

# **2012 PROGRESS REPORT**

## **For the Lower St. Johns River Basin Tributaries Basin Management Action Plan I**

*Developed by the  
**Lower St. Johns River Tributaries Basin Working Group***

*In cooperation with the  
**Florida Department of Environmental Protection**  
Division of Environmental Assessment and Restoration  
Bureau of Watershed Restoration  
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## LIST OF ACRONYMS

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

## **EXECUTIVE SUMMARY**

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### **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 (FDEP) 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 10 of these 75 impaired tributaries. FDEP adopted TMDLs in 2006 for Miramar Creek, Butcher Pen Creek, Hogan Creek, and Goodbys Creek. FDEP 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 2012 Progress Report is the third 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, 2012 through December 31, 2012.

### **WATER QUALITY MONITORING AND TRENDS**

The Tributaries Assessment Team (TAT) implemented the BMAP monitoring plan over the last year. Data collected from 2008 through 2012 were assessed to determine water quality trends in the 10 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.

The TAT conducted follow up investigations in several tributaries to determine the sources of the high counts observed in these areas, and to implement projects to reduce the fecal coliform loading. In July 2012, the City of Jacksonville (COJ) and JEA followed up on high counts in the Hogan Creek watershed that were found at the monitoring station on Broad Street. The cause of the high counts was identified as a broken sewer pipe under a high rise building, which was infiltrating into the stormwater system. The sewer pipe has since been repaired and fecal coliform counts are decreasing at this station. FDEP noticed that the site on Butcher Pen Creek at Jammes Road was consistently high, and they found a shopping cart that had been wedged into the culvert with material backing up behind the cart. The culvert is about 100 feet long and devoid of light, which creates a prime location for bacteria regrowth. FDEP removed the shopping cart and allowed the stream to remove the soils that had built up. As a result, the fecal coliform counts dropped about 20% at this location.

### **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 system rehabilitation projects in the Big Fishweir Creek and Open Creek watersheds, and followed up on open potential illicit connection (PIC) cases in Butcher Pen Creek and Goodbys Creek.

## SECTION 1: INTRODUCTION

### 1.1 PURPOSE OF THE REPORT

This is the third 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, 2012 through December 31, 2012. **Section 2** provides information on BMAP water quality monitoring and trends in each of the 10 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 10 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 1.

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 10 samples taken over a 30-day period. However, there were insufficient data (less than 10 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 (FDEP) in 2006. In July 2009, FDEP 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 10 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%                 |

| WBID NUMBER | WBID NAME      | WASTELOAD ALLOCATION<br>WASTEWATER<br>(COLONIES/DAY) | WASTELOAD ALLOCATION<br>STORMWATER (%) | LOAD ALLOCATION (%) |
|-------------|----------------|------------------------------------------------------|----------------------------------------|---------------------|
| 2204        | Terrapin Creek | Not applicable                                       | 71%                                    | 71%                 |
| 2326        | Goodbys Creek  | Not applicable                                       | 87%                                    | 87%                 |
| 2299        | Open Creek     | Not applicable                                       | 60%                                    | 60%                 |

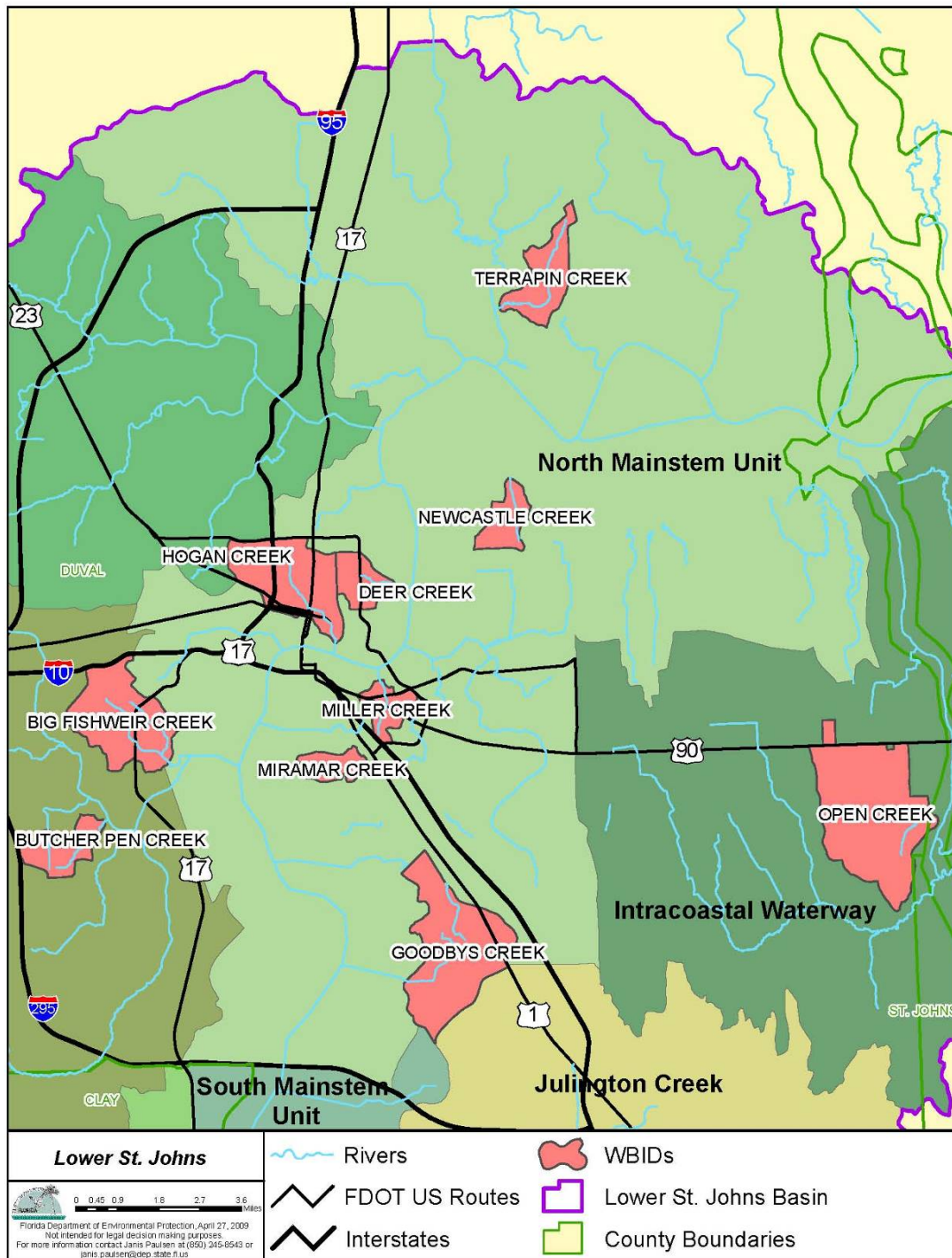


FIGURE 1: LSJR BASIN TRIBUTARIES INCLUDED IN BMAP I

### **1.3 RESPONSIBLE PARTIES AND KEY STAKEHOLDERS**

Sources of fecal coliform loading in the 10 tributaries include wastewater, septic tanks, and stormwater. The entities responsible for addressing these sources in the BMAP tributaries include the City of Jacksonville (COJ), Duval County Health Department (DCHD), Florida Department of Transportation (FDOT), and JEA. FDEP 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 5 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. FDEP 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, FDEP 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, FDEP 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, FDEP 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

### 2.1.1 MODIFICATIONS TO THE BMAP MONITORING PLAN

After the second year of BMAP implementation, the Tributaries Assessment Team (TAT) reviewed the data from 2007 through 2011, which were included in the second annual progress report, to identify any needed modifications to the monitoring plan. The TAT decided to stop sampling several stations from the monitoring plan that had consistently low fecal coliform counts or where the creek was too shallow for sampling so that they could focus on monitoring in areas with higher counts. In addition, the TAT identified stations that should be increased from quarterly to monthly sampling and new stations for sampling. **Table 2** lists the stations that were removed from the BMAP monitoring plan, and **Table 3** lists the stations that were modified or added in the monitoring plan.

**TABLE 2: STATIONS REMOVED FROM THE BMAP I MONITORING PLAN**

| WBID NAME          | MONITORING STATION | FREQUENCY | LOCATION                                 | RESPONSIBLE ENTITY |
|--------------------|--------------------|-----------|------------------------------------------|--------------------|
| Newcastle Creek    | 21FLJXWQARL5B      | Monthly   | Near mouth of creek                      | COJ                |
| Butcher Pen Creek  | 21FLA 20030955     | Monthly   | Ducheneau Drive                          | FDEP               |
| Miller Creek       | 21FLJXWQSS21       | Monthly   | Camden Avenue                            | COJ                |
| Miller Creek       | 21FLJXWQSS2A       | Monthly   | Stillman Street                          | COJ                |
| Miramar Creek      | 21FLJXWQSS5A       | Monthly   | Orlando Circle West                      | COJ                |
| Big Fishweir Creek | 21FLA 20030952     | Monthly   | Greenwood Avenue (Little Fishweir Creek) | FDEP               |
| Deer Creek         | 21FLJXWQDR2S       | Monthly   | Southwest branch                         | COJ                |
| Terrapin Creek     | 21FLA 20030654     | Quarterly | Alta Drive                               | FDEP               |
| Goodbys Creek      | 21FLA 20030518     | Quarterly | State Road 13                            | FDEP               |
| Goodbys Creek      | 21FLA 20030538     | Monthly   | West branch at San Clerc Road            | FDEP               |
| Open Creek         | 21FLA 20030949     | Monthly   | Cross Water Boulevard                    | FDEP               |
| Open Creek         | 21FLA 20030848     | Monthly   | Northwest tributary at Hodge Boulevard   | FDEP               |

**TABLE 3: MODIFIED AND NEW STATIONS IN THE BMAP I MONITORING PLAN**

| WBID NAME     | MONITORING STATION | FREQUENCY | LOCATION           | RESPONSIBLE ENTITY |
|---------------|--------------------|-----------|--------------------|--------------------|
| Hogan Creek   | 21FLJXWQHC3        | Monthly   | First Street       | COJ                |
| Miller Creek  | 21FLJXWQSSBHCS     | Monthly   | Atherton Road      | COJ                |
| Miramar Creek | 21FLJXWQSSGAD      | Monthly   | Gadsen Road        | COJ                |
| Miramar Creek | 21FLJXWQSS4        | Monthly   | San Jose Boulevard | COJ                |
| Deer Creek    | 21FLJXWQDR1        | Monthly   | Talleyrand Avenue  | COJ                |

### 2.1.2 PROGRESS TOWARDS IMPLEMENTATION MILESTONES

The BMAP includes a 5-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 4 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 5 analysis, additional efforts may be required in that WBID.

For this annual report, the last 5 years of monitoring data (2008 through 2012) 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 4**, 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 4: PERCENT FECAL COLIFORM REDUCTION SINCE THE TMDL VERIFIED PERIOD**

| WBID NUMBER | WBID NAME          | TMDL MEDIAN (#/100mL) (1996–2003) | MEDIAN (#/100mL) (2008–2012) | % REDUCTION |
|-------------|--------------------|-----------------------------------|------------------------------|-------------|
| 2235        | Newcastle Creek    | 2,500                             | 870                          | 65.2%       |
| 2252        | Hogan Creek        | 5,000                             | 1,200                        | 76.0%       |
| 2322        | Butcher Pen Creek  | 2,400                             | 3,050                        | -27.1%      |
| 2287        | Miller Creek       | 5,000                             | 3,900                        | 22.0%       |
| 2304        | Miramar Creek      | 7,000                             | 1,400                        | 80.0%       |
| 2280        | Big Fishweir Creek | 3,000                             | 2,200                        | 26.7%       |
| 2256        | Deer Creek         | 2,765                             | 360                          | 87.0%       |
| 2204        | Terrapin Creek     | 1,367                             | 685                          | 49.9%       |
| 2326        | Goodbys Creek      | 3,000                             | 500                          | 83.3%       |
| 2299        | Open Creek         | 1,000                             | 550                          | 45.0%       |

### 2.1.3 NEWCASTLE CREEK

The data period of 2008 through 2012 indicates that the fecal coliform concentrations are increasing in the Newcastle Creek watershed (see **Figure 2**). **Table 5** provides the data by year and shows an increase in the percent exceedances from 2010 to 2012. Station 21FLJXWQARL5B had the highest median fecal coliform concentration of 1,100 CFU, and this station is located near the mouth of the creek.

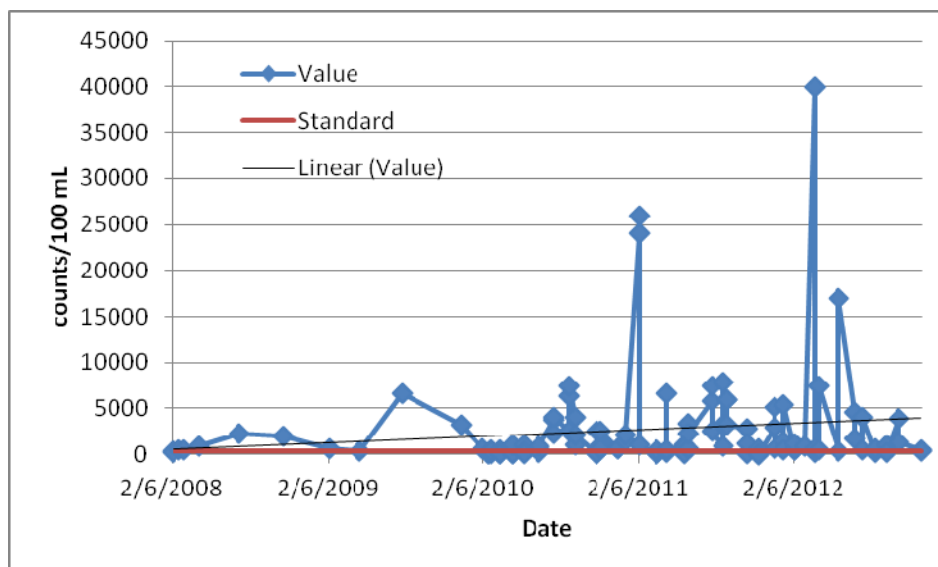


**FIGURE 2: FECAL COLIFORM TRENDS IN NEWCASTLE CREEK, 2008-2012**

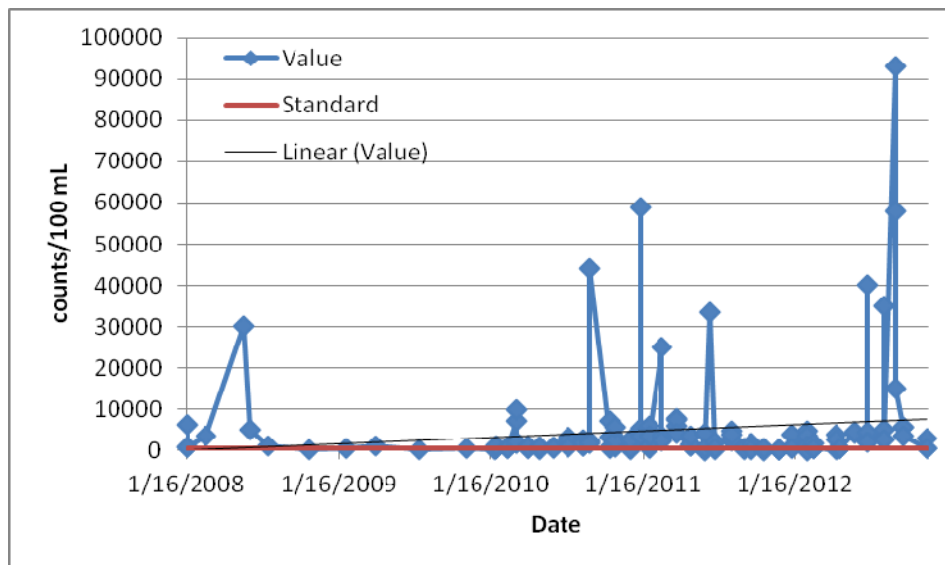
**TABLE 5: SUMMARY OF NEWCASTLE CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012**

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 7      | 209                   | 2,300                 | 510                  | 963                | 5                        | 71%              |
| 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%              |

### 2.1.4 HOGAN CREEK

Fecal coliform concentrations in Hogan Creek have increased from 2008 through 2012 (see **Figure 3**). The number of exceedances increased from 2011 to 2012 as shown in **Table 6**. Station 21FLJXWQHC2A had the highest median concentration of 1,400 CFU. This station is located in Confederate Park on Hubbard Street.

COJ found a high count of 40,000 CFU at station 21FLJXWQHC1A on Broad Street in early July 2012. They followed up on this high count and took samples all around the site. COJ determined that the high counts were coming from a stormwater pipe just northwest of the bridge, and to the west of this station is a high-rise building. The COJ Streets and Drainage Department pulled manholes in this area so that samples could be collected but none of the samples had high counts. JEA then televised the stormwater line and found a sewer line connection coming from the high-rise building. It was determined that this high-rise building had a broken sewer pipe under the building that was infiltrating into the stormwater system. The sewer pipe has since been repaired and fecal coliform counts are decreasing at this station.

**FIGURE 3: FECAL COLIFORM TRENDS IN HOGAN CREEK, 2008-2012****TABLE 6: SUMMARY OF HOGAN CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012**

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 8      | 340                   | 30,000                | 2,300                | 5,980              | 7                        | 88%              |
| 2009 | 4      | 295                   | 1,000                 | 510                  | 579                | 3                        | 75%              |

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 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%              |

### 2.1.5 BUTCHER PEN CREEK

Fecal coliform concentrations in Butcher Pen Creek have slightly increased from 2008 to 2012 (see **Figure 4**). The median concentrations and percent exceedances remain relatively high, with the lowest values occurring in 2009 (see **Table 7**). The stations with the highest median concentrations are 21FLA 20030955 (5,600 CFU), 21FLA 20030829 (4,700 CFU), 21FLJXWQCR2 (3,100 CFU), and 21FLA 20030760 (2,100 CFU). Station 21FLA 20030829 is located near the headwaters of Butcher Pen Creek where it intersects Jammes Road. Station 21FLJXWQCR2 and Station 21FLA 20030760 are located near Wesconnett Boulevard. Station 21FLA 20030955 is located at Ducheneau Drive.

In reviewing historical data, FDEP found that the site on Butcher Pen Creek at Jammes Road was consistently high. In 2012, FDEP examined the stream at this sampling location and they could hear water running in the culvert that was not typical stream flow. FDEP found a shopping cart that had been wedged into the culvert and material backing up behind the cart. The culvert is about 100 feet long and devoid of light, which creates a prime location for bacteria regrowth. In March 2012, FDEP removed the shopping cart and allowed the stream flow to remove the soils that had built up. As a result, the fecal coliform counts dropped about 20% at this location since the removal of the shopping cart and other materials.

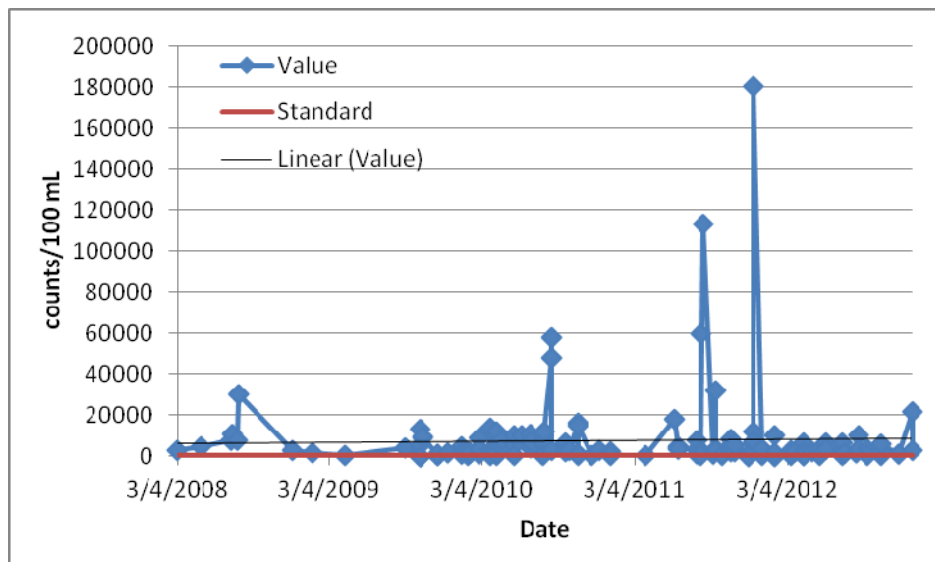


FIGURE 4: FECAL COLIFORM TRENDS IN BUTCHER PEN CREEK, 2008-2012

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

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 7      | 2,800                 | 30,000                | 7,500                | 9,586              | 7                        | 100%             |
| 2009 | 13     | 66                    | 13,000                | 1,800                | 3,706              | 10                       | 77%              |
| 2010 | 43     | 330                   | 58,000                | 3,900                | 7,298              | 42                       | 98%              |

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2011 | 34     | 220                   | 180,000               | 3,050                | 14,632             | 32                       | 94%              |
| 2012 | 35     | 150                   | 22,000                | 2,300                | 3,439              | 32                       | 91%              |

### 2.1.6 MILLER CREEK

Fecal coliform concentrations in Miller Creek slightly decreased over the data period of 2008 through 2012 (see **Figure 4**). The median concentrations and percent exceedances remain high with the lowest exceedances in 2008 (see **Table 8**). The sampling station with the highest median concentration of 28,000 CFU is station 21FLJXWQSS21, located on the west branch at Camden Avenue. COJ has determined that the high counts in this area are from wildlife. In addition, stations 21FLJXWQSS23 and 21FLJXWQSS1 had high medians of 4,500 CFU and 2,400 CFU, respectively. Station 21FLJXWQSS23 is located on the east branch at Mayfair Road and 21FLJXWQSS1 is located on Atlantic Boulevard.

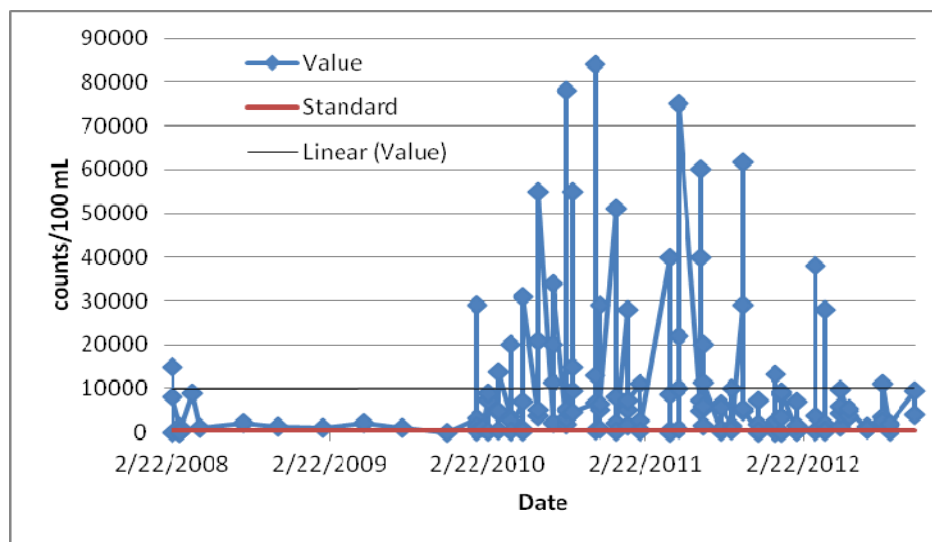


FIGURE 5: FECAL COLIFORM TRENDS IN MILLER CREEK, 2008-2012

TABLE 8: SUMMARY OF MILLER CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 6      | 0                     | 15,000                | 700                  | 4,083              | 3                        | 50%              |
| 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%              |

### 2.1.7 MIRAMAR CREEK

Between 2008 and 2012, the fecal coliform concentrations in Miramar Creek increased (see **Figure 6**). As shown in **Table 9**, the percent exceedances increased from 2010 to 2012. The stations with the highest median concentrations were 21FLJXWQSS4 (2,454 CFU) and 21FLJXWQSS505 (1,110 CFU). Station 21FLJXWQSS505 is located adjacent to JEA Lift Station #S505. Station 21FLJXWQSS4 is the most downstream station and is located on San Jose Boulevard.

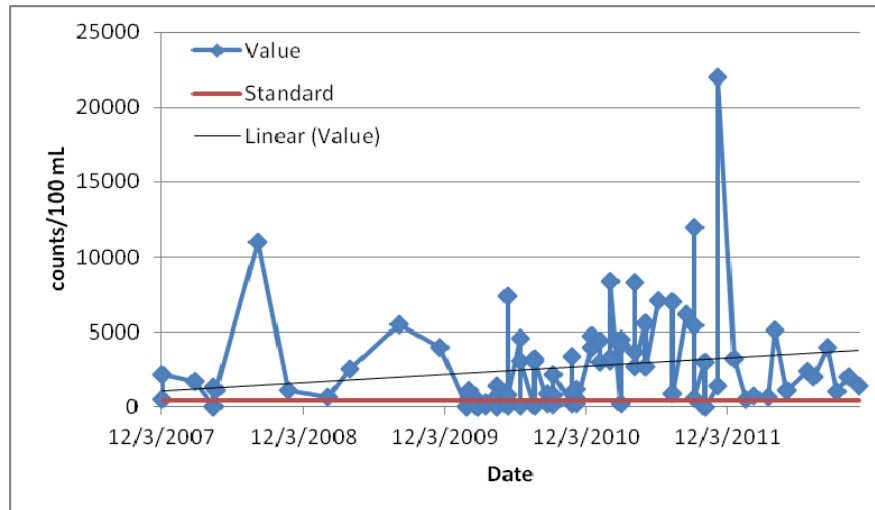


FIGURE 6: FECAL COLIFORM TRENDS IN MIRAMAR CREEK, 2008-2012

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

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 7      | 0                     | 11,000                | 1,100                | 2,316              | 4                        | 57%              |
| 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%             |

### 2.1.8 BIG FISHWEIR CREEK

The fecal coliform concentrations in Big Fishweir Creek increased from 2008 through 2012 (see **Figure 10**). The median concentrations have been higher since 2009 (see **Table 10**). The stations with the highest median concentrations are 21FLA 20030951 (4,550 CFU), 21FLA 20030953 (2,900 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.

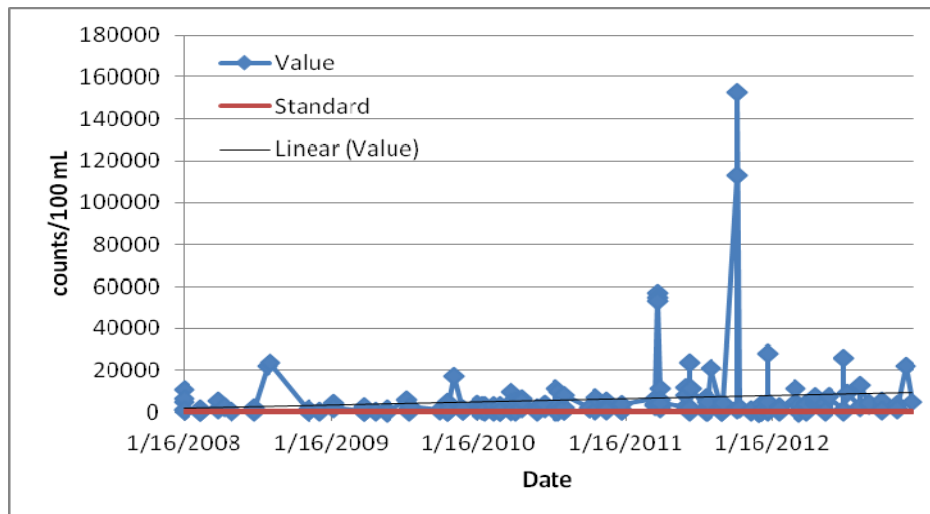


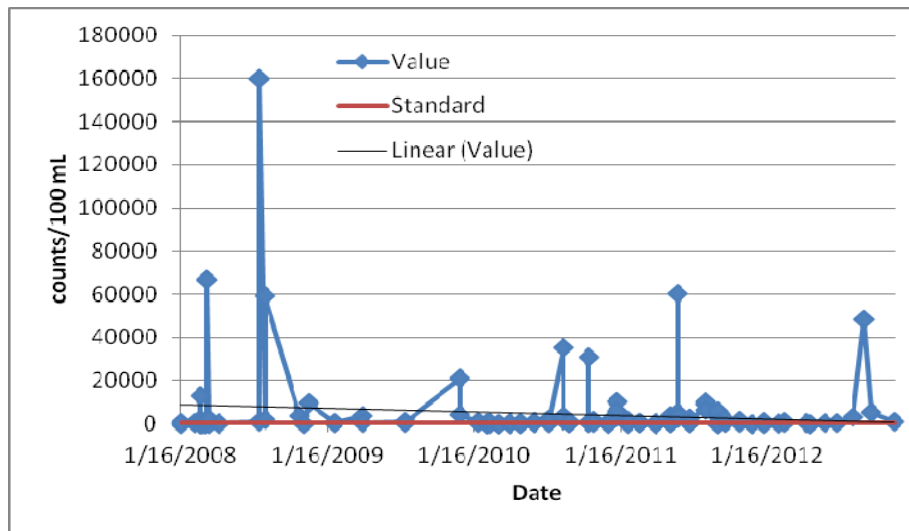
FIGURE 7: FECAL COLIFORM TRENDS IN BIG FISHWEIR CREEK, 2008-2012

**TABLE 10: SUMMARY OF BIG FISHWEIR 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 |
|------|--------|--------------------|--------------------|-------------------|-----------------|-----------------------|---------------|
| 2008 | 21     | 210                | 24,000             | 1,200             | 4,142           | 17                    | 81%           |
| 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%           |

### 2.1.9 DEER CREEK

The Deer Creek fecal coliform concentrations decreased between 2008 and 2012 (see **Figure 8**). The median concentrations were generally low and decreasing over time (see **Table 11**). 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, 2008-2012****TABLE 11: 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 |
|------|--------|--------------------|--------------------|-------------------|-----------------|-----------------------|---------------|
| 2008 | 27     | 0                  | 160,000            | 400               | 11,938          | 13                    | 48%           |
| 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%           |

### 2.1.10 TERRAPIN CREEK

The Terrapin Creek fecal coliform concentrations declined over the period of 2008 through 2012 (see **Figure 9**). The median concentrations were generally low, with the exception of 2008 (see **Table 12**). The station with highest median concentration was 21FLA 20030490FLA with 930 CFU. Station 21FLA 20030490FLA is located at Blassius Road.

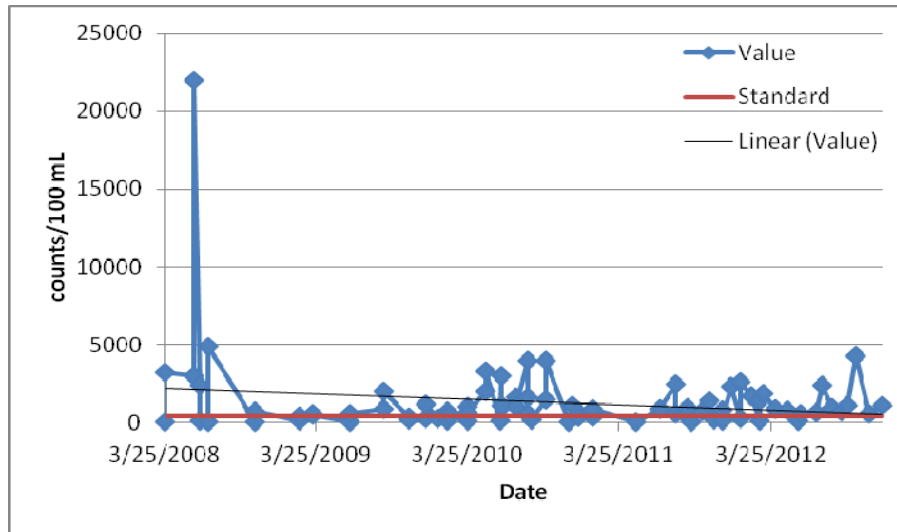


FIGURE 9: FECAL COLIFORM TRENDS IN TERRAPIN CREEK, 2008-2012

TABLE 12: SUMMARY OF TERRAPIN CREEK FECAL COLIFORM DATA BY YEAR, 2008-2012

| YEAR | NUMBER | MINIMUM<br>(#/100 mL) | MAXIMUM<br>(#/100 mL) | MEDIAN<br>(#/100 mL) | MEAN<br>(#/100 mL) | NUMBER OF<br>EXCEEDANCES | %<br>EXCEEDANCES |
|------|--------|-----------------------|-----------------------|----------------------|--------------------|--------------------------|------------------|
| 2008 | 10     | 16                    | 22,000                | 1,560                | 3,642              | 6                        | 60%              |
| 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%              |

### 2.1.11 GOODBYS CREEK

There was an increase in fecal coliforms in Goodbys Creek between 2008 and 2012 (see **Figure 10**). However, as shown in **Table 13**, the median concentrations were less than 1,000 CFU in every year. Station SS319, located at Sanchez Road, has the highest median concentration of 730 CFU.

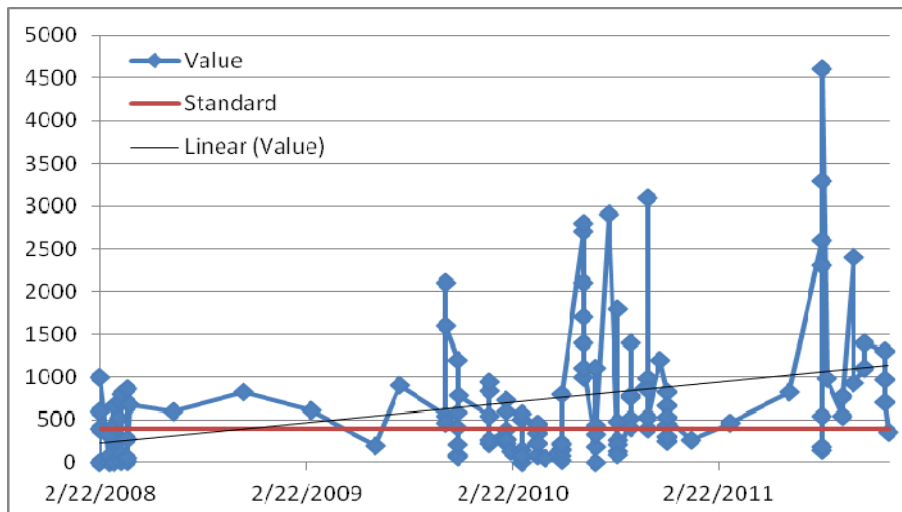


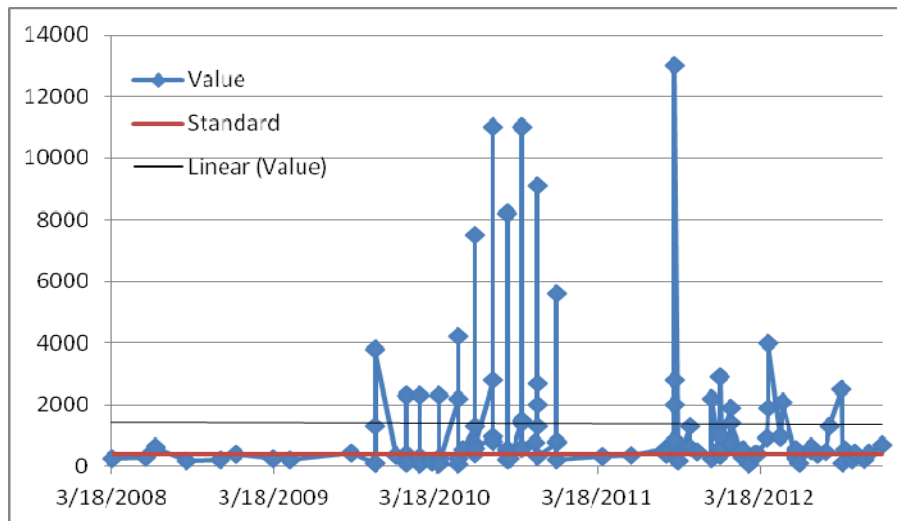
FIGURE 10: FECAL COLIFORM TRENDS IN GOODBYS CREEK, 2008-2012

**TABLE 13: SUMMARY OF GOODBYS 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 |
|------|--------|--------------------|--------------------|-------------------|-----------------|-----------------------|---------------|
| 2008 | 24     | 0                  | 1,000              | 410               | 404             | 12                    | 50%           |
| 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%           |

### 2.1.12 OPEN CREEK

Fecal coliform concentrations in Open Creek slightly decreased over the period of 2008 through 2012 (see **Figure 11**). The median concentrations during this time were generally low and decreasing, with a small increase in 2010 (see **Table 14**). Station 21FLA 20030858 had the highest median concentration of 5,600 CFU. This station is located along the branch at Windsor Park Drive North.

**FIGURE 11: FECAL COLIFORM TRENDS IN OPEN CREEK, 2008-2012****TABLE 14: SUMMARY OF OPEN 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 |
|------|--------|--------------------|--------------------|-------------------|-----------------|-----------------------|---------------|
| 2008 | 6      | 180                | 640                | 285               | 333             | 1                     | 17%           |
| 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%           |

## **SECTION 3: COUNTY-WIDE PROGRAMS IN THE LSJR BASIN**

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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 DCHD PROGRAMS**

DCHD 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 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, DCHD, or FDEP). 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 FDEP, 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 2012, JEA used cured in place pipe (CIPP) on 0.64% of the lines and cleaned 0.64% of the lines. JEA also had 1 inspection of force main discharge manholes and inspected 95 manholes as part of the Pop-Top Program. JEA's activities in the Newcastle Creek watershed are shown in **Table 15**.

**TABLE 15: JEA ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED**

Note: JEA's Fiscal Year 2012 (FY12) is from October 1, 2011 through September 30, 2012

| 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                                          | Total footage in FY12: 0                                       | \$0            | JEA            | Ongoing        |
| JEA – 2        | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                     | Total footage in 2012: 798                                     | Unknown        | JEA            | Ongoing        |
| JEA – 3        | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                            | 0 manholes rehabbed in 2012                                    | \$0            | JEA            | Ongoing        |
| JEA – 4        | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                        | 0 ARVs inspected or replaced in 2012                           | \$0            | JEA            | Ongoing        |
| JEA – 5        | Pump Station SCADA Upgrades                                      | Retrofit completed in 2004; all stations constructed since have SCADA installed | Not applicable                                                 | Unknown        | JEA            | Complete       |
| JEA – 6        | Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary | Inspect force main discharge manholes, repair/rehab as necessary                | 1 inspection for 2012                                          | Unknown        | JEA            | Ongoing        |
| JEA – 7        | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                          | 0 projects in FY12                                             | \$0            | JEA            | Ongoing        |
| JEA – 8        | FOG Reduction Program                                            | FOG Reduction Program                                                           | Not applicable                                                 | Unknown        | JEA            | Ongoing        |
| JEA – 9        | Pipe TV Inspection                                               | Inspect existing infrastructure through use of closed-circuit television        | 0 linear feet of pipe inspected in 2012                        | \$0            | JEA            | Ongoing        |
| JEA – 10       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                         | 798 linear feet cleaned in 2012                                | Unknown        | 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                                                                 | 95 manholes inspected in 2012                                  | Unknown        | JEA            | Ongoing        |
| JEA – 15       | Non-Destructive Testing Program/Pipe Integrity Testing           | Non-Destructive Testing Program/pipe integrity testing                          | 0 sites were tested in 2012                                    | \$0            | 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            | Complete       |

## 4.2 DCHD ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

In 2012, DCHD issued 1 repair permit, 1 annual operating permit, and conducted 1 plan review and site evaluation. The programs and activities DCHD conducts in the Newcastle Creek watershed are shown in **Table 16**.

**TABLE 16: DCHD ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                                            | PROJECT DESCRIPTION                                                                                                                                             | LEVEL OF EFFORT                                                              | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|---------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 1       | OSTDS Program                                           | Implementation of programs to address septic systems as potential sources                                                                                       | Approximately 1 repair permit                                                | \$500          | Florida Department of Health (FDOH)                                             | Ongoing        |
| DCHD-77        | Annual Operating Permits                                | Annual operating permits issued for performance-based treatment systems (PBTS), systems located in industrial/manufacturing zones (IMZ), and commercial systems | 1 annual operating permit issued for PBTS/IMZ in WBID                        | \$350          | FDOH                                                                            | Ongoing        |
| DCHD – 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      |
| DCHD – 3       | DCHD-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        |
| DCHD – 4       | Application/Plan Review/Site Evaluations                | DCHD 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 were performed in WBID       | \$200          | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 6       | Complaint Investigations                                | DCHD 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        |
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

#### **4.3 COJ ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED**

In 2012, COJ had 17 work orders for ditch and creek regrading, 15 for repair/clearing of structures, and 1 illicit water discharge. These inspections are initiated through information from the CARE database. COJ also collected 4 routine water quality samples, 23 BMAP samples, and 4 follow up samples on high counts. COJ's efforts in the Newcastle Creek watershed are shown in **Table 17**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 17: 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            | Complete       |
| 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            | Complete       |
| COJ – 3        | Berrywood Lane                                            | Ditch cleanout to remove sediments and vegetation                                                                   | Berrywood Lane         | Unknown    | COJ            | Complete       |
| COJ – 192      | 3833 Hermitage Road East                                  | Pipe replacement                                                                                                    | Hermitage Road         | \$17,788   | COJ            | Complete       |
| COJ – 4        | Ditch/Creek Regrade/Erosion/Clean                         | CARE requests with costs for responses where a work order was issued                                                | 17                     | \$157      | 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                                                | 15                     | \$3,344    | COJ            | Ongoing        |
| COJ – 7        | Illicit Water Discharge                                   | CARE initiated - incidents reported/found and closed during reporting period                                        | 1                      | \$379      | 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                                        | 0                      | \$0        | 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               | None pending as of 12/31/12                                                                                         | 0                      | \$0        | COJ            | Ongoing        |
| COJ – 12       | Routine Surface Water Sampling                            | NPDES permit related quarterly water quality sampling – 1 station in WBID                                           | 4                      | \$544      | COJ            | Ongoing        |
| COJ – 13       | BMAP Monitoring                                           | 3 sites (2 sampled monthly and 1 sampled quarterly)                                                                 | 23                     | \$4,071    | COJ            | Ongoing        |
| COJ – 196      | Re-Sampling                                               | Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources                     | 4                      | \$544      | COJ            | Ongoing        |
| COJ – 14       | Eggleston Heights Failure Area – Septic Tank Phase-Out    | Phase out of septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 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        |

| PROJECT NUMBER | PROJECT NAME                             | PROJECT DESCRIPTION          | LEVEL OF EFFORT | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|------------------------------------------|------------------------------|-----------------|------------|----------------|----------------|
| 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        |

<sup>1</sup> COJ has committed to removing septic tanks in failure areas that are within 300 meters of a surface water in the 2008 LSJR Main Stem BMAP. At a minimum, COJ will accomplish a 50% implementation of the septic tank phase-out projects by July 31, 2015, with the phase-outs completed by December 31, 2023. For the 10 tributaries addressed in this BMAP, a total of 1,180 septic tanks are located in failure areas, although not all of them may be located within 300 meters of a surface water. The failing tanks within 300 meters of a surface water will be included in the COJ plan and schedule to phase out tanks and will be identified as Tributaries BMAP-related tanks in the plan.

#### 4.4 FDOT ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED

FDOT helps to fund 1 monitoring station in the Newcastle Creek watershed that is sampled quarterly as part of the MS4 routine monitoring program. **Table 18** lists FDOT's activities in the Newcastle Creek watershed.

**TABLE 18: FDOT ACTIVITIES IN THE NEWCASTLE CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                                                                                  | ESTIMATED COST        | FUNDING SOURCE | LEVEL OF EFFORT                                                        | PROJECT STATUS |
|----------------|-----------------------------------------------------------------------------------------------|-----------------------|----------------|------------------------------------------------------------------------|----------------|
| FDOT – 1       | PIC Program – Search for Illicit Connections                                                  | Countywide - \$9,300  | FDOT/COJ       | Effort is continuous                                                   | Ongoing        |
| FDOT – 2       | PIC Program – Illicit Connections Identified and Removed in WBID if Found To Be Truly Illicit | Countywide - \$9,300  | FDOT/COJ       | No illicit connections found                                           | Ongoing        |
| FDOT – 3       | Routine Tributary Monitoring as Part of MS4 Permit                                            | Countywide - \$27,900 | FDOT/COJ       | 1 station sampled quarterly; 4 routine and 23 BMAP samplings performed | Ongoing        |

## SECTION 5: HOGAN CREEK (WBID 2252)

### 5.1 JEA ACTIVITIES IN THE HOGAN CREEK WATERSHED

In 2012, JEA pipe burst 0.03% of the pipes in the watershed, used CIPP on 0.07% of the lines, open cut 0.01% of the pipes, repaired 9 manholes, inspected 0.36% of the pipes with closed-circuit television, and cleaned 9.06% of the lines. JEA also inspected 344 manholes as part of the Pop-Top Program. JEA's activities in the Hogan Creek watershed are shown in **Table 19**.

**TABLE 19: JEA ACTIVITIES IN THE HOGAN CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012: 482                   | Unknown        | JEA            | Ongoing        |
| JEA – 18       | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                         | Total footage in FY12: 1,054                 | \$36,890       | JEA            | Ongoing        |
| JEA – 19       | Open Cut – Removal and Replacement                               | Replace failing/leaking infrastructure                                              | 200 linear feet of pipe was replaced in FY12 | \$50,000       | JEA            | Ongoing        |
| JEA – 20       | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | 9 manholes rehabbed in 2012                  | Unknown        | JEA            | Ongoing        |
| JEA – 21       | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                               | Not applicable | JEA            | Complete       |
| JEA – 22       | 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 – 23       | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                              | 0 projects in FY12                           | Not applicable | JEA            | Ongoing        |
| JEA – 24       | FOG Reduction Program                                            | FOG Reduction Program                                                               | Not applicable                               | Unknown        | JEA            | Ongoing        |
| JEA – 25       | Pipe TV Inspection                                               | Inspect existing infrastructure through closed-circuit television                   | 5,225 linear feet of pipe inspected in 2012  | Unknown        | JEA            | Ongoing        |
| JEA – 26       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 131,067 linear feet cleaned in 2012          | Unknown        | JEA            | Ongoing        |
| JEA – 27       | Implement CMOM Program                                           | Implement CMOM Program                                                              | Not applicable                               | Not applicable | JEA            | Ongoing        |
| JEA – 28       | Manhole Monitoring                                               | Manhole Monitoring                                                                  | Not applicable                               | Not applicable | JEA            | Ongoing        |
| JEA – 29       | SSO Root Cause Program                                           | SSO Root Cause Program                                                              | Not applicable                               | Not applicable | JEA            | Ongoing        |
| JEA – 30       | Pop-Top Program                                                  | Pop-Top Program                                                                     | 344 manholes inspected in 2012               | Unknown        | JEA            | Ongoing        |
| JEA – 31       | Non-Destructive Testing Program/ Pipe Integrity Testing          | Non-Destructive Testing Program/pipe integrity testing                              | 0 sites were tested in FY12                  | \$0            | JEA            | Ongoing        |

## 5.2 DCHD ACTIVITIES IN THE HOGAN CREEK WATERSHED

In 2012, DCHD issued 1 abandonment permit and performed 2 complaint investigations. The programs and activities DCHD conducts in the Hogan Creek watershed are shown in **Table 20**.

**TABLE 20: DCHD ACTIVITIES IN THE HOGAN CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                             | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                                             | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 7       | OSTDS Program                            | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 1 abandonment permit issued                                                   | \$100          | FDOH                                                                            | Ongoing        |
| DCHD – 8       | Annual Operating Permits                 | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems                                                           | None                                                                                        | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 9       | DCHD-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        |
| DCHD – 10      | Application/Plan Review/Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | None                                                                                        | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 12      | Complaint Investigations                 | DCHD investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations                   | 2 complaint investigations have been performed in WBID                                      | \$300          | FDOH                                                                            | Ongoing        |
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Complete       |

## 5.3 COJ ACTIVITIES IN THE HOGAN CREEK WATERSHED

In the Hogan Creek watershed in 2012, COJ had 22 work orders for ditch and creek regrading, 1 work order for ditch clean out, 4 work orders for lake or pond problems, 115 work orders for repair/clearing of structures, 1 illicit water discharge, and 2 sewers that drain to a yard or ditch. These inspections are initiated through information from the CARE database. COJ identified 1 PIC and this case is being followed up on. In addition, COJ collected 4 routine water quality samples, 35 BMAP samples, and 34 follow up samples on high counts. COJ's efforts in the Hogan Creek watershed are shown in **Table 21**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 21: 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            | Complete       |
| COJ – 19       | Newtown Area                                      | Flood improvement                                                                        | Newtown Area                     | \$5,375,000 | COJ            | Design         |
| COJ – 20       | Hogan Creek                                       | Wet detention                                                                            | 48 acres                         | Unknown     | COJ            | Complete       |
| COJ – 197      | Emerald Necklace and Liberty Ponds                | MSMP construction schedule subject to funding                                            | Ponds                            | \$2,153,000 | COJ            | Planned        |
| COJ-253        | 1100 4 <sup>th</sup> Street                       | Drainage improvement                                                                     | Drainage                         | \$92,554    | COJ            | Construction   |
| COJ – 21       | Edmonson West                                     | Alleviate flooding by improving conveyances                                              | Edmonson West                    | Unknown     | COJ            | Complete       |
| COJ – 22       | 7 <sup>th</sup> & Ionia                           | Standing water at curbing                                                                | 7 <sup>th</sup> and Ionia        | Unknown     | COJ            | Complete       |
| COJ – 23       | Boulevard RR Crossing                             | Headwall has failed, causing dual drain pipes to break                                   | RR crossing                      | \$100,000   | COJ            | Complete       |
| COJ – 24       | W&M-18 <sup>th</sup> & Fla                        | Drainage system rehab project                                                            | W&M 18 <sup>th</sup> and Fla     | \$2,620     | COJ            | Complete       |
| COJ – 25       | Trash Removal in Main Channel                     | Removed trash in main channel of creek as Walk the WBID follow-up                        | Main channel                     | Unknown     | COJ            | Complete       |
| 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            | Complete       |
| COJ – 198      | 1500 8 <sup>th</sup> Street                       | Pipe replacement                                                                         | 8 <sup>th</sup> Street           | \$67,954    | COJ            | Complete       |
| COJ – 27       | Ditch/Creek Regrade/Erosion/Clean                 | CARE requests with costs for responses where a work order was issued                     | 22                               | \$8,338     | COJ            | Ongoing        |
| COJ – 199      | Ditch Hazardous/Contaminated                      | CARE requests with costs for responses where a work order was issued                     | 1                                | Unknown     |                |                |
| COJ – 28       | Lake or Pond Problem                              | CARE requests with costs for responses where a work order was issued                     | 4                                | \$0         | COJ            | Ongoing        |
| COJ – 29       | Structure Blocked/Repair/General Flooding         | CARE requests with costs for responses where a work order was issued                     | 115                              | \$43,585    | 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             | 0                                | \$0         | COJ            | Ongoing        |
| COJ – 32       | Sewer Drains into Yard/Ditch                      | CARE initiated - incidents reported/found and closed during reporting period             | 2                                | \$758       | COJ            | Ongoing        |
| COJ – 33       | Sewer Overflow                                    | CARE initiated - incidents reported/found and closed during reporting period             | 0                                | \$0         | COJ            | Ongoing        |
| COJ – 200      | Septic Tank Inspections                           | CARE initiated transferred to DCHD for enforcement action                                | 0                                | \$0         | COJ            | Ongoing        |
| COJ – 34       | Private Lift Station Inspection                   | 3 private lift stations in this WBID                                                     | 0                                | \$0         | COJ            | Ongoing        |
| COJ – 35       | Illicit Discharge Detection and Elimination       | 0 illicit, 1 open                                                                        | 1                                | \$379       | COJ            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                  | PROJECT DESCRIPTION                                                                            | LEVEL OF EFFORT       | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|-----------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------|------------|----------------|----------------|
| COJ – 36       | Follow Up on Outstanding PIC                  | Follow up on 1 open PIC in watershed                                                           | 1                     | \$379      | COJ            | Complete       |
| COJ – 37       | Routine Surface Water Sampling                | NPDES permit-related quarterly water quality sampling –<br>1 sampling station in WBID          | 4                     | \$544      | COJ            | Ongoing        |
| COJ – 38       | BMAP Sampling                                 | 4 sites (3 sampled monthly and 1 sampled quarterly)                                            | 35                    | \$6,195    | COJ            | Ongoing        |
| COJ – 39       | Re-Sampling                                   | Conducted when high levels of fecal coliform bacteria are noted to attempt to identify sources | 34                    | \$4,624    | COJ            | Ongoing        |
| COJ – 40       | Outside Failure Areas – Septic Tank Phase-Out | Phase out program as provided by COJ ordinance                                                 | 32 tanks, 0 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 2012, the Adopt-A-Highway Program collected 1,320 pounds of trash along 5 miles of roadway. FDOT collected 67.5 tons of debris through the street sweeping program. FDOT also helps to fund 2 monitoring stations in the Hogan Creek watershed that are sampled quarterly as part of the MS4 routine monitoring program. **Table 22** lists FDOT's activities in the Hogan Creek watershed.

**TABLE 22: 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 - \$9,300     | 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        | Countywide - \$9,300     | FDOT/COJ       | No true illicit connection identified to date                                                                                                                                                   | Ongoing        |
| FDOT – 6       | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 2 stations sampled quarterly; 4 routine water quality and 35 BMAP samplings performed                                                                                                           | Ongoing        |
| FDOT – 7       | S.R. 115/8 <sup>th</sup> 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 - \$16,930    | FDOT           | Ongoing effort                                                                                                                                                                                  | Ongoing        |
| FDOT – 9       | Adopt-A-Highway Program                                                                              | Unknown                  | Not applicable | 1,320 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 67.5 tons                                                                                        | Ongoing        |
| FDOT – 12      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 2012, JEA used CIPP on 0.11% of the lines, inspected 0.03% of the pipes with closed-circuit television, and cleaned 5.83% of the lines. JEA also inspected 5 ARVs and replaced 3 ARVs in the watershed. In addition, JEA inspected 18 manholes as part of the Pop-Top Program. JEA's activities in the Butcher Pen Creek watershed are shown in **Table 23**.

**TABLE 23: JEA ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in FY12: 0                            | \$0            | JE A           | Ongoing        |
| JEA – 33       | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                         | Total footage in FY12: 486                          | \$17,010       | JE A           | Ongoing        |
| JEA – 34       | Open Cut – Removal and Replacement                               | Replace failing/leaking infrastructure                                              | Total footage in FY12:0                             | Not applicable | JE A           | Ongoing        |
| JEA – 35       | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | Not applicable                                      | Not applicable | JE A           | 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 | JE A           | Complete       |
| JEA – 37       | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                            | 5 ARVs inspected and 3 replaced in 2012             | Unknown        | JE A           | Ongoing        |
| JEA – 38       | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                                      | Unknown        | JE A           | 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 | JE A           | Ongoing        |
| JEA – 40       | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                              | 0 projects in FY12                                  | Not applicable | JE A           | 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      | JE A           | Complete       |
| JEA – 42       | FOG Reduction Program                                            | FOG Reduction Program                                                               | Not applicable                                      | Not applicable | JE A           | Ongoing        |
| JEA – 43       | Pipe TV Inspection                                               | Inspect existing infrastructure through use of closed-circuit TV system             | 128 linear feet of pipe inspected in 2012           | Unknown        | JE A           | Ongoing        |
| JEA – 44       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 26,303 linear feet of pipe cleaned in 2012          | Unknown        | JE A           | Ongoing        |
| JEA – 45       | Implement CMOM Program                                           | Implement CMOM Program                                                              | Not applicable                                      | Not applicable | JE A           | Ongoing        |
| JEA – 46       | Manhole Monitoring                                               | Manhole Monitoring                                                                  | Not applicable                                      | Not applicable | JE A           | Ongoing        |
| JEA – 47       | SSO Root Cause Program                                           | SSO Root Cause Program                                                              | Not applicable                                      | Unknown        | JE A           | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                           | PROJECT DESCRIPTION                                    | LEVEL OF EFFORT               | ESTIMATED COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------|----------------|----------------|----------------|
| JEA – 48       | Pop-Top Program                                        | Pop-Top Program                                        | 18 manholes inspected in 2012 | Unknown        | 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 DCHD ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

In 2012, DCHD issued 1 repair permit and 5 annual operating permits, performed 1 plan review and site evaluation, and 1 complaint investigation. The programs and activities DCHD conducts in the Butcher Pen Creek watershed are shown in **Table 24**.

**TABLE 24: DCHD ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                               | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                             | ESTIMATED COST | FUNDING SOURCE        | PROJECT STATUS |
|----------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------|-----------------------|----------------|
| DCHD – 13      | OSTDS Program                              | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 1 repair permit issued                                        | \$500          | FDOH                  | Ongoing        |
| DCHD – 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        |
| DCHD – 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       |
| DCHD – 16      | DCHD-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        |
| DCHD – 17      | Application/ Plan Review/ Site Evaluations | DCHD 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        |
| DCHD – 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        |
| DCHD – 19      | Complaint Investigations                   | DCHD 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        |

| PROJECT NUMBER | PROJECT NAME                 | PROJECT DESCRIPTION                                                                                       | LEVEL OF EFFORT                                    | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 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/ FDEP/ 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 follow up on the 14 open PIC cases in the watershed during 2011 and 2012. Of these PICs, 2 were determined to be illicit and were disconnected or removed.

### 6.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Butcher Pen Creek watershed in 2012, COJ had 39 work orders for ditch and creek regrading, 3 work orders for a lake or pond problem, 41 work orders for repair/clearing of structures, and 1 illicit water discharge. These inspections are initiated through information from the CARE database. In addition, COJ collected 4 routine water quality samples. COJ's efforts in the Butcher Pen Creek watershed are shown in **Table 25**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 25: 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            | Complete       |
| COJ – 44       | La Moya Roadway Project                          | Wet detention                                                                                                       | 17 acres                          | Unknown    | COJ            | Complete       |
| COJ – 201      | 5000 Block Chadroe Road                          | Curb/gutter                                                                                                         | Chadroe Road                      | \$13,135   | COJ            | Complete       |
| COJ-254        | 6442 Romily Road                                 | Drainage improvement                                                                                                | Drainage                          | \$20,208   | COJ            | Design         |
| COJ – 45       | Ditch/Creek Regrade/Erosion/Clean                | CARE requests with costs for responses where a work order was issued                                                | 39                                | \$733      | 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                                                | 3                                 | Unknown    | COJ            | Ongoing        |
| COJ – 47       | Structure Blocked/Repair/General Flooding        | CARE requests with costs for responses where a work order was issued                                                | 41                                | \$485      | 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 DCHD 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      | See COJ-54                                                                                                          | 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            | Complete       |
| 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            | Complete       |
| 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 (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 70 total tanks, 0 tanks connected | Unknown    | COJ            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                  | PROJECT DESCRIPTION                            | LEVEL OF EFFORT                   | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|-----------------------------------------------|------------------------------------------------|-----------------------------------|------------|----------------|----------------|
| 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        |

<sup>1</sup> COJ has committed to removing septic tanks in failure areas that are within 300 meters of a surface water in the 2008 LSJR Main Stem BMAP. At a minimum, COJ will accomplish a 50% implementation of the septic tank phase-out projects by July 31, 2015, with the phase-outs completed by December 31, 2023. For the 10 tributaries addressed in this BMAP, a total of 1,180 septic tanks are located in failure areas, although not all of them may be located within 300 meters of a surface waterbody. The failing tanks within 300 meters of a surface waterbody will be included in the COJ plan and schedule to phase out tanks and will be identified as Tributaries BMAP-related tanks in the plan.

## 6.4 FDOT ACTIVITIES IN THE BUTCHER PEN CREEK WATERSHED

In 2012, FDOT collected 32.4 tons of debris through the street sweeping program. FDOT found 1 PIC in the watershed and determined that it was not a true illicit connection or discharge. FDOT also helps to fund 1 monitoring station in the Butcher Pen Creek watershed that is sampled quarterly as part of the MS4 routine monitoring program. **Table 26** lists FDOT's activities in the Butcher Pen Creek watershed.

**TABLE 26: 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 - \$9,300     | 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        | Countywide - \$9,300     | FDOT/COJ       | 1 potential illicit found and determined not to be a true illicit connection/discharge                                                                                                          | Ongoing        |
| FDOT – 15      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 1 station sampled quarterly; 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 - \$16,930    | 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 32.4 tons                                                                                        | Ongoing        |
| FDOT – 18      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 2012, JEA pipe burst 1.34% of the pipes in the watershed, repaired 6 manhole linings, inspected 2 ARVs, inspected 4 force main discharge manholes, inspected 0.15% of the pipes with closed-circuit television, and cleaned 2.94% of the lines. JEA also inspected 55 manholes as part of the Pop-Top Program. JEA's activities in the Miller Creek watershed are shown in **Table 27**.

**TABLE 27: JEA ACTIVITIES IN THE MILLER CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012: 978                      | Unknown        | JEA            | Ongoing        |
| JEA – 51       | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                         | Total footage in FY12: 0                        | \$0            | JEA            | Ongoing        |
| JEA – 52       | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | 6 manhole liners rehabbed in 2012               | Unknown        | JEA            | Ongoing        |
| JEA – 53       | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                            | 2 ARVs inspected and 0 replaced in 2012         | Unknown        | JEA            | Ongoing        |
| JEA – 54       | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                                  | Not applicable | JEA            | Complete       |
| JEA – 55       | Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary | Inspect force main discharge manholes, repair/rehab as necessary                    | 4 inspections, 0 rehabs                         | Unknown        | 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            | 108 linear of pipe inspected in 2012            | Unknown        | JEA            | Ongoing        |
| JEA – 58       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 2,142 linear feet cleaned by contractor in 2012 | Unknown        | JEA            | Ongoing        |
| JEA – 59       | Implement CMOM Program                                           | Implement CMOM Program                                                              | Not applicable                                  | Not applicable | JEA            | Ongoing        |
| JEA – 60       | Manhole Monitoring                                               | Manhole monitoring                                                                  | Not applicable                                  | Not applicable | 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                                                                     | 55 manholes inspected in 2012                   | \$0            | JEA            | Ongoing        |
| JEA – 63       | Non-Destructive Testing Program/Pipe Integrity Testing           | Non-Destructive Testing Program/pipeline integrity testing                          | Not applicable                                  | Not applicable | JEA            | Ongoing        |

## 7.2 DCHD ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2012, DCHD issued 1 modification permit, 2 repair permits, 1 abandonment permit, and 6 operating permits. DCHD also conducted 3 plan reviews and site evaluations. The programs and activities DCHD conducts in the Miller Creek watershed are shown in **Table 28**.

**TABLE 28: DCHD ACTIVITIES IN THE MILLER CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                              | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                                        | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 20      | OSTDS Program                             | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 1 modification permit, 2 repair permits, and 1 abandonment permit issued | \$1,550        | FDOH                                                                            | Ongoing        |
| DCHD – 21      | Annual Operating Permits                  | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems                                                           | 6 operating permits issued for PBTS/IMZ in WBID                                        | \$2,100        | FDOH                                                                            | Ongoing        |
| DCHD – 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      |
| DCHD – 23      | DCHD-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        |
| DCHD – 24      | Application/Plan Review/ Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | Approximately 3 plan reviews and site evaluations have been performed in WBID          | \$600          | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 26      | Complaint Investigations                  | DCHD 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        |
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

## 7.3 COJ ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2012, COJ had 9 work orders for ditch and creek regrading and 23 work orders for repair/clearing of structures. These inspections are initiated through information from the CARE

database. COJ followed up on 1 PIC, which was found not to be illicit. In addition, COJ collected 4 routine water quality samples, 36 BMAP samples, and 20 follow up samples on high counts. COJ also connected 2 septic tanks to the sewer system within the Saint Nicholas failure area. COJ's efforts in the Miller Creek watershed are shown in **Table 29**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 29: 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            | Complete       |
| COJ – 61       | Ditch/Creek Regrade/Erosion/Clean                      | CARE requests with costs for responses where a work order was issued                                                               | 9                                                              | \$1,207    | 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                                                               | 23                                                             | \$258      | COJ            | Ongoing        |
| COJ – 63       | Ditch/Vegetation Clearing                              | Thin vegetation at Mayfair Road and Bridgewater Roads for maintenance enhancement                                                  | This area is on private land and COJ was unable to gain access | \$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 DCHD for enforcement action                                                                          | 0                                                              | \$0        | COJ            | Ongoing        |
| COJ – 68       | Private Lift Station Inspection                        | 14 private lift stations in this WBID                                                                                              | 0                                                              | \$0        | 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            | Complete       |
| COJ – 70       | Illicit Discharge Detection and Elimination            | 0 open, 0 illicit                                                                                                                  | 1                                                              | \$379      | COJ            | Ongoing        |
| COJ – 71       | Routine Surface Water Sampling                         | NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID                                                 | 4                                                              | \$544      | COJ            | Ongoing        |
| COJ – 72       | BMAP Sampling                                          | 4 sites (3 sampled monthly and 1 sampled quarterly)                                                                                | 36                                                             | \$6,372    | COJ            | Ongoing        |
| COJ – 208      | Re-Sampling                                            | Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources                                    | 20                                                             | \$2,720    | COJ            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                        | PROJECT DESCRIPTION                                                                                                 | LEVEL OF EFFORT              | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|------------|----------------|----------------|
| COJ – 73       | Saint Nicholas Failure Area – Septic Tank Phase-Out | Phase-out of septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 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            | Complete       |
| 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        |

<sup>1</sup> COJ has committed to removing septic tanks in failure areas that are within 300 meters of a surface waterbody in the 2008 LSJR Main Stem BMAP. At a minimum, COJ will accomplish a 50% implementation of the septic tank phase-out projects by July 31, 2015, with the phase-outs completed by December 31, 2023. For the 10 tributaries addressed in this BMAP, a total of 1,180 septic tanks are located in failure areas, although not all of them may be located within 300 meters of a surface waterbody. The failing tanks within 300 meters of a surface waterbody will be included in the COJ plan and schedule to phase out tanks and will be identified as Tributaries BMAP-related tanks in the plan.

## 7.4 FDOT ACTIVITIES IN THE MILLER CREEK WATERSHED

In 2012, the Adopt-A-Highway Program collected approximately 1,120 pounds of trash along 6 miles of roadway. FDOT collected 75.6 tons of debris through the street sweeping program. FDOT also helps to fund 1 monitoring station in the Miller Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 30** lists FDOT's activities in the Miller Creek watershed.

**TABLE 30: 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 - \$9,300  | 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        | Countywide - \$9,300  | FDOT/ COJ      | No illicit connection found to date                                                                                                                                                             | Ongoing        |
| FDOT – 21      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900 | FDOT/ COJ      | 1 station sampled quarterly; 4 routine and 36 BMAP samplings performed                                                                                                                          | Ongoing        |
| FDOT – 22      | DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection | Countywide - \$16,930 | FDOT           | Ongoing effort                                                                                                                                                                                  | Ongoing        |
| FDOT – 23      | Adopt-A-Highway Program                                                                              | Unknown               | Not applicable | 1,120 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 75.6 tons                                                                                        | Ongoing        |
| FDOT – 26      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$       | 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 2012, JEA inspected 2 ARVs and inspected 12 manholes as part of the Pop-Top Program. JEA's activities in the Miramar Creek watershed are shown in **Table 31**.

**TABLE 31: JEA ACTIVITIES IN THE MIRAMAR CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012:0                                                              | Not applicable | JEA            | Ongoing        |
| JEA – 65       | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | Not applicable                                                                       | Not applicable | JEA            | Ongoing        |
| JEA – 66       | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                            | 2 ARVs inspected and 0 replaced in 2012                                              | \$0            | JEA            | Ongoing        |
| JEA – 67       | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                                                                       | Not applicable | JEA            | Complete       |
| JEA – 68       | 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 – 69       | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                              | Not applicable                                                                       | 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            | Complete       |
| 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            | Complete       |
| JEA – 72       | FOG Reduction Program                                            | FOG Reduction Program                                                               | Not applicable                                                                       | Not applicable | JEA            | Ongoing        |
| JEA – 73       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 0 linear feet of pipe cleaned in 2012                                                | Not applicable | 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                                                                     | 12 manholes inspected in 2012                                                        | Unknown        | 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 DCHD ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In 2012, DCHD issued 2 new permits, 8 repair permits, and 19 annual operating permits. DCHD also conducted 10 plan reviews and site evaluations and performed 4 complaint investigations. The programs and activities DCHD conducts in the Miramar Creek watershed are shown in **Table 32**.

**TABLE 32: DCHD ACTIVITIES IN THE MIRAMAR CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                               | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                                                                            | ESTIMATED COST    | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 28      | OSTDS Program                              | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 2 new and 8 repair permits issued                                                                            | \$4,300           | FDOH                                                                            | Ongoing        |
| DCHD – 29      | 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        |
| DCHD – 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      |
| DCHD – 31      | DCHD-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        |
| DCHD – 32      | Application/ Plan Review/ Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | Approximately 10 plan reviews and site evaluations have been performed in WBID                                             | \$2,000           | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 34      | Complaint Investigations                   | DCHD 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        |
| DCHD – 35      | OSTDS on Brooker Road                      | Investigate home on Brooker Road with potential OSTDS issues                                                                                       | Inspect and report findings in annual progress report                                                                      | Part of DCHD – 36 | FDOH/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

| PROJECT NUMBER | PROJECT NAME                 | PROJECT DESCRIPTION                                                                                       | LEVEL OF EFFORT                                     | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|------------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

### 8.3 COJ ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In the Miramar Creek watershed in 2012, COJ had 17 work orders for ditch and creek regrading, 2 work orders for ditch clean out, 3 work orders for a lake or pond problem, 15 work orders for repair/clearing of structures, and 2 illicit water discharges. These inspections are initiated through information from the CARE database. COJ inspected 1 private lift station in the basin. In addition, COJ collected 4 routine water quality samples, 20 BMAP samples, and 8 follow up samples on high counts. COJ also connected 2 septic tanks to the sewer system in the Freeman Road/Inwood Terrace failure areas and 4 septic tanks in the watershed that is outside of a failure area. COJ's efforts in the Miramar Creek watershed are shown in **Table 33**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 33: 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            | Complete       |
| COJ – 78       | Miramar Tributary Improvements                | Flood improvement                                                                               | 23 acres        | \$1,200,000 | COJ            | Complete       |
| COJ – 79       | Pine Forest/Larson Acres Area                 | Flood improvement, wet detention                                                                | 22 acres        | \$5,015,000 | COJ            | Complete       |
| COJ – 80       | St Augustine Rd (Emerson to U.S. 1)           | Regional pond                                                                                   | 167 acres       | Unknown     | COJ            | Complete       |
| 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            | Complete       |
| COJ – 255      | 2121 Sessions                                 | Drainage improvement                                                                            | Drainage        | \$45,903    | COJ            | Construction   |
| COJ – 256      | 212 Sessions                                  | Drainage improvement                                                                            | Drainage        | \$38,165    | COJ            | Construction   |
| COJ – 81       | Ditch/Creek<br>Regrade/Erosion/Clean          | CARE requests with costs for responses where a work order was issued                            | 17              | \$870       | COJ            | Ongoing        |
| COJ – 211      | Ditch Hazardous/Contaminated                  | CARE requests with costs for responses where a work order was issued                            | 2               | Unknown     | COJ            | Ongoing        |
| COJ – 82       | Lake or Pond Problem                          | CARE requests with costs for responses where a work order was issued                            | 3               | Unknown     | COJ            | Ongoing        |
| COJ – 83       | Structure Blocked/Repair/<br>General Flooding | CARE requests with costs for responses where a work order was issued                            | 15              | \$1,552     | COJ            | Ongoing        |
| COJ – 84       | Illicit Water Discharge                       | CARE initiated - incidents reported/found and closed during reporting period                    | 2               | \$758       | 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                    | 0               | \$0         | COJ            | Ongoing        |
| COJ – 87       | Sewer Overflow                                | CARE initiated - incidents reported/found and closed during reporting period                    | 0               | \$0         | COJ            | Ongoing        |
| COJ – 212      | Septic Tank Inspections                       | CARE initiated transferred to DCHD 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   | CARE initiated - determined to be Illicit and removed during reporting period                   | 0               | \$0         | COJ            | Ongoing        |
| COJ – 90       | Routine Surface Water Sampling                | NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID              | 4               | \$544       | COJ            | Ongoing        |
| COJ – 91       | BMAP Sampling                                 | 3 sites (2 sampled monthly and 1 sampled quarterly)                                             | 20              | \$3,540     | COJ            | Ongoing        |
| COJ – 213      | Re-Sampling                                   | Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources | 8               | \$1,088     | COJ            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                         | PROJECT DESCRIPTION                                                                                              | LEVEL OF EFFORT              | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------|------------|----------------|----------------|
| COJ – 92       | Pointe La Vista Failure Area – Septic Tank Phase-Out | Phase out septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 127 total tanks, 0 connected | Unknown    | COJ            | Ongoing        |
| COJ – 93       | Freeman Road Failure Area – Septic Tank Phase-Out    | Phase out septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 82 total tanks, 2 connected  | Unknown    | COJ            | Ongoing        |
| COJ – 94       | Inwood Terrace Failure Area – Septic Tank Phase-Out  | Phase out septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 10 total tanks, 0 connected  | Unknown    | COJ            | Ongoing        |
| COJ – 95       | Emerson Failure Area – Septic Tank Phase-Out         | Phase out septic tanks in failure areas (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 452 total tanks, 4 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        |

<sup>1</sup> COJ has committed to removing septic tanks in failure areas that are within 300 meters of a surface water in the 2008 LSJR Main Stem BMAP. At a minimum, COJ will accomplish a 50% implementation of the septic tank phase-out projects by July 31, 2015, with the phase-outs completed by December 31, 2023. For the 10 tributaries addressed in this BMAP, a total of 1,180 septic tanks are located in failure areas, although not all of them may be located within 300 meters of a surface water. The failing tanks within 300 meters of a surface water will be included in the COJ plan and schedule to phase out tanks and will be identified as Tributaries BMAP-related tanks in the plan.

## 8.4 FDOT ACTIVITIES IN THE MIRAMAR CREEK WATERSHED

In 2012, the Adopt-A-Highway Program collected approximately 320 pounds of trash in the watershed. FDOT collected 27 tons of debris through the street sweeping program. FDOT also helps to fund 1 monitoring station in the Miramar Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 34** lists FDOT's activities in the Miramar Creek watershed.

**TABLE 34: 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 - \$9,300     | 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        | Countywide - \$9,300     | FDOT/COJ       | No illicit connections found                                                                                                                                                                    | Ongoing        |
| FDOT – 29      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 1 station sampled quarterly, 4 routine water quality and 20 BMAP samplings performed                                                                                                            | Ongoing        |
| FDOT – 30      | DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection | Countywide - \$16,930    | FDOT           | Ongoing effort                                                                                                                                                                                  | Ongoing        |
| FDOT – 31      | Adopt-A-Highway Program                                                                              | Unknown                  | Not applicable | 320 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 27 tons                                                                                          | Ongoing        |
| FDOT – 34      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 2012, open cut 0.06% of the lines, inspected 25 ARVs and replaced 5 ARVs, upgraded 2 lift stations, inspected 0.23% of the pipes with closed-circuit television, and cleaned 1.95% of the lines. JEA also inspected 30 manholes as part of the Pop-Top Program. JEA's activities in the Big Fishweir Creek watershed are shown in **Table 35**.

**TABLE 35: JEA ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012: 0                                                                                       | \$0            | JEA            | Ongoing        |
| JEA – 80       | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                         | Total footage in FY12: 0                                                                                       | \$0            | JEA            | Ongoing        |
| JEA – 81       | Open Cut - Removal and Replacement                               | Replace failing/leaking infrastructure                                              | Total footage in FY12 - 735                                                                                    | \$183,750      | JEA            | Ongoing        |
| JEA – 82       | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | 0 manholes rehabbed in 2011                                                                                    | \$0            | JEA            | Ongoing        |
| JEA – 83       | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                            | 25 ARVs inspected and 5 replaced in 2012                                                                       | Unknown        | 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            | Complete       |
| JEA – 85       | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                                                                                                 | Not applicable | JEA            | Complete       |
| JEA – 86       | 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 – 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            | Complete       |
| 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            | Complete       |
| 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                              | 2 lift stations upgraded in 2012                                                                               | \$33,875       | JEA            | Ongoing        |
| JEA – 90       | Pipe TV Inspection                                               | Inspect existing infrastructure through use of closed-circuit TV system             | 3,090 linear feet of pipe inspected in 2012                                                                    | Unknown        | JEA            | Ongoing        |
| JEA – 91       | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 25,721 linear feet cleaned in 2012                                                                             | Unknown        | JEA            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                           | PROJECT DESCRIPTION                                    | LEVEL OF EFFORT               | ESTIMATED COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------|----------------|----------------|----------------|
| 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                                        | 30 manholes inspected in 2012 | \$0            | JEA            | Ongoing        |
| JEA – 96       | Non-Destructive Testing Program/Pipe Integrity Testing | Non-Destructive Testing Program/pipe integrity testing | 0 sites were tested in 2012   | \$0            | JEA            | Ongoing        |

## 9.2 DCHD ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED

In 2012, DCHD issued 1 new permit, 7 repair permits, 6 abandonment permits, and 37 annual operating permits. DCHD also conducted 8 plan reviews and site evaluations and performed 4 complaint investigations. The programs and activities DCHD conducts in the Big Fishweir Creek watershed are shown in **Table 36**.

**TABLE 36: DCHD ACTIVITIES IN THE BIG FISHWEIR CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                               | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                               | ESTIMATED COST | FUNDING SOURCE        | PROJECT STATUS |
|----------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------|-----------------------|----------------|
| DCHD – 37      | OSTDS Program                              | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 1 new permit, 7 repair permits and 6 abandonment permits issued | \$2,850        | FDOH                  | Ongoing        |
| DCHD – 38      | Annual Operating Permits                   | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems                                                           | 37 annual operating permits issued for PBTS/IMZ in WBID                       | \$12,950       | FDOH                  | Ongoing        |
| DCHD – 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      |
| DCHD – 40      | DCHD-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        |
| DCHD – 41      | Application/ Plan Review/ Site Evaluations | DCHD 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        |
| DCHD – 42      | Septic Tank Failure Area Ranking           | Septic tank failure area scored and prioritized on annual basis                                                                                    | Less than 1 year since previous update                                        | N/A            | Not applicable        | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                 | PROJECT DESCRIPTION                                                                                                              | LEVEL OF EFFORT                                        | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 43      | Complaint Investigations     | DCHD investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations | 4 complaint investigations have been performed in WBID | \$600          | FDOH                                                                            | Ongoing        |
| DCHD – 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/ FDEP/ 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 2011, COJ completed a drainage outfall repair on Quan Drive and a drainage improvement project on Rensselaer and Hollingsworth. These projects will help to reduce the amount of fecal coliforms that reach the creek from these areas.

#### 9.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In 2012, COJ had 120 work orders for ditch and creek regrading, 4 work orders for ditch clean out, 1 work order for a lake or pond problem, 135 work orders for repair/clearing of structures, 1 illicit water discharge, 1 pollution discharge, and 1 sewer that drains into a yard or ditch. These inspections are initiated through information from the CARE database. COJ inspected 2 private lift stations in the basin and followed up on 5 PICs, 4 of which were not illicit and 1 is still an open case. In addition, COJ collected 12 routine water quality samples. COJ also connected 5 septic tanks 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 37**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 37: 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            | Complete       |
| COJ – 101      | Murray Hill Phase 1                        | Wet detention                                                                | 219 acres           | Unknown     | COJ            | Complete       |
| COJ – 102      | Riverside Avenue                           | Second-generation baffle box                                                 | 70 acres            | Unknown     | COJ            | Complete       |
| 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            | Complete       |
| COJ – 104      | Jersey St Drainage                         | Pipe roadside ditch                                                          | Jersey Street       | \$75,000    | COJ            | Complete       |
| COJ – 105      | Fairfax Manor Creek                        | Regrade ditch                                                                | Fairfax Manor Creek | \$65,000    | COJ            | Complete       |
| COJ – 215      | 5340 Royce Avenue                          | Pipe replacement                                                             | Royce Avenue        | \$63,608    | COJ            | Complete       |
| COJ – 216      | Poppy Drive Paving Rehabilitation          | Construction                                                                 | Poppy Drive         | \$58,357    | COJ            | Complete       |
| COJ – 217      | 1748 Harksheimer Avenue                    | Pipe replacement                                                             | Harksheimer Avenue  | \$49,225    | COJ            | Complete       |
| COJ – 218      | Quan Drive Drainage Outfall                | Repair concrete ditch lining                                                 | Quan Drive          | \$12,482    | COJ            | Complete       |
| COJ – 219      | 4700 Block Astral Street                   | Curb/gutter                                                                  | Astral Street       | \$9,502     | COJ            | Complete       |
| COJ – 220      | College/Talbot                             | Curb/gutter                                                                  | College/Talbot      | \$31,914    | COJ            | Complete       |
| COJ – 221      | Murray Drive/French Street                 | Curb/gutter                                                                  | Murray/French       | \$11,750    | COJ            | Complete       |
| COJ – 247      | 1290 Menna Drive                           | Pipe replacement                                                             | Unknown             | \$46,349    | COJ            | Complete       |
| COJ – 248      | 1748 Harkisheimer Drive                    | Drainage improvement                                                         | Outfall improvement | \$49,225    | COJ            | Complete       |
| COJ – 249      | Boone Park and Pine Grove                  | Drainage improvement                                                         | Outfall improvement | \$2,502     | COJ            | Complete       |
| COJ - 250      | Rensselaer and Hollingsworth               | Drainage improvement                                                         | Outfall improvement | \$86,710    | COJ            | Complete       |
| COJ-257        | Woodruff                                   | Drainage improvement                                                         | Drainage            | \$24,239    | COJ            | Construction   |
| COJ – 106      | Ditch/Creek Regrade/Erosion/Clean          | CARE requests with costs for responses where a work order was issued         | 120                 | \$2,058     | COJ            | Ongoing        |
| COJ – 222      | Ditch Hazardous/Contaminated               | CARE requests with costs for responses where a work order was issued         | 4                   | \$214       | COJ            | Ongoing        |
| COJ – 107      | Lake or Pond Problem                       | CARE requests with costs for responses where a work order was issued         | 1                   | \$0         | COJ            | Ongoing        |
| COJ – 108      | Structure Blocked/Repair/General Flooding  | CARE requests with costs for responses where a work order was issued         | 135                 | \$18,913    | COJ            | Ongoing        |
| COJ – 109      | Illicit Water Discharge                    | CARE initiated - incidents reported/found and closed during reporting period | 1                   | \$379       | COJ            | Ongoing        |
| COJ – 110      | Pollution – Water – Illegal Discharge      | CARE initiated - incidents reported/found and closed during reporting period | 1                   | \$379       | COJ            | Ongoing        |
| COJ – 111      | Sewer Drains into Yard/Ditch               | CARE initiated - incidents reported/found and closed during reporting period | 1                   | \$379       | COJ            | Ongoing        |
| COJ – 112      | Sewer Overflow                             | CARE initiated - incidents reported/found and closed during reporting period | 0                   | \$0         | COJ            | Ongoing        |

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| PROJECT NUMBER | PROJECT NAME                                  | PROJECT DESCRIPTION                                                                              | LEVEL OF EFFORT              | TOTAL COST        | FUNDING SOURCE | PROJECT STATUS |
|----------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------|------------------------------|-------------------|----------------|----------------|
| COJ – 113      | Sewer Repairs at The Loop Restaurant          | Follow-up and enforcement of sewer repairs at restaurant                                         | Follow up on repairs         | \$1,500           | COJ            | Complete       |
| COJ – 114      | Septic Tank Inspection                        | CARE initiated transferred to DCHD for enforcement action                                        | 0                            | \$0               | COJ            | Ongoing        |
| COJ – 115      | Private Lift Station Inspection               | 20 private lift stations in WBID                                                                 | 2                            | \$758             | 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            | Complete       |
| COJ – 117      | Illicit Discharge Detection and Elimination   | 1 open, 0 illicit                                                                                | 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            | Complete       |
| 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            | Complete       |
| 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            | Complete       |
| 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                                                   | 491 total tanks, 5 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 2012, FDOT found 1 PIC but determined that it was not a true illicit connection/discharge. FDOT collected 56.7 tons of debris through the street sweeping program. FDOT also helps to fund 3 monitoring stations in the Big Fishweir Creek watershed that are sampled quarterly as part of the routine monitoring program. **Table 38** lists FDOT's activities in the Big Fishweir Creek watershed.

**TABLE 38: 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 - \$9,300     | 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        | Countywide - \$9,300     | FDOT/COJ       | 1 potential illicit found and determined not to be a true illicit connection/discharge                                                                                                          | Ongoing        |
| FDOT – 37      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 3 stations sampled quarterly; 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 - \$16,930    | 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 56.7 tons                                                                                        | Ongoing        |
| FDOT – 41      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 repaired 6 manholes, inspected 0.13% of the pipes with closed-circuit television, and cleaned 4.56% of the lines. JEA also inspected 155 manholes as part of the Pop-Top Program. JEA's activities in the Deer Creek watershed are shown in **Table 39**.

**TABLE 39: JEA ACTIVITIES IN THE DEER CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012: 0                                                   | \$0            | JEA            | Ongoing        |
| JEA – 98       | CIPP – Install New Inner Lining                                  | Rehabilitate failing/leaking infrastructure                                         | Total footage in 2012: 0                                                   | \$0            | JEA            | Ongoing        |
| JEA – 99       | Open Cut – Removal and Replacement                               | Replace failing/leaking infrastructure                                              | Total footage in FY12:0                                                    | \$0            | JEA            | Ongoing        |
| JEA – 100      | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | 6 manholes rehabbed in 2012                                                | Unknown        | JEA            | Ongoing        |
| JEA – 101      | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                                                             | Not applicable | JEA            | Complete       |
| 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            | Complete       |
| JEA – 104      | FOG Reduction Program                                            | FOG Reduction Program                                                               | Not applicable                                                             | Not applicable | JEA            | Ongoing        |
| JEA – 105      | Pipe TV Inspection                                               | Inspect existing infrastructure through use of closed-circuit TV system             | 470 linear feet of pipe inspected in 2012                                  | Unknown        | JEA            | Ongoing        |
| JEA – 106      | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 16,443 linear of pipe cleaned in 2012                                      | Unknown        | JEA            | Ongoing        |
| JEA – 107      | Implement CMOM Program                                           | Implement CMOM Program                                                              | Not applicable                                                             | Not applicable | JEA            | Ongoing        |
| JEA – 108      | Manhole Monitoring                                               | Manhole monitoring                                                                  | Not applicable                                                             | Not applicable | 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                                                                     | 155 manholes inspected in 2012                                             | Unknown        | 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 DCHD ACTIVITIES IN THE DEER CREEK WATERSHED

In 2012, DCHD issued 2 annual operating permits and performed 1 complaint investigation. The programs and activities DCHD conducts in the Deer Creek watershed are shown in **Table 40**.

**TABLE 40: DCHD ACTIVITIES IN THE DEER CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                               | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                            | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 45      | OSTDS Program                              | Implementation of programs to address septic systems as potential sources                                                                          | None                                                       | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD-78        | Annual Operating Permits                   | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems                                                           | 2 annual operating permits issued for PBTS/IMZ in WBID     | \$700          | FDOH                                                                            | Ongoing        |
| DCHD – 46      | DCHD-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        |
| DCHD – 47      | Application/ Plan Review/ Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | None                                                       | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 49      | Complaint Investigations                   | DCHD 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        |
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

## 10.3 COJ ACTIVITIES IN THE DEER CREEK WATERSHED

In the Deer Creek watershed in 2012, COJ had 5 work orders for ditch and creek regrading, 19 work orders for repair/clearing of structures, and 1 sewer overflow. These inspections are initiated through information from the CARE database. In addition, COJ collected 4 routine water quality samples and 13 BMAP samples. COJ's efforts in the Deer Creek watershed are shown in **Table 41**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 41: 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 <sup>th</sup> Street, MLK Jr. Expressway, 1 <sup>st</sup> 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            | Complete       |
| COJ – 223      | 1405 Van Buran Street                          | Pipe replacement                                                                                                        | Van Buran Street | \$88,940    | COJ            | Complete       |
| COJ – 224      | Jessie Street                                  | Pipe CIPP                                                                                                               | Jessie Street    | \$237,952   | COJ            | Complete       |
| COJ-258        | 1525 Tallyrand                                 | Drainage improvement                                                                                                    | Drainage         | \$38,421    | COJ            | Construction   |
| COJ – 129      | Ditch/Creek Regrade/Erosion/Clean              | CARE requests with costs for responses where a work order was issued                                                    | 5                | \$6,415     | 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                                                    | 19               | \$821       | 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                                            | 1                | \$379       | COJ            | Ongoing        |
| COJ – 227      | Septic Tank Inspections                        | CARE initiated transferred to DCHD 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    | Determined to be Illicit and removed during reporting period                                                            | 0                | \$0         | COJ            | Ongoing        |
| COJ – 137      | Routine Surface Water Sampling                 | NPDES permit-related quarterly water quality sampling – 2 sampling stations in WBID                                     | 4                | \$544       | COJ            | Ongoing        |
| COJ – 138      | BMAP Sampling                                  | 4 sites (3 sampled monthly and 1 sampled quarterly)                                                                     | 13               | \$2,301     | COJ            | Ongoing        |
| COJ – 139      | Re-Sampling                                    | Conducted when high levels of fecal coliform are noted, to attempt to identify sources                                  | 0                | \$0         | COJ            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                                              | PROJECT DESCRIPTION                                                                      | LEVEL OF EFFORT | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------|------------|----------------|----------------|
| 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      |
| COJ – 141      | Outside Failure Areas – Septic Tank Phase-Out                             | Phase out program as provided by COJ ordinance                                           | 0 total tanks   | Unknown    | COJ            | Complete       |
| 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 2012, FDOT collected 26.1 tons of debris through the street sweeping program. FDOT also helps to fund 2 monitoring stations in the Deer Creek watershed that are sampled quarterly as part of the routine monitoring program. **Table 42** lists FDOT's activities in the Deer Creek watershed.

**TABLE 42: 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 - \$9,300     | FDOT/COJ       | Effort is continuous in WBID                                                                                                                                                                    | Ongoing        |
| FDOT – 43      | PIC Program – Illicit Connections Identified and Removed in WBID if Truly Illicit                             | Countywide - \$9,300     | FDOT/COJ       | No true illicit connection identified to date                                                                                                                                                   | Ongoing        |
| FDOT – 44      | Routine Surface Water Sampling and Best Management Practice (BMP) Effectiveness Project as Part of MS4 Permit | Countywide - \$27,900    | FDOT/COJ       | 2 stations sampled quarterly, 4 routine water quality samplings performed; BMP wet detention pond effectiveness                                                                                 | Ongoing        |
| FDOT – 45      | DCP – Connecting Entity Must Certify that All Discharges to FDOT MS4 Are Treated Prior to Connection          | Countywide - \$16,930    | 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 21.6 tons                                                                                         | Ongoing        |
| FDOT – 48      | Maintain FDOT Stormwater Systems                                                                              | Countywide - \$5,272,132 | 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 2012 activities in the Terrapin Creek watershed are shown in **Table 43**.

**TABLE 43: JEA ACTIVITIES IN THE TERRAPIN CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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            | Complete       |
| JEA – 115      | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable          | Not applicable | JEA            | Complete       |
| 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 DCHD ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

In 2012, DCHD issued 15 annual operating permits. The programs and activities DCHD conducts in the Terrapin Creek watershed are shown in **Table 44**.

**TABLE 44: DCHD ACTIVITIES IN THE TERRAPIN CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME             | PROJECT DESCRIPTION                                                                      | LEVEL OF EFFORT                                         | ESTIMATED COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|--------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------|----------------|----------------|----------------|
| DCHD – 50      | OSTDS Program            | Implementation of programs to address septic systems as potential sources                | None                                                    | Not applicable | FDOH           | Ongoing        |
| DCHD – 51      | Annual Operating Permits | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems | 15 annual operating permits issued for PBTS/IMZ in WBID | \$5,250        | FDOH           | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                             | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                            | ESTIMATED COST | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 52      | DCHD-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        |
| DCHD – 53      | Application/Plan Review/Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | None                                                       | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 55      | Complaint Investigations                 | DCHD investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations                   | None                                                       | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 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/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |

### 11.3 COJ ACTIVITIES IN THE TERRAPIN CREEK WATERSHED

In the Terrapin Creek watershed in 2012, COJ collected 8 routine water quality samples. COJ also connected 1 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 45**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 45: 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            | Complete       |
| 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 DCHD for enforcement action                                       | 0                           | \$0        | COJ            | Ongoing        |
| COJ – 149      | Private Lift Station Inspection               | 6 private lift stations in WBID                                                                 | 0                           | \$0        | COJ            | Ongoing        |
| COJ – 150      | Determine Lift Station Location               | 1 lift station is located on boundary, verify location for first annual report                  | 1                           | \$212      | COJ            | Complete       |
| COJ – 151      | Illicit Discharge Detection and Elimination   | 0 open                                                                                          | 0                           | \$0        | COJ            | Ongoing        |
| COJ – 152      | Follow Up on Outstanding PICs                 | Follow up on 9 open PICs in watershed                                                           | 9                           | \$1,908    | COJ            | Complete       |
| COJ – 153      | Routine Surface Water Sampling                | NPDES permit-related quarterly water quality sampling – 2 sampling stations in WBID             | 8                           | \$1,088    | COJ            | Ongoing        |
| COJ – 233      | BMAP Monitoring                               | COJ is not responsible for BMAP monitoring in this watershed                                    | 0                           | \$0        | COJ            | Complete       |
| COJ – 234      | Re-Sampling                                   | Conducted when high levels of fecal coliform bacteria are noted, to attempt to identify sources | 0                           | \$0        | COJ            | Complete       |
| 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 also helps to fund 2 monitoring stations in the Terrapin Creek watershed that are sampled quarterly as part of the routine monitoring program. **Table 46** lists FDOT's activities in the Terrapin Creek watershed.

**TABLE 46: 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 - \$9,300     | FDOT/COJ       | Effort is continuous in WBID                                                                                                                                                                    | Ongoing        |
| FDOT – 50      | PIC Program – Illicit Connections Identified and Removed in WBID if Truly Illicit                    | Countywide - \$9,300     | FDOT/COJ       | No truly illicit connection identified to date                                                                                                                                                  | Ongoing        |
| FDOT – 51      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 2 stations sampled quarterly, 8 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 - \$16,930    | FDOT           | Ongoing effort                                                                                                                                                                                  | Ongoing        |
| FDOT – 53      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 2012, JEA repaired 1 manhole, inspected 2 ARVs, inspected 1 force main discharge manhole, inspected 0.08% of the pipes with closed-circuit television, and cleaned 0.93% of the lines. JEA also inspected 70 manholes as part of the Pop-Top Program. JEA's activities in the Goodbys Creek watershed are shown in **Table 47**.

**TABLE 47: JEA ACTIVITIES IN THE GOODBYS CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                              | Total footage in 2012: 0                   | \$0            | JEA            | Ongoing        |
| JEA – 124      | Open Cut – Removal and Replacement                               | Replace failing/leaking infrastructure                                              | Total footage in FY12: 0                   | \$0            | JEA            | Ongoing        |
| JEA – 125      | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                | 1 manhole rehabbed in 2012                 | Unknown        | JEA            | Ongoing        |
| JEA – 126      | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                            | 2 ARVs inspected and 0 replaced in 2012    | Unknown        | JEA            | Ongoing        |
| JEA – 127      | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed | Not applicable                             | Not applicable | JEA            | Complete       |
| JEA – 128      | Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary | Inspect force main discharge manholes, repair/rehab as necessary                    | 1 manhole inspected, 0 rehabbed            | Unknown        | JEA            | Ongoing        |
| JEA – 129      | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                              | Not applicable                             | Not applicable | 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             | 1,177 linear of pipe inspected in 2012     | Unknown        | JEA            | Ongoing        |
| JEA – 132      | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                             | 13,483 linear feet of pipe cleaned in 2012 | Unknown        | JEA            | Ongoing        |
| JEA – 133      | Implement CMOM Program                                           | Implement CMOM Program                                                              | Not applicable                             | Not applicable | JEA            | Ongoing        |
| JEA – 134      | Manhole Monitoring                                               | Manhole monitoring                                                                  | Not applicable                             | \$0            | 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                                                                     | 70 manholes were inspected in 2012         | Unknown        | JEA            | Ongoing        |
| JEA – 137      | Non-Destructive Testing Program/Pipe Integrity Testing           | Non-Destructive Testing Program/pipe integrity testing                              | 0 sites were tested in 2012                | \$0            | JEA            | Ongoing        |

## 12.2 DCHD ACTIVITIES IN THE GOODBYS CREEK WATERSHED

In 2012, DCHD issued 2 new permits, 2 repair permits, 3 abandonment permit, and 15 annual operating permits. DCHD also conducted 4 plan reviews and site evaluations and performed 2 complaint investigations. The programs and activities DCHD conducts in the Goodbys Creek watershed are shown in **Table 48**.

**TABLE 48: DCHD ACTIVITIES IN THE GOODBYS CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                              | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                                               | ESTIMATED COST    | FUNDING SOURCE                                                                  | PROJECT STATUS |
|----------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 56      | OSTDS Program                             | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 2 new, 2 repair, and 3 abandonment permits issued               | \$2,050           | FDOH                                                                            | Ongoing        |
| DCHD – 57      | Annual Operating Permits                  | Annual operating permits issued for PBTS, systems located in IMZ, and commercial systems                                                           | 15 annual operating permits for PBTS/IMZ located in WBID                      | \$5,400           | FDOH                                                                            | Ongoing        |
| DCHD – 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      |
| DCHD – 59      | DCHD-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        |
| DCHD – 60      | Application/ Plan Review/Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | Approximately 4 plan reviews and site evaluations have been performed in WBID | \$800             | FDOH                                                                            | Ongoing        |
| DCHD – 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        |
| DCHD – 62      | Complaint Investigations                  | DCHD investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations                   | 2 complaint investigations have been performed in WBID                        | \$300             | FDOH                                                                            | Ongoing        |
| DCHD – 63      | Walk the WBID Effort                      | Inspect the septic tanks in the central portion of watershed to identify sources                                                                   | Walk the WBID                                                                 | Part of DCHD – 64 | FDOH/ FDEP/ Section 319 Nonpoint Source Management Program Implementation Grant | Completed      |
| DCHD – 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/ FDEP/ 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 follow ups on the remaining 14 PIC cases in the watershed.

### ***12.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES***

In 2012, COJ had 66 work orders for ditch and creek regrading, 1 work order for ditch clean out, 3 work orders for a lake or pond problem, 80 work orders for repair/clearing of structures, and 2 illicit water discharges. These inspections are initiated through information from the CARE database. COJ also followed up on 3 PICs and collected 4 routine water quality samples. In addition, COJ connected 1 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 49**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 49: 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            | Complete       |
| 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            | Complete       |
| COJ – 236      | San Clerc/Sanchez Drainage                                                                                   | Construction                                                                         | Unknown            | \$229,524   | COJ            | Complete       |
| COJ – 237      | San Clerc Road Drainage Improvement                                                                          | Drainage improvement                                                                 | San Clerc Road     | \$541       | COJ            | Complete       |
| COJ – 251      | San Clerc/Sanchez Drainage Improvement                                                                       | Drainage improvement                                                                 | Unknown            | \$29,524    | COJ            | Construction   |
| COJ – 252      | Sanchez Road                                                                                                 | Drainage improvement                                                                 | Unknown            | \$62,333    | COJ            | Construction   |
| COJ-259        | 9439 San Jose Boulevard                                                                                      | Drainage improvement                                                                 | Unknown            | \$66,195    | COJ            | Construction   |
| COJ – 159      | Ditch/Creek<br>Regrade/Erosion/Clean                                                                         | CARE requests with costs for responses where a work order was issued                 | 66                 | \$38,295    | COJ            | Ongoing        |
| COJ – 238      | Ditch Hazardous/Contaminated                                                                                 | CARE requests with costs for responses where a work order was issued                 | 1                  | Unknown     | COJ            | Ongoing        |
| COJ – 160      | Lake or Pond Problem                                                                                         | CARE requests with costs for responses where a work order was issued                 | 3                  | Unknown     | COJ            | Ongoing        |
| COJ – 161      | Structure Blocked/Repair/General Flooding                                                                    | CARE requests with costs for responses where a work order was issued                 | 80                 | \$1,399     | COJ            | Ongoing        |
| COJ – 162      | Illicit Water Discharge                                                                                      | CARE initiated - incidents reported/found and closed during reporting period         | 2                  | \$758       | COJ            | Ongoing        |
| COJ – 163      | Pollution – Water – Illegal Discharge                                                                        | CARE initiated - incidents reported/found and closed during reporting period         | 0                  | \$0         | COJ            | Ongoing        |
| COJ – 164      | Sewer Drains into Yard/Ditch                                                                                 | CARE initiated - incidents reported/found and closed during reporting period         | 0                  | \$0         | COJ            | Ongoing        |
| COJ – 165      | Sewer Overflow                                                                                               | CARE initiated - incidents reported/found and closed during reporting period         | 0                  | \$0         | COJ            | Ongoing        |
| COJ – 239      | Septic Tank Inspections                                                                                      | CARE initiated transferred to DCHD for enforcement action                            | 0                  | \$0         | COJ            | Ongoing        |
| COJ – 166      | Private Lift Station Inspection                                                                              | 50 private lift stations in WBID                                                     | 0                  | \$0         | 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            | Complete       |
| COJ – 168      | Illicit Discharge Detection and Elimination                                                                  | 3 illicit discharge issues listed, 3 illicit discharge issues require investigation  | 3                  | \$1,137     | COJ            | Ongoing        |
| COJ – 169      | Follow Up on Outstanding PICs                                                                                | Follow up on 16 open PICs in watershed, 14 remaining PICs resolved                   | 16                 | \$6,064     | COJ            | Complete       |

| PROJECT NUMBER | PROJECT NAME                                           | PROJECT DESCRIPTION                                                                                                 | LEVEL OF EFFORT              | TOTAL COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------------------|------------|----------------|----------------|
| COJ – 170      | Routine Surface Water Sampling                         | NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID                                  | 4                            | \$544      | 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 (also listed as part of larger LSJR Main Stem BMAP project) <sup>1</sup> | 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                                                                      | 315 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/DCHD       | 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        |

<sup>1</sup> COJ has committed to removing septic tanks in failure areas that are within 300 meters of a surface water in the 2008 LSJR Main Stem BMAP. At a minimum, COJ will accomplish a 50% implementation of the septic tank phase-out projects by July 31, 2015, with the phase-outs completed by December 31, 2023. For the 10 tributaries addressed in this BMAP, a total of 1,180 septic tanks are located in failure areas, although not all of them may be located within 300 meters of a surface water. The failing tanks within 300 meters of a surface water will be included in the COJ plan and schedule to phase out tanks and will be identified as Tributaries BMAP-related tanks in the plan.

## 12.4 FDOT ACTIVITIES IN THE GOODBYS CREEK WATERSHED

In 2012, FDOT identified 1 PIC that is currently under investigation. The Adopt-A-Highway Program collected 480 pounds of trash along 6.5 miles of roadway. FDOT collected 97.2 tons of debris through the street sweeping program. FDOT also helps to fund 1 monitoring station in the Goodbys Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 50** lists FDOT's activities in the Goodbys Creek watershed.

**TABLE 50: 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 - \$9,300     | 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        | Countywide - \$9,300     | FDOT/COJ       | 1 potential illicit found and currently under investigation                                                                                                                                     | Ongoing        |
| FDOT – 56      | Routine Tributary Monitoring as Part of MS4 Permit                                                   | Countywide - \$27,900    | FDOT/COJ       | 1 station sampled quarterly, 4 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 - \$16,930    | FDOT           | Ongoing effort                                                                                                                                                                                  | Ongoing        |
| FDOT – 59      | Adopt-A-Highway Program                                                                              | Unknown                  | Not applicable | 480 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 97.2 tons                                                                                        | Ongoing        |
| FDOT – 62      | Maintain FDOT Stormwater Systems                                                                     | Countywide - \$5,272,132 | 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 2012, JEA repaired 6 manhole liners, inspected 4 ARVs, inspected 8 force main discharge manholes, upgraded 2 lift stations, and inspected 0.06% of the pipes with closed-circuit television. JEA also inspected 752 manholes as part of the Pop-Top Program. JEA's activities in the Open Creek watershed are shown in **Table 51**.

**TABLE 51: JEA ACTIVITIES IN THE OPEN CREEK WATERSHED**

Note: JEA's FY12 is from October 1, 2011 through September 30, 2012

| 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                                                 | Total footage in 2012: 0                                                  | \$0            | JEA            | Ongoing        |
| JEA – 139      | Open Cut – Removal and Replacement                               | Replace failing/leaking infrastructure                                                 | Total footage in FY12: 0                                                  | \$0            | JEA            | Ongoing        |
| JEA – 140      | Manhole Linings Rehabbed                                         | Repair deteriorating manhole linings                                                   | 6 manhole liners rehabbed in 2012                                         | Unknown        | JEA            | Ongoing        |
| JEA – 141      | ARV Inspection and Rehab                                         | ARV inspection and rehab                                                               | 4 ARVs inspected and 0 replaced in 2012                                   | Unknown        | JEA            | Ongoing        |
| JEA – 142      | Pump Station SCADA Upgrades                                      | Retrofitting completed in 2004; all stations constructed since have SCADA installed    | Not applicable                                                            | Not applicable | JEA            | Complete       |
| JEA – 143      | Inspect Force Main Discharge Manholes, Repair/Rehab as Necessary | Inspect force main discharge manholes, repair/rehab as necessary                       | 8 inspected, 0 rehabs                                                     | Unknown        | JEA            | Ongoing        |
| JEA-155        | Pump Station Class I/II Rebuilding                               | Repair or replace components of existing pump stations                                 | 2 lift stations upgraded in 2012                                          | \$19,031       | 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            | Complete       |
| 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            | Complete       |
| JEA – 146      | FOG Reduction Program                                            | FOG Reduction Program                                                                  | Not applicable                                                            | Not applicable | JEA            | Ongoing        |
| JEA – 147      | Pipe TV Inspection                                               | Inspect existing infrastructure through use of closed-circuit television               | 405 linear feet of pipe inspected in 2012                                 | Unknown        | JEA            | Ongoing        |
| JEA – 148      | Pipe Cleaning                                                    | Clean existing pipes to avoid blockages                                                | 0 linear feet of pipe cleaned in 2012                                     | \$0            | JEA            | Ongoing        |
| JEA – 149      | Implement CMOM Program                                           | Implement CMOM Program                                                                 | Not applicable                                                            | Not applicable | JEA            | Ongoing        |

| PROJECT NUMBER | PROJECT NAME                                           | PROJECT DESCRIPTION                                    | LEVEL OF EFFORT               | ESTIMATED COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|--------------------------------------------------------|--------------------------------------------------------|-------------------------------|----------------|----------------|----------------|
| JEA – 150      | Manhole Monitoring                                     | Manhole monitoring                                     | Not applicable                | Not applicable | 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                                        | 752 manholes surveyed in 2012 | Unknown        | 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 DCHD ACTIVITIES IN THE OPEN CREEK WATERSHED

In 2012, DCHD issued 1 abandonment permit and 2 annual operating permits. The programs and activities DCHD conducts in the Open Creek watershed are shown in **Table 52**.

**TABLE 52: DCHD ACTIVITIES IN THE OPEN CREEK WATERSHED**

| PROJECT NUMBER | PROJECT NAME                             | PROJECT DESCRIPTION                                                                                                                                | LEVEL OF EFFORT                                            | ESTIMATED COST | FUNDING SOURCE | PROJECT STATUS |
|----------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------|----------------|----------------|
| DCHD – 65      | OSTDS Program                            | Implementation of programs to address septic systems as potential sources                                                                          | Approximately 1 abandonment permit issued                  | \$100          | FDOH           | Ongoing        |
| DCHD – 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        |
| DCHD – 67      | DCHD-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        |
| DCHD – 68      | Application/Plan Review/Site Evaluations | DCHD performs plan review and site evaluation for each application received for OSTDS new construction, repair, or modification of existing system | None                                                       | Not applicable | FDOH           | Ongoing        |
| DCHD – 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 |
|----------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------|---------------------------------------------------------------------------------|----------------|
| DCHD – 70      | Complaint Investigations     | DCHD investigates all complaints received, performs site visit, and initiates enforcement action on sanitary nuisance violations | None                                               | Not applicable | FDOH                                                                            | Ongoing        |
| DCHD – 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/ FDEP/ 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 2012, COJ completed the first part of the Washburn Road drainage improvement project, which will help reduce fecal coliform loading to Open Creek from this area.

#### 13.3.2 ONGOING COJ PROGRAMS AND ACTIVITIES

In the Open Creek watershed in 2012, COJ had 17 work orders for ditch and creek regrading, 19 work orders for repair/clearing of structures, 1 illicit water discharge, and 1 illegal water discharge. These inspections are initiated through information from the CARE database. In addition, COJ collected 4 routine water quality samples. COJ also connected 2 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 53**. Additional details about COJ projects are included in **Appendix A**.

**TABLE 53: 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            | Complete       |
| COJ-260        | Washburn Road                                                                         | Drainage improvement                                                                            | Unknown                             | \$6,191    | COJ            | Design         |
| COJ-261        | Washburn Road Drainage                                                                | Drainage improvement                                                                            | Unknown                             | \$35,949   | COJ            | Construction   |
| COJ-262        | Washburn Road Drainage Part A                                                         | Drainage improvement                                                                            | Unknown                             | \$72,692   | COJ            | Complete       |
| COJ – 177      | Ditch/Creek Regrade/Erosion/Clean                                                     | CARE requests with costs for responses where a work order was issued                            | 17                                  | \$92       | 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                            | 19                                  | Unknown    | COJ            | Ongoing        |
| COJ – 180      | Illicit Water Discharge                                                               | CARE initiated - incidents reported/found and closed during reporting period                    | 1                                   | \$379      | COJ            | Ongoing        |
| COJ – 243      | Pollution – Water – Illegal Discharge                                                 | CARE initiated - incidents reported/found and closed during reporting period                    | 1                                   | \$379      | 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 DCHD for enforcement action                                       | 0                                   | \$0        | COJ            | Ongoing        |
| COJ – 183      | Private Lift Station Inspection                                                       | 15 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            | Complete       |
| COJ – 185      | Illicit Discharge Detection and Elimination                                           | 0 open                                                                                          | 0                                   | \$0        | COJ            | Ongoing        |
| COJ – 186      | Follow Up on Outstanding PICs                                                         | Follow up on 5 open PICs in watershed                                                           | 5                                   | \$1,895    | COJ            | Complete       |
| COJ – 187      | Routine Surface Water Sampling                                                        | NPDES permit-related quarterly water quality sampling – 1 sampling station in WBID              | 4                                   | \$544      | 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 2012, FDOT collected 7.29 tons of debris through monthly street sweeping of 2.7 miles of roadway. FDOT also helps to fund 1 monitoring station in the Open Creek watershed that is sampled quarterly as part of the routine monitoring program. **Table 54** lists FDOT's activities in the Open Creek watershed.

**TABLE 54: 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 - \$9,300     | 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       | Countywide - \$9,300     | FDOT/COJ       | No true illicit connection identified to date                                                                                                                                                   | Ongoing        |
| FDOT – 65      | Routine Tributary Monitoring as Part of MS4 Permit                                                  | Countywide - \$27,900    | FDOT/COJ       | 1 station sampled quarterly, 4 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 - \$16,930    | 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 - \$2,750,735 | 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 7.29 tons                                                                                       | Ongoing        |
| FDOT-71        | Maintain Wet Stormwater Management System – Drainage Area 22 acres                                  | Unknown                  | FDOT           | Keep pond functioning as designed                                                                                                                                                               | Ongoing        |

## **APPENDICES**

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## **Appendix A: COJ Activities Supporting Information**

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

### ***MS4 CAPITAL IMPROVEMENT AND DRAINAGE SYSTEM REPAIR PROJECTS***

Capital improvement projects that were completed, under design, or under construction within each of 10 tributaries in the BMAP I watershed areas remain active and have continued progress toward operational goals. The current 5 year capital improvement program lists 12 stormwater system capital improvement projects with a total estimated cost of over \$26 million dollars. The capital improvement projects include 6 in the planning phase, 2 in the design phase, 2 under construction, and 2 completed during the reporting period. The proposed funding for capital improvements beyond fiscal year 2012/2013 was estimated to exceed \$160 million.

The current drainage system restoration and improvement programs include 15 projects with a reported total cost of \$718,173. The drainage system projects included 2 in the design phase, 7 under construction, and 6 completed during the reporting period. COJ anticipates continued investment estimated at approximately \$500,000 annually for drainage system repair projects.

### ***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 3 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. COJ allocates over \$6 million annually for stormwater system activities including street sweeping, structure and closed conveyance cleaning, repair, and replacement projects.

Most stormwater systems maintenance requests are received through the COJ Citizens Action Response Effort (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 2,315 Right of Way and Grounds Maintenance Division CARE system issues were received during the reporting period for reactive repair and maintenance related concerns. The Right of Way and Grounds Maintenance Division records indicated 796 repair and maintenance work orders were completed within in the BMAP I watershed areas. During the current reporting year, there were multiple repairs and maintenance activities performed by the Right of Way and Grounds Maintenance Division in BMAP watershed areas. Since some information on these activities is not recorded with references to the BMAP project areas, some of these efforts may not be included in BMAP annual progress reports. COJ continues to improve information gathering and reporting practices in an effort to better support NPDES and BMAP reporting requirements in the future.

### ***SANITARY SEWER OVERFLOWS***

The sanitary sewer collection system and related treatment facilities within the City of Jacksonville is operated by JEA, an independent regional authority. COJ Environmental Quality Division (EQD) staff receive reports of sanitary sewer overflows (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. The reactive SSO investigations may reveal pollution source issues that are subject to enforcement actions by EQD or another city division, as provided by city ordinance codes.

### ***SPILL REPORTING AND RESPONSE***

EQD staff 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 completed 147 water quality related CARE system inspections city-wide during the current reporting period, of which 31 were located 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 Duval County Health Department (DCHD). 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 issues:

- *Failing septic tanks (referred to DCHD 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 FDEP 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; and*
- *Other surface water pollutant or erosion controls.*



**FIGURE A-1: EQD STAFF PERFORM PROACTIVE INDUSTRIAL COMPLIANCE INSPECTIONS**

### ***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. On March 2011, the city's Environmental Protection Board approved amendments to Rule 3. The amendments included updates to the design standards and performance requirements and most significantly to the operation and maintenance requirements for lift station owners and operators. COJ revised private lift station inspection schedules and standard operating procedures to prioritize private lift stations located within fecal coliform impaired watersheds. 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.

### ***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 5 BMAP I streams (18 sites) as part of the BMAP source assessment sampling obligations. EQD collected 171 samples in the BMAP I tributaries in 2012. Through coordination with the Tributary Assessment Team (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 2012, EQD staff collected 66 follow-up water samples within BMAP I tributaries.



**FIGURE A-2: COJ EQD WATER QUALITY SAMPLING PROGRAMS**

#### ***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. Over 23,000 septic tanks are located within 37 on-site treatment and disposal system failure areas designated by DCHD. 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 FDEP.

#### ***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 total maximum daily loads (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:

- *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; and*
- *Implementation of a bacteria control plan for one TMDL WBID not under a BMAP.*

During the current 5-year NPDES permit period, the city estimates it will invest over \$12.5 million to comply with permit requirements and fulfill its Lower St. Johns River main stem and tributaries BMAPs water quality monitoring and inspection obligations.

#### ***PUBLIC EDUCATION OUTREACH AND ORDINANCES***

The city public education and outreach activities received significant support during the current reporting period. COJ provides continuing support for BMAPs through several established public education and outreach programs and special events. Support for public education and outreach programs include multiple city organizations:

- *Duval County Agricultural Extension Office;*
- *COJ Environmental Protection Board; and*
- *COJ Environmental Quality and Right of Way Grounds Maintenance Divisions.*

One major goal of the city's outreach program is public and business collaboration. The city conducts programs for water quality protection that focus on educational outreach for irrigation and fertilizer best management practices. The city facilitates this outreach program through town meetings, homeowner association meetings, businesses, civic organizations, and meetings of the Florida Pest Management Association. To date, the city distributed over 40,000 irrigation and fertilizer brochures at these events. To accomplish the intended goals and objectives of the fertilizer ordinance code, the Environmental and Compliance Department maintains an ongoing educational campaign to inform and educate residents about the value of natural water resources and effective fertilizer application practices for home lawns and around commercial properties.

Many public education and outreach events were hosted and supported during the BMAP annual reporting period with several significant annual events including:

- *Annual Museum of Science and History Water Festival;*
- *Annual Earth Day Festival;*
- *Tree Hill Butterfly Festival;*
- *Annual Environmental Protection Board and University of North Florida Environmental Symposium; and*
- *Annual Jacksonville Home and Patio Show.*

In addition to the annual events referenced above, the Planning and Development Department also conducts workshops, presentations, and provides informational material related to stormwater and water quality protection and preservation practices. The target audiences for these workshops are schools, homeowner associations, neighborhood planning groups, and other community groups. EQD provides a 24-hour public education and outreach point of contact for the community through direct email to Stormwater Services, [NPDES@coj.net](mailto:NPDES@coj.net), and through COJ's CARE call center.

## 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 FDEP and COJ over the last year are included in the tables below.

**TABLE B-1: FDEP FOLLOW UP SAMPLING RESULTS**

| DATE       | WBID | STATION DESCRIPTION                                      | FECAL COLIFORM (CFU/100ML) | COMMENTS                                 |
|------------|------|----------------------------------------------------------|----------------------------|------------------------------------------|
| 01/11/2012 | 2280 | Little Fishweir at St. Johns Avenue                      | 430                        | Not applicable                           |
| 01/11/2012 | 2280 | Little Fishweir at Hershell Street                       | 760                        | Not applicable                           |
| 02/07/2012 | 2322 | Butcher Pen at Randia                                    | 3,200                      | Not applicable                           |
| 02/07/2012 | 2322 | Butcher Pen at Blanding                                  | 80                         | Not applicable                           |
| 03/16/2012 | 2280 | Little Fishweir Greenwood                                | 3,100                      | Not applicable                           |
| 04/13/2012 | 2322 | Butcher Pen 100m Downstream of Jammes                    | 5,000                      | Not applicable                           |
| 05/04/2012 | 2280 | Little Fishweir Oak                                      | 5,500                      | Not applicable                           |
| 05/04/2012 | 2280 | Little Fishweir Greenwood                                | 2,300                      | Not applicable                           |
| 06/15/2012 | 2280 | Little Fishweir at Boone Park                            | 6,000                      | Not applicable                           |
| 06/15/2012 | 2280 | Trib to Little Fishweir at Boone Park                    | 15,000                     | Didn't follow up - Debby flooding        |
| 07/26/2012 | 2280 | Big Fishweir 100m North Blanding at Jersey               | 5,500                      | Walk the WBID effort looking for sources |
| 07/30/2012 | 2280 | Big Fishweir 100m Down from Glenwood                     | 6,000                      | Walk the WBID effort looking for sources |
| 07/30/2012 | 2280 | Side Tributary to Big Fishweir between Glenwood and Park | 6,000                      | Walk the WBID effort looking for sources |
| 07/30/2012 | 2280 | Big Fishweir above West Park                             | 6,000                      | Walk the WBID effort looking for sources |
| 08/02/2012 | 2280 | 4647 Glenwood                                            | 6,400                      | Walk the WBID effort looking for sources |
| 08/02/2012 | 2280 | Big Fishweir 1 <sup>st</sup> Trib Below Park             | 6,000                      | Walk the WBID effort looking for sources |
| 08/02/2012 | 2280 | Big Fishweir 100 meters Below Park                       | 42                         | Walk the WBID effort looking for sources |
| 08/07/2012 | 2280 | 4635 Glenwood                                            | 9,900                      | Walk the WBID effort looking for sources |
| 08/07/2012 | 2280 | Big Fishweir 1 <sup>st</sup> Trib Below Park             | N/A                        | Walk the WBID effort looking for sources |

TABLE B-2: COJ FOLLOW UP SAMPLING RESULTS

| STREAM NAME     | WBID | STATION           | STATION DESCRIPTION          | DATE       | TEMP (°C) | CONDUCTIVITY (µS) | SALINITY | pH   | FECAL COLIFORM (CFU/100 mL) |
|-----------------|------|-------------------|------------------------------|------------|-----------|-------------------|----------|------|-----------------------------|
| Miller Creek    | 2287 | SS21A             | Camden Avenue                | 01/04/2012 | 10.81     | 206.5             | 0.1      | 7.72 | 6,000                       |
| Miller Creek    | 2287 | SS23              | Mayfair Road                 | 01/11/2012 | 17.03     | 5562              | 3.06     | 6.75 | 650                         |
| Miller Creek    | 2287 | SSX               | 100 feet Upstream of Mayfair | 01/11/2012 | N/A       | N/A               | N/A      | N/A  | 700                         |
| Newcastle Creek | 2235 | ARL5A             | Berrywood Lane               | 01/19/2012 | 13.77     | 475.9             | 0.24     | 7.12 | 1,100                       |
| Newcastle Creek | 2235 | ARL5Aup           | Upstream of ARL5A            | 01/19/2012 | 13.34     | 464.7             | 0.23     | 7.14 | 380                         |
| Miller Creek    | 2287 | SSBHSC            | Behind Shopping Center       | 04/12/2012 | 19.37     | 355.7             | 0.18     | 6.59 | 9,500                       |
| Miller Creek    | 2287 | SSBEACH           | Beach Boulevard              | 04/12/2012 | 20.06     | 382.4             | 0.19     | 6.73 | 700                         |
| Miller Creek    | 2287 | SSBHSC            | Behind Shopping Center       | 04/23/2012 | 21.85     | 1414              | 0.75     | 6.76 | 4,100                       |
| Miramar Creek   | 2304 | SSGAD             | Gadsden Road                 | 04/02/2012 | N/A       | N/A               | N/A      | N/A  | 420                         |
| Miramar Creek   | 2304 | SS5A              | Orlando Circle West          | 04/02/2012 | N/A       | N/A               | N/A      | N/A  | 500                         |
| Miramar Creek   | 2304 | SS4               | San Jose Boulevard           | 04/11/2012 | N/A       | N/A               | N/A      | N/A  | 1,000                       |
| Miramar Creek   | 2304 | SS4UP             | Upstream of SS4              | 04/11/2012 | 20.57     | 2,897             | 1.56     | 7.36 | N/A                         |
| Newcastle Creek | 2235 | ARL6              | Ft Caroline Hills Drive      | 04/12/2012 | 19.17     | 273.6             | 0.13     | 6.74 | 860                         |
| Newcastle Creek | 2235 | ARL6up            | Upstream of ARL6             | 04/12/2012 | 19.56     | 250.8             | 0.12     | 6.51 | 620                         |
| Miramar Creek   | 2304 | SSGAD             | Gadsden Road                 | 05/03/2012 | 24.68     | 429.9             | 0.22     | 7    | 9,400                       |
| Miramar Creek   | 2304 | SSGAD             | Gadsden Road                 | 05/21/2012 | 24.57     | 414.2             | 0.21     | 7.08 | 450                         |
| Miller Creek    | 2287 | SSBeach           | Beach Boulevard              | 05/17/2012 | 23.21     | 355               | 0.18     | 7.06 | 560                         |
| Miller Creek    | 2287 | SSSCH             | Schumacher Avenue            | 05/17/2012 | 22.88     | 324.4             | 0.16     | 6.82 | 12,000                      |
| Miller Creek    | 2287 | SSBHSC            | Behind Shopping Center       | 05/17/2012 | 22.8      | 333.7             | 0.16     | 6.73 | 1,000                       |
| Miramar Creek   | 2304 | SSGAD             | Gadsden Road                 | 06/25/2012 | 26.58     | 277.7             | 0.13     | 6.9  | 2,200                       |
| Miller Creek    | 2287 | SSBEACH           | Beach Boulevard              | 06/07/2012 | 24.22     | 255               | 0.12     | 6.76 | 5,900                       |
| Miller Creek    | 2287 | SS-SCHUM          | Schumacher Avenue            | 06/07/2012 | 24.8      | 282.2             | 0.14     | 6.69 | 4,800                       |
| Hogan Creek     | 2252 | HC@DAVIS          | Trib at Davis Street         | 07/11/2012 | 28.19     | 628.3             | 0.32     | 7.11 | 721                         |
| Hogan Creek     | 2252 | HCRR              | Railroad tracks              | 07/11/2012 | 27.88     | 382.9             | 0.19     | 6.78 | 4,700                       |
| Hogan Creek     | 2252 | HCRR-W            | West ditch                   | 07/11/2012 | N/A       | N/A               | N/A      | N/A  | 180                         |
| Hogan Creek     | 2252 | HCRR-E            | East ditch                   | 07/11/2012 | N/A       | N/A               | N/A      | N/A  | 1,351                       |
| Hogan Creek     | 2252 | HC1A              | Broad Street                 | 07/11/2012 | 30.6      | 554.4             | 0.28     | 7.24 | 33,000                      |
| Hogan Creek     | 2252 | HCLAB             | Upstream of HC1A             | 07/11/2012 | 28.04     | 548.4             | 0.28     | 7.18 | 901                         |
| Hogan Creek     | 2252 | HC1A              | Broad Street                 | 07/13/2012 | 27.52     | 567.5             | 0.29     | 7.21 | 30,000                      |
| Hogan Creek     | 2252 | Bridge W          | Stream west of bridge        | 07/13/2012 | 27.3      | 569.3             | 0.29     | 7.21 | 4,700                       |
| Hogan Creek     | 2252 | Pipe NW           | Pipe NW                      | 07/13/2012 | N/A       | N/A               | N/A      | N/A  | 20                          |
| Hogan Creek     | 2252 | Pipe NE           | Pipe NE                      | 07/13/2012 | N/A       | N/A               | N/A      | N/A  | 20                          |
| Hogan Creek     | 2252 | Bridge at 5th St. | Upstream of HC1A             | 07/13/2012 | 28.42     | 564.5             | 0.29     | 7.23 | 1,100                       |
| Hogan Creek     | 2252 | Pipe SE           | Pipe SE                      | 07/13/2012 | N/A       | N/A               | N/A      | N/A  | 20                          |
| Hogan Creek     | 2252 | Pipe SW           | Pipe SW                      | 07/13/2012 | N/A       | N/A               | N/A      | N/A  | 20                          |
| Hogan Creek     | 2252 | Pipe SW #2        | SW Pipe                      | 07/13/2012 | N/A       | N/A               | N/A      | N/A  | 60,000                      |
| Hogan Creek     | 2252 | Down 1            | Down 1                       | 07/31/2012 | N/A       | N/A               | N/A      | N/A  | 2,100                       |
| Hogan Creek     | 2252 | Down 2            | Down 2                       | 07/31/2012 | N/A       | N/A               | N/A      | N/A  | 2,400                       |
| Hogan Creek     | 2252 | Down 3            | Down 3                       | 07/31/2012 | N/A       | N/A               | N/A      | N/A  | 1,892                       |

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| STREAM NAME   | WBID | STATION       | STATION DESCRIPTION    | DATE       | TEMP (°C) | CONDUCTIVITY (uS) | SALINITY | pH   | FECAL COLIFORM (CFU/100 mL) |
|---------------|------|---------------|------------------------|------------|-----------|-------------------|----------|------|-----------------------------|
| Hogan Creek   | 2252 | Down 4        | Down 4                 | 07/31/2012 | N/A       | N/A               | N/A      | N/A  | 1,712                       |
| Hogan Creek   | 2252 | Pipe SW #2    | SW Pipe                | 07/31/2012 | N/A       | N/A               | N/A      | N/A  | 600,000                     |
| Hogan Creek   | 2252 | HC5TH         | 5th St.                | 08/16/2012 | 30.15     | 477               | 0.24     | 7.24 | 600,000                     |
| Hogan Creek   | 2252 | SW#2 pipe     | SW Pipe                | 08/16/2012 | N/A       | N/A               | N/A      | N/A  | N/A                         |
| Hogan Creek   | 2252 | North Pipe    | North Pipe             | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 600,000                     |
| Hogan Creek   | 2252 | East pipe     | East pipe              | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 600,000                     |
| Hogan Creek   | 2252 | West pipe     | West pipe              | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 4,545                       |
| Hogan Creek   | 2252 | SW#2 Pipe     | SW Pipe                | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 880,000                     |
| Hogan Creek   | 2252 | South manhole | South manhole          | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 780,000                     |
| Hogan Creek   | 2252 | West manhole  | West manhole           | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 270,000                     |
| Hogan Creek   | 2252 | Storm Pond N  | Storm Pond N           | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 1,532                       |
| Hogan Creek   | 2252 | HC5th St      | 5th Street             | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 4,100                       |
| Hogan Creek   | 2252 | HC1A          | Broad Street           | 08/27/2012 | N/A       | N/A               | N/A      | N/A  | 20,000                      |
| Hogan Creek   | 2252 | SW#2pipe      | SW Pipe                | 09/13/2012 | N/A       | N/A               | N/A      | N/A  | 34,000                      |
| Hogan Creek   | 2252 | HC5TH         | 5th Street             | 09/13/2012 | 24.22     | 133.7             | 0.06     | 7.67 | 86,000                      |
| Miller Creek  | 2287 | SBHSC         | Behind Shopping Center | 10/29/2012 | 16.84     | 392.1             | 0.19     | 6.62 | 12,000                      |
| Miramar Creek | 2304 | SSGAD         | Gadsden Road           | 10/10/2012 | 23.6      | 453.2             | 0.23     | 6.94 | 1,532                       |
| Miller Creek  | 2287 | ST NICK       | St. Nicholas Avenue    | 11/08/2012 | 15.49     | 621.9             | 0.32     | 6.92 | 580                         |
| Miller Creek  | 2287 | SS23          | Mayfair Road           | 11/08/2012 | 14.96     | 895.2             | 0.47     | 7.15 | 1,700                       |
| Miller Creek  | 2287 | SS21          | Camden Avenue          | 11/08/2012 | 17.6      | 271.9             | 0.13     | 7.31 | 11,000                      |
| Miller Creek  | 2287 | SSBHSC        | Behind Shopping Center | 11/08/2012 | 16.86     | 352.8             | 0.17     | 6.89 | 21,000                      |
| Miller Creek  | 2287 | SS2A          | Stillman Street        | 11/08/2012 | 20.68     | 398.7             | 0.2      | 6.6  | 600                         |
| Hogan Creek   | 2252 | HC5TH         | 5th Street             | 12/06/2012 | 20.97     | 555.7             | 0.28     | 7.5  | 2000                        |
| Hogan Creek   | 2252 | SW#2pipe      | SW Pipe                | 12/06/2012 | ns        | N/A               | N/A      | N/A  | 10,450                      |
| Miller Creek  | 2287 | SS21          | Camden Avenue          | 12/17/2012 | 20.67     | 274.2             | 0.13     | 7.06 | 3,800                       |
| Miller Creek  | 2287 | SSBHSC        | Behind Shopping Center | 12/17/2012 | 20.13     | 360.3             | 0.18     | 7.03 | 8,500                       |
| Miller Creek  | 2287 | SS2A          | Stillman Street        | 12/17/2012 | 21.77     | 389.4             | 0.19     | 6.69 | 49                          |