,000 per day fine: although our efforts to relocate the spray field should mitigate that issue.

Under Chapter 471 FS, I am informing the City that the City Commission's deferral of my recommendations are contrary to good industry practice and may lead to fines and environmental litigation.

My previous recommendation was to install at least a 15HP pump as the lead pump in the station. The sedimentation and degradation that has occurred since that time requires me to refine/specify/clarify that recommendation in the phase 1 plan for the pump station to 20HP due to higher friction or head losses and the growth peaking conditions observed. That install date is past due. The schedule for phase 1 is now. The total anticipated cost is between $21,000 and $23,000. The current budget has $31,802.27 left in it after 7 months from the initial $70,000 approved. Although the normal improvements may come in somewhere near $10,000 below budget: this needed improvement will probably cause a $10,000 to $15,000 budget over-run in that category.

The phase 2 program for the station would involve a second 20HP pump with upgrades to the starters, breakers, fuse, service, etc. The power available is a 100 amp service. The wire and the fuse are only 60 amp. The starters and breakers would be upgraded to provide for the 2nd 20 HP pump. The motors would have soft starters. The 2 @ 20 HP pumps would be the lead and lag to the generator. This improvement is needed by 2019 and is expected to cost approximately $45,000 and is shown in the approved budget.

Phase 3 is to have the third existing pump (10HP lag; lag; pump) changed out to a 30HP that is conceptually anticipated in the 2030-2035 time frame.

I am requesting the City's immediate attention to this matter.

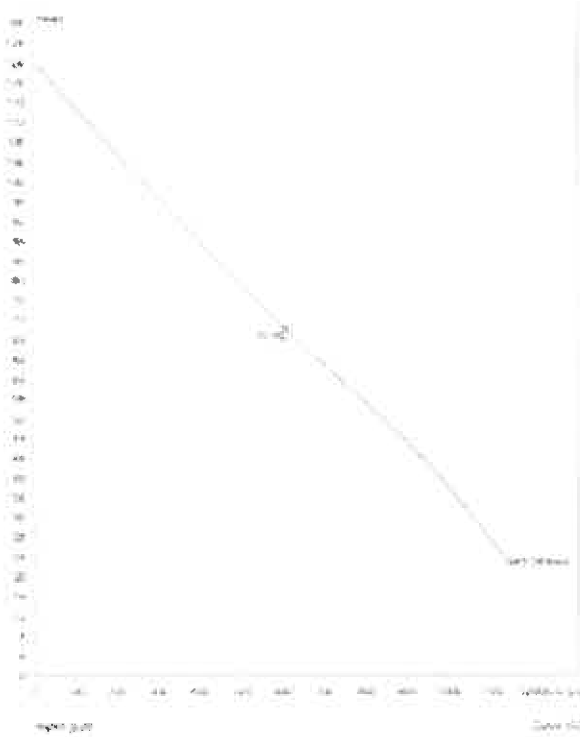
Very truly yours,
Hartman Consultants, LLC

Gerald C. Hartman
PE, BCEE, ASA
Cc: Keith Prestige, PWD
Keith Burge, via email
Kevin Burge, Aquarina Water Works

xylem

NP 3153 HT 3~ 483

Technical specification



Note: Picture might not correspond to the current configuration.

General

Impeller

Installation: P - Semi permanent, Wet

Motor

Configuration

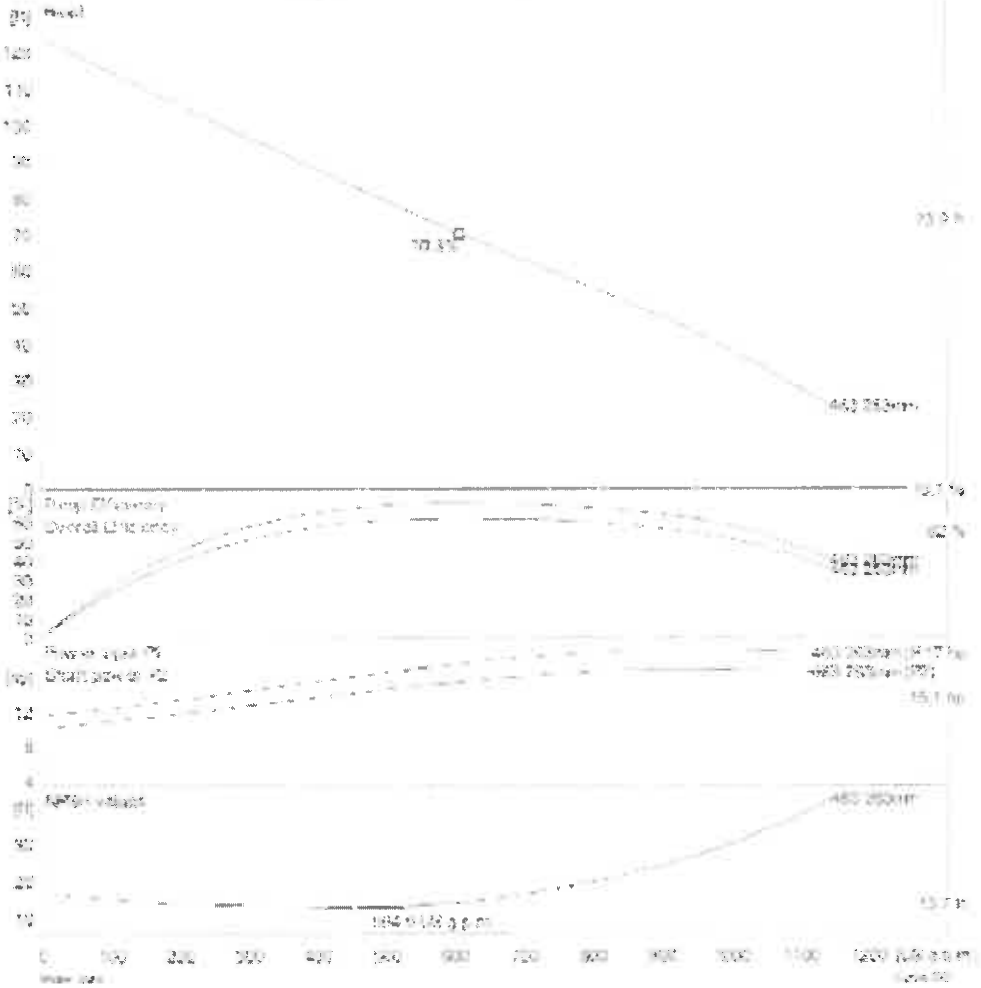
xylem

NP 3153 HT 3~ 463

Performance curve

Pump

Motor



Duty point		Guarantee	
Flow	Head		Power

xylem

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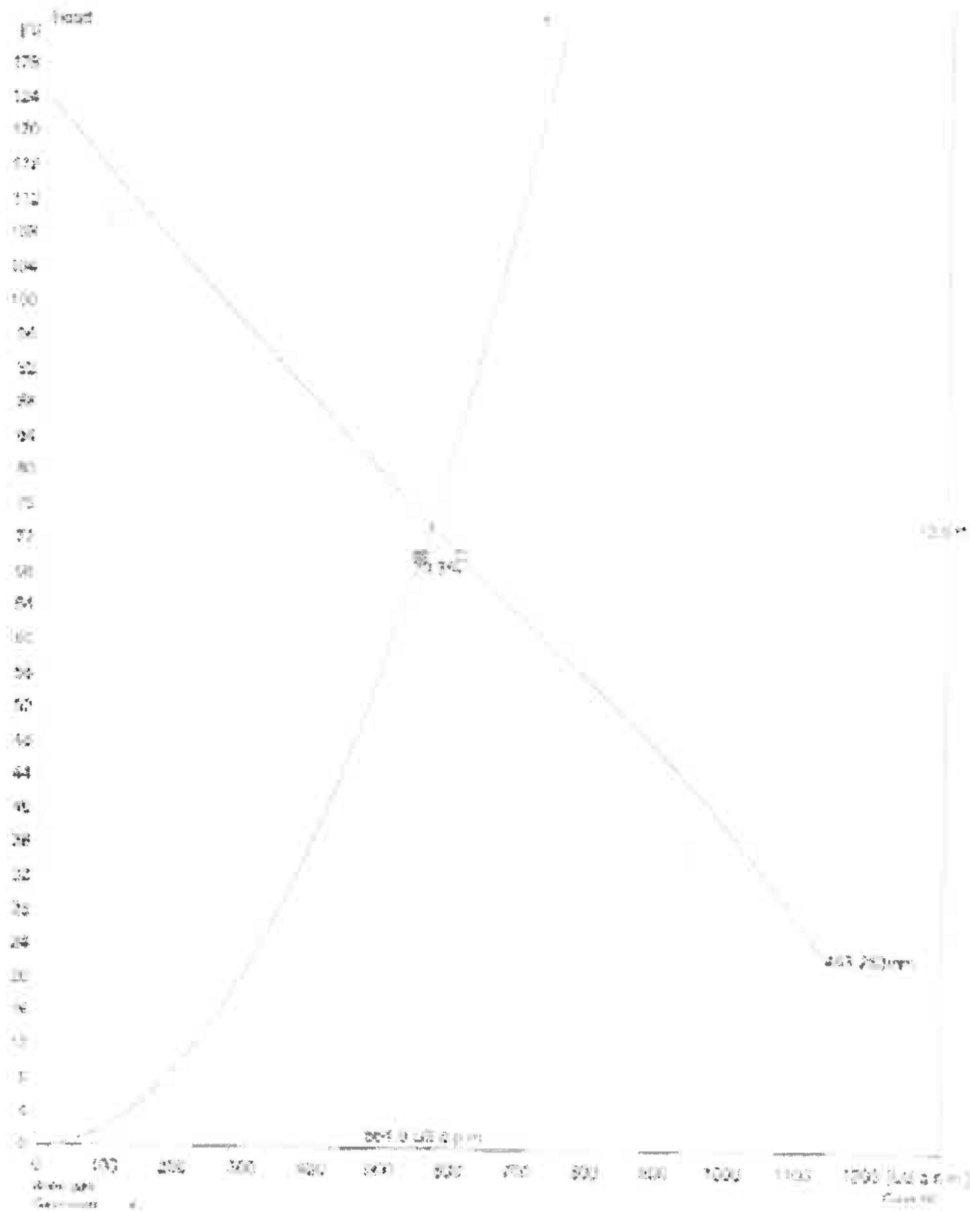
Duty Analysis



Pumps running /System	Individual pump Flow	Head	Shaft power	Total Flow	Head	Shaft power	Pump eff.	Specific energy	NPSHre
1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Project | Project ID | Created by | Created on | Last update

[illegible]

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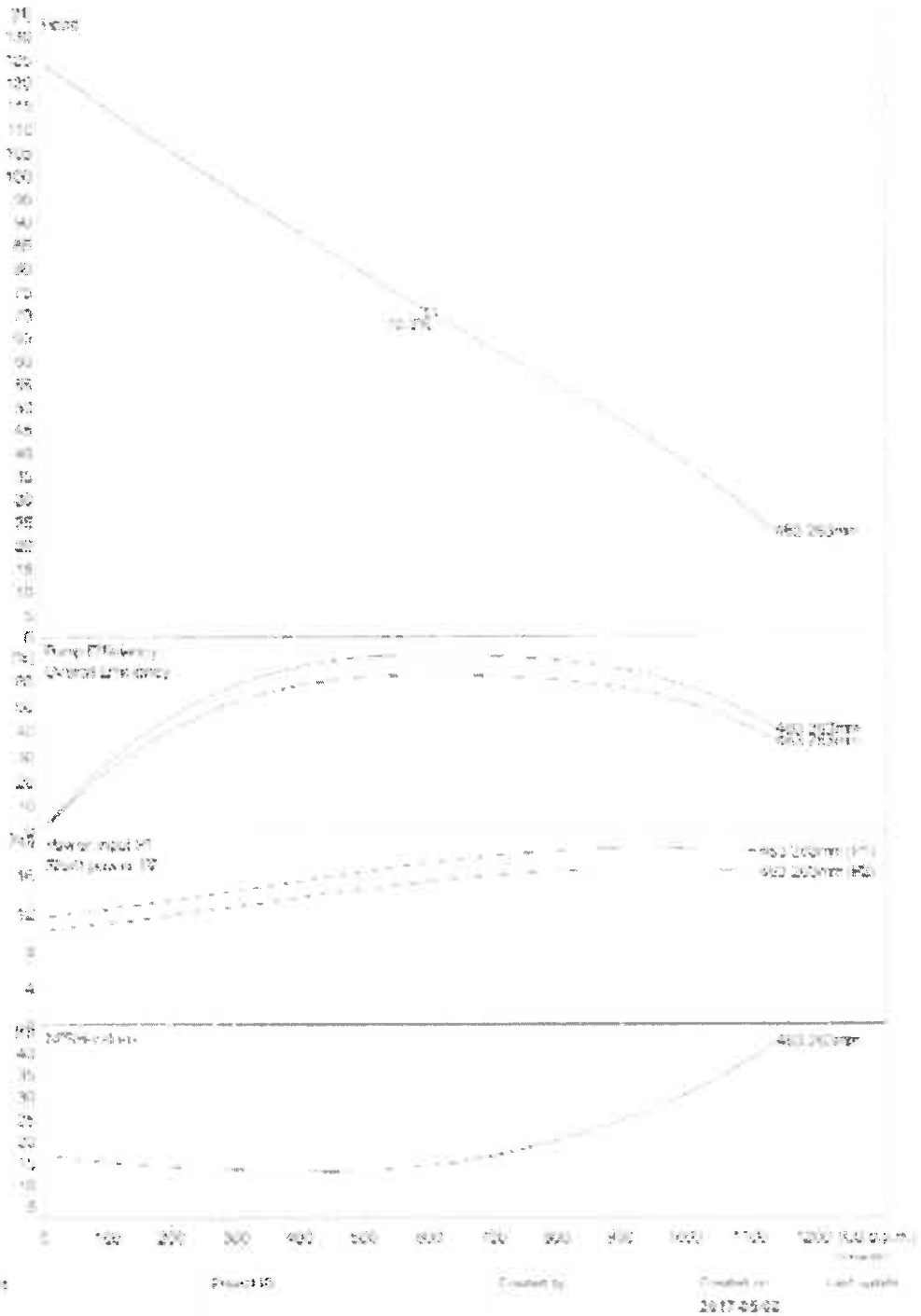
VFD Curve



2017-05-02

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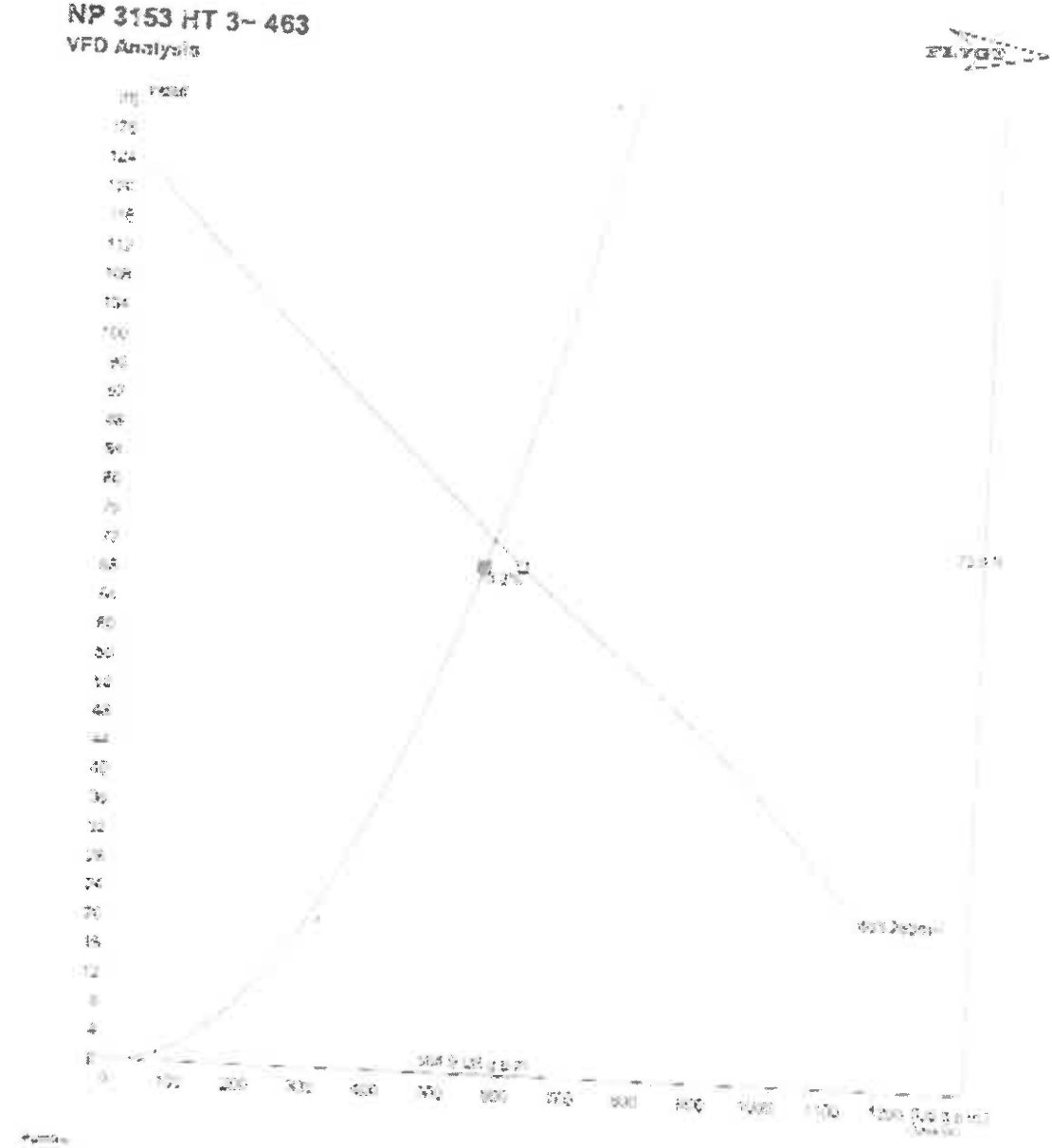
VFD Analysis



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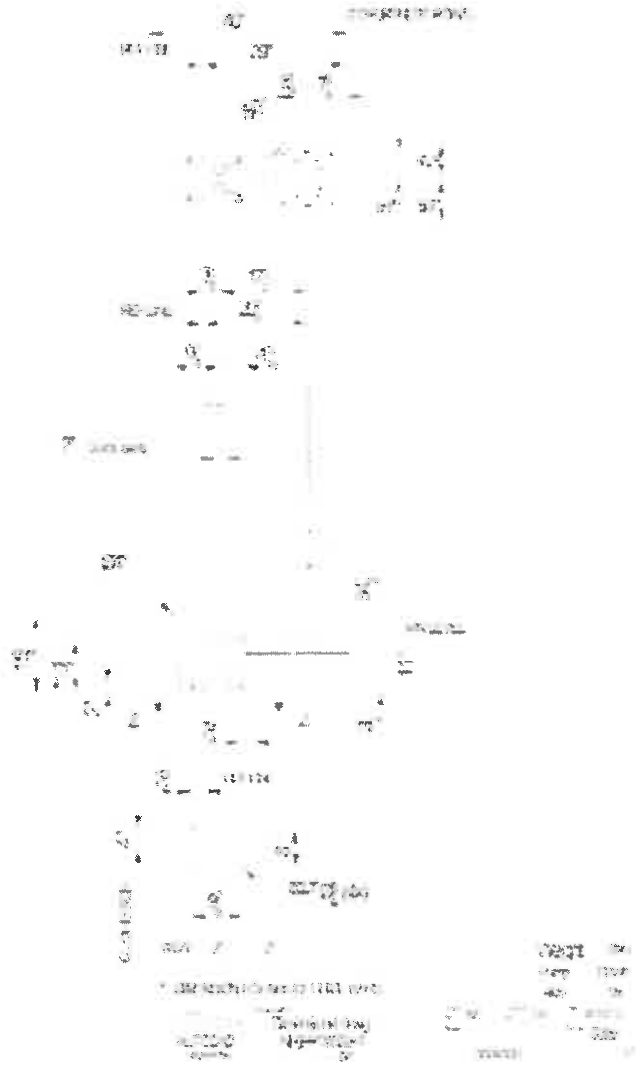
Dimensional drawing

FLYGT



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[illegible]

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Life cycle costs (LCC)

Total lifetime	[illegible]	Inflation rate (rate of price increases)	[illegible] %
Annual operating time	[illegible]	Interest rate (for investment)	[illegible] %
Energy cost per kWh	[illegible] USD		
Power input P1			

Total costs

0%	0.00 USD	Energy
0%	0.00 USD	Investment costs
0%	0.00 USD	Installation & commissioning
0%	0.00 USD	Operating cost
0%	0.00 USD	Maintenance & repair
0%	0.00 USD	Downtime
0%	0.00 USD	Environmental
0%	0.00 USD	Decommissioning

0.00
USD

First year costs

0%	0.00 USD	Energy (1st year)
0%	0.00 USD	Investment costs (1st year)
0%	0.00 USD	Installation & commissioning (1st year)
0%	0.00 USD	Operating cost (1st year)
0%	0.00 USD	Maintenance & repair (1st year)
0%	0.00 USD	Downtime (1st year)
0%	0.00 USD	Environmental (1st year)
0%	0.00 USD	Decommissioning (1st year)

0.00
USD

Disclaimer: The calculations and the results are based on user input values and general assumptions [illegible]

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			[illegible]	