

VOLUME V:

WHITEWATER RIVER REGION MONITORING PLAN

Updates and key revisions to this Monitoring Plan are presented in the format of blue underlined or strikeout text for clarity and review. Global "un-highlighted" revisions include standardization of terms, clarification of text, and other minor editorial corrections. Refer to the Monitoring Annual Report(s) for updates to the special studies workplans. The Permittees will proceed with the monitoring program in accordance with the guidance provided herein.



**RIVERSIDE COUNTY FLOOD CONTROL AND WATER
CONSERVATION DISTRICT**

**CONSOLIDATED MONITORING PROGRAM
Volume V**

**WHITEWATER RIVER REGION
MONITORING PLAN**

**Riverside County Flood Control and
Water Conservation District
1995 Market Street
Riverside, CA 92501**

Rev. 4 - November 2020

Rev. 3 - January 2020

Rev. 2 - October 2018

Rev. 1 - January 2018

July 2014

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION	1
1.1 BACKGROUND	1
1.2 PROGRAM GOALS	1
1.3 PROGRAM DESCRIPTION.....	1
1.4 GENERAL SCOPE OF MONITORING.....	2
1.5 PROJECT ORGANIZATION AND RESPONSIBILITIES.....	4
1.6 MOBILIZATION CRITERIA	6
1.6.1 Wet Weather Monitoring Mobilization Criteria	6
1.6.2 Dry Weather Monitoring Mobilization Criteria.....	6
1.7 DATA COLLECTION	6
1.8 MONITORING PROGRAM ANALYSES AND SAMPLE TYPES.....	7
2.0 WATER QUALITY OBJECTIVES (WQOS).....	10
3.0 RECEIVING WATER MONITORING PROGRAM	12
3.1 RECEIVING WATER MONITORING PROGRAM OVERVIEW	12
3.1.1 Receiving Water Monitoring Program Management Questions.....	12
3.1.2 Receiving Water Monitoring Program Overview	12
3.2 RECEIVING WATER MONITORING LOCATION.....	13
3.3 RECEIVING WATER SAMPLING EQUIPMENT AND BOTTLES	15
3.4 RECEIVING WATER WET WEATHER MONITORING	16
3.4.1 Receiving Water Wet Weather Monitoring Criteria	16
3.4.2 Receiving Water Wet Weather Sampling Teams	16
3.5 RECEIVING WATER DRY WEATHER MONITORING	17
3.5.1 Receiving Water Dry Weather Monitoring Criteria	17
3.5.2 Receiving Water Dry Weather Sampling Teams.....	17
4.0 MS4 OUTFALL AND IC/ID MONITORING PROGRAM	18
4.1 MS4 OUTFALL MONITORING PROGRAM OVERVIEW	18
4.1.1 MS4 Outfall Monitoring Program Purpose.....	18
4.1.2 MS4 Outfall Monitoring Program Overview.....	18
4.2 MS4 OUTFALL MONITORING LOCATIONS	19
4.3 MS4 OUTFALL SAMPLING EQUIPMENT AND BOTTLES	21
4.4 MS4 OUTFALL WET WEATHER MONITORING.....	22
4.4.1 MS4 Outfall Wet Weather Monitoring Criteria.....	22
4.4.2 MS4 Outfall Wet Weather Sampling Teams	22
4.5 MS4 OUTFALL DRY WEATHER IC/ID MONITORING.....	23
4.5.1 MS4 Outfall Dry Weather IC/ID Monitoring Criteria.....	23
4.5.2 MS4 Outfall Dry Weather IC/ID Sampling Teams	23
4.5.3 MS4 Outfall Dry Weather IC/ID Monitoring Results Database.....	24
5.0 ILLICIT CONNECTION/ILLEGAL DISCHARGE FOLLOW-UP INVESTIGATIONS.....	25
5.1 INSPECTIONS AND FIELD RECONNAISSANCE	25
5.2 COMPLAINT FOLLOW-UP ACTIONS	28
5.3 FOLLOW-UP ACTIONS	29
5.4 FOLLOW-UP MONITORING.....	30
5.5 PUBLIC EDUCATION	31
5.6 IC/ID MONITORING RECORDKEEPING	32
6.0 SPECIAL STUDIES.....	33
6.1 TMDL/303(D) LISTED WATERBODY MONITORING.....	33
6.2 REGIONAL MONITORING PROGRAMS	33
7.0 DATA RECORDS, MANAGEMENT, AND REPORTING	34

7.1	EVENT DATA RECORDS AND CHAINS OF CUSTODY (COC).....	34
7.2	DATA MANAGEMENT	35
7.3	REPORTING.....	35
	7.3.1 Program Effectiveness Assessment and Reporting.....	35
	7.3.2 Monitoring Annual Report Schedule.....	36
8.0	REFERENCES	37

FIGURES

Section	Page
Figure 1-1: Project Organizational Chart.....	5
Figure 3-1: Receiving Water Monitoring Location	14
Figure 4-1: MS4 Outfall Monitoring Locations.....	20

TABLES

Section	Page
Table 1-1: Summary of Monitoring Program	3
Table 1-2: Project Contacts.....	4
Table 1-3: Monitoring Constituents of Concern	7
Table 2-1: Numeric Water Quality Objectives (WQOs) for WWR Monitored Constituents	10
Table 3-1: Receiving Water Monitoring Program Overview	12
Table 3-2: Receiving Water Station Location.....	13
Table 3-3: Receiving Water Monitoring Bottle List.....	15
Table 3-4: Receiving Water Wet Weather Monitoring Team Roles.....	16
Table 3-5: Receiving Water Dry Weather Monitoring Team Roles	17
Table 4-1: MS4 Outfall Monitoring Program Overview	18
Table 4-2: MS4 Outfall Monitoring Locations	19
Table 4-3: MS4 Outfall and IC/ID MS4 Outfall Monitoring Bottle List.....	21
Table 4-4: MS4 Outfall Wet Weather Monitoring Team Roles	22
Table 4-5: MS4 Outfall Dry Weather IC/ID Monitoring Team Roles.....	23
Table 5-1: Indirect Discharge Generating Sites.....	27
Table 7-1: Reporting Schedule	36

ABBREVIATIONS AND ACRONYMS

Basin Plan	Water Quality Control Plan for the Colorado River Basin
BMP	Best Management Practice
Cal OES	California Office of Emergency Services
CASQA	California Stormwater Quality Association
cfs	cubic feet per second
CMP	Consolidated Monitoring Program
COC	Chain of Custody
CVWD	Coachella Valley Water District
CVSC	Coachella Valley Storm Channel
District	Riverside County Flood Control and Water Conservation District
DO	Dissolved Oxygen
EC	electrical conductivity
EDD	electronic data deliverables
IC/ID	Illicit Connection/Illegal Discharge
ID	Identification
IDDE	Illicit Discharge Detection and Elimination
KiWQM	Kisters Water Quality Module
MBAS	Methylene Blue Active Substance
mg/L	milligram per liter
mL	milliliters
ML	State Board Minimum Level
MMP	Model Monitoring Program prepared by SCWRRP for Municipal Separate Storm Sewer Systems in Southern California, Technical Report 419
MRP	Monitoring and Reporting Program
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
Permittees	Riverside County Flood Control and Water Conservation District, County of Riverside, Coachella Valley Water District, and incorporated Cities of Riverside County within the WWR
POP	probability of precipitation
QAPMP	Quality Assurance Project and Monitoring Plan
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
QPS	Quantitative Precipitation Statement
Regional Board	Colorado River Regional Water Quality Control Board
RL	Reporting Limit
Sample IDs	Sample identification numbers
SMC	Southern California Monitoring Coalition
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasure
SCCWRP	Southern California Coastal Waters Research Group
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TPH	Total Petroleum Hydrocarbon
TSS	Total Suspended Solids

USEPA	United States Environmental Protection Agency
WQO	Water Quality Objective
WWR	Whitewater River Region
WWR Permit	Order No. R7-2013-0011, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS617002
µg/L	micrograms per liter

REVISIONS

Volume III Version	Date	Summary of Revisions
Internal Draft	June 2011	Development of a draft monitoring plan as guidance for meeting monitoring requirements of the Monitoring and Reporting Program of Order R7-2008-0001.
Original	July 2014	Development and formalization of a monitoring plan for compliance with the Monitoring and Reporting Program of Order R7-2013-0011.
Revision 1	January 2018	As a result of lessons learned, the CMP (Volume V) was revised to reflect minor programmatic adjustments and reference relevant updates in other Volumes of the CMP, including changes of key staff assignments, analytical updates, minor improvements in protocols and procedures. Other revisions included minor changes to water quality values pursuant to the most current Basin Plan and updates to IC/ID response guidance herein.
Revision 2	October 2018	Minor revisions to address changes in program key personnel.
Revision 3	January 2020	Minor revisions to address changes in program key personnel. Updated public education description.
Revision 4	November 2020	Minor revisions to address changes in program key personnel, and other minor editorial changes.

1.0 INTRODUCTION

The Colorado River Basin Regional Water Quality Control Board (Regional Board) issued Waste Discharge Requirements for discharges from the Municipal Separate Storm Sewer Systems (MS4s) within the Whitewater River Watershed, Order No. R7-2013-0011, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS617002, hereafter referred to as the Order. The Order pertains to discharges of urban runoff from the MS4s draining the Riverside County Flood Control and Water Conservation District (District), the County of Riverside, the Coachella Valley Water District (CVWD), and incorporated cities of Riverside County (collectively, Permittees), within the Whitewater River Watershed (Hydrologic Unit No. 719) in the Colorado River Basin Region. This Monitoring Plan sets out procedures for compliance with Section L of Order No. R7-2013-0011, which became effective on June 20, 2013. ~~The Order is anticipated to be effective from June 2013 to June 2018 or until a new permit is issued, more commonly referred to as the Permit term. Although the Permit is currently expired, the Permittees will continue implementing the existing, relevant monitoring program requirements until permit renewal.~~

1.1 BACKGROUND

The area of Riverside County under Permittee jurisdiction within the Whitewater River Watershed of the Colorado River Basin is known as the Whitewater River Region (WWR). The WWR consists of approximately 350 square miles, within Riverside County and is under the jurisdiction of the Regional Board.

The WWR is an arid desert area and flows in the receiving waters are ephemeral. The WWR includes both non-urbanized areas such as National Forests and State Parks as well as the urbanized areas that lie approximately between the San Geronio Pass to the northwest and the Salton Sea to the southeast.

"Average annual precipitation ranges from less than three inches in the valleys to 40 inches in the San Bernardino Mountains... The Whitewater River is the major drainage course in the Planning Area. There is perennial flow in the mountains, but because of diversions and percolation into the basin, the River becomes dry further downstream. The constructed downstream extension of the River channel known as the Coachella Valley Storm Water Channel, serves as a drainage way for irrigation return flows, treated community wastewater, and storm runoff." - Regional Board, Water Quality Control Plan for the Colorado River Basin (Basin Plan), p. 1-11 (2006).

1.2 PROGRAM GOALS

This Monitoring Plan is intended to comply with the requirements of the Order to facilitate the collection of the data needed to assess the health of the receiving waters through the Urban Runoff Management Program. This plan details how the urban runoff management program is coordinated and enacted to protect the beneficial uses of the receiving waters. The Permittees will monitor the receiving water and MS4 for pollutants, as required by the Order. Monitoring will assist the Permittees with characterizing of urban runoff, assessing effectiveness of implemented BMPs, and determining the impact of urban runoff on the beneficial uses of receiving waters in the WWR.

1.3 PROGRAM DESCRIPTION

Since inception of the Whitewater MS4 Urban Runoff Management Program in 1996, the objectives of the Monitoring Program have periodically been evaluated and adjusted to support the direction of the

Urban Runoff Management Program, and reflect lessons learned through regional program implementation and analysis of water quality data. For the 2013 MS4 Permit term, the major objectives of the Whitewater River Region Monitoring Program are:

- Objective 1: Develop and support an effective Urban Runoff Management Program;
- Objective 2: Collect monitoring data from designated MS4 outfall stations in order to characterize pollutants associated with urban runoff in the region;
- Objective 3: Determine the impact of urban runoff on the beneficial uses of regional receiving waters;
- Objective 4: Collect monitoring data from the only perennially flowing receiving water in the region (i.e., the lower 17-mile reach of CVSC) during wet and dry weather conditions to evaluate the health of the CVSC; and
- Objective 5: Analyze and interpret the collected data to identify long-term trends, if any, both to maintain existing receiving water quality through the implementation of BMPs, and to track water quality improvements which may be observed as a result of the urban runoff management program.

The Regional Board has assessed the water quality of watersheds under their jurisdiction and has incorporated the results into the Basin Plan¹. Water Quality Objectives (WQOs) are assigned based on the beneficial uses present in the watershed. Waterbody specific WQOs and beneficial uses for the WWR watershed are included in the Basin Plan.

The Regional Board, in Section L.9 of the Order (Table L-1), provides a constituent list for analysis under the WWR Monitoring Program. The list of constituents according to the Order, referred to as the "Constituents of Concern", contains analytes that must be analyzed during wet and dry weather at the receiving water monitoring station, and during wet weather at the outfall monitoring stations. Constituents of Concern represent analytes that may contribute to impairment of receiving waters in the WWR. A previous requirement for analysis of "Priority Pollutants" (i.e., analytes listed on the U.S. EPA Priority Pollutant List) included in the 2008 MS4 Permit was eliminated with the adoption of the 2013 Order. Permittee outfall and receiving water data gathered over three permit terms showed that Priority Pollutants either have never been detected, or have rarely been detected in the Whitewater River Region, and therefore, are not expected to contribute to impairment of receiving waters in the WWR.

1.4 GENERAL SCOPE OF MONITORING

This Monitoring Plan makes up Volume V of the Consolidated Monitoring Program (CMP). The CMP was created to incorporate monitoring requirements for all applicable monitoring programs covered under the three separate NPDES permits within Riverside County. The overarching Quality Assurance Program Plan (QAPP) which covers common elements of all three watershed programs including general QA/QC, standard operating procedures, and general program information is included as Volume II of the CMP. Updates to the CMP will also be reported in the WWR Monitoring Annual Report.

Monitoring will consist of grab samples, field measurements and observations. Monitoring procedures are based on Surface Water Ambient Monitoring Program (SWAMP) SOP recommendations, modified as necessary for the needs of the specific monitoring program requirements. When feasible, a regional watershed approach is implemented for elements of the Monitoring Program to enhance consistency of monitoring data within Southern California. Monitoring of wet and dry weather flows is included in this program. Timing of sample collection and safety concerns are described in Section L.5 and L.6 of the

¹ Water Quality Control Plan, Colorado River Basin – Region 7, includes amendments adopted by the Regional Board through August 2017.

Order, as well as covered in Section 1.6 herein. Sampling events will be coordinated by the District. Samples will be analyzed for the constituents listed in the sections of this Monitoring Plan specific to each of the monitoring programs.

The Permittees also participate in multiple Regional Monitoring Programs, as discussed in Section 6.1. Regional Monitoring Programs have individual Monitoring Plans under which they operate.

Each individual monitoring program is comprised of multiple components which are detailed below. This Monitoring Plan organization follows the same sequence as the programs listed below. Monitoring program results and updates will be reported in the WWR Monitoring Annual Report. The Monitoring Plan includes the following programs:

Receiving Water Monitoring Program

- Wet Weather monitoring
- Dry Weather monitoring

MS4 Outfall and IC/ID MS4 Outfall Monitoring

- Wet Weather Outfall Monitoring
- Dry Weather Quarterly IC/ID MS4 Outfall Monitoring

IC/ID Follow-Up Investigations

- Inspections and field reconnaissance
- Follow-Up Actions
- Complaint Follow-Up Actions

Special Studies

- Regional Monitoring Programs

Grab samples will be collected for all monitoring programs in the WWR. Although not required per Section L of the Order, monitoring activities are intended to be compatible with protocols provided by SWAMP and the Center for Watershed Protection Illicit Discharge Detection and Elimination (IDDE)² guidance in order to enhance program quality and the consistency of Southern California monitoring data.

Table 1-1 provides a summary of monitoring program requirements.

Table 1-1: Summary of Monitoring Program

Monitoring Component	Sampling Frequency Requirement	Analytical Requirements
Receiving Water	2 Dry Weather (CVSC at Avenue 52 Station only), 1 Wet Weather	Field parameters, Constituents of Concern ¹ and Flow
MS4 Outfall Monitoring	4 Dry Weather, 2 Wet Weather	Dry: Field parameters, <i>E.coli</i> , and Flow Wet: Field parameters, Constituents of Concern, and Flow

² Center for Watershed Protection. Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments. October 2004.

IC/ID MS4 Outfall Quarterly Investigations	Quarterly (in conjunction with Dry Weather MS4 Outfall Monitoring)	Field parameters, <i>E.coli</i> , and Flow
IC/ID Follow-Up Investigations	As needed	Refer to guidance in Sec 5.4
Regional Monitoring Programs	As stated under individual monitoring programs	As stated under individual monitoring programs

¹ Constituents of Concern per the Order are listed in Table 1-3 and discussed in Section 1.8.

1.5 PROJECT ORGANIZATION AND RESPONSIBILITIES

Through agreement, the District, as a Co-Principal Permittee of the WWR Permit, is the agency responsible for oversight of the WWR Monitoring Program on behalf of the Permittees. Rebekah Guill is the Monitoring Program Manager and has the responsibility of overseeing the monitoring programs, providing coordination of participating entities, and providing data and findings to the Regional Board in compliance with the reporting requirements of the Order. Rebekah Guill is the District's Watershed Monitoring Section Manager, serving as the Monitoring Program Manager under this CMP, and is responsible for overseeing Monitoring Program compliance. Abigail Suter is the District's Water Quality Database Manager and is responsible for QA/QC review of data received from field crews and laboratory consultants, as specified in Appendix O of Volume II.

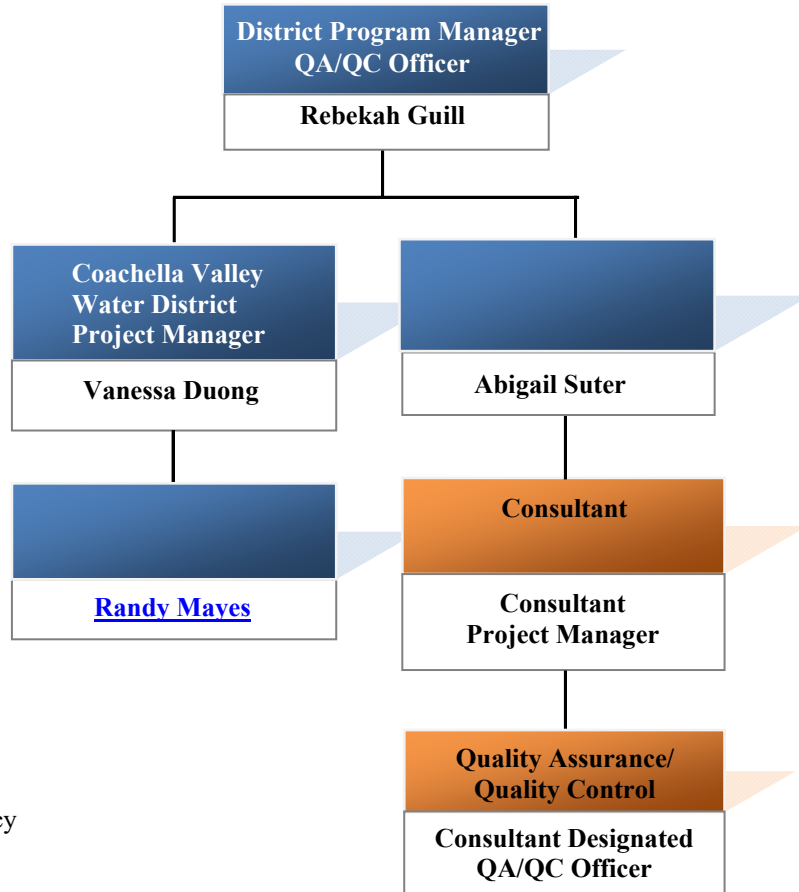
The District, with assistance from Coachella Valley Water District (CVWD), conducts WWR receiving water and IC/ID MS4 outfall monitoring required under the Order. If an IC/ID incident is discovered within a Permittee's jurisdiction, that Permittee is notified to conduct a follow-up investigation. CVWD analyzes self-collected microbiology samples. Vanessa Duong is the Project Manager for CVWD and [Randy Mayes Wil Gonzalez](#) is the Laboratory Manager for CVWD's analytical laboratory. Laboratory consultants will conduct constituent analysis. Responsibilities and consultant organization are located in Appendix O of Volume II. The laboratory consultant is responsible for all internal QA/QC of analysis data, including sub-consultant's analysis data.

The primary contacts for this Program are listed in Table 1-2. The Project Organization Chart is provided in Figure 1-1.

Table 1-2: Project Contacts

Affiliation	Name/Title	Contact Information
District	Rebekah Guill Watershed Monitoring Section Manager (Monitoring Program Manager)	Ph: (951) 955-2901 E-mail: rguill@rivco.org
District	Abigail Suter Database Manager (Data QC)	Ph: 951.955.1734 E-mail: adsuter@rivco.org
CVWD	Vanessa Duong Project Manager	Ph: 760.398.2661 ext. 2782 E-mail: VDuong@cvwd.org
CVWD	Randy Mayes Wil Gonzalez , Laboratory Manager	Ph: (760) 398-2651 ext. 2575 2235 E-mail: RMayes@cvwd.org WGonzalez@cvwd.org
Laboratory and Monitoring Consultants	Project Manager (See Appendix O, CMP Vol. II)	See Appendix O of the QAPP (CMP Vol. II)
Laboratory and Monitoring Consultants	QA Officer (See Appendix O, CMP Vol. II)	See Appendix O of the QAPP (CMP Vol. II)

Figure 1-1: Project Organizational Chart



Notes:
■ Government Agency
■ Consultant

1.6 MOBILIZATION CRITERIA

1.6.1 Wet Weather Monitoring Mobilization Criteria

The receiving water monitoring station will be sampled during one wet weather event. The MS4 outfall monitoring stations will be sampled during two wet weather events. According to the USEPA NPDES Storm Water Sampling Guidance Document (USEPA 833-B-92-001) the type of storm event that must be considered for sampling (i.e., qualifying wet weather event) should meet the following criteria:

- A quantitative precipitation forecast (QPF) of at least 0.10 inch.
- A probability of precipitation (POP) of at least 60%.
- Storm event must be preceded by at least 72 hours of dry conditions (<0.10 inch of precipitation).
- The storm is forecast to be within range of the EPA recommended storm criteria, when possible.

As stated in the Section L.6 of the Order, "sample collection shall occur only when there is enough sunlight to safely collect a monitoring sample from an MS4 Outfall or Receiving Water Wet Weather monitoring event".

Due to the ephemeral nature of the waterbodies in the WWR, storm events that fall under the USEPA-recommended criteria may not result in sufficient runoff for sampling from tributary areas. Additionally, convective rainfall events (summer thunderstorms) make up a large portion of the annual rainfall in the WWR. These types of events are often discrete, short, fast moving, and often difficult to anticipate.

In general, wet weather monitoring should be conducted according to the mobilization criteria available in Section 10.3 of Volume II. For mobilization to occur, criteria will typically be met 24 hours in advance of the sampling, or at the discretion of the Program Managers, for coordination with laboratory and sampling personnel.

1.6.2 Dry Weather Monitoring Mobilization Criteria

The receiving water monitoring station will be sampled during two dry weather events. The MS4 outfall monitoring stations will be monitored for a minimum of four dry weather / IC/ID events, and sampled if flows are present. Monitoring will be conducted according to the criteria below:

- Dry weather monitoring must be preceded by at least 72 hours of dry conditions (<0.1 inch of precipitation) unless otherwise directed by the District.
- If flow is absent or insufficient to sample, field crews will record this information on the field data sheet and take photographs.

1.7 DATA COLLECTION

Refer to the corresponding sections for representative frequencies and site locations of each program. Constituents for analysis and detailed sampling methods are available in Section 1.8 and in Section 11 of Volume II, respectively. The following types of samples and measurements will be collected at each monitoring station:

- Grab samples
 - Chemistry grab samples
 - Bacteriological grab samples

- Any additional grab samples, as necessary to document/ characterize potential IC/IDs
- *In-situ* field measurements
 - Temperature
 - pH
 - Specific conductance
 - Dissolved oxygen
 - Turbidity
- Flow measurements/observations
 - Presence or absence of discharge from the MS4 outfall being monitored;
 - Presence or absence of surface flow in the receiving water being discharged to;
 - Presence or absence of connectivity of surface flow from the MS4 outfall being monitored to its associated receiving water; and
 - If applicable, and conditions are safe enough to gather the information, estimations of surface flows of both the MS4 outfall being monitored and the associated receiving water.

1.8 MONITORING PROGRAM ANALYSES AND SAMPLE TYPES

Grab samples collected under this Monitoring Plan shall be analyzed in accordance with the Analytical Requirements specified in Table 1-1. Samples must be analyzed for the Constituents of Concern as listed in Table 1-3 below, as pursuant to Table L-1 of the Order. For the constituent's corresponding units, methods, and reporting limits refer to the Master List of Analytical Constituents, Table 6.2, provided in the QAPP (CMP Volume II).

Table 1-3: Monitoring Constituents of Concern

Analytes			
<i>Metals (Total)</i>			
Antimony	Cadmium	Lead	Silver
Arsenic	Chromium	Mercury	Thallium
Barium	Chromium ⁶⁺	Nickel	Zinc
Beryllium	Copper	Selenium	
<i>Bacterial Indicators</i>			
<i>E.coli</i>			
<i>Nutrients and Others</i>			
Nitrite as Nitrogen	Total Suspended Solids (TSS)	Total Petroleum Hydrocarbons (TPH)	
Nitrate as Nitrogen	Total Dissolved Solids (TDS)	Methylene-blue activated substances (MBAS)	
Total Kjeldahl Nitrogen	Total Dissolved Solids (TDS)		
Total Nitrogen	Total Phosphorus	Ethylene-glycol	
Ammonia as Nitrogen	Ortho Phosphorus	Oil and Grease	

Grab Samples

Grab samples will be collected for constituents that have short holding times or special bottle or preservative requirements, as described in Sections 3.3 to 3.5 for receiving water and Sections 4.3 and 4.5 for MS4 outfalls. Grab samples will be collected using protocols outlined in Section 11 of Volume II. Grab samples should be collected and delivered to the laboratory in accordance with Sections 3.3 to 3.4 for receiving water and Sections 4.3 and 4.4 for MS4 outfalls.

In-situ Field Measurements

In-situ water quality field measurements will be collected at each station once during each monitoring event. *In-situ* field measurements will be collected concurrently with grab sample collection after the Lead Sampler has determined there is sufficient volume to sample. *In-situ* field measurements will be collected for the following parameters:

- Temperature
- pH
- Specific conductance
- Dissolved oxygen
- Turbidity

Standard procedures for collecting *in-situ* water quality parameters are described in Section 11 of Volume II. If meter failure occurs, the field team will attempt to use another team's meter. As a last resort, the laboratory will be instructed to analyze for any missing parameters according to the methods provided in the QAPP Table 6-2.

Flow and Precipitation Monitoring

At wet and dry weather monitoring stations, flow may be estimated via orange peel method (refer to CMP Vol. II Appendix E) and precipitation data may be gathered from the local rain gauge(s). If available, flow meters may be programmed to record stage (to be converted to flow values based on channel dimensions) and precipitation data throughout the monitoring event. Flow and precipitation monitoring will commence during the pre-event preparation and will terminate upon completion of sampling.

The Lead Sampler of the field crew will make observations of site conditions during the sampling event to determine if flow is present or absent at the MS4 outfall station or receiving water station being monitored, as well as to determine if there is connectivity of surface flow from the MS4 outfall station to its proximate receiving water. The Lead Sampler will then determine if there is a sufficient volume of discharge water to sample and take field parameters.

Example field scenarios are described below:

- Ex. 1 MS4 outfall is dry (*flow is absent*). Record dry observation, take photo documentation and no sample is collected. Where possible verify if flow is present in the proximate receiving water.
- Ex. 2 MS4 outfall has presence of ponded water (*flow is absent*). Record ponded observation, take photo documentation, no sample and no field parameters are collected. Where possible verify if flow is present in the proximate receiving water.
- Ex. 3 MS4 outfall has small trickle flow (*flow is present*). If discharge volume is insufficient for sampling (i.e., the sample water cannot be collected without disturbing bottom substrate) then no sample and no field parameters are collected. Where possible verify if flow is present in the proximate receiving water.
- Ex. 4 MS4 outfall has flow (*flow is present*) which reaches the flowing water of the proximate receiving waterbody (*flow is present*). Collect sample, field parameters, and flow measurements at outfall location. Record observations and take photo documentation of outfall station and connectivity to the receiving water confluence. Record that flow is present at the receiving water under the observations section of the field data sheet.

Ex. 5 MS4 outfall has flow (*flow is present*), however the discharge infiltrates/evaporates prior to reaching the proximate receiving water, or the outfall flows reach the proximate receiving water and infiltrate into the dry stream bed of the receiving water (*flow is absent*). Collect sample, field parameters and flow measurements at outfall location. Record observations and take photo documentation of where the flow infiltrates/evaporates before reaching the receiving water or of the dry stream bed where flow is absent from of the receiving water.

Flow will be estimated by collecting the following measurements:

- Width of the water surface;
- Approximate depth of the water; and
- Approximate flow velocity.

Visual estimates of velocity may be made per the procedures detailed in the QAPP (Appendix E). Alternatively, handheld velocity probes may be used to measure velocity if available.

2.0 WATER QUALITY OBJECTIVES (WQOS)

Individual waterbodies within the WWR are assigned WQOs based on their existing and potential beneficial uses. Beneficial use-based WQOs, found in Chapter 3 of the Basin Plan, are designed to prevent harm to human health and/or aquatic life and may differ between receiving waters. Different reaches of a waterbody may cross HSAs and may have different beneficial uses.

Numeric WQOs are presented below in Table 2-1. Table 2-1 presents numeric criteria for the constituents to be monitored in compliance with the Order, including Constituents of Concern and Field Parameters, per the MRP.

Table 2-1: Numeric Water Quality Objectives (WQOs) for WWR Monitored Constituents

Constituent	Units	Basin Plan Numeric WQOs ⁵
Constituents of Concern		
Metals (Total and Dissolved)		
Antimony	--	--
Arsenic	µg/L	10
Barium	µg/L	1,000
Beryllium	--	--
Cadmium	µg/L	5
Chromium	µg/L	50
Chromium ⁶⁺	--	--
Copper	--	--
Lead	µg/L	15
Mercury	µg/L	2
Nickel	--	--
Selenium	µg/L	50
Silver	µg/L	100
Thallium	--	--
Zinc	--	--
Bacterial Indicator		
<i>E.coli</i>	MPN/100mL	Geometric mean: 126 (Rec I) and 630 (Rec II) Maximum: 400 (Rec I) and 2,000 (Rec II)
Nutrients and Other		
Nitrite as Nitrogen	--	--
Nitrate as Nitrogen	mg/L	45
Total Kjeldahl Nitrogen	--	--
Total Nitrogen	mg/L	10
Ammonia as Nitrogen	--	--
Total Suspended Solids (TSS)	--	--
Total Dissolved Solids (TDS) ¹	--	--
Total Phosphorus	--	--
Ortho Phosphorus	--	--
Total Petroleum Hydrocarbons (TPH)	--	--

Constituent	Units	Basin Plan Numeric WQOs ⁵
Methylene-blue activated substances (MBAS)	--	--
Ethylene-glycol	--	--
Oil and Grease	--	--
Field Parameters		
Water Temperature ²	--	--
pH	pH units	6.0-9.0
Electrical Conductivity (EC)	--	--
Turbidity ³	--	--
Dissolved Oxygen (DO) ⁴	mg/L	<5 (WARM); <8 (COLD); <8 (WARM & COLD)

¹ Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated, to the satisfaction of the Regional Board, that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters. Numeric maximums for TDS are identified in the Basin Plan however these do not apply to any of the monitored waterbodies referenced herein.

² Discharges of waste shall not alter temperature of receiving water, unless alteration in temperature does not adversely affect beneficial uses, must be demonstrated to the satisfaction of the Regional Board.

³ Waters shall be free of changes in turbidity that cause nuisance or affect beneficial uses.

⁴ The dissolved oxygen concentrations shall not be reduced below the minimum allowable levels. Dissolved oxygen is necessary for the survival of aquatic life, therefore, it must not be too low.

⁵ [The Basin Plan Numeric WQO's as stated in the January 8, 2019 Basin Plan.](#)

-- Represents a constituent with no applicable water quality objective.

3.0 RECEIVING WATER MONITORING PROGRAM

The Receiving Waters Monitoring Program is part of a regional effort by the Permittees to implement the watershed-based monitoring programs. The watershed-based approach is hydrologically defined, involves stakeholders, and strategically addresses priority water resource goals. Watershed-based monitoring provides the effective data for answering the Model Monitoring Program (MMP) management questions and meeting the MMP goals.

3.1 RECEIVING WATER MONITORING PROGRAM OVERVIEW

The Coachella Valley Storm Channel (CVSC) receiving water station at Avenue 52 Bridge is monitored under this program. Monitoring will be conducted during one wet weather event and two dry weather events at this station. Grab samples, as well as Field Parameters, will be collected during wet and dry weather sampling.

The Receiving Waters Monitoring Program incorporates the following monitoring components:

- Dry Weather Receiving Water Monitoring (Section 3.5)
- Wet Weather Receiving Water Monitoring (Section 3.4)

Samples will be collected in accordance with the Clean Hands/Dirty Hands SOP provided in Appendix D of Volume II. Monitoring is intended to be SWAMP compatible. Composite or grab sample times, *in-situ* field measurements, and sampling activities and observations will be recorded on a field data sheet in accordance with the procedures for documenting dry locations detailed Section 11 of Volume II.

3.1.1 Receiving Water Monitoring Program Management Questions

Sections L.10.C and L.10.D of the Order require that receiving water monitoring be conducted for purposes of evaluating the health of the perennial portion of the CVSC during dry weather and wet weather conditions. This evaluation was completed and included in the 2015-2016 Monitoring Annual Report through analysis of long-term trend data.

3.1.2 Receiving Water Monitoring Program Overview

Table 3-1 summarizes requirements of the Receiving Waters Monitoring Program.

Table 3-1: Receiving Water Monitoring Program Overview

Station Name	Station ID	Watershed	# Wet Events	# Dry Events	Monitoring Type	Sample Type	Analyses	Permit Reference
CVSC at Avenue 52 Bridge	719CVS884	Whitewater River	1	2	Receiving Water Quality	Grab	Constituents of Concern, Flow	§L.10.C; §L.10.D
			1	2	Receiving Water Quality	Field Meter	<i>In-situ</i> measurements	

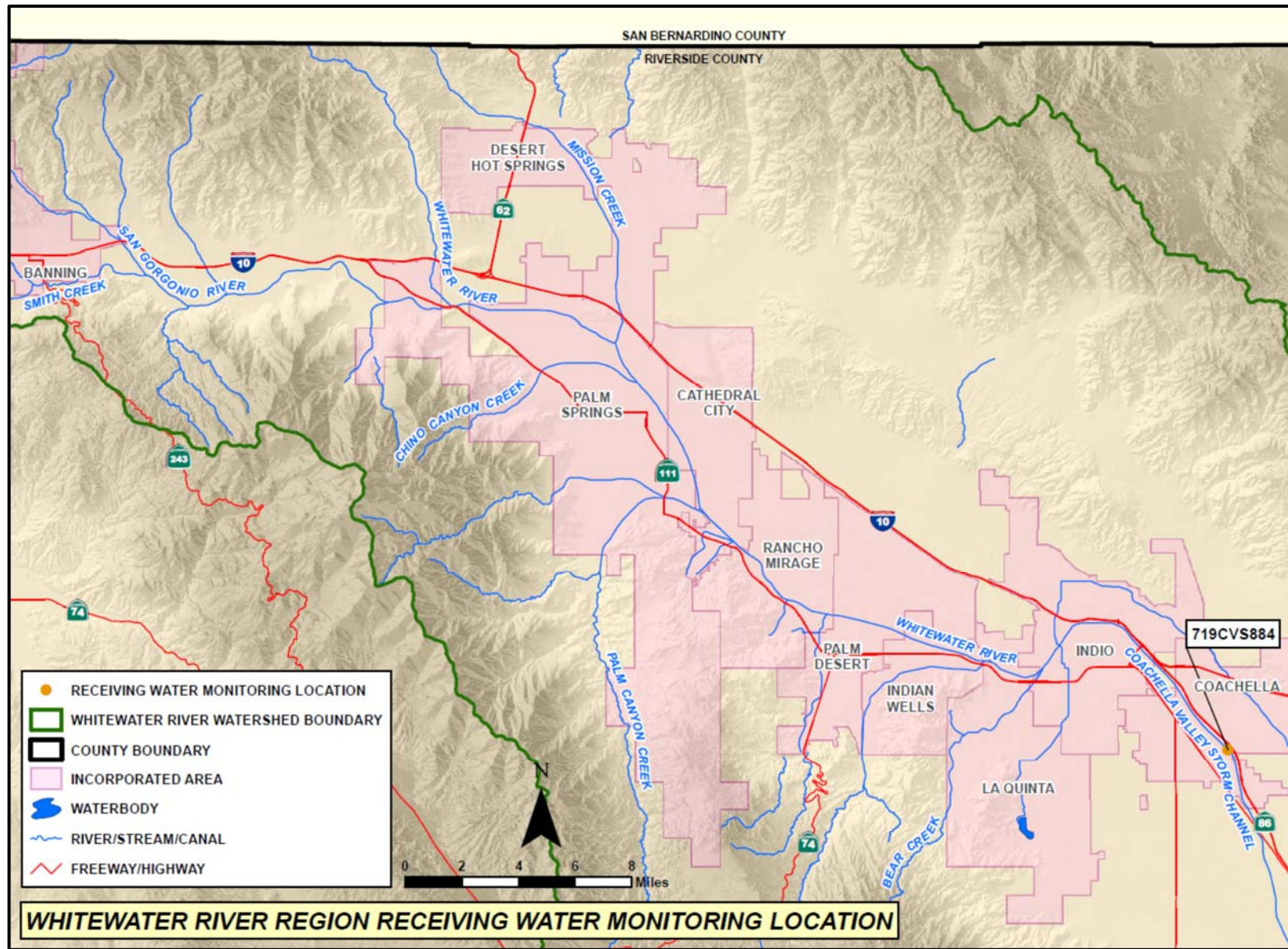
3.2 RECEIVING WATER MONITORING LOCATION

The location is summarized and mapped in Table 3-2 and Figure 3-1, respectively. A full description and photographs of the receiving water monitoring station is provided in the Monitoring Annual Report.

Table 3-2: Receiving Water Station Location

Station Name	Station Number	Station Type	Latitude	Longitude	Sampling Frequency
CVSC at Avenue 52 Bridge	719CVS884	Receiving Water	33°40'20.9"	-116°08'57.8"	1 Wet; 2 Dry

Figure 3-1: Receiving Water Monitoring Location



3.3 RECEIVING WATER SAMPLING EQUIPMENT AND BOTTLES

Equipment

At the receiving water monitoring station the following equipment may be used for collection of field measurements:

- Hand-held flow meter (if available)
- Portable field water quality meter

A detailed description of the monitoring equipment and its operation can be found in Section 15 of Volume II.

Installation and Maintenance

No installation of equipment will be conducted for wet or dry weather sampling. Maintenance and calibration will be performed prior to each event per Section 15 of Volume II.

Bottles

Grab samples will be collected according to Section 11 of Volume II. Section 11 of Volume II also contains additional information regarding sample bottles. Table 3-3 below provides a summary of bottles required for wet and dry weather receiving water monitoring.

Table 3-3: Receiving Water Monitoring Bottle List

Constituent	Container Type ¹	Preservative	EPA Recommended Holding Time
<i>E.coli</i>	2 x 125-mL plastic	Na ₂ S ₂ O ₃	8 hours
Oil and Grease	1 x 1 L amber glass	HCl or H ₂ SO ₄ to pH<2, ≤6°C	6 months
All other constituents (Chemistry)	As directed by the laboratory ²	≤6°C	48 hours (maximum)

¹ Container Type may change based on ELAP certified laboratory recommendations.

² For the specific corresponding container type contact the laboratory.

Additional parameters may be collected if necessary to characterize or document a suspected IC/ID (Order, MRP Section L.9). See also WWR Permit Section B.3 for information regarding prohibited discharges.

3.4 RECEIVING WATER WET WEATHER MONITORING

Wet weather receiving water monitoring will consist of grab sampling. Grab samples will be analyzed for the Constituents of Concern listed in Table 2-1. Monitoring at the receiving water station includes recording flow and precipitation during sampling. The monitoring station location is summarized and mapped in Table 3-2 and Figure 3-1, respectively.

3.4.1 Receiving Water Wet Weather Monitoring Criteria

Monitoring will be conducted according to the mobilization criteria described in Section 1.6. Additional information regarding mobilization criteria is available in Section 10.3 of Volume II.

3.4.2 Receiving Water Wet Weather Sampling Teams

One team, comprised of two CVWD field personnel, will monitor the receiving water station during wet weather, in conjunction with MS4 outfall monitoring responsibilities. A staffing breakdown of assignments for each program covered under this Monitoring Plan is provided in Table 3-4 below:

Table 3-4: Receiving Water Wet Weather Monitoring Team Roles

Discussed in this Section ¹	Monitoring Events	Team ²	Monitoring Activity	Responsible Party
✓	Wet 1	2	Receiving Water	CVWD
		1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
	Wet 2	1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
	Dry 1	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 2	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 3	1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 4	1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD

¹ Table is provided as general guidance and is subject to change during implementation.

² Team 1 includes District staff. Team 2 includes CVWD staff.

All samples will be delivered to the laboratory by field crews immediately following sample collection within EPA recommended holding times.

Refer to Section 3.3 for details on sampling equipment and bottles.

3.5 RECEIVING WATER DRY WEATHER MONITORING

Dry weather receiving water monitoring will consist of grab samples during two events. Grab samples will be analyzed for the constituents listed in Table 2-1. Dry weather water quality monitoring at the receiving water station includes recording flow during sampling. The monitoring station location is summarized and mapped in Table 3-2 and Figure 3-1, respectively.

3.5.1 Receiving Water Dry Weather Monitoring Criteria

Monitoring will be conducted according to the mobilization criteria in Section 1.6. Additional information regarding mobilization criteria is available in Section 10.3 of Volume II.

3.5.2 Receiving Water Dry Weather Sampling Teams

One team, comprised of two CVWD field personnel, will monitor the receiving water station during dry weather, in conjunction with MS4 outfall and quarterly IC/ID monitoring responsibilities. A staffing breakdown of programs covered under this Monitoring Plan is provided in Table 3-5 below:

Table 3-5: Receiving Water Dry Weather Monitoring Team Roles

Discussed in this Section ¹	Monitoring Events	Team ²	Monitoring Activity	Responsible Party
	Wet 1	2	Receiving Water	CVWD
		1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
	Wet 2	1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
✓	Dry 1	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 2	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
	Dry 3	2	IC/ID MS4 Outfall	CVWD
		1	IC/ID MS4 Outfall	District
	Dry 4	2	IC/ID MS4 Outfall	CVWD
		1	IC/ID MS4 Outfall	District

¹ Table is provided as general guidance and is subject to change during implementation.

² Team 1 includes District staff. Team 2 includes CVWD staff.

All samples will be delivered to the laboratory by field crews immediately following sample collection within EPA recommended holding times.

Refer to Section 3.3 for details on sampling equipment and bottles.

4.0 MS4 OUTFALL AND IC/ID MONITORING PROGRAM

The Dry Weather MS4 Outfall Water Quality and Quarterly IC/ID Monitoring Program (collectively, MS4 Outfall Monitoring Program) is part of a regional effort by the Permittees to implement the watershed-based monitoring programs. The watershed-based approach is hydrologically defined, involves stakeholders, and strategically addresses priority water resource goals. Watershed-based monitoring provides the effective data for answering the MMP management questions and meeting the MMP goals.

4.1 MS4 OUTFALL MONITORING PROGRAM OVERVIEW

Section L of the Order requires MS4 outfall monitoring at two IC/ID MS4 outfall monitoring locations (MS4 outfall Stations). Monitoring will be conducted during two wet and four dry weather events at the designated MS4 outfall stations. Grab samples, as well as field parameters, will be collected during wet and dry weather sampling, when flow is present.

The MS4 Outfall Monitoring Program incorporates the following monitoring components:

- Wet Weather MS4 Outfall Monitoring (Section 4.4)
- Dry Weather IC/ID MS4 Outfall Monitoring (Section 4.5)

Samples will be collected in accordance with the Clean Hands/Dirty Hands SOP provided in Appendix D of Volume II. Monitoring is intended to be SWAMP compatible. Grab sample times, *in-situ* field measurements, and sampling activities and observations will be recorded on a field data sheet in accordance with the procedures for documenting dry locations detailed in Section 11 of Volume II.

4.1.1 MS4 Outfall Monitoring Program Purpose

Section L.10. A of the Order requires that dry weather MS4 outfall monitoring be conducted at monitored sites for purposes of proactively seeking to identify IC/IDs; observed incidents are tracked in respective Permittee IC/ID databases, and are reported in the Monitoring Annual Report. Order Section L.10.B, requires that wet weather MS4 outfall monitoring be conducted for purposes of evaluating long-term trends in WWR urban runoff. Analysis for long-term trends has been provided in the 2015-2016 Monitoring Annual Report.

4.1.2 MS4 Outfall Monitoring Program Overview

Table 4-1 below summarizes requirements of the MS4 Outfall Monitoring Program.

Table 4-1: MS4 Outfall Monitoring Program Overview

Station Name	Station ID	Watershed	# Wet Events	# Dry Events	Monitoring Type	Sample Type	Analyses	Permit Reference
Ramsey Street Storm Drain	719RMS782	Whitewater River	2	0	MS4 Outfall Water Quality Monitoring	Grab	Constituents of Concern	§L.10.A; §L.10.B
						Field Meter	<i>In-situ</i> measurements and Flow	
			0	4	MS4 Outfall Quarterly IC/ID Monitoring	Grab	<i>E.coli</i>	
						Field Meter	<i>In-situ</i> measurements and Flow	

Station Name	Station ID	Watershed	# Wet Events	# Dry Events	Monitoring Type	Sample Type	Analyses	Permit Reference
Portola Avenue Outfall	719POR817	Whitewater River	2	0	MS4 Outfall Water Quality Monitoring	Grab	Constituents of Concern	§L.10.A; §L.10.B
						Field Meter	<i>In-situ</i> measurements and Flow	
			0	4	MS4 Outfall Quarterly IC/ID Monitoring	Grab	<i>E coli</i>	
						Field Meter	<i>In-situ</i> measurements and Flow	

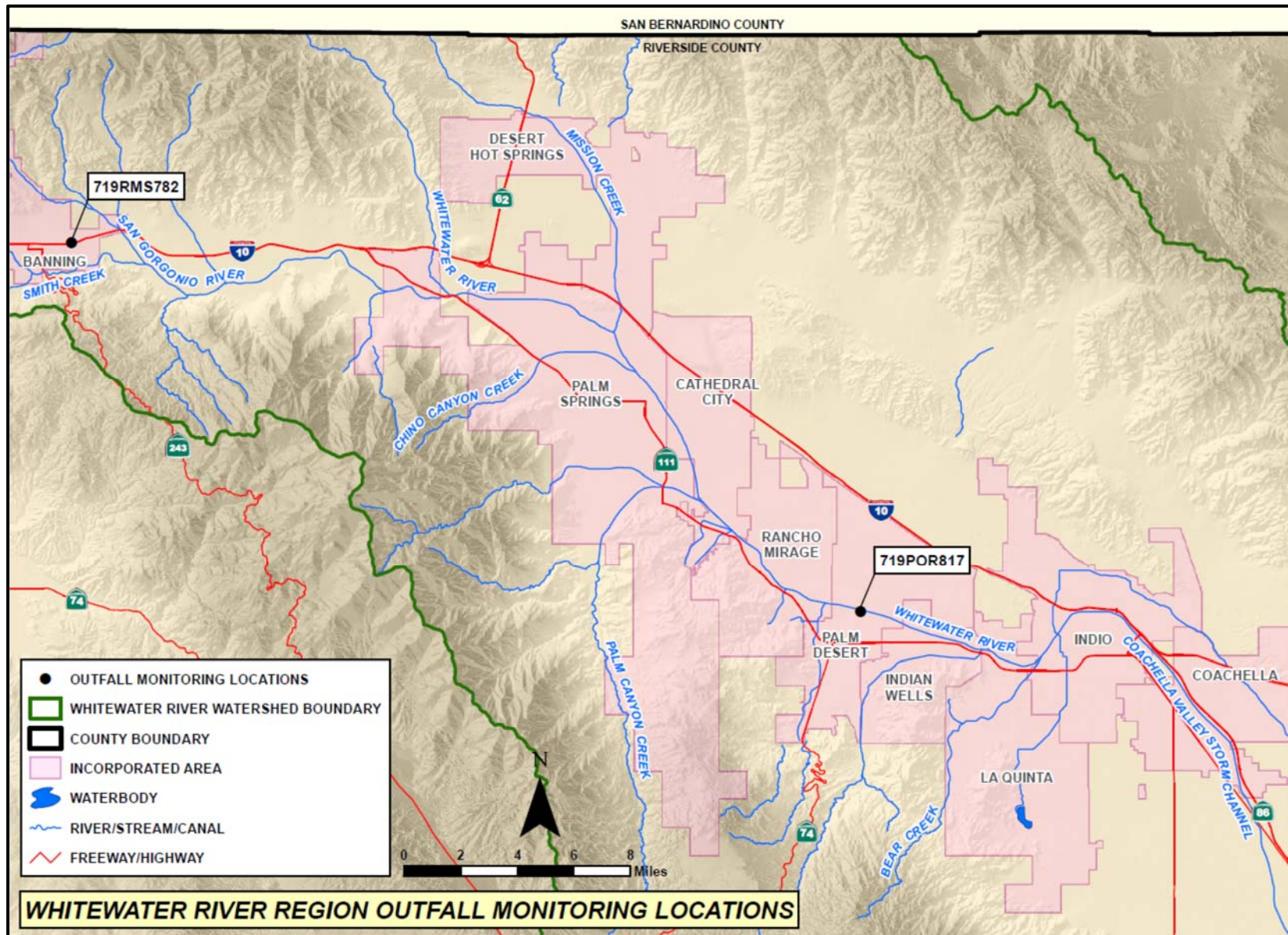
4.2 MS4 OUTFALL MONITORING LOCATIONS

Two wet weather and two dry weather events will be monitored annually at each of the two MS4 outfall monitoring stations. In addition, quarterly IC/ID investigations will be conducted during dry weather at both stations. All four of the IC/ID investigations will be conducted concurrent with dry weather monitoring. Full descriptions of each core monitoring station will be included in the Monitoring Annual Report. MS4 outfall monitoring stations are summarized and mapped in Table 4-2 and Figure 4-1, respectively.

Table 4-2: MS4 Outfall Monitoring Locations

Station Name	Station Number	Station Type	Latitude (°N)	Longitude (°W)	Sampling Frequency
Ramsey Street Storm Drain	719RMS782	MS4 Outfall	33°55' 30.59"	-116°51'30.64"	2 Wet; 4 Dry
Portola Avenue Outfall	719POR817	MS4 Outfall	33°44'16.8"	-116°22'24.6"	2 Wet; 4 Dry

Figure 4-1: MS4 Outfall Monitoring Locations



4.3 MS4 OUTFALL SAMPLING EQUIPMENT AND BOTTLES

Equipment

At each MS4 outfall monitoring station the following equipment may be used for collection of field measurements:

- Hand-held flow meter (if available)
- Portable field water quality meters

A detailed description of the monitoring equipment and its operation can be found in Section 15 of Volume II.

Installation and Maintenance

No installations of equipment will be conducted under the MS4 Outfall Monitoring Program. Maintenance and calibration will be performed prior to each event per Section 15 of Volume II.

Bottles

Grab samples shall be analyzed in accordance with the Analytical Requirements specified in Table 1-1. For MS4 outfall samples that must be analyzed for Constituents of Concern (i.e., outfall wet weather samples) refer to the list in Table 1-3. Grab samples will be collected according to procedures in Section 11 of the QAPP (Volume II). Section 11 of Volume II also contains additional information regarding sample bottles. Table 4-3 below provides a summary of bottles required for MS4 outfall wet weather and IC/ID MS4 outfall dry weather monitoring.

Table 4-3: MS4 Outfall and IC/ID MS4 Outfall Monitoring Bottle List

Constituent	Container Type¹	Preservative	EPA Recommended Holding Time
<i>E.coli</i>	2 x 125-mL plastic (each)	Na ₂ S ₂ O ₃	8 hours
All other Constituents of Concern ² (Wet weather only)	As directed by the laboratory ³	≤6°C	48 hour (maximum)

¹ Container Type may change based on ELAP certified laboratory recommendations.

² Constituents of Concern are listed in Table 1-4, discussed in Section 1.8.

³ For the specific corresponding container type contact the laboratory.

Additional parameters may be collected if necessary to characterize or document a suspected IC/ID (Order, MRP Section L.9). See also WWR Permit Section B.3 for information regarding prohibited discharges.

4.4 MS4 OUTFALL WET WEATHER MONITORING

Wet weather MS4 outfall water monitoring will consist of grab samples for all required constituents. Grab samples will be analyzed for the Constituents of Concern listed in Table 1-4. The MS4 outfall stations will be sampled during two wet weather monitoring events following protocols which are consistent with this Monitoring Plan and compatible with SWAMP. Monitoring at the two MS4 outfall monitoring stations includes recording flow and precipitation during sampling. MS4 outfall monitoring stations are summarized and mapped in Table 4-2 and Figure 4-1, respectively.

4.4.1 MS4 Outfall Wet Weather Monitoring Criteria

Monitoring will be conducted according to the mobilization criteria described in Section 1.6. Additional information regarding mobilization criteria is available in Section 10.3 of Volume II.

4.4.2 MS4 Outfall Wet Weather Sampling Teams

Two teams, each comprised of at least two District or CVWD field personnel, will monitor the stations during wet weather, in conjunction with receiving water monitoring responsibilities. A staffing breakdown of programs covered under this Monitoring Plan is provided in Table 4-4 below:

Table 4-4: MS4 Outfall Wet Weather Monitoring Team Roles

Discussed in this Section ¹	Monitoring Events	Team ²	Monitoring Activity	Responsible Party
	Wet 1	2	Receiving Water	CVWD
✓		1	MS4 Outfall	District
✓		2	MS4 Outfall	CVWD
✓	Wet 2	1	MS4 Outfall	District
✓		2	MS4 Outfall	CVWD
	Dry 1	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 2	2	Receiving Water	CVWD
		1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 3	1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD
	Dry 4	1	IC/ID MS4 Outfall	District
		2	IC/ID MS4 Outfall	CVWD

¹ Table is provided as general guidance and is subject to change during implementation.

² Team 1 includes District staff. Team 2 includes CVWD staff.

All samples will be delivered to the laboratory by field crews immediately following sample collection within EPA recommended holding times.

Refer to Section 4.3 for details on sampling equipment and bottles.

4.5 MS4 OUTFALL DRY WEATHER IC/ID MONITORING

Dry weather IC/ID MS4 outfall monitoring will consist of grab samples for all required constituents during events. Grab samples will be analyzed for the constituents identified in the Analytical Requirements of Table 1-1. Dry weather water quality monitoring at the MS4 outfall monitoring station includes recording flow during sampling. IC/ID MS4 outfall monitoring stations are summarized and mapped in Table 4-2 and Figure 4-1, respectively.

4.5.1 MS4 Outfall Dry Weather IC/ID Monitoring Criteria

Monitoring will be conducted according to the mobilization criteria in Section 1.6. Additional information regarding mobilization criteria is available in Section 10.3 of Volume II.

4.5.2 MS4 Outfall Dry Weather IC/ID Sampling Teams

Two teams, each comprised of at least two District or CVWD field personnel, will monitor two MS4 outfall monitoring stations during dry weather, in conjunction with receiving water and quarterly IC/ID monitoring responsibilities. A staffing breakdown of programs covered under this Monitoring Plan is provided in Table 4-5 below:

Table 4-5: MS4 Outfall Dry Weather IC/ID Monitoring Team Roles

Discussed in this Section ¹	Monitoring Events	Team ²	Monitoring Activity	Responsible Party
	Wet 1	2	Receiving Water	CVWD
		1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
	Wet 2	1	MS4 Outfall	District
		2	MS4 Outfall	CVWD
	Dry 1	2	Receiving Water	CVWD
✓		1	IC/ID MS4 Outfall	District
✓		2	IC/ID MS4 Outfall	CVWD
	Dry 2	2	Receiving Water	CVWD
✓		1	IC/ID MS4 Outfall	District
✓		2	IC/ID MS4 Outfall	CVWD
	Dry 3	1	IC/ID MS4 Outfall	District
✓		2	IC/ID MS4 Outfall	CVWD
	Dry 4	1	IC/ID MS4 Outfall	District
✓		2	IC/ID MS4 Outfall	CVWD

¹ Table is provided as general guidance and is subject to change during implementation.

² Team 1 includes District staff. Team 2 includes CVWD staff.

All samples will be delivered to the laboratory by field crews immediately following sample collection within EPA recommended holding times.

Refer to Section 4.3 for details on sampling equipment and bottles.

4.5.3 MS4 Outfall Dry Weather IC/ID Monitoring Results Database

All data collected as part of the IC/ID MS4 Outfall Monitoring Program (excluding follow-up response conducted by the Permittees) are loaded into the District's Kisters' Water Quality Module³ database. The historic data is available to be used during future desktop assessments.

³ In 2017 the District updated its water quality database with newer technology that will allow staff to be more efficient and create better products in house. The prior database technology was Kisters Hydstra Water Quality Module. This database will remain at the District to maintain the Hydrologic data (rainfall, stage, flow) within it's Time Series Module. The Water Quality Module reached limitations on the number of parameters certain fields can hold and did not include automated features for other quality control checks. This module also requires more support from the company to write individual computer programs to make any customizations. This module is being replaced by Kisters Water Quality Module (KiWQM).

5.0 ILLICIT CONNECTION/ILLEGAL DISCHARGE FOLLOW-UP INVESTIGATIONS

The WWR Permit requires that the Permittees effectively prohibit the discharge of non-stormwater into their MS4 facilities and to Waters of the U.S. The Permittees' Illicit Connection/Illegal Discharge Monitoring Program is designed to be compatible with the "Illicit Discharge, Detection, and Elimination: Guidance Manual" (Center for Watershed Protection, 2004).

The two MS4 outfall monitoring stations are required to be monitored quarterly during dry weather to investigate for evidence of non-typical flow and water quality conditions, as discussed in Section 4. If sufficient flow is present at the MS4 outfall monitoring stations, bacteriological samples will be collected along with field parameters. Based on the results of quarterly IC/ID monitoring, follow-up investigations may be necessary if parameters are outside of normal range, non-typical flow or water quality conditions are evidenced, and/or if an IC/ID is suspected. When a potential IC/ID has been identified during MS4 monitoring (see Section 4) or receiving water monitoring (see Section 3), the District or CVWD sampling staff will notify the Permittee having jurisdiction so that they implement follow-up procedures in accordance with the guidance provided herein Sections 5.1 through 5.6, as appropriate.

In addition to actions that may be triggered by notification from the District or CVWD as described above, IC/ID investigation and follow-up may be triggered by individual Permittee field observations during regular business activities and complaint calls from within their jurisdiction. This section covers the actions to be conducted by the individual Permittees for the implementation of the IC/ID Program.

5.1 INSPECTIONS AND FIELD RECONNAISSANCE

If an IC/ID incident is discovered within a Permittee's jurisdiction, that Permittee is responsible for conducting a follow-up investigation. Should quarterly monitoring results indicate the need for follow-up IC/ID investigations, the Permittee having jurisdiction will utilize the following procedures, as necessary, as follow-up actions for quarterly dry weather MS4 outfall monitoring, including Permittee outfall inspections and field reconnaissance:

- Conduct field screening and visual observations to determine if an IC/ID is present. If necessary collect an analytical sample in accordance with Section 5.4 below.
- If active discharge, take photos at point of entry to MS4. Also, document recent stains which may be indicative of recent active discharges.
- Trace discharge as far upstream as possible. Spills may be traced into catch basins and through storm drains.
- Document observations. Determine if the discharge is authorized or permitted. The following is a list of allowable discharges, per Section C of the Order:
 - a. Discharges covered by NPDES permits or written clearances issued by the Regional Board or the State Board;
 - b. Air conditioning condensation
 - c. Potable water line flushing and other potable water sources;
 - d. Passive foundation drains
 - e. Passive footing drains;
 - f. Water from crawl space pumps;
 - g. Discharges from landscape irrigation, lawn/garden watering and other irrigation waters;
 - h. Dechlorinated swimming pool discharges;
 - i. Non-commercial vehicle washing; (e.g., residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organizations);

- j. Diverted stream flows;
 - k. Rising groundwaters and natural springs;
 - l. Groundwater infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater;
 - m. Flows from riparian habitats and wetlands;
 - n. Street wash water;
 - o. Emergency water flows (i.e., firefighting flows and other flows necessary for the protection of life and property) do not require BMPs and need not be prohibited. However, appropriate BMPs shall be considered where practicable when not interfering with emergency public health and safety issues;
 - p. Waters not otherwise containing Wastes, as defined in CWC Section 13050 (d); and
 - q. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.
- If discharge is unauthorized, or if unsure whether the discharge is authorized, follow the appropriate reporting procedures.
 - If discharge is permitted, request copy of regulatory permit, District Encroachment Permit, or other document authorizing the discharge. No further action is required where the source is determined to be a permitted, allowed, or exempted discharge. The District has developed a Third Party Non-Stormwater Discharge application that is intended for discharges where an Encroachment Permit is required. The application may also be used for discharge to District facilities where the District is previously notified and the discharge may result in a violation of the District's MS4 Permit.
 - If a permitted, allowed, or exempted discharge is exposed to a source of pollutants (e.g., recently-applied fertilizers or pesticides) it should be treated as an illegal discharge.

Table 5-1: Indirect Discharge Generating Sites

Chapter 1: The Basics of Illicit Discharges

Table 2: Land Uses, Generating Sites and Activities That Produce Indirect Discharges		
Land Use	Generating Site	Activity that Produces Discharge
Residential	<ul style="list-style-type: none"> • Apartments • Multi-family • Single Family Detached 	<ul style="list-style-type: none"> • Car Washing • Driveway Cleaning • Dumping/Spills (e.g., leaf litter and RV/boat holding tank effluent) • Equipment Washdowns • Lawn/Landscape Watering • Septic System Maintenance • Swimming Pool Discharges
Commercial	<ul style="list-style-type: none"> • Campgrounds/RV parks • Car Dealers/Rental Car Companies • Car Washes • Commercial Laundry/Dry Cleaning • Gas Stations/Auto Repair Shops • Marinas • Nurseries and Garden Centers • Oil Change Shops • Restaurants • Swimming Pools 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing • Washdown of greasy equipment and grease traps
Industrial	<ul style="list-style-type: none"> • Auto recyclers • Beverages and brewing • Construction vehicle washouts • Distribution centers • Food processing • Garbage truck washouts • Marinas, boat building and repair • Metal plating operations • Paper and wood products • Petroleum storage and refining • Printing 	<ul style="list-style-type: none"> • All commercial activities • Industrial process water or rinse water • Loading and un-loading area washdowns • Outdoor material storage (fluids)
Institutional	<ul style="list-style-type: none"> • Cemeteries • Churches • Corporate Campuses • Hospitals • Schools and Universities 	<ul style="list-style-type: none"> • Building Maintenance (e.g., power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Parking Lot Maintenance (power washing) • Vehicle Washing
Municipal	<ul style="list-style-type: none"> • Airports • Landfills • Maintenance Depots • Municipal Fleet Storage Areas • Ports • Public Works Yards • Streets and Highways 	<ul style="list-style-type: none"> • Building Maintenance (power washing) • Dumping/Spills • Landscaping/Grounds Care (irrigation) • Outdoor Fluid Storage • Parking Lot Maintenance (power washing) • Road Maintenance • Spill Prevention/Response • Vehicle Fueling • Vehicle Maintenance/Repair • Vehicle Washing

5.2 COMPLAINT FOLLOW-UP ACTIONS

In the event that a Permittee has received a complaint call, the following section provides general guidance. Based on the location described by the complaint report, the Permittee should determine the jurisdiction responsible for the follow-up actions and notify the appropriate point of contact (QAPP Appendix K). For complaints falling within a Permittee's jurisdiction it is recommended that their respective internal enforcement protocols be followed, or the response procedures in the Enforcement and Compliance Strategies of the SWMP (SWMP Section 1.7) may be utilized as guidance.

Complaints may be received from a member of the public via phone, email, or direct communications; from in-house staff (or field staff, inspectors, and maintenance crews); or from other agencies (other county agency, a neighboring city, or state agency). In the event that a Permittee has received a complaint call the following section provides general guidance. Based on the location described by the complaint report the Permittee should determine the jurisdiction responsible for the follow-up actions and notify the appropriate point of contact (QAPP Appendix K). For complaints falling within a Permittee's jurisdiction it is recommended that they follow their internal enforcement protocols. Refer to Section 5.6 regarding complaint records. The following general guidance is recommended for follow-up actions to a complaint call.

Generally, for incoming complaints, Permittee personnel having jurisdiction and who are trained in IC/ID investigations collect information from the complainant and begin the *IC/ID Incident Reporting Form* (See QAPP Appendix N or similar form). The incident is categorized according to location and type of discharge. For a non-MS4 facility (i.e., commercial site), the appropriate City or County NPDES coordinator or alternate point of contact is notified (QAPP Appendix K or similar form). Referrals to City and/or the Regional Board are made according to the Enforcement and Compliance Strategies if the incident occurred at an industrial business or construction site. When the incident discharges to a natural waterway with no MS4 connectivity, the appropriate Permittee staff is notified. If the Illicit Discharge is to a District facility, the District's IC/ID staff or MS4 Permit Manager is immediately notified.

The following are general procedures for following up on non-stormwater discharges for which a complaint has been reported. These may vary between Permittee jurisdictions; please refer to the respective Permittee's local procedures.

- Neighbor disputes involving non-stormwater issues are a civil matter. Complaints are referred to appropriate Permittee contact (QAPP Appendix K).
- Health hazards with no MS4 connectivity – Refer complaint to Department of Environmental Health. QAPP Appendix K provides contact information.
- Flooding issue with no pollutant issue – Complaints are referred to the District Project Planning Section at 951.955.1200. The Project Planning Section has implemented internal procedures for handling flooding complaint issues.
- Complaints occurring on private property where the owner of the property is in violation (e.g., accumulated rubbish, construction without permits, junk yard(s), and/or abandoned vehicles, etc.), the appropriate Permittee is contacted. See QAPP Appendix K for a list of contacts by community and the local office that handles these complaints.
- Within the Whitewater River Region, all areas which have sanitary sewer access fall under the jurisdiction of a sewerage agency which has appropriate spill response procedures. If sewage or treated effluent is involved, the appropriate sewerage agency will have jurisdiction.

When it has been determined that the incident (from complaints) warrants investigation refer to general guidance in Sections 5.1, 5.3, and 5.4 as appropriate.

If an IC/ID is determined to endanger human health or the environment the Regional Water Board at 760-346-7491, and the California Office of Emergency Services (Cal OES) at 800-852-7550. At a minimum, the following types of spills, leaks, and/or Illegal Discharges will be reported immediately within the period specified per the Permit:

- Sewage spills above 1,000 gallons or that could impact water contact recreation
- Oil spills that could impact wildlife
- Hazardous material spills where residents are evacuated
- Spills of reportable quantities of hazardous waste (as defined in 40 CFR 117 and 40 CFR 302)
- Other spills or discharges that are reportable to the Cal OES, such as:
 - Spills or other releases of one barrel or more of petroleum products at a tank facility;
 - Discharges of any hazardous substances or sewage, into or on any Waters of the State;
 - Found or lost radioactive materials;
 - Discharges of oil or petroleum products into or on any Waters of the State; and
 - Hazardous liquid pipeline releases and every rupture, explosion or fire involving a pipeline.

5.3 FOLLOW-UP ACTIONS

The following section outlines general guidance for response to findings from source investigations, steps covered in the above sections. The Permittee will confirm discharge is occurring and assess if discharge may be a threat to human health or the environment. If the discharge may be a threat to health or the environment, implement Permittee Enforcement and Compliance Strategy procedures and notify the Regional Board/California Emergency Management Agency within the period specified in the Permit.

Complete IC/ID Incident Reporting Form and IC/ID Incident Investigation Report (QAPP Appendix N or similar form).

- Review Table 5-1 on following page (recreated from Table 2 of the IDDE Guidance Manual), and note land use types and generating sites in the area and activities observed.
- Trace discharge upstream, as possible, to determine source.
- Take enough photos to document extent and severity of impact. Photos should be attached to the investigation documentation.

If the source cannot be identified:

Active discharge with flow –

- Field measurements are collected and documented (outlined above) where there is no other evidence of the IC/ID source.
- Provide appropriate public education material (Section 5.5 below) in area of IC/ID or complaint.

No active discharge but evidence of IC/ID is present at time of investigation –

- Mark location for future follow-up. Follow-up visit(s) will confirm if the IC/ID has recurred and will attempt to locate source. If IC/ID has not recurred or has been eliminated, note on IC/ID form (or similar) and close complaint/investigation.
- Provide appropriate public education material (Section 5.5 below) in area of IC/ID or complaint.

If the source is identified:

- Determine if the discharge is permitted or allowable (see Section 5.1). Discussions with property owners and others near the source of the discharge may be necessary.

- If a permitted, allowed, or exempted discharge is exposed to a source of pollutants (e.g., recently-applied fertilizers or pesticides), it will be treated as an Illegal Discharge. Refer incident to Regional Board.
- If discharge is permitted, request copy of regulatory permit, District Encroachment Permit, or other document authorizing the discharge. No further action is required where the source is determined to be a permitted, allowed, or exempted discharge. Permitted discharges that are perceived to be a threat to human health or the environment will be reported to the Regional Board/California Emergency Management Agency.
- If discharge is not clearly permitted or allowable, the responsible Permittee will implement their local Enforcement and Compliance Strategy procedures. Permittee staff should enforce respective Stormwater Ordinances; the Enforcement and Compliance Response Procedures (SWMP Section 1.7), may be utilized as guidance. These actions will take place until the discharger is able to obtain a permit from the Regional Board and the discharge is determined to be acceptable by the Permittees.

If the incident is or is suspected to be part of a HazMat incident...

When responding to a pollutant spill or discharge, the goal is to safely identify the material, contain the spill or discharge in order to minimize the effects to life, health and the environment, and mitigate the spill or discharge.

Under no circumstances should a site be entered or field measurements collected if conditions are unsafe.

If the material cannot be positively identified from a safe distance or there is any indication that the material is hazardous, call the Emergency Response number – 911.

5.4 FOLLOW-UP MONITORING

Follow-up monitoring may be necessary to support source identification efforts described in the above sections. Sampling Methods are described in Section 11 of the QAPP (CMP Volume II), as well as QAPP Appendix E (SWAMP SOPs for Collection of Water and Bed Sediment Samples with Associated Field Measurements and Physical Habitat in California). Additionally, the following guidance should be considered by the Permittee conducting the follow-up investigation.

Unknown Source of Discharge

Where there is no other evidence of the IC/ID source, or as an adjunct to an IC/ID investigation, field measurements and samples should be collected if needed to characterize the source of an IC/ID. Samples may be collected if there is a concern that water of unknown origin could impact the MS4 outfall or receiving water.

Known Source of Discharge

Where there is evidence of the IC/ID source, the facility owner or operator may have a Spill Prevention, Control, and Countermeasure (SPCC) plan (or other relevant plan or report) on site which may provide information of any hazardous or significant materials stored and handled at the facility. When the source of the illegal discharge is known, analyze for the known parameters. If after looking at any available plans for a facility and if the source is still unknown, continue investigation of the area to identify the type of material being discharged and to identify possible operations which may have contributed to the discharge. Appendix L of the QAPP provides guidance on determining the potential source of the flow.

Also, if a record of complaint history is available, it should be reviewed for sources and past sample analysis. Once the potential source has been determined or estimated the following procedures are recommended:

- Estimate and document the flow of the discharge by measuring:
 - Width of the water surface;
 - Approximate depth of the water; and
 - Approximate flow velocity.
- Collect samples, as discussed in Section 11 of the QAPP:
 - If sufficient flow is present and safe to collect, collection of the following *in-situ* field measurements is recommended:
 - Temperature;
 - pH;
 - Specific conductance;
 - Dissolved oxygen; and
 - Turbidity.
 - Additional parameters may be analyzed if needed to characterize or document the suspected IC/ID or for use in follow up enforcement actions against sources of the IC/ID in accordance with Section L.9 of the Order. If it is not possible to identify the source of the discharge, and field parameters are outside of the following normal ranges, a sample should be collected. Determine what parameters to analyze, as according to Appendix L of the QAPP.

5.5 PUBLIC EDUCATION AND OUTREACH OVERVIEW

Public education is an essential part of a municipal stormwater program because changing public behavior can create a real reduction in pollutants. When a community has a clear understanding of where the pollution comes from, how it can affect them, and what they can do to stop it, they are more likely to support the program, change their own practices, and help educate others.



The Watershed Protection Program's strategic plan for public education has been developed by the Public Education Strategic Taskforce (PEST) to engage Riverside County residents in actions protective of the County's streams, rivers, which is built upon the many successes of the current program and carries out activities and projects that include:

- Maintaining the 24/7 illegal dumping hotline;
- Monthly eNews Bulletin;
- Program Website (rcwatershed.org);
- Outreach campaign to eliminate over-irrigation;
- Business outreach to landscape professionals; and
- Continuation of a school-aged children education outreach program.

The Program's goals consist of continued efforts to increase stormwater pollution prevention awareness and its impact on the environment; to educate residents and local businesses with the goal of shaping their attitude towards minimizing stormwater pollution and to maintain compliance with the MS4 Permit. In addition to improving water quality, helping the public understand the problems associated with stormwater runoff can help build overall support for the stormwater program.

The Permittees participate in and contribute to the Riverside County Watershed Protection Program which provides educational materials on the subject of water quality, urban runoff, and both storm and

non-stormwater discharges to residents, businesses, developers, contractors, and schools through public events and online sources. For more information refer to the outreach webpage: <https://www.rcwatershed.org/>.

5.6 IC/ID MONITORING RECORDKEEPING

Sampling data collected as part of the IC/ID monitoring program, including incident response information, are tracked individually by each Permittee pursuant to the Permit and included in their Annual Report.

6.0 SPECIAL STUDIES

In addition to the program described in Sections 3.0 through 5.0, additional monitoring components are required as described in the following sections.

6.1 TMDL/303(D) LISTED WATERBODY MONITORING

In accordance with its Quality Assurance Project and Monitoring Plan (QAPMP) and Phase I of TMDL implementation, the City of Coachella performs monthly monitoring at each of its three (3) MS4 outfalls to CVSC. The City of Coachella will provide the monitoring data to the Regional Board on a quarterly basis. The monitoring data is gathered by the City of Coachella in accordance with Phase I of the TMDL for bacterial indicators at CVSC. This data will also be incorporated into the WWR Annual Monitoring Reports by reference.

6.2 REGIONAL MONITORING PROGRAMS

The District participates in regional monitoring and scientific studies conducted by the Stormwater Monitoring Coalition (SMC) and the California Stormwater Quality Association (CASQA) as required by the Order. Per Order, the Permittees must implement regional studies such that:

"The Permittees, individually or collectively, shall continue to participate in regional monitoring and scientific studies conducted by the Southern California Monitoring Coalition (SMC) and or the California Stormwater Quality Association (CASQA), and/or other regional groups or efforts necessary to improve monitoring program design, parameter test methods, calibrate labs, evaluate the effectiveness of BMPs, and/or advance the science and understanding of Urban Runoff impacts on Receiving Waters." – Order Section L.10

Stand-alone work plans have been and are developed and approved for these components independently of this CMP. The Regional Monitoring Programs include the following:

- NPDES Desert Task Force Advisory Committee
- SMC Regional Bioassessment Monitoring of Southern California (District acting as Vice-Chair)
- SCCWRP Regional Hydromodification Study
- LID BMP Monitoring
- CASQA Board of Directors (District acting as a Director)
- CASQA Stormwater Monitoring and Science Subcommittee (District acting as Co-Chair)
- CASQA Legislation Subcommittee (District acting as Co-Chair)
- CASQA Policy and Permitting Subcommittee (District acting as Co-Chair)
- CASQA Pesticide Regulatory Subcommittee Support
- SMC Laboratory Intercalibration

7.0 DATA RECORDS, MANAGEMENT, AND REPORTING

7.1 EVENT DATA RECORDS AND CHAINS OF CUSTODY (COC)

Achieving a quality data set requires rigorous documentation of field activities and defensible Chain of Custodies (COCs), as well as timely review of laboratory data. This section reviews the data required to be recorded on the field data sheets, sample labels, COCs, and laboratory turnaround time for data reports and SWAMP compatible electronic data deliverables (EDDs).

Field Data Sheets

During sampling activities, a record of the event, including grab sample times, and *in-situ* field measurements (including flow measurements and observations), will be recorded electronically via the Survey 123 application or on a paper field data sheet per the standard documentation procedures detailed in Section 11 of Volume II. Field data sheets will document site conditions, including flow and ponded water, the presence of trash, and any other applicable issues and information. Field personnel will be trained at least annually to complete field data sheets, both electronically and on paper, correctly. Field data sheets and COCs will be reviewed immediately following each mobilization, and discrepancies resolved while memories are fresh.

Sample Labeling and COCs

Sample Identification numbers (Sample IDs) on all COC forms must match those on the sample bottles, laboratory reports and EDDs. Detailed COC and bottle labeling requirements are provided in Section 12 of the QAPP. Sample IDs include:

- Sampling year;
- Event code;
- Station Code (last three digits of the station ID number); and
- Two digit code that designates the sample as a primary, field duplicate, or field blank sample.

Example sample IDs are described below:

- Ex. 1 Wet Weather Receiving Water
1718-W1-884-01
(2017-2018 year, 1st Wet Weather Event, CVSC at Avenue 52 Bridge 719CVS884, Primary Sample)
- Ex. 2 Wet Weather Receiving Water QA/QC
1718-W1-884-02
(2017-2018 year, 1st Wet Weather Event, CVSC at Avenue 52 Bridge 719CVS884, Field Duplicate)
- Ex. 3 Dry Weather Outfall
1718-D1-782-01
(2017-2018 year, 1st Dry Weather Event, Ramsey Street Storm Drain Site 719RMS782, Primary Sample)
- Ex. 4 Dry Weather Outfall QA/QC
1718-D1-782-03
(2017-2018 year, 1st Dry Weather Event, Ramsey Street Storm Drain Site 719RMS782, Field Blank)

Laboratory Reporting and Electronic Data Deliverables (EDDs)

In general, properly formatted laboratory reports and EDDs must be received by the District within three weeks (21 days) of sample delivery to the lab. Any revised reports or EDDs are due to the District one week after comments/revisions are provided to the laboratory. Laboratory data analysis reports and EDDs may be SWAMP compatible and follow the guidelines set forth in Section 14 of Volume II.

7.2 DATA MANAGEMENT

Water quality data management will be initiated through the use of COCs and field data sheets during monitoring and sample relinquishment to the laboratory. The COC form for the programs described herein is attached in Appendix A of the QAPP. The field data sheet is located in Appendix B of the QAPP.

Analytical data quality control checks will be conducted by laboratory consultants, the District's Data Manager, and/or the CVWD's Laboratory Manager as appropriate. The laboratory will provide data to the District in both an electronic data deliverable (EDD) (i.e., simple text format and SWAMP compatible format) and hard copy formats within three weeks (21 days total) of a monitored event. The District's Data Manager will conduct QA/QC of laboratory data, EDDs, and all documentation according to procedures set forth in the QAPP. Data collected from the consultants and CVWD will be managed by the District in the same manner as data collected by the District.

Data may also be obtained and combined with data from other agencies and organizations from both regional and statewide monitoring programs.

7.3 REPORTING

The District, as the lead Co-Principal Permittee, will collaborate with the Permittees for reporting of data. A summary of reporting requirements and the reporting schedule, per Order Section L, are provided below. Additional information is available in the WWR Storm Water Management Plan (SWMP).

7.3.1 Program Effectiveness Assessment and Reporting

Updates to this CMP and the WWR Monitoring Plan will be made available on the District's NPDES/Municipal Stormwater Management Program internet website. The status, data, assessments, and updates to the WWR Monitoring Program will be reported in the Annual Monitoring Report. The Order Section L.11 sets forth annual reporting requirements, including:

- Description of monitoring station locations, sampling frequency, QA/QC procedures, sampling and analysis protocols, data/results summaries, methods of evaluating the data, and graphical data summaries;
- Analysis of the findings of each monitoring year, identification of water quality parameters which may have been measured outside normal ranges of that parameter based on historic water quality data; and
- The FY2015-2016 Annual Monitoring Report included identification and analysis of long-term trends in stormwater or receiving water quality, including signs of chronic water quality concerns, identification of potential urban sources of chronic problems, effectiveness of existing BMP control measures, and recommended next steps, where necessary.

It is the responsibility of the individual Permittees to track the IC/IDs occurring during the term of the Order, as well as the overall compliance level for each reporting period, per the requirements of the Order.

Formatting and Additional Submission Requirements

The report will be submitted in electronic format and will be searchable, including EDDs. Annual Monitoring Reports shall use a standard report format and shall include the following:

- An introduction;
- Summary of special studies participated in during the reporting period;
- Comprehensive interpretations and conclusions; and
- Recommendations for necessary future actions.

Additional submissions are available in Section L of the MRP.

7.3.2 Monitoring Annual Report Schedule

Per Order Section L, the District, on behalf of the Permittees, will provide monitoring annual reports to the Regional Board according to the reporting schedule provided in Table 7-1, starting with the 2014-2015 Monitoring Annual Report.

Table 7-1: Reporting Schedule

Submittal	Order Section	Reporting Frequency	Due Date
Monitoring Annual Report	L.11.a	Annually, included in the Watershed Annual Report	March 1
Watershed Annual Report	N	Annually	March 1

8.0 REFERENCES

California Regional Water Quality Control Board, Colorado River Basin Region. Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer System (MS4) Within the Whitewater River Watershed. Order No. 2013-0011. NPDES No. CAS617002. Adopted June 20, 2013.

California Regional Water Quality Control Board, Colorado River Basin. Water Quality Control Plan for the Colorado River Basin – Region 7. 1994, amended August, 2017.

Center for Watershed Protection. Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments. October 2004.

Riverside County Flood Control and Water Conservation District. Consolidated Program for Water Quality Monitoring. October 2008.

Riverside County Flood Control and Water Conservation District. Hydrology Manual. April 1978.

Sawyer, et al. Chemistry for Environmental Engineering, 4th Ed. McGraw-Hill, Inc. 1994.

Southern California Stormwater Monitoring Coalition (SMC). Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California, A report from the Stormwater Monitoring Coalition's Model Monitoring Technical Committee. August 2004.

State Water Resources Control Board. 2008 CWA Section 303(d) List of Water Quality and Limited Segment. Colorado Basin Regional Water Quality Control Board. 2010.

State Water Resources Control Board. Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. California Environmental Protection Agency. 2005.

Surface Water Ambient Monitoring Program (SWAMP). Quality Assurance Program Plan.
https://www.waterboards.ca.gov/water_issues/programs/swamp/qapp/swamp_QAPrP_2017_Final.pdf,
May, 2017.

SWAMP. SWAMP Data Management Plan. Chemistry Template.
https://www.waterboards.ca.gov/water_issues/programs/swamp/data_management_resources/templates_docs.shtml , August 21, 2013.

U.S. Environmental Protection Agency. MS4 Program Evaluation Guidance. USEPA Office of Wastewater Management. EPA-833-R-07-003. January 2007.

U.S. Environmental Protection Agency. NPDES Storm Water Sampling Guidance Document. EPA 833-B-92-001. July 1992.

U.S. Geological Survey. TWRI Book 9. Chapter A4: Collection of Water Samples, p. 18. August, 1999.