

CITY OF VALDOSTA
TWO MILE BRANCH MONITORING AND IMPLEMENTATION PLAN

Introduction

As part of the General NPDES Stormwater Permit No GAG610000, the City of Valdosta is required to identify any impaired waters located within its permitted area, using the latest approved 305(b)/303(d) List of Waters which contain MS4 outfalls or are within one (1) linear mile downstream of MS4 outfalls. For those impaired waters, the permittee is required to propose a Monitoring and Implementation Plan addressing each pollutant of concern (POC). As part of the City’s Watershed Protection Plan, a Sampling and Quality Assurance Plan (SQAP) has already been approved by the Georgia Environmental Protection Division (EPD) and is the base for this document.

As of October 2015, the most recent approved 305(b)/303(d) list is from 2012 and includes a section of Two Mile Branch as not supporting its designated use for fishing within the City’s jurisdiction. See *Table 1: Impaired Stream Segment*.

TABLE 1: IMPAIRED STREAM SEGMENT

Reach Name	Reach Location	Use	Criterion Violated	Potential Causes	Extent
Two Mile Branch	Headwaters to Sugar Cr., Valdosta	Fishing	FC ¹	UR ²	2 miles

*Mud Creek is listed as impaired for FC. The reach location description is correct, “D/S Valdosta Mud Cr. WPCP to Alapahoochee River”; however, the impaired stream segment shapefile is incorrect and has been confirmed by Georgia EPD. The distance from the nearest outfall to where the impaired stream segment begins is over 5,800 linear feet away from a city outfall.

Objective

The primary objective of this plan is to meet the General NPDES Stormwater Permit requirement and to ensure the proper collection, handling, transportation, and analysis of water samples so that the Two Mile Branch stream segment can be delisted.

Sample Sites

The City of Valdosta has identified two (2) permanent sampling sites for the collection of water quality samples (See Attachment A). The sampling sites vary in depth, width, and sampling complexity. Sampling procedures will depend upon the ability of the sampling personnel to enter the stream safely. See *Table 2: Sample Sites*.

TABLE 2: SAMPLE SITES

Sampling Station	Stream	Location	In-stream	Sample Type
1	Two Mile Branch	Oak Street	Upstream	FC
2	Two Mile Branch	Meadowbrook Drive	Downstream	FC

Sampling Schedule

¹ Fecal Coliform (FC) – Fecal coliform bacteria are a kind of coliform associated with human or animal wastes.

² Urban Runoff (UR) – Urban runoff is surface runoff of rainwater created by urbanization.

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The Georgia Department of Natural Resources Watershed Assessment and Protection Plan Guidance requires four sampling events for each sampling station per year. Table 3 summarizes the planned sampling schedule.

TABLE 3: SAMPLING SCHEDULE

Sampling Station	Scheduled Sampling Months
Station #1	February, May, August, November
Station #2	February, May, August, November

Bacteriological results (e.g. fecal coliform) will be reported as the geometric mean of at least four samples captured within a 30 day period, but no closer than 24 hours apart, per year requiring a total of 16 sampling events. The scheduling of bacteriological samples will not be affected by rainfall.

Dry Weather Sampling

A dry weather sample will be defined as one captured at least 72 hours after the most recent rain event totaling 0.1 inch of rain or more. All dry weather samples will be grab samples. If staff can safely wade the stream, the samples will be collected from the main flow stream by immersion of the sample bottles. Bacteriological samples will be collected in a sterile container, separate from the other samples. Should the stream not be wadeable, samples will be collected using a bucket and rope from a position on a bridge or crossing directly over the main flow stream.

Wadeable Stream Sampling

If the stream is wadeable, staff will wade to a spot within the main flow of stream to collect samples and perform on site analyses. Bacteriological samples collected in a wadeable stream will be collected in sterilized glass bottles or purchased sterile whirl pack bags. Staff will enter the water just downstream of the sampling point and walk upstream to prevent collection of samples at a point where the sediment has been disturbed. Staff will face upstream while capturing the sample. The sample container will remain closed until submerged to prevent contamination. The container will be opened underwater, filled, and closed while still submerged. Bacteriological samples will be placed on ice immediately after capture and delivered for analysis within two hours. Analysis of bacteriological samples will begin within six hours of capture. Chain of Custody forms will be used to document sampling times, proper preservation, and custody from sampling until delivery to the laboratory.

Non-Wadeable Stream Samples

If sampling cannot be done safely by wading, bacteriological samples will be collected using a bucket and rope. Before taking the sample the bucket will be rinsed out three (3) times with sample water. From the bridge or road crossing, the bucket and rope will be lowered midstream into the fast flowing section of the water. Once the bucket has been filled it will then be pulled

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up for sampling. A properly labeled sterile bottle or whirl pack bag will be placed underwater in the sample, opened, and allowed to fill. Bacteriological samples will be placed on ice immediately after capture and delivered for analysis within two hours. Analysis of bacteriological samples will begin within six hours of capture. Chain of Custody forms will be used to document sampling times, proper preservation, and custody from sampling until delivery to the laboratory.

Preservation and Transportation of Samples

Samples will be placed into properly labeled and preserved sample bottles, placed in individual zipper locking freezer bags to prevent cross contamination, and placed on ice within 15 minutes of collection. Samples will be delivered and carried by City staff to the wastewater treatment laboratory for analysis no later than six hours after sample collection to meet laboratory holding times. Chain of custody forms will be used to document sampling times, proper preservation, and custody from sampling until delivery to the laboratory. Sample holding times and preservation techniques will be in accordance with 40 CFR, Part 136.

Record Keeping

For each parameter the City will record the following:

- The place, date, and time of sampling
- The person collecting the sample
- The dates and times the analyses were performed
- The person(s) who performed the analyses
- The analytical procedures or methods used
- The results of all analyses

The City will maintain a dry weather water quality monitoring report form for each dry weather sampling. The dry weather report form will also contain the bacteriological results for the station. The City will also maintain a wet weather water quality report form for each wet weather sampling. Copies of these report forms will be included with the annual report. Chain of custody copies, laboratory report copies, quality control records, and water quality report forms will be maintained in the files of the person or position at the City of Valdosta Wastewater Laboratory.

Implementation Schedule

The City is prepared to fully implement this Monitoring and Implementation Plan when approved by the Georgia EPD.

Proposed Best Management Practices

The City will continue to implement its Stormwater Management Plan (SWMP) under its current NPDES Phase II MS4 permit.

FC – The City is currently implementing a number of best management practices (BMPs) in an effort to reduce fecal coliform bacteria in Two Mile Branch. These BMPs include: smoke testing,

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sewer manhole replacement / rehabilitation, pump station replacement / rehabilitation, new force main, etc. The majority of this work is schedule to be completed between 2016 – 2018.

Annual Reporting

Each year, the City will develop a brief water quality report for Two Mile Branch. This report will include:

- Monitoring results
- Trend analysis
- Documentation of activities
- Recommendations based on evaluations

The water quality data along with the trend analysis will be utilized to determine if the trend is showing improvement or degradation relative to implementing BMPs. If the trend analysis indicates that water quality is worsening or not improving, then additional sampling and/or BMPs will be evaluated to sources within the City limits. A copy of this report and sampling results/data will be submitted in the City's Annual Report.

City of Valdosta Two Mile Branch Monitoring and Implementation Plan Sample Site Locations

