

2013 PROGRESS REPORT

for the Lower St. Johns River Basin Tributaries Basin Management Action Plan I

prepared by the
Division of Environmental Assessment and Restoration
Watershed Restoration Program
Florida Department of Environmental Protection
Tallahassee, FL 32399

in cooperation with the
Lower St. Johns River Tributaries Basin Working Group

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This *2013 Lower St. Johns River Tributaries BMAP I Progress Report* was prepared as part of a statewide watershed management approach to restore and protect Florida's water quality. It was prepared by the Florida Department of Environmental Protection in cooperation with the Lower St. Johns River Tributaries BMAP I stakeholders.



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LIST OF ACRONYMS AND ABBREVIATIONS

ARV	Air Release Valve
BMAP	Basin Management Action Plan
BMP	Best Management Practice
CARE	Citizen Action Response Effort
CFU	Colony Forming Unit
CIPP	Cured In Place Pipe
CMOM	Capacity, Management, Operations, and Maintenance
COJ	City of Jacksonville
DCP	Drainage Connection Program
Department	Florida Department of Environmental Protection
EQD	Environmental Quality Division
F.A.C.	Florida Administrative Code
FDOH	Florida Department of Health
FDOT	Florida Department of Transportation
FOG	Fats, Oils, and Grease
FY	Fiscal Year
GIS	Geographic Information System
HDPE	High Density Polyethylene
IMZ	Industrial/Manufacturing Zone
LSJR	Lower St. Johns River
MAPS	Managed Aquatic Plant Systems
MF	Membrane Filter
mL	Milliliter
MPN	Most Probable Number
MS4	Municipal Separate Storm Sewer System
MSMP	Master Stormwater Management Plan
NPDES	National Pollutant Discharge Elimination System
OSTDS	Onsite Sewage Treatment and Disposal System
PBTS	Performance-Based Treatment and Disposal System
PIC	Potential Illicit Connection
RSF	Regional Stormwater Facility
SCADA	Supervisory Control and Data Acquisition
SSO	Sanitary Sewer Overflow
SWIM	Surface Water Improvement and Management
TAT	Tributary Assessment Team
TMDL	Total Maximum Daily Load
WBID	Waterbody Identification

SUMMARY

TOTAL MAXIMUM DAILY LOADS

Total Maximum Daily Loads (TMDLs) are water quality targets for specific pollutants (such as fecal coliforms) that are established for impaired waterbodies that do not meet designated uses based on Florida water quality standards. The Florida Department of Environmental Protection identified 75 tributaries in the Lower St. Johns River (LSJR) Basin as verified impaired for fecal coliforms. The LSJR Tributaries Basin Management Action Plan (BMAP) I includes ten of these 75 impaired tributaries. The Department adopted TMDLs in 2006 for Miramar Creek, Butcher Pen Creek, Hogan Creek, and Goodbys Creek. The Department then adopted TMDLs in 2009 for Miller Creek, Big Fishweir Creek, Newcastle Creek, Deer Creek, Terrapin Creek, and Open Creek.

The LSJR Tributaries BMAP I was adopted by Secretarial Order in December 2009 as a plan to implement these TMDLs. This 2013 Progress Report is the fourth annual progress report for the LSJR Tributaries BMAP I, and it describes the activities implemented by the stakeholders during the reporting period of January 1, 2013 through December 31, 2013.

WATER QUALITY MONITORING AND TRENDS

The Tributaries Assessment Team (TAT) implemented the BMAP monitoring plan over the last year. Data collected from 2009 through 2013 were assessed to determine water quality trends in the ten BMAP I tributaries. Newcastle Creek, Hogan Creek, Miramar Creek, Deer Creek, and Goodbys Creek are currently exceeding the 50% improvement milestone for the BMAP. Improvements in fecal coliform concentrations have also occurred in Miller Creek, Big Fishweir Creek, Terrapin Creek, and Open Creek. Butcher Pen Creek continues to require improvement.

PROJECT AND PROGRAM IMPLEMENTATION

All of the entities continued to implement their county-wide programs. These programs include the maintenance and repair of infrastructure, which helps to reduce fecal coliform loading that can occur with faulty systems. In addition, COJ completed drainage improvement projects in the Butcher Pen Creek, Miramar Creek, Big Fishweir Creek, Deer Creek, Goodbys Creek, and Open Creek watersheds.

SECTION 1: INTRODUCTION

1.1 PURPOSE OF THE REPORT

This is the fourth annual progress report for the Lower St. Johns River (LSJR) Tributaries Basin Management Action Plan (BMAP) I and contains information for the period from January 1, 2013 through December 31, 2013. **Section 2** provides information on BMAP water quality monitoring and trends in each of the ten BMAP I tributaries. **Section 3** describes ongoing programs implemented by the responsible stakeholders in the LSJR Basin. **Section 4** through **Section 13** provide status updates for the activities conducted by each entity in each of the BMAP tributaries.

1.2 TOTAL MAXIMUM DAILY LOADS IN THE TRIBUTARIES OF THE LSJR BASIN

The LSJR Tributaries BMAP I includes the ten tributaries with adopted total maximum daily loads (TMDLs) identified as the waterbody identification numbers (WBIDs) with the worst-case condition for fecal coliforms (see **Figure 1**). This worst-case determination was made using a ranking method that establishes the severity of water quality impairment based on the number of exceedances of fecal coliform colony counts. The water quality ranking method uses the total number of fecal coliform samples in the waterbody during the period of record to categorize how many samples were over 800, 5,000, and 10,000 colony forming units (CFU). A combined rank is created based on the number of exceedances in each category. The WBIDs are sorted from worst to best to provide a guideline for assessment priorities, with the worst-case WBID ranked as number one.

The water quality criteria for fecal coliform bacteria are detailed in Rule 62-302, Florida Administrative Code (F.A.C.). The requirements for exceeding maximum fecal coliform concentrations in a Class III waterbody are stated as follows: *The most probable number (MPN) or membrane filter (MF) counts per 100 milliliters (mL) of fecal coliform bacteria shall not exceed a monthly average of 200, nor exceed 400 in 10% of samples, nor exceed 800 on any one day.* The criteria states that monthly averages shall be expressed as geometric means based on a minimum of ten samples taken over a 30-day period. However, there were insufficient data (less than ten samples in a given month) available to evaluate the geometric mean criterion for fecal coliform bacteria. Therefore, the criterion selected for the TMDLs was not to exceed 400.

The fecal coliform TMDLs for Hogan Creek, Butcher Pen Creek, Miramar Creek, and Goodbys Creek were adopted by the Florida Department of Environmental Protection in 2006. In July 2009, the Department adopted the TMDLs for Newcastle Creek, Miller Creek, Big Fishweir Creek, Deer Creek, Terrapin Creek, and Open Creek. **Table 1** lists the TMDLs adopted by rule and the pollutant load allocations for the ten BMAP I tributaries.

TABLE 1: TMDLS FOR THE LSJR TRIBUTARIES INCLUDED IN BMAP I

WBID NUMBER	WBID NAME	WASTELOAD ALLOCATION WASTEWATER (COLONIES/DAY)	WASTELOAD ALLOCATION STORMWATER (%)	LOAD ALLOCATION (%)
2235	Newcastle Creek	Not applicable	84%	84%
2252	Hogan Creek	Meet permit limits	92%	92%
2322	Butcher Pen Creek	Meet permit limits	83%	83%
2287	Miller Creek	Not applicable	92%	92%
2304	Miramar Creek	Not applicable	92%	92%
2280	Big Fishweir Creek	Not applicable	87%	87%
2256	Deer Creek	Not applicable	86%	86%
2204	Terrapin Creek	Not applicable	71%	71%
2326	Goodbys Creek	Not applicable	87%	87%
2299	Open Creek	Not applicable	60%	60%

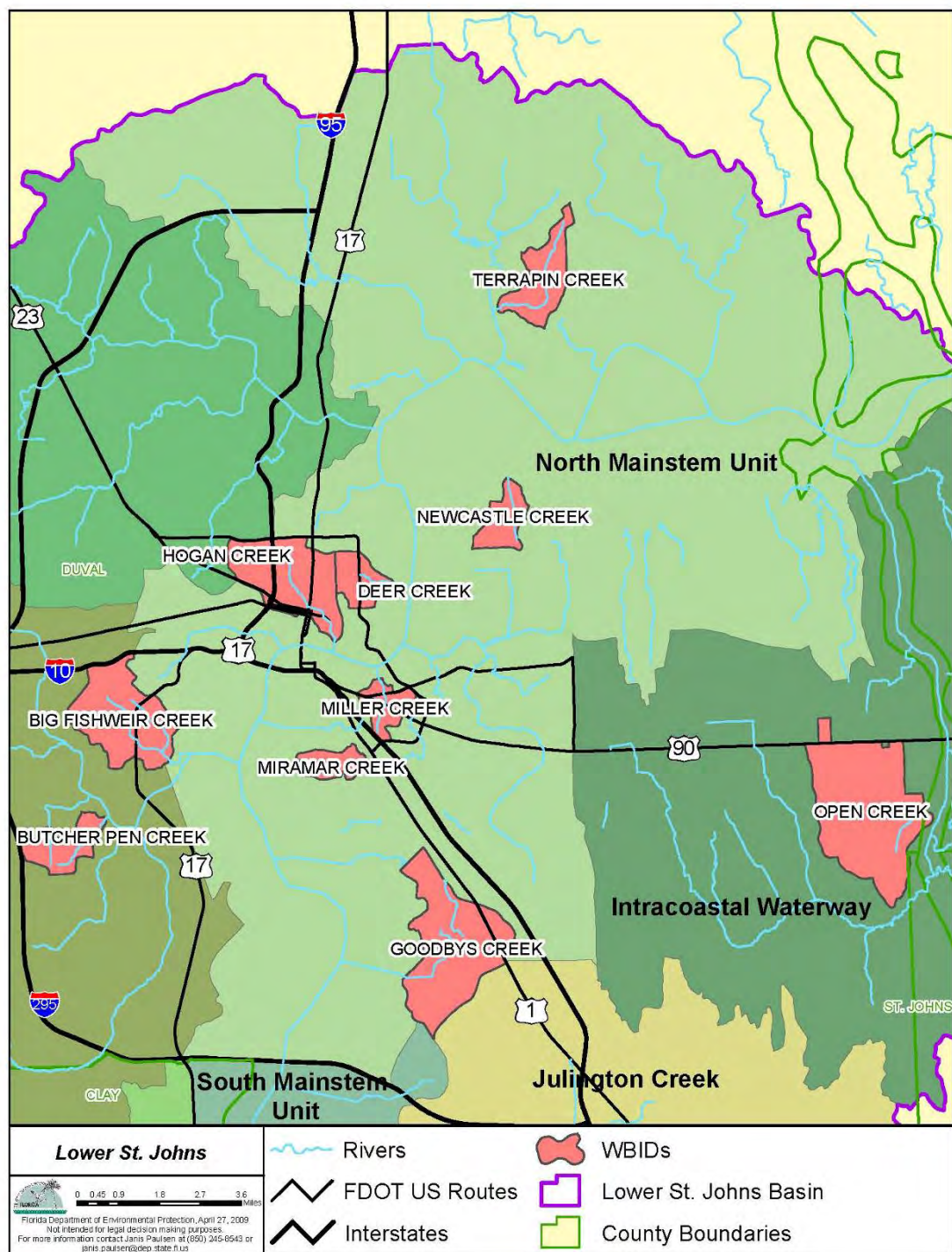


FIGURE 1: LSJR BASIN TRIBUTARIES INCLUDED IN BMAP I

1.3 RESPONSIBLE PARTIES AND KEY STAKEHOLDERS

Sources of fecal coliform loading in the ten tributaries include wastewater, septic tanks, and stormwater. The entities responsible for addressing these sources in the BMAP tributaries include the City of

Jacksonville (COJ), Florida Department of Health (FDOH) in Duval County, Florida Department of Transportation (FDOT), and JEA. The Department is also essential to the implementation of BMAP activities.

1.4 SUFFICIENCY OF EFFORT APPROACH

Fecal coliform can be highly variable and easily transported, making it difficult, in many cases, to identify the source of the bacteria. For this reason, detailed allocations were not made to each of the BMAP stakeholders. Instead, based on the potential sources in each WBID, the stakeholders were asked to identify their activities to reduce or remove bacteria sources that have been implemented since 1996 (the start of the TMDL verified period) and additional efforts that were underway or planned in five years from BMAP adoption. The stakeholders all submitted project sheets and program descriptions for the prevention, reduction, and source removal activities they conduct in each of the 10 WBIDs or on a countywide basis. The Department then used a “sufficiency of effort” approach to conduct a WBID-specific assessment of the potential sources, and cumulative projects and activities that address or eliminate fecal coliform loading. This sufficiency of effort evaluation was not an assessment of each agency’s individual activities; instead, it focused on whether the activities submitted by all the entities corresponded to the potential sources identified in the watershed and whether the total efforts were adequate to eliminate the known sources, assess unknown sources, and prevent the development of new sources.

During the sufficiency of effort evaluation, the Department reviewed the information about each WBID including the documentation of the most likely sources, a Geographic Information System (GIS) database to determine the spatial and temporal distribution of the sources, permit and water quality information, relevant field information, and the completed corrective actions. For each waterbody evaluation, the Department used the source summary for each tributary and compared it with the restoration activities to ensure that appropriate programs and activities were being implemented for the most likely sources to either decrease or eliminate the known sources, or further assess fecal coliform loadings. If any of the likely sources was not sufficiently addressed, the Department identified the need for additional actions and the appropriate stakeholder was required to implement the actions as part of the BMAP.

SECTION 2: WATER QUALITY MONITORING AND TRENDS

2.1 PROGRESS TOWARDS IMPLEMENTATION MILESTONES

The BMAP includes a five-year milestone to assess progress towards the TMDLs. The goal is that during the fifth year following the BMAP adoption (2014), the water quality data will show that the median value for the fecal coliform counts in the first four years of BMAP implementation is at least 50% of the median in the TMDL (based on the period of January 1, 1996, to June 30, 2003) in each WBID. If this 50% reduction is not achieved for each waterbody by the time of this year five analysis, additional efforts may be required in that WBID.

For this annual report, the last five years of monitoring data (2009 through 2013) were used to determine the median for each WBID. Data included in this assessment were collected as part of the BMAP monitoring plan and municipal separate storm sewer system (MS4) sampling. This period of data was compared to the TMDL medians to determine what reductions have been made thus far. As reflected in **Table 2**, Newcastle Creek, Hogan Creek, Miramar Creek, Deer Creek, and Goodbys Creek are currently exceeding this 50% improvement milestone. Improvements in fecal coliform concentrations have also occurred in Miller Creek, Big Fishweir Creek, Terrapin Creek, and Open Creek. Butcher Pen Creek continues to require improvement.

TABLE 2: PERCENT FECAL COLIFORM REDUCTION SINCE THE TMDL VERIFIED PERIOD

WBID NUMBER	WBID NAME	TMDL MEDIAN (#/100mL) (1996–2003)	MEDIAN (#/100mL) (2009–2013)	% REDUCTION
2235	Newcastle Creek	2,500	1,000	60.0%
2252	Hogan Creek	5,000	1,291	74.2%
2322	Butcher Pen Creek	2,400	2,600	-8.3%
2287	Miller Creek	5,000	4,250	15.0%
2304	Miramar Creek	7,000	1,100	84.3%
2280	Big Fishweir Creek	3,000	2,215	26.2%
2256	Deer Creek	2,765	440	84.1%
2204	Terrapin Creek	1,367	700	48.8%
2326	Goodbys Creek	3,000	520	82.7%
2299	Open Creek	1,000	550	45.0%

2.2 NEWCASTLE CREEK

The data period of 2009 through 2013 indicates that the fecal coliform concentrations are increasing in the Newcastle Creek watershed (see **Figure 2**). **Table 3** provides the data by year and shows an

increase in the percent exceedances from 2010 to 2012, with a decrease in the percent exceedances occurring in 2013. Stations 21FLJXWQARL5B and 21FLJXWQARL6 had the highest median fecal coliform concentrations of 1,100 CFU. Station ARL5B is located near the mouth of the creek and Station ARL6 is located at Fort Caroline Hills Drive.

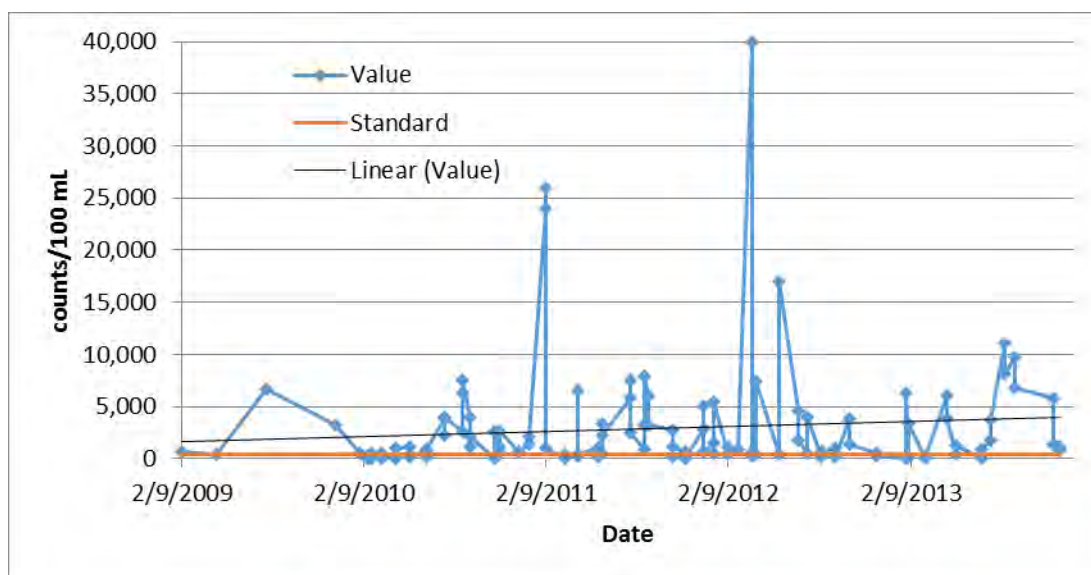


FIGURE 2: FECAL COLIFORM TRENDS IN NEWCASTLE CREEK, 2009-2013

TABLE 3: SUMMARY OF NEWCASTLE CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	4	420	6,636	1,910	2,719	4	100%
2010	36	20	7,500	660	1,364	22	61%
2011	35	0	26,000	1,400	3,632	28	80%
2012	26	160	40,000	756	3,668	21	81%
2013	22	1	11,081	1,532	3,297	16	73%

2.3 HOGAN CREEK

Fecal coliform concentrations in Hogan Creek have increased from 2009 through 2013 (see **Figure 3**). The percentage of exceedances also increased from 2011 to 2013 as shown in **Table 4**. Station 21FLJXWQHC2A had the highest median concentration of 1,400 CFU. This station is located in Confederate Park on Hubbard Street.

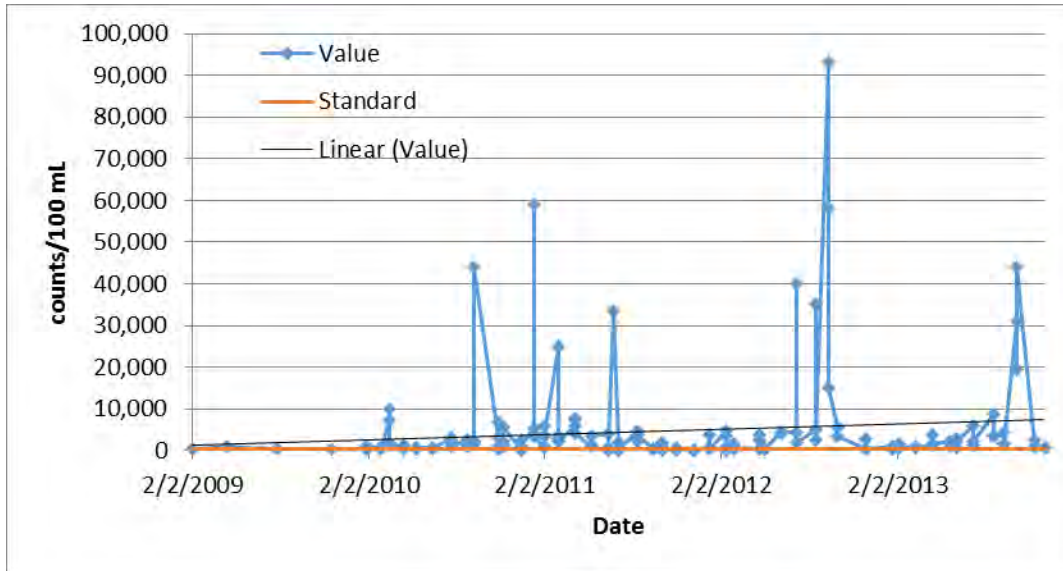


FIGURE 3: FECAL COLIFORM TRENDS IN HOGAN CREEK, 2009-2013

TABLE 4: SUMMARY OF HOGAN CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	4	295	1,000	510	579	3	75%
2010	49	200	44,000	940	2,573	45	92%
2011	47	0	33,500	1,351	3,187	31	66%
2012	36	0	93,000	2,750	8,670	31	86%
2013	36	330	44,000	1,532	4,418	35	97%

2.4 BUTCHER PEN CREEK

Fecal coliform concentrations in Butcher Pen Creek have slightly decreased from 2009 to 2013 (see **Figure 4**). The median concentrations and percent exceedances remain relatively high, with the lowest median value occurring in 2013 (see **Table 5**). The stations with the highest median concentrations are 21FLA 20030955 (5,600 CFU) and 21FLA 20030829 (4,600 CFU). Station 21FLA 20030955 is located at Ducheneau Drive, and Station 21FLA 20030829 is located near the headwaters of Butcher Pen Creek where it intersects Jammes Road.

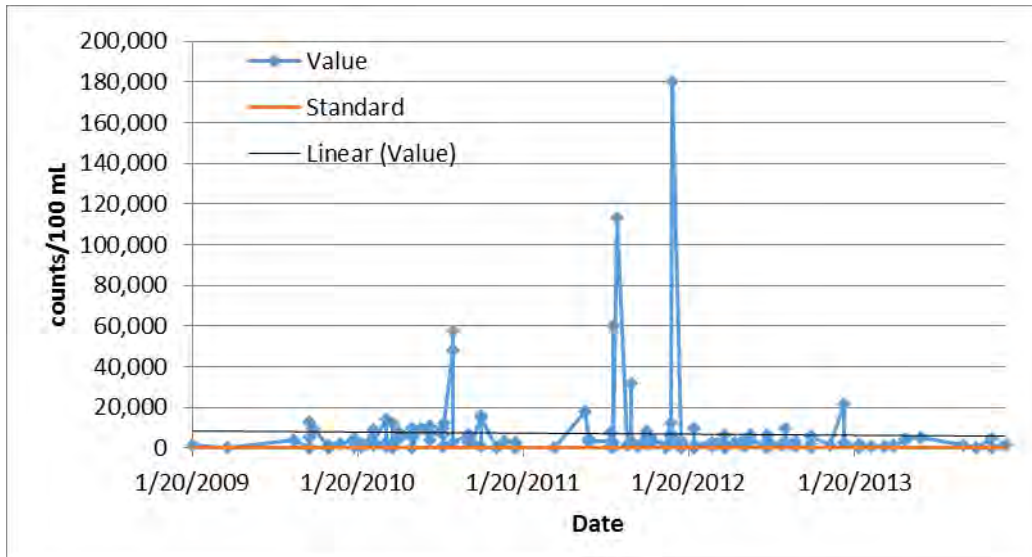


FIGURE 4: FECAL COLIFORM TRENDS IN BUTCHER PEN CREEK, 2009-2013

TABLE 5: SUMMARY OF BUTCHER PEN CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	13	66	13,000	1,800	3,706	10	77%
2010	43	330	58,000	3,900	7,298	42	98%
2011	34	220	180,000	3,050	14,632	32	94%
2012	35	150	22,000	2,300	3,439	32	91%
2013	17	150	5,100	1,200	1,856	14	82%

2.5 MILLER CREEK

Fecal coliform concentrations in Miller Creek have decreased over the data period of 2009 through 2013 (see **Figure 4**). However, the median concentrations and percent exceedances remain high (see **Table 6**). The sampling station with the highest median concentration of 17,428 CFU is station 21FLJXWQSS21, located on the west branch at Camden Avenue. Based on observations of animal tracks along the creek and the inability to find human sources, COJ has determined that the high counts in this area are likely from wildlife and feral cats; however, additional investigations are planned with the Department to confirm this finding. In addition, stations 21FLJXWQSS23 and 21FLJXWQSS1 had high medians of 3,700 CFU and 2,200 CFU, respectively. Station 21FLJXWQSS23 is located on the east branch at Mayfair Road and 21FLJXWQSS1 is located on Atlantic Boulevard.

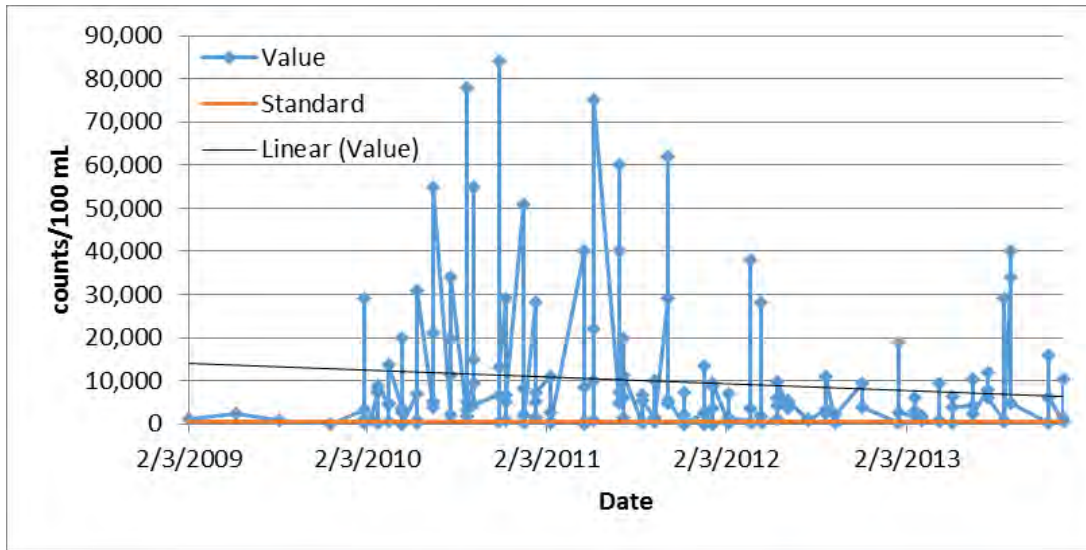


FIGURE 5: FECAL COLIFORM TRENDS IN MILLER CREEK, 2009-2013

TABLE 6: SUMMARY OF MILLER CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	4	16	2,200	960	1,034	3	75%
2010	36	40	84,000	7,225	17,066	31	86%
2011	44	0	75,000	5,150	11,777	33	75%
2012	34	0	38,000	3,450	5,189	28	82%
2013	33	180	40,000	3,900	7,387	30	91%

2.6 MIRAMAR CREEK

Between 2009 and 2013, the fecal coliform concentrations in Miramar Creek decreased (see **Figure 6**). As shown in **Table 7**, the percent exceedances decreased from 2012 to 2013. The station with the highest median concentration was 21FLJXWQSS4 (2,000 CFU). This station is the most downstream station and is located on San Jose Boulevard.

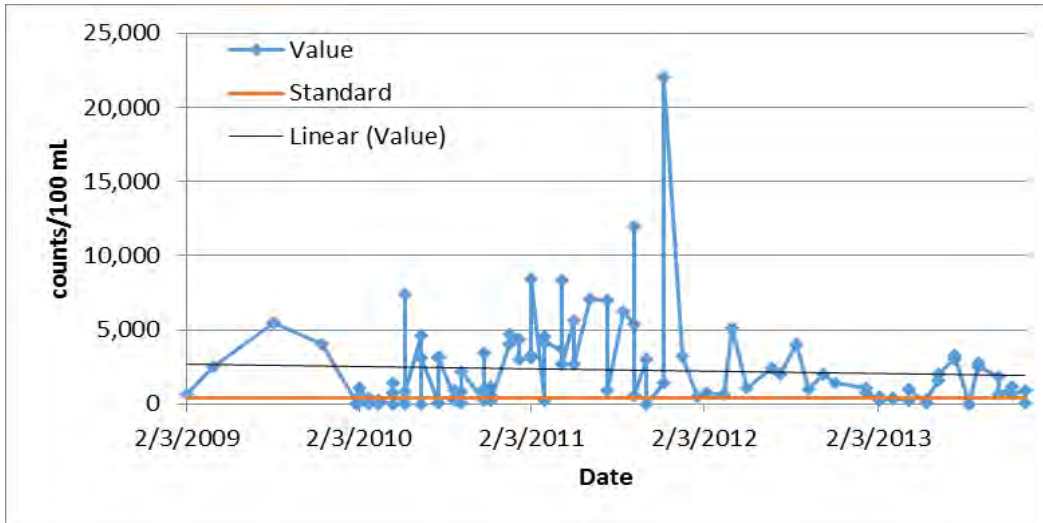


FIGURE 6: FECAL COLIFORM TRENDS IN MIRAMAR CREEK, 2009-2013

TABLE 7: SUMMARY OF MIRAMAR CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	4	680	5,500	3,254	3,172	4	100%
2010	36	0	7,400	520	1,303	20	56%
2011	25	0	22,000	3,700	4,913	23	92%
2012	11	500	5,100	1,400	1,896	11	100%
2013	24	1	3,300	676	1,052	15	63%

2.7 BIG FISHWEIR CREEK

The fecal coliform concentrations in Big Fishweir Creek increased from 2009 through 2013 (see **Figure 10**). The median concentration decreased from 2012 to 2013, although the percent exceedance rate remains high (see **Table 8**). The stations with the highest median concentrations are 21FLA 20030951 (4,500 CFU), 21FLA 20030953 (3,000 CFU), and 21FLA 20030952 (2,600 CFU). Station 21FLA 20030951 is located at Park Street. Stations 21FLA 20030953 and 21FLA 20030952 are both located on Little Fishweir Creek at Oak Street and Greenwood Avenue, respectively.

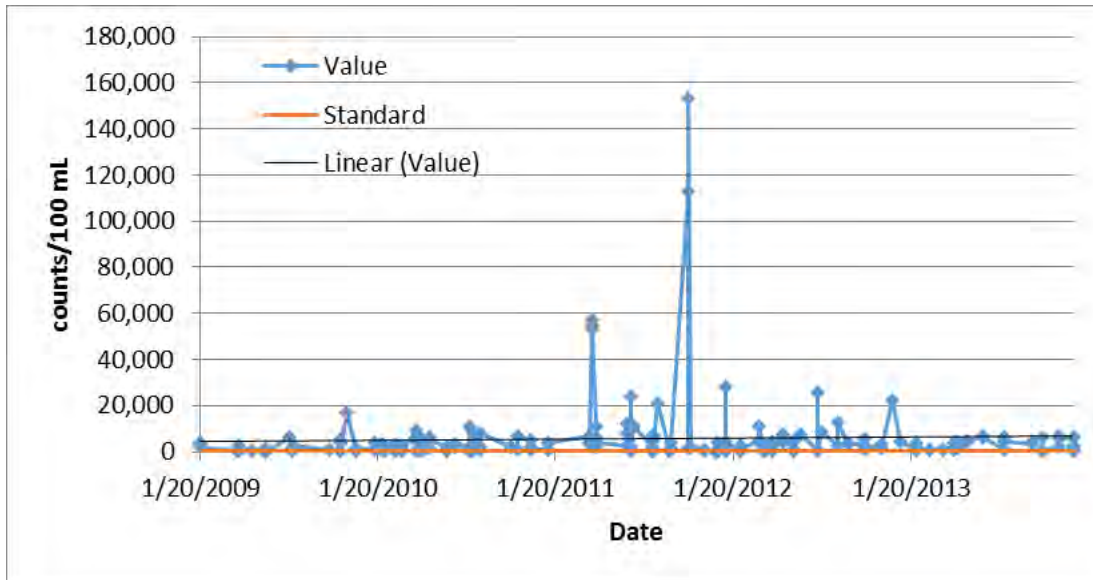


FIGURE 7: FECAL COLIFORM TRENDS IN BIG FISHWEIR CREEK, 2009-2013

TABLE 8: SUMMARY OF BIG FISHWEIR CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	24	21	17,000	1,340	2,437	22	92%
2010	48	210	11,000	2,000	2,793	43	90%
2011	51	0	153,000	3,100	12,278	46	90%
2012	40	45	28,000	3,500	5,259	36	90%
2013	35	90	6,900	2,100	2,880	33	94%

2.8 DEER CREEK

The Deer Creek fecal coliform concentrations decreased slightly between 2009 and 2013 (see **Figure 8**). The median concentrations are generally low (see **Table 9**). The station with the highest median concentration is 21FLJXWQDR2S with 520 CFU, which is located on the southwest branch.

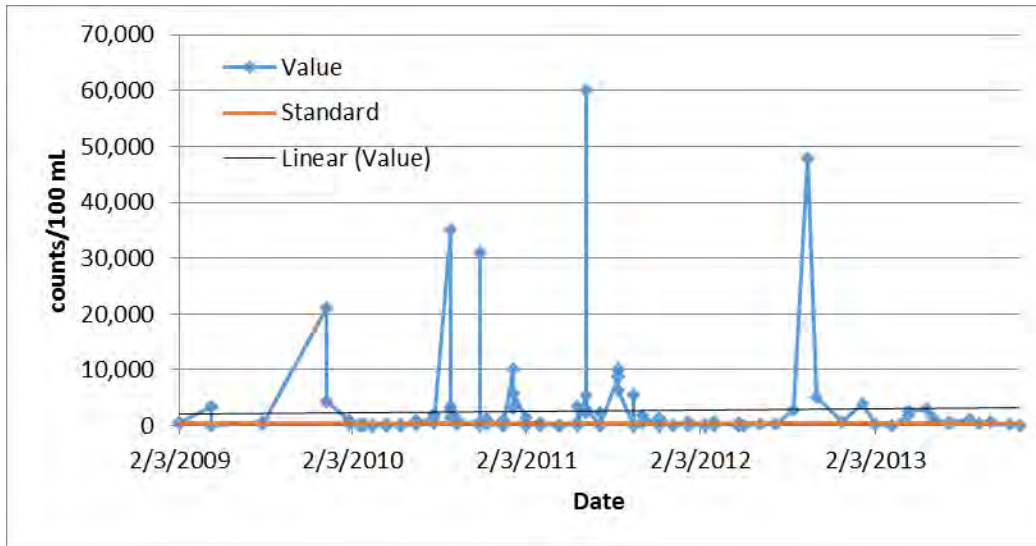


FIGURE 8: FECAL COLIFORM TRENDS IN DEER CREEK, 2009-2013

TABLE 9: SUMMARY OF DEER CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	8	82	21,000	580	3,833	6	75%
2010	49	0	35,000	270	1,865	22	45%
2011	41	0	60,000	480	3,513	21	51%
2012	16	0	48,000	280	3,718	7	44%
2013	15	1	4,000	631	1,127	9	60%

2.9 TERRAPIN CREEK

The Terrapin Creek fecal coliform concentrations slightly increased over the period of 2009 through 2013 (see **Figure 9**). The median concentrations are fairly low for this period of time (see **Table 10**). The station with highest median concentration was 21FLA 20030490FLA with 920 CFU. Station 21FLA 20030490FLA is located at Blassius Road.

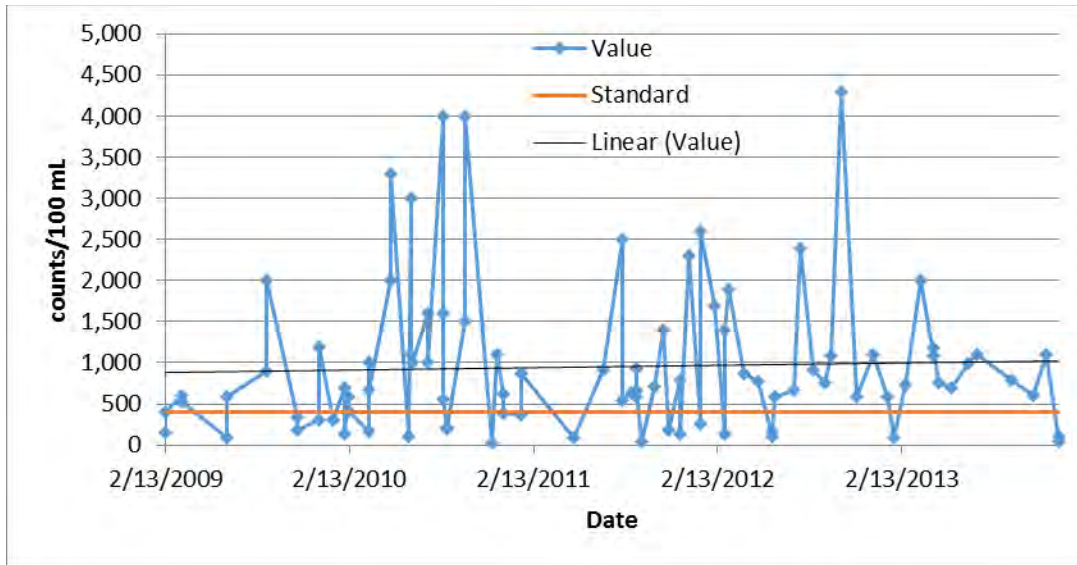


FIGURE 9: FECAL COLIFORM TRENDS IN TERRAPIN CREEK, 2009-2013

TABLE 10: SUMMARY OF TERRAPIN CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	12	82	2,000	460	604	6	50%
2010	28	27	4,000	685	1,126	19	68%
2011	17	39	2,500	660	802	12	71%
2012	19	110	4,300	860	1,173	15	79%
2013	15	44	2,000	750	788	12	80%

2.10 GOODBYS CREEK

There was an increase in fecal coliforms in Goodbys Creek between 2009 and 2013 (see **Figure 10**). However, as shown in **Table 11**, the median concentrations were less than 1,000 CFU in every year. Station SS319, located at Sanchez Road, has the highest median concentration of 780 CFU.

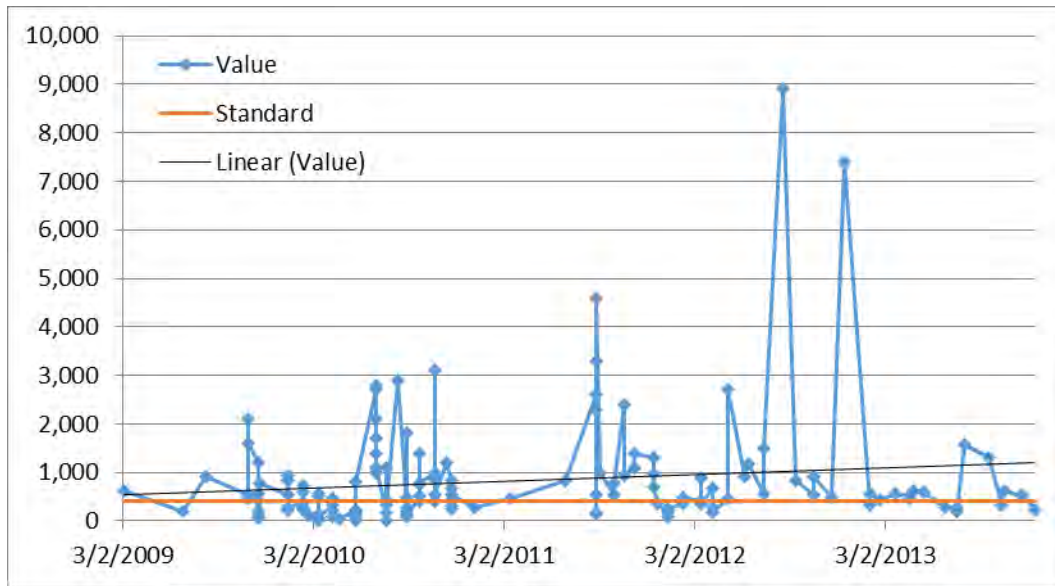


FIGURE 10: FECAL COLIFORM TRENDS IN GOODBYS CREEK, 2009-2013

TABLE 11: SUMMARY OF GOODBYS CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	15	60	2,100	550	656	10	67%
2010	68	0	3,100	440	659	36	53%
2011	20	150	4,600	950	1,322	17	85%
2012	24	99	8,900	520	1,280	15	63%
2013	18	200	1,580	515	553	12	67%

2.11 OPEN CREEK

Fecal coliform concentrations in Open Creek decreased over the period of 2009 through 2013 (see **Figure 11**). The median concentrations during this time were generally low and decreasing, with a small increase in 2010 (see **Table 12**). Station 21FLA 20030858 had the highest median concentration of 5,600 CFU; however, this is based on data from 2009 and 2010. This station is located along the branch at Windsor Park Drive North. Station 21FLA 20030949 had the next highest median concentration of 840 CFU. This station is located at Cross Water Boulevard on the northwestern branch of the creek.

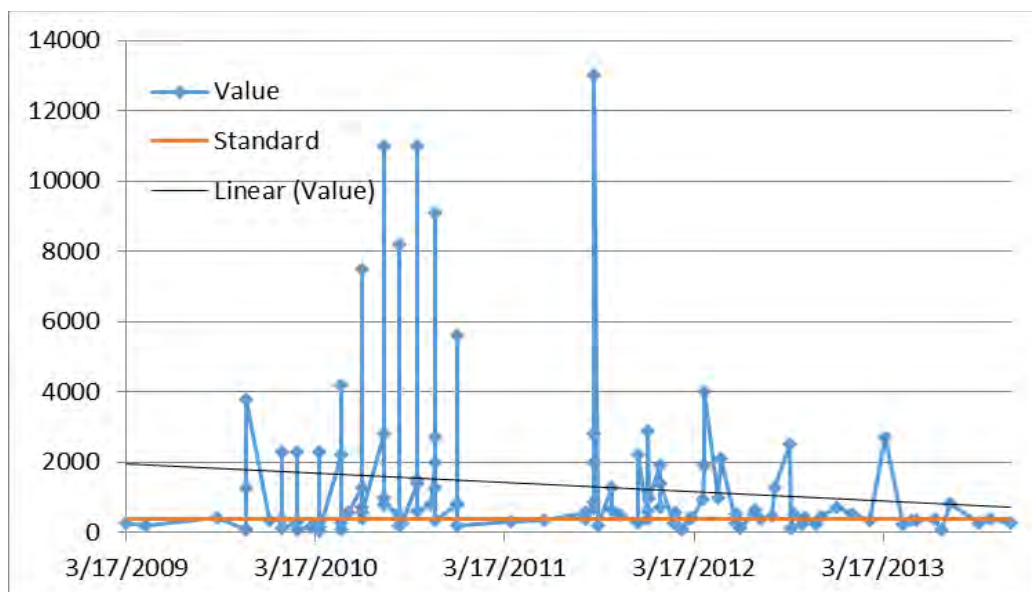


FIGURE 11: FECAL COLIFORM TRENDS IN OPEN CREEK, 2009-2013

TABLE 12: SUMMARY OF OPEN CREEK FECAL COLIFORM DATA BY YEAR, 2009-2013

YEAR	NUMBER	MINIMUM (#/100 mL)	MAXIMUM (#/100 mL)	MEDIAN (#/100 mL)	MEAN (#/100 mL)	NUMBER OF EXCEEDANCES	% EXCEEDANCES
2009	8	96	3,800	306	819	3	38%
2010	48	63	11,000	665	1,897	30	63%
2011	21	190	13,000	600	1,521	15	71%
2012	30	81	4,000	535	852	20	67%
2013	12	90	2,700	355	559	3	25%

SECTION 3: COUNTY-WIDE PROGRAMS IN THE LSJR BASIN

There are several programs and projects that the entities conduct on county-wide level. These activities are summarized below and waterbody-specific efforts associated with these programs are described in the WBID chapters.

3.1 JEA PROGRAMS

JEA continues to implement a number of countywide specific improvement programs, as follows, to address the sanitary sewer system as a source of fecal coliform contamination: (1) Fats, Oil, and Grease (FOG) Reduction Program; (2) Sanitary Sewer Overflow (SSO) Root Cause Program; (3) Pop-Top Program; (4) Non-Destructive Testing and Air Release Valve (ARV) Programs; (5) Supervisory Control and Data Acquisition (SCADA); (6) Third Party Education and Enforcement Program; (7) Manhole Monitoring; (8) Force Main Discharge Manholes; and (9) Capacity, Management, Operations, and Maintenance (CMOM) Program.

3.2 FDOH IN DUVAL COUNTY PROGRAMS

FDOH in Duval County implements a variety of countywide specific improvement programs and restoration activities to address onsite sewage treatment and disposal systems (OSTDS) as sources of fecal coliform contamination. These include the OSTDS Program, training programs, and the designation of septic tank failure and nuisance areas for transfer to central sewer.

3.3 COJ PROGRAMS

COJ has established a monitoring plan to evaluate the effectiveness of the Stormwater Management Program and the associated pollutant reduction from MS4 systems to waters of the state. The monitoring plan is a requirement of Part V.B. of the COJ/FDOT National Pollutant Discharge Elimination System (NPDES) MS4 permit and supported by Title 40 of the Code of Federal Regulations, Part 122.26(d)(2)(iii). In addition to the routine monitoring, COJ Environmental Quality Division (EQD) is part of the TAT and conducts sampling to help identify potential sources of fecal coliform contamination.

COJ PWD's Streets and Drainage Division is responsible for maintaining its stormwater conveyance systems in Jacksonville. In addition to routine maintenance activities, work orders for maintenance are

generated from the Citizen Action Response Effort (CARE) database. COJ also implements the Potential Illicit Connection (PIC) Program. COJ EQD keeps a record of reported PICs in a database and a determination is made to identify where site visits are necessary. COJ inspectors conduct the site visits and talk to both the people who live on the site, as well as their neighbors, to verify the nature of the issue. If there is a known discharge, the inspector investigates in order to direct the resolution of the discharge to the appropriate entity (COJ, FDOH in Duval County, or the Department). If necessary, a sample is collected to determine the nature of the discharge. COJ may assist the individual in remedying the situation and return to ensure that the connection has been removed.

Educational outreach is a vital part of the PIC Program. COJ EQD primarily provides this outreach by distributing materials to the public such as educational pamphlets and informational door hangers, and through a storm drain–stenciling program. COJ also has several continuing public service announcements to address pet waste management and septic tank maintenance.

3.4 FDOT PROGRAMS

Under Subsection 334.044(15), Florida Statutes, and Rule 14-86, F.A.C., FDOT implements a Drainage Connection Program (DCP). The program does not issue water quality permits but requires the connecting entity to certify that the discharge is of acceptable water quality. Connecting entities are required to maintain the discharge of acceptable water quality for the duration of the FDOT DCP permit. If connecting entities fail to meet this requirement after sufficient warning by FDOT, they will be reported to the Department, the St. Johns River Water Management District, and, if applicable, to the local municipality; these entities regulate stormwater quality through state rules, ordinances, and codes.

FDOT also works with COJ on several efforts related to the MS4 permit. FDOT participates in the PIC Program in conjunction with COJ. FDOT has instructed staff to be alert for illicit connections during routine maintenance activities, and investigates observances found in the right of way. Those located outside the right of way are reported to the applicable municipality for further investigation and enforcement action. FDOT maintains a toll-free number to be used for reporting illicit connections.

SECTION 4: NEWCASTLE CREEK (WBID 2235)

4.1 JEA ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

In 2013, JEA rehabilitated one manhole liner, inspected one ARV, replaced 68 linear feet of pipe associated with pump stations, inspected 1.27% of the pipe through televising, cleaned 1.37% of the pipes, and inspected ten manholes as part of the Pop-Top Program. JEA's activities in the Newcastle Creek watershed are shown in **Table 13**.

TABLE 13: JEA ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

Note: JEA's Fiscal Year 2013 (FY13) is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 1	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 2	Cured in Place Pipe (CIPP) – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 3	Manhole Linings Rehabbed	Repair deteriorating manhole linings	1 manhole rehabbed in 2013	\$750	JEA	Ongoing
JEA – 4	ARV Inspection and Rehab	ARV inspection and rehab	1 ARV inspected in 2013	\$142	JEA	Ongoing
JEA – 5	Pump Station SCADA Upgrades	Retrofit completed in 2004; all stations constructed since have SCADA installed	68 linear feet of pipe was replaced in FY13	\$13,600	JEA	Completed
JEA – 6	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	0 inspections for 2013	Not applicable	JEA	Ongoing
JEA – 7	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	0 projects in FY13	Not applicable	JEA	Ongoing
JEA – 8	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 9	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit television	1,576 linear feet of pipe inspected in 2013	\$31,520	JEA	Ongoing
JEA – 10	Pipe Cleaning	Clean existing pipes to avoid blockages	1,698 linear feet cleaned in 2013	\$33,960	JEA	Ongoing
JEA – 11	CMOM Program	CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 12	Manhole Monitoring	Manhole monitoring	Not applicable	Not applicable	JEA	Ongoing
JEA – 13	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 14	Pop-Top Program	Pop-Top Program	10 manholes inspected in 2013	\$500	JEA	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 15	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing
JEA – 16	Lift Station @ 3254 Townsend Boulevard	Upgrade station to address multiple SSOs related to electrical problems	Installed new electrical control panel; work completed in 2008	\$70,000	JEA	Completed

4.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

In 2013, FDOH issued two repair permits and conducted two plan reviews and site evaluations. The programs and activities FDOH conducts in the Newcastle Creek watershed are shown in **Table 14**.

TABLE 14: FDOH IN DUVAL COUNTY ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 1	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 2 repair permits	\$1,000	FDOH	Ongoing
FDOH-77	Annual Operating Permits	Annual operating permits issued for performance-based treatment systems (PBTS), systems located in industrial/manufacturing zones (IMZ), and commercial systems	No annual operating permits issued for PBTS/IMZ in WBID	Not applicable	FDOH	Ongoing
FDOH – 2	Surface Water Improvement and Management (SWIM) Project	Implementation of broad-ranging septic tank ordinance	Approximately 0.25% of Eggleston Heights Septic Tank Failure Area is in WBID	\$2,000	FDOH/LSJR SWIM Grant	Completed
FDOH – 3	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 4	Application/Plan Review/Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 2 plan reviews and site evaluations were performed in WBID	\$400	FDOH	Ongoing
FDOH – 5	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 6	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	No complaint investigations were performed in WBID	Not applicable	FDOH	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 71	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 128 inspections performed within WBID	\$12,250	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

4.3 COJ ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

In 2013, COJ had six work orders for ditch and creek regrading, 11 for repair/clearing of structures (see **Figure 12**), and one sewer that drains into a yard or ditch. These inspections are initiated through information from the CARE database. COJ also collected 22 BMAP samples from the two monitoring stations in the basin. COJ's efforts in the Newcastle Creek watershed are shown in **Table 15**. Additional details about COJ projects are included in **Appendix A**.



FIGURE 12: STORMWATER INLET IN NEED OF MAINTENANCE

TABLE 15: COJ ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 1	Townsend Road (COJ-31)	Wet detention	151 acres	Unknown	COJ	Completed
COJ – 191	Regional Stormwater Facility (RSF)	0.4 acre RSF planed under the Master Stormwater Management Plan (MSMP), construction subject to funding	0.4 acres	\$110,000	COJ	Planned
COJ – 2	Townsend Road	Townsend Road drainage system rehab	Townsend Road	\$173,326	COJ	Completed
COJ – 3	Berrywood Lane	Ditch cleanout to remove sediments and vegetation	Berrywood Lane	Unknown	COJ	Completed
COJ – 192	3833 Hermitage Road East	Pipe replacement	Hermitage Road	\$17,788	COJ	Completed
COJ – 4	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	6	\$1,354	COJ	Ongoing
COJ – 193	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 5	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 6	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	11	\$3,668	COJ	Ongoing
COJ – 7	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 194	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 8	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 9	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 195	Septic Tank Inspection	CARE initiated	0	\$0	COJ	Ongoing
COJ – 10	Private Lift Station Inspection	No private lift stations in the WBID	0	\$0	COJ	Ongoing
COJ – 11	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 12	Routine Surface Water Sampling	NPDES permit related quarterly water quality sampling – 1 station in WBID	0 (included in COJ-13)	\$0	COJ	Ongoing
COJ – 13	BMAP Monitoring	2 sites (1 sampled monthly and 1 sampled quarterly)	22	\$3,894	COJ	Ongoing
COJ – 196	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 14	Eggleston Heights Failure Area – Septic Tank Phase-Out	Phase out of septic tanks in failure areas	125 tanks, 0 connected	Unknown	COJ	Ongoing
COJ – 15	Septic Tanks Outside Failure Area – Septic Tank Phase-Out	Phase-out program as provided by COJ ordinance	10 tanks, 0 connected	Unknown	COJ	Ongoing
COJ – 16	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 17	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

4.4 FDOT ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

Upon thorough re-evaluation and field visit, FDOT determined that it has no MS4 system or infrastructure in this WBID.

SECTION 5: HOGAN CREEK (WBID 2252)

5.1 JEA ACTIVITIES IN THE HOGAN CREEK WATERSHED

In 2013, JEA pipe burst 0.12% of the pipes in the watershed, open cut 0.01% of the pipes, repaired 15 manhole linings, inspected 11 pump stations, inspected one force main, inspected 0.46% of the pipes with closed-circuit television, and cleaned 3.91% of the lines. JEA also distributed 360 informational packages as part of the FOG Program and inspected 185 manholes as part of the Pop-Top Program. JEA's activities in the Hogan Creek watershed are shown in **Table 16**.

TABLE 16: JEA ACTIVITIES IN THE HOGAN CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 17	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	1,673 feet of high density polyethylene (HDPE) pipe installed	\$250,950	JE A	Ongoing
JEA – 18	CIPP – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	Not effort	Not applicable	JE A	Ongoing
JEA – 19	Open Cut – Removal and Replacement	Replace failing/leaking infrastructure	208 linear feet of pipe was replaced in FY13	\$41,600	JE A	Ongoing
JEA – 20	Manhole Linings Rehabbed	Repair deteriorating manhole linings	15 manholes rehabbed in 2013	\$11,250	JE A	Ongoing
JEA – 21	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	11 inspected	\$1,447	JE A	Completed
JEA – 22	Inspect Force Main Discharge Manholes; Repair/Rehab as Necessary	Inspect force main discharge manholes; repair/rehab as necessary	1 force main inspection in 2013	\$750	JE A	Ongoing
JEA – 23	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	0 projects in FY13	Not applicable	JE A	Ongoing
JEA – 24	FOG Reduction Program	FOG Reduction Program	360 packages	\$1,800	JE A	Ongoing
JEA – 25	Pipe TV Inspection	Inspect existing infrastructure through closed-circuit television	6,673 linear feet of pipe inspected in 2013	\$133,460	JE A	Ongoing
JEA – 26	Pipe Cleaning	Clean existing pipes to avoid blockages	56,488 linear feet cleaned in 2013	\$1,129,760	JE A	Ongoing
JEA – 27	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JE A	Ongoing
JEA – 28	Manhole Monitoring	Manhole Monitoring	3 monitors in watershed	\$15,000	JE A	Ongoing
JEA – 29	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JE A	Ongoing
JEA – 30	Pop-Top Program	Pop-Top Program	185 manholes inspected in 2013	\$9,250	JE A	Ongoing
JEA – 31	Non-Destructive Testing Program/ Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JE A	Ongoing

5.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE HOGAN CREEK WATERSHED

In 2013, FDOH performed one complaint investigation. The programs and activities FDOH conducts in the Hogan Creek watershed are shown in **Table 17**.

TABLE 17: FDOH IN DUVAL COUNTY ACTIVITIES IN THE HOGAN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 7	OSTDS Program	Implementation of programs to address septic systems as potential sources	No permits issued in WBID	Not applicable	FDOH	Ongoing
FDOH – 8	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	No annual operating permits issued in WBID	Not applicable	FDOH	Ongoing
FDOH – 9	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 10	Application/Plan Review/Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	No plan reviews or site evaluations performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 11	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 12	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	1 complaint investigation have been performed in WBID	\$150	FDOH	Ongoing
FDOH – 72	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 237 inspections performed to confirm each property connected to central sewer	\$22,600	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Complete

5.3 COJ ACTIVITIES IN THE HOGAN CREEK WATERSHED

In the Hogan Creek watershed in 2013, COJ had 12 work orders for ditch and creek regrading, 50 work orders for repair/clearing of structures, one illicit water discharge, one illegal discharge, and seven sewer overflows. These inspections are initiated through information from the CARE database. COJ inspected two private lift stations and identified one PIC, which is being followed up on. COJ collected 36 BMAP samples and 14 follow up samples on high counts. In addition, COJ connected one septic tank to central sewer in a location outside of a failure area. COJ's efforts in the Hogan Creek watershed are shown in **Table 18**. Additional details about COJ projects are included in **Appendix A**.

TABLE 18: COJ ACTIVITIES IN THE HOGAN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 18	Durkeeville West	Wet detention	106 acres	Unknown	COJ	Completed
COJ – 19	Newtown Area	Flood improvement	Newtown Area	\$5,375,000	COJ	Design
COJ – 20	Hogan Creek	Wet detention	48 acres	Unknown	COJ	Completed
COJ – 197	Emerald Necklace and Liberty Ponds	MSMP construction schedule subject to funding	Ponds	\$2,153,000	COJ	Planned
COJ – 253	1100 4 th Street	Drainage improvement	Drainage	\$92,554	COJ	Construction
COJ – 21	Edmonson West	Alleviate flooding by improving conveyances	Edmonson West	Unknown	COJ	Completed
COJ – 22	7 th & Ionia	Standing water at curbing	7 th and Ionia	Unknown	COJ	Completed
COJ – 23	Boulevard RR Crossing	Headwall has failed, causing dual drain pipes to break	RR crossing	\$100,000	COJ	Completed
COJ – 24	W&M-18 th & Fla	Drainage system rehab project	W&M 18 th and Fla	\$2,620	COJ	Completed
COJ – 25	Trash Removal in Main Channel	Removed trash in main channel of creek as Walk the WBID follow-up	Main channel	Unknown	COJ	Completed
COJ – 26	Venus and Mars Apartment Complex Pond Maintenance	Conducted maintenance activities at pond at apartment complex as Walk the WBID follow-up	Venus and Mars apartment complex	Unknown	COJ	Completed
COJ – 198	1500 8 th Street	Pipe replacement	8 th Street	\$67,954	COJ	Completed
COJ – 263	1003 15 th Street	Design	Not applicable	\$21,254	COJ	Design
COJ – 264	Steele Street at Myrtle Avenue	Storm sewer	Storm sewer	\$15,239	COJ	Construction
COJ – 27	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	12	\$4,701	COJ	Ongoing
COJ – 199	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 28	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 29	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	50	\$15,329	COJ	Ongoing
COJ – 30	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 31	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 32	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 33	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	7	\$2,653	COJ	Ongoing
COJ – 200	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 34	Private Lift Station Inspection	3 private lift stations in this WBID	2	\$0	COJ	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 35	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center: 1 open	1	\$379	COJ	Ongoing
COJ – 36	Follow Up on Outstanding PIC	Follow up on 1 open PIC in watershed	1	\$379	COJ	Completed
COJ – 37	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	0 (included in COJ-38)	\$0	COJ	Ongoing
COJ – 38	BMAP Sampling	3 sites (2 sampled monthly and 1 sampled quarterly)	36	\$6,372	COJ	Ongoing
COJ – 39	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted to attempt to identify sources	14	\$1,904	COJ	Ongoing
COJ – 40	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	32 tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 41	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 42	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

5.4 FDOT ACTIVITIES IN THE HOGAN CREEK WATERSHED

In 2013, FDOT found one PIC and the investigation is underway. The Adopt-A-Highway Program collected 120 pounds of trash along five miles of roadway, and FDOT collected 2,750 pounds of debris through the street sweeping program. FDOT also helps to fund the monitoring station in the Hogan Creek watershed that is sampled quarterly as part of the MS4 routine monitoring program. **Table 19** lists FDOT’s activities in the Hogan Creek watershed.

TABLE 19: FDOT ACTIVITIES IN THE HOGAN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 4	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 5	PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-4	FDOT/COJ	1 PIC found this reporting period; investigation is underway	Ongoing
FDOT – 6	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	1 sampling station; 4 routine water quality samplings performed	Ongoing
FDOT-71	BMAP Monitoring	Cost included in FDOT - 6	FDOT/COJ	3 sites; 32 sampling events	Ongoing
FDOT-72	Source Identification Sampling – Conducted When High Levels of Coliform Bacteria Counts are Noted and Source Identification is Necessary	Cost included in FDOT - 6	FDOT/COJ	14 additional samples were conducted	Ongoing
FDOT – 7	S.R. 115/8 th Street Project	\$2,941,944	FDOT	31 acres, wet detention	Completed
FDOT – 8	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 9	Adopt-A-Highway Program	Unknown	Not applicable	120 pounds of trash collected; trash collection area is 5.0 miles	Ongoing
FDOT – 10	Sediment Accumulation, Trash, and Debris Removed As Needed	Cost included in FDOT-12	FDOT	Approximately 350 inlets/catch basins and about 12 miles of piping	Ongoing
FDOT – 11	Street Sweeping Program	Cost included in FDOT-12	FDOT	25 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 2,750 pounds	Ongoing
FDOT – 12	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 6: BUTCHER PEN CREEK (WBID 2322)

6.1 JEA ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

In 2013, JEA open cut on 0.06% of the lines, inspected 0.52% of the pipes with closed-circuit television, and cleaned 1.93% of the lines. JEA also installed seven ARVs and replaced four ARVs in the watershed. In addition, JEA repaired a force main as part of the SSO Root Cause Program and inspected 20 manholes as part of the Pop-Top Program. JEA's activities in the Butcher Pen Creek watershed are shown in **Table 20**.

TABLE 20: JEA ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 32	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 33	CIPP – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 34	Open Cut – Removal and Replacement	Replace failing/leaking infrastructure	277 linear feet of pipe was replaced in FY13	\$55,400	JEA	Ongoing
JEA – 35	Manhole Linings Rehabbed	Repair deteriorating manhole linings	0 manholes rehabbed in 2013	Not applicable	JEA	Ongoing
JEA – 36	Line Inspection of Manhole at 4557 Arthur Drive	Report on results of manhole line inspection	Manhole inspected and found to be in good condition	Not applicable	JEA	Completed
JEA – 37	ARV Inspection and Rehab	ARV inspection and rehab	7 ARVs installed and 4 replaced in 2013	\$3,921	JEA	Ongoing
JEA – 38	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Complete
JEA – 39	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	Not applicable	Not applicable	JEA	Ongoing
JEA – 40	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	0 projects in FY13	Not applicable	JEA	Ongoing
JEA – 41	Pump Station Repair at 4807 Ducheneau Drive	Report on status of pump station repair in first annual progress report	Pump station rehabbed	\$115,107	JEA	Completed
JEA – 42	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 43	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit TV system	2,340 linear feet of pipe inspected in 2013	\$46,800	JEA	Ongoing
JEA – 44	Pipe Cleaning	Clean existing pipes to avoid blockages	8,721 linear feet of pipe cleaned in 2013	\$174,420	JEA	Ongoing
JEA – 45	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 46	Manhole Monitoring	Manhole Monitoring	Not applicable	Not applicable	JEA	Ongoing
JEA – 47	SSO Root Cause Program	SSO Root Cause Program	Force main failed, repaired with full circle	Not applicable	JEA	Ongoing
JEA – 48	Pop-Top Program	Pop-Top Program	20 manholes inspected in 2013	\$1,000	JEA	Ongoing
JEA – 49	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

6.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

In 2013, FDOH issued two repair permits and 5 annual operating permits, performed two plan reviews and site evaluations, and performed one complaint investigation. The programs and activities FDOH conducts in the Butcher Pen Creek watershed are shown in **Table 21**.

TABLE 21: FDOH IN DUVAL COUNTY ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 13	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 2 repair permits issued	\$1,000	FDOH	Ongoing
FDOH – 14	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	5 annual operating permits issued for PBTS/IMZ in WBID	\$1,750	FDOH	Ongoing
FDOH – 15	SWIM Project	Implementation of broad-ranging septic tank ordinance	Approximately 15% of Cedar River Septic Tank Failure Area is in WBID	\$48,750	FDOH/ LSJR SWIM Grant	Complete
FDOH – 16	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 17	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 2 plan reviews and site evaluations have been performed in WBID	\$400	FDOH	Ongoing
FDOH – 18	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 19	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	1 complaint investigation has been performed in WBID	\$150	FDOH	Ongoing
FDOH – 73	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 69 inspections performed within WBID	\$6,600	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

6.3 COJ ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

6.3.1 COMPLETED COJ PROJECTS

COJ completed the drainage improvement project at 6442 Romily Road, which helps reduce fecal coliform loading to the creek from runoff in this area.

6.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Butcher Pen Creek watershed in 2013, COJ had four work orders for ditch and creek regrading and 11 work orders for repair/clearing of structures. These inspections are initiated through information from the CARE database. In addition, COJ collected four routine water quality samples. COJ's efforts in the Butcher Pen Creek watershed are shown in **Table 22**. Additional details about COJ projects are included in **Appendix A**.

TABLE 22: COJ ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 43	Wesconnett Blvd (Blanding to Blanding)	Wet detention	396 acres	Unknown	COJ	Completed
COJ – 44	La Moya Roadway Project	Wet detention	17 acres	Unknown	COJ	Completed
COJ – 201	5000 Block Chadroe Road	Curb/gutter	Chadroe Road	\$13,135	COJ	Completed
COJ – 254	6442 Romily Road	Drainage improvement	Drainage	\$20,208	COJ	Completed
COJ – 265	4615 Harlow Boulevard	Storm sewer	Storm sewer	\$80,487	COJ	Construction
COJ – 266	Harlow Boulevard at Bambi Lane	Drain line	Drain Line	\$74,845	COJ	Construction
COJ – 267	4503 ISH Brant Road West and 4465 Ranier Road	Storm sewer	Storm sewer	\$8,595	COJ	Construction
COJ – 45	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	4	\$42,864	COJ	Ongoing
COJ – 202	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 46	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 47	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	11	\$5,108	COJ	Ongoing
COJ – 48	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 49	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 50	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 51	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 203	Septic Tank	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 52	Private Lift Station Inspection	No private lift stations in WBID	0	\$0	COJ	Ongoing
COJ – 53	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 54	Follow Up on Outstanding PICs	Followed up on 14 open PICs during 2011 and 2012 in watershed; 2 determined to be illicit and disconnected/removed	14	\$379	COJ	Completed
COJ – 55	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	4	\$544	COJ	Ongoing
COJ – 56	BMAP Sampling	COJ is not responsible for BMAP monitoring in this watershed.	0	\$0	COJ	Completed

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 204	Re-Sampling	Re-sampling effort conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources.	0	\$0	COJ	Ongoing
COJ – 57	Cedar River Failure Area – Septic Tank Phase-Out	Phase-out of septic tanks in failure areas	70 total tanks, 0 tanks connected	Unknown	COJ	Ongoing
COJ – 58	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	36 total tanks, 0 tanks connected	Unknown	COJ	Ongoing
COJ – 59	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 60	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

6.4 FDOT ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

In 2013, FDOT collected 1,320 pounds of debris through the street sweeping program. FDOT also helps to fund one monitoring station in the Butcher Pen Creek watershed that is sampled quarterly as part of the MS4 routine monitoring program. **Table 23** lists FDOT’s activities in the Butcher Pen Creek watershed.

TABLE 23: FDOT ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 13	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 14	PIC Program - Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-13	FDOT/COJ	No potential illicit found this reporting period	Ongoing
FDOT – 15	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	1 sampling station; 4 routine water quality samplings performed	Ongoing
FDOT – 16	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 17	Street Sweeping Program	Cost included in FDOT-18	FDOT	12 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 1,320 pounds	Ongoing
FDOT – 18	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 7: MILLER CREEK (WBID 2287)

7.1 JEA ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2013, JEA repaired one manhole linings inspected two ARVs, inspected four force main discharge manholes, inspected 1.16% of the pipes with closed-circuit television, and cleaned 4.44% of the lines. JEA also inspected 69 manholes as part of the Pop-Top Program. JEA's activities in the Miller Creek watershed are shown in **Table 24**.

TABLE 24: JEA ACTIVITIES IN THE MILLER CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 50	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 51	CIPP – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 52	Manhole Linings Rehabbed	Repair deteriorating manhole linings	1 manhole liner rehabbed in 2013	\$750	JEA	Ongoing
JEA – 53	ARV Inspection and Rehab	ARV inspection and rehab	2 ARVs inspected in 2013	\$921	JEA	Ongoing
JEA – 54	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 55	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	4 inspections	\$3,000	JEA	Ongoing
JEA – 56	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 57	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit television	842 linear of pipe inspected in 2013	\$16,840	JEA	Ongoing
JEA – 58	Pipe Cleaning	Clean existing pipes to avoid blockages	3,240 linear feet cleaned by contractor in 2013	\$64,800	JEA	Ongoing
JEA – 59	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 60	Manhole Monitoring	Manhole monitoring	1 monitor in watershed	\$5,000	JEA	Ongoing
JEA – 61	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 62	Pop-Top Program	Pop-Top Program	69 manholes inspected in 2013	\$3,450	JEA	Ongoing
JEA – 63	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

7.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2013, FDOH issued one repair permits and four operating permits and conducted one plan review and site evaluation. The programs and activities FDOH conducts in the Miller Creek watershed are shown in **Table 25**.

TABLE 25: FDOH IN DUVAL COUNTY ACTIVITIES IN THE MILLER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 20	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 1 repair permit issued in WBID	\$500	FDOH	Ongoing
FDOH – 21	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	4 operating permits issued for PBTS/IMZ in WBID	\$1,400	FDOH	Ongoing
FDOH – 22	SWIM Project	Implementation of broad-ranging septic tank ordinance	Approximately 38% of St. Nicholas Septic Tank Failure Area is in WBID	\$6,000	FDOH/ LSJR SWIM Grant	Completed
FDOH – 23	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 24	Application/Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 1 plan review and site evaluation have been performed in WBID	\$200	FDOH	Ongoing
FDOH – 25	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on an annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 26	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	No complaint investigations have been performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 27	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 372 inspections performed in WBID	\$35,600	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

7.3 COJ ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2013, COJ had four work orders for ditch and creek regrading and 14 work orders for repair/clearing of structures. These inspections are initiated through information from the CARE database. COJ inspected three private lift stations. In addition, COJ collected 27 BMAP samples and 15 follow up samples on high counts. COJ also connected two septic tanks to the sewer system within the Saint Nicholas failure area. COJ's efforts in the Miller Creek watershed are shown in **Table 26**. Additional details about COJ projects are included in **Appendix A**.

TABLE 26: COJ ACTIVITIES IN THE MILLER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 246	3931 Carmichael Avenue	Pipe replacement	Unknown	\$24,271	COJ	Completed
COJ – 61	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	4	\$1,770	COJ	Ongoing
COJ – 205	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 206	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 62	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	14	\$4,986	COJ	Ongoing
COJ – 63	Ditch/Vegetation Clearing	Thin vegetation at Mayfair Road and Bridgewater Roads for maintenance enhancement	This area in on private land	\$0	COJ	Completed
COJ – 64	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 65	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 66	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 67	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 207	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 68	Private Lift Station Inspection	12 private lift stations in this WBID	3	\$1,137	COJ	Ongoing
COJ – 69	Enforcement at The Preserve at St. Nicholas Apartments	Citation issued 2/11/2009. Settlement of \$4,505 plus supplemental environmental projects of \$13,515 for upgrades to lift station	Case is corrected and closed	\$18,020	COJ	Completed
COJ – 70	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 71	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	0 (included in COJ-72)	\$0	COJ	Ongoing
COJ – 72	BMAP Sampling	3 sites (2 sampled monthly and 1 sampled quarterly)	27	\$4,779	COJ	Ongoing
COJ – 208	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	15	\$2,040	COJ	Ongoing
COJ – 73	Saint Nicholas Failure Area – Septic Tank Phase-Out	Phase-out of septic tanks in failure areas	302 total tanks, 2 connected	Unknown	COJ	Ongoing
COJ – 74	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	0 total tanks	Unknown	COJ	Completed
COJ – 75	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 76	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

7.4 FDOT ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2013, the Adopt-A-Highway Program collected approximately 144 pounds of trash along six miles of roadway. FDOT collected 3,080 pounds of debris through the street sweeping program. FDOT also helps to fund one monitoring station in the Miller Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 27** lists FDOT's activities in the Miller Creek watershed.

TABLE 27: FDOT ACTIVITIES IN THE MILLER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 19	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 20	PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-19	FDOT/COJ	No illicit connection found to date	Ongoing
FDOT – 21	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	1 sampling station; 3 routine samplings performed	Ongoing
FDOT-73	BMAP Monitoring	Included in FDOT-21	FDOT/COJ	3 sites; 24 sampling events	Ongoing
FDOT-74	Source Identification Sampling – Conducted When High Levels of Coliform Bacteria Counts are Noted and Source Identification is Necessary	Included in FDOT-21	FDOT/COJ	15 additional samples were conducted	Ongoing
FDOT – 22	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 23	Adopt-A-Highway Program	Unknown	Not applicable	144 pounds of trash collected; trash collection areas is 6.0 miles	Ongoing
FDOT – 24	Sediment Accumulation, Trash, and Debris Removed as Needed	Included in FDOT-26	FDOT	Approximately 130 inlets/catch basins and about 5 miles of piping	Ongoing
FDOT – 25	Street Sweeping Program	Included in FDOT-26	FDOT	28 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 3,080 pounds	Ongoing
FDOT – 26	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 8: MIRAMAR CREEK (WBID 2304)

8.1 JEA ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In 2013, JEA inspected two ARVs and replaced one ARV, inspected one force main, and cleaned 1.47% of the pipes. JEA also inspected six manholes as part of the Pop-Top Program. JEA's activities in the Miramar Creek watershed are shown in **Table 28**.

TABLE 28: JEA ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 64	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 65	Manhole Linings Rehabbed	Repair deteriorating manhole linings	0 manhole liners rehabbed in 2013	Not applicable	JEA	Ongoing
JEA – 66	ARV Inspection and Rehab	ARV inspection and rehab	2 ARVs inspected and 1 replaced in 2013	\$1,013	JEA	Ongoing
JEA – 67	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 68	Inspect Force Main Discharge Manholes; Repair/Rehab as Necessary	Inspect force main discharge manholes; repair/rehab as necessary	1 force main inspection in 2013	\$750	JEA	Ongoing
JEA – 69	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	0 projects in FY13	Not applicable	JEA	Ongoing
JEA – 70	Confirm Locations of Lift Stations on Boundary	Confirm locations of lift stations on boundary for first annual progress report	Lift station at 4171 Hendricks is in WBID; station at 2325 Emerson is in Craig Creek	Not applicable	JEA	Completed
JEA – 71	Follow Up on Seep under Sewer Line on Northern Branch	Follow up on seep under sewer line on northern branch as part of Walk the WBID	No seep found during inspection	Not applicable	JEA	Completed
JEA – 72	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 73	Pipe Cleaning	Clean existing pipes to avoid blockages	1,977 linear feet of pipe cleaned in 2013	\$39,540	JEA	Ongoing
JEA – 74	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 75	Manhole Monitoring	Manhole monitoring	Not applicable	Not applicable	JEA	Ongoing
JEA – 76	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 77	Pop-Top Program	Pop-Top Program	6 manholes inspected in 2013	\$300	JEA	Ongoing
JEA – 78	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

8.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In 2013, FDOH issued three new permits, five repair permits, four abandonment, and 13 annual operating permits. FDOH also conducted eight plan reviews and site evaluations and performed two complaint investigations. The programs and activities FDOH conducts in the Miramar Creek watershed are shown in **Table 29**.

TABLE 29: FDOH IN DUVAL COUNTY ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 28	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 3 new, 5 repair, and 4 abandonment permits issued	\$6,000	FDOH	Ongoing
FDOH – 29	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	13 annual operating permits issued for PBTS/IMZ in WBID	\$4,550	FDOH	Ongoing
FDOH – 30	SWIM Project	Implementation of broad-ranging septic tank ordinance	59% of Emerson, 77.2% of Freeman/Inwood Terrace, and 24.7% of Point La Vista Septic Tank Failure Areas are located in WBID	\$235,000	FDOH/ LSJR SWIM Grant	Completed
FDOH – 31	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 32	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 8 plan reviews and site evaluations have been performed in WBID	\$1,600	FDOH	Ongoing
FDOH – 33	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 34	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	2 complaint investigations has been performed in WBID	\$300	FDOH	Ongoing
FDOH – 35	OSTDS on Brooker Road	Investigate home on Brooker Road with potential OSTDS issues	Inspect and report findings in annual progress report	Part of FDOH – 36	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 36	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 672 inspections performed within WBID	\$64,300	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

8.3 COJ ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

8.3.1 COMPLETED COJ PROJECTS

COJ completed the drainage improvement projects at 2121 Sessions Lane and 2120 Sessions Lane, which will help to reduce fecal coliform loading to the creek from these areas.

8.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Miramar Creek watershed in 2013, COJ had 12 work orders for ditch and creek regrading, one work order for a lake or pond problem, one work order for repair/clearing of structures, one illicit water discharge, two sewers that drained into a yard or ditch, and one sewer overflow. These inspections are initiated through information from the CARE database. COJ inspected one private lift station in the basin and identified one PIC, which is under investigation. In addition, COJ collected 29 BMAP samples. COJ also connected one septic tank to the sewer system in the Pointe La Vista failure area and one in the Freeman Road/Inwood Terrace failure areas. COJ's efforts in the Miramar Creek watershed are shown in **Table 30**. Additional details about COJ projects are included in **Appendix A**.

TABLE 30: COJ ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 77	Inwood Terrace Area	Relieve flooding by improving conveyances	5 acres	\$572,000	COJ	Completed
COJ – 78	Miramar Tributary Improvements	Flood improvement	23 acres	\$1,200,000	COJ	Completed
COJ – 79	Pine Forest/Larson Acres Area	Flood improvement, wet detention	22 acres	\$5,015,000	COJ	Completed
COJ – 80	St Augustine Rd (Emerson to U.S. 1)	Regional pond	167 acres	Unknown	COJ	Completed
COJ – 209	Conveyance Under San Jose Blvd	MSMP construction schedule subject to funding	San Jose Blvd	\$150,000	COJ	Planned
COJ – 210	Pine Tree Road Drainage	Construction	Pine Tree Road	\$57,309	COJ	Completed
COJ – 255	2121 Sessions Lane	Drainage improvement	Drainage	\$45,903	COJ	Completed
COJ – 256	2120 Sessions Lane	Drainage improvement	Drainage	\$38,165	COJ	Completed
COJ – 81	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	12	\$4,376	COJ	Ongoing
COJ – 211	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 82	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	1	\$179	COJ	Ongoing
COJ – 83	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	1	\$562	COJ	Ongoing
COJ – 84	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 85	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 86	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	2	\$758	COJ	Ongoing
COJ – 87	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 212	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 88	Private Lift Station Inspection	9 private lift stations in this WBID	1	\$379	COJ	Ongoing
COJ – 89	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center: 1 open	1	\$379	COJ	Ongoing
COJ – 90	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	0 (included in COJ-91)	\$0	COJ	Ongoing
COJ – 91	BMAP Sampling	3 sites (2 sampled monthly and 1 sampled quarterly)	29	\$5,133	COJ	Ongoing
COJ – 213	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 92	Pointe La Vista Failure Area – Septic Tank Phase-Out	Phase out septic tanks in failure areas	126 total tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 93	Freeman Road Failure Area – Septic Tank Phase-Out	Phase out septic tanks in failure areas	81 total tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 94	Inwood Terrace Failure Area – Septic Tank Phase-Out	Phase out septic tanks in failure areas	10 total tanks, 0 connected	Unknown	COJ	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 95	Emerson Failure Area – Septic Tank Phase-Out	Phase out septic tanks in failure areas	452 total tanks, 0 connected	Unknown	COJ	Ongoing
COJ – 96	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	12 total tanks, 0 connected	Unknown	COJ	Ongoing
COJ – 97	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 98	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

8.4 FDOT ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In 2013, the Adopt-A-Highway Program collected approximately 96 pounds of trash in the watershed. FDOT collected 1,100 pounds of debris through the street sweeping program. FDOT also helps to fund one monitoring station in the Miramar Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 31** lists FDOT's activities in the Miramar Creek watershed.

TABLE 31: FDOT ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 27	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 28	PIC Program - Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-27	FDOT/COJ	1 potential illicit connection found this reporting period; investigation is underway	Ongoing
FDOT – 29	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	1 sampling station, 3 routine water quality samplings performed	Ongoing
FDOT – 75	BMAP Monitoring	Included in FDOT-29	FDOT/COJ	3 sites; 26 sampling events	Ongoing
FDOT – 76	Source Identification Sampling – Conducted When High Levels of Coliform Bacteria Counts are Noted and Source Identification is Necessary	Included in FDOT-29	FDOT/COJ	0 additional samples were conducted	Ongoing
FDOT – 30	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 31	Adopt-A-Highway Program	Unknown	Not applicable	96 pounds of trash collected, trash collection area is 4.0 miles	Ongoing
FDOT – 32	Sediment Accumulation, Trash, and Debris Removed as Needed	Cost included in FDOT-34	FDOT	Approximately 178 inlets/catch basins and about 7 miles of piping	Ongoing
FDOT – 33	Street Sweeping Program	Cost included in FDOT-34	FDOT	10 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 1,100 pounds	Ongoing
FDOT – 34	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 9: BIG FISHWEIR CREEK (WBID 2280)

9.1 JEA ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

In 2013, open cut 0.03% of the lines, inspected 26 ARVs and replaced 18, inspected 0.18% of the pipes with closed-circuit television, and cleaned 0.53% of the lines. JEA also inspected 95 manholes as part of the Pop-Top Program. JEA's activities in the Big Fishweir Creek watershed are shown in **Table 32**.

TABLE 32: JEA ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 79	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 80	CIPP – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 81	Open Cut - Removal and Replacement	Replace failing/leaking infrastructure	208 linear feet of pipe was replaced in FY13	\$41,600	JEA	Ongoing
JEA – 82	Manhole Linings Rehabbed	Repair deteriorating manhole linings	0 manholes rehabbed in 2013	Not applicable	JEA	Ongoing
JEA – 83	ARV Inspection and Rehab	ARV inspection and rehab	26 ARVs inspected and 18 replaced in 2013	\$16,921	JEA	Ongoing
JEA – 84	ARV Inspection	Inspect all ARVs in watershed to ensure integrity	21 ARVs in watershed –21 inspected in FY11	\$2,100	JEA	Completed
JEA – 85	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 86	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	0 force main inspections in 2013	Not applicable	JEA	Ongoing
JEA – 87	Lift Station Inspection	Inspect lift stations near surface waters	6 stations near surface waters – all 6 stations inspected in FY10 – preventative maintenance performed monthly	Not applicable	JEA	Completed
JEA – 88	Merimac Avenue Lift Station Repair	Repaired lift station at Merimac Avenue as part of Walk the WBID follow-up	1 station	Not applicable	JEA	Completed
JEA – 89	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA-154	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	0 projects in 2013	Not applicable	JEA	Ongoing
JEA – 90	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit TV system	2,346 linear feet of pipe inspected in 2013	\$46,920	JEA	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 91	Pipe Cleaning	Clean existing pipes to avoid blockages	7,029 linear feet cleaned in 2013	\$140,580	JEA	Ongoing
JEA – 92	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 93	Manhole Monitoring	Manhole monitoring	Not applicable	Not applicable	JEA	Ongoing
JEA – 94	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 95	Pop-Top Program	Pop-Top Program	95 manholes inspected in 2013	\$4,750	JEA	Ongoing
JEA – 96	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	0 sites were tested in 2013	Not applicable	JEA	Ongoing

9.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

In 2013, FDOH issued one repair permit, six abandonment permits, and 19 annual operating permits. FDOH also conducted one plan review and site evaluation and performed six complaint investigations. The programs and activities FDOH conducts in the Big Fishweir Creek watershed are shown in **Table 33**.

TABLE 33: FDOH IN DUVAL COUNTY ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 37	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 1 repair and 6 abandonment permits issued	\$3,500	FDOH	Ongoing
FDOH – 38	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	19 annual operating permits issued for PBTS/IMZ in WBID	\$6,650	FDOH	Ongoing
FDOH – 39	SWIM Project	Implementation of broad-ranging septic tank ordinance	100% of Murray Hill B Septic Tank Failure Area is located in WBID	\$155,000	FDOH/ LSJR SWIM Grant	Completed
FDOH – 40	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 41	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 1 plan review and site evaluation have been performed in WBID	\$200	FDOH	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 42	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 43	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	6 complaint investigations have been performed in WBID	\$900	FDOH	Ongoing
FDOH – 44	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 395 inspections performed within WBID	\$37,800	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

9.3 COJ ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

9.3.1 COMPLETED COJ PROJECTS

In 2013, COJ completed the drainage improvement project on Woodruff Avenue. This project will help to reduce the amount of fecal coliforms that reach the creek from this area.

9.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In 2013, COJ had 16 work orders for ditch and creek regrading, 33 work orders for repair/clearing of structures, seven illicit water discharges, three sewers that drains into a yard or ditch, and seven sewer overflows. These inspections are initiated through information from the CARE database. COJ inspected 15 private lift stations in the basin (see **Figure 13**) and identified one PIC, which is still an open case. In addition, COJ collected 12 routine water quality samples. COJ also connected one septic tank to the sewer system within the watershed but outside of a failure area. COJ's efforts in the Big Fishweir Creek watershed are shown in **Table 34**. Additional details about COJ projects are included in **Appendix A**.



FIGURE 13: COJ EQD STAFF CONDUCTS INSPECTION OF SEWAGE LIFT STATION IN THE BIG FISHWEIR WATERSHED

TABLE 34: COJ ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 99	Hamilton at Jersey Outfall	Improve outfall to relieve flooding	Improve outfall	\$2,900,000	COJ	Design
COJ – 100	Lakeshore Woodcrest	Wet detention	296 acres	Unknown	COJ	Completed
COJ – 101	Murray Hill Phase 1	Wet detention	219 acres	Unknown	COJ	Completed
COJ – 102	Riverside Avenue	Second-generation baffle box	70 acres	Unknown	COJ	Completed
COJ – 214	In-line Dry pond, Widen Downstream Channel	MSMP, construction schedule subject to funding	Dry pond	\$2,500,000	COJ	Planned
COJ – 103	Drainage Improvements to Arden Street	Drainage improvement	Arden Street	Unknown	COJ	Completed
COJ – 104	Jersey St Drainage	Pipe roadside ditch	Jersey Street	\$75,000	COJ	Completed
COJ – 105	Fairfax Manor Creek	Regrade ditch	Fairfax Manor Creek	\$65,000	COJ	Completed
COJ – 215	5340 Royce Avenue	Pipe replacement	Royce Avenue	\$63,608	COJ	Completed
COJ – 216	Poppy Drive Paving Rehabilitation	Construction	Poppy Drive	\$58,357	COJ	Completed
COJ – 217	1748 Harksheimer Avenue	Pipe replacement	Harksheimer Avenue	\$49,225	COJ	Completed
COJ – 218	Quan Drive Drainage Outfall	Repair concrete ditch lining	Quan Drive	\$12,482	COJ	Completed
COJ – 219	4700 Block Astral Street	Curb/gutter	Astral Street	\$9,502	COJ	Completed
COJ – 220	College/Talbot	Curb/gutter	College/Talbot	\$31,914	COJ	Completed
COJ – 221	Murray Drive/French Street	Curb/gutter	Murray/French	\$11,750	COJ	Completed
COJ – 247	1290 Menna Drive	Pipe replacement	Unknown	\$46,349	COJ	Completed
COJ – 248	1748 Harksheimer Drive	Drainage improvement	Outfall improvement	\$49,225	COJ	Completed
COJ – 249	Boone Park and Pine Grove	Drainage improvement	Outfall improvement	\$2,502	COJ	Completed
COJ - 250	Rensselaer and Hollingsworth	Drainage improvement	Outfall improvement	\$86,710	COJ	Completed
COJ – 257	Woodruff Avenue	Drainage improvement	Drainage	\$24,239	COJ	Completed
COJ – 268	Kingsbury Street at Lark Street	Cave in	Cave In	\$10,177	COJ	Construction
COJ – 269	Plymouth Street	Design	Design	\$8,339	COJ	Design
COJ – 270	3900 Richmond Street	Storm sewer	Storm Sewer	\$2,773	COJ	Construction
COJ – 271	Rensselaer Avenue at Hollingsworth Street	Construction	Construction	\$56,470	COJ	Construction
COJ – 272	Quan Drive	Construction	Construction	\$148,686	COJ	Construction
COJ – 106	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	16	\$9,302	COJ	Ongoing
COJ – 222	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 107	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 108	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	33	\$47,175	COJ	Ongoing
COJ – 109	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	7	\$2,653	COJ	Ongoing
COJ – 110	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 111	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	3	\$1,137	COJ	Ongoing
COJ – 112	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	7	\$2,653	COJ	Ongoing
COJ – 113	Sewer Repairs at The Loop Restaurant	Follow-up and enforcement of sewer repairs at restaurant	Follow up on repairs	\$1,500	COJ	Completed
COJ – 114	Septic Tank Inspection	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 115	Private Lift Station Inspection	21 private lift stations in WBID	15	\$5,685	COJ	Ongoing
COJ – 116	Verify Location of Private Lift Stations	Verify that stations on boundary are reported in associated WBIDs (Cedar River and McCoy Creek)	5	\$1,060	COJ	Completed
COJ – 117	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through City staff and reported to CARE call center: 1 open	5	\$1,895	COJ	Ongoing
COJ – 118	Follow Up on Outstanding PICs	Follow up on 6 open PIC in watershed	6	Part of COJ – 117	COJ	Completed
COJ – 119	Walk the WBID PIC Investigations	Inspect 5 PICs between Cassat and Plymouth Avenue and black corrugated pipe on central branch	6	\$1,272	COJ	Completed
COJ – 120	Routine Surface Water Sampling	3 sampling stations in WBID	12	\$1,632	COJ	Ongoing
COJ – 121	BMAP Sampling	COJ is not responsible for BMAP monitoring in this watershed	0	\$0	COJ	Completed
COJ – 122	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted , to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 123	Outside Failure Areas – Septic Tank Phase-Out	Phase-out program as provided by COJ ordinance	490 total tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 124	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 125	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

9.4 FDOT ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

In 2013, FDOT found one PIC and the investigation is underway. FDOT collected 2,310 pounds of debris through the street sweeping program. FDOT also helps to fund three monitoring stations in the Big Fishweir Creek watershed that are sampled quarterly as part of the routine monitoring program.

Table 35 lists FDOT’s activities in the Big Fishweir Creek watershed.

TABLE 35: FDOT ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 35	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 36	PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-35	FDOT/COJ	1 potential illicit found this reporting period; investigation underway	Ongoing
FDOT – 37	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	3 sampling stations; 12 routine water quality samplings performed	Ongoing
FDOT – 38	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 39	Sediment Accumulation, Trash, and Debris Removed as Needed	Cost included in FDOT-41	FDOT	Approximately 305 inlets/catch basins and 14 miles of piping	Ongoing
FDOT – 40	Street Sweeping Program	Cost included in FDOT-41	FDOT	21 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 2,310 pounds	Ongoing
FDOT – 41	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 10: DEER CREEK (WBID 2256)

10.1 JEA ACTIVITIES IN THE DEER CREEK WATERSHED

During the last year, JEA used open cut to replace 0.02% of the pipes, inspected 3.56% of the pipes with closed-circuit television, and cleaned 1.58% of the lines. JEA also delivered 666 informational packages as part of the FOG Reduction Program and inspected 138 manholes as part of the Pop-Top Program. JEA's activities in the Deer Creek watershed are shown in **Table 36**.

TABLE 36: JEA ACTIVITIES IN THE DEER CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 97	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 98	CIPP – Install New Inner Lining	Rehabilitate failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 99	Open Cut – Removal and Replacement	Replace failing/leaking infrastructure	78 linear feet of pipe was replaced in FY13	\$15,600	JEA	Ongoing
JEA – 100	Manhole Linings Rehabbed	Repair deteriorating manhole linings	0 manholes rehabbed in 2013	Not applicable	JEA	Ongoing
JEA – 101	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 102	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	Not applicable	Not applicable	JEA	Ongoing
JEA – 103	Inspect Lift Station on Jesse Street	Inspect lift station and report in first annual BMAP report	Lift station inspected in FY10, monthly preventative maintenance performed	Not applicable	JEA	Completed
JEA – 104	FOG Reduction Program	FOG Reduction Program	666 packages	\$3,330	JEA	Ongoing
JEA – 105	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit TV system	12,854 linear feet of pipe inspected in 2013	\$39,540	JEA	Ongoing
JEA – 106	Pipe Cleaning	Clean existing pipes to avoid blockages	5,685 linear of pipe cleaned in 2013	\$113,700	JEA	Ongoing
JEA – 107	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 108	Manhole Monitoring	Manhole monitoring	1 monitor in watershed	\$5,000	JEA	Ongoing
JEA – 109	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 110	Pop-Top Program	Pop-Top Program	138 manholes inspected in 2013	\$6,900	JEA	Ongoing
JEA – 111	Non-Destructive Testing Program/ Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

10.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE DEER CREEK WATERSHED

In 2013, FDOH issued one annual operating permit and performed one complaint investigation. The programs and activities FDOH conducts in the Deer Creek watershed are shown in **Table 37**.

TABLE 37: FDOH IN DUVAL COUNTY ACTIVITIES IN THE DEER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 45	OSTDS Program	Implementation of programs to address septic systems as potential sources	No permits issued in WBID	Not applicable	FDOH	Ongoing
FDOH-78	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	1 annual operating permit issued for PBTS/IMZ in WBID	\$350	FDOH	Ongoing
FDOH – 46	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 47	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	No plan reviews or site evaluations performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 48	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 49	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	1 complaint investigation has been performed in WBID	\$150	FDOH	Ongoing
FDOH – 74	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 148 inspections performed within WBID	\$14,200	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

10.3 COJ ACTIVITIES IN THE DEER CREEK WATERSHED

10.3.1 COMPLETED COJ PROJECTS

In 2013, COJ completed a drainage improvement project at 1525 Tallyrand Avenue, which help to reduce fecal coliform loading to the creek from this area.

10.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Deer Creek watershed in 2013, COJ had five work orders for repair/clearing of structures, which was initiated through information from the CARE database. In addition, COJ collected three routine water quality samples and 12 BMAP samples. COJ's efforts in the Deer Creek watershed are shown in **Table 38**. Additional details about COJ projects are included in **Appendix A**.

TABLE 38: COJ ACTIVITIES IN THE DEER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 126	Lower Eastside Drainage Improvements – Phase 3	Eliminate flooding area bordered by 7 th Street, MLK Jr. Expressway, 1 st Street, Spearing Street	Wet detention	\$6,500,000	COJ	Construction
COJ – 127	Lower Eastside Pond Expansion	Pond expansion to provide compensating treatment for library, courthouse, and other downtown improvements	Wet detention	\$5,000,000	COJ	Construction
COJ – 128	Upper Deer Creek Regional Project	Wet detention	537 acres	Unknown	COJ	Completed
COJ – 223	1405 Van Buran Street	Pipe replacement	Van Buran Street	\$88,940	COJ	Completed
COJ – 224	Jessie Street	Pipe CIPP	Jessie Street	\$237,952	COJ	Completed
COJ – 258	1525 Tallyrand Avenue	Drainage improvement	Drainage	\$38,421	COJ	Completed
COJ – 129	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 225	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 226	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 130	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	5	\$2,946	COJ	Ongoing
COJ – 131	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 132	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 133	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 134	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 227	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 135	Private Lift Station Inspection	No private lift stations in WBID	0	\$0	COJ	Ongoing
COJ – 136	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 137	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 2 sampling stations in WBID	3	\$408	COJ	Ongoing
COJ – 138	BMAP Sampling	2 sites (1 sampled monthly and 1 sampled quarterly)	12	\$2,124	COJ	Ongoing
COJ – 139	Re-Sampling	Conducted when high levels of fecal coliform are noted, to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 140	Investigate High Fecal Coliform Counts in Downstream Portion of Watershed	Investigate and report results in first annual BMAP report; Walk the WBID was not needed	See COJ-138	\$0	COJ	Completed

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 141	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	0 total tanks	Unknown	COJ	Completed
COJ – 142	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 143	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

10.4 FDOT ACTIVITIES IN THE DEER CREEK WATERSHED

In 2013, FDOT collected 880 pounds of debris through the street sweeping program. FDOT also helps to fund two monitoring stations in the Deer Creek watershed that are sampled quarterly as part of the routine monitoring program. **Table 39** lists FDOT’s activities in the Deer Creek watershed.

TABLE 39: FDOT ACTIVITIES IN THE DEER CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 42	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 43	PIC Program – Illicit Connections Identified and Removed in WBID if Truly Illicit	Included in FDOT-42	FDOT/COJ	No true illicit connection identified to date	Ongoing
FDOT – 44	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	2 sampling stations, 3 routine water quality samplings performed	Ongoing
FDOT-77	BMAP Monitoring	Included in FDOT-44	FDOT/COJ	2 sites; 12 sampling events	Ongoing
FDOT-78	Source Identification Sampling – Conducted When High Levels of Coliform Bacteria Counts are Noted and Source Identification is Necessary	Included in FDOT-44	FDOT/COJ	0 additional samples were conducted	Ongoing
FDOT – 45	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 46	Sediment Accumulation, Trash, and Debris Removed as Needed	Cost included in FDOT-48	FDOT	Approximately 42 inlets/catch basins and 4 miles of piping	Ongoing
FDOT – 47	Street Sweeping Program	Cost included in FDOT-48	FDOT	8 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 880 pounds	Ongoing
FDOT – 48	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 11: TERRAPIN CREEK (WBID 2204)

11.1 JEA ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

JEA's 2013 activities in the Terrapin Creek watershed are shown in **Table 40**.

TABLE 40: JEA ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 112	Manhole Linings Rehabbed	Repair deteriorating manhole linings	Not applicable	Not applicable	JEA	Ongoing
JEA – 113	ARV Inspection and Rehab	ARV inspection and rehab	0 ARVs inspected	Not applicable	JEA	Ongoing
JEA – 114	ARV Inspection	Inspect 1 ARV in watershed and report in annual progress report	1 ARV inspected in FY10	\$100	JEA	Completed
JEA – 115	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 116	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	Not applicable	Not applicable	JEA	Ongoing
JEA – 117	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 118	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 119	Manhole Monitoring	Manhole monitoring	Not applicable	Not applicable	JEA	Ongoing
JEA – 120	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 121	Pop-Top Program	Pop-Top Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 122	Non-Destructive Testing Program	Non-Destructive Testing Program	Not applicable	Not applicable	JEA	Ongoing

11.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

In 2013, FDOH issued five annual operating permits. The programs and activities FDOH conducts in the Terrapin Creek watershed are shown in **Table 41**.

TABLE 41: FDOH IN DUVAL COUNTY ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 50	OSTDS Program	Implementation of programs to address septic systems as potential sources	No permits issued in WBID	Not applicable	FDOH	Ongoing
FDOH – 51	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	5 annual operating permits issued for PBTS/IMZ in WBID	\$1,750	FDOH	Ongoing
FDOH – 52	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 53	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	No plan reviews or site evaluations performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 54	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 55	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	No complaint investigations performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 75	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 395 inspections performed within WBID	\$37,800	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

11.3 COJ ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

In the Terrapin Creek watershed in 2013, COJ inspected six private lift stations in the watershed and collected seven routine water quality samples. COJ also connected one septic tank to the sewer system within the watershed but outside of a failure area. COJ's efforts in the Terrapin Creek watershed are shown in **Table 42**. Additional details about COJ projects are included in **Appendix A**.

TABLE 42: COJ ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 144	Faye Road – Area Floods	Faye Road drainage system rehab	Faye Road	\$40,000	COJ	Completed
COJ – 145	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 228	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 229	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 146	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 147	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 148	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 230	Sewer Drains to Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 231	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 232	Septic Tank Inspection	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 149	Private Lift Station Inspection	6 private lift stations in WBID	6	\$2,274	COJ	Ongoing
COJ – 150	Determine Lift Station Location	1 lift station is located on boundary, verify location for first annual report	1	\$212	COJ	Completed
COJ – 151	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 152	Follow Up on Outstanding PICs	Follow up on 9 open PICs in watershed	9	\$1,908	COJ	Completed
COJ – 153	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 2 sampling stations in WBID	7	\$952	COJ	Ongoing
COJ – 233	BMAP Monitoring	COJ is not responsible for BMAP monitoring in this watershed	0	\$0	COJ	Completed
COJ – 234	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	0	\$0	COJ	Completed
COJ – 154	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	55 total tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 155	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 156	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

11.4 FDOT ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

FDOT helps to fund two monitoring stations in the Terrapin Creek watershed that are sampled quarterly as part of the routine monitoring program. **Table 43** lists FDOT’s activities in the Terrapin Creek watershed.

TABLE 43: FDOT ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 49	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 50	PIC Program – Illicit Connections Identified and Removed in WBID if Truly Illicit	Included in FDOT-49	FDOT/COJ	No truly illicit connection identified to date	Ongoing
FDOT – 51	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	2 sampling stations, 7 routine water quality samplings performed	Ongoing
FDOT – 52	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 53	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 12: GOODBYS CREEK (WBID 2326)

12.1 JEA ACTIVITIES IN THE GOODBYS CREEK WATERSHED

In 2013, JEA used open cut to repair 0.01% of the pipes, inspected 11 ARVs and replaced one, rebuilt four lift stations, inspected 0.04% of the pipes with closed-circuit television, and cleaned 0.25% of the lines. JEA also inspected 91 manholes as part of the Pop-Top Program. JEA's activities in the Goodbys Creek watershed are shown in **Table 44**.

TABLE 44: JEA ACTIVITIES IN THE GOODBYS CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 123	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	No effort	Not applicable	JEA	Ongoing
JEA – 124	Open Cut – Removal and Replacement	Replace failing/leaking infrastructure	86 linear feet of pipe was replaced in FY13	\$17,200	JEA	Ongoing
JEA – 125	Manhole Linings Rehabbed	Repair deteriorating manhole linings	0 manholes rehabbed in 2013	Not applicable	JEA	Ongoing
JEA – 126	ARV Inspection and Rehab	ARV inspection and rehab	11 ARVs inspected and 1 replaced in 2013	\$2,197	JEA	Ongoing
JEA – 127	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 128	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	Not applicable	Not applicable	JEA	Ongoing
JEA – 129	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	4 projects in FY13	\$519,680	JEA	Ongoing
JEA – 130	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 131	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit TV system	608 linear of pipe inspected in 2013	\$12,160	JEA	Ongoing
JEA – 132	Pipe Cleaning	Clean existing pipes to avoid blockages	3,684 linear feet of pipe cleaned in 2013	\$73,680	JEA	Ongoing
JEA – 133	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 134	Manhole Monitoring	Manhole monitoring	1 monitor in watershed	\$5,000	JEA	Ongoing
JEA – 135	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 136	Pop-Top Program	Pop-Top Program	91 manholes were inspected in 2013	\$4,550	JEA	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 137	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

12.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE GOODBYS CREEK WATERSHED

In 2013, FDOH issued one new permit, five repair permits, and eight annual operating permits. FDOH also conducted six plan reviews and site evaluations and performed one complaint investigation. The programs and activities FDOH conducts in the Goodbys Creek watershed are shown in **Table 45**.

TABLE 45: FDOH IN DUVAL COUNTY ACTIVITIES IN THE GOODBYS CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 56	OSTDS Program	Implementation of programs to address septic systems as potential sources	Approximately 1 new and 5 repair permits issued	\$3,000	FDOH	Ongoing
FDOH – 57	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	8 annual operating permits for PBTS/IMZ located in WBID	\$2,800	FDOH	Ongoing
FDOH – 58	SWIM Project	Implementation of broad-ranging septic tank ordinance	16.3% of Beauclerc Gardens Septic Tank Failure Area located in WBID	\$34,000	FDOH/ LJSR SWIM Grant	Completed
FDOH – 59	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	Not applicable	Not applicable	Ongoing
FDOH – 60	Application/ Plan Review/Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	Approximately 6 plan reviews and site evaluations have been performed in WBID	\$1,200	FDOH	Ongoing
FDOH – 61	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 1 year since previous update	Not applicable	Not applicable	Ongoing
FDOH – 62	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	1 complaint investigation have been performed in WBID	\$150	FDOH	Ongoing
FDOH – 63	Walk the WBID Effort	Inspect the septic tanks in the central portion of watershed to identify sources	Walk the WBID	Part of FDOH – 64	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 64	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 337 inspections performed within WBID	\$32,200	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

12.3 COJ ACTIVITIES IN THE GOODBYS CREEK WATERSHED

12.3.1 COMPLETED COJ PROJECTS

COJ completed the drainage improvement projects on San Clerc Road, San Clerc Road and Sanchez Road, and Sanchez Road. These projects will help to reduce fecal coliform loadings to the creek from these areas.

12.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In 2013, COJ had 22 work orders for ditch and creek regrading, 23 work orders for repair/clearing of structures, two illegal water discharges, one sewer that drains to yard or ditch, and six sewer overflows. These inspections are initiated through information from the CARE database. COJ also inspected 12 private lift stations and collected three routine water quality samples. In addition, COJ connected one septic tank to the sewer system within the watershed but outside of a failure area. COJ's efforts in the Goodbys Creek watershed are shown in **Table 46**. Additional details about COJ projects are included in **Appendix A**.

TABLE 46: COJ ACTIVITIES IN THE GOODBYS CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 157	Powers Avenue at Old Kings Road	Regional pond	520 acres	Unknown	COJ	Completed
COJ – 235	Berm, New Ponds with Managed Aquatic Plant Systems (MAPS), Existing Pond with MAPS, and Borrow Pit with MAPS	MSMP, construction schedule subject to funding	Ponds	\$4,300,000	COJ	Planned
COJ – 158	Repair Erosion at Sierra Madre Drive	Bank repairs failed to prevent erosion	Sierra Madre Drive	\$106,262	COJ	Completed
COJ – 236	San Clerc/Sanchez Drainage	Construction	Unknown	\$229,524	COJ	Completed
COJ – 237	San Clerc Road Drainage Improvement	Drainage improvement	San Clerc Road	\$541	COJ	Completed
COJ – 251	San Clerc/Sanchez Drainage Improvement	Drainage improvement	Unknown	\$29,524	COJ	Completed
COJ – 252	Sanchez Road	Drainage improvement	Unknown	\$62,333	COJ	Completed
COJ – 259	9439 San Jose Boulevard	Drainage improvement	Unknown	\$66,195	COJ	Completed
COJ – 272	9115 Barnstable Lane	Drain line	Drain line	\$40,006	COJ	Construction
COJ – 273	8893 Brierwood Road	Storm sewer	Storm sewer	\$6,034	COJ	Construction
COJ – 274	Osprey Court	Construction	Construction	\$89,394	COJ	Construction
COJ – 159	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	22	\$10,998	COJ	Ongoing
COJ – 238	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 160	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 161	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	23	\$0	COJ	Ongoing
COJ – 162	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 163	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	2	\$758	COJ	Ongoing
COJ – 164	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	1	\$379	COJ	Ongoing
COJ – 165	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	6	\$2,274	COJ	Ongoing
COJ – 239	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 166	Private Lift Station Inspection	50 private lift stations in WBID	12	\$4,548	COJ	Ongoing
COJ – 167	Verify Locations of Private Lift Stations on Boundary	Verify location of 3 stations on boundary and report in first annual progress report	3	\$636	COJ	Completed
COJ – 168	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 169	Follow Up on Outstanding PICs	Follow up on 16 open PICs in watershed, 14 remaining PICs resolved	16	\$6,064	COJ	Completed
COJ – 170	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	3	\$408	COJ	Ongoing
COJ – 240	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 171	Beauclerc Gardens Failure Area – Septic Tank Phase-Out	Phase-out of septic tanks in failure areas	84 total tanks, 0 connected	Unknown	COJ	Ongoing
COJ – 172	Outside Failure Areas – Septic Tank Phase-Out	Phase out program as provided by COJ ordinance	314 total tanks, 1 connected	Unknown	COJ	Ongoing
COJ – 173	Walk the WBID Effort	Conduct Walk the WBID in central portion of watershed to identify sources	Walk the WBID	Unknown	COJ/ FDOH	Planned
COJ – 174	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 175	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

12.4 FDOT ACTIVITIES IN THE GOODBYS CREEK WATERSHED

In 2013, the Adopt-A-Highway Program collected 156 pounds of trash along 6.5 miles of roadway. FDOT collected 3,960 pounds of debris through the street sweeping program. FDOT also helps to fund one monitoring station in the Goodbys Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 47** lists FDOT's activities in the Goodbys Creek watershed.

TABLE 47: FDOT ACTIVITIES IN THE GOODBYS CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 54	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 55	PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-54	FDOT/COJ	No potential illicit found this reporting period	Ongoing
FDOT – 56	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,194	FDOT/COJ	1 sampling station, 3 routine water quality samplings performed	Ongoing
FDOT – 57	Baymeadows Project from East of U.S. 1 to Baymeadows Rd	\$1,496,472	FDOT	35 acres, wet detention	Completed
FDOT – 58	DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 59	Adopt-A-Highway Program	Unknown	Not applicable	156 pounds of trash collected, trash collection area is 6.5 miles	Ongoing
FDOT – 60	Sediment Accumulation, Trash, and Debris Removed As Needed	Cost included in FDOT-62	FDOT	Approximately 195 inlets/catch basins and about 8 miles of piping	Ongoing
FDOT – 61	Street Sweeping Program	Cost included in FDOT-62	FDOT	36 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 3,960 pounds	Ongoing
FDOT – 62	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing

SECTION 13: OPEN CREEK (WBID 2299)

13.1 JEA ACTIVITIES IN THE OPEN CREEK WATERSHED

In 2013, JEA pipe burst 0.09% of the lines, used open cut to repair 0.01% of the pipes, repaired 12 manhole liners, inspected one ARV and replaced one ARV, upgraded one lift stations, inspected 0.05% of the pipes with closed-circuit television, and cleaned 0.26% of the pipes. JEA also inspected nine manholes as part of the Pop-Top Program. JEA's activities in the Open Creek watershed are shown in **Table 48**.

TABLE 48: JEA ACTIVITIES IN THE OPEN CREEK WATERSHED

Note: JEA's FY13 is from October 1, 2012 through September 30, 2013

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 138	Pipe Bursting – Increase Carrying Capacity	Replace failing/leaking infrastructure	640 feet of HDPE pipe installed	\$96,000	JEA	Ongoing
JEA – 139	Open Cut – Removal and Replacement	Replace failing/leaking infrastructure	50 linear feet of pipe was replaced in FY13	\$10,000	JEA	Ongoing
JEA – 140	Manhole Linings Rehabbed	Repair deteriorating manhole linings	12 manhole liners rehabbed in 2013	\$9,000	JEA	Ongoing
JEA – 141	ARV Inspection and Rehab	ARV inspection and rehab	1 ARV inspected and 1 replaced in 2013	\$882	JEA	Ongoing
JEA – 142	Pump Station SCADA Upgrades	Retrofitting completed in 2004; all stations constructed since have SCADA installed	Not applicable	Not applicable	JEA	Completed
JEA – 143	Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary	Inspect force main discharge manholes, repair/rehab as necessary	Not applicable	Not applicable	JEA	Ongoing
JEA-155	Pump Station Class I/II Rebuilding	Repair or replace components of existing pump stations	1 project in FY13	\$30,027	JEA	Ongoing
JEA – 144	Verify Lift Station Location on Boundary	Verify which WBID Marsh Island station is reported in for first annual progress report	14657 Marsh Island station is in the Open Creek watershed	Not applicable	JEA	Completed
JEA – 145	Inspect Lift Stations near Surface Waters	Inspect 11 stations near surface waters and report in annual progress reports	11 stations inspected in FY10, monthly preventative maintenance performed	Not applicable	JEA	Completed
JEA – 146	FOG Reduction Program	FOG Reduction Program	Not applicable	Not applicable	JEA	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
JEA – 147	Pipe TV Inspection	Inspect existing infrastructure through use of closed-circuit television	373 linear feet of pipe inspected in 2013	\$7,460	JEA	Ongoing
JEA – 148	Pipe Cleaning	Clean existing pipes to avoid blockages	1,913 linear feet of pipe cleaned in 2013	\$38,260	JEA	Ongoing
JEA – 149	Implement CMOM Program	Implement CMOM Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 150	Manhole Monitoring	Manhole monitoring	1 monitor in watershed	\$5,000	JEA	Ongoing
JEA – 151	SSO Root Cause Program	SSO Root Cause Program	Not applicable	Not applicable	JEA	Ongoing
JEA – 152	Pop-Top Program	Pop-Top Program	9 manholes surveyed in 2013	\$450	JEA	Ongoing
JEA – 153	Non-Destructive Testing Program/Pipe Integrity Testing	Non-Destructive Testing Program/pipe integrity testing	Not applicable	Not applicable	JEA	Ongoing

13.2 FDOH IN DUVAL COUNTY ACTIVITIES IN THE OPEN CREEK WATERSHED

In 2013, FDOH issued two annual operating permits. The programs and activities FDOH conducts in the Open Creek watershed are shown in **Table 49**.

TABLE 49: FDOH IN DUVAL COUNTY ACTIVITIES IN THE OPEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 65	OSTDS Program	Implementation of programs to address septic systems as potential sources	No permits have been issued in WBID	Not applicable	FDOH	Ongoing
FDOH – 66	Annual Operating Permits	Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems	2 annual operating permits for PBTS/IMZ located in WBID	\$700	FDOH	Ongoing
FDOH – 67	FDOH-Sponsored Training Programs	Annual training programs held for septic tank contractors, certified plumbers, maintenance entities, and environmental health professionals	1 to 2 trainings per year providing up to 12 contact hours	\$2,500	FDOH	Ongoing
FDOH – 68	Application/ Plan Review/ Site Evaluations	FDOH performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system	No plan reviews or site evaluations have been performed in WBID	Not applicable	FDOH	Ongoing
FDOH – 69	Septic Tank Failure Area Ranking	Septic tank failure area scored and prioritized on annual basis	Less than 2 years since previous update	Not applicable	Not applicable	Ongoing

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	ESTIMATED COST	FUNDING SOURCE	PROJECT STATUS
FDOH – 70	Complaint Investigations	FDOH investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations	No complaints have been received in WBID	Not applicable	FDOH	Ongoing
FDOH – 76	Intensive Inspection Program	Intensive inspections based on repair permit applications, water quality information, and site conditions	Approximately 65 inspections performed within WBID	\$6,250	FDOH/ Department/ Section 319 Nonpoint Source Management Program Implementation Grant	Completed

13.3 COJ ACTIVITIES IN THE OPEN CREEK WATERSHED

13.3.1 COMPLETED COJ PROJECTS

In 2013, COJ completed drainage improvement projects along Washburn Road, which will help to reduce fecal coliform loading to Open Creek from this area.

13.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Open Creek watershed in 2013, COJ had one work order for ditch and creek regrading and three work orders for repair/clearing of structures. These inspections are initiated through information from the CARE database. In addition, COJ collected two routine water quality samples. COJ also connected two septic tanks to the sewer system within the watershed but outside of a failure area. COJ's efforts in the Open Creek watershed are shown in **Table 50**. Additional details about COJ projects are included in **Appendix A**.

TABLE 50: COJ ACTIVITIES IN THE OPEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	PROJECT DESCRIPTION	LEVEL OF EFFORT	TOTAL COST	FUNDING SOURCE	PROJECT STATUS
COJ – 241	Conveyance Improvements Under Power Easement Near Deer Chase Place and Danforth Drive	MSMP, construction schedule subject to funding	Deer Chase Place and Danforth Drive	\$296,000	COJ	Planned
COJ – 176	Improve Drainage Pine Tree Road	Road does not drain adequately	Pine Tree Road	\$20,369	COJ	Completed
COJ – 260	Washburn Road	Drainage improvement	Unknown	\$6,191	COJ	Completed
COJ – 261	Washburn Road Drainage	Drainage improvement	Unknown	\$35,949	COJ	Completed
COJ – 262	Washburn Road Drainage Part A	Drainage improvement	Unknown	\$72,692	COJ	Completed
COJ – 177	Ditch/Creek Regrade/Erosion/Clean	CARE requests with costs for responses where a work order was issued	1	\$5,126	COJ	Ongoing
COJ – 242	Ditch Hazardous/Contaminated	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 178	Lake or Pond Problem	CARE requests with costs for responses where a work order was issued	0	\$0	COJ	Ongoing
COJ – 179	Structure Blocked/Repair/General Flooding	CARE requests with costs for responses where a work order was issued	3	\$188	COJ	Ongoing
COJ – 180	Illicit Water Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 243	Pollution – Water – Illegal Discharge	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 181	Sewer Drains into Yard/Ditch	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 182	Sewer Overflow	CARE initiated - incidents reported/found and closed during reporting period	0	\$0	COJ	Ongoing
COJ – 244	Septic Tank Inspections	CARE initiated transferred to FDOH for enforcement action	0	\$0	COJ	Ongoing
COJ – 183	Private Lift Station Inspection	14 private lift stations in WBID	0	\$0	COJ	Ongoing
COJ – 184	Verify Location of Lift Stations on Boundary	Verify that 2 stations on boundary are reported in Hogpen Creek	2	\$758	COJ	Completed
COJ – 185	Illicit Discharge Detection and Elimination	Investigation of illicit discharge and dumping issues through city staff and reported to CARE call center	0	\$0	COJ	Ongoing
COJ – 186	Follow Up on Outstanding PICs	Follow up on 5 open PICs in watershed	5	\$1,895	COJ	Completed
COJ – 187	Routine Surface Water Sampling	NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID	2	\$272	COJ	Ongoing
COJ – 245	Re-Sampling	Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources	0	\$0	COJ	Ongoing
COJ – 188	Outside Failure Areas	Phase out program as provided by COJ ordinance	72 total tanks, 2 connected	Unknown	COJ	Ongoing
COJ – 189	Septic Tank Maintenance Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing
COJ – 190	Pet/Animal Management Public Education	Public service announcements	Ongoing	Unknown	COJ	Ongoing

13.4 FDOT ACTIVITIES IN THE OPEN CREEK WATERSHED

In 2013, FDOT collected 297 pounds of debris through monthly street sweeping of 2.7 miles of roadway. FDOT also helps to fund one monitoring station in the Open Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 51** lists FDOT’s activities in the Open Creek watershed.

TABLE 51: FDOT ACTIVITIES IN THE OPEN CREEK WATERSHED

PROJECT NUMBER	PROJECT NAME	ESTIMATED COST	FUNDING SOURCE	LEVEL OF EFFORT	PROJECT STATUS
FDOT – 63	PIC Program – Search for Illicit Connections	Countywide - \$45,394	FDOT/COJ	Effort is continuous in WBID	Ongoing
FDOT – 64	PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit	Included in FDOT-63	FDOT/COJ	No true illicit connection identified to date	Ongoing
FDOT – 65	Routine Tributary Monitoring as Part of MS4 Permit	Countywide - \$197,794	FDOT/COJ	1 sampling station, 2 routine water quality samplings performed	Ongoing
FDOT – 66	Beach Boulevard Widening from Intracoastal Waterway to East of Penman	\$230,910	FDOT	39 acres, wet detention	Completed
FDOT – 67	DCP– Connecting Entity Must Certify that All Discharges to FDOT MS4 are Treated Prior to Connection	Countywide - \$11,492	FDOT	Ongoing effort	Ongoing
FDOT – 68	Sediment Accumulation, Trash, and Debris Removed on As-Needed Basis	Cost included in FDOT-69	FDOT	Approximately 12 inlets/catch basins and 2.7 miles of piping	Ongoing
FDOT – 69	Maintain FDOT Stormwater Systems	Countywide - \$7,099,840	FDOT	Clean drainage structures, replace/repair storm/cross/side drains, clean/reshape roadside ditches, clear/repair outfall ditches, mowing, roadside litter removal, respond to citizen complaints	Ongoing
FDOT-70	Street Sweeping Program	Cost included in FDOT-69	FDOT	2.7 miles of roadway swept monthly, amount of street sweeping debris collected is approximately 297 pounds	Ongoing
FDOT-71	Maintain Wet Stormwater Management System – Drainage Area 22 acres	Cost included in FDOT-69	FDOT	Keep pond functioning as designed	Ongoing

APPENDICES

Appendix A: COJ Activities Supporting Information

The following supplemental information is provided in reference to project and activity records contained in the COJ project tables.

MS4 Capital Improvement and Drainage System Repair Projects

Capital improvement projects that were completed, under design, or under construction within each of ten tributaries in the BMAP I watershed areas remain active and have continued progress toward operational goals. A total of 24 drainage system restoration improvement projects within the BMAP I were begun or completed during 2013, and this work represents a total drainage system improvement expenditure of \$1,021,981 within the BMAP I WBIDs. During 2013, two projects were in design with 12 projects under construction.

MS4 Maintenance Activities

The Department of Public Works Right of Way and Grounds Maintenance Division provides improvements to stormwater systems and ensure conveyances, ponds, control structures, and other elements of the infrastructure are intact and functioning properly. In 2011, a proactive stormwater infrastructure inspection program was implemented. There are three stormwater system inspectors dedicated to proactive stormwater system maintenance inspections. The stormwater system inspection program will support NPDES permit requirements and best management practices through existing maintenance programs of the Right of Way and Grounds Maintenance Division.

Most stormwater systems maintenance requests are received through the COJ CARE call center system. The Right of Way and Grounds Maintenance Division responds to an average of 10,000 CARE requests per year. The reactive maintenance program provides for ditch repair and cleaning, debris removal, vegetation control, structure repair, and any tasks required to keep the stormwater systems functioning. A total of 5,546 Right of Way and Grounds Maintenance Division drainage related work orders were issued city-wide during the reporting period. Right of Way and Grounds Maintenance Division records indicate a total of 229 maintenance work orders with an associated total cost of \$190,987 were completed within in the BMAP I watershed areas in 2013.

SSOs

The sanitary sewer collection system and related treatment facilities within COJ is operated by JEA, an independent regional authority. COJ EQD staff members receive reports of SSOs through the CARE

call center. The SSO and related CARE system issues received by EQD that are not associated with JEA's sanitary sewer system are investigated by EQD staff. The SSO issues confirmed to be associated with JEA sanitary sewer systems are referred to JEA response staff. JEA reports SSO information in accordance with JEA NPDES permit requirements. The SSOs and related issues may be investigated by EQD staff, or referred to the appropriate regulatory agency.

Spill and Discharge Reporting and Response

EQD staff members receive reports of pollution spills and environmental concerns through the CARE call center and direct contact from citizens and other government organizations. Environmental concerns related to the BMAP watersheds and overall Duval County NPDES permit requirements are also investigated through EQD's proactive illicit discharge source investigation program.

EQD conducted 535 water quality related CARE system inspections city-wide during the current reporting period. A total 36 CARE initiated water quality inspections were in the BMAP I watershed areas. These inspections are noted on a WBID basis in the project tables. Illicit discharges and spills initially investigated by EQD staff and found to be caused by private septic tanks are referred to the FDOH in Duval County. COJ has maintained illicit discharge detection elimination programs for many years and, in 1999, began tracking the investigative work in coordination with the NPDES permitting program. Illicit discharge inspections initiated through CARE system requests may include the following:

- *Failing septic tanks (referred to FDOH for follow up inspection and enforcement).*
- *Plumbing code violations (referred to the city's Code Enforcement Section).*
- *JEA or other utility SSOs and incidents (referred to the Department's Northeast District).*
- *Private sewage lift stations or other treatment facilities without NPDES permits (investigated by EQD staff).*
- *Illicit discharges and connections to the COJ stormwater systems.*
- *Spills or illegal dumping incidents.*
- *Other surface water pollutant or erosion controls.*

Private Lift Station Inspections

Within COJ there are over 1,400 private sewage lift stations that were permitted and built after 1991. COJ EQD conducts scheduled routine inspections of private lift stations to confirm compliance with local Environmental Protection Board Rule 3 requirements. When an inspection finds a private lift station is not in proper working order, EQD informs the owner and operator and initiates enforcement action when necessary. Inspections of private lift stations are conducted in response to CARE system reports. The EQD private lift station inspection program activity has been integrated with overall proactive illicit discharge detection and elimination efforts associated with BMAP and NPDES permit requirements. There are 115 private lift stations in BMAP I WBIDs. One was inspected during 2013.

Water Quality Monitoring and Sampling

COJ maintains several river and tributary sampling networks. The ambient tributary program currently consists of 103 locations and each site is sampled quarterly. Station locations are often near bridges and roadways to facilitate sampling efforts; sites are both above and within tidal influence from the St. Johns River or Intracoastal Waterway. The primary objective of this program is the collection of a long-term dataset that will enable the city to document water quality trends. Parameters include field observations, weather information, metered parameters, (dissolved oxygen, percent saturation of dissolved oxygen, pH, temperature, salinity and specific conductance), and fecal coliform bacteria.

EQD also samples additional tributary stations monthly in five of the ten BMAP I streams (13 sites) as part of the BMAP source assessment sampling obligations. EQD collected 157 samples in the BMAP I tributaries in 2013. Through coordination with the TAT, a protocol has been established for investigating high bacteria counts. When a tributary site results exceed 5,000 CFU, re-sampling is conducted upstream and downstream to attempt to determine the source of the elevated bacteria levels. EQD has elected to conduct follow-up sampling on high bacteria counts from the routine ambient tributary network as well as the BMAP sampling. In 2013, EQD staff collected 29 follow-up water samples within BMAP I tributaries.

Septic Tank Phase Out Program

Based on an analysis completed by the Water and Sewer Expansion Authority in 2010, there are over 65,000 septic tanks within the city. JEA and COJ are reviewing and consolidating records to confirm the total number of septic tanks eliminated city-wide since 1996. Based on a preliminary review of records, approximately 4,500 septic tanks have been phased out and connected to JEA city-wide since

1996. Approximately 650 septic tanks have been phased out in the BMAP I WBIDs between 1996 and December 3013.

Information regarding the number of septic tank connections during the current reporting period was determined by reviewing the COJ building inspection database. The number of septic tanks eliminated and connected to the JEA sanitary sewer collection system in future years is dependent on funding and use of the ArcNLET model being developed by the Department.

BMAP and NPDES Permit Programs

The COJ NPDES permit links permit compliance with reductions in surface water contamination. The NPDES permit references the BMAPs and associated tributary TMDLs in relation to water quality monitoring and reductions in tributary pollutant loading. Watershed improvement practices and recordkeeping associated with the reduction of the TMDL and the overall BMAP include the following.

- *Inventory and mapping of COJ and FDOT MS4 infrastructure.*
- *Implementation of proactive Illicit Discharge Detection and Elimination Program.*
- *MS4 Structural Control Inspection Program.*
- *Expansion of High Priority Industry Inspection Programs.*
- *Update of its ongoing Water Quality Monitoring Program.*
- *Water quality trend analysis.*
- *Implementation of a bacteria control plan for one TMDL WBID not under a BMAP.*

During the current five-year NPDES permit period, the city estimates it will invest over \$12.5 million to comply with permit requirements and fulfill its LSJR main stem and tributaries BMAPs water quality monitoring and inspection obligations.

Public Education and Outreach

COJ, coordinated by the Environmental Protection Board and EQD, facilitates its outreach efforts primarily through Citizens Planning Advisory Committee meetings, homeowner association meetings, businesses and civic group meetings and school presentations. These events provide opportunities to teach citizens about efforts to improve water quality and to reduce bacteria levels in Jacksonville's tributaries.

COJ also provides continuing public education and outreach through ongoing programs and special events in partnership with multiple city, state and federal organizations including:

- *Duval County Agricultural Extension Office.*
- *COJ Public Works - Mowing Division.*
- *JaxParks.*
- *COJ Clean it Up / Green it Up.*
- *Florida Department of Environmental Protection.*
- *National Park Service.*
- *FDOH in Duval County.*
- *City of Jacksonville Beach.*
- *City of Atlantic Beach.*
- *City of Neptune Beach.*

Many public education and outreach events are supported in the community or hosted by the Environmental Protection Board during the BMAP annual reporting period. Several significant annual events include the following:

- *Annual Environmental Protection Board Water Education Festival at the Museum of Science & History.*
- *Annual Earth Day Festival.*
- *Annual Tree Hill Butterfly Festival.*
- *Annual Environmental Protection Board-University of North Florida Environmental Symposium.*
- *1st Annual Art & Environment Festival at the Cummer Museum.*

The Environmental Protection Board provides a 24-hour public education and outreach point of contact for the community through direct email to epb@coj.net, through COJ's call center (CARE) and via the COJ web pages.

Appendix B: TAT Data

The TAT protocol requires that if a fecal coliform concentration over 5,000 counts is found during the routine sampling, follow up sampling must be conducted upstream and downstream of the high counts to try and determine the source. The follow up samples collected by the Department and COJ over the last year are included in the tables below.

TABLE B-1: DEPARTMENT FOLLOW UP SAMPLING RESULTS

DATE	WBID	STATION DESCRIPTION	FECAL COLIFORM (CFU/100mL)	COMMENTS
06/24/2013	2280	Upstream of Little Fishweir at Oak Approx. 1 Block	4,500	Original hit on 06/14/2013 downstream was 6,000
06/24/2013	2280	Upstream of Big Fishweir at East Park at the West Park Site	6,000Z	06/14/2013 downstream was 6,900
06/24/2013	2322	Followed Upstream of Butcher Pen at Wesconnett Approx. 100m	4,900	Not applicable

TABLE B-2: COJ FOLLOW UP SAMPLING RESULTS

WBID	STATION	STATION DESCRIPTION	DATE	TEMP (°C)	CONDUCTIVITY (uS)	SALINITY	pH	FECAL COLIFORM (CFU/100 mL)	WEATHER CONDITIONS
2252	HC5TH	At 5th Street	1/24/2013	18.01	550.6	0.28	7.77	250	Not applicable
2252	SW#2	SW Pipe	1/24/2013	Not Sampled	Not Sampled	Not Sampled	Not Sampled	410	Not applicable
2287	SS21	Camden Avenue	2/21/2013	15.02	339.5	0.17	6.51	11,892	Partly Sunny 17.5C
2287	SS2A	Stillman Street	2/21/2013	19.18	360.6	0.18	6.1	360	Partly Sunny 23.4C
2252	HC2A	Hubbard Street	6/4/2013	27.82	518.7	Not Sampled	Not Sampled	2,200	Heavy Rain Shower 25.4C
2252	HC2A	Hubbard Street	6/4/2013	29.39	469.9	Not Sampled	Not Sampled	8,559	Light Rain 26.1C
2287	SS21	Camden Avenue	6/20/2013	24.15	272.1	0.13	6.25	31,000	Mostly Cloudy 28C
2287	SSBHSC	Atherton Road	6/20/2013	23.96	362.3	0.18	6.48	7,387	Mostly Cloudy 27.8C
2287	SS2A	Stillman Street	6/20/2013	23.7	408.5	0.2	6.36	811	Mostly Cloudy 29C
2287	SS21UP Bridge	Upstream of Footbridge	6/20/2013	25.81	288.1	0.14	6.29	5,200	Mostly Cloudy 28.6C
2287	SS21UP Pipe	Upstream of SW Pipe	6/20/2013	25.81	288.1	0.14	6.29	2,200	Mostly Cloudy 28.6C
2287	SS23	Mayfair Road	6/20/2013	25.09	688.1	0.35	7	3,500	Mostly Cloudy 28.1C
2287	SS1	Atlantic Boulevard	6/20/2013	27.65	4256	2.32	6.88	4,600	Mostly Cloudy 27.6C
2287	SS21	Camden Avenue	7/18/2013	24.3	348	0.17	6.47	46,000	Mostly Cloudy 30.9C
2287	S2A	Stillman Street	7/18/2013	24.3	348	0.17	5.92	1,171	Mostly Cloudy 31.1C
2287	SS21UP Bridge	Upstream of Footbridge	7/18/2013	Not Sampled	Not Sampled	Not Sampled	Not Sampled	2,500	Mostly Cloudy 31.2C
2287	SS21UP Pipe	Upstream of SW Pipe	7/18/2013	Not Sampled	Not Sampled	Not Sampled	Not Sampled	1,712	Mostly Cloudy 31.2C
2287	SS21	Camden Avenue	8/20/2013	25.35	303.5	0.15	6.02	25,000	Not applicable
2287	SS2A	Stillman Street	8/20/2013	25.77	406.8	0.2	6.29	991	Not applicable
2252	HC2A	Hubbard Street	10/14/2013	24.64	2888	1.56	6.95	2,700	Mostly Cloudy 21.7
2252	HC3	First Street	10/14/2013	24.15	943.8	0.49	6.99	991	Mostly Cloudy 22
2252	HC1A	Broad Street	10/14/2013	23.52	497.2	0.25	7.03	1,532	Mostly Cloudy 22.1
2252	HC5TH	5th Street	10/14/2013	23.92	489.5	0.25	7.05	1,171	Light Rain 24.5
2252	HC2A	Hubbard Street	12/12/2013	18.33	3415	1.85	7.4	5,800	Clear 14.4 C, no heavy rain in 7 days
2252	HC3	First Street	12/12/2013	17.82	562.7	0.29	7.34	2,800	Clear 14.4 C, no heavy rain in 7 days
2252	HC1A	Broad Street	12/12/2013	18.37	505.8	0.26	7.37	1,532	Clear 15.6 C, no heavy rain in 7 days
2252	8TH DN	8th Street Downstream side	12/12/2013	19.55	515.3	0.26	7.52	1,081	Clear, no heavy rain in 7 days
2252	8TH UP	8th Street Upstream side	12/12/2013	19.7	522.4	0.27	7.49	1,532	Clear, no heavy rain in 7 days
2252	HCRR	At Railroad Tracks	12/12/2013	19.99	333.4	0.16	7.09	4,900	Clear, no heavy rain in 7 days

Appendix C: Updated Ranking of Impaired Tributaries

The following table lists the latest ranking of the 75 fecal coliform impaired tributaries in the LSJR Basin, showing both the historical rankings and the latest ranking using data from 2009 through 2013.

TABLE C-1: FECAL COLIFORM IMPAIRED TRIBUTARIES RANKING

N/A = Not applicable

WBID	NAME	2004-2008 RANK	2005-2009 RANK	2006-2010 RANK	2007-2011 RANK	2008-2012 RANK	2009-2013 RANK	BMAP
2287	MILLER CREEK	1	2	1	1	1	1	1
2322	BUTCHER PEN CREEK	5	9	2	2	2	2	1
2280	BIG FISHWEIR CREEK	4	1	4	4	4	3	1
2297	CRAIG CREEK	3	3	3	3	3	4	2
2321	CHRISTOPHER BRANCH	11	6	7	6	6	5	N/A
2316	WILLIAMSON CREEK	13	14	13	8	6	6	2
2252	HOGAN CREEK	6	7	8	7	5	7	1
2254	RED BAY BRANCH	16	15	11	9	9	7	N/A
2246	JONES CREEK	34	22	32	23	14	9	N/A
2304	MIRAMAR CREEK	2	11	5	5	8	10	1
2235	NEWCASTLE CREEK	8	21	21	11	11	11	1
2207	BLOCKHOUSE CREEK	26	31	23	20	15	12	2
2407	GROG BRANCH	48	51	33	36	19	12	N/A
2382	UNNAMED DRAIN (TACITO CREEK)	15	32	6	18	13	14	N/A
2256	DEER CREEK	9	4	12	13	12	15	1
2385	MANDARIN DRAIN	31	28	14	14	21	15	N/A
2228	MONCREIF CREEK	19	13	17	35	26	17	2
2239	STRAWBERRY CREEK	47	62	65	49	23	18	N/A
2257	MCCOY CREEK	12	8	27	30	22	19	2
2308	LEEDS POND	25	39	37	21	15	20	N/A
2189	RUSHING BRANCH	7	17	9	12	18	20	N/A
2361	DEEP BOTTOM CREEK	18	23	15	31	25	22	2
2210	WEST BRANCH	35	37	29	28	30	22	N/A
2299	OPEN CREEK	41	38	18	17	24	24	1
2324	FISHING CREEK	17	10	22	38	27	25	2
2278	SILVERSMITH CREEK	44	35	42	40	28	26	N/A
2233	LONG BRANCH	10	5	10	10	33	27	N/A
2266	HOPKINS CREEK	28	33	35	37	31	28	2
2244	COWHEAD CREEK	45	45	40	44	32	29	N/A
2240	GREENFIELD CREEK	39	34	36	33	38	29	2
2592	MILL BRANCH	22	58	16	16	36	31	N/A
2561	UNNAMED DITCHES	20	57	25	22	9	31	N/A
2234	MT. PLEASANT CREEK	50	53	52	57	36	33	N/A
2262	CEDAR RIVER	54	29	54	42	40	34	N/A
2284	LITTLE POTTSBURG CR	23	12	31	26	19	34	N/A
2282	WILLS BRANCH	33	25	55	53	38	36	2
2220	NINE MILE CREEK	61	44	49	56	43	37	N/A
2204	TERRAPIN CREEK	14	16	20	24	35	38	1

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WBID	NAME	2004- 2008 RANK	2005- 2009 RANK	2006- 2010 RANK	2007- 2011 RANK	2008- 2012 RANK	2009- 2013 RANK	BMAP
2326	GOODBYS CREEK	24	18	43	41	40	39	1
2238	LITTLE SIXMILE CREEK	30	24	30	32	29	40	N/A
2223	TROUT RIVER (UPPER)	63	65	58	62	53	40	N/A
2290	CEDAR SWAMP CREEK	70	69	67	65	49	42	N/A
2305	NORMANDY VILLAGE RUN	56	64	59	58	44	42	N/A
2248	GINHOUSE CREEK	43	48	46	48	46	44	N/A
2464	GOVERNOR CREEK	32	49	28	29	47	44	N/A
2381	CORMORANT BRANCH	29	19	26	34	50	46	2
2370	OLDFIELD CREEK	51	42	47	47	44	46	N/A
2265B	POTTSBURG CREEK	40	30	48	51	54	48	2
2191	BROWARD RIVER	53	36	66	68	54	49	N/A
2227	SHERMAN CREEK	38	20	44	46	40	49	2
2203	TROUT RIVER	46	27	34	43	51	49	2
2306	NEW ROSE CREEK	27	26	24	25	48	52	N/A
2419	SAMPSON CREEK	55	60	50	50	59	53	N/A
2511B	SIMMS CREEK	58	66	53	54	68	54	N/A
2203A	TROUT RIVER	67	68	70	71	51	54	2
2356	BIG DAVIS CREEK	62	52	61	61	60	55	N/A
2270	HOGPEN CREEK	57	46	45	45	56	55	N/A
2224	RIBAULT RIVER	71	56	68	67	57	55	N/A
2249B	MCGIRTS CREEK	52	47	51	52	58	58	N/A
2232	SIXMILE CREEK	66	61	62	63	64	59	N/A
2213P	ORTEGA RIVER	65	75	75	75	60	60	N/A
2351	JULINGTON CREEK	69	50	63	66	63	61	N/A
2323	YELLOW WATER CREEK	74	70	71	70	62	62	N/A
2181	DUNN CREEK	37	40	41	55	66	63	N/A
2365	DURBIN CREEK	72	72	73	73	65	64	N/A
2446	BULL CREEK	75	74	74	74	N/A	65	N/A
2555	CRACKER BRANCH	73	73	72	72	68	65	N/A
2389A	DOCTORS LAKE DRAIN	21	41	19	19	N/A	65	N/A
2478	GREENE CREEK	64	71	56	59	34	65	N/A
2368	LITTLE BLACK CREEK	42	55	60	15	15	65	N/A
2460	MILL CREEK	49	59	39	39	68	65	N/A
2249A	ORTEGA RIVER	60	43	69	69	67	65	N/A
2444	PETERS CREEK	68	67	64	64	N/A	65	N/A
2302	RYALS SWAMP	59	63	57	60	68	65	N/A
2213R	UNNAMED DRAIN TO ST. JOHNS RIVER	36	54	38	27	N/A	65	N/A