



Audit of  
Backflow Assembly Devices & Testing  
at Port Everglades  
(Interim Report)

Office of the County Auditor

**Robert Melton, CPA, CIA, CFE, CIG**  
**County Auditor**

Audit Conducted by:  
Kathie-Ann Ulett, CPA, Deputy County Auditor  
Yan Jiang, CPA, Audit Manager  
Fay Francis, Audit Supervisor  
Muhammad Ramjohn, CISA, WTPO, Information Technology Auditor

**Report No. 19-08**  
**April 4, 2019**



OFFICE OF THE COUNTY AUDITOR

115 S. Andrews Avenue, Room 520 • Fort Lauderdale, Florida 33301 • 954-357-7590 • FAX 954-357-7592

April 4, 2019

Honorable Mayor and Board of County Commissioners

As you are aware, we are currently conducting an audit at Port Everglades (Port), and as part of our audit, we reviewed allegations related to backflow assembly testing. Because of the immediate need for corrective action, we are issuing an interim audit report.

The allegations assessed in this interim report are:

- A. Port employees used County-owned backflow test kits for personal business outside the Port.
- B. Port's backflow assembly devices, which prevent public water supply contamination, were not certified annually as required by city, county, state, and federal requirements and standards

We completed our assessment of the following allegations:

- A. Unauthorized use of County-owned backflow testing kits. **Substantiated**
- B. Inadequate certification of backflow assembly devices. **Substantiated**

The findings and recommendations presented herein may not be inclusive of all areas where improvement may be needed; however, we believe implementing these recommendations will result in corrective actions as well as improve and strengthen the controls over backflow assembly device testing at the Port.

Management's response is in Appendix E. We appreciate the cooperation and assistance provided by Port staff throughout our audit process.

Respectfully submitted,

A handwritten signature in blue ink that reads "Bob Melton".

Bob Melton  
County Auditor

cc: Bertha Henry, County Administrator  
Andrew Meyers, County Attorney  
Glenn Wiltshire, Port Everglades Acting Chief Executive/Port Director

# TABLE OF CONTENTS

DISCUSSION & ANALYSIS.....	2
Background .....	2
Analysis .....	3
FINDINGS & RECOMMENDATIONS .....	13
1. The Backflow Inspection Process at Port Everglades is Inadequate and Has Not Been Managed. ....	13
2. Backflow Assembly Devices are not Certified Annually to Ensure Compliance with Regulations and Standards and to Safeguard Public Health and Safety at Port Everglades. ....	14
3. Former Employees Used County-owned Backflow Test Kits a Minimum of 156 times for Personal Financial Gain. ....	16
4. Port Everglades’ Backflow Prevention Policy Manual Has not Been Updated for 30 years. ....	17
5. Backflow Preventer Test Kits Were Not Calibrated Annually to Ensure Accurate Readings when Testing Backflow Preventer Assemblies.....	18
6. The Number of Backflow Preventer Test Kits Purchased is Excessive .....	19
APPENDIX A.....	20
APPENDIX B.....	20
APPENDIX C.....	20
APPENDIX D.....	20
APPENDIX E – Management’s Response.....	20

# DISCUSSION & ANALYSIS

During the course of our Procurement Audit at Port Everglades (Port), we received allegations of improprieties regarding the use of County-owned backflow assembly testing kits by County employees for their personal business outside of the Port, as well as inadequate certification and testing of backflow assembly devices at the Port. Background information and our analysis are presented below.

## Background

Backflow assembly devices are installed in select residential and all commercial properties to prevent the incorrect flow of contaminants such as: foul water, chemicals, and other pollutants into the public drinking water supply. Pollutants caused by toilets with faulty valves, swimming pools, agricultural, and industrial activity may flow back into the public drinking water supply if these devices are not maintained and certified, affecting public health and safety of employees, visitors, and tenants at the Port.



Figure 1: Backflow Assembly Device

## *City of Fort Lauderdale Agreement*

In October 2002, the City of Fort Lauderdale, and the Port entered into the “Large User Agreement to Provide Water and Water and Wastewater Billing services to Broward County Port Everglades Department.” This agreement provides potable drinking water to the Port, their leased properties, and docked ships. Section 14 of the agreement states that the Port is responsible for the following:

- ❖ Complying with all federal, state and local regulations regarding water quality on the County’s side of the meters including, but not limited to:
  - Cross connection control, which includes backflow assembly device maintenance and certification,
  - Line flushing, and
  - Bacteriological sampling and testing

### ***Background of Former Employee 1 (Subject of Allegation 1)***

Former Employee 1 began employment with the Port in March 1994, as a Plumber. His duties included, but were not limited to; installing pipes and fixtures, repairing plumbing fixtures, and maintaining the general plumbing infrastructure at the Port. During this time, the employee operated three different plumbing companies, including All County Plumbing, at various times during his employment. The employee retired from the Port in May 2016.

### ***Background of Former Employee 2 (Subject of Allegation 1)***

Former Employee 2 began employment with the Port in May 2007, as a Plumber. His duties included, but were not limited to; installing pipes and fixtures, repairing plumbing fixtures, and maintaining the general plumbing infrastructure at the Port. This employee did not report any outside employment during his service at the Port. The employee resigned from the Port in August 2018.

## **Analysis**

### **Allegation 1: Port employees used County-owned backflow test kits for personal business outside the Port. – Substantiated**

We were informed that on the June 22, 2018, flyers and backflow certification documents from Former Employee 1's company, All County Plumbing Contractors (All County Plumbing), plus other County records, were observed by the Plumbing Supervisor in the backroom of the plumbing shop.

The Plumbing Supervisor instructed Former Employee 2, (who we later learned previously worked for Former Employee 1's private business) to clean the backroom and to let him know when progress was made. The Plumbing Supervisor returned later that day with the Port Maintenance Manager, who informed Former Employee 2 to keep all records and continue cleaning.

The following morning, Former Employee 2 informed the Plumbing Supervisor that he had cleaned the room, disposed of all records in the dumpster, and placed a filing cabinet on top of the records. Later that night, the Port Maintenance Manager and the Plumbing Supervisor retrieved the records

*Figure 2: All County Plumbing Contractors Flyer.*



*(Source: Retrieved from the Dumpster)*

Audit of Backflow Assembly Devices & Testing at Port Everglades

from the dumpster upon the direction of Port management. Upon review, they noted the records included purchasing card receipts, merchant invoices, backflow certificates, and All County Plumbing's invoices for backflow testing certificates.

The Plumbing Supervisor discovered one specific backflow certificate from 2009, signed by Former Employee 2, indicating he had performed a backflow certification test at a property on Commercial Boulevard for All County Plumbing. The Plumbing Supervisor identified that the serial number for the test kits used to perform the certification belonged to the Port.

We obtained and reviewed all records initially discarded by Former Employee 2. Upon inspection of the documents, we identified the following:

- A. All County Plumbing Contractor's solicitation flyer to perform backflow recertification and installation (Figure 2).
- B. Backflow Prevention Assembly Certificate Report issued by All County Plumbing to Citgo, on October 5, 2009, using test kit, serial number 11070504 (a County-owned kit). Additionally, we noted the test was performed by Former Employee 2 who had discarded the records (Figure 3).

Figure 3: Backflow Certificate from All County Plumbing to Citgo - using Port owned testing kit and signed by Former Employee 2

Li#CFC039956 **BILL WOESSNER** Phone 954-328-9122  
 d/b/a/ All County Plumbing  
 P.O. Box 13098 • Ft. Lauderdale, Florida 33316

**Backflow Prevention Assembly Certification Report**

Date of Test: 10-5-09 CONTACT PERSON: David Moore  
 Name of Premises: CITGO TELEPHONE # 954-214-7139  
 Street Address: 299 E Commercial Blvd WATER ACCOUNT # \_\_\_\_\_  
 Location of Assembly: West side of Bldg WATER METER # 39782043  
 Type of Assembly: RP  DC  PVB  Other: \_\_\_\_\_ Size: 1  
 Manufacturer: WATTS Model: 009 Serial # 3265E  
 Inlet Line Pressure: \_\_\_\_\_ psi Permit # \_\_\_\_\_

CHECK VALVE #1	RELIEF VALVE	CHECK VALVE #2	PRES VACUUM BREAKER
<input type="checkbox"/> Leaked <input checked="" type="checkbox"/> Closed tight diff. pressure across check valve <u>6.3</u> psi #2 Shut off Valve hold <input checked="" type="checkbox"/> leaks <input type="checkbox"/>	Opened at: <u>2.8</u> psi did not open <input type="checkbox"/>	<input type="checkbox"/> Leaked <input checked="" type="checkbox"/> Closed tight diff. pressure across check valve <u>1.8</u> psi	Air inlet opened at _____ psi Did not open <input type="checkbox"/> Check Valve: Leaked <input type="checkbox"/> held at _____ psi backpressure evaluation <input type="checkbox"/>
Repair: Explain below <input type="checkbox"/> Cleaned only <input checked="" type="checkbox"/> Cleaned and replaced: <input type="checkbox"/> Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: <input type="checkbox"/> Rubber kit <input type="checkbox"/> RV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: <input type="checkbox"/> Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: <input type="checkbox"/> Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>

**TEST AFTER REPAIRS**

Diff. pressure across CV _____ psi	Opened at: _____ psi	Diff. pressure across CV _____ psi	Air inlet _____ psi Check valve _____ psi
------------------------------------	----------------------	------------------------------------	--

NOTE: ALL REPAIRS MUST BE COMPLETED WITHIN TEN (10) DAYS.

REMARKS: \_\_\_\_\_

Name of Plumbing Company: All county plumbing  
 Passed  Failed  Repair Date: \_\_\_\_\_ Contractor Lic. No. CFC039956  
 Test Equip. Used: 11070504 Calibration Date: 11-15-08 Test Kit Serial # 11070504  
 I HEREBY CERTIFY THIS DATA IS ACCURATE AND REFLECTS THE PROPER OPERATION AND MAINTENANCE OF THE ASSEMBLY.  
 CERTIFIED TESTER SIGNATURE: [Signature] PRINT NAME: David Moore  
 BACKFLOW TESTER CERTIFICATE # 11070504 EXPIRATION DATE: \_\_\_\_\_  
 QUALIFIER'S SIGNATURE: [Signature] LICENSE NO. 00030916  
 ANY REPORT SUBMITTED WITHOUT THE ACCOUNT AND METER NUMBER WILL NOT BE ACCEPTED.

(WHITE) WATER PURVEYOR (YELLOW) TESTING COMPANY (GREEN) OWNER

(Source: Retrieved from the Dumpster)

Audit of Backflow Assembly Devices & Testing at Port Everglades

- C. Backflow Prevention Assembly Certificate Report issued by All County Plumbing to Burger King at 2201 University Drive on May 3, 2010, using test kit serial number 275313 (a County-owned kit). Additionally, we noted the test was performed by Former Employee 1 (Figure 4).

Figure 4: Backflow Certificate from All County Plumbing to Burger King – using Port owned testing kit and signed by Former Employee 1

Lic #CFC039956 **BILL WOESSNER** Phone 954-328-9122  
 d/b/a/ All County Plumbing  
 P.O. Box 13098 • Ft. Lauderdale, Florida 33316

**Backflow Prevention Assembly Certification Report**

Date of Test: 5-3-10 CONTACT PERSON: Alley  
 Name of Premises: BURGER KING TELEPHONE #: 786-258-3170  
 Street Address: 2201 UNIVERSITY DR WATER ACCOUNT#: \_\_\_\_\_  
 Location of Assembly: EAST SIDE OF SIDEWALK WATER METER #: 06501912  
 Type of Assembly: RP  DC  PVB  Other: \_\_\_\_\_ Size: 2  
 Manufacturer: WATTS Model: 009 Serial #: A 18858  
 Inlet Line Pressure: 65 psi Permit #: \_\_\_\_\_

CHECK VALVE #1	RELIEF VALVE	CHECK VALVE #2	PRES VACUUM BREAKER
<input type="checkbox"/> Leaked <input checked="" type="checkbox"/> Closed tight diff. pressure across check valve <u>6.2</u> psi <input type="checkbox"/> Shut off Valve held <input type="checkbox"/> leaks <input type="checkbox"/>	Opened at: <u>2.2</u> psi <input type="checkbox"/> did not open <input type="checkbox"/>	<input type="checkbox"/> Leaked <input checked="" type="checkbox"/> Closed tight diff. pressure across check valve <u>1.3</u> psi	Air inlet opened at _____ psi <input type="checkbox"/> Did not open <input type="checkbox"/> Check Valve Leaked <input type="checkbox"/> held at _____ psi <input type="checkbox"/> backpressure evaluation <input type="checkbox"/>
Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: Rubber kit <input type="checkbox"/> RV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>	Repair: Explain below <input type="checkbox"/> Cleaned only <input type="checkbox"/> Cleaned and replaced: Rubber kit <input type="checkbox"/> CV assembly <input type="checkbox"/>

**TEST AFTER REPAIRS**

Diff. pressure across CV _____ psi	Opened at: _____ psi	Diff. pressure across CV _____ psi	Air inlet _____ psi Check valve _____ psi
------------------------------------	----------------------	------------------------------------	--

NOTE: ALL REPAIRS MUST BE COMPLETED WITHIN TEN (10) DAYS.  
 REMARKS: \* IN GREEN AREA

Name of Plumbing Company: ALL COUNTY PLUMBING CONTRACTORS INC  
 Passed  Failed  Repair Date: \_\_\_\_\_ Contractor Lic. No: CECA39956  
 Test Equip. Used: MIDWEST 2830 Calibration Date: 11/4/09 Test Kit Serial #: 275313  
 I HEREBY CERTIFY THIS DATA IS ACCURATE AND REFLECTS THE PROPER OPERATION AND MAINTENANCE OF THE ASSEMBLY.  
 CERTIFIED TESTER SIGNATURE: [Signature] PRINT NAME: WILLIAM WILSON  
 BACKFLOW TESTER CERTIFICATE #: ASSN 47806 EXPIRATION DATE: 2/28/2013  
 QUALIFIER'S SIGNATURE: [Signature] LICENSE NO: CFC039956

ANY REPORT SUBMITTED WITHOUT THE ACCOUNT AND METER NUMBER WILL NOT BE ACCEPTED.

(Source: Retrieved From the Dumpster)

We obtained and recorded the serial numbers of all Port owned backflow test kits on-hand as of September 5, 2018 (**Figure 5**). We also noted that these test kits are now stored in a locked cage room at the Port Maintenance Section.

*Figure 5: Backflow Preventer Test Kits at the Port*



Make: Mid-West  
Model: 820  
Serial # 275313



Make: Mid-West  
Model: 830  
Serial # 122756



Make: Mid-West  
Model: 830  
Serial # 11070503



Make: Mid-West  
Model: 830  
Serial # 11070504



Make: WATTS  
Model: TK-9A  
Serial # 0065261



Make: Mid-West  
Model: 830  
Serial # 93916



Make: WATTS  
Model: TK-9A  
Serial # 0120492

*(Source: Auditor Onsite Visit to Port Everglades Public Works Office)*

As can be observed in **Figures 3** and **4**, test kits with serial numbers matching the ones owned by the Port were used to certify non-County backflow assemblies. Thus County-owned test kits were used by Former Employee 1 and Former Employee 2 for non-County purposes.

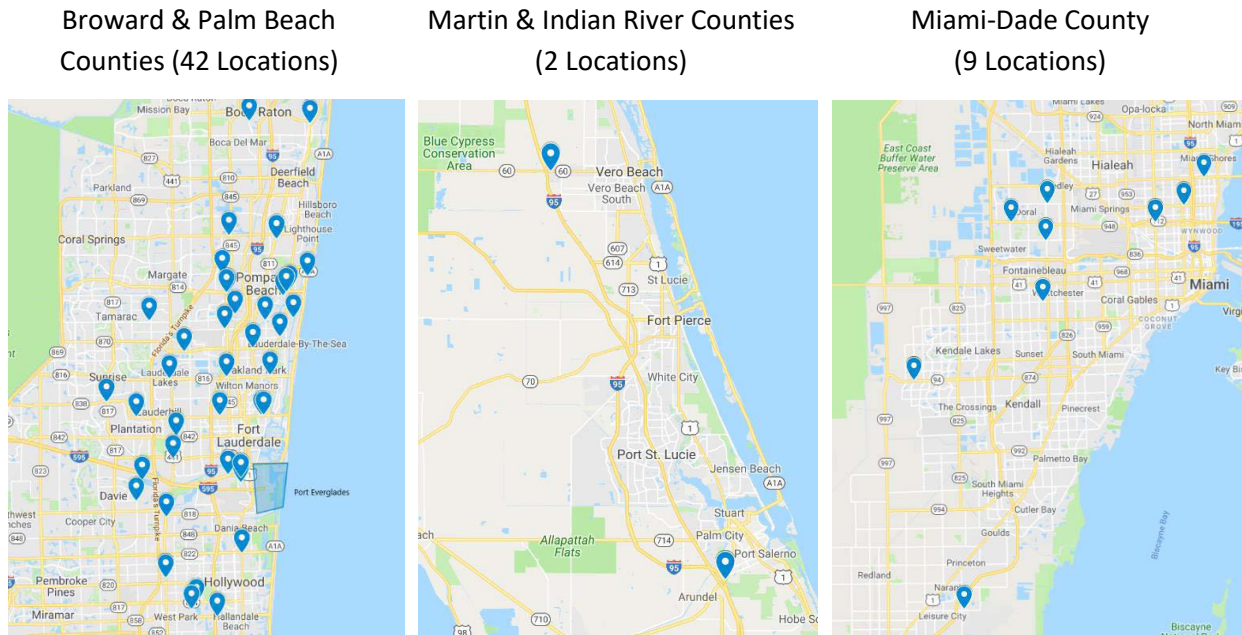
To assist in evaluating the extent of unauthorized use of test kits, we obtained a list of all backflow assembly devices that were certified using Port owned test kits from BSI Online Backflow Solutions, Inc. (BSI Online) and Miami-Dade County. BSI Online provides web-based tracking and monitoring of the backflow device certification processes in order to increase backflow testing compliance. Their tracking system includes the serial numbers of test kits used, date of testing, technician performing the test, the backflow assembly device, and the physical address where the testing was performed. BSI Online is commonly used by governmental organizations, including Broward County's Water and Wastewater Services Division. Miami-Dade County maintains its own tracking system for backflow device certification processes.

Upon inspection of data provided by BSI Online and Miami-Dade County, we noted that 156 backflow assembly device certifications were issued by All County Plumbing using test kits



belonging to the Port from March 2014 to March 2018, at 53 unique locations throughout Miami-Dade, Broward, Palm Beach, Martin, and Indian River counties. We noted that none of these locations were within the Port boundary as shown in **Figure 6**. (See lists in Appendices A and B).

*Figure 6: Maps of Addresses where Certificates Using Port Owned Test Kits Were Issued*



*(Source: Prepared by the Office of the County Auditor with information obtained from BSI Online Report and Miami Dade County.)*

In addition, we contacted ten property owners with the most recently issued certificates from BSI Online’s report (See Appendix A) to determine whether the tests were actually performed, and the amount paid for each test. **Figure 7** shows the survey results.

Figure 7: Backflow Testing Survey Results

Sample	Date	Customer Name	Physical Address	Response
1	1/21/18	Burger King	2319 N Federal Hwy Hollywood 33020	Does not recall test being performed.
2	1/9/18	Carver Ranches Day Center	2201 SW 42nd Ave Hollywood 33023	No response.
3	1/6/18	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr Pompano Beach 33069	Does not recall test being performed.
4	12/18/17	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd Oakland Park 33334	No response.
5	12/13/17	Chi Yacht Refinishing, Inc	2615 SW 2 Ave Fort Lauderdale 33315-3115	Recall paying \$45 for testing.
6	12/13/17	General Hardwoods & Millwork, LLC	2619 SW 2 Ave Fort Lauderdale 33315	Recall paying \$45 for testing.
7	12/13/17	Hydraulic Machine Service	237-239 SW 31 St Fort Lauderdale 33315	No response.
8	11/30/17	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd. Pompano Beach 33060	No response.
9	10/10/17	Goldco, LLC	1725 E Sunrise Blvd Fort Lauderdale 33304-3014	No response.
10	8/2/17	Shop Smart	680 NE 33rd St, Pompano Beach, FL 33064	No response.

*(Source: Prepared by the Office of the County Auditor with information obtained from 10 property owners selected from BSI Online Report.)*

Based on responses received, it appears that All County Plumbing charged customers \$45 per certification using County-owned test kits.

Based on the information discussed above, we conclude that Former Employee 1 used County-owned backflow test kits for personal business from at least 2009 as shown in **Figure 3**, until his retirement in May 2016, and for almost two years after retirement, until March 2018 as shown in **Figure 7**. The information presented above is inherently limited, as many cities still rely on a manual, paper processes to record backflow assembly testing and this activity would not be recorded in BSI Online's or Miami-Dade County's tracking database. We were able to identify, at a minimum, 156 occasions between March 2014 and March 2018, where All County Plumbing used Port-owned backflow test kits for non-County purposes. Assuming each customer was charged \$45 as advertised on the flyer and as indicated in survey responses received, we estimate that All County Plumbing received a minimum of \$7,020 using County-owned equipment during our testing period. Therefore, we substantiate this allegation.

**Allegation 2: Port’s backflow assembly devices, which prevent public water supply contamination, were not certified annually as required by city, county, state, and federal requirements and standards. – Substantiated**

We conclude that backflow assembly devices at the Port were not certified annually as required. The Plumbing Supervisor explained that, on numerous occasions, he attempted to obtain records of backflow assembly device certifications from Port staff but was unsuccessful.

On December 12, 2018, we met with the Port Everglades Construction Manager to understand the backflow assembly device certification process at the Port. He stated that prior to 2017, backflow assembly devices were tested and certified by the Port’s plumbing staff, and the certificates were retained by the Port. In 2018, the Port contracted with Hans Johnson Plumbing & Air, LLC (Hans Johnson) to perform the backflow testing for all backflow assembly devices within the Port property. However, all backflow assembly devices were not tested.

We reviewed the Hans Johnson purchase order dated February 13, 2018 and noted that they were to test and certify 500 backflow assembly devices at multiple locations at the Port, however only 197 backflow assembly devices were tested in 2018 (**Figure 8**).

*Figure 8: Hans Johnson Purchase Order for Backflow Certifications at the Port Everglades*

<b>BROWARD COUNTY</b> FLORIDA		Board of County Commissioners <b>PURCHASE ORDER</b> Broward County, Florida www.broward.org	<b>PURCHASE ORDER:</b> PEO1800062 Contract Number Y211298381_1	Change Number 0 Order Date 2/13/2018	Change Date  Page No. 1 of 1	
Supplier: HANS JOHNSON PLUMBING & AIR LLC 11230 NW 27 Street PLANTATION FL 33323		Ship To: PORT EVERGLADES 2101 EISENHOWER BOULEVARD PUBLIC WORKS SECTION FORT LAUDERDALE FL 33316 Attn: See Detail Below				
Supplier Contact: Supplier Phone: Supplier Email: Supplier Number: VC00022650		Bill To: Broward County Commission P.O. Box 14740 Fort Lauderdale, FL 33302-4740 Attn: Accounts Payable Or email to AccountsPayable@Broward.org  Florida State Sales Tax Exemption Number: 85-80138214DC-7 Federal Tax Identification Number: 58-6006531				
To conduct inspections for Port Everglades Backflow Preventers at various locations.						
Line	Due Date	Item ID	Quantity	Unit	Unit Price	Extended Price
1	02/13/2018	Y211298381_1_301	500	EA	\$50.0000	\$26,000.00
Description: Backflow Preventer Certification-Test (Annual)						\$22,000.00
Total Amount:						\$25,000.00
APPROVED <i>[Signature]</i> Work Completed as Requested		RECEIVED MAY 3 - 2018 PUBLIC WORKS		-INITIAL PAYMENT-		
Freight Terms: FOB DEST Ship Via: COMMON Payment Terms: N30	Requisition Number: PEO0000764 Requestor: PEGGY CADEAUX Requestor Phone: 954468-3543	Buyer Name: Amy Almanzar Buyer Phone: 954357-5943 Buyer Email: Supplier Instructions: * Important: NO C.O.D.'s or COLLECT shipments will be accepted				
Authorized By:  UNAUTHORIZED On behalf of Brenda J. Billingsley, Director of Purchasing	Digitally signed by DN: cn =		Date Authorized: 2/13/2018			

(Source: Broward County Purchasing Department)

We requested all backflow assembly device certifications from 2013 to 2018 from the Port Construction Manager. The Port Construction Manager explained that in late 2017, he took on the responsibility of managing the backflow assembly device certification process after noticing the lack of backflow assembly device certifications on file while researching requests for these certifications from the City of Fort Lauderdale.

Both the Port Construction Manager and the Port Project Manager individually indicated they initiated the action to outsource device certifications to Hans Johnson. We were unable to verify who initiated this action. Under the agreement, Hans Johnson was to test, certify and repair backflow assembly devices throughout the Port property. The Port Construction Manager mentioned that the initial contract amount was based on his initial understanding of how many backflow assembly devices existed on Port property. He indicated that he instructed Hans Johnson to locate all backflow assembly devices on Port property and to test them. Our analysis of certifications received from the Port Construction Manager is presented in **Figure 9**.

*Figure 9: Port Backflow Assembly Device Certificates On-Hand Per Calendar Year*

Year	Certificate Count
2013	92
2014	20
2015	6
2016	0
2017	0
2018	197

*(Source: Prepared by the Office of the County Auditor with information obtained from Port Everglades Public Works Section)*

We met with the Port’s Seaport Construction office in February 2019 and obtained a geographic information systems (GIS) report which showed that the Port has 274 backflow assembly devices that require annual certification (**Figure 10**).

Figure 10: Port Backflow Assembly Device Location



● Backflow Assembly Devices at the Port

(Source: Seaport Engineering Office)

Based on the information discussed above, we conclude that backflow assembly devices at the Port, which prevent public water supply contamination, were not being tested and certified annually as required by city, county, state, and federal requirements and standards, potentially exposing Port employees, visitors, and lease holders to contaminants in their drinking water. Therefore, we substantiate this allegation.

# FINDINGS & RECOMMENDATIONS

Findings and recommendations, which are contained herein are only those that are included within this interim report. This interim report was not designed nor intended to be a detailed study of every relevant system, procedure, or transaction. Accordingly, the Findings and Recommendations presented in this interim report are not all-inclusive of areas where improvement are needed. A complete audit report will be issued at the conclusion of the audit.

## **1. The Backflow Inspection Process at Port Everglades is Inadequate and Has Not Been Managed.**

Port management has neglected oversight of backflow device inspections. Many inspections were not done, which created a public health and safety issue at the Port. We noted the following:

- A. Backflow assembly devices are not certified annually to ensure compliance with regulations and standards and to safeguard public health and safety at the Port. (See Finding No. 2)
- B. Backflow preventer test kits are not calibrated annually to ensure accurate readings when testing backflow preventer assembly devices. (See Finding No. 5)
- C. Backflow assembly device certification documentation provided by Hans Johnson was not adequately reviewed. During our inspection of certifications, we noted the following:
  - i. Fifty-one of 262 (19%) of backflow certifications (both passed and failed) reviewed did not have the correct test kit information recorded on the certificate. No action was taken by Port staff.
  - ii. Fifty-four of 197 (27%) initial certifications issued by Hans Johnson Plumbing, LLC did not have a test result recorded on the certification, so management is not aware of whether the device passed or failed and needed retesting. No action was taken by Port staff.
  - iii. Nine of 65 (14%) backflow assemblies that required re-testing did not have a final re-test date recorded on the certifications, so management is not aware of when the 12-month certification period begins and ends. No action was taken by Port staff.
- D. The responsibility for ensuring inspections and certifications were performed was not formally assigned to appropriate personnel by Port's management. The Project Manager assumed the responsibility of trying to obtain the certifications because the City of Fort

Lauderdale had been asking for them. However, management had not assigned this responsibility to him, and his apparent purpose was to satisfy the City of Fort Lauderdale's requests. The Port Maintenance Manager stated that he contacted the Project Manager to get the certifications, and when he realized there was an issue, he worked with the Project Manager to outsource the certifications. However, as noted in this report, the contractor did not inspect all backflow assembly devices, nor did they adequately complete the certification in many instances. Also, as previously discussed, we were unable to substantiate that the Port Maintenance Manager initiated the outsourcing decision.

It is essential that responsibility for ensuring backflow assembly certifications are adequately completed on a timely basis and be assigned to a specific position, and that position should be held accountable. This position should be required to provide periodic reports to Port Management. Because of the lack of assigned responsibility, accountability for the lack of inspection and certification is precluded.

By outsourcing this function, Port staff could be relieved of the time involved in the certification process, except for appropriate monitoring. Action should be taken immediately by Port staff.

**We recommend** management immediately outsource the function of backflow prevention device certification. Management should monitor certifications to ensure they are performed timely and adequately.

## **2. Backflow Assembly Devices are not Certified Annually to Ensure Compliance with Regulations and Standards and to Safeguard Public Health and Safety at Port Everglades.**

During our review of Backflow assembly Device Testing, we noticed the following concerns:

- A. Between calendar years 2013 and 2018, Port's backflow assembly devices were not consistently tested and certified annually as required by local, state, and federal regulations. Backflow certificates are issued upon the completion of testing relief valves on a backflow assembly device. The certificates indicate whether the device passed or failed and is valid for one year.
- B. All backflow assembly devices are required to be certified at least annually as required by the Port's Cross Connection Control Plan. Florida Administrative Code, Section 62.555.360 requires that management maintain records of the installation, inspection/testing, and repair of backflow protection. **Figure 11** shows the testing



certificates provided by the Port for backflow assembly devices from calendar year 2013 through 2018.

*Figure 11: Percentage of Backflow Devices Certified Per Calendar Year*

Year	# of Backflow Devices Certified	# of Port Backflow Assembly Devices	% Not Tested	Number Not Tested
2013	92	274	66%	182
2014	20	274	93%	254
2015	6	274	98%	268
2016	0	274	100%	274
2017	0	274	100%	274
2018	197	274	28%	77

*(Source: Prepared by the Office of the County Auditor with information obtained from Port Everglades Public Works Section)*

In 2018, management contracted with Hans Johnson to certify backflow assembly devices. Upon testing 197 devices, 59 (30%) devices initially failed the test indicating problems may have existed for multiple years prior. Failure to certify backflow assembly devices increases the risk of water contamination affecting public health and safety at the Port. Devices that fail the inspection increase the probability of contamination. Without proper inspections and record retention of backflow preventer certifications, it appears that management did not perform their due diligence in complying with Florida Administrative Code (F.A.C) 62-555.360-1, Section III, D, which states:

*“Assemblies being required at or for non-residential service connections pursuant to Table 62-555.360-2, which appears at the end of Rule 62-555.360, F.A.C., shall be tested after installation or repair and at least annually thereafter and shall be repaired if they fail to meet performance standards...”*

- C. No third-party service is used to report and track backflow assembly certification. Such a service is routinely used by local governments. Use of the service provide a formal mechanism to track certification to ensure they are completed timely. Additionally, certification data would be available to the City of Fort Lauderdale, which has a role in oversight of device certification. Without use of the database, monitoring of certificates by all parties is more difficult, and could facilitate some backflow devices not being tested.

Annual testing and certification are required to ensure the safety of the drinking water. This is especially important at the Port, which contains old pipes. By not ensuring the backflow

prevention devices are working properly, the health and safety of visitors and employees are at risk.

**We recommend** management:

- A.1. Identify and test all backflow assembly devices on the Port at least annually.
- A.2. Keep adequate records of the installation, testing, repair, and certification of backflow assembly devices.
- B. Consider using technology (software, database) or a third-party service to track backflow assembly certifications.

### **3. Former Employees Used County-owned Backflow Test Kits a Minimum of 156 times for Personal Financial Gain.**

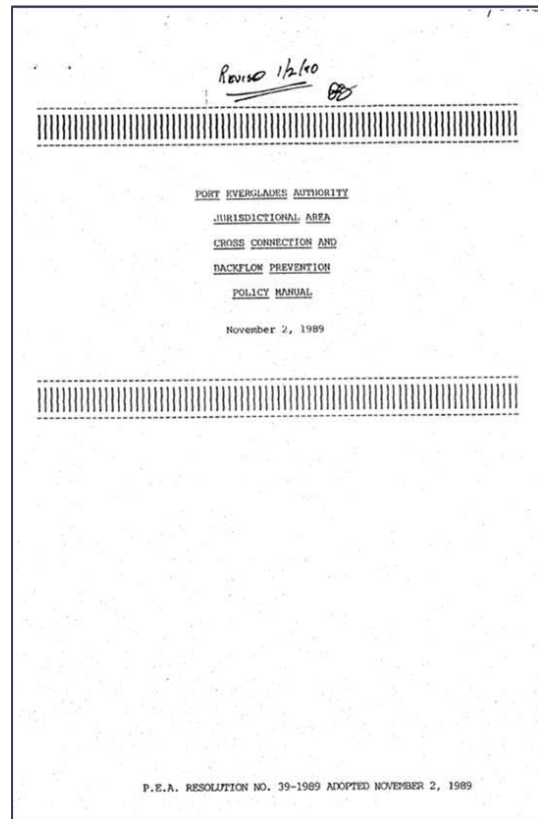
Former employees used County-owned backflow test kits a minimum of 156 times for an employee-owned company, All County Plumbing. Using BSI Online's tracker and Miami-Dade County's tracking database, we identified 156 certifications issued to 53 unique addresses during the period March 2014 to March 2018. None of the 53 addresses were at the Port Everglades property. Broward County's Code of Ordinances, Section 26-67 prohibits the use of public positions for personal gain. Using public property for personal gain violates the public's trust and is a misuse of County assets. Using the average cost of \$45 per backflow certificate issued by the former employee, we estimate the former employee billed at least \$7,020 to private businesses and individuals not affiliated with Broward County and the Port. It should be noted that many cities still use paper records which would not be counted in our analysis using BSI Online's tracker and Miami-Dade County's data. Therefore, it is possible, if not likely that the actual amount of misuse is more than we identified.

**We recommend** management ensure appropriate procedures are in place to ensure that test kits are used only for authorized purposes at the Port.

#### 4. Port Everglades' Backflow Prevention Policy Manual Has not Been Updated for 30 years.

The Port Everglades Authority Jurisdictional Area Cross Connection and Backflow Prevention Policy Manual (Cross-Connection Control Plan) has not been updated for 30 years to ensure compliance with current industry standards, laws and regulations, and City of Fort Lauderdale's contract requirements. The Cross-Connection Control plan, as seen in **Figure 12**, is used by management to detect and prevent cross connections and back siphoning that can create imminent and substantial danger to public health from contamination. According to the 2002 "Large User Agreement to Provide Water and Water and Wastewater Billing Services to Broward County's Port Everglades Department," the County shall be responsible for complying with all federal, state, and local regulations regarding water quality on the county side of the meters including, but not limited to, proper programs covering cross connection control, line flushing and bacteriological sampling and testing. Failure to periodically update the Cross-Connection Control plan increases the risk of non-compliance with all federal, state and local regulations.

*Figure 12 – Port Everglades Authority Jurisdictional Area Cross Connection and Backflow Prevention Policy Manual dated November 2, 1989*



*(Source: Seaport Engineering Office)*


**We recommend** management review and update the Cross-Connection Control plan for the Port.

### 5. Backflow Preventer Test Kits Were Not Calibrated Annually to Ensure Accurate Readings when Testing Backflow Preventer Assemblies.

During our inspection of the Port’s backflow preventer test kits, we noted that four of seven (57%) backflow test kits did not have current or previous calibration reports available (**Figure 13**). Of the remaining three test kits, two certifications expired on October 19, 2017, and one expired on January 30, 2018. Therefore, at the time of our testing, there were zero Port test kits that could be used to certify backflow assembly devices at the Port. It appears the Port paid \$99 for each test kit calibration in the past. (See Appendix C)

Industry standards require that field test equipment be calibrated annually. Failure to maintain appropriate records of the annual calibration of backflow preventer test kits reduces management’s ability to rely on test results and certificates issued using these kits, increasing risks to public health and safety.

*Figure 13 – Calibration Report for Backflow Assembly Test Kit 11070503 dated 1/30/2017*

		<b>Calibration Report</b>				
Instrument Specialties, INC. 3885 ST. JOHN'S PARKWAY SANFORD FLORIDA 32771		(407) 324-7800	Date: 1/30/2017			
Customer: BROWARD COUNTY						
Mfg. Model Serial No. Midwest #830 SN: 11070503		Location	Owner			
Calibrated: 1/30/2017		Date Calibration Due: 1/30/2018				
Conditions						
Repair Type	Recalibration	TEMP DEG. F	68			
Measurement	0-15 PSID	%RH	41			
Test Value		Results	Difference	After CAL	Error	Tolerance
A	1	1	0	0	0	+/- 0.2
B	2	2	0	0	0	+/- 0.2
C	5	5	0	0	0	+/- 0.2
D	7	7	0	0	0	+/- 0.2
Comments						
Standards Used						
Seeger Standards, Test Gauge, Serial #2951		NIST NO		Due Date		
		4335-42426		3/2/2017		
Environmental Limits of Standards Used: Temperature 40 to 110 DEG.F. %RH 90						
Calibrated By <i>Scott Causseaux</i>						
Steve Manning Service Manager						
<p>We warrant the parts and labor supplied to be free of defects for a period of 30 days. This warranty is in lieu of all other warranties whether written or implied. (Except as noted below)</p> <p>Operating Kits without filter elements and gaskets can result in foreign particles entering the diaphragm chamber and clogging the valves. Although the kit had a normal calibration, ISI will not be responsible should the valves become clogged due to foreign particles.</p>						
Page 1						

*(Source: Auditor Onsite Visit to Port Everglades Public Works Office)*

**We recommend** management refrain from the use of any of the test kits until they are calibrated. Management should calibrate backflow preventer test kits annually. Copies of the calibration report should be retained to ensure their valid use in testing backflow assembly devices.

## **6. The Number of Backflow Preventer Test Kits Purchased is Excessive**

During our audit, we were able to locate seven backflow preventer test kits that had been purchased. Because of the lack of adequate purchasing practices at the Port, we are unable to determine whether additional test kits may have been purchased.

The Port has no need for seven test kits, even if Port staff annually tested and certified all backflow prevention devices. The Port's Director of Operations indicated that probably two would be sufficient, but three at the most. Therefore, at least four unnecessary test kits were purchased. Employee's interviewed at the Port could not explain why so many kits were needed for Port business. Current prices for those kits are approximately \$1,730 each (See Appendix D). Therefore, Port staff spent approximately \$6,920 unnecessarily.

Port management has a responsibility to ensure public funds are used in a wise and prudent manner, and only for County business. This was not the situation for the purchase of these backflow prevention test kits.

**We recommend** Port management surplus excess test kits to the Division of Water and Wastewater or other County agencies as needed.

# APPENDIX A

## BSI Online's Tracking Report of Backflow Preventer Assemblies Certified Using Port Owned Test Kits. (Source: BSI Online Tracking)

Test Kit Serial Number	Tested Date	Testing Company Name	Tester Name	Customer Name	Device Physical Address
122756	6/15/2017	All County Plumbing Contractors Inc	William, Woessner	G&G Foods Inc	8905 20th St, Vero Beach, 32966
122756	3/4/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
122756	3/4/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
122756	8/2/2017	All County Plumbing Contractors Inc	William, Woessner	704 N Ocean Blvd Association Inc	704 N Ocean Blvd, Pompano Beach, 33062
122756	8/2/2017	All County Plumbing Contractors Inc	William, Woessner	704 N Ocean Blvd Association Inc	704 N Ocean Blvd, Pompano Beach, 33062
122756	9/21/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2700 Hammondville Rd, Pompano Beach, 33069
122756	9/21/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2700 Hammondville Rd, Pompano Beach, 33069
122756	7/11/2017	All County Plumbing Contractors Inc	William, Woessner	The Dugout	340 SE 15 St, Pompano Beach, 33062
122756	4/1/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2500 W Atlantic Ave, Pompano Beach, 33069
122756	4/1/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2500 W Atlantic Ave, Pompano Beach, 33069
122756	3/5/2017	All County Plumbing Contractors Inc	William, Woessner	Pembroke Commerce Center II, Ltd	3900 Pembroke Rd, Pembroke Park, 33021
122756	6/4/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	3801 W Broward Blvd, Fort Lauderdale, 33312
122756	6/4/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	3801 W Broward Blvd, Fort Lauderdale, 33312
122756	7/11/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's Restaurant Corp	3300 W Commercial Blvd, Fort Lauderdale, 33309
122756	5/6/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #16438	4003 W Oakland Park Blvd, Lauderdale Lakes, 33312
122756	5/6/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #16438	4003 W Oakland Park Blvd, Lauderdale Lakes, 33312
122756	2/6/2017	All County Plumbing Contractors Inc	William, Woessner	Shop Smart	680 NE 33rd St, Pompano Beach, 33064
122756	6/21/2017	All County Plumbing Contractors Inc	William, Woessner	Shop Smart	680 NE 33rd St, Pompano Beach, 33064
122756	3/4/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
122756	3/4/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
122756	6/19/2017	All County Plumbing Contractors Inc	William, Woessner	Jaea Restaurant Holdings LLC	865 N Federal Hwy, Boca Raton, 33432
122756	7/11/2017	All County Plumbing Contractors Inc	William, Woessner	Lester M Entin Associates	21300 St Andrews Blvd, Boca Raton, 33433
122756	8/22/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	1091 W Hallandale Beach Blvd, Hallandale Beach, 33009

## Audit of Backflow Assembly Devices & Testing at Port Everglades

122756	8/22/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	1091 W Hallandale Beach Blvd, Hallandale Beach, 33009
122756	4/1/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	5000 S State Rd 7, Fort Lauderdale, 33309
122756	4/1/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	5000 S State Rd 7, Fort Lauderdale, 33309
122756	6/21/2017	All County Plumbing Contractors Inc	William, Woessner	Ninotchka Naves	1745 N University Dr, Unit B, Plantation, 33322
122756	4/1/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	6125 W Sunrise Blvd, Plantation, 33313
122756	3/5/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	1267 S State Rd 7, North Lauderdale, 33068
122756	3/5/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King	1267 S State Rd 7, North Lauderdale, 33068
122756	6/20/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's #8179	7115 W McNab Rd, North Lauderdale, 33068
122756	8/22/2017	All County Plumbing Contractors Inc	William, Woessner	Wendys	1631 E Sunrise Blvd, Fort Lauderdale, 33304-2355
122756	1/15/2017	All County Plumbing Contractors Inc	William, Woessner	Chi Yacht Refinishing, Inc	2615 SW 2 Ave, Fort Lauderdale, 33315-3115
122756	8/22/2017	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
122756	8/22/2017	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
122756	10/10/2017	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1725 E Sunrise Blvd, Fort Lauderdale, 33304-3014
122756	10/9/2017	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
122756	10/9/2017	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
122756	1/15/2017	All County Plumbing Contractors Inc	William, Woessner	Hydraulic Machine Service	237-239 SW 31 St, Fort Lauderdale, 33315
122756	8/4/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	2031 E Oakland Park Blvd, Oakland Park, 33306
122756	8/4/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	2031 E Oakland Park Blvd, Oakland Park, 33306
122756	2/3/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's	943 W State Rd 84, Fort Lauderdale, 33315
122756	6/17/2017	All County Plumbing Contractors Inc	William, Woessner	Jaea Restaurant Holdings LLC	2660 Dave Rd, Davie, 33314
122756	9/21/2017	All County Plumbing Contractors Inc	William, Woessner	Wrest 42 FL State Rd 7,LLC	499 N State Rd 7, Unit #1, Margate, 33063-4560
122756	10/9/2017	All County Plumbing Contractors Inc	William, Woessner	Wrest 42 FL State Rd 7,LLC	499 N State Rd 7, Unit #2, Margate, 33063-4560
275313	9/10/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
275313	11/25/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
275313	9/10/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
275313	11/25/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
275313	5/22/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
275313	5/22/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
275313	12/14/2016	All County Plumbing Contractors Inc	William, Woessner	The Dugout	340 SE 15 St, Pompano Beach, 33062
275313	1/20/2018	All County Plumbing Contractors Inc	William, Woessner	George Simmons	330 SE 15 St, Pompano Beach, 33062

## Audit of Backflow Assembly Devices & Testing at Port Everglades

275313	11/30/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
275313	11/30/2017	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	12/10/2016	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/6/2018	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
275313	1/9/2018	All County Plumbing Contractors Inc	William, Woessner	Carver Ranches Day Center	2201 SW 42nd Ave, Hollywood, 33023
275313	1/9/2018	All County Plumbing Contractors Inc	William, Woessner	Carver Ranches Day Center	2201 SW 42nd Ave, Hollywood, 33023
275313	5/21/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #16438	4003 W Oakland Park Blvd, Lauderdale Lakes, 33312
275313	5/21/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King #16438	4003 W Oakland Park Blvd, Lauderdale Lakes, 33312
275313	4/30/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
275313	4/30/2014	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
275313	12/13/2017	All County Plumbing Contractors Inc	William, Woessner	Chi Yacht Refinishing, Inc	2615 SW 2 Ave, Fort Lauderdale, 33315-3115
275313	12/13/2017	All County Plumbing Contractors Inc	William, Woessner	General Hardwoods & Millwork, LLC	2619 SW 2 Ave, Fort Lauderdale, 33315
275313	11/24/2015	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
275313	11/24/2015	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
275313	12/13/2017	All County Plumbing Contractors Inc	William, Woessner	Hydraulic Machine Service	237-239 SW 31 St, Fort Lauderdale, 33315
275313	1/21/2018	All County Plumbing Contractors Inc	William, Woessner	Burger King	2319 N Federal Hwy, Hollywood, 33020
275313	10/22/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King # 73	3951 SW 64 Ave, Davie, 33314
275313	10/22/2017	All County Plumbing Contractors Inc	William, Woessner	Burger King # 73	3951 SW 64 Ave, Davie, 33314
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd, Oakland Park, 33334
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd, Oakland Park, 33334



## Audit of Backflow Assembly Devices & Testing at Port Everglades

275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd, Oakland Park, 33334
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd, Oakland Park, 33334
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 E Commercial Blvd, Oakland Park, 33334
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 W Oakland Park Blvd, Oakland Park, 33334
275313	12/18/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's of Northeast Florida, Inc	1049 W Oakland Park Blvd, Oakland Park, 33334
275313	11/26/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's	7700 SW Lost River Rd, Stuart, 34997
275313	12/9/2016	All County Plumbing Contractors Inc	William, Woessner	Wendys	930 W Cypress Creek Rd, Fort Lauderdale, 33309
275313	10/24/2017	All County Plumbing Contractors Inc	William, Woessner	Wendys	930 W Cypress Creek Rd, Fort Lauderdale, 33309
275313	12/6/2017	All County Plumbing Contractors Inc	William, Woessner	Wendy's	943 W State Rd 84, Fort Lauderdale, 33315
11070503	7/18/2016	All County Plumbing Contractors Inc	William, Woessner	G&G Foods Inc	8905 20th St, Vero Beach, 32966
11070503	3/10/2016	All County Plumbing Contractors Inc	William, Woessner	Farm Stores #3713	1621 S Cypress Rd, Pompano Beach, 33060
11070503	12/17/2015	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
11070503	11/16/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
11070503	12/17/2015	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
11070503	11/16/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King #00055	40 N Federal Hwy, Pompano Beach, 33062
11070503	3/14/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
11070503	3/14/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King #14576	2350 W Atlantic Blvd, Pompano Beach, 33069
11070503	9/29/2016	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2700 Hammondville Rd, Pompano Beach, 33069
11070503	9/29/2016	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2700 Hammondville Rd, Pompano Beach, 33069
11070503	4/14/2016	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2500 W Atlantic Ave, Pompano Beach, 33069
11070503	4/14/2016	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	2500 W Atlantic Ave, Pompano Beach, 33069
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	JAEA Restaurant Holdings LLC	1840 E Atlantic Blvd., Pompano Beach, 33060
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069

## Audit of Backflow Assembly Devices & Testing at Port Everglades

11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
11070503	12/18/2015	All County Plumbing Contractors Inc	William, Woessner	Cypress Bend Condo #3	2205-2209 S Cypress Bend Dr, Pompano Beach, 33069
11070503	10/2/2016	All County Plumbing Contractors Inc	William, Woessner	Pembroke Commerce Center II, Ltd	3900 Pembroke Rd, Pembroke Park, 33021
11070503	6/28/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	3801 W Broward Blvd, Fort Lauderdale, 33312
11070503	6/28/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	3801 W Broward Blvd, Fort Lauderdale, 33312
11070503	9/2/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's Restaurant Corp	3300 W Commercial Blvd, Fort Lauderdale, 33309
11070503	3/13/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
11070503	3/13/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	2200 W Sample Rd, Pompano Beach, 33073
11070503	8/5/2016	All County Plumbing Contractors Inc	William, Woessner	Lester M Entin Associates	21300 St Andrews Blvd, Boca Raton, 33433
11070503	9/4/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	1091 W Hallandale Beach Blvd, Hallandale Beach, 33009
11070503	9/4/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's Old Fashioned Hamburgers	1091 W Hallandale Beach Blvd, Hallandale Beach, 33009
11070503	5/24/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	5000 S State Rd 7, Fort Lauderdale, 33309
11070503	5/24/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	5000 S State Rd 7, Fort Lauderdale, 33309
11070503	5/24/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	6125 W Sunrise Blvd, Plantation, 33313
11070503	4/9/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	1267 S State Rd 7, North Lauderdale, 33068
11070503	4/9/2016	All County Plumbing Contractors Inc	William, Woessner	Burger King	1267 S State Rd 7, North Lauderdale, 33068
11070503	7/22/2016	All County Plumbing Contractors Inc	William, Woessner	Wendy's #8179	7115 W McNab Rd, North Lauderdale, 33068
11070503	8/29/2016	All County Plumbing Contractors Inc	William, Woessner	Wendys	1631 E Sunrise Blvd, Fort Lauderdale, 33304-2355
11070503	1/28/2016	All County Plumbing Contractors Inc	William, Woessner	Chi Yacht Refinishing, Inc	2615 SW 2 Ave, Fort Lauderdale, 33315-3115
11070503	6/6/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
11070503	8/29/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
11070503	6/6/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
11070503	8/29/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	5556 N Federal Hwy, Fort Lauderdale, 33308-3238
11070503	11/16/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1725 E Sunrise Blvd, Fort Lauderdale, 33304-3014
11070503	9/25/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
11070503	9/25/2016	All County Plumbing Contractors Inc	William, Woessner	Goldco, LLC	1445 W Sunrise Blvd, Fort Lauderdale, 33311
11070503	2/9/2016	All County Plumbing Contractors Inc	William, Woessner	Hydraulic Machine Service	237-239 SW 31 St, Fort Lauderdale, 33315

# APPENDIX B


## Miami-Dade County Report of Backflow Preventer Assemblies Certified Using Port Owned Test Kits. (Source: Miami Dade County)

Address	Date	Test By	Test Kit	Company
2 NE 79TH ST	3/08/14	WILLIAM WOESSNER	275313	ALL COUNTY PLUMBING CONTRACTORS INC
10680 NW 41ST ST	8/28/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
13485 SW 288TH ST	12/27/16	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
13485 SW 288TH ST	12/27/16	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
16203 SW 88TH ST	8/29/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
16203 SW 88TH ST	8/29/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
16203 SW 88TH ST	8/29/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
2400 NW 87TH AVE	8/28/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
2400 NW 87TH AVE	8/28/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
3805 NW 27TH AVE	8/27/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
3805 NW 27TH AVE	8/27/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
8540 NW 58TH ST	8/27/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
8540 NW 58TH ST	8/27/17	WILLIAM WOESSNER	122756	ALL COUNTY PLUMBING CONTRACTORS INC
1100 NW 54TH ST	11/20/17	WILLIAM WOESSNER	11070503	ALL COUNTY PLUMBING CONTRACTORS INC
1100 NW 54TH ST	11/20/17	WILLIAM WOESSNER	11070503	ALL COUNTY PLUMBING CONTRACTORS INC
8922 SW 24TH ST	3/31/18	WILLIAM WOESSNER	11070503	ALL COUNTY PLUMBING CONTRACTORS INC

# APPENDIX C

## Test Kit Calibration With a Unit Price of \$99. (Source: Broward County Purchasing Card Records)

### Invoice



3885 St. Johns Parkway • Sanford, FL 32771  
(407)-324-7800 • fax (407)-324-1104 • offices@isisales.com


INVOICE # 55583  
INVOICE DATE 11/18/2013  
DUE DATE 11/18/2013


PAGE: 1

HILL TO: BROWARD COUNTY PT EVERGLADES  
PUBLIC WORKS  
2101 EISENHOWER BLVD  
RAJINDRA LALLHARRY  
FT LAUDERDALE FL 33316

SHIP TO: BROWARD COUNTY PT EVERGLADES  
PUBLIC WORKS  
2101 EISENHOWER BLVD  
RAJINDRA LALLHARRY  
FT LAUDERDALE FL 33316


PURCHASE ORDER NO.		CUSTOMER ID		SALES ID		SHIPPING METHOD		PAYMENT TERMS		MASTER NUMBER	
VISA		PORTEV100				UPS		PPD		11/18/2013 39,011	
QTY. ORDERED	QTY. SHIPPED	QTY. B/O	ITEM NUMBER	DESCRIPTION	UNIT PRICE	EXTENDED PRICE					
3	3	0	830C 6 122756	SHOP CALIBRATE S/N 11070503, 275313	\$99.00	\$297.00					





Subtotal	\$297.00
Tax	\$0.00
Freight	\$39.00
Total	\$336.00
Payment Received	\$336.00
Balance Due	\$0.00
If Paid After 11/18/2013	\$0.00

*Thank You*




# APPENDIX D

Backflow Preventer Test Kit With a Web Price of \$1,732. (Source: [www.grainger.com](http://www.grainger.com))

MIDWEST INSTRUMENT

## Backflow Preventer Test Kit, 5 Valve, Includes: Carrying Case, Analog test Gauge, Pressure Gauge, (3

Item # 34CU33 Mfr. Model # 830 Catalog Page # 2904 UNSPSC # 40141616



Web Price <sup>i</sup>  
**\$1,732.46** / each

1 **Add to Cart**  
[+ Add to List](#)

Shipping  Pickup  
Expected to arrive **Mon. Mar 18.**  
Ship To 33301 ([Change](#))

☆☆☆☆ [Be the first to write a review](#)

Shipping Weight **17.0 lbs.**

Country of Origin **USA** | *Country of Origin is subject to change.*  
Note: Product availability is real-time updated and adjusted continuously. The product will be reserved for you when you complete your order.  
[More](#)

[How can we improve our Product Images?](#)

Compare

---

### Product Details

For testing reduced pressure principle, pressure vacuum breaker and double check valve backflow prevention assemblies. Features soft-seated brass  
[View More](#) <sup>v</sup>

### Technical Specs

Item	Backflow Preventer Test Kit, 5 Valve	For Use With	Grainger Items 34CU36, 34CU37, 34CU38, 34CU40, 34CU41
Includes	Carrying Case, Analog test Gauge, Pressure Gauge, (3) 5ft Hoses, NPT Adapter Fittings (Set of 12), Clear 4 ft. Bleed Tube, Certificate of Calibration.		

# APPENDIX E – Management’s Response




BERTHA W. HENRY, County Administrator

115 S. Andrews Avenue, Room 409 • Fort Lauderdale, Florida 33301 • 954-357-7362 • FAX 954-357-7360

## MEMORANDUM

**TO:** Robert Melton, CPA/CIA/CFE/CIG, County Auditor

**FROM:** Bertha Henry, County Administrator 

**DATE:** April 3, 2019

**SUBJECT:** Management's Response to Audit of Backflow Assembly Devices & Testing at Port Everglades

---

We have reviewed the above referenced County Auditor's Report, and the following is management's response to the findings and recommendations:

### *Background:*

The water distribution system within the geographic boundary of Port Everglades is owned and operated by the Broward County Port Everglades Department, distributing water supplied by the City of Fort Lauderdale through five master meters under a Large User Agreement with the City of Fort Lauderdale. The September 2002 agreement with the City extended the term of the previous agreements until 2032 and provides for the County to purchase water from the City and resell it to its customers, as well as allowing the City to act as the County's agent to provide water and billing services to Port tenants and private property owners within the Port's water service area.

As part of any water distribution system, backflow assembly devices are provided to protect the system from backflow caused by back siphoning and backpressure scenarios. While these events are not common, backflow assembly devices are installed on all water service connections such as buildings, fire protection and irrigation systems to prevent potential contamination of the public drinking water system. It is important to note that backflow assembly devices were installed on all the active water connections within the Port prior to the audit.

### *Findings and Recommendations:*

**Finding 1:** The Backflow Inspection Process at Port Everglades is Inadequate and Has Not Been Managed.

**Recommendation:** Management immediately outsource the function of backflow prevention device certification. Management should monitor certifications to ensure they are performed timely and adequately.

Broward County Board of County Commissioners  
Mark D. Bogen • Lamar P. Fisher • Beam Furr • Steve Geller • Dale V.C. Holness • Nan H. Rich • Tim Ryan • Barbara Sharief • Michael Udine  
[www.broward.org](http://www.broward.org)

**Response:** Management concurs with the recommendation. Port Everglades staff recognized in early 2018, that the certification of backflow assembly devices throughout the Port using Port staff was not meeting the requirements. Staff initiated the use of an existing County master agreement with Hans Johnson Plumbing Inc. beginning in February 2018 to conduct the testing, certification, and repair process of the devices for which the Port is responsible. Port staff should have conducted better reviews of the work product provided by the vendor, and minor errors in the reporting forms were not addressed prior to the completion of the vendor's work, which would have resulted in a concise reporting of the test results representing a pass or fail.

The responsibility for the testing of these devices has been formally transferred from the Port's Operations Division to the Seaport Engineering & Facilities Maintenance Division (SEFMD). SEFMD has issued a new work order to the County vendor to test and repair all Port backflow assembly devices. The work is scheduled to begin April 1, 2019, and is estimated to be completed within 45-60 work days. An SEFMD construction project manager familiar with these devices has been assigned responsibility to monitor the daily work progress to ensure that all tests are performed, and devices that fail the initial tests are retested after repairs are made.

**Finding 2:** Backflow Assembly Devices are not Certified Annually to Ensure Compliance with Regulations and Standards and to Safeguard the Public Health and Safety at Port Everglades.

**Recommendation:**

- A.1. Identify and test all backflow assembly devices on the Port at least annually.
- A.2. Keep adequate records of the installation, testing, repair, and certification of backflow assembly devices.
- B. Consider using technology (software, database) or a third-party service to track backflow assembly certifications.

**Response:** Management concurs with the recommendations. As noted in the response to Finding 1, Port Everglades engaged Hans Johnson Plumbing, Inc. in February 2018, to perform the required testing for 2018, and again in March 2019 for testing to satisfy this year's annual requirements. It is the Port Everglades Department's intent to continue this testing annually in conformance with the Florida Administrative Code requirements.

Over the past two years, the Port has aggressively developed a Geographical Information System (GIS) database of significant Port resources. This GIS database includes the water distribution system, valves, fire hydrants, and most recently added water meters and backflow assembly devices. The development and management of this system is ongoing. This GIS will allow staff to better manage the water distribution system by maintaining the geographical location of these facilities as well as directly linking them to the as-built drawings digitally on file. The GIS will allow staff to manage the testing of these devices and track historical results going forward. Separately, Port staff is working towards implementation of a comprehensive inventory and work order management system using Assetwork AiM software, which will also allow for scheduling and tracking of annual testing.

Port staff has met with a third-party vendor that provides an online reporting and tracking service for backflow assembly certifications. This service, already in use by the City of Fort Lauderdale as well



as Broward County Water and Wastewater Services Division, will serve as a digital database to ensure the certifications are done timely and in conformance with the requirements. It is the intent to have this service available for use no later than May 2019 to compile and track the results of this year's annual testing.

**Finding 3:** Former Employees used County-owned Backflow Test Kits a Minimum of 156 times for Personal Financial Gain.

**Recommendation:** Management ensure appropriate procedures are in place to ensure that the test kits are used only for authorized purposes at the Port.

**Response:** Management concurs with the recommendation. All the test kits have been collected and are within a management controlled locked facility. Although the Port has outsourced the testing of backflow assemblies, two calibrated and certified test kits will be maintained for internal use as required. Internal procedures including adequate management oversight have been developed to ensure that the test kits are utilized only for authorized purposes.

**Finding 4:** Port Everglades Backflow Prevention Policy Manual has not Been Updated for 30 years.

**Recommendation:** Management review and update the Cross-Connection Control Plan for Port Everglades.

**Response:** Management concurs with the recommendation. The Port Everglades Cross-Connection Control Plan will be updated to reflect current industry standards, laws, and regulations, and the current City of Fort Lauderdale Large User Agreement terms. The document is currently being updated by Port staff to address the current industry practice. It is anticipated that this document will be distributed to Port water distribution system users by Summer 2019.

**Finding 5:** Backflow Preventer Test Kits Were Not Calibrated Annually to Ensure Accurate Readings when Testing Backflow Preventer Assemblies.

**Recommendation:** Management refrain from use of any of the test kits until they are calibrated. Management should calibrate backflow preventer test kits annually. Copies of the calibration report should be retained to ensure their valid use in testing backflow assembly devices.

**Response:** Management concurs with the recommendation. While Port Everglades has outsourced performance of the required testing and repairs to the Backflow Assembly Devices, staff intends to maintain two calibrated and certified Backflow Assembly Test Kits on hand for internal use as necessary.

**Finding 6:** The Number of Backflow Preventer Test Kits Purchased is Excessive.

**Recommendation:** Port management should surplus the excess test kits to the Division of Water and Wastewater or other County agencies as needed.

**Response:** Management concurs with the recommendation, and intends to begin the internal surplus process for all but two of the test kits currently in stock.

Please do not hesitate to contact my office if you have any questions or require additional information.

cc: Monica Cepero, Deputy County Administrator  
Gretchen Cassini, Assistant County Administrator  
Glenn Wiltshire, Port Everglades Acting Chief Executive/Port Director  
Andrew Meyers, County Attorney  
Thomas Hutka, Director, Public Works Department