



Las Vegas Valley NPDES Municipal Stormwater Discharge Permit

Annual Report 2025-2026

November
2026

REGIONAL FLOOD CONTROL DISTRICT

CLARK COUNTY NEVADA

CITY OF LAS VEGAS NEVADA

CITY OF NORTH LAS VEGAS

HENDERSON

Brown AND Caldwell

HDR

REGIONAL FLOOD CONTROL DISTRICT

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General Manager/Chief Engineer

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November 1, 2026

Robert Zinkevich, Stormwater Supervisor
Bureau of Water Pollution Control
Nevada Division of Environmental Protection
375 E. Warms Springs Road, Suite 200
Las Vegas, NV 89119

RE: 2025 – 2026 Annual Report-Las Vegas Valley NPDES MS4 Permit

Dear Mr. Zinkevich,

Please find enclosed a copy of the 2025-2026 Annual Report for the Las Vegas Valley National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit (NV0021911). This report was prepared in cooperation with Brown and Caldwell and HDR, Inc. and is hereby submitted for your review. The Annual Report details compliance activities for the period from July 1, 2025, through June 30, 2026.

If you should have any questions, please do not hesitate to email at jtennert@regionalflood.org or by phone at (702) 685-0023.

Sincerely,

John Tennert
John Tennert (Oct 5, 2026 15:20:59 PDT)

John R. Tennert, Ph.D.
Environmental Mitigation Director

Enclosure

2025-2026
Annual Report

Las Vegas Valley
National Pollutant Discharge Elimination System
Municipal Separate Storm Sewer System Permit

Prepared for:

Las Vegas Valley
Stormwater Quality Management Committee (SQMC)

Clark County Regional Flood Control District
City of Henderson
City of Las Vegas
City of North Las Vegas
Clark County

Prepared by:

November 1, 2026

LAS VEGAS VALLEY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT

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Acronyms and Abbreviations

AB	Assembly Bill
BLM	Bureau of Land Management
BMP	Best Management Practice
BOD	Biological Oxygen Demand
CC	Clark County
CCPRO	Clark County Public Response Office
CCRFCD	Clark County Regional Flood Control District
CESQG	Conditionally Exempt Small Quantity Generators of Hazardous Waste
CFR	Code of Federal Regulations
CLV	City of Las Vegas
CNLV	City of North Las Vegas
COD	Chemical Oxygen Demand
COH	City of Henderson
CWA	Clean Water Act
E. Coli	*Escherichia coli*
EPA	Environmental Protection Agency
GIS	Geographic Information System
GPCD	Gallons per capita per day
HCDDM	Hydrologic Criteria and Drainage Design Manual
IC	Ion Chromatography
ICAP	Inductively Coupled Argon Plasma Spectroscopy
IDDE	Illicit Discharge Detection and Elimination
LVMC	Las Vegas Municipal Code
LVV	Las Vegas Valley
LVVWAC	Las Vegas Valley Watershed Advisory Committee
LVWCC	Las Vegas Wash Coordination Committee
MBAS	Methylene Blue Active Substance (Surfactants)
MEP	Maximum Extent Practicable
mg/L	milligrams per liter
MIBK	2-Methyl-2-pentanone
MPU	Master Plan Update
MS4	Municipal Separate Storm Sewer System
MWP	Maintenance Work Program
NA	Not Available / Not Analyzed
NAICS	North American Industry Classification System
ND	Non-detect / Not Detected
NDEP	Nevada Division of Environmental Protection
NDOT	Nevada Department of Transportation
NDSR	New Development and Significant Redevelopment
NLVMC	North Las Vegas Municipal Code
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System

NPS	Non-Point Source
NTU	Turbidity
P	Phosphorus
PDF	Permitted Disposal Facility
PE	Professional Engineer
Permittees	Las Vegas Valley Permittees
pH	Measure of acidity or alkalinity
PSA	Public Service Announcement
RCRA	Resource Conservation and Recovery Act
RTC	Regional Transportation Commission of Southern Nevada
SARA	Superfund Amendments and Reauthorization Act
SGS	Société Générale de Surveillance
SIC	Standard Industrial Classification
SNHD	Southern Nevada Health District
SNWA	Southern Nevada Water Authority
SQMC	Stormwater Quality Management Committee
sq. ft.	Square Feet
STEAM	Science, Technology, Engineering, Arts, and Mathematics
SVOC	Semivolatile Organic Compound
SWMP	Stormwater Management Plan
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TON	Total Organic Nitrogen
TRI	Toxics Release Inventory
TSS	Total Suspended Solids
UDB	Ultimate Development Boundary
USGS	United States Geological Survey
UST	Underground Storage Tank
VOC	Volatile Organic Compound
WLA	Wasteload Allocation



Section 1.0

Introduction

Section 1

Introduction

The United States Environmental Protection Agency (EPA) has adopted regulations to control pollutants entering the environment through storm drainage facilities associated with the Municipal Separate Storm Sewer System (MS4). In compliance with these regulations, on February 5, 2024, the Nevada Division of Environmental Protection (NDEP) issued National Pollutant Discharge Elimination System (NPDES) Permit No. NV0021911 jointly to the Clark County Regional Flood Control District (CCRFCD), the City of Las Vegas (CLV), the City of North Las Vegas (CNLV), the City of Henderson (COH), and Clark County (CC), collectively known as the Las Vegas Valley Permittees (Permittees). The permit authorizes the Permittees to discharge stormwater from the MS4. The permit is issued for a period of five years (2024-2029).

1.1 Annual Report Organization

This Annual Report is prepared to document that the Permittees have complied with the permit requirements and measurable goals identified in the 2011 Stormwater Management Plan (SWMP) and the 2026 SWMP, reflecting the transition between the two plans during the permit year (July 1, 2025 through June 30, 2026). The Permittees submitted the Final 2026 SWMP to NDEP in May 2026 in compliance with the 2024 MS4 Permit. The Annual Report is organized to address each of the main programs required by the NPDES MS4 Permit and associated SWMP for the Las Vegas Valley:

- Section 1.0 Introduction
- Section 2.0 B.5.1 SWMP Revision
- Section 3.0 B.5.2 Source Identification
- Section 4.0 B.5.3 Characterization Data and Stormwater Monitoring
- Section 5.0 B.5.4 Public Outreach and Education
- Section 6.0 B.5.5 MS4 Maintenance Activities
- Section 7.0 B.5.6 Post-Construction Program for New Development and Significant Redevelopment Projects
- Section 8.0 B.5.7 Illicit Discharge Detection and Elimination
- Section 9.0 B.5.8 Industrial Facility Monitoring and Control
- Section 10.0 B.5.9 Construction Site BMP Program
- Section 11.0 B.5.10 Inspection of Construction Sites
- Section 12.0 B.5.12 Reviewing and Updating Stormwater Management Programs
- Section 13.0 B.5.13 Responsibility for SWMP Implementation in New Areas
- Section 14.0 B.5.15 Legal Authority
- Section 15.0 Additional Information Pursuant to the 2011 SWMP

1.2 Permit Coordination

The CCRFCD is the coordinating agency responsible for general administration of the permit conditions, preparation of reports, coordination among Permittees, and serving as liaison with NDEP. In addition, the CCRFCD provides funding for many of the regional permit compliance efforts. The CCRFCD also retained Brown and Caldwell and HDR to assist with preparation of information required to comply with the conditions of the permit.

Further permit coordination during the permit year was facilitated by the Stormwater Quality Management Committee (SQMC). The SQMC is comprised of representatives from each of the Permittees (Public Works Director or equivalent and General Manager of the CCRFCD), who advise on topics for permit implementation. Public SQMC meetings were held four times, on August 12, 2025, November 10, 2025, February 10, 2026, and May 12, 2026.

SQMC meetings were regularly attended by other employees of the Permittees, employees of other local agencies, entities that have an interest in water quality issues (i.e., stakeholders), and members of the general public. Meeting agendas and meeting minutes were made available to the public and time was allowed in each meeting for public comments. The SQMC Representatives as of June 30, 2026, are shown in Table 1-1.

Table 1-1. 2025-2026 Stormwater Quality Management Committee (SQMC) Representatives as of June 30, 2026

SQMC Representatives	Title	Permittee
Andrew Trelease, PE (Chair)	General Manager/Chief Engineer	Clark County Regional Flood Control District
Lance Olson, PE	Director of Public Works	City of Henderson
Michael Cunningham, PE	Director of Public Works	City of Las Vegas
Mike Hudgeons, PE	Director of Public Works	City of North Las Vegas
Denis Cederburg, PE	Director of Public Works	Clark County
SQMC Representatives	**Title**	**Permittee**
John Tennert	Environmental Mitigation Director	Clark County Regional Flood Control District
Steven Conner, PE	City Engineer	City of Henderson
Gina Venglass, PE	Deputy Director of Public Works	City of Las Vegas
Lenny Badger, PE	Manager, Development and Flood Control Division	City of North Las Vegas
Dean Mosher	Public Works Assistant Manager Maintenance Management	Clark County

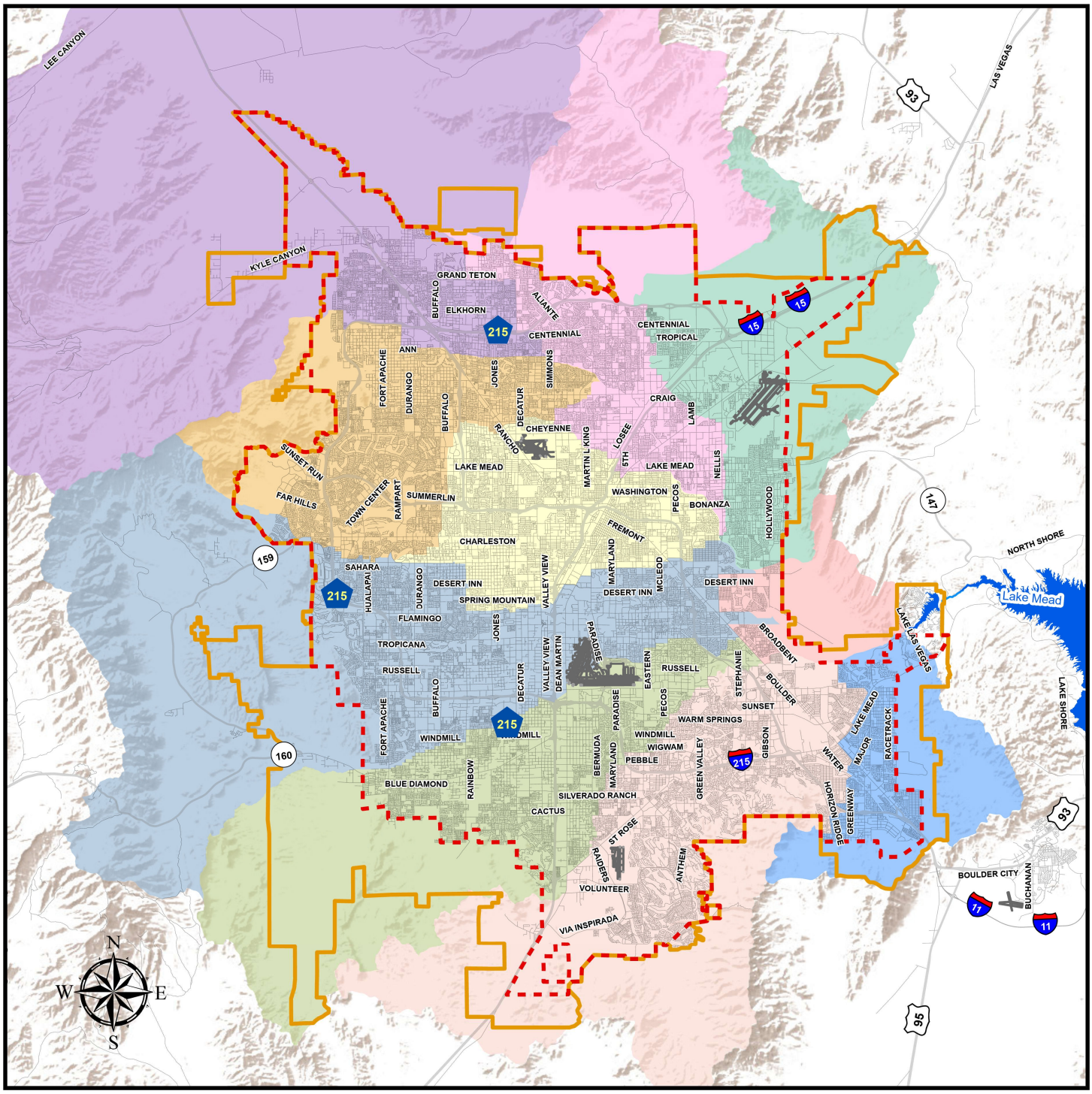
1.3 Las Vegas Valley Area Map

The Las Vegas Valley NPDES MS4 Permit applies to all the urbanized and urbanizing watershed areas that are naturally tributary to the Las Vegas Wash. The permit area of coverage includes the cities of Las Vegas, the majority of North Las Vegas, and the majority of Henderson, as well as the urbanized portions of unincorporated Clark County that lie within the Las Vegas Valley. The permit does not apply to federal or state-owned land in the Las Vegas Valley or to sites that have their own NPDES MS4 Permit (i.e., Nellis Air Force Base, Nevada Department of Transportation [NDOT] facilities).

The ultimate development boundary (UDB) within the 2023 Las Vegas Valley Flood Control Master Plan Update is used as the baseline for determining applicability of the 2024 MS4 Permit and assumes that the full “build out” condition is reached and all available land within the Las Vegas Valley is fully developed. This condition is assumed so that flood control facilities built today are planned to have capacity for future runoff. The development of the UDB is based on the limits of where development is expected to occur in the Las Vegas Valley, using criteria such as location of protected lands and mountain terrain that surround the Las

Vegas Valley. The Bureau of Land Management (BLM) manages a “disposal boundary” in the Las Vegas Valley, which designates federally managed lands that could eventually be privatized and developed.

The permit area encompasses the urbanized and urbanizing area within the 2023 UDB area, modified as described in prior Annual Reports, within the Las Vegas Valley watershed that ultimately contributes to the Las Vegas Wash. The area of coverage for the 2025-2026 MS4 permit year is within the 2023 UDB – Updated for the Las Vegas Valley MS4 Program and the BLM Disposal Boundary, as shown in Figure 1-1.



Legend

- Las Vegas Valley Disposal Boundary
- Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)
- Airport
- Street

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

0 2 4 8 12

Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

Figure 1-1
Las Vegas Valley Area Map
2025-2026 Annual Report



Section 2.0

B.5.1 SWMP Revision

Section 2

B.5.1 SWMP Revision

Section B.5.1 of the 2024 MS4 Permit for the Las Vegas Valley requires development of a revised SWMP. Section B.5.1.6 requires the Permittees to present a review of legal authority to implement the requirements of the permit and to identify additional ordinances or regulatory mechanisms to be adopted. Section B.5.1.9 requires the Permittees to provide information explaining how and why Best Management Practices (BMPs) and measurable goals were selected for inclusion and to demonstrate that implementation of approved BMPs satisfies the standard of reducing pollutants to the Maximum Extent Practicable (MEP). In addition, Section B.6.3.3.11 requires Permittees to provide information on annual expenditures for the reporting period, broken down by the major programs indicated in the SWMP.

2.1 Permit Year Overview

The Cities and Clark County Permittees are supported by local ordinances that grant them the authority to implement the requirements of the 2024 MS4 Permit. When appropriate, modifications to ordinances were adopted. Section B.5.1.6 of the MS4 Permit applies to legal authority and ordinance review activities.

Section B.5.1.11 applies to the staff and resources available to implement SWMP program elements. The CCRFCD will continue to fund its MS4 program responsibilities from revenue collected from the ¼ cent sales tax that provides funding for all CCRFCD functions. The other Permittees (CC, CLV, CNLV, and COH) will continue to fund their projects from a combination of CCRFCD funding and general fund revenues. A portion of the construction program measures (e.g., inspections, design reviews) may also be financed through development permit fees.

Permittee staff from multiple departments work to ensure compliance with the 2024 MS4 Permit, such as conducting industrial and construction site inspections, responding to complaints, reviewing development submittals, and performing MS4 maintenance activities.

2.1.1 Compliance and Enforcement

Section B.5.1.6 of the 2024 Permit requires a review of the legal authority and ordinances developed and implemented to comply with the 2024 MS4 Permit. Local ordinances were reviewed by each Permittee during the permit year. Members of the SQMC work together to coordinate cross-jurisdictional cooperation and compliance with the Permit. While the Permittees' stormwater ordinances are similar, they may differ to fit the needs of each jurisdiction's program and how the jurisdiction administers compliance and enforcement.

2.1.2 Staff and Resources

The summary of current expenditures and the anticipated budget for the next permit year are included in Table 2-1 and Table 2-2, respectively.

Table 2-1. Annual Las Vegas Valley MS4 Program Expenditures for the Current Permit Year (2025-2026) *					
Permit Element	Clark County Regional Flood Control District	City of Henderson	City of Las Vegas	City of North Las Vegas	Clark County
Public Outreach and Education Program	$122,206	$21,758	$104,967	$12,493	$63,403
Stormwater Monitoring Program	$56,853	N/A	N/A	N/A	N/A
Source Control and MS4 Maintenance Program [a]	$14,092,802	$4,116,615	$28,894,631	$3,315,930	$13,913,044
Post-Construction Program for NDSR	$41,361,695	$9,168,041	$1,018,809	$16,822	$4,374,526
Illicit Discharge Detection and Elimination Program	$5,000	$963,272	$5,628,678	$1,859,360	$63,988,981
Industrial Facility Monitoring and Control Program	$0	$53,764	$120,929	$82,360	$1,897,335
Construction Site Program	$10,000	$132,981	$218,365	$62,902	$397,241
MS4 Program Management [b]	$420,190	$62,178	$204,353	$81,900	$253,612
TOTAL [c]	$56,068,746	$14,518,609	$36,190,732	$5,431,767	$84,888,142

Notes:

[a] Amount includes funding from CCRFCD. Amount from CCRFCD MWP is included in source control expenditures

[b] This category includes staff and consulting costs, management, and administrative costs, reporting, tracking, Permittee coordination, and other related costs

[c] There may be expenditures made by the Permittees, SNWA, SNHD, and others that are not captured in this estimate

* The values presented in this table should not be compared between entities because each entity uses different methods for categorizing and tracking expenditures

Table 2-2. Anticipated Las Vegas Valley MS4 Program Budget for the Next Permit Year (2026-2027) *					
Permit Element	Clark County Regional Flood Control District	City of Henderson	City of Las Vegas	City of North Las Vegas	Clark County
Public Outreach and Education Program	$117,206	$25,500	$92,578	$15,000	$68,210
Stormwater Monitoring Program	$111,549	N/A	N/A	N/A	N/A
Source Control and MS4 Maintenance Program [a]	$15,000,000	$5,876,964	$31,033,478	$3,506,500	$10,115,848
Post-Construction Program for NDSR	$40,202,800	$10,323,568	$1,049,374	$28,000	$4,409,848
Illicit Discharge Detection and Elimination Program	$5,000	$993,977	$5,665,255	$2,500,000	$114,975,131
Industrial Facility Monitoring and Control Program	$0	$10,533	$124,557	$95,000	$1,897,510
Construction Site Program	$10,000	$137,646	$224,916	$73,000	$425,157
MS4 Program Management [b]	$532,153	$64,354	$227,482	$85,000	$272,840
TOTAL [c]	$55,978,708	$17,432,542	$38,417,640	$6,302,500	$132,164,544

Notes:

[a] Amount includes funding from CCRFCD. Amount from CCRFCD MWP is included in source control expenditures

[b] This category includes staff and consulting costs, management, and administrative costs, reporting, tracking, Permittee coordination, and other related costs

[c] There may be expenditures made by the Permittees, SNWA, SNHD, and others that are not captured in this estimate

* The values presented in this table should not be compared between entities because each entity uses different methods for categorizing and tracking expenditures

2.2 Permit Year Measurable Goals

Table 2-3 provides a description of the status of Permittee attainment of the measurable goals in the submitted Final SWMP (2026).

Table 2-3. SWMP Revision Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.1a	Review legal authority each permit year as part of the Annual Report.	City of Henderson	Yes	Reviewed
		City of Las Vegas	Yes	Reviewed Urban Forestry Management Plan adopted by City Council on 12/17/25
		City of North Las Vegas	Yes	Reviewed
		Clark County	Yes	Reviewed 24.40 on 2/18/26 and concluded it provided adequate regulatory provisions to enforce the new MS4 Permit
Measure 5.1b	Each permit year provide NDEP with a summary of the costs expended for that permit year and a budget for the following permit year as part of the Annual Report.	City of Henderson	Yes	Tables 2-1 and 2-2 present the Annual Las Vegas Valley MS4 Program Expenditures for the Current and for the next Permit Year
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	
		Clark County Regional Flood Control District	Yes	



Section 3.0

B.5.2 Source Identification

Section 3

B.5.2 Source Identification

Section B.5.2 of the 2024 MS4 Permit for the Las Vegas Valley requires the preparation of a map of the existing regional MS4, including major stormwater outfalls in the area of coverage.

3.1 Permit Year Overview

During the permit year, the MS4 map was updated to assist the Permittees, regulatory agencies, and other stakeholders to determine where potential stormwater quality problems may exist or originate. The map is based on existing computerized inventory information from the Permittees that defines the existing drainage and flood control system.

The MS4 map was prepared using regional information from the CCRFCD Geographic Information System (GIS), which was developed for the 2023 Master Plan Update (MPU), as well as GIS data available from the individual Permittees. The map includes the MS4 boundary (2023 UDB within the Las Vegas Valley watershed) in the Final SWMP (2026) and no changes to this boundary were made during the 2025-2026 permit year. The MS4 map depicts changes resulting from new development and updates to flood control infrastructure. Locations of regional detention basins (constructed and under construction), channels (lined and unlined), washes, and outfall locations for the Las Vegas Valley MS4 are shown in Figure 3-1. To provide more detail, Figure 3-2 through Figure 3-5 depict sectional areas of the Las Vegas Valley (northwest, northeast, southwest, and southeast, respectively).

Although pipelines and potential outfalls are shown in Figure 3-1, in the Las Vegas Valley pipelines are not as significant as they may be in communities with more precipitation, where they may discharge into fishable—swimmable waters. In the Las Vegas Valley, most or all pipelines discharge into constructed open channels that are a part of the MS4. These open channels are often lined with concrete and are not classified for fishing or swimming. These open channels discharge into other open channels, ultimately leading to the lower Las Vegas Wash, which is also not classified for fishing or swimming but supports fish. The outfalls are identified as potential because they identify the daylighting end of pipelines at the tributary channels regardless of whether those pipelines discharge into a water of the United States.

3.2 Permit Year Measurable Goals

Table 3-1 provides a description of the status of the measurable goal in the submitted Final SWMP (2026).

Table 3-1. Source Identification Measurable Goal

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.2a	Submit updated maps once each permit year as part of the Annual Report.	Clark County Regional Flood Control District	Yes	Maps are updated and included in the 2025-2026 Annual Report.

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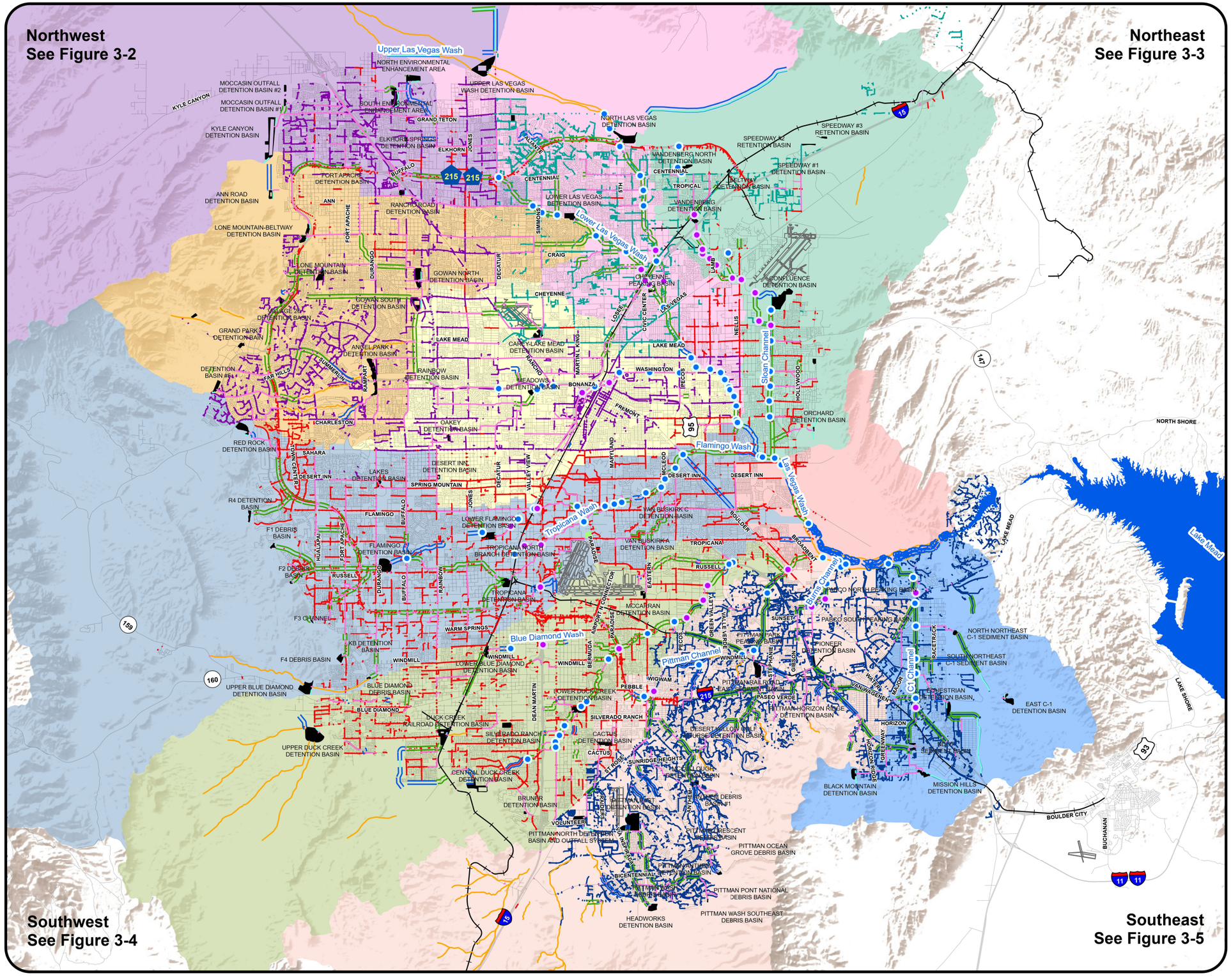
Figure 3-1
Las Vegas Valley Stormwater System: Overview



Legend

- Potential Outfall Location
- Potential Outfall Location in Industrial Area

Regional Facilities

- Natural Channels/Washes
- Unlined Stabilized Channels
- Concrete-Lined Channels
- Levee
- Storm Drains

Local Facilites

- Clark County Stormwater Infrastructure
- City of Las Vegas Stormwater Infrastructure
- City of North Las Vegas Stormwater Infrastructure
- City of Henderson Stormwater Infrastructure

Detention Basins

- Completed
- Under Construction

- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

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Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

2025-2026 Annual Report

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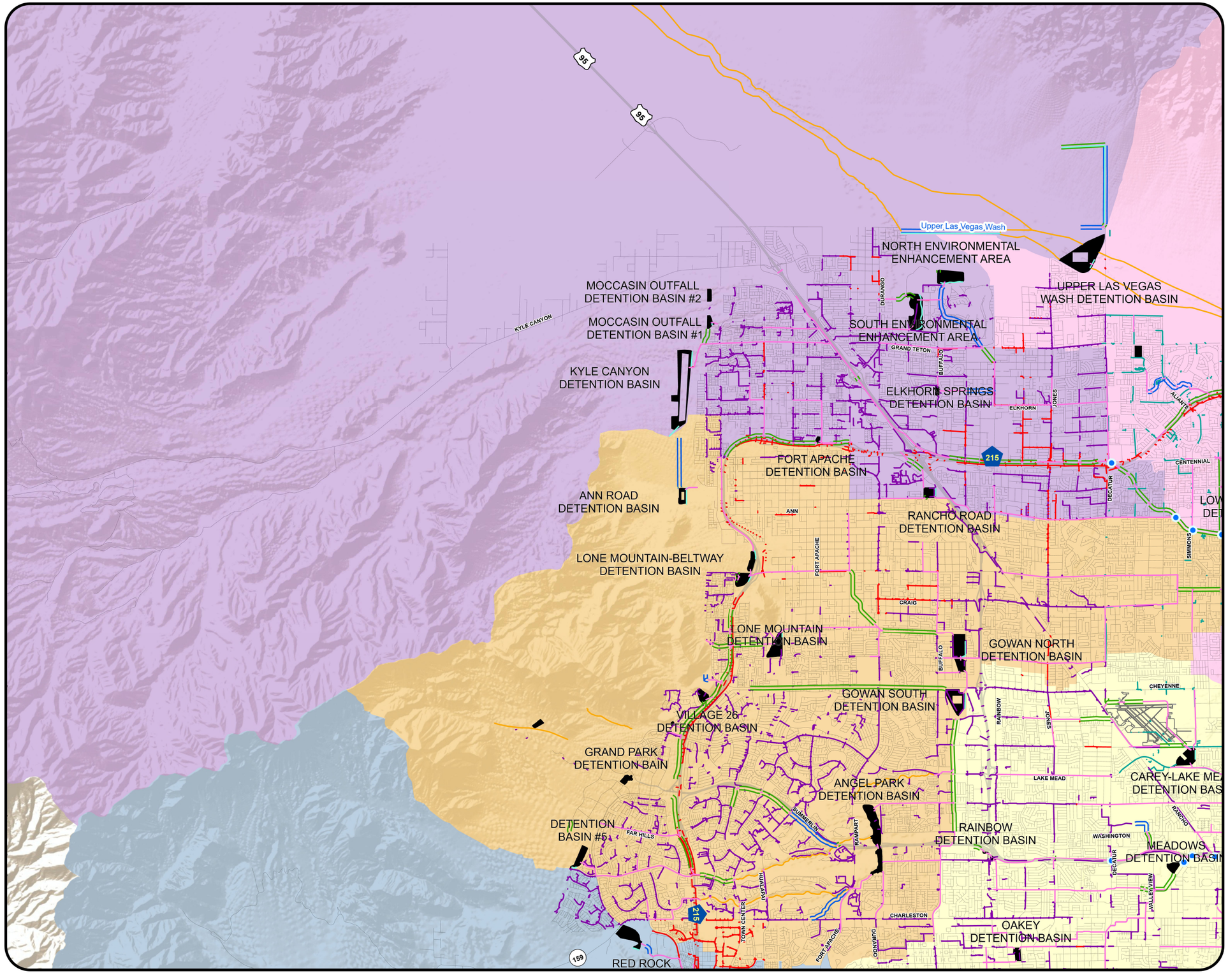
Figure 3-2
Las Vegas Valley Stormwater System: Northwest



Legend

- Potential Outfall Location
- Potential Outfall Location in Industrial Area

Regional Facilities

- Natural Channels/Washes
- Unlined Stabilized Channels
- Concrete-Lined Channels
- Levee
- Storm Drains

Local Facilites

- Clark County Stormwater Infrastructure
- City of Las Vegas Stormwater Infrastructure
- City of North Las Vegas Stormwater Infrastructure
- City of Henderson Stormwater Infrastructure

Detention Basins

- Completed
- Under Construction
- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

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Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

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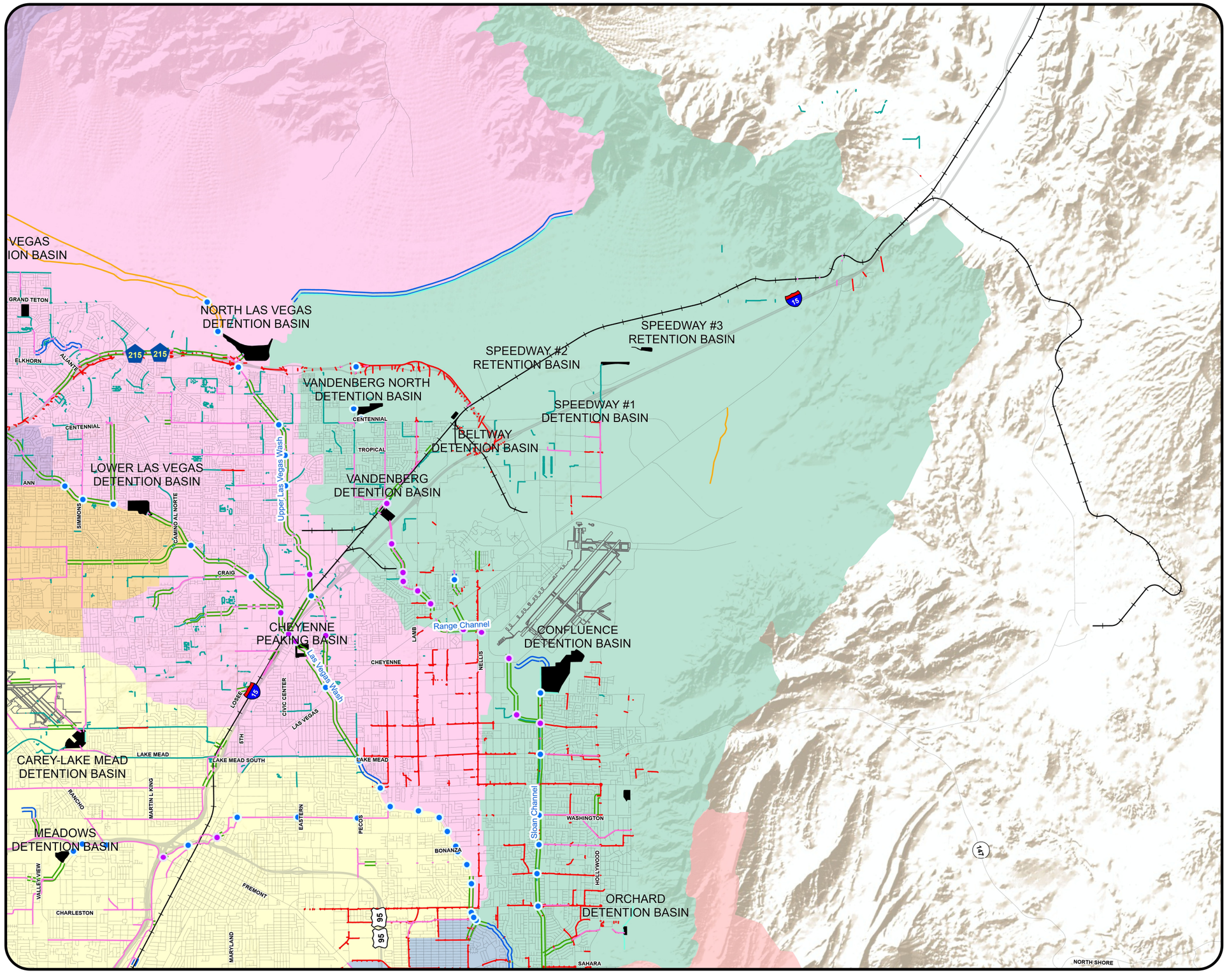
Figure 3-3
Las Vegas Valley Stormwater System: Northeast



Legend

- Potential Outfall Location
- Potential Outfall Location in Industrial Area

Regional Facilities

- Natural Channels/Washes
- Unlined Stabilized Channels
- Concrete-Lined Channels
- Levee
- Storm Drains

Local Facilites

- Clark County Stormwater Infrastructure
- City of Las Vegas Stormwater Infrastructure
- City of North Las Vegas Stormwater Infrastructure
- City of Henderson Stormwater Infrastructure

Detention Basins

- Completed
- Under Construction
- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

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Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

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Figure 3-4
Las Vegas Valley Stormwater System: Southwest

RED ROCK DETENTION BASIN
R4 DETENTION BASIN
F1 DEBRIS BASIN
F2 DEBRIS BASIN
F3 CHANNEL
F4 DEBRIS BASIN
UPPER BLUE DIAMOND DETENTION BASIN
UPPER DUCK CREEK DETENTION BASIN
KB DETENTION BASIN
BLUE DIAMOND DEBRIS BASIN
LAKES DETENTION BASIN
OAKEY DETENTION BASIN
DESERT INN DETENTION BASIN
FLAMINGO DETENTION BASIN
LOWER FLAMINGO DETENTION BASIN
TROPICANA NORTH BRANCH DETENTION BASIN
TROPICANA DETENTION BASIN
LOWER BLUE DIAMOND DETENTION BASIN
DUCK CREEK RAILROAD DETENTION BASIN
CENTRAL DUCK CREEK DETENTION BASIN
BRUNER DETENTION BASIN
PITTMAN NORTH DETENTION BASIN AND OUTFALL SYSTEM
SILVERADO RANCH DETENTION BASIN
LOWER DUCK CREEK DETENTION BASIN
CACTUS DETENTION BASIN
VAN BU DETENTI
MCCAR DETENTIO
PITTMAN EA DETENTION B
Flamingo Wash
Tropicana Wash
Blue Diamond Wash
Duck Creek Channel
CHARLESTON
SAHARA
SPRING MOUNTAIN
FLAMINGO
TROPICANA
SUNSET
WARM SPRINGS
WINDMILL
RUSSELL
DESERT INN
WILBUR CLARK DI EAST
FREMONT
TOWN CENTER
RAMPART
BUFFALO
JONES
VALLEY VIEW
RANCHO
MARTIN L KING
MARYLAND
EASTERN
PARADISE
HUALAPAI
FORT APACHE
DURANGO
DECATUR
DEAN MARTIN
AIRPORT CONNECTOR
LAS VEGAS
RAINBOW
BLUE DIAMOND
BERMUDA
PEBBLE
SILVERADO RANCH
CACTUS
ST ROSE
RAIDERS
SUN CITY ANTHEM
VOLUNTEER
95
215
15
159
160

Legend

- Potential Outfall Location
- Potential Outfall Location in Industrial Area

Regional Facilities

- Natural Channels/Washes
- Unlined Stabilized Channels
- Concrete-Lined Channels
- Levee
- Storm Drains

Local Facilites

- Clark County Stormwater Infrastructure
- City of Las Vegas Stormwater Infrastructure
- City of North Las Vegas Stormwater Infrastructure
- City of Henderson Stormwater Infrastructure

Detention Basins

- Completed
- Under Construction

- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

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Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

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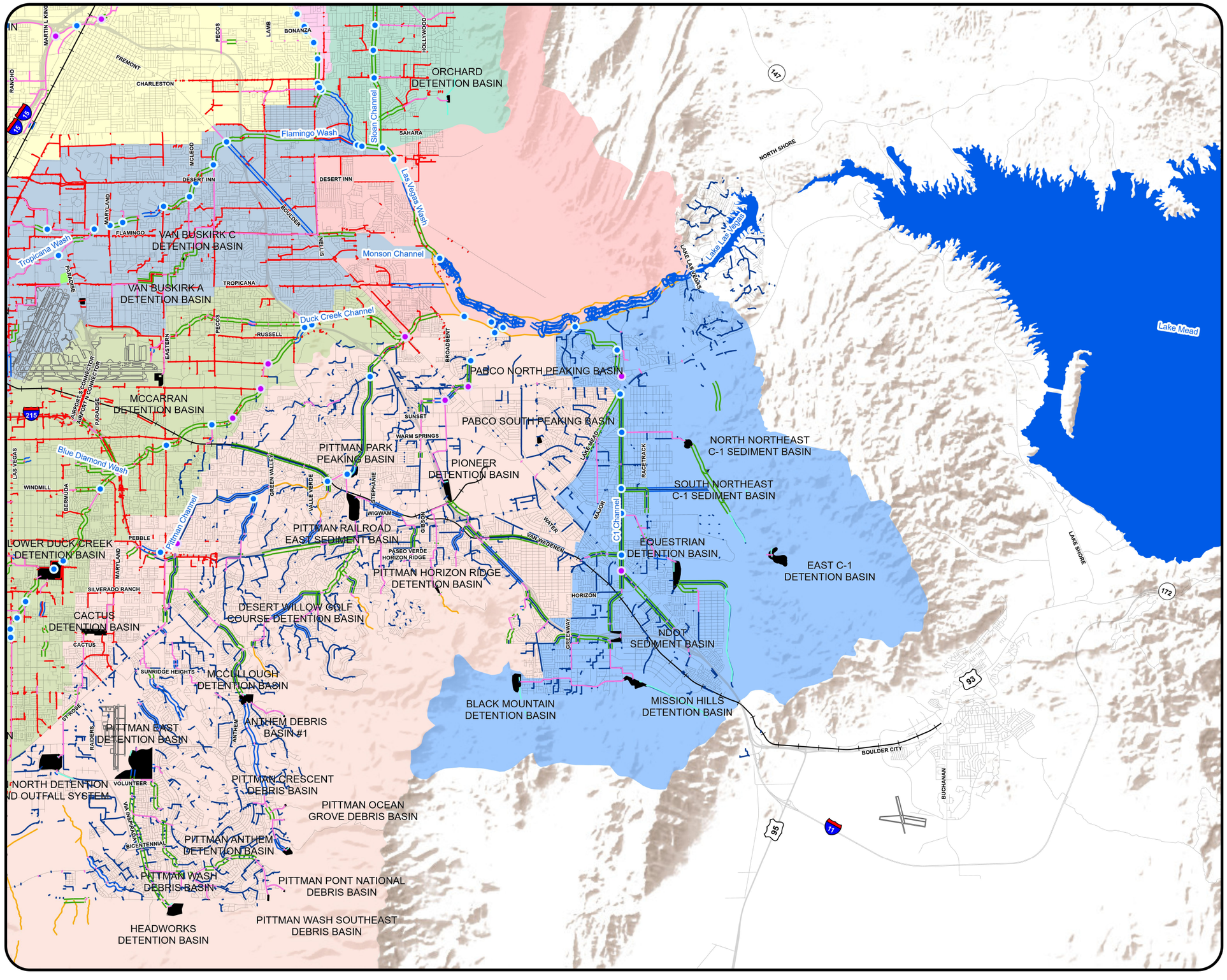
Figure 3-5
Las Vegas Valley Stormwater System: Southeast



Legend

- Potential Outfall Location
- Potential Outfall Location in Industrial Area

Regional Facilities

- Natural Channels/Washes
- Unlined Stabilized Channels
- Concrete-Lined Channels
- Levee
- Storm Drains

Local Facilites

- Clark County Stormwater Infrastructure
- City of Las Vegas Stormwater Infrastructure
- City of North Las Vegas Stormwater Infrastructure
- City of Henderson Stormwater Infrastructure

Detention Basins

- Completed
- Under Construction

- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

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Scale in Miles

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

2025-2026 Annual Report

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Section 4.0

B.5.3 Characterization Data and Stormwater Monitoring

Section 4

B.5.3 Characterization Data and Stormwater Monitoring

Section B.6.1 of the 2024 MS4 Permit for the Las Vegas Valley describes the requirements for a stormwater monitoring program, including the evaluation of available water quality characterization data for the permit area. Section B.5.3 requires the establishment of a measurable goal for this evaluation, providing the basis for assessing completion of the water quality characterization data review. Section B.6.3.3.6 of the 2024 MS4 Permit includes requirements for reporting on the stormwater monitoring program.

4.1 Wet Weather Monitoring

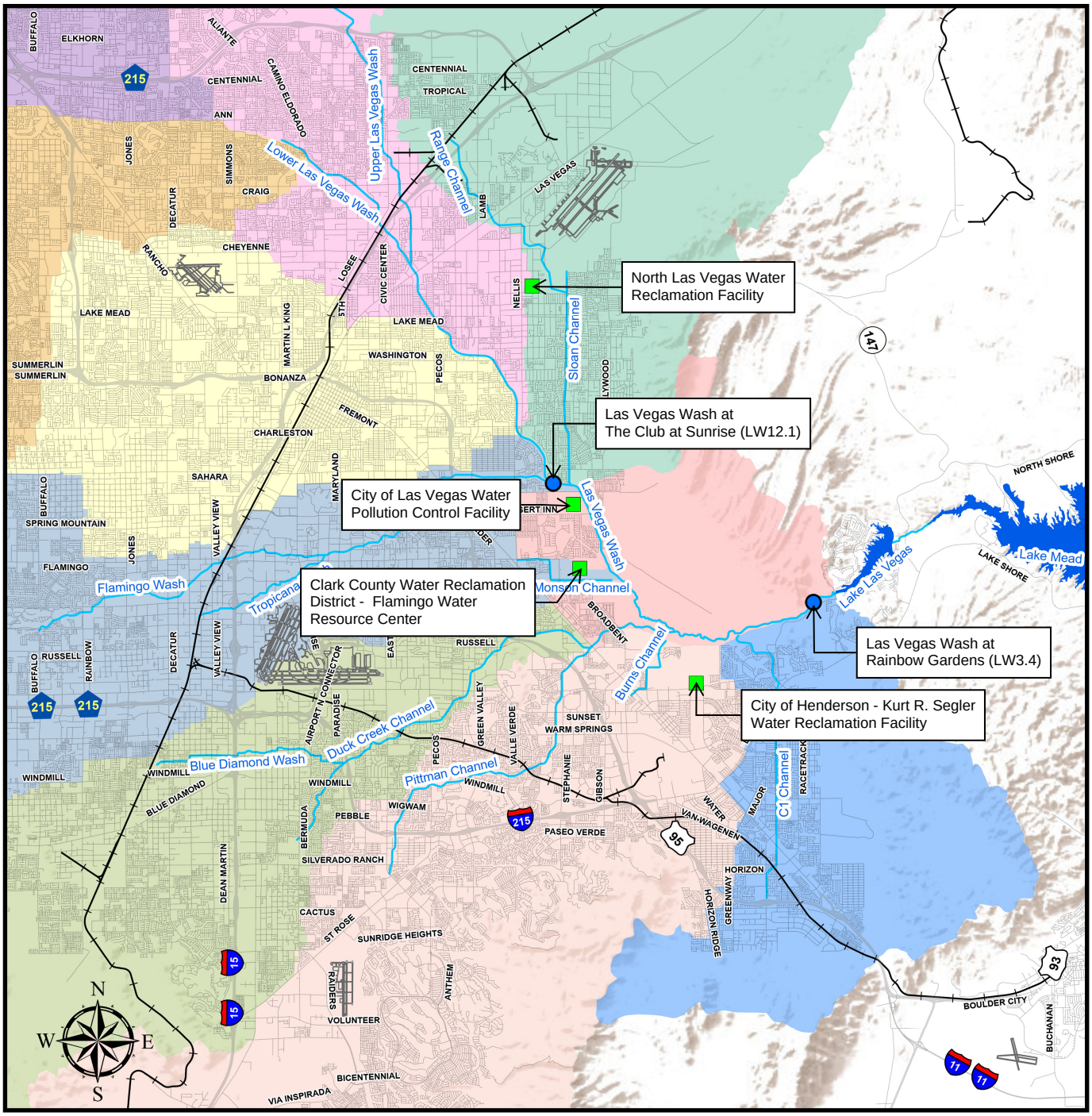
This section of the Annual Report describes the stormwater monitoring activities performed as described in the Stormwater Monitoring Plan, including an evaluation of the characterization data collected during the permit year. In the 2023-2024 Annual Report, an extensive data evaluation concluded that the monitoring program should not be modified because data collected continues to be consistent with previous years.

The 2025-2026 permit year monitoring results continue to support the conclusions reported in the 2023-2024 Annual Report. Total Suspended Solids (TSS) and turbidity data indicate that erosion control structures, channel stabilization measures, and regional detention facilities within the Las Vegas Valley continue to be effective in limiting sediment transport through the lower Las Vegas Wash. The monitoring results also continue to support the conclusion that TSS concentrations and turbidity levels from the Las Vegas Valley are not having a significant effect on the lower Las Vegas Wash or Lake Mead. Overall, the 2025-2026 monitoring results are generally consistent with historical monitoring results, and no significant changes to the data collection or sampling program are proposed for the 2026-2027 permit year.

4.1.1 Wet Weather Sampling Procedures

The wet weather monitoring program for the 2025-2026 permit year followed the same protocols as described in the 2026 Stormwater Monitoring Plan. Samples were properly preserved and analyzed using approved methods in accordance with 40 CFR 136 and within the maximum allowable holding times. Sampling is conducted at the following locations, as displayed in Figure 4-1:

- Las Vegas Wash at The Club at Sunrise (The Club at Sunrise)
- Las Vegas Wash at Rainbow Gardens (Rainbow Gardens)



Legend

- Wet Weather Sampling Point (USGS Site Number)
- Wastewater Treatment Plant
- Airports
- Streets
- Railroads
- Lakes
- Washes

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

0 1 2 4 6

Scale in Miles

Figure 4-1
Wet Weather Monitoring Sites
2025-2026 Annual Report

Service Layer Credits: World Terrain Base:

The Club at Sunrise sampling site is located on the Las Vegas Wash immediately upstream of the confluence of Sloan Channel and Las Vegas Wash. The Sloan Lane Improvements Project includes the construction of a new bridge over the Las Vegas Wash, providing a connection between Ruby Creek Drive and Vegas Valley Drive. As a result of this work, the existing vehicle access to the sampling box location has been temporarily closed, preventing automated sample collection during the second and third sampling events reported below. Consequently, the two rain events sampled during the 2025-2026 permit year were conducted manually at a location approximately 0.25 miles upstream of the original sampling site. Following completion of the Sloan Lane project, a new evaluation of the site will be conducted to assess the conditions and confirm suitability for ongoing sampling at the original sampling location.

The wet weather sampling goal for the 2025-2026 permit year included collecting a minimum of three sampling events per year, with a maximum of ten sampling events weather dependent, from each of the two sites during significant storm events. A significant storm event is defined as a total rainfall depth of 0.16 inches at any rain gauge within the drainage area tributary to a monitoring station. Based on historical experience, a depth of 0.16 inches is required to generate sufficient runoff for a sampling event. The sampling team used both the CCRFCD website (https://www.regionalflood.org) and the United States Geological Survey (USGS) website (https://waterdata.usgs.gov/state/Nevada) to view rainfall maps and stream gauge water levels in the Las Vegas Valley in real time. This data helped determine if the storm was likely to meet the stormwater sampling flow requirements. During the 2025-2026 permit year, samples were able to be collected three times at both The Club at Sunrise and Rainbow Gardens.

For each sampling event, both automatic samples and grab samples were collected and brought back to the in-office laboratory for preparation. Composite samples were prepared for each site by combining 24 approximately equal-volume aliquots. For each sample in the 2025-2026 permit year, composite samples were prepared, and volumes were individually deposited into laboratory sample bottles and preserved according to laboratory method requirements. Samples were then delivered to Société Générale de Surveillance (SGS), a laboratory certified by the State of Nevada for each constituent analyzed. All constituents were analyzed using Nevada-certified laboratories. Because there are no Nevada-certified laboratories using Method 632 for additional organic compounds, these parameters will no longer be analyzed.

As part of the 2025–2026 wet-weather sampling events described above, additional samples were collected to further evaluate the correlation between turbidity and TSS. Duplicate turbidity and TSS samples were collected during each sampling event and analyzed by ASSET Laboratories. In-situ turbidity measurements were also collected at approximately 3-minute intervals at The Club at Sunrise and 5-minute intervals at Rainbow Gardens to align with the sampling duration.

4.1.2 Wet Weather Constituents

The wet weather monitoring program includes standard stormwater constituents and additional constituents selected for monitoring in the Las Vegas Valley. The standard stormwater constituents include constituents analyzed as part of the original NPDES MS4 sampling program, while the additional constituents include constituents also monitored by SNWA as part of the dry weather monitoring program. The constituents analyzed during the 2025-2026 permit year are shown in Table 4-1.

Table 4-1. Constituents and Analytical Methods in Wet Weather Samples for the Current Permit Year (2025-2026)	
Analytical Method	**Constituents Analyzed**
8260B	2-chloroethyl vinyl ether
SM 2320B	Alkalinity, bicarbonate, carbonate
SM 4500NH3D	Ammonia
SM 5210B	Biological Oxygen Demand (BOD)
632	Carbamate pesticides
SM 5220D	Chemical Oxygen Demand (COD)
SM 4500CNE	Cyanide
SM 2510B	Electrical conductivity
SM 9223B	*E. Coli*
Colilert-18	Fecal coliform
Enterolert	Fecal Streptococcus
SM 2340B	Hardness
8151A	Herbicides
200.7	Magnesium, sodium, iron, aluminum
SM 5540C	Methylene Blue Active Substances (MBAS) (Surfactants)
245.2	Mercury
300	Nitrate-N, nitrite-N, bromide, sulfate, fluoride
1664A	Oil and grease
525.2, 531.2, 551.1, 556, 625, 8081A, 8082, 8270D	Organics
556	Pesticides, volatile organic compounds
SM 4500-HB	pH
200.8	Selenium, selenium (dissolved), antimony, barium, beryllium, boron, cadmium, chromium, copper, copper (dissolved), lead, lead (dissolved), arsenic, manganese, nickel, silver, thallium, zinc, zinc (dissolved)
SM 5540C, 425.1	Surfactants
SM 2540C	TDS
Thermal Analysis (In Situ)	Temperature
SM 5310C, 415.3	Total Organic Carbon (TOC)
Calculation	Total Organic Nitrogen (TON)
SM 4500NorgC	Total Kjeldahl Nitrogen (TKN)
SM 4500PE	Total phosphorous-P, orthophosphate-P
SM 2540D	TSS
SM 2130B / (In Situ)	Turbidity

4.1.3 Wet Weather Monitoring Results

During the 2025-2026 permit year, three significant storm events occurred, allowing three sample collections from the sampling locations at The Club at Sunrise and Rainbow Gardens.

The laboratory analyzed the list of constituents for the storm events during the permit year. Wet weather sampling was conducted at The Club at Sunrise and Rainbow Gardens on October 10, November 15, and

November 18, 2025. Wet weather sampling reports for the significant storm events and historical wet weather sampling data are included in Appendix A.

Tables 4-2 and 4-3 present the results of wet weather monitoring data collected in the 2025-2026 permit year for both The Club at Sunrise and Rainbow Gardens sampling locations, respectively. Tables 4-4 and 4-5 display the presence of organic compounds in the samples collected during the current permit year at The Club at Sunrise and Rainbow Gardens. Review of data collected for the Wet Weather Monitoring Program in 2025-2026 does not show identifiable trends in wet weather constituent concentrations that would suggest a change in the nature of stormwater pollutants generated in the Las Vegas Valley watershed. Data was generally consistent with previously collected wet weather characterization data.

Table 4-2. The Club at Sunrise Wet Weather Monitoring Constituent Data for the Current Permit Year (2025-2026)

Parameter	Units	10-Oct-2025	15-Nov-2025	18-Nov-2025	Median 2025-2026	Historical Median 1997-2026	Historical Range 1997-2026		
NPDES Constituents [a]									
Oil and Grease - Gravimetric	mg/L	< 5	5.2	6.4	5.2	< 5	<2.4	-	1,180
Total Dissolved Solids (TDS)	mg/L	306	165	111	165	498	93	-	2,500
Total Suspended Solids (TSS)	mg/L	720	574	456	574	850	18	-	8,350
Total Phosphorus-P	mg/L	1.04	0.84	0.80	0.84	0.99	0.17	-	3.9
Orthophosphate-P	mg/L	0.70	0.73	0.23	0.70	0.19	<0.01	-	1.54
Nitrite, Nitrogen by IC	mg/L	0.29	0.20	0.12	0.20	< 0.10	0.036	-	6.5
Nitrate-N by IC	mg/L	1.03	0.77	0.75	0.77	1.27	<0.1	-	165
Total Kjeldahl Nitrogen (TKN)	mg/L	5.5	4.1	3.7	4.1	4.5	<0.2	-	28.0
Copper, Total, ICAP	mg/L	0.056	0.035	0.035	0.035	0.043	0.0052	-	0.69
Lead, Total, ICAP	mg/L	0.024	0.012	0.013	0.013	0.023	<0.0005	-	0.18
Zinc, Total, ICAP	mg/L	0.29	0.18	0.19	0.19	0.20	0.01	-	4.6
Copper, ICAP, Dissolved	mg/L	0.046	0.005	0.007	0.007	0.008	<0.002	-	0.11
Lead, ICAP, Dissolved	mg/L	0.0270	< 0.001	0.0008	< 0.001	< 0.0001	0.0004	-	<0.1
Zinc, ICAP, Dissolved	mg/L	0.350	0.012	0.018	0.018	< 0.023	<0.001	-	0.4
Boron, Total, ICAP	mg/L	0.21	0.09	0.056	0.09	0.21	<0.02	-	0.84
Turbidity	NTU	813	597	548	597	511	28	-	5,200
Temperature	Thermal Analysis	23.0	18.2	15.2	18.2	18.2	11.0	-	27.3
Fecal Coliform Bacteria	MPN/100mL	129,970	18,600	14,390	18,600	54,050	130	-	160,000,000
Fecal Streptococci	MPN/100mL	39,680	17,290	6,200	17,290	23,820	<1	-	3,300,000
E. Coli	MPN/100mL	199,000	38,700	13,700	38,700	35,650	7,710	-	199,000
Semivolatile Organic Compounds (SVOCs) [c]	No. of Detects	1	3	0	1	2	0	-	7
Volatile Organic Compounds (VOCs) [c]	No. of Detects	6	4	1	4	2	0	-	14
Pesticides [c]	No. of Detects	0	0	0	0	0	0	-	5
Herbicides [c]	No. of Detects	0	0	0	0	1	0	-	4
SNWA Expansion Constituents [b]									
Alkalinity as $CaCO_3$	mg/L	295	228	186	228	106	51	-	960
Aluminum, Total, ICAP	mg/L	6.25	7.22	6.01	6.25	5.50	0.0113	-	56
Antimony, Total, ICAP	mg/L	0.006	0.002	0.004	0.004	0.004	<0.001	-	0.1
Arsenic, Total, ICAP	mg/L	0.006	0.004	0.004	0.004	0.007	0.0014	-	0.046
Barium, Total, ICAP	mg/L	0.23	0.16	0.15	0.16	0.22	0.058	-	1.8
Beryllium, Total, ICAP	mg/L	< 0.001	< 0.001	0.0003	< 0.001	< 0.001	0.0003	-	<0.01
Bicarbonate Alkalinity as HCO_3^-	mg/L	295	228	186	228	130	51	-	960
BOD	mg/L	29.8	22.0	60.0	29.8	32.4	<2	-	263
Bromide [d]	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	0.05	<0.005	-	0.53
Carbonate, Calculated	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 2.00	<0.028	-	<10.0
Cadmium, Total, ICAP	µg/L	< 1.0	< 1.0	< 0.046	< 1.0	< 1.0	<0.046	-	6.9
Chloride	mg/L	20.1	10.0	7.2	10.0	29.1	5.86	-	266
Chromium, Total, ICAP	mg/L	0.011	0.008	0.01	0.01	0.0135	<0.0001	-	15.0
COD	mg/L	98	70	57	70	146	<38.6	-	990
Fluoride	mg/L	0.24	0.19	0.11	0.19	0.28	0.076	-	1.08
Hardness as $CaCO_3$	mg/L	421	452	363	421	707	101	-	5,600
Hydroxide as OH^-, Calc	mg/L	< 5.0	< 5.0	< 5	< 5	< 2.00	0.001	-	13.0
Iron, Total, ICAP	mg/L	3.4	3.4	2.8	3.4	8.3	0.018	-	100
Magnesium, Total, ICAP	mg/L	34	31.7	26.2	31.7	44.9	6.21	-	490
Manganese, Total, ICAP	mg/L	0.20	0.14	0.14	0.14	0.23	0.03	-	2.4
Mercury	mg/L	< 0.00032	< 0.00032	< 0.000062	< 0.0032	< 0.0002	<0.000062	-	0.00506
Nickel, Total, ICAP	mg/L	0.010	0.008	0.008	0.008	0.018	0.0038	-	0.14
pH, Lab	Standard Units	7.5	7.4	7.0	7.4	7.53	5.92	-	8.57
Selenium, Total	mg/L	0.0015	< 0.001	0.0008	< 0.001	< 0.005	0.0008	-	<0.05
Selenium, Dissolved	mg/L	0.0011	< 0.001	0.0004	< 0.001	< 0.0010	0.0004	-	<0.01
Silver, Total, ICAP	mg/L	< 0.001	< 0.001	0.0001	< 0.001	< 0.0005	0.0001	-	<0.005
Sodium, Total, ICAP	mg/L	19.0	10.0	7.1	10.0	30.4	6.51	-	1,020
Sulfate	mg/L	67.6	23.8	18.6	23.8	145	18.6	-	1,300
Surfactants	mg/L	0.495	0.456	0.227	0.456	0.34	<0.05	-	2.18
Thallium Total, ICAP	mg/L	< 0.001	< 0.001	0.0001	< 0.001	< 0.001	0.0001	-	<0.01
Total Organic Carbon	mg/L	22.4	21.5	14.0	21.5	38.0	4.05	-	131

Notes:
[a] NPDES Constituents = Constituents originally analyzed under the Las Vegas Valley MS4 Wet Weather Sampling Program (1991 - 2002)
[b] SNWA Expansion Constituents = Constituents added to the list of analytes by SNWA as part of the Urban Tributary Water Quality Monitoring Program
[c] Refer to Table 4-4 for The Club at Sunrise Wet Weather Monitoring Detected Organics Data for the Current Permit Year (2025 - 2026)
[d] Bromide results are higher than typical due to a higher detection limit used by the laboratory. Future samples are expected to return to the normal testing range.

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Table 4-3. Rainbow Gardens Wet Weather Monitoring Constituent Data for the Current Permit Year (2025-2026)

Parameter	Units	10-Oct-2025	15-Nov-2025	18-Nov-2025	Median 2025-2026	Historical Median 1997-2026	Historical Range 1997-2026		
NPDES Constituents [a]									
Oil and Grease - Gravimetric	mg/L	7.1	< 5	<5	<5	< 5.0	1.4	-	10
Total Dissolved Solids (TDS)	mg/L	1,110	853	691	853	1,110	270	-	2,560
Total Suspended Solids (TSS)	mg/L	199	598	692	598	420	<5	-	12,000
Total Phosphorus-P	mg/L	0.52	0.77	0.97	0.77	0.59	0.074	-	4.3
Orthophosphate-P	mg/L	0.49	0.87	0.39	0.49	0.13	<0.01	-	3.0
Nitrite, Nitrogen by IC	mg/L	< 0.05	< 0.004	< 0.004	< 0.004	< 0.10	<0.001	-	1.9
Nitrate-N by IC	mg/L	9.19	5.82	4.49	5.82	7.28	<0.1	-	45
Total Kjeldahl Nitrogen (TKN)	mg/L	1.7	3.9	3.3	3.3	2.0	<0.2	-	24.5
Copper, Total, ICAP	mg/L	0.016	0.031	0.025	0.025	0.026	0.0013	-	0.218
Lead, Total, ICAP	mg/L	0.010	0.015	0.016	0.015	0.010	<0.0005	-	0.151
Zinc, Total, ICAP	mg/L	0.06	0.18	0.13	0.13	0.08	0.029	-	0.62
Copper, ICAP, Dissolved	mg/L	0.012	0.004	0.003	0.004	0.01	<0.001	-	0.0329
Lead, ICAP, Dissolved	mg/L	0.0085	0.0002	0.0006	0.0006	< 0.0005	<0.00043	-	0.109
Zinc, ICAP, Dissolved	mg/L	0.051	0.012	0.012	0.012	0.024	<0.005	-	0.109
Boron, Total, ICAP	mg/L	0.45	0.34	0.28	0.34	0.41	0.05	-	0.75
Turbidity	NTU	225	523	721	523	203	3	-	3,700
Temperature	Thermal Analysis	25.6	25.6	19.4	25.6	25.4	11.2	-	27.1
Fecal Coliform Bacteria	MPN/100mL	4,870	34,480	24,890	24,890	50,000	23	-	5,000,000
Fecal Streptococci	MPN/100mL	520	4,820	5,120	4,820	11,390	<1	-	500,000
E. Coli	MPN/100mL	4,320	64,900	7,760	7,760	39,200	4,320	-	1,410,000
Semivolatile Organic Compounds (SVOCs) [c]	No. of Detects	0	0	0	0	1	0	-	5
Volatile Organic Compounds (VOCs) [c]	No. of Detects	2	4	2	2	3	0	-	12
Pesticides [c]	No. of Detects	0	0	0	0	0	0	-	3
Herbicides [c]	No. of Detects	0	1	1	1	0	0	-	4
SNWA Expansion Constituents [b]									
Alkalinity as $CaCO_3$	mg/L	137	202	224	202	120	65	-	420
Aluminum, Total, ICAP	mg/L	6.07	8.84	9.92	8.84	4.25	0.0096	-	69
Antimony, Total, ICAP	mg/L	0.001	0.002	0.002	0.002	< 0.002	<0.001	-	0.02
Arsenic, Total, ICAP	mg/L	0.011	0.014	0.014	0.014	0.011	0.0048	-	0.099
Barium, Total, ICAP	mg/L	0.19	0.22	0.22	0.22	0.179	0.044	-	1.6
Beryllium, Total, ICAP	mg/L	< 0.0010	0.004	0.0004	0.004	< 0.001	0.00018	-	<0.005
Bicarbonate Alkalinity as HCO_3^-	mg/L	137	202	224	202	140	79	-	420
BOD	mg/L	4.6	15	18	15	13	<2	-	80
Bromide [d]	mg/L	< 5	< 5	< 2.5	< 5	0.13	<0.001	-	4.07
Carbonate, Calculated	mg/L	< 5	< 5	< 5	< 5	< 2.0	0.27	-	<10
Cadmium, Total, ICAP	µg/L	< 1.0	0.2	< 0.046	0.2	< 1.0	<0.046	-	610
Chloride	mg/L	226	146	114	146	181	56	-	369
Chromium, Total, ICAP	mg/L	0.008	0.012	0.012	0.012	0.0090	0.001	-	2.5
COD	mg/L	29	39	28	29	70	19.3	-	909
Fluoride	mg/L	0.56	0.50	0.40	0.50	0.55	<0.1	-	1.0
Hardness as $CaCO_3$	mg/L	549	664	602	602	640	323	-	3,000
Hydroxide as OH^-, Calc	mg/L	< 5	< 5	< 5	< 5	< 2.0	0.005	-	<5.0
Iron, Total, ICAP	mg/L	4.9	4.5	4.0	4.5	4.66	0.09	-	71
Magnesium, Total, ICAP	mg/L	54.0	59.8	53.0	54.0	61.0	29	-	200
Manganese, Total, ICAP	mg/L	0.32	0.52	0.43	0.43	0.33	0.012	-	3.6
Mercury	mg/L	< 0.00032	0.000181	0.000262	0.000262	< 0.0002	<0.0001	-	0.0019
Nickel, Total, ICAP	mg/L	0.0095	0.012	0.011	0.011	0.0121	0.0014	-	0.14
pH, Lab	Standard Units	7.76	7.29	7.50	7.50	7.56	6.9	-	8.48
Selenium, Total	mg/L	0.0024	0.003	0.002	0.0024	< 0.0042	<0.001	-	<0.15
Selenium, Dissolved	mg/L	0.0023	0.002	0.001	0.002	0.002	0.001	-	<0.01
Silver, Total, ICAP	mg/L	< 0.0010	0.0001	0.0002	0.0002	< 0.0005	0.00013	-	1.0
Sodium, Total, ICAP	mg/L	162	126	102	126	141	53	-	303
Sulfate	mg/L	310	221	200	221	410	156	-	1,100
Surfactants	mg/L	< 0.28	0.227	0.568	< 0.28	0.13	<0.035	-	0.88
Thallium Total, ICAP	mg/L	< 0.001	0.0002	0.0002	0.0002	< 0.001	<0.0001	-	<0.005
Total Organic Carbon	mg/L	7.0	13.9	< 2.0	7.0	14.2	<2	-	82.7

Notes:

[a] NPDES Constituents = Constituents originally analyzed under the Las Vegas Valley MS4 Wet Weather Sampling Program (1991 - 2002)

[b] SNWA Expansion Constituents = Constituents added to the list of analytes by SNWA as part of the Urban Tributary Water Quality Monitoring Program

[c] Refer to Table 4-5 for Rainbow Gardens Wet Weather Monitoring Detected Organics Data for the Current Permit Year (2025 - 2026)

[d] Bromide results are higher than typical due to a higher detection limit used by the laboratory. Future samples are expected to return to the normal testing range.

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Table 4-4. The Club at Sunrise Wet Weather Monitoring Detected Organics Data for the Current Permit Year (2025-2026)

Parameter		Detections 2025-2026	Historical Range of Detections 1997-2026		
Herbicide Detections	Total No. of Detects:	0	0	-	4
Pesticide Detections	Total No. of Detects:	0	0	-	5
SVOC Detections	4-Methylphenol	X	0	-	7
	Bis(2-ethylhexyl)adipate	X			
	Di-n-Octylphthalate	X			
	N-Nitrosodi-n-propylamine	X			
	Total No. of Detects:	4			
VOC Detections	2-Butanone	X	0	-	14
	4-Methyl-2-pentanone (MIBK)	X			
	Acetone	X			
	Ethylbenzene	X			
	Methyl Chloride	X			
	o-Xylene	X			
	Toluene	X			
	Vinyl Chloride m, p-Xylene	X			
	Total No. of Detects:	8			

Notes:

Cells marked with an "X" indicate that the constituent was detected in the sample

Table 4-5. Rainbow Gardens Wet Weather Monitoring Detected Organics Data for the Current Permit Year (2025-2026)

Parameter		Detections 2025-2026	Historical Range of Detections 2003-2026		
Herbicide Detections	Pentachlorophenol	X	0	-	4
	Total No. of Detects:	1			
Pesticide Detections	Total No. of Detects:	0	0	-	3
SVOC Detections	Total No. of Detects:	0	0	-	5
VOC Detections	2-Butanone	X	0	-	12
	Acetone	X			
	Chloroform	X			
	Methyl Chloride	X			
	Total No. of Detects:	4			

Notes:

Cells marked with an "X" indicate that the constituent was detected in the sample

4.1.4 Suspended Solids and Turbidity

A large part of the Permittees' stormwater management program is directed at the control of sediment, especially the retention of soil onsite. The wet weather monitoring program includes additional evaluation for two parameters, TSS and turbidity. TSS measures the concentration of suspended solids in water, while turbidity measures the water clarity based on the amount of light scattered by suspended particles. Although related, the two parameters measure different characteristics of the stormwater. EPA and NDEP have emphasized that the Permittees should implement Best Management Practices (BMPs) that help reduce the transport of sediment and associated pollutants in stormwater runoff.

To explore the consistency of TSS and turbidity data, additional data were collected starting in the 2024-2025 permit year. Samples were sent to two different laboratories for turbidity and TSS analysis. Although the samples were collected from the same source, differences in TSS and turbidity results may occur due to the non-uniform distribution of suspended particles within the samples. Table 4-6 presents the results from the two laboratories.

Table 4-6. Turbidity and TSS Data from Laboratories

Site	Laboratory	Event Date	Turbidity (NTU)	TSS (mg/L)
The Club at Sunrise	ASSET Laboratories	10/10/2025	510	600
		11/15/2025	470	580
		11/18/2025	310	370
	SGS	10/10/2025	813	720
		11/15/2025	597	574
		11/18/2025	548	456
Rainbow Gardens	ASSET Laboratories	10/10/2025	160	180
		11/15/2025	450	590
		11/18/2025	710	1,300
	SGS	10/10/2025	225	199
		11/15/2025	523	598
		11/18/2025	721	692

Most of the results were not consistent. For samples collected at The Club at Sunrise, SGS laboratory results reported that turbidity measurements were 60%, 27%, and 77% higher, respectively, than those measured by ASSET Laboratories. For TSS, SGS's measurements were 20% higher, 1% lower (essentially equivalent), and 23% higher, respectively, than those measured by ASSET Laboratories.

For samples collected at Rainbow Gardens, SGS reported turbidity measurements that were 34%, 15%, and 2% (essentially equivalent) higher, respectively, than those measured by ASSET Laboratories. For TSS, SGS's measurements were 10% and 1% higher (essentially equivalent) and 61% lower, respectively, than those measured by ASSET Laboratories. These results highlight the potential variability in laboratory results for individual samples, even when standard sampling and analysis procedures are consistently applied.

In addition, field crews collected onsite turbidity measurements from the actual water body as aliquots were being collected. Figure 4-2 provides the results for The Club at Sunrise on October 10, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data indicated a gradual decline throughout the monitoring period, decreasing from approximately 510 NTU at the beginning of the event to about 340 NTU near the end of the sampling period. Despite the downward trend, turbidity measurements

remained within a relatively narrow range, supporting the conclusion that the collected samples are representative of site conditions during the event. The ASSET Laboratories turbidity result was generally consistent with the onsite turbidity measurements and fell within the range of observed field values. In contrast, the SGS turbidity result was notably higher than both the onsite measurements and the ASSET Laboratories result. Similar differences were observed for TSS, with SGS reporting a higher TSS concentration than ASSET Laboratories.

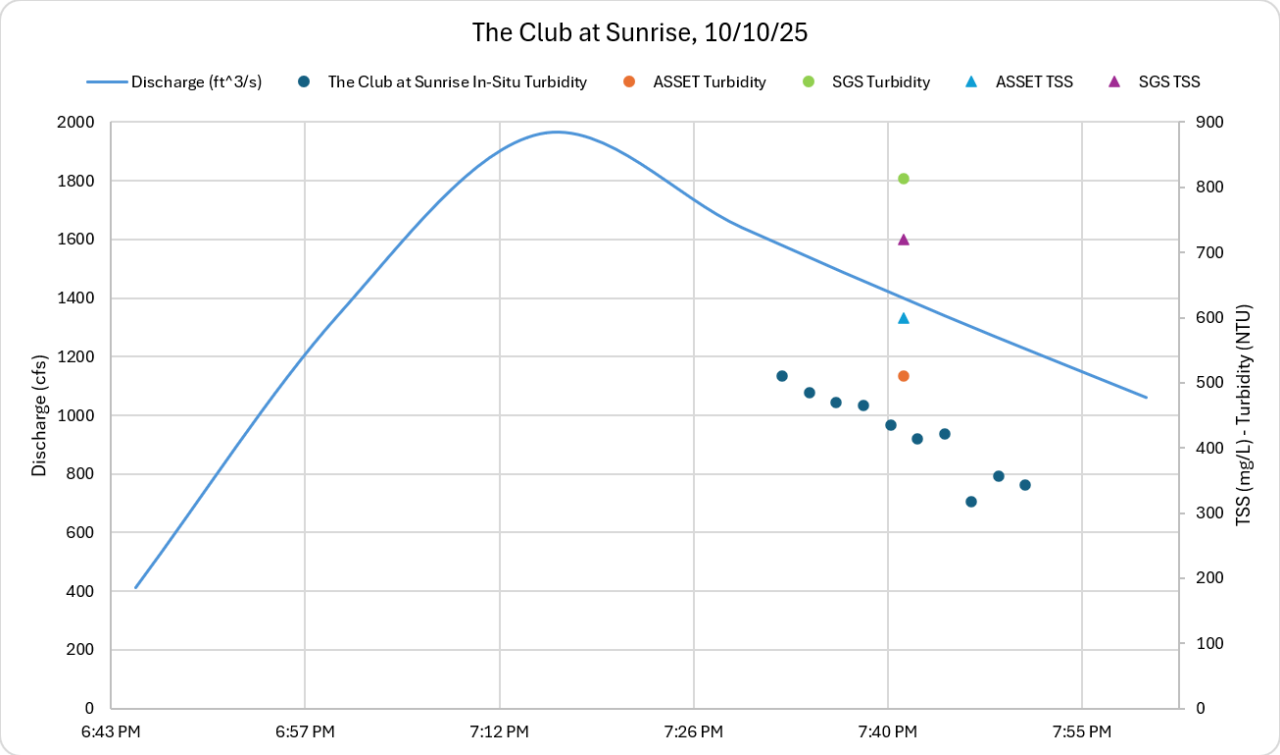

Figure 4-2. The Club at Sunrise: Turbidity and TSS data for the 10/10/2025 Storm Event

Figure 4-3 displays the results for The Club at Sunrise on November 15, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data was relatively consistent throughout the monitoring period, ranging from approximately 360 to 440 NTU. These data support the conclusion that the collected samples were representative, as they indicate that turbidity levels were relatively consistent throughout a Las Vegas Valley stormwater runoff event. The ASSET Laboratories turbidity result was slightly higher than the onsite turbidity measurements but remained reasonably consistent with the observed field data. In contrast, the SGS turbidity result was noticeably higher than both the onsite measurements and the ASSET Laboratories result. The ASSET and SGS TSS results were generally comparable.

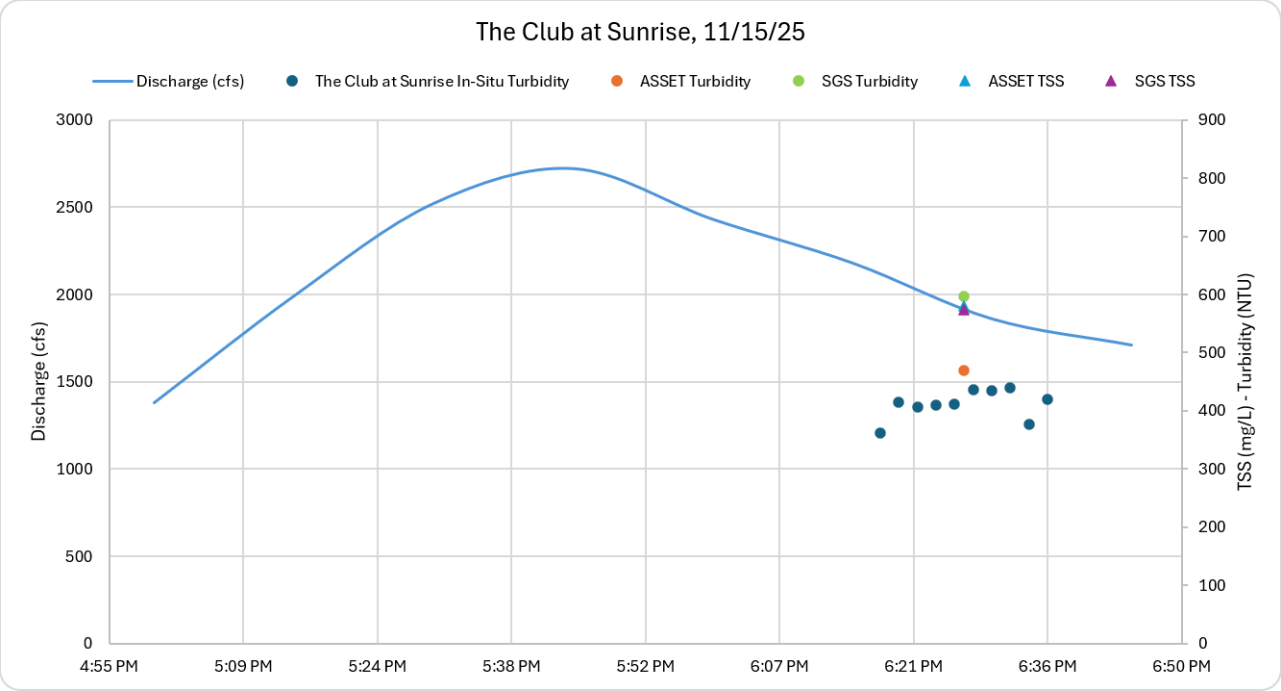

Figure 4-3. The Club at Sunrise: Turbidity and TSS data for the 11/15/2025 Storm Event

Figure 4-4 displays the results for The Club at Sunrise on November 18, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data exhibited an increasing trend throughout the monitoring period, rising from approximately 220 NTU at the beginning of the sampling event to about 450 NTU near the end of the sampling period. This gradual increase indicates that sediment concentrations in runoff increased as the storm event progressed. Samples were collected from 2:51 PM to 3:21 PM during the rising limb of the hydrograph. Despite the upward trend, the changes in turbidity were gradual and consistent, supporting the conclusion that the composite sample is representative of conditions observed during the precipitation event. The ASSET Laboratories turbidity result fell within the range of onsite turbidity measurements and was generally consistent with the overall event data. The SGS turbidity result was notably higher than both the onsite turbidity measurements and the ASSET Laboratories result. Similar differences were observed for TSS, with the SGS TSS result exceeding the ASSET Laboratories TSS result.

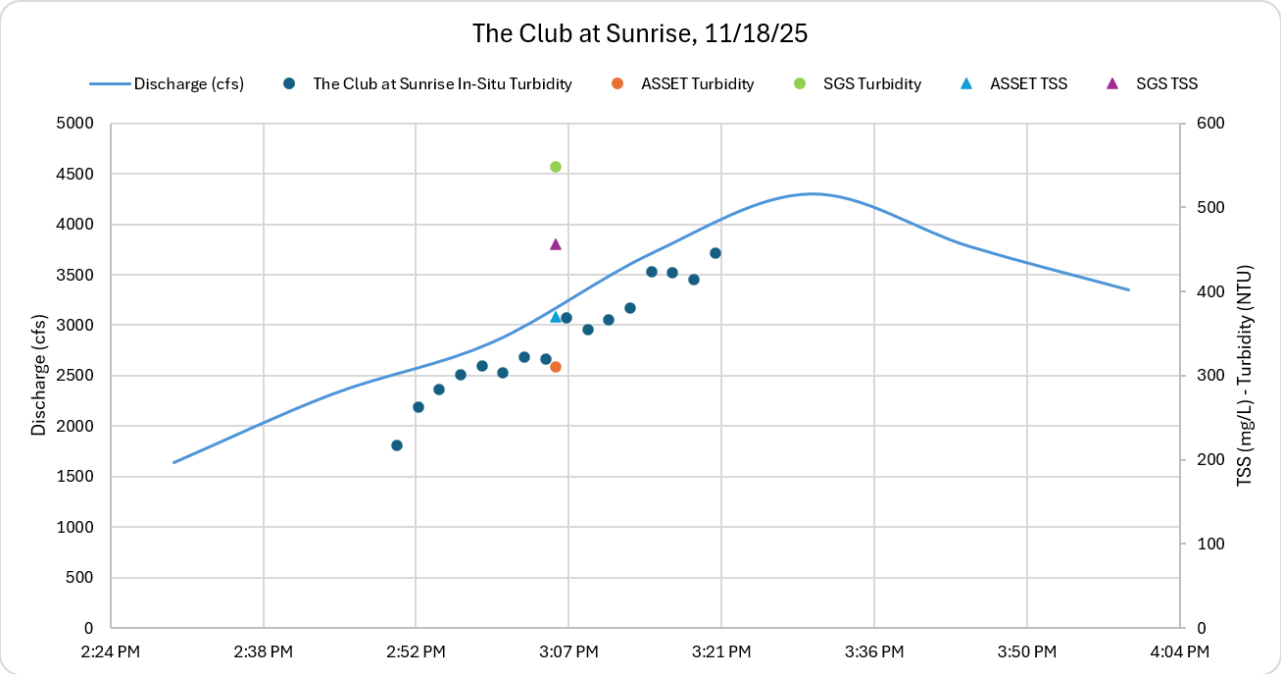

Figure 4-4. The Club at Sunrise: Turbidity and TSS data for the 11/18/2025 Storm Event

Figure 4-5 displays the results for Rainbow Gardens on October 10, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data exhibited moderate variation throughout the runoff event, ranging from approximately 75 to 250 NTU. Turbidity fluctuated during the sampling period, with values generally between 100 and 250 NTU for most of the sampling event. The ASSET and SGS turbidity results were reasonably consistent with the onsite measurements, although the SGS turbidity result was higher than the ASSET result. The TSS results from both laboratories were also consistent with the onsite turbidity data, with the ASSET TSS result slightly lower than the SGS TSS result. Overall, the laboratory results were consistent with the range of observed onsite turbidity measurements, supporting the conclusion that the composite samples were representative of conditions during the storm event. Consistent with historical data, turbidity at Rainbow Gardens remained notably lower than turbidity observed at The Club at Sunrise, further supporting previous conclusions that the erosion control structures and bank stabilization efforts help reduce sediment transport in lower Las Vegas Wash.

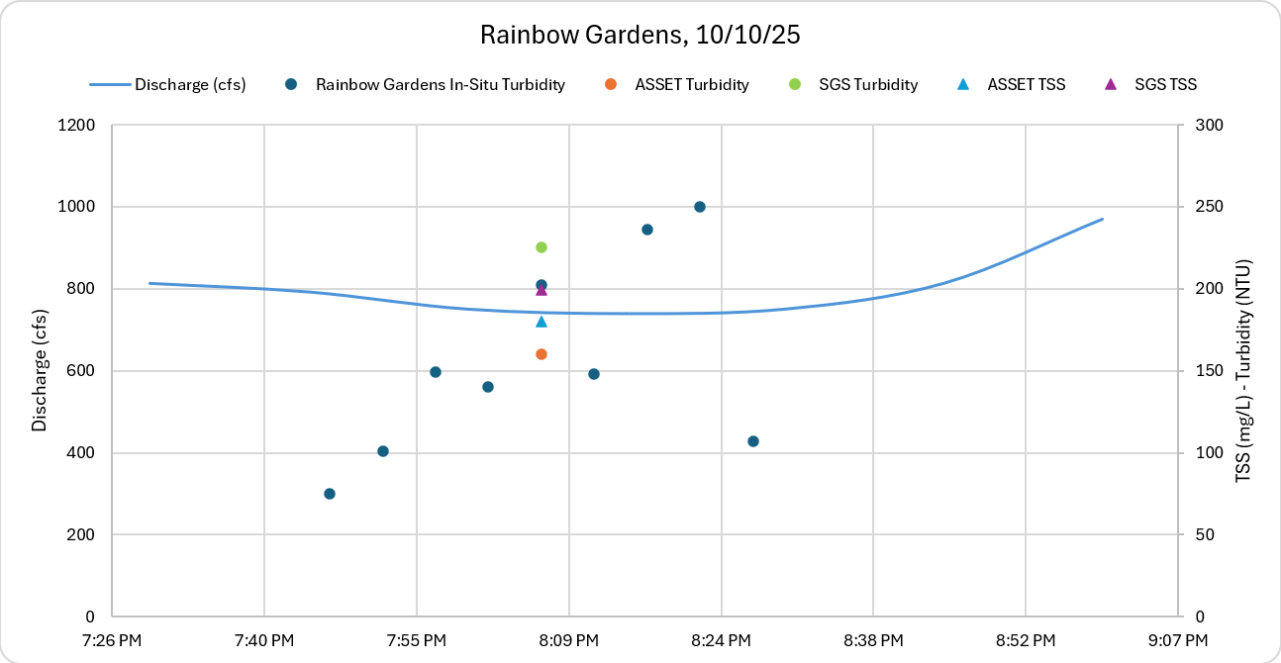

Figure 4-5. Rainbow Gardens: Turbidity and TSS data for the 10/10/2025 Storm Event

Figure 4-6 displays the results for Rainbow Gardens on November 15, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data was relatively consistent throughout the sampling event, with most measurements falling between 75 and 150 NTU. A few measurements were higher, including an early reading of approximately 215 NTU, but the overall turbidity pattern exhibited little variation over time. The ASSET and SGS turbidity results were notably higher than the onsite turbidity measurements, with the SGS turbidity result exceeding the ASSET result. Similarly, the TSS results from both laboratories were considerably higher than the onsite turbidity data and were reasonably close to one another.

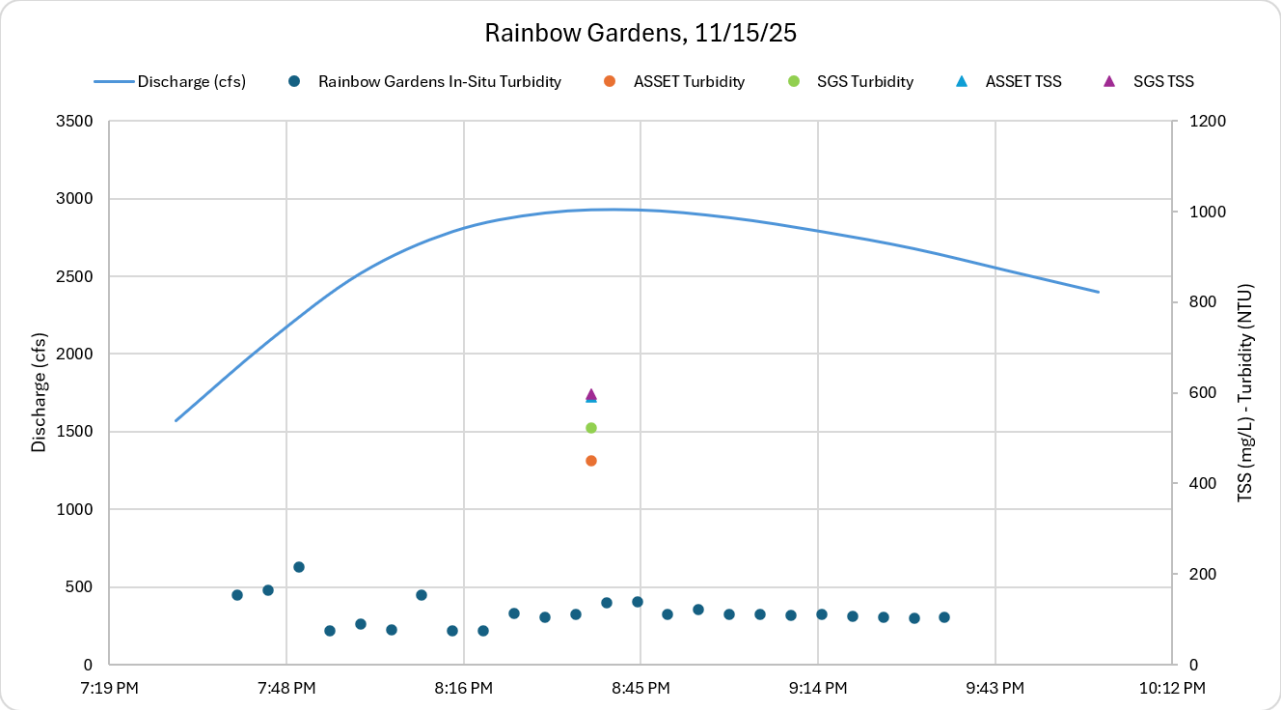

Figure 4-6. Rainbow Gardens: Turbidity and TSS data for the 11/15/2025 Storm Event

Figure 4-7 displays the results for Rainbow Gardens on November 18, 2025, with the corresponding laboratory data superimposed. The onsite turbidity data increased during the early portion of the sampling event, rising from approximately 140 to 425 NTU, and then remaining relatively consistent for the remainder of the sampling period, generally ranging from 320 to 400 NTU. The ASSET and SGS turbidity results were substantially higher than the onsite turbidity measurements, with both laboratory results exceeding 700 NTU and the SGS result slightly higher than the ASSET result. The TSS results from the two laboratories differed considerably, with the ASSET TSS result notably higher than the SGS TSS result. Despite the differences between the laboratory and field results, the onsite turbidity data exhibited a relatively stable pattern during most of the sampling event.

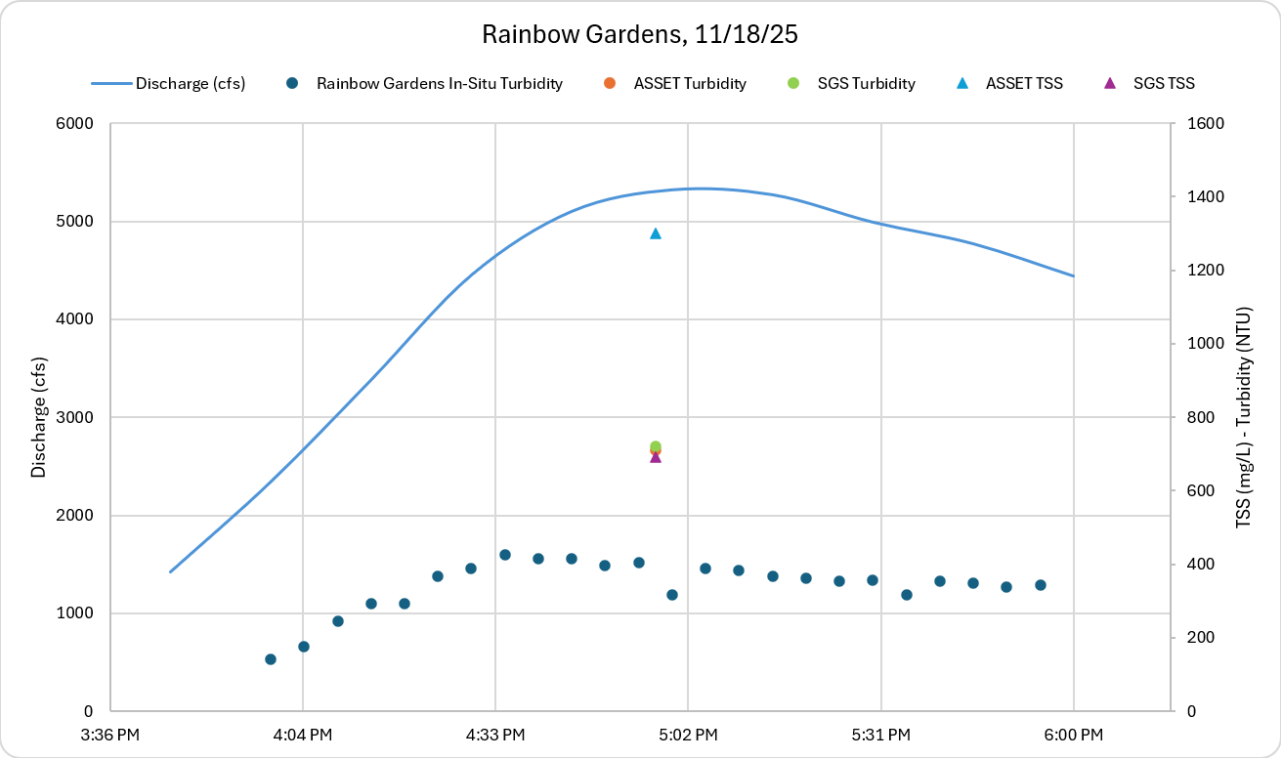

Figure 4-7. Rainbow Gardens: Turbidity and TSS data for the 11/18/2025 Storm Event

The data collected during the 2025-2026 permit year continue to demonstrate that differences can occur between laboratory-measured TSS concentrations and turbidity measurements. Notable differences were observed between results reported by ASSET and SGS Laboratories, particularly for turbidity. At the same time, repeated onsite turbidity measurements generally exhibited consistent trends throughout individual sampling events, providing confidence that the composite samples were representative of runoff conditions during the sampling periods.

The October and November 2025 storm events further support the effectiveness of onsite turbidity monitoring for evaluating stormwater quality conditions during runoff events. In most cases, turbidity measurements remained relatively stable throughout the sampling period or changed gradually over time, suggesting that sediment concentrations were generally consistent during the storm events.

The main conclusions of the evaluation of TSS and turbidity data include:

- There is a strong relationship between TSS concentrations and turbidity levels in most samples collected during sampling events.
- Differences between laboratory-measured turbidity and TSS results persist and can be significant for individual events; however, the overall trends remain consistent with historical observations.
- Repeated onsite turbidity measurements generally exhibit consistent patterns throughout sampling events, supporting the representativeness of the composite sampling approach.
- Turbidity concentrations at Rainbow Gardens remain lower than those observed at The Club at Sunrise for most storm events, consistent with historical monitoring data.

- The November 18, 2025 storm event showed higher turbidity levels at Rainbow Gardens than the November 15, 2025 event, while turbidity conditions at The Club at Sunrise were generally comparable between the two events.

4.1.5 Comparison of Wet Weather Sampling Results for the November 2025 Storm Events

The two back-to-back storm events provided an opportunity to compare water quality conditions over a short interval. A comparison of the November 15 and November 18, 2025 storm events reveals different results at the two monitoring locations. At The Club at Sunrise, both TSS and turbidity concentrations were slightly lower during the November 18 event than during the November 15 event. TSS decreased from approximately 575 mg/L to 460 mg/L, while turbidity decreased from approximately 600 NTU to 550 NTU. At Rainbow Gardens, both TSS and turbidity concentrations were slightly higher during the November 18 event. TSS increased from approximately 600 mg/L to 690 mg/L, while turbidity increased from approximately 520 NTU to 720 NTU (Figure 4-8).

Orthophosphate concentrations were lower in the second November storm event at both monitoring locations. Total phosphorus concentrations remained relatively consistent at The Club at Sunrise but were slightly higher during the second event at Rainbow Gardens (Figure 4-9). Oil and grease were not detected in samples collected from both storm events at Rainbow Gardens, while the concentration in the sample in the second event was slightly higher at The Club at Sunrise (Figure 4-10).

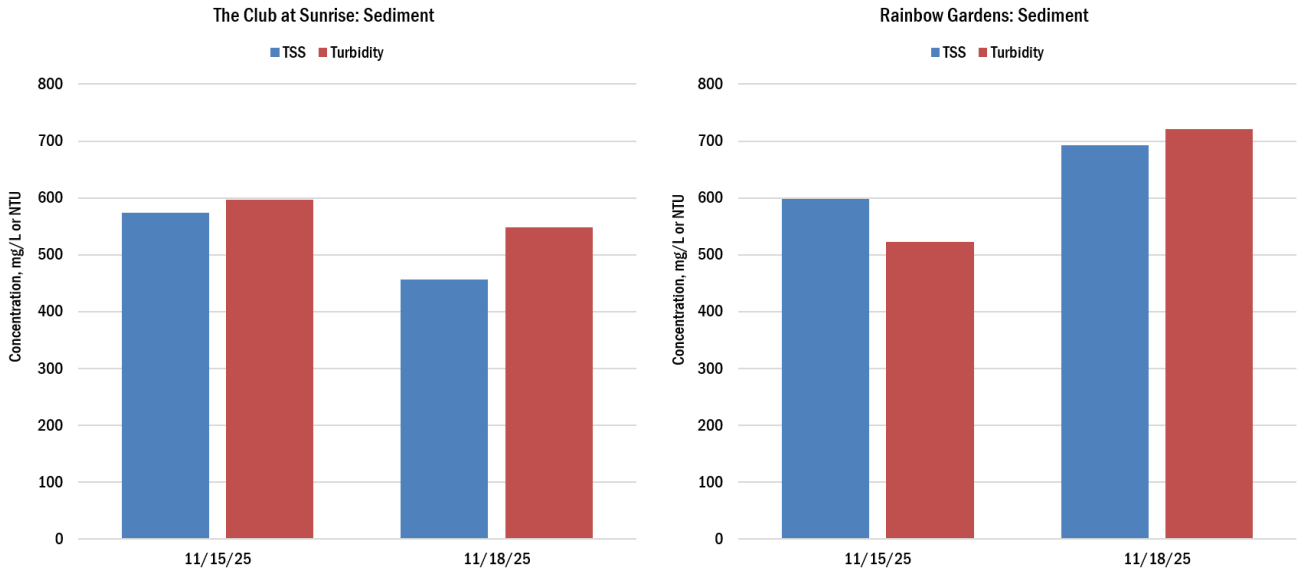

Figure 4-8. Sediment data for the 11/15/2025 and 11/18/2025 Storm Events

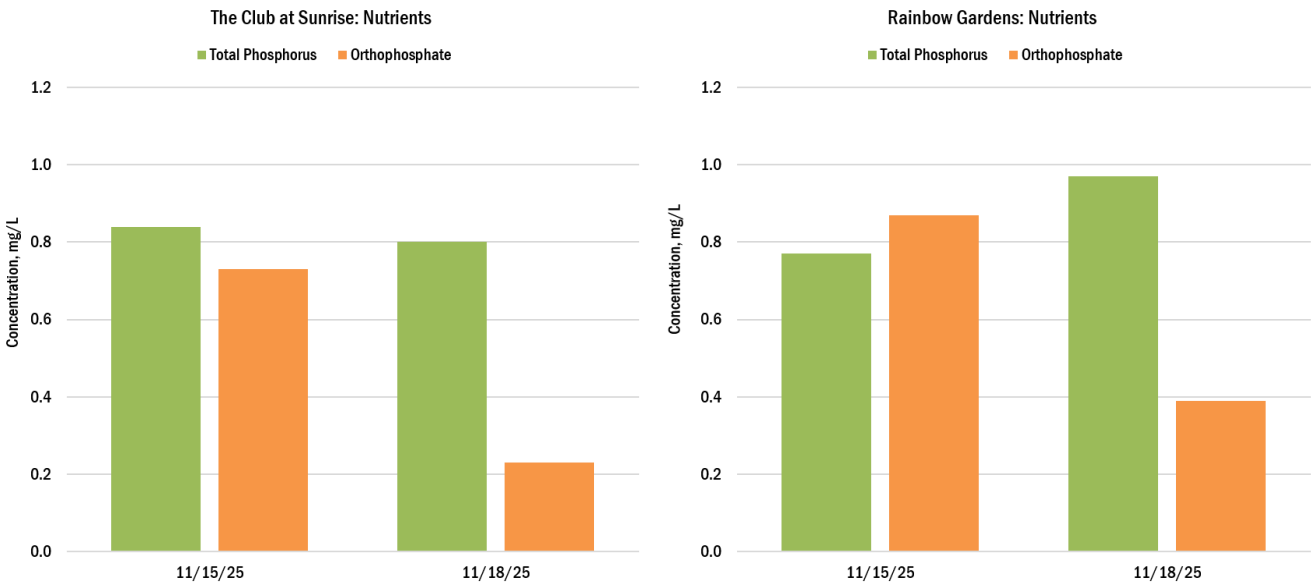

Figure 4-9. Nutrients data for the 11/15/2025 and 11/18/2025 Storm Events

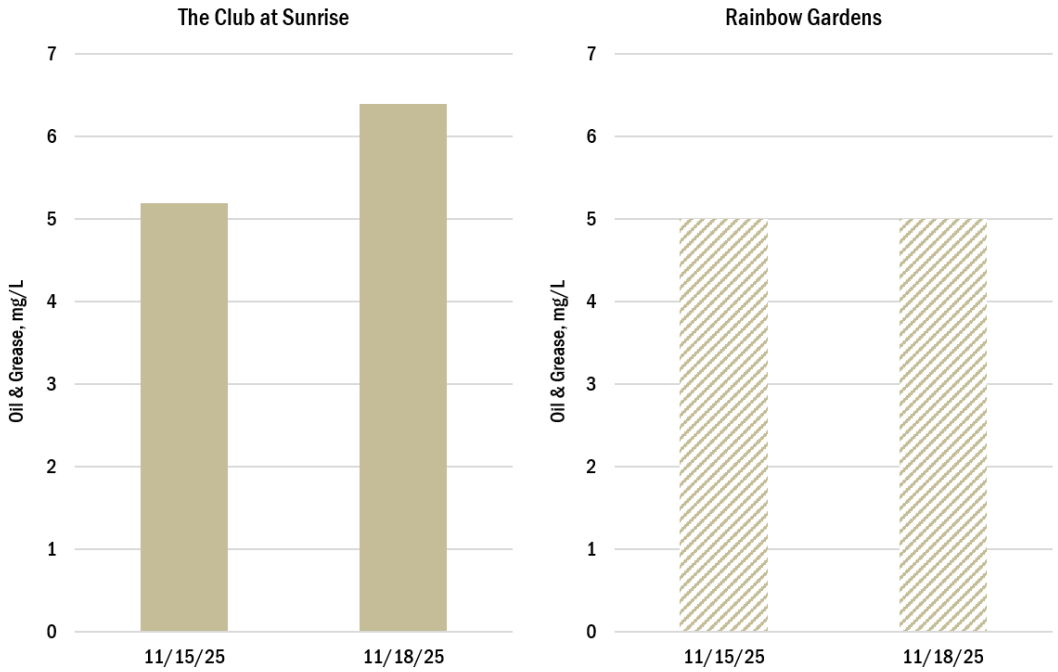

Figure 4-10. Oil and Grease data for the 11/15/2025 and 11/18/2025 Storm Events

4.1.6 Stormwater Monitoring Summary

The erosion control structures, channel stabilization measures, and regional detention facilities within the Las Vegas Valley continue to be effective in limiting sediment transport through lower Las Vegas Wash. Overall, the 2025-2026 permit year sampling results continue to support previous conclusions that the Las Vegas Valley stormwater management program is effectively controlling sediment transport and protecting downstream resources. TSS concentrations and turbidity levels from the Las Vegas Valley are not having a significant negative impact on lower Las Vegas Wash or Lake Mead.

Based on the results, no additional monitoring stations are recommended for the Las Vegas Valley. The Club at Sunrise location effectively monitors stormwater conditions upstream of the wastewater treatment plants, and the Rainbow Gardens location effectively monitors stormwater conditions for the whole Las Vegas Valley.

4.1.7 Stormwater Monitoring Plan

In accordance with the 2024 MS4 Permit, the Final Stormwater Monitoring Plan was submitted to NDEP in May 2026. The final Stormwater Monitoring Plan, as approved by NDEP, will be reviewed annually for the Annual Report.

An update to the Stormwater Monitoring Plan is the removal of testing for carbamates (a specific set of pesticides), as there are no Nevada-certified laboratories using Method 632. In addition, carbamate detections have not been reported in stormwater sampling in the historical record. The stormwater sampling includes a standard suite of organic compounds, including pesticides and other compounds, which will continue to be performed in the stormwater monitoring program.

4.2 Impaired Waters and Total Maximum Daily Loads (TMDLs)

Sections B.4.1 and B.4.2 of the 2024 MS4 Permit for the Las Vegas Valley include requirements to evaluate whether stormwater discharges cause or contribute to the listing of waters identified in accordance with the requirements of Section 303(d) of the Clean Water Act (CWA).

Table 4-7 displays the segments of the Las Vegas Wash and tributary channels that are identified in the Nevada 2024 Water Quality Integrated Report.

Table 4-7. 303(d) List of Impaired Waterbodies in the Las Vegas Valley (2024)

Waterbody	Location	Impairment Parameter	Beneficial Use(s)
Pittman Wash	From its origin to Duck Creek	Selenium	Aquatic Life Irrigation
		Total Dissolved Solids (TDS)	Watering Livestock
Duck Creek	From its origin to the Las Vegas Wash	Boron	Irrigation
		Fluoride	Irrigation
		Selenium	Aquatic Life
		Total Dissolved Solids (TDS)	Watering Livestock
Flamingo Wash	From its origin to the Las Vegas Wash	Boron	Irrigation
		Iron	Aquatic Life
		Selenium	Aquatic Life
		Total Suspended Solids (TSS)	Aquatic Life
		E. Coli	Recreation no Contact
Las Vegas Wash	From its origin to the confluence with Sloan Channel	Boron	Aquatic Life Irrigation
		E. Coli	Recreation no Contact
		Iron	Irrigation
		Selenium	Aquatic Life
		Total Dissolved Solids (TDS)	Watering Livestock
		Total Suspended Solids (TSS)	Aquatic Life
Sloan Channel	From North Las Vegas Blvd to the Las Vegas Wash	Boron	Irrigation
		pH	Aquatic Life
		Selenium	Aquatic Life

Table 4-8 displays an assessment of whether stormwater caused or contributed to the listings described in Table 4-7.

Table 4-8. Sources of Pollutants and Effects of MS4 Discharges on Impaired Waterbodies in the Las Vegas Valley

Constituent	Cause of Listing	Did Stormwater Cause or Contribute to the Listing?
Boron	Flow through native sub-surface soils, Resurfacing shallow groundwater	No
E. Coli	Attributed to animals/wildlife	No
Fluoride	Flow through native sub-surface soils, Resurfacing shallow groundwater	No
Iron	Flow through native sub-surface soils, Resurfacing shallow groundwater	No
pH	Natural geochemical conditions, interaction with native sub-surface soils, resurfacing shallow groundwater	No
Selenium	Flow through native sub-surface soils, Resurfacing shallow groundwater	No
TDS	Flow through native sub-surface soils, Resurfacing shallow groundwater	No
TSS	Sediment transported in stream channels during dry weather	No

4.2.1 Permit Compliance for Constituents with a TMDL

The 2024 MS4 Permit requires the Permittees to comply with permit Section B.4.2.2 for constituents with established TMDLs. NDEP has approved a TMDL for total phosphorus and total ammonia applicable to the Las Vegas Wash. These approved TMDLs do not apply to stormwater discharges from the Permittees' MS4, and do not include a pollutant Wasteload Allocation (WLA) or other performance requirements for stormwater discharge from the Permittees' MS4. They do not address a flow regime likely to occur during periods of stormwater discharge. Because they do not include WLAs, permit provisions related to WLAs are not applicable. No additional or modified stormwater controls are necessary.

4.3 Permit Year Measurable Goals

Table 4-9 displays a description of the status of the measurable goal in the submitted Final SWMP (2026).

Table 4-9. Characterization Data Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.3.1	Submit required information in the stormwater monitoring plan and report updates in the Annual Report.	Clark County Regional Flood Control District	Yes	Information submitted in the Stormwater Monitoring Plan and updates for the 2025-2026 permit year are included in section 4 of the 2025-2026 Annual Report.



Section 5.0

B.5.4 Public Outreach and Education Program

Section 5

B.5.4 Public Outreach and Education Program

Section B.5.4 of the 2024 MS4 Permit for the Las Vegas Valley includes requirements for a Public Outreach and Education Program.

5.1 Permit Year Overview

During the permit year, the Permittees continued implementation of their Public Outreach and Education Programs through social media, websites, educational materials, videos, drain inlet labeling, tabling events, and live presentations. Outreach efforts were directed toward three primary audiences:

- Developers, architects, construction contractors, and other professionals and businesses
- The general public
- School-age children

Educational efforts focused on increasing awareness of how everyday activities can impact stormwater quality, providing information on applicable stormwater requirements and best management practices, and encouraging behaviors that reduce pollutant discharges to the MS4. Topics addressed during the permit year included sediment, pet waste, trash and debris, yard waste, oils, solvents, and other household chemicals. The Permittees also continued to evaluate public understanding of stormwater quality issues through periodic surveys. Sections B.5.4.1 through B.5.4.5 of the 2024 MS4 Permit require the Permittees to implement public outreach, education, and public information activities and distribute educational materials to targeted audiences to reduce pollutant discharges to the MS4. Specific outreach and education activities conducted during the permit year for each target audience are described in the following subsections.

5.1.1 Public Outreach Events

During the permit year, the Permittees attended a number of environmental fairs and community events to distribute educational materials about stormwater quality and respond to public questions or concerns. Some examples of the public outreach and education events attended by Permittees during the 2025-2026 permit year included the Dog Daze of Summer, Earth Day, Science, Technology, Engineering, Arts, and Mathematics (STEAM) Summer Academy at Nevada State University, National Night Out, Fire Station Open Houses, and Earth Day at the Springs Preserve.

5.1.2 Elementary School Presentations

During the 2025-2026 permit year, CCRFCD gave presentations to elementary school students on a variety of important stormwater concepts. The presentations were provided during normal school sessions and day camps for students. The presentations generally focused on stormwater quality and flood safety messages. The COH provided presentations and activities on stormwater concepts for elementary school Safekey programs. The COH developed two new interactive activities: a dog waste relay, using fake dog waste, and a

hands-on game, Storm Drain or Trash Can. These activities are used at elementary school presentations and other public outreach events.

5.1.3 Public Service Announcements / Flood Channel

In the Las Vegas Valley, additional communication methods were implemented to inform the public about stormwater topics. These included public service announcements (PSAs) and programming on the Flood Channel sponsored by CCRFCD. Throughout the 2025-2026 permit year, the Permittees produced and aired multiple PSAs and created new Flood Channel segments. The content focused on proper disposal practices for pet waste and household chemicals and the importance of identifying and reporting clogged storm drains. A segment of the Flood Channel explored the purpose of stormwater inspections at active construction sites.

5.1.4 Las Vegas Valley (LVV) Stormwater Quality Website

The CCRFCD continued to host the Las Vegas Valley stormwater quality website, www.LVstormwater.com, on behalf of the Permittees and the Stormwater Quality Management Committee (SQMC). The website provides information about the MS4, Las Vegas Valley monitoring programs, the Las Vegas Valley NPDES MS4 Permit, federal and state regulations, and guidance documents and educational resources for industry and the general public. Several guidance documents are available for the construction, industrial, and development sectors, homeowners, businesses, and other industries to educate the public and special interest groups about reducing pollutants and improving the quality of stormwater runoff.

In addition to the LVstormwater.com website, the municipal Permittees and Clark County continued to include stormwater information on their respective websites. During the permit year, the Permittees reviewed their respective websites and updated them as needed. The Permittee websites include stormwater outreach materials, regulations, links for reporting illicit discharges or spills, and links to additional resources.

5.2 Permit Year Measurable Goals

Table 5-1 displays a description of the status of the measurable goals in the submitted Final SWMP (2026).

Table 5-1. Public Outreach and Education Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.4a	Review program once per permit cycle.	City of Henderson City of Las Vegas City of North Las Vegas Clark County Clark County Regional Flood Control District	N/A	Clark County and the City of Las Vegas reviewed their public outreach and education programs and determined that no changes were necessary. City of Henderson and City of North Las Vegas plan to review during the 2026-2027 permit year.
Measure 5.4b	CCRFCD to produce or update one new PSA every permit cycle.	Clark County Regional Flood Control District	Yes	Flood Channel Segment Series and Series of Paid Radio Spots: Local cable Channels 2 and 4 plus Boulder City—The Flood Channel. Local Channels 3, 5, 8, 13, and Telemundo - Stormwater Quality. Airs approximately 28 times a month.

Table 5-1. Public Outreach and Education Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.4c	CCRFCD will attend 3 community events and 5 elementary school presentations each permit year.	Clark County Regional Flood Control District	Yes	50 school presentations – 3,642 students 2 summer camps – 145 students 25 employee presentations 12 community events, including: ○ STEAM Family Fest at the Neon Museum ○ Las Vegas Science & Technology Expo ○ STEAM Summer Academy at Nevada State University ○ Discovery Children's Museum Flood Awareness Day/Stormwater Quality ○ Dog Daze of Summer ○ Flash Flood Safety News Conference ○ Earth Day, Springs Preserve
		City of Las Vegas	N/A	3 community events
		City of Henderson	N/A	24 community events
		Clark County	N/A	1 community event
Measure 5.4d	Hold contractor workshops once each permit year and notify contractors in advance.	All Permittees	Yes	Notification was sent out by CCRFCD in advance of the sessions. Attendees signed up for training sessions which are capped based on room size to 80 persons. 6 Trainings: July 1, 2025, May 5, 2026, and May 6, 2026 220 total attendees City of Henderson: Capriati Construction, Lennar & Subs, COH Employees, Lennar & Herschi Masonry, and Bravo Stormwater training. 48 total attendees
Measure 5.4e	Hold public meetings (such as at an SQMC meeting) at least once per year and maintain or update lvstormwater.com website.	Clark County Regional Flood Control District	Yes	4 SQMC meetings: August 12, 2025, November 10, 2025, February 10, 2026, and May 12, 2026 The LVstormwater.com website was updated.

Table 5-1. Public Outreach and Education Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.4f	Review the Hydrologic Criteria and Drainage Design Manual (HCDDM) and the LVV Construction Site Best Management Practices Guidance Manual annually and implement updates.	Clark County Regional Flood Control District	On track for future due date	The Permittees are currently updating the Las Vegas Valley Construction Site Best Management Practices Guidance Manual, which is expected to be available to the public during the 2026-2027 permit year. Sections of the updated Hydrologic Criteria and Drainage Design Manual (HCDDM) have been posted on the CCRFCD website, and additional sections are currently being finalized.



Section 6.0

B.5.5 MS4 Maintenance Activities

Section 6

B.5.5 MS4 Maintenance Activities

Section B.5.5 of the 2024 MS4 Permit for the Las Vegas Valley requires an MS4 Maintenance Program to reduce pollutants in stormwater runoff from commercial and residential areas.

6.1 Permit Year Overview

The Permittees have implemented structural and source control measures, including the following: regional detention basins, the regional conveyance system, street sweeping, and training on the use of pesticides and herbicides. The Permittees maintained and inspected regional detention basins and the regional conveyance system, including drain inlets. During the 2025-2026 permit year, the Permittees inspected and maintained 82 detention basins and more than 30,000 storm drain inlets. The Permittees swept more than 9,000 miles of streets. This section reports on the Permittees' progress to implement BMPs consistent with the Measurable Goals outlined in the 2026 SWMP, including the number of miles of streets swept, the amount of material removed, and the number of storm drains and detention basins cleaned. Specific maintenance activities conducted during the permit year are described in the following subsections.

6.1.1 Regional Detention Basins

Based on criteria developed by CCRFCD and adopted by all the Permittees, detention basins are designed to control the 100-year flood to discharges that can be safely conveyed in downstream channels. Sediment/debris basins are designed to catch sediment and debris, but are not necessarily sized for the 100-year flood event and/or other regional detention basin design criteria. References to detention basins generally include sediment/debris basins.

Section B.5.5.1.1 requires a description of maintenance activities and a maintenance schedule to reduce pollutants in discharges from the MS4. During the 2025-2026 permit year, the Permittees inspected regional and local detention basins and removed sediment, debris, and trash as needed. Maintenance activities were performed to preserve flood storage capacity, maintain hydraulic performance, and reduce potential pollutant sources within the MS4. The Permittees conducted routine inspections, including semi-annual inspections and inspections following major storm events. The Permittees inspected and maintained local detention basins as well as regional detention basins.

6.1.2 Local Conveyance System

The Permittees inspected and, as needed, removed sediment, debris, and trash from storm drain inlets in the public MS4 system. Routine maintenance was performed to ensure proper hydraulic performance, prevent clogging, and remove potential sources of pollution. After large storms, additional inspections of facilities that historically have problems with debris accumulation and clogging were conducted and the facilities were cleaned as necessary. The Permittees inspected 20 percent of storm drain inlets a minimum of once per year and cleaned as appropriate.

6.1.3 Public Street Sweeping

Section B.5.5.1.2 requires a description of practices for operating and maintaining public streets, roads, and highways and procedures for reducing impacts on receiving waters from MS4 discharges. The City and County Permittees' street sweeping program covers paved public streets with curb and gutter under the jurisdiction of the municipal and Clark County Permittees. As new areas were developed, the Permittees expanded their street sweeping programs to include the new public streets. State highway and freeway maintenance remained the responsibility of the Nevada Department of Transportation, which has its own MS4 permit and its own street sweeping procedures and goals. Maintenance of private streets and parking lots remained the responsibility of the private owners. Streets were swept on a regular basis to remove accumulated sediment, debris, trash, hydrocarbons, and other pollutants. The Permittees inspected streets roughly every 30 days and performed street sweeping activities on a regular basis during the permit year.

6.1.4 Pesticide and Herbicide Training

Section B.5.5.1.4 of the MS4 Permit requires pesticide and herbicide management activities. During the 2025-2026 permit year, supervisors involved with pesticide and herbicide application are certified (Nevada Restricted-Use Pesticide Certification) or completed training related to the proper use and application of these materials. Training records were maintained throughout the permit year.

6.2 Permit Year Measurable Goals

Table 6-1 provides a description of the status of attainment of measurable goals in the submitted Final SWMP (2026).

Table 6-1. MS4 Maintenance Activities Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.5a	Inspect regional detention basins twice per permit year (July 1 through June 30), for example fall and spring.	City of Henderson	Yes	20 detention basins were inspected twice during the permit year
		City of Las Vegas	Yes	23 detention basins were inspected twice during the permit year
		City of North Las Vegas	Yes	10 detention basins were inspected twice during the permit year
		Clark County	Yes	29 detention basins were inspected twice during the permit year
Measure 5.5b	Monitor sediment and debris in regional detention basins as deemed warranted and report the estimated volume of material removed each permit year.	City of Henderson	Yes	6,379 CY
		City of Las Vegas	Yes	5,854 CY
		City of North Las Vegas	Yes	4,259 CY
		Clark County	Yes	1,519 CY
Measure 5.5c	Inspect conveyance system regional exposed channels twice per permit year, (July 1 through June 30), for example fall and spring.	City of Henderson	Yes	Fall 2025 and Spring 2026 inspections completed
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	

Table 6-1. MS4 Maintenance Activities Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.5d	Monitor sediment and debris in conveyance system regional exposed channels when deemed warranted, and report on the estimated volume of material removed from the conveyance system regional channels each permit year in the Annual Report.	City of Henderson	Yes	28,939 CY
		City of Las Vegas	Yes	523 CY
		City of North Las Vegas	Yes	4,046 CY
		Clark County	Yes	22,972 CY
Measure 5.5e	Inspect 20% of the public storm drain inlets in the jurisdiction of each entity each permit year.	City of Henderson	Yes	1,186 inspections of 5,753 inlets (20%)
		City of Las Vegas	Yes	1,861 inspections of 9,126 inlets (20%)
		City of North Las Vegas	Yes	585 inspections of 2,976 inlets (20%)
		Clark County	Yes	5,965 inspections of 13,829 inlets (43%)
Measure 5.5f	Monitor sediment and debris in public storm drain inlets when deemed warranted, and report on the estimated volume of material removed from the public storm drain inlets each permit year.	City of Henderson	Yes	4,455 CY removed [a]
		City of Las Vegas	Yes	51 CY removed
		City of North Las Vegas	Yes	1,907 CY removed
		Clark County	Yes	350 CY removed
Measure 5.5g	Sweep curbed and paved public streets in urban areas monthly on average, and report on the compliance with the goal each permit year.	City of Henderson	Yes	997 centerline miles, 63,521 miles swept (odometer miles)
		City of Las Vegas	Yes	2,721 curbed miles, 149,243 miles swept
		City of North Las Vegas	Yes	1,643 lane miles, 22,961 lane miles swept
		Clark County	Yes	4,780 street miles, 68,025 miles swept
Measure 5.5h	Review and report training each permit year for the application of pesticides and herbicides.	City of Henderson	Yes	100% of supervisors are trained (Nevada Restricted-Use Pesticide Certification)
		City of Las Vegas	Yes	100% of supervisors are trained (Nevada Restricted-Use Pesticide Certification)
		City of North Las Vegas	Yes	100% of supervisors are trained (Nevada Restricted-Use Pesticide Certification)
		Clark County	Yes	100% of supervisors are trained (Nevada Restricted-Use Pesticide Certification, County Herbicide Contract Holder training)

Notes:

[a] Material removed is a total of street sweeping and drain inlet material removed



Section 7.0

B.5.6 Post-Construction Program for New Development and Significant Redevelopment Projects

Section 7

B.5.6 Post-Construction Program for New Development and Significant Redevelopment Projects

Section B.5.6 of the 2024 MS4 Permit for the Las Vegas Valley includes requirements for a Post-Construction Program for New Development and Significant Redevelopment (NDSR).

7.1 Permit Year Overview

The purpose of the Post-Construction Program for NDSR is to utilize BMPs to address impacts to urban runoff water quality after construction activities have ceased. The Permittees' Post-Construction program consists of mapping areas of NDSR, regional detention basins, low-flow features, the regional conveyance system channel linings, parking lot program, water quality impairment evaluation, and a selenium evaluation.

During the 2025–2026 permit year, the Permittees continued implementation of the Post-Construction Program for NDSR, including construction of regional detention basins and low-flow features planning, construction, inspection, inventory tracking, NDSR mapping, Low Impact Development implementation, and selenium evaluation. During the 2025-2026 permit year, seven detention basins were under design, three had completed design, and three were completed. In particular, the Meadows Detention Basin was upgraded. The Permittees inspected 82 regional detention basins and 14 low-flow features. Outreach activities included six contractor training sessions with approximately 220 attendees, distribution of flyers, and updates to lvstormwater.com. The annual selenium evaluation continued to conclude that the post-construction program criteria are not expected to contribute to elevated selenium levels or cause exceedances of applicable water quality standards. These activities are described in the following subsections.

7.1.1 Areas of NDSR

Figure 7-1 presents a valley-wide GIS map depicting approximate areas of NDSR in the Las Vegas Valley developed in the permit year. Figures 7-2 through 7-5 provide a more detailed view of four Las Vegas Valley regions (northwest, northeast, southwest, and southeast, respectively). These maps were prepared based on stormwater infrastructure data provided by the Permittees and parcel-level data from Clark County. Data were compiled only for development projects that were completed (e.g., have received Certificates of Occupancy or Certificates of Completion) during the 2025-2026 permit year.

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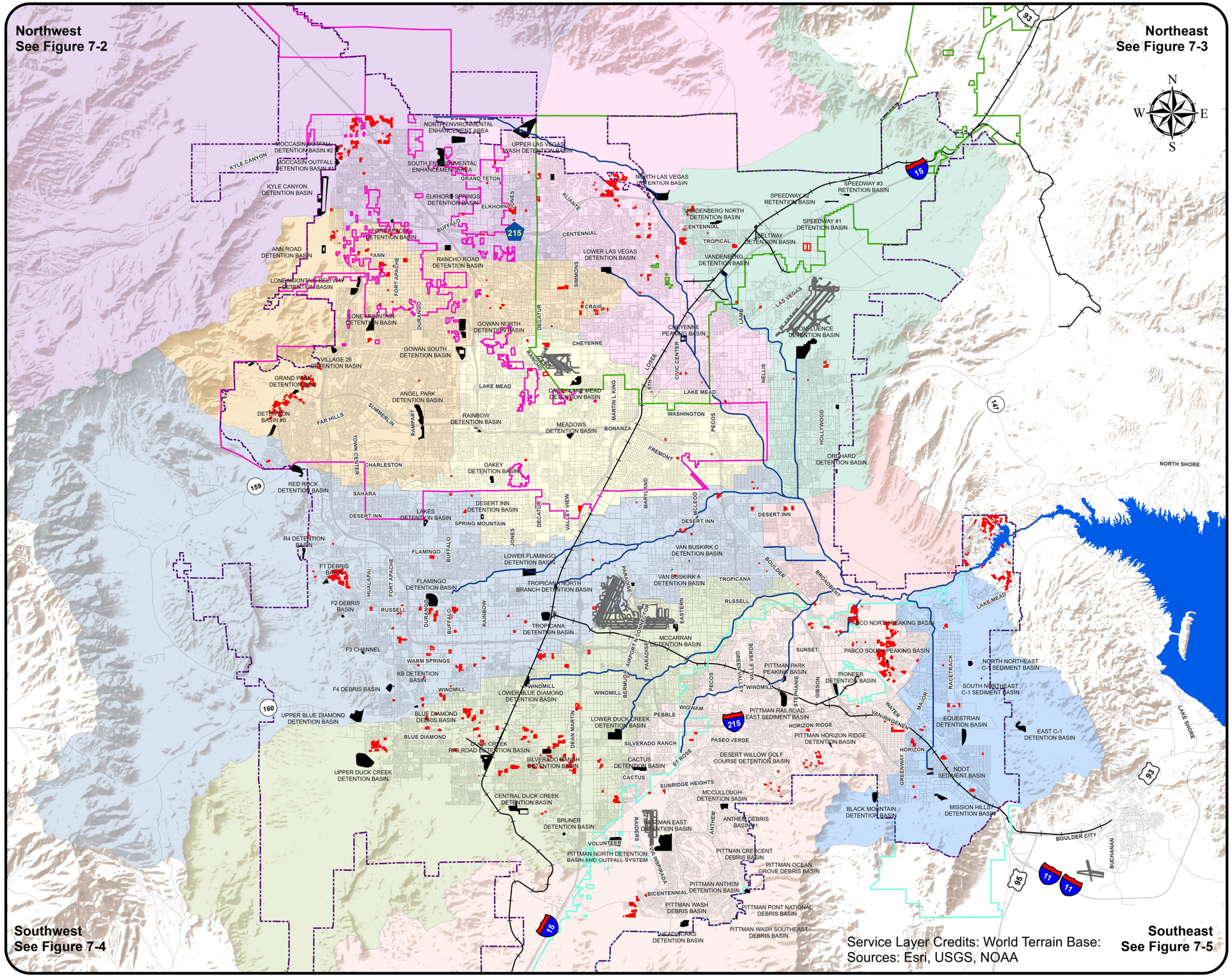
Figure 7-1
Las Vegas Valley
NDSR: Overview



Legend

- New Development and Significant Redevelopment from July 1, 2025 to June 30, 2026
- Major Washes

Detention Basins

- Completed
- Under Construction
- Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)

Jurisdictional Boundaries

- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

0 1 2 4 6

Scale in Miles

2025-2026 Annual Report

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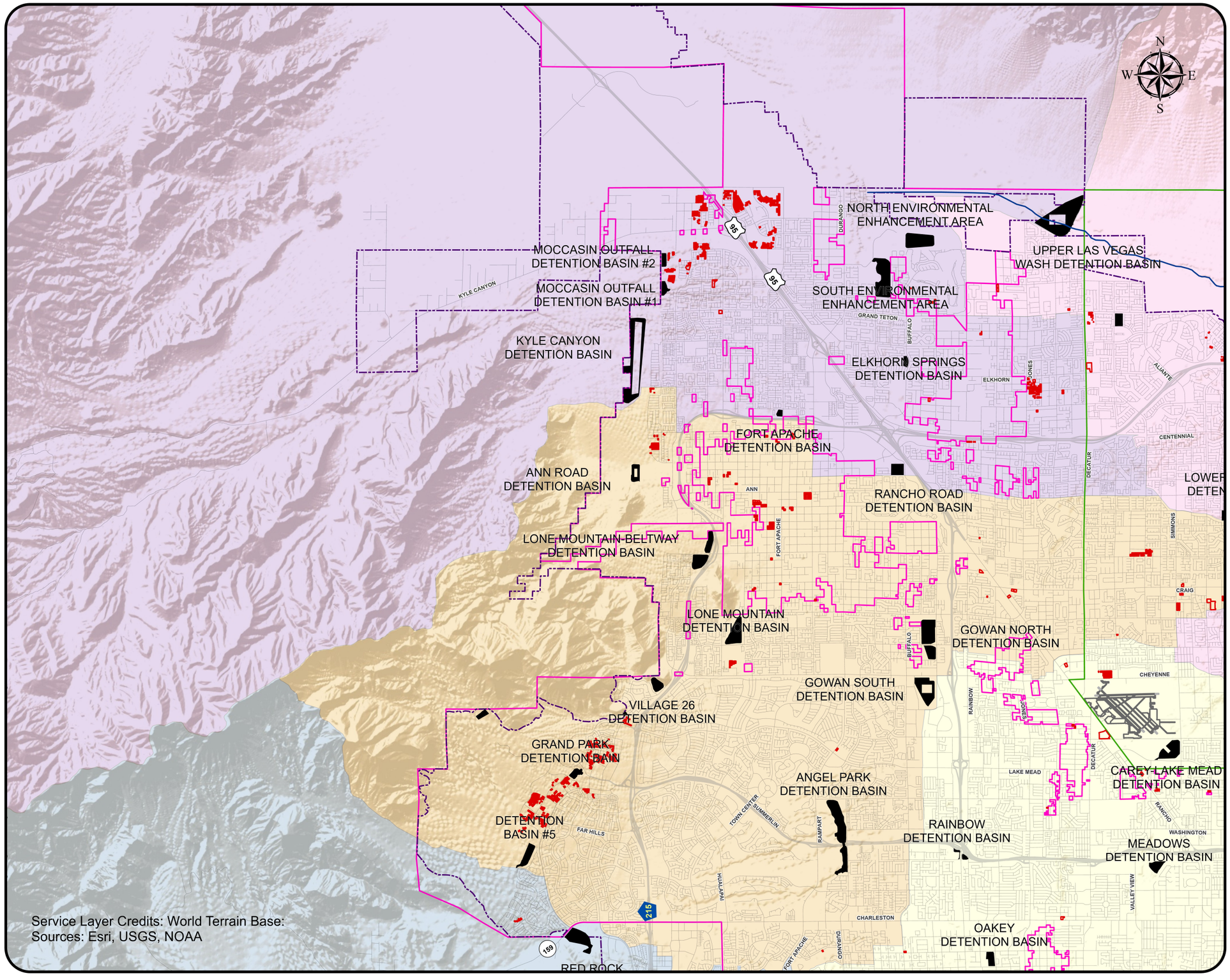
Figure 7-2
Las Vegas Valley
NDSR: Northwest



Service Layer Credits: World Terrain Base:
Sources: Esri, USGS, NOAA

Legend

- New Development and Significant Redevelopment from July 1, 2025 to June 30, 2026
- Major Washes

Detention Basins

- Completed
- Under Construction
- Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)

Jurisdictional Boundaries

- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

0 0.5 1 2 3

Scale in Miles

2025-2026 Annual Report

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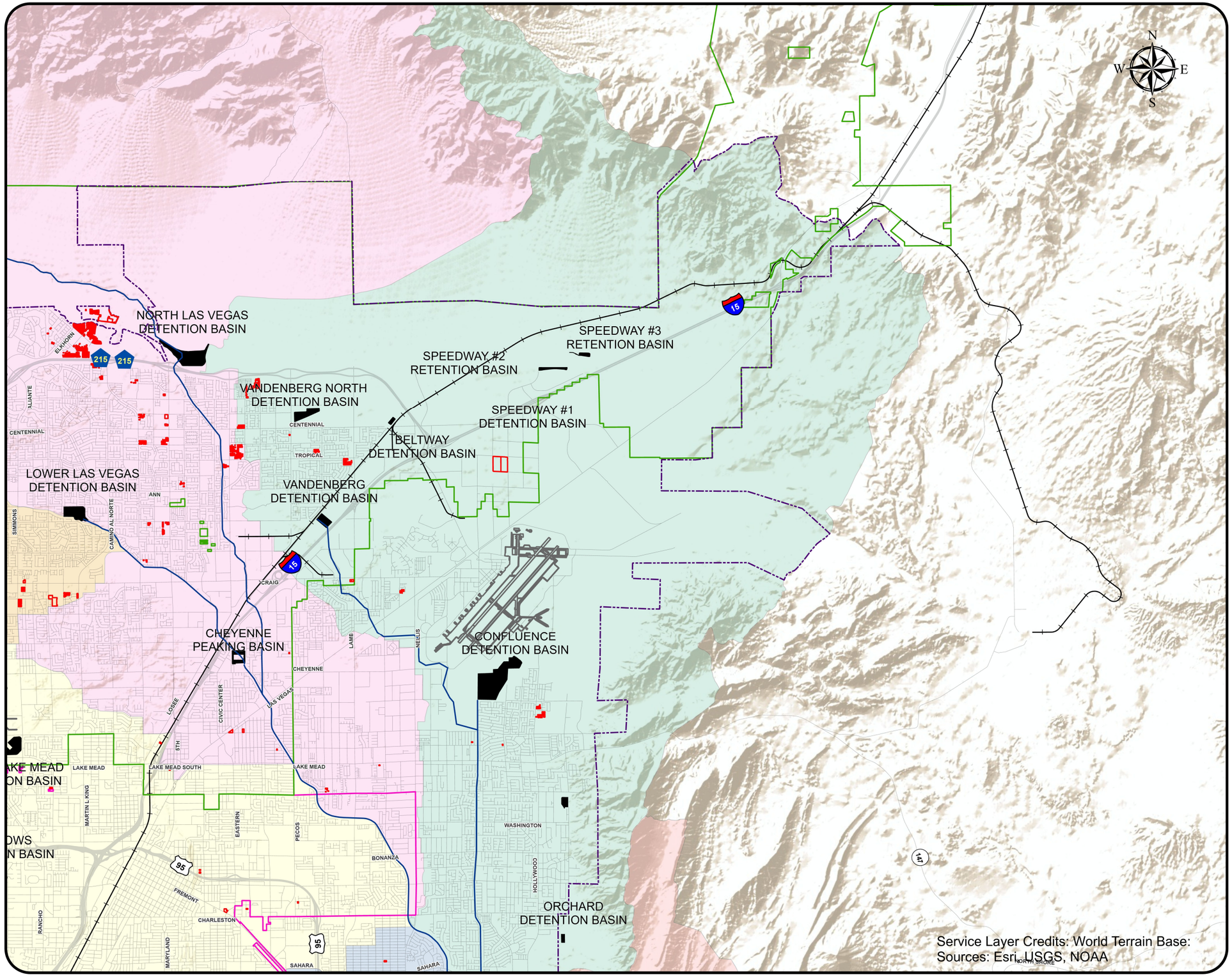
Figure 7-3
Las Vegas Valley
NDSR: Northeast



Legend

- New Development and Significant Redevelopment from July 1, 2025 to June 30, 2026
- Major Washes

Detention Basins

- Completed
- Under Construction
- Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)

Jurisdictional Boundaries

- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Airports
- Streets
- Railroads

Watersheds

- C1
- CENTRAL
- DUCK CREEK
- FLAMINGO/TROPICANA
- GOWAN
- LOWER LAS VEGAS WASH
- LOWER NORTHERN
- PITTMAN
- RANGE WASH
- UPPER NORTHERN

0 0.5 1 2 3

Scale in Miles

2025-2026 Annual Report

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Figure 7-4
Las Vegas Valley
NDSR: Southwest

Legend

New Development and Significant Redevelopment from July 1, 2025 to June 30, 2026

Major Washes

Detention Basins

Completed

Under Construction

Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)

Jurisdictional Boundaries

City of Henderson

City of Las Vegas

City of North Las Vegas

Airports

Streets

Railroads

Watersheds

C1

CENTRAL

DUCK CREEK

FLAMINGO/TROPICANA

GOWAN

LOWER LAS VEGAS WASH

LOWER NORTHERN

PITTMAN

RANGE WASH

UPPER NORTHERN

0 0.5 1 2 3

Scale in Miles

2025-2026 Annual Report

RED ROCK DETENTION BASIN

R4 DETENTION BASIN

F1 DEBRIS BASIN

F2 DEBRIS BASIN

F3 CHANNEL

F4 DEBRIS BASIN

KB DETENTION BASIN

UPPER BLUE DIAMOND DETENTION BASIN

UPPER DUCK CREEK DETENTION BASIN

OAKEY DETENTION BASIN

LAKES DETENTION BASIN

DESERT INN DETENTION BASIN

FLAMINGO DETENTION BASIN

LOWER FLAMINGO DETENTION BASIN

TROPICANA NORTH BRANCH DETENTION BASIN

TROPICANA DETENTION BASIN

LOWER BLUE DIAMOND DETENTION BASIN

BLUE DIAMOND DEBRIS BASIN

DUCK CREEK RAILROAD DETENTION BASIN

SILVERADO RANCH DETENTION BASIN

CENTRAL DUCK CREEK DETENTION BASIN

BRUNER DETENTION BASIN

PITTMAN NORTH DETENTION BASIN AND OUTFALL SYSTEM

LOWER DUCK CREEK DETENTION BASIN

CACTUS DETENTION BASIN

CHARLESTON

SAHARA

DESERT INN

SPRING MOUNTAIN

FLAMINGO

TROPICANA

RUSSELL

WARM SPRINGS

WINDMILL

SILVERADO RANCH

CACTUS

VOLUNTEER

PEBBLE

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

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Figure 7-5
Las Vegas Valley
NDSR: Southeast

Legend

New Development and Significant Redevelopment from July 1, 2025 to June 30, 2026

Major Washes

Detention Basins

Completed

Under Construction

Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)

Jurisdictional Boundaries

City of Henderson

City of Las Vegas

City of North Las Vegas

Airports

Streets

Railroads

Watersheds

C1

CENTRAL

DUCK CREEK

FLAMINGO/TROPICANA

GOWAN

LOWER LAS VEGAS WASH

LOWER NORTHERN

PITTMAN

RANGE WASH

UPPER NORTHERN

0 0.5 1 2 3

Scale in Miles

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ORCHARD DETENTION BASIN
VAN BUSKIRK C DETENTION BASIN
VAN BUSKIRK A DETENTION BASIN
MCCARRAN DETENTION BASIN
PABCO NORTH PEAKING BASIN
PABCO SOUTH PEAKING BASIN
PITTMAN PARK PEAKING BASIN
PIONEER DETENTION BASIN
NORTH NORTHEAST C-1 SEDIMENT BASIN
SOUTH NORTHEAST C-1 SEDIMENT BASIN
EQUESTRIAN DETENTION BASIN
EAST C-1 DETENTION BASIN
NDOT SEDIMENT BASIN
MISSION HILLS DETENTION BASIN
BLACK MOUNTAIN DETENTION BASIN
LOWER DUCK CREEK DETENTION BASIN
PITTMAN RAILROAD EAST SEDIMENT BASIN
PITTMAN HORIZON RIDGE DETENTION BASIN
DESERT WILLOW GOLF COURSE DETENTION BASIN
CACTUS DETENTION BASIN
MCCULLOUGH DETENTION BASIN
ANTHEM DEBRIS BASIN #1
PITTMAN EAST DETENTION BASIN
PITTMAN CRESCENT DEBRIS BASIN
PITTMAN OCEAN GROVE DEBRIS BASIN
PITTMAN ANTHEM DETENTION BASIN
PITTMAN WASH DEBRIS BASIN
PITTMAN PONT NATIONAL DEBRIS BASIN
PITTMAN WASH SOUTHEAST DEBRIS BASIN
HEADWORKS DETENTION BASIN
N NORTH DETENTION AND OUTFALL SYSTEM
Lake Mead
BOULDER CITY

Service Layer Credits: World Terrain Base: Sources: Esri, USGS, NOAA

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7.1.2 Regional Detention Basins

Regional flood control detention basins are a key component of the NDSR Program. Due to the infrequency, localization, and variable magnitude of storm events in the Las Vegas Valley, the use of regional detention basins to capture and regulate runoff and associated pollutants is more efficient than the use of smaller scale facilities.

During the 2025-2026 permit year, the following seven detention basins were under design:

- Duck Creek Larson Detention Basin
- Lakemoor Park Detention Basin
- North Las Vegas Detention Basin (no low-flow feature planned)
- Pabco North Peaking Basin (no low-flow feature planned)
- Pioneer Detention Basin (low-flow feature modification)
- Southeast Pittman Detention Basin
- Southwest Pittman Detention Basin

During the 2025-2026 permit year, design was completed for the following three regional facilities:

- Tropicana Wash – Harry Reid Airport Peaking Basin
- Village 27 Debris Basin
- Harry Reid Peaking Basin (no low-flow feature planned)

During the 2025-2026 permit year, construction was completed for the following three detention basins:

- Jim McGaughey Detention Basin
- Paradise Detention Basin
- Village 31 Detention Basin

7.1.3 Low-Flow Features

The Permittees have been installing low-flow features in regional detention basins to improve capture of sediment and other pollutants during low-flow events. The Permittees determine the amount of low-flow features to be added by assessing the area of NDSR that is projected to drain to a planned or existing detention basin and then estimating the runoff associated with this area from the 85th percentile storm event, with the goal of constructing low-flow features sufficient to respond to the projected volume. Figure 7-6 shows the volume attributed to the 85th percentile storm from data records of new development and compares it with the capacities of the low-flow features that have been installed since the program started in 2013.

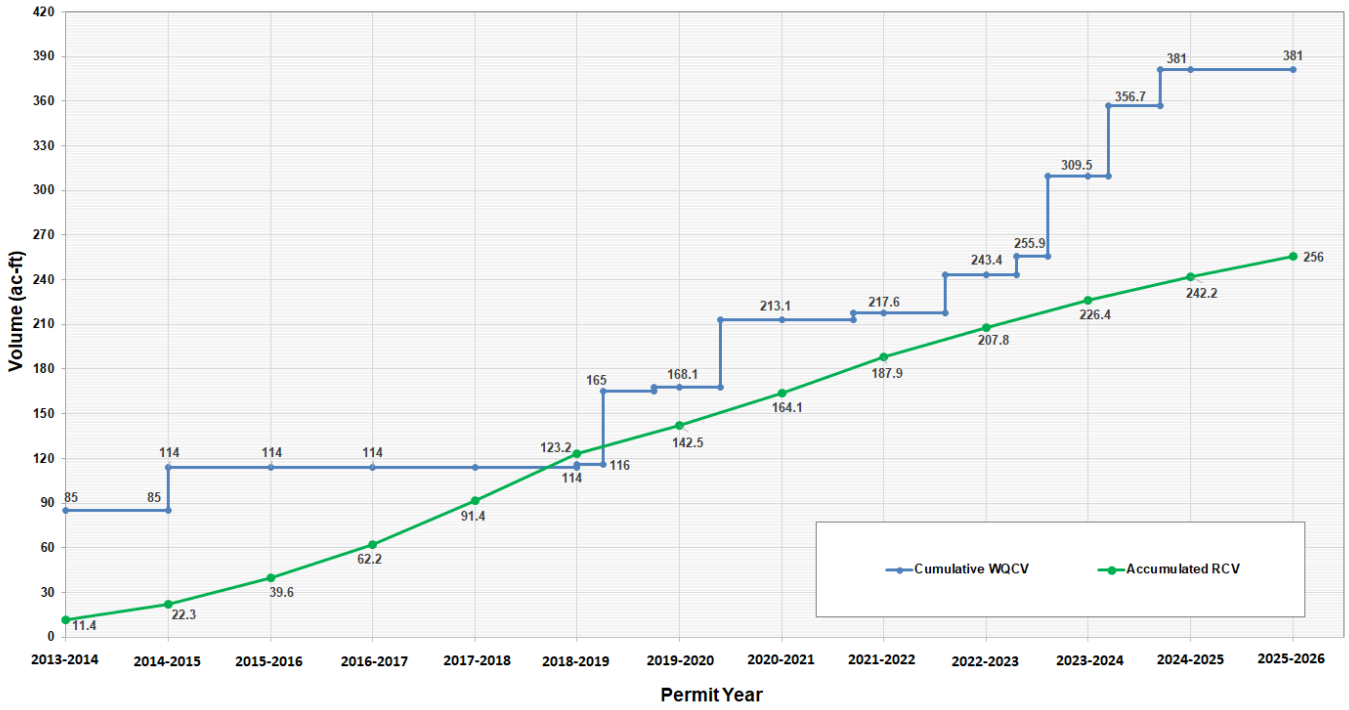


Figure 7-6: Total Volume Generated by NDSR Acreage vs. Total Low-Flow Feature Treatment Capacity (also known as Water Quality Capture Volume [WQCV])

Since 2013, low-flow features have been installed in the following regional detention basins:

- Angel Park Detention Basin
- Equestrian Detention Basin
- Pioneer Detention Basin
- Horizon Ridge Detention Basin
- Pittman North Detention Basin
- Park Highlands West Detention Basin
- Vandenberg North Detention Basin
- Speedway 2 Detention Basin
- Grand Park Detention Basin
- Silverado Ranch Detention Basin
- Gowan North Detention Basin
- Oakey Detention Basin
- Pittman East Detention Basin
- Rancho Detention Basin

7.1.4 Low Impact Development

In order to get approval for construction plans, all new development, both public and private, must comply with the Hydrologic Criteria and Drainage Design Manual (HCDDM), which requires Low Impact Development (LID) measures such as swales or alternative measures for medium and large commercial and industrial parking lots. The Permittees are required to maintain an inventory of these sites.

7.1.5 Selenium Evaluation

CCRFCD provides written evaluations of whether the criteria developed as part of the post-construction program will tend to cause or contribute to elevated levels of selenium in surface waters within the Las Vegas Valley and whether the criteria developed as part of the post-construction program will tend to reduce or degrade the contribution of stormwater to the water supplies provided by the Colorado River.

The Permittees have concluded that post-construction program criteria will not contribute to elevated levels of selenium in surface waters within the Las Vegas Valley and will not cause an exceedance of the water quality standards for selenium in identified waters. This conclusion depends primarily on the lack of measures that would cause stormwater to infiltrate into the ground. Infiltration in the Las Vegas Valley raises shallow groundwater levels and mobilizes naturally occurring selenium in the soils, which ultimately surfaces in surface channels.

7.2 Permit Year Measurable Goals

The 2025-2026 measurable goals are provided in Table 7-1.

Table 7-1. Post-Construction Program for NDSR Projects Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.6a	Report on whether the inventory and tracking system has been updated each permit year in the Annual Report.	City of Henderson	Yes	The Permittees maintained and updated their post-construction BMP tracking list this permit year.
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	
Measure 5.6b	Inspect all regional detention basins and low-flow features each permit year. Inspect additional post-construction BMPs during construction or as appropriate. Each Permittee will review the program annually and make necessary changes.	City of Henderson	Yes	The Permittees inspected 82 regional detention basins and 14 low-flow features during the permit year. COH - 20 detention basins CLV - 23 detention basins CNLV - 10 detention basins CC - 29 detention basins
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	
Measure 5.6c	Provide NDEP with updated maps each permit year in the Annual Report.	Clark County Regional Flood Control District	Yes	Figure 7-1 presents a Valley-wide GIS map depicting areas, or approximate areas, of NDSR in the Las Vegas Valley for the permit year. Figure 7-2 through Figure 7-5 provide a more detailed view of four Las Vegas Valley regions.
Measure 5.6d	Report on the number of contractor trainings conducted and flyers distributed each permit year in the Annual Report.	All Permittees	Yes	Number of trainings conducted with post-construction information: 6 (July 1, 2025, May 5, 2026, and May 6, 2026). Estimated number of attendees: 220 Flyers distributed: 440 lvstormwater.com website updated.

Table 7-1. Post-Construction Program for NDSR Projects Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.6e	Provide written evaluations or updated evaluations each permit year in the Annual Report.	Clark County Regional Flood Control District	Yes	The Permittees have concluded that post-construction program criteria will not contribute to elevated levels of selenium in surface waters within the Las Vegas Valley and will not cause an exceedance of the water quality standards for selenium in identified waters. This conclusion depends primarily on the lack of LID measures that would cause stormwater to infiltrate into the ground. Infiltration in the Las Vegas Valley raises shallow groundwater levels and mobilizes naturally occurring selenium in the soils, which ultimately surfaces in surface channels.



Section 8.0

B.5.7 Illicit Discharge Detection and Elimination

Section 8

B.5.7 Illicit Discharge Detection and Elimination

Section B.5.7 of the 2024 MS4 Permit for the Las Vegas Valley requires an Illicit Discharge Detection and Elimination Program.

8.1 Permit Year Overview

During the 2025-2026 permit year, the Permittees conducted field screening activities, including inspections of regional storm channels and detention basins, to identify potential illicit discharges, illegal dumping, non-stormwater discharges, and maintenance concerns. The Permittees also received and investigated reports of illicit discharges and other stormwater-related concerns through their established complaint reporting systems and continued to implement spill prevention and response programs.

8.1.1 Storm Channel Inspections

Sections B.5.7.1.2 and B.5.7.1.4 of the 2024 MS4 Permit require field screening and investigation activities associated with illicit discharge detection and elimination. Semi-annual inspections of regional open storm channels and detention basins included inspecting for evidence of illicit discharges, illegal dumping, and other maintenance needs. Applicable MS4 facilities were inspected by the Permittees in Fall 2025 and Spring 2026. Inspections included visually inspecting exposed storm channels and detention basins to look for evidence of non-stormwater discharges. Emphasis was placed on those areas that had a reasonable potential for containing illicit discharges, exfiltration from the sanitary sewer system, or other sources of non-stormwater.

In general, dry weather flows in Las Vegas Valley MS4 channels were minor. Vegetation, trash, debris, and graffiti were commonly found in channels inspected by the City of North Las Vegas, the City of Henderson, and, the City of Las Vegas. Clark County commonly observed vegetation, gravel/silt, and debris during the inspections.

8.1.2 Spill Control Prevention Plan

Section B.5.7.1.5 requires spill prevention, containment, and response activities. Spill Control Prevention Plans are plans designed to help the Permittees prevent and contain spills of hazardous materials that would impact downstream water quality. The Permittees maintained spill prevention and response programs through their fire departments and contracts with specialized emergency response contractors. These programs were implemented in response to other state requirements but accrue benefits to the MS4 program.

8.1.3 Stormwater-Related Complaint Response

Section B.5.7.1.6 of the 2024 MS4 Permit requires activities that facilitate public reporting of illicit discharges and stormwater-related concerns. The Permittees provide several avenues by which the public can report potential illicit discharges to the MS4, including:

- Websites
  - The www.LVstormwater.com website has a link to allow reporting illicit discharges by members of the community. This link provides contact information for reporting illicit discharges and clogged storm drains.
  - Individual Permittee websites also include links for reporting illicit discharges or illegal dumping within their jurisdiction.
- Southern Nevada Health District (SNHD)
  - The SNHD has the authority to enforce ordinances prohibiting dumping of solid waste, semisolid waste, liquid waste, and sewage to the Las Vegas Valley MS4. The public can call SNHD and report problems directly or can submit a complaint form reporting evidence of illegal dumping via their website: www.southernnevadahealthdistrict.org/solid-waste/illegal-dumping.php
- Clark County Public Response Office (CCPRO)
  - The CCPRO receives public complaints related to illegal dumping and other ordinance violations and is empowered to respond and address these problems via their website: https://www.clarkcountynv.gov/government/departments/administrative_services/code_enforcement_-_public_response_office/
- Direct Contact with Permittees
  - Each of the Permittees receives direct reports from citizens reporting dumping, illegal discharges of non-stormwater to the drainage system, maintenance problems, and other conditions that may affect water quality. The CLV, CNLV, and COH follow up on these complaints within their jurisdiction; Clark County follows up on complaints in unincorporated Clark County. The CCRFCD also routinely receives reports through its citizen contact system, often in response to its PSAs. Complaints are directed to the appropriate jurisdiction for resolution.

8.2 Permit Year Measurable Goals

Table 8-1 displays a description of the status of the measurable goals in the submitted Final SWMP (2026).

Table 8-1. Illicit Discharge Detection and Elimination Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.7a	Conduct field screening activities along with maintenance activities including inspections of channels and detention basins.	City of Henderson	Yes	Fall 2025 and Spring 2026 inspections completed
		City of Las Vegas	Yes	Fall 2025 and Spring 2026 inspections completed
		City of North Las Vegas	Yes	Fall 2025 and Spring 2026 inspections completed
		Clark County	Yes	Fall 2025 and Spring 2026 inspections completed

Table 8-1. Illicit Discharge Detection and Elimination Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.7b	Train new inspectors and provide refresher training every three years.	City of Henderson	Yes	1 refresher training
		City of Las Vegas	Yes	2 new inspectors and 5 refresher trainings
		City of North Las Vegas	Yes	Refresher training for inspectors to be provided during the 2026-2027 permit year
		Clark County	Yes	9 new inspectors and 5 refresher trainings
Measure 5.7c	Report on the number of responses to complaints relating to illicit discharge and detection each permit year.	City of Henderson	Yes	391
		City of Las Vegas	Yes	51
		City of North Las Vegas	Yes	6
		Clark County	Yes	540
Measure 5.7d	Conduct a program review every five permit years.	City of Henderson	N/A	Clark County and the City of Las Vegas reviewed the Illicit Discharge Detection and Elimination (IDDE) Program during the permit year. City of Henderson and City of North Las Vegas plan to review their IDDE during the 2026-2027 permit year.
		City of Las Vegas	N/A	
		City of North Las Vegas	N/A	
		Clark County	N/A	



Section 9.0

B.5.8 Industrial Facility Monitoring and Control

Section 9

B.5.8 Industrial Facility Monitoring and Control

Section B.5.8 of the 2024 MS4 Permit requires the Permittees to monitor and inspect the potential for discharges of industrial stormwater pollution to the MS4.

9.1 Permit Year Overview

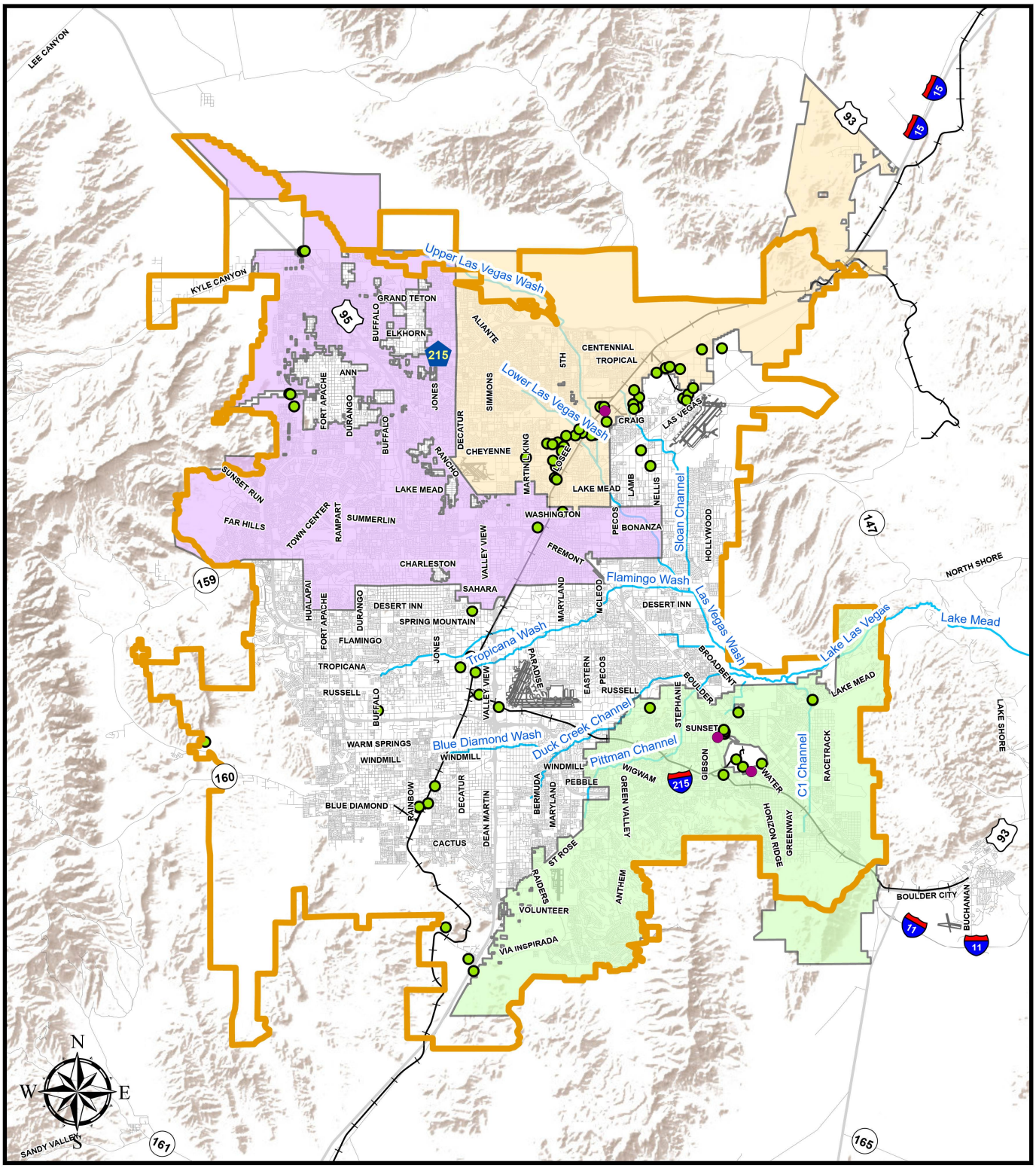
The Industrial Facility Monitoring and Control program addresses discharges from operating municipal landfills, hazardous waste treatment, disposal, and recovery facilities, and industrial facilities subject to Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The program also addresses discharges from industrial facilities that the Permittees determine are contributing a substantial pollutant loading to the MS4 within the area covered by the 2024 MS4 Permit.

This program complements, but is independent from NDEP's State Multi-Sector program. The industrial facility monitoring and control processes for the cities and County are as follows:

- Clark County Water Quality staff perform the activities and measures for the industrial facility program. Clark County staff inspect the sites identified on the industrial facility inventory at least annually and perform follow-up as needed.
- CLV use their pretreatment program staff to conduct stormwater inspections during their regular site visits. All industrial sites in the pretreatment program are inspected. If issues pertaining to stormwater are discovered during normal inspections for compliance with discharges to the sanitary sewer, these are noted and addressed accordingly.
- CNLV use their pretreatment program staff to conduct stormwater inspections during their regular site visits. All industrial sites in the pretreatment program are inspected. If issues pertaining to stormwater are discovered during normal inspections for compliance with discharges to the sanitary sewer, these are noted and addressed accordingly.
- The COH Building and Fire Safety Division Fire Inspector II staff inspect sites identified on the industrial facility inventory at least annually and perform follow-up as needed.

9.1.1 Industrial Facility Stormwater Inventory

The 2024 MS4 Permit requires that the Permittees maintain an inventory of industrial facilities subject to monitoring and enforcement during the permit year. The inventory has four categories: 1) operating municipal landfills; 2) hazardous waste treatment, disposal, and recovery facilities; 3) facilities that are subject to SARA Section 313; and 4) industrial facilities that the municipal or Clark County Permittee determines are contributing a substantial pollutant loading to the MS4. In the Las Vegas Valley, there are no operating municipal landfills. Facilities in Categories 2 and 3 are checked against the EPA website for accuracy and are discussed in Sections 9.1.2 and 9.1.3, respectively. The Permittees track other industrial facilities to confirm they are not substantially contributing to stormwater pollution, even though they are not in an MS4 permit-mandated industrial category. During the 2025-2026 permit year, there were no industrial facilities that the Permittees determined were contributing a substantial pollutant loading to the MS4. Figure 9-1 shows the industrial facility locations that are listed in the Permittees' respective industrial facility inventory.



Legend

- Ultimate Development Boundary Updated for the Las Vegas Valley MS4 Program (2023 MPU)
- Hazardous Waste Treatment Disposal and Recovery Facilities
- Industrial Facility Subject to Section 313
- Airports
- Streets
- Railroads

Jurisdictional Boundaries

- City of Henderson
- City of Las Vegas
- City of North Las Vegas
- Clark County

0 2 3 6 9

Scale in Miles

Service Layer Credits: World Terrain
Base: Sources: Esri, USGS, NOAA

Figure 9-1
Industrial Facility Locations
2025-2026 Annual Report

9.1.2 Hazardous Waste Treatment, Disposal, and Recovery Facilities

The EPA keeps a list of hazardous waste treatment, disposal, and recovery facilities that are subject to the control of hazardous waste under the Resource Conservation and Recovery Act (RCRA). The EPA RCRA Info website (https://enviro.epa.gov/facts/rcrainfo/search.html) was searched to identify hazardous waste treatment, disposal, and recovery facilities within the Las Vegas Valley. The facilities subject to RCRA within the Las Vegas Valley that are listed on the EPA RCRA Info website are displayed in Table 9-1.

Table 9-1. Hazardous Waste Treatment, Disposal, and Recovery Facilities in the Las Vegas Valley, According to EPA RCRA Info for the 2025-2026 Permit Year

Industrial Facility Name	Address	Inspected Annually By
Basic Remediation Company (BRC)	875 W Warm Springs Rd., Henderson, NV 89011	Clark County
Safety-Kleen Systems, Inc	4582 Donovan Way, North Las Vegas, NV 89081	City of North Las Vegas
EMD Acquisition LLC (formerly Tronox LLC)	560 W Lake Mead Pkwy., Henderson, NV 89015	Clark County

9.1.3 SARA Title III Section 313

SARA Title III Section 313 requires certain classes of industrial facilities to submit reports to the EPA based on their potential for toxic chemical releases. The EPA regulates and maintains a list of these industrial facilities, as well as other facilities that release certain amounts of regulated chemicals into the environment. The EPA's website (https://enviro.epa.gov/envirofacts/tri/search) was used to identify all Toxics Release Inventory (TRI) facilities in the Las Vegas Valley. However, some inaccuracies in the EPA GIS data may be present due to potential lag time in updates on the facilities' information being published online. Section 313 facilities within the Las Vegas Valley that are listed on the EPA TRI website are displayed in Table 9-2.

Table 9-2. Industrial Facilities in the Las Vegas Valley Subject to SARA Title III Section 313, According to EPA TRI Search for the 2025-2026 Permit Year

Industrial Facility Name	Address	Inspected Annually By
Accurate Metal Solutions, Las Vegas, LLC [a]	3261 Builders Ave., Las Vegas, NV 89101	City of Las Vegas [d]
Aggregate Industries SWR Gowan Asphalt	413 E Gowan Rd., North Las Vegas, NV 89030	City of North Las Vegas
Amazon.com Services LLC	5801 Nicco Way, Las Vegas, NV 89115	City of North Las Vegas
Anderson Dairy	801 Searles Ave., Las Vegas, NV 89101	City of Las Vegas
Calportland Company Gary Plant (Desert Ready Mix)	6501 W Richmar Ave., Las Vegas, NV 89139	Clark County
Calportland Company Gowan Plant	143 W Gowan Rd., North Las Vegas, NV 89032	City of North Las Vegas
Calportland Company Henderson Plant (Silver State Materials)	450 Eastgate Rd., Henderson, NV 89014	City of Henderson
Calportland Company Range Plant	5910 Range Rd., Las Vegas, NV 89115	City of North Las Vegas
Calportland Company Sloan Plant	5300 Sloan Rd., Sloan, NV 89124	Clark County
Capital Cabinet Corp [b]	3645 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas [d]
Casino Ready Mix [b]	5355 N Beesley Dr., Las Vegas, NV 89115	Clark County [d]
Cemex Anthem Plant #1856 [b]	2403 Democracy Way, Henderson, NV 89044	City of Henderson [d]
Cemex - Block Plant	5030 N Lamb Blvd., Las Vegas, NV 89115	City of North Las Vegas
Cemex Blue Diamond Plant 1855 [b]	9325 S Jones Blvd., Las Vegas, NV 89119	Clark County [d]
Cemex Gowan Plant #1860	29 W Gowan., North Las Vegas, NV 89030	City of North Las Vegas

Table 9-2. Industrial Facilities in the Las Vegas Valley Subject to SARA Title III Section 313, According to EPA TRI Search for the 2025-2026 Permit Year

Industrial Facility Name	Address	Inspected Annually By
Cemex Kyle Canyon Plant #1866 (Sierra Ready Mix—East Batch Plant)	2645 Moccasin Rd., Las Vegas, NV 89143 [e]	City of Las Vegas
Cemex – Losee Plant	4001 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas
Cemex MGM City Center [b]	3790 Las Vegas Blvd., Las Vegas, NV 89109	Clark County [d]
Cemex North Las Vegas Plant #1853	4001 N Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas
Cemex – Sloan Plant	14998 S Las Vegas Blvd., Las Vegas, NV 89124	Clark County
Cemex Turnberry Plant #1859 [b]	2777 Paradise Rd., Las Vegas, NV 89109	Clark County [d]
Certainteed Gypsum - Las Vegas Finishing Plant	3838 Civic Center Dr., North Las Vegas, NV 89030	City of North Las Vegas
Certain Teed Gypsum - Las Vegas Plant	13500 Blue Diamond Rd Las Vegas, NV 89161	Clark County
CMC Economy Steel	4265 W Tompkins Ave, Las Vegas, NV 89103 [f]	Clark County
CMC Rebar Las Vegas	4485 E Colton Ave., Las Vegas, NV 89115	Clark County
CPI Card Group (listed as CPI Card Group)	1220 Trade Drive, North Las Vegas, NV 89030	City of North Las Vegas
Custom Building Products	3115 E. Lone Mountain Rd., Suite 1000, North Las Vegas, NV 89081	City of North Las Vegas
DFA Dairy Brands Fluid LLC DBA Meadow Gold Dairy	6350 E Centennial Pkwy., North Las Vegas, NV 89115	City of North Las Vegas
EMD Acquisition LLC (formerly Tronox)	560 W Lake Mead Pkwy., Henderson NV, 89015	Clark County
Ergon Asphalt & Emulsions Inc. - Las Vegas	3901 W Ponderosa Way, Las Vegas, NV 89118	Clark County
Ergon Asphalt & Emulsions Inc. - Las Vegas	6400 W Richmar Ave., Las Vegas, NV 89139	Clark County
Farm Fresh Foods	3840 Civic Center Dr., North Las Vegas, NV 89030	City of North Las Vegas
Firestone Building Products	4272 Corporate Center Dr., North Las Vegas, NV 89030	City of North Las Vegas
Grand Products Nevada Inc. (CES)	751 Pilot Rd. Suite A, Las Vegas, NV 89119	Clark County
HD Supply Construction Supply LTD (Harris Real Estate Nevada LLC)	2437 1/2 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas
IGT [b]	6811 Spencer St., Las Vegas, NV 89119 [g]	Clark County [d]
Jensen Precast	3853 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas
Jensen Precast	3840 N Bruce St., North Las Vegas, NV 89030	City of North Las Vegas
Jensen Precast [b]	2750 Marion Dr., Las Vegas, NV 89115	Clark County [d]
Kalco Lighting LLC	6355 S Windy St. Suite 3, Las Vegas, NV 89119	Clark County
Ken's Foods Inc. Las Vegas	8925 Ken's Ct., Las Vegas, NV 89139	Clark County
Las Vegas Cultured Marble Inc. [b]	6875 Speedway Blvd. Building U-102, Las Vegas, NV 89115	Clark County [d]
Las Vegas Paving Corp	10846 W. Lone Mountain Rd., Las Vegas, NV 89129	City of Las Vegas
Las Vegas Paving [b]	6600 Speedway Blvd., Las Vegas, NV 89115	City of North Las Vegas
Las Vegas Paving Corp	3400 N 5th St., North Las Vegas, NV 89030	City of North Las Vegas
Las Vegas Paving Corp	521 Cape Horn Dr., Henderson, NV 89011	City of Henderson
Las Vegas Paving Corp	9325 S Jones Blvd., Las Vegas, NV 89139	Clark County
Las Vegas Paving [b]	0.75 Miles W of I-15 & 15 SW of US 95, Las Vegas, NV 89115	Clark County [d]

Table 9-2. Industrial Facilities in the Las Vegas Valley Subject to SARA Title III Section 313, According to EPA TRI Search for the 2025-2026 Permit Year

Industrial Facility Name	Address	Inspected Annually By
Las Vegas Paving Corp [b]	1.5 Miles N of Hollywood & Las Vegas Blvd., Las Vegas, NV 89115	Clark County [d]
Lighthouse VIP Products [b]	4601 E Cheyenne Ave., Las Vegas, NV 89115	Clark County [d]
Mars Chocolate NA	1 Sunset Way, Henderson, NV 89014	City of Henderson
May Manufacturing LLC (dba Artesian Spas)	4720 N Lamb Blvd., Las Vegas NV 89115	Clark County
MCC-Uniflex LLC [b]	1151 Grier Dr., Las Vegas, NV 89119	Clark County [d]
Nevada Ready Mix Arville	4301 W Hacienda Ave., Las Vegas, NV 89109	Clark County
Nevada Ready Mix [b]	2200 Bowes St., Henderson, NV 89044	City of Henderson [d]
Nevada Ready Mix Bonanza	601 W Bonanza Rd., Las Vegas, NV 89106	City of Las Vegas
Nevada Ready Mix Echelon [b]	2920 S Industrial Rd., Las Vegas, NV 89109	Clark County [d]
Nevada Ready Mix Le Reve [b]	Sands & S Las Vegas Blvd., Las Vegas, NV 89109	Clark County [d]
Nevada Ready Mix Lone Mountain	10811 W Washburn Ave., Las Vegas, NV 89129	Clark County
Nevada Ready Mix Plant 9 [b]	8755 W Sunset Rd., Las Vegas, NV 89123	Clark County [d]
Nitrex Inc.	201 E Mayflower Ave., North Las Vegas, NV 89030	City of North Las Vegas
Nucor Insulated Panel Group	4700 Engineers Way Suite 103, North Las Vegas, NV 89081	City of North Las Vegas
Ocean Spray Cranberries Inc. [c]	1301 American Pacific Dr., Henderson, NV 89014	City of Henderson [d]
Pacific Engineering & Production Co. of Nevada [b]	8291 Gibson Rd., Henderson, NV 89015	City of Henderson [d]
Pavestone – Las Vegas NV Plant	4720 Alto Ave. Las Vegas, NV 89115	Clark County
Pilot Thomas Logistics LLC - Sloan (Thomas Petroleum LLC Sloan) [b]	4825 N Sloan Ln., Las Vegas NV 89115	Clark County
Pioneer Americas LLC D/B/A Olin Chlor Alkali Products	350 S Fourth St., Henderson, NV 89015	Clark County
Poly-West [b]	251 Conestoga Way, Henderson, NV 89002	City of Henderson [d]
Pro Petroleum LLC – Las Vegas Terminal	4985 N Sloan Ln., Las Vegas, NV 89115	Clark County
Pro Terminal Operators LLC – North Las Vegas Rail Terminal	4800 E El Campo Grande Ave., Las Vegas, NV 89115	City of North Las Vegas
Quikrete – Las Vegas NV Plant	112 W Brooks Ave North Las Vegas, NV 89030	City of North Las Vegas
Rebel Oil Co Inc – Las Vegas Terminal	5054 N Sloan Ln., Las Vegas, NV 89115	Clark County
Reladyne West LLC (New West Holdings LLC)	2420 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas
Rinker Las Vegas Pipe	1899 Burns Rd. Henderson, NV 89011	City of Henderson
Rinker Materials Blue Diamond Plant 1855 [b]	9275 S Jones Blvd., Las Vegas, NV 89139	Clark County [d]
Rinker Materials Buffalo Main 1850 [b]	4511 S Buffalo Dr., Las Vegas, NV 89147	Clark County [d]
Rinker Materials Henderson 1854 [b]	750 Capehorn Dr., Henderson, NV 89015	City of Henderson [d]
Safety-Kleen Systems	4582 Donovan Way, North Las Vegas, NV 89081	City of North Las Vegas
Saguaro Power Company	435 S Fourth St., Henderson, NV 89015	Clark County
Service Rock Products Inc. – 4th Street (Robertson's Ready Mix)	8350 4th St Henderson, NV, 89015	Clark County

Table 9-2. Industrial Facilities in the Las Vegas Valley Subject to SARA Title III Section 313, According to EPA TRI Search for the 2025-2026 Permit Year

Industrial Facility Name	Address	Inspected Annually By
Service Rock Products Inc. Las Vegas [b]	800 Feet S of Intersection of Cactus Rd. & Polluck Dr., Las Vegas, NV 89102	City of Las Vegas [d]
Service Rock Products Inc. – Lone Mountain NV Facility (Robertson's Ready Mix)	10815 W Washburn, Las Vegas, NV 89149	Clark County
Service Rock Products Inc - Sloan (Robertson's Ready Mix)	14575 Arville St., Las Vegas, NV 89124	Clark County
Service Rock Products Inc – Beesley NV (Robertson's Ready Mix)	5255 Beesley Dr., Las Vegas, NV 89115	Clark County
Sierra North Batch Plant	4150 Smiley Rd., North Las Vegas, NV 89081	City of North Las Vegas
Sierra West Batch Plant (Wells Cargo)	10021 Moccasin Rd., Las Vegas, NV 89143	City of Las Vegas
Sofidel Las Vegas TAD LLC	3901 Donna St, North Las Vegas, NV 89030	City of North Las Vegas
Southern Nevada Paving Summerlin Asphalt Plant [b]	Summerlin Pkwy. & I-215, Las Vegas, NV 89145	City of Las Vegas [d]
Sparkletts Drinking Water Corp	4225 W Desert Inn Rd., Las Vegas, NV 89102	Clark County
Sparkletts Water System Aqua Vend [b]	3140 Polaris Ave. #10, Las Vegas, NV 89102	City of Las Vegas [d]
Spartan of Nevada, Inc. [b]	2441 W Desert Inn Rd., Las Vegas, NV 89109	Clark County [d]
Thatcher Co of Nevada	90 Business Center St., Henderson, NV 89014	City of Henderson
Thermo Fluids Inc. Antifreeze Services	4000 Arcata Way, North Las Vegas, NV 89030	City of North Las Vegas
Thomas Petroleum - Las Vegas Bonanza [b]	715 W Bonanza Rd., Las Vegas NV 89106	City of Las Vegas [d]
Titanium Metals Corp	181 N Water St., Henderson, NV 89015	Clark County
Transportation Systems Services Operations Inc.	5406 E El Campo Grande Ave., North Las Vegas, NV 89115	City of North Las Vegas
Wells Enterprises Inc.	1001 Olsen St., Henderson, NV 89011	City of Henderson
Universal Urethane Inc.	4201 E Lone Mountain Rd., North Las Vegas, NV 89081	City of North Las Vegas
Washington Group International [b]	4610 N Grand Canyon Dr., Las Vegas, NV 89129	Clark County [d]
West Direct Oil #75 LAS	4581 Eaker St., North Las Vegas, NV 89081	City of North Las Vegas
Westlake Royal Roofing Henderson (formerly Boral Roofing, LLC)	430 Eastgate Rd., Henderson, NV 89011	City of Henderson
Young Electric Sign Co.	5119 S Cameron St., Las Vegas, NV 89118	Clark County

Notes:

[a] This business is not operational / does not have a business license in CLV

[b] Facility not operational or no longer exists

[c] Stormwater inspections not required, due to facility process change

[d] Not Applicable; no inspection necessary

[e] Current address: 10025 Moccasin Rd., Las Vegas, NV 89143

[f] Current address: 4485 E Colton Ave. Las Vegas, NV 89103

[g] Current address: 6355 S Buffalo Dr, Las Vegas, NV 89113

For the 2025–2026 permit year, the EPA TRI facility search identified no changes to the facilities from the prior permit year within the Las Vegas Valley.

9.1.4 Industrial Facility Inventory

Table 9-3 lists the inventory of facilities that will be inspected and their inspection frequency during the 2026-2027 MS4 permit year. This list is reviewed every year and submitted to NDEP as part of the Annual Report.

Table 9-3. Inventory of Facilities and Inspection Frequency for 2026-2027 Permit Year

Type of Industrial Facility	Facility Name	SIC Code(s)	NAICS Code(s)	Address	Jurisdiction	Minimum Inspection Frequency
Section 313 of SARA	Calportland Company Gary Plant (Desert Ready Mix)	3273	327320	6501 W Richmar Ave., Las Vegas, NV 89139	Clark County	Once Annually
	Calportland Company Sloan Plant	3273	327320	5300 Sloan Rd., Las Vegas, NV 89054		
	Cemex Sloan Plant	3273	327320	14998 S Las Vegas Blvd., Las Vegas, NV 89124		
	Certain Teed Gypsum - Las Vegas Plant	N/A	212399	13500 Blue Diamond Rd Las Vegas, NV 89161		
	CMC Economy Steel	3441	332312	4485 E Colton Ave. Las Vegas, NV 89103		
	CMC Rebar Las Vegas	3441	332312	4485 E Colton Ave., Las Vegas, NV 89115		
	Ergon Asphalt & Emulsions Inc. - Las Vegas	2951	324121	3901 W Ponderosa Way, Las Vegas, NV 89118		
	Ergon Asphalt & Emulsions Inc. - Las Vegas	2951	324121	6400 W Richmar Ave., Las Vegas, NV 89139		
	Grand Products Nevada Inc. (CES)	3672	334412	751 Pilot Rd, Las Vegas, NV 89119		
	IGT	3999	339999	6355 S Buffalo Dr., Las Vegas, NV 89113		
	Kalco Lighting LLC	3999	335122	6355 S Windy St. Suite 3, Las Vegas, NV 89119		
	Ken's Foods Inc. Las Vegas	2099	311941	8925 Ken's Ct., Las Vegas, NV 89139		
	Las Vegas Paving Corp	1081	324121	9325 S Jones Blvd., Las Vegas, NV 89139		
	May Manufacturing LLC (dba Artesian Spas)	3088	326191	4720 N Lamb Blvd., Las Vegas NV 89115		
	Nevada Ready Mix Arville	3273	327320	4301 W Hacienda Ave., Las Vegas, NV 89109		
	Nevada Ready Mix Lone Mountain	3273	327320	10811 W Washburn Ave., Las Vegas, NV 89129		
	Pavestone – Las Vegas NV Plant	3273	327331	4720 Alto Ave. Las Vegas, NV 89115		

Table 9-3. Inventory of Facilities and Inspection Frequency for 2026-2027 Permit Year						
Type of Industrial Facility	Facility Name	SIC Code(s)	NAICS Code(s)	Address	Jurisdiction	Minimum Inspection Frequency
Section 313 of SARA	Pilot Thomas Logistics LLC - Sloan (Thomas Petroleum LLC Sloan)	5171	424710	4825 N Sloan Ln., Las Vegas NV 89115	Clark County	Once Annually
	Pioneer Americas LLC D/B/A Olin Chlor Alkali Products	2812	325181 325188 32532 32512	350 S Fourth St., Henderson, NV 89015		
	Pro Petroleum LLC – Las Vegas Terminal	5171	424710	4985 N Sloan Ln., Las Vegas, NV 89115		
	Rebel Oil Co Inc – Las Vegas Terminal	5171	424710	5054 N Sloan Ln., Las Vegas, NV 89115		
	Saguaro Power Company	4939	221112	435 S Fourth St., Henderson, NV 89015		
	Service Rock Products Inc. – 4th Street (Robertson's Ready Mix)	3273	327320	8350 4th St Henderson, NV, 89015		
	Service Rock Products Inc. – Lone Mountain NV Facility (Robertson's Ready Mix)	3273	327320	10815 W Washburn Rd., Las Vegas, NV 89149		
	Service Rock Products Inc – Sloan (Robertson's Ready Mix)	3273	327320	14575 Arville St., Las Vegas, NV 89124		
	Service Rock Products Inc – Beesley NV (Robertson's Ready Mix)	3273	327320	5255 Beesley Dr., Las Vegas, NV 89115		
	Sparkletts Drinking Water Corp	5149	312112	4225 W Desert Inn Rd., Las Vegas, NV 89102		
	Titanium Metals Corp	3339	331419	181 N Water St., Henderson, NV 89015		
	Young Electric Sign Co.	3993	811121	5119 S Cameron St., Las Vegas, NV 89118		
Section 313 of SARA	Anderson Dairy	2023, 2024, 2026	311511, 311514, 311520	801 Searles Ave., Las Vegas, NV 89101	City of Las Vegas	Once Annually
	Arteaga's Concrete Inc.	3273	327320	2550 Highland Dr., Las Vegas, NV 89109		
	Las Vegas Paving Corp.	3273	324121	10846 W. Lone Mountain Rd., Las Vegas, NV 89129		
	Mel Clark Inc. Lone Mountain Pit	1429	212319	10550 W Lone Mtn Rd., Las Vegas, NV 89129		
	Nevada Ready Mix Bonanza	3273	327320	601 W Bonanza Rd., Las Vegas, NV 89106		

Table 9-3. Inventory of Facilities and Inspection Frequency for 2026-2027 Permit Year						
Type of Industrial Facility	Facility Name	SIC Code(s)	NAICS Code(s)	Address	Jurisdiction	Minimum Inspection Frequency
Section 313 of SARA	Sierra Ready Mix — Central Batch Plant	3273	327320	10051 Moccasin Rd., Las Vegas, NV 89143	City of Las Vegas	Once Annually
	Sierra Ready Mix—East Batch Plant	3273	327320	10025 Moccasin Rd., Las Vegas, NV 89143		
	Sierra Ready Mix—West Batch Plant	3273	327320	10021 Moccasin Rd., Las Vegas, NV 89143		
	Wells Cargo Inc. Lone Mountain Pit	1429	212319	11291 W. Washburn Rd., Las Vegas, NV 89145		
Section 313 of SARA	Aggregate Industries SWR Gowan Asphalt	2951	23411, 23571, 324121	413 E Gowan Rd., North Las Vegas, NV 89030	City of North Las Vegas	Once Annually
	Amazon.com Services LLC (LSA Development)	5961	454110	5801 Nicco Way., Las Vegas, NV 89115		
	American Eagle	N/A	N/A	120 W Delhi Ave., North Las Vegas, NV 89030		
	Calportland Company Gowan Plant	N/A	327320	143 W Gowan Rd., North Las Vegas, NV 89032		
	Calportland Company Range Plant	N/A	327320	5910 Range Rd., North Las Vegas, NV 89115		
	Cemex - Block Plant	3251, 3273	327320, 327331	5030 N Lamb Blvd., Las Vegas, NV 89115		
	Cemex Gowan Plant #1860	3273	327320	29 W Gowan., North Las Vegas, NV 89030		
	Cemex – Losee Plant	3273	327320	4001 Losee Rd., North Las Vegas, NV 89030		
	Cemex North Las Vegas Plant #1853	3273	327320	4001 N Losee Rd., North Las Vegas, NV 89030		
	CertainTeed Gypsum - Las Vegas Finishing Plant	3275	327420	3838 Civic Center Dr., North Las Vegas, NV 89030		
	Core & Main	N/A	N/A	2829 Losee Rd., North Las Vegas, NV 89030		
	Custom Building Products	3272	327999, 327390	3115 E. Lone Mountain Rd. Suite 1000, North Las Vegas, NV 89081		
	DFA Dairy Brands Fluid LLC DBA Meadow Gold Dairies	2026	311511, 311514, 424430	6350 E Centennial Pkwy., North Las Vegas, NV 89115		
	Farm Fresh Foods	5147	311991	3840 Civic Center Dr., North Las Vegas, NV 89030		
	Firestone Building Products	3081	326113	4272 Corporate Center Dr., North Las Vegas, NV 89030		

Table 9-3. Inventory of Facilities and Inspection Frequency for 2026-2027 Permit Year						
Type of Industrial Facility	Facility Name	SIC Code(s)	NAICS Code(s)	Address	Jurisdiction	Minimum Inspection Frequency
Section 313 of SARA	HD Supply Construction Supply LTD (Harris Real Estate Nevada LLC)	1791	2381201	2437 1/2 Losee Rd., North Las Vegas, NV 89030	City of North Las Vegas	Once Annually
	Jensen Precast	3272	327390, 327331	3853 Losee Rd., North Las Vegas, NV 89030		
	Jensen Precast	3272	327390, 327331	3840 N Bruce St., North Las Vegas, NV 89030		
	Las Vegas Paving Corp	2951	324121	6600 Speedway Blvd., Las Vegas, NV 89115		
	Las Vegas Paving Corp	N/A	324121	3400 N 5th St., North Las Vegas, NV 89030		
	Nitrex Inc.	3398	332811	201 E Mayflower Ave., North Las Vegas, NV 89030		
	Nucor Insulated Panel Group	3448	332311	4700 Engineers Way Suite 103, North Las Vegas, NV 89081		
	PLI (formerly CPI Card Group)	N/A	326199, 323111,	1220 Trade Drive, North Las Vegas, NV 89030		
	Pro Terminal Operators LLC - North Las Vegas Rail Terminal	5171	424710	4800 E El Campo Grande Ave., Las Vegas, NV 89115		
	Quikrete – Las Vegas NV Plant	3273	327320	112 W Brooks Ave North Las Vegas, NV 89030		
	Reladyne West LLC (New West Holdings LLC)	5171	424710	2420 Losee Rd., North Las Vegas, NV 89030		
	Sierra North Batch Plant	N/A	327320	4150 Smiley Rd., North Las Vegas, NV 89081		
	Sofidel Las Vegas TAD LLC	2621	322120	3901 Donna St, North Las Vegas, NV 89030		
	Thermo Fluids Inc. Antifreeze Services	2899, 5093	325998, 423930	4000 Arcata Way, North Las Vegas, NV 89030		
	Transportation Systems Services Operations Inc.	3743	336510, 33651	5406 E El Campo Grande Ave., North Las Vegas, NV 89115		
	Universal Urethane Inc.	3069, 3086, 3714	326150, 32615	4201 E Lone Mountain Rd., North Las Vegas, NV 89081		
	West Direct Oil #75 LAS	N/A	424710	4581 Eaker St., North Las Vegas, NV 89081		
Section 313 of SARA	Calportland Company Henderson Plant (Silver State Materials)	3273	327320	450 Eastgate Rd., Henderson, NV 89014	City of Henderson	Once Annually

Table 9-3. Inventory of Facilities and Inspection Frequency for 2026-2027 Permit Year						
Type of Industrial Facility	Facility Name	SIC Code(s)	NAICS Code(s)	Address	Jurisdiction	Minimum Inspection Frequency
Section 313 of SARA	Las Vegas Paving Corp	2951	324121	521 Cape Horn Dr., Henderson, NV 89011	City of Henderson	Once Annually
	Mars Chocolate NA	2066	311352, 445292	1 Sunset Way, Henderson, NV 89014		
	Rinker Las Vegas Pipe	3273	327320	1899 Burns Rd. Henderson, NV 89011		
	Thatcher Co of Nevada	0111, 9999	3251, 32512, 325180, 325188	90 Business Center St., Henderson, NV 89014		
	Wells Enterprises	2024	311520	1001 Olsen St., Henderson, NV 89011		
	Westlake Royal Roofing (formerly Boral Roofing, LLC)	3251	327390	430 Eastgate Rd., Henderson, NV 89011		
Hazardous Waste Treatment, Disposal, and Recovery	Basic Remediation Company (BRC)	2819	325188	875 W Warm Springs Rd., Henderson, NV 89011	Clark County	Once Annually
	EMD Acquisition LLC (formerly Tronox)	2819, 1799	32518, 325180, 325188	560 W Lake Mead Pkwy., Henderson NV, 89015		
	Safety-Kleen Systems Inc.	7389, 4953	325998, 484220, 484230, 562112, 532490	4582 Donovan Way, North Las Vegas, NV 89081	City of North Las Vegas	Once Annually
Landfills	None in the Las Vegas Valley					
Other Facilities Contributing a Substantial Pollutant Load	None in the Las Vegas Valley					

There is repetition with Tables 9-1, 9-2, and 9-3 due to the tables being provided for different documentation purposes. Tables 9-1 and 9-2 display publicly available facility information available on the EPA website. The purpose of Table 9-3 is to indicate the facilities included in the Permittees' industrial inspection inventory for the next permit year. Based on the annual review, no facilities were identified for addition to or removal from the inventory for the 2026–2027 permit year.

9.2 Permit Year Measurable Goals

Table 9-4 provides a description of the status of the measurable goals in the submitted 2026 SWMP.

Table 9-4. Industrial Facility Monitoring and Control Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.8a	Inspect each facility required to be on the inventory once each permit year.	City of Henderson	Yes	133 inspections 3 follow-up actions
		City of Las Vegas	Yes	88 inspections 35 follow-up actions
		City of North Las Vegas	Yes	451 inspections 6 follow-up actions
		Clark County	Yes	200 inspections 155 follow-up actions
Measure 5.8b	Train new inspectors and provide refresher training every three years.	City of Henderson	Yes	3 new inspectors trained 2 inspectors and 1 Sr refresher training 2 new inspectors field training 1 Sr refresher field training
		City of Las Vegas	Yes	2 new inspectors trained 5 previously hired inspectors receiving refresher training
		City of North Las Vegas	Yes	1 new inspector trained 1 previously hired inspector receiving refresher training
		Clark County	Yes	2 new inspectors trained 3 previously hired inspectors receiving refresher training
Measure 5.8c	Update and submit inventory to NDEP once each permit year in the Annual Report. For Categories 2 and 3, the minimum inspection frequency is once per permit year. There are currently no facilities in Categories 1 and 4, but if facilities are added they will be inspected once per permit year.	City of Henderson	Yes	Table 9-3 contains the inventory required by the 2024 MS4 Permit
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	



Section 10.0

B.5.9 Construction Site BMP Program

Section 10

B.5.9 Construction Site BMP Program

Section B.5.9 of the 2024 MS4 Permit for the Las Vegas Valley includes requirements for a Construction Site Program to reduce pollutants in stormwater runoff from construction sites to the MS4.

10.1 Permit Year Overview

Sections B.5.9.1.2 and B.5.9.1.3 require construction site BMP guidance and training activities. The Las Vegas Valley MS4 Construction Site Program complements, but is independent of, NDEP's state construction site program. During the 2025-2026 permit year, the Permittees continued implementation of the Construction Site BMP Program by maintaining and providing the Las Vegas Valley Construction Site BMP Guidance Manual, conducting outreach and training for construction contractors and inspectors, and reviewing construction activities for compliance with applicable stormwater requirements. The Permittees hosted six contractor training sessions, with a total of 220 attendees. Specific construction site BMP program activities and measurable outcomes completed during the permit year are described in the following subsections.

10.1.1 Construction Site BMP Guidance Manual

Section B.5.9.1.2 requires construction site BMP guidance and implementation activities. In 2009, the Permittees produced the Las Vegas Valley Construction Site Best Management Practices Guidance Manual that describes the construction site runoff management program and provides non-structural and structural BMP implementation guidance for contractors, engineers, and other construction professionals. The manual provides guidance on selecting and designing construction site BMPs that are suitable to the unique environment and conditions in the Las Vegas Valley. The Las Vegas Valley Construction Site BMP Guidance Manual is available on the CCRFCD website and on the www.LVstormwater.com website. During the permit year, the manual was reviewed and revisions were initiated. The Permittees continue to update the manual, which is expected to be finalized during the 2026-2027 permit year.

10.1.2 Construction Site Training Workshops

Section B.5.9.1.3 of the MS4 Permit requires educational and training activities for construction site operators. Collectively, the Permittees host construction site training workshops that are open to Las Vegas area contractors, developers, and other interested stakeholders. These workshops included presentations from NDEP and the Nevada Department of Transportation (NDOT) on their specific stormwater-related construction site requirements.

During the permit year, the Permittees updated the Stormwater Training for Construction Contractors workshop. Six training sessions were held for the construction industry on July 1, 2025, May 5, 2026, and May 6, 2026, and included 220 participants. Two sessions were conducted on each training date.

10.2 Permit Year Measurable Goals

Table 10-1 provides a description of the status of the measurable goals in the submitted Final SWMP (2026).

Table 10-1. Construction Site BMP Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.9a	Report to NDEP once each permit year in the Annual Report whether the Permittees continue to provide to developers development checklists identifying the need for a stormwater permit for properties of one acre or more.	City of Henderson	Yes	A standard Construction Site Inspection Checklist was approved by NDEP in 2016 and is in use by the Permittees. Each Permittee has customized the standard checklist slightly to meet its needs.
		City of Las Vegas	Yes	
		City of North Las Vegas	Yes	
		Clark County	Yes	
Measure 5.9b	With the input and concurrence of the other Permittees, CCRFCD maintains the Las Vegas Valley Construction Site Best Management Practices Guidance Manual. Complete updates within two permit years after the SWMP is approved.	Clark County Regional Flood Control District	Yes	The Permittees continued to make available the Las Vegas Valley Construction Site Best Management Practices Guidance Manual (2009) that describes the construction site runoff management program and provides non-structural and structural BMP implementation guidance. Available at: www.LVstormwater.com and www.regionalflood.org The Permittees are currently updating the Las Vegas Valley Construction Site Best Management Practices Guidance Manual, which is expected to be available to the public during the 2026-2027 permit year.
Measure 5.9c	Hold construction site operator workshops once each permit year and notify construction site operators in advance.	All Permittees	Yes	Number of trainings conducted: 6 (July 1, 2025, May 5, 2026, and May 6, 2026) Estimated number of attendees: 220 Flyers distributed: 440 City of Henderson: Capriati Construction, Lennar & Subs, COH Employees, Lennar & Herschi Masonry, and Bravo Stormwater training. 48 total attendees
Measure 5.9d	Report to NDEP any construction sites that the Permittees determine do not have coverage.	City of Henderson	N/A	The Permittees were not required to report during the current permit year.
		City of Las Vegas	N/A	
		City of North Las Vegas	N/A	
		Clark County	N/A	



Section 11.0

B.5.10 Inspection of Construction Sites

Section 11

B.5.10 Inspection of Construction Sites

Section B.5.10 of the 2024 MS4 Permit for the Las Vegas Valley includes requirements for inspection of construction sites to verify compliance with local ordinances and permits, as well as requirements to identify the implementation and enforcement actions necessary for compliance.

11.1 Permit Year Overview

During the 2025-2026 permit year, the Permittees conducted construction site inspections to evaluate compliance with stormwater ordinances, verify BMP implementation and maintenance, assess BMP effectiveness, and identify potential sources of pollutant discharges to the MS4. The Permittees conducted more than 6,000 construction site inspections and conducted follow-up actions as necessary based on inspection findings. The Permittees also provided training for new inspectors and refresher training for existing inspection personnel.

11.1.1 Inspection of Construction Sites

Supported by local ordinances, construction sites in the Las Vegas Valley are inspected for active or potential discharges to the MS4, proper BMP implementation, waste management, and erosion control.

The frequency of a site inspection is determined by the site's characteristics. All construction sites disturbing 100 acres or more, any site determined by the Permittees as "a significant threat to water quality," and any site disturbing more than 1 acre that is tributary to an impaired waterbody (for sediment or turbidity), are required to be inspected at least monthly. Further, all construction sites greater than 1 acre that are not identified as a "significant threat to water quality" are required to be inspected at least twice during ground-disturbing activities.

The Permittees' construction site inspections included the following activities:

- Assessment of compliance with Permittee stormwater ordinances
- Verification of proper BMP implementation and maintenance
- Evaluation of BMP effectiveness
- Visual observations for non-stormwater discharges, potential illicit connections, and the potential to discharge pollutants to the MS4
- Distribution of stormwater pollution prevention information and educational materials to site personnel, as needed
- Preparation of written or electronic inspection records

The Permittees used existing inspection staff or a third-party contractor to perform construction site inspections. A standard Construction Site Inspection Checklist was approved by NDEP in 2016 and is in use by the Permittees. Each Permittee has customized the standard checklist slightly to meet its needs.

11.1.2 Construction Site Inspector Training

Permittee personnel involved in construction site inspections completed training related to stormwater BMP requirements, inspection procedures, and regulatory compliance for construction activities. Training included instruction for new inspectors and refresher training for existing inspection personnel. Training records were maintained throughout the permit year.

11.2 Permit Year Measurable Goals

Table 11-1 provides a description of the status of the measurable goals in the Final SWMP (2026).

Table 11-1. Inspection of Construction Sites Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.10a	Report on number of sites with monthly inspections and number of inspections performed each permit year in the Annual Report.	City of Henderson	Yes	2 sites disturbing >100 acres; 1 site determined to be a "significant threat"; 0 sites disturbing more than 1 acre that are tributary to an impaired waterbody listed for sediment or turbidity. Number of Construction Site Inspections Conducted: 1,435
		City of Las Vegas	Yes	2 sites disturbing >100 acres; 0 sites determined to be a "significant threat"; 0 sites disturbing more than 1 acre that are tributary to an impaired waterbody listed for sediment or turbidity. Number of Construction Site Inspections Conducted: 1,726
		City of North Las Vegas	Yes	8 sites disturbing >100 acres; 0 sites determined to be a "significant threat"; 0 sites disturbing more than 1 acre that are tributary to an impaired waterbody listed for sediment or turbidity. Number of Construction Site Inspections Conducted: 1,003
		Clark County	Yes	0 sites disturbing >100 acres; 21 sites determined to be a "significant threat"; 0 sites disturbing more than 1 acre that are tributary to an impaired waterbody listed for sediment or turbidity. Number of Construction Site Inspections Conducted: 1,912
Measure 5.10b	Report on the number of follow-up actions each permit year in the Annual Report.	City of Henderson	Yes	Number of Follow-Up Actions: 106
		City of Las Vegas	Yes	Number of Follow-Up Actions: 79
		City of North Las Vegas	Yes	Number of Follow-Up Actions: 240
		Clark County	Yes	Number of Follow-Up Actions: 705

Table 11-1. Inspection of Construction Sites Measurable Goals

Program Element	Measurable Goal	Permittee	Goal Completed	Description
Measure 5.10c	Train new inspectors and provide refresher training every three years.	City of Henderson	Yes	25 employees completed training
		City of Las Vegas	Yes	2 new inspectors trained 5 previously hired inspectors receiving refresher training
		City of North Las Vegas	Yes	1 inspector trained
		Clark County	Yes	3 new inspectors trained 2 previously hired inspectors receiving refresher training



Section 12.0

B.5.12 Reviewing and Updating Stormwater Management Programs

Section 12

B.5.12 Reviewing and Updating Stormwater Management Programs

Section B.5.12 of the 2024 MS4 Permit for the Las Vegas Valley requires an annual review of the SWMP.

12.1 Permit Year Overview

An annual review of the SWMP was performed in conjunction with preparation of the 2025-2026 Annual Report and during development of the 2026 SWMP and 2026 Stormwater Monitoring Plan.

12.2 Permit Year Measurable Goals

Table 12-1 provides a description of the status of the measurable goals in the submitted Final SWMP (2026).

Table 12-1. Reviewing and Updating Stormwater Management Programs

Program Element	Measurable Goal	Municipal Permittee	Goal Completed	Description
Measure 5.12.1	Conduct annual review of SWMP and report results to NDEP once each permit year in the Annual Report.	All Permittees	Yes	The Permittees, under the coordination of CCRFCD, completed the annual review of the SWMP and submitted the Final SWMP and Final Stormwater Monitoring Plan to NDEP.



Section 13.0

B.5.13 Responsibility for SWMP Implementation in New Areas

Section 13

B.5.13 Responsibility for SWMP Implementation in New Areas

Section B.5.13 of the 2024 MS4 Permit for the Las Vegas Valley requires the Permittees to implement the SWMP in new areas under the respective Permittee's jurisdiction within the Las Vegas Valley MS4 permit boundary not later than one year from the addition of the new area.

13.1 Permit Year Overview

During the 2025-2026 permit year, there were no updates to the Las Vegas Valley MS4 permit boundary.

13.2 Permit Year Measurable Goals

Table 13-1 provides a description of the status of the measurable goal in the submitted Final SWMP (2026).

Table 13-1. Responsibility for SWMP Implementation in New Areas

Program Element	Measurable Goal	Municipal Permittee	Goal Completed	Description
Measure 5.13.1	Report changes to the boundaries once each permit year in the Annual Report.	Clark County Regional Flood Control District	Yes	There were no updates to the Las Vegas Valley MS4 program boundaries or Permittees' jurisdictional boundaries during the permit year.



Section 14.0

B.5.15 Legal Authority

Section 14

B.5.15 Legal Authority

Section B.5.15 of the 2024 MS4 Permit for the Las Vegas Valley requires each of the Permittees to have ordinances in place to enforce requirements of the permit.

14.1 Permit Year Overview

Current stormwater ordinances for each municipal and Clark County Permittee are available by searching the municode library website by location (https://library.municode.com). The existing legal authority of the Permittees was found to be adequate to prohibit illegal discharges to the MS4, to control spills, and to determine and require compliance with the 2024 MS4 Permit.

14.1.1 Compliance and Enforcement

Each Permittee requires compliance with its stormwater ordinances and regulations, as it does with its local jurisdiction ordinances. During the 2025-2026 permit year, the Permittees continued to implement and enforce their stormwater ordinances and regulations through development review, construction site inspections, illicit discharge investigations, and other compliance activities. Information on local stormwater regulations and requirements was provided to residents, businesses, and development professionals through the www.LVstormwater.com website, educational materials, contractor training workshops, and other outreach activities conducted during the permit year.

14.2 Permit Year Measurable Goals

Table 14-1 provides a description of the status of the measurable goal in the Final SWMP 2026.

Table 14-1. Legal Authority Measurable Goals				
Program Element	**Measurable Goal**	**Permittee**	**Goal Completed**	**Description Local Stormwater Ordinance(s)**
Measure 5.15a	Provide legal authority to NDEP once each permit year in the Annual Report.	City of Henderson	Yes	Chapter 13.04 of the City of Henderson Municipal Code: Stormwater Regulations; 19.8.4 COH Hillside Overlay District; 19.14.6 Drainage Design Adoption of the HCCDM; Title 14 Utility Services; Title 15.12 Property Maintenance Code; Title 15.32 International Fire Code.
		City of Las Vegas	Yes	LVMC 6.54 Mobile Car Wash/Auto Detail Business; LVMC 13.04 Use of Streets and Sidewalks; LVMC 14.08 Water Regulations; LVMC 14.11 Water Conservation; LVMC 14.17 Wastewater Collection and Treatment; LVMC 14.18 Stormwater and Stormwater Management; LVMC 20.04 Flood Control Channels Master Plan; LVMC 20.08 Flood Hazard Reduction; LVMC 20.10 Uniform Regulations for the Control of Drainage; Title 19.060.040(F) and Title 19.08.040(F) for Landscaping and Low Impact Development; Title 19.09.080 Open Space Standards; Title 19.10.140 Hillside Overlay; 2050 Master Plan (Land Use/Density/Rural Land Overlay); and Special Area Plans.
		City of North Las Vegas	Yes	Chapter 8.50 of the City of North Las Vegas Municipal Code (NLVMC): Stormwater Regulations.
		Clark County	Yes	Title 24, Chapter 24.40 Storm Sewer System Discharge / Other related ordinances include: Title 9 Public Health and Sanitation, 10.36 - Animals, noise, waste, restraint, sanitation & dead animals, 10.40 - Enforcement, 11 - Abatement and Nuisances, Title 22 – Building and Construction, 22.02.492 - Storm sewer system inspections, 25.10 – Building Water Conservation, 25.20 – The Energy Conservation Code, 30.04 Development Standards, 30.04.01 Landscaping, 30.04.01.A.4 Permanent Stormwater Control per Section 1500 of the Regional Flood Control District's, Hydrologic Criteria and Drainage Design Manual, 30.04.05 Site and Building Design, 30.04.05.K Hillside Development, 30.06.11.E Grading Permits, 30.04.08.B.1 Drainage Impact Analysis, and the Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual.



Section 15.0

Additional Information Pursuant to the 2011 SWMP

Section 15

Additional Information Pursuant to the 2011 SWMP

Section 15 summarizes BMPs and activities originally developed under the 2011 SWMP. While these efforts supported stormwater pollution prevention and public awareness, they are not proposed to be detailed in the annual report for the revised SWMP developed in accordance with the 2024 MS4 Permit for the Las Vegas Valley.

These programs include activities such as storm drain marking, pet waste management, website-based outreach, printed educational materials, and other related efforts. While some of these programs may continue voluntarily or under other agency initiatives, they are not required components of the updated SWMP and are therefore presented here for documentation and transparency only.

Although no longer included in the 2026 SWMP framework, these efforts represent a continued regional commitment to improving stormwater quality through public engagement and non-structural BMPs that complement the regulatory requirements of the MS4 Permit.

15.1 Regional Water Quality Planning

Regional water quality planning activities are performed by a variety of agencies and organizations including the Southern Nevada Water Authority (SNWA), the Las Vegas Valley Watershed Advisory Committee (LVVWAC), and the Las Vegas Wash Coordination Committee (LVWCC) outside the 2024 MS4 Permit. These regional coalitions allow for the coordination of activities designed to benefit stormwater quality throughout the Las Vegas Valley. During the permit year, the LVVWAC held three meetings (October 21, 2025; January 27, 2026; and April 14, 2026), and the LVWCC held two meetings (October 28, 2025, and April 28, 2026).

15.2 Storm Drain Marking Program

The storm drain marking program consisted of imprinting the curb at storm drain inlets in new developments and areas of significant redevelopment. The stamps are required for new drain inlets installed in the public right-of-way and are intended to educate the public on the connection between the storm drain system and their drinking water source (Lake Mead), as well as to discourage illegal dumping. During the permit year there were no new or revised standards for storm drain marking. The Permittees continued to educate their inspectors and contractors about this requirement, per the Regional Transportation Commission of Southern Nevada (RTC) standard and per the 2011 SWMP. Inspectors verified that this requirement was met for all new development.

15.3 Pet Waste Management

Pet waste management was largely addressed through public outreach events and activities targeted to pet owners. Pet owners are encouraged to clean up waste left by their pets in yards, parks, and open spaces. Public service campaigns regarding pet waste management are provided at the www.LVstormwater.com website. In addition to providing educational materials, the Permittees also purchased pet waste disposal

bags and dispensers and provided them at parks and open spaces. These measures can substantially reduce the potential for stormwater to pick up pathogens from pet waste in public and private areas. Table 15-1 provides a summary of pet waste disposal bags purchased during the current permit year.

Table 15-1. Pet Waste Disposal Bags Purchased by Permittees during the Current Permit Year

Best Management Practice	Municipal Permittee	2025-2026
Number of pet waste disposal bags purchased	City of Henderson	2,194,000
	City of Las Vegas	81,657
	City of North Las Vegas	120,000
	Clark County	2,592,000

15.4 Brochures and Printed Material

The Permittees have a variety of brochures and printed materials available to educate the public about stormwater pollution prevention. Materials for construction-related audiences address construction-site BMPs, stormwater permitting requirements, and pollution prevention practices. Materials for industrial and commercial audiences address BMPs and practices for preventing pollutants from entering the storm drain system. Materials for residents and homeowners provide information on preventing stormwater pollution from common household and outdoor activities.

Clark County has also created over 30 different stormwater pollution prevention flyers and brochures, developed in both English and Spanish through Non-Point Source (NPS) grants from NDEP. These include commercial/industrial, construction, and resident flyers focused on stormwater pollution prevention. Most of the brochures and flyers are available on their website (https://www.clarkcountynv.gov/government/departments/water_quality/index.php).

CCRFCD created and distributed a variety of educational materials for school and community outreach, including approximately 5,000 School Activity books, 1,000 No-No Ball sheets, 2,500 English-language and 1,000 Spanish-language 3 Ps materials, 4,000 fact sheets, and 1,500 Animal Foundation flyers. The Animal Foundation materials provided information to pet owners on responsible pet-waste disposal and its connection to stormwater and water quality. City of Las Vegas has a water quality educational kiosk structure installed at the Harris-Marion Park facility, next to the Las Vegas Wash. City of North Las Vegas distributed flash flood & flood safety information. During the permit year, COH printed 900 stormwater stickers for distribution and developed a stormwater activity book provided at Safekey presentations.

Throughout the permit year, the Permittees routinely distributed information on stormwater quality and how it can be influenced by common behaviors, including the importance of proper pet waste disposal. In addition, the Permittees distributed materials in-person at environmental and community events, during construction and industrial inspections, and when responding to customer complaints. The progress made for these BMPs in the 2025-2026 permit year is displayed in Table 15-2.

Table 15-2. Permittee Activities for Public Outreach and Education

Best Management Practice	Municipal Permittee	2025-2026
Brochures and Printed Material	City of Henderson	820
	City of Las Vegas	300
	City of North Las Vegas	100
	Clark County	0 [a]

[a] *The Regional Flood Control District provided outreach and education to meet MS4 Permit Requirements*

15.5 Maintenance of Public Facilities

This measure is aimed at Permittee-owned sites with urban land uses such as parks, golf courses, parking lots, garages, vehicle wash areas, as well as vehicle storage and maintenance areas. The target goal is that public facility maintenance plans should be reviewed every other year. The Permittees reviewed and modified the following public facility maintenance plans during the 2025-2026 MS4 permit year:

- City of Henderson – Reviewed and updated plans for Vactor Dump, Fleet Maintenance, Van Wagenen, and Park maintenance.
- City of Las Vegas – Reviewed facility maintenance plans for all Fleet Facilities and Parks Maintenance.
- Clark County – Reviewed and updated the Clark County Maintenance Facilities Plan.
- City of North Las Vegas - Reviewed and updated the Central Garage Facility Management Plan.

15.6 Regional Channel Lining

In addition to improving hydraulic performance, channel lining eliminates channel erosion that would contribute to downstream sediment load, TSS, and turbidity. Slopes in the Las Vegas Valley are generally moderate-to-steep, flow velocities are high, and soils are erodible; therefore, most channels are stabilized using concrete lining. Table 15-3 provides a summary of regional channel lining projects completed during the current permit year.

Table 15-3. Miles of Regional Channel Stabilization for the Current Permit Year

Metric	2025-2026
Miles of Regional Channel Stabilized (e.g., replacing an unlined channel with an armored channel or reinforced concrete box)	1.06

15.7 Water Conservation (Drought) Ordinances

Each Permittee has a water conservation ordinance designed to reduce use of water outdoors. The water conservation ordinances adopted by the Permittees include restrictions on new turf areas, particularly in front yards, and require the use of xeriscaping in new development. The local water conservation ordinances are the City of Henderson Municipal Code, Chapter 14.14, Conservation; the City of Las Vegas Municipal Code, Chapter 14.11, Drought Plan; the City of North Las Vegas, Chapter 13.08, Water Conservation; and the Clark County Code, Chapter 24.34, Water Use Restrictions. Minimizing outdoor water use reduces water waste and limits the amount of pollutants transported to the MS4 via overwatering.

15.8 Turf Conversion Program

In combination with drought ordinances, turf removal can assist with reducing runoff from irrigated urban areas. The SNWA has a Water Smart Landscapes program (https://www.snwa.com/rebates/wsl/index.html) that offers a rebate to consumers for removal of existing turf. This program helps Southern Nevada conserve water and reduces the need to apply fertilizers and herbicides to the converted areas. The SNWA currently offers Water Smart Landscapes rebates to customers (business, homeowners associations, and multifamily properties) of $5.00 per square foot of grass that is removed and replaced with desert landscaping up to the first 10,000 square feet converted per property, per fiscal year. Beyond the first 10,000 square feet, SNWA will provide a rebate of $1.50 per square foot of turf conversion. The program has assisted the community in upgrading 250 million square feet of lawn to water-efficient landscaping, saving more than 203 billion gallons of water since the program began in 1999. Table 15-4 provides a summary of the Water Smart Landscapes Program during the current permit year.

Table 15-4. Water Conservation Activities	
SNWA Water Smart Landscapes Program Elements	2025
Rebate Funding Available	$31,611,819
Turf Converted (sq. ft.)	9,650,101
Estimated Water Savings (gallons)	538,475,636
Actual Funding Expenditure	$31,255,343

Additionally, as part of the Water Smart Landscape rebate program, the Tree Enhancement Program pays new applicants a bonus of $100 for every new tree installed. The list of qualifying trees is based on a combination of factors related to climate resiliency, water efficiency, pathogen resistance, drought tolerance, maintenance, diversity, and invasiveness (https://www.snwa.com/assets/pdf/wsl-tree-rebate-qualifying.pdf).

In June 2021, the Nevada Legislature passed Assembly Bill (AB) 356, which directed the SNWA Board of Directors to develop a plan for the removal of nonfunctional turf in the Las Vegas Valley. The legislation prohibits Southern Nevada's water supply from watering existing unused grass on properties that are not zoned exclusively for single-family residences after January 1, 2027. According to SNWA, removing this nonfunctional turf is expected to save about 9.5 billion gallons of water per year.

The City of Henderson supplements the SNWA Water Smart Landscapes program with an additional rebate of up to $575 for eligible single-family residential properties. For the 2025-2026 permit year, the City of Henderson rebate funding available was $500,000. The actual rebate expenditure was $181,750 for 292,616 sq ft of turf converted, with an estimated annual water saving of 16,327,973 gallons.

15.9 Household Hazardous Waste Collection

Many common household chemicals can cause significant water quality degradation when disposed of improperly and/or enter the MS4. These household chemicals are considered hazardous waste and may include paint thinners, solvents, paint removers, gasoline, diesel fuel, lighter fluid, waste oil, batteries, garden chemicals, pool chemicals, cleaning fluids, and aerosol cans. Republic Services (the Las Vegas Valley's recycling and waste disposal company) continues to provide household hazardous waste collection and recycled oil services for all residents in the Las Vegas Valley. Household hazardous waste is limited to 40 pounds of dry or 15 gallons of liquid per customer (gasoline restricted to 5 gallons). Republic Services provides two drop-off locations (South Valley: 560 Cape Horn Drive, Henderson and North Valley: 333 W. Gowan Road, North Las Vegas) that are open on rotating weeks, Wednesday through Saturday from 9 am to 1 pm. In addition, the South Valley location is open every Saturday. Table 15-5 provides a summary of the quantities of household hazardous waste received by Republic Services, and presumably spared from storm drains, for the current permit year.

Table 15-5. Republic Services Household Hazardous Waste Collection for the Current Permit Year	
Republic Services Program Elements	Pounds Collected
Acidic Liquids	3,428
Aerosols	15,632
Anti-Freeze	15,401
Caustic Liquids	1,565
Flammable Liquids	16,578
Oil, used	12,984

Table 15-5. Republic Services Household Hazardous Waste Collection for the Current Permit Year	
Republic Services Program Elements	Pounds Collected
Oxidizing Solids (pool chemicals, matches, cleaners, etc.)	1,813
Paint Related Materials	14,062
Pesticides, Herbicides, etc.	10,887
Total	92,350

15.10 Ordinances Prohibiting Non-Stormwater Discharges and Littering

All municipal Permittees and Clark County have ordinances prohibiting discharges of non-stormwater (except as expressly permitted) to the MS4. Local ordinances give the entities the authority to take enforcement action against illegal and illicit discharges, illegal dumping, littering, and other practices that may adversely affect the quality of water in the MS4, including those actions that have the "potential to pollute." Violations may be reported by code enforcement officers, public agency staff, or by general citizens through hotlines and Permittee websites.

Depending on the type and location of the observation, reports of illegal dumping may be referred to the BLM (data not reported in this Annual Report), the Southern Nevada Health District (SNHD), or the Clark County Public Response Office (CCPRO) for investigation and enforcement. Table 15-6 summarizes the non-stormwater discharge enforcement activity undertaken by each Permittee for the 2025-2026 permit year.

Table 15-6. MS4 Maintenance Additional Activities		
Best Management Practice	Permittee	Description
Enforcement of Non-Stormwater Discharges and Litter Complaints / Responses	City of Henderson	80 enforcement actions [a]
	City of Las Vegas	0 enforcement actions
	City of North Las Vegas	5,868 enforcement actions
	Clark County	3,114 solid waste cases, 90 biohazard, 41 sewage, 4 chemical/fuel, 312 illegal dumping complaints, and 269 enforcement actions [b]
Enforcement of Desert Dumping Complaints / Responses	City of Henderson	2 enforcement actions [a]
	City of Las Vegas	0 enforcement actions [c]
	City of North Las Vegas	168 enforcement actions
	Clark County Public Response Office	3,114 solid waste cases and 312 illegal dumping complaints
	Southern Nevada Health District	799 complaints; 41 NOVs; 34 cases adjudicated; $42,108 in penalties

Notes:

[a] City of Henderson enforcement actions do not include: verbal warnings; for Desert Dumping and Illicit Discharge complaints, they do include notice of violations, certified letters to abate, misdemeanor citations, and fines

[b] Enforcement actions include: verbal warning, corrective notice, Notice of Violation, Notice to Abate, Cease and Desist Orders, and judicial actions

[c] CLV is called by SNHD to clean up desert dumping on CLV public property; CLV defers to SNHD for enforcement actions on private properties

15.11 Sanitary Sewer Lines

The Permittees inspect sanitary sewer lines as part of their compliance with their respective wastewater discharge permits. Table 15-7 presents miles of sanitary sewer lines inspected and repaired or jetted. The miles inspected and repaired, and the number of manholes inspected, are tracked and reported.

Table 15-7. Illicit Discharge and Detection Additional Activities

Best Management Practice	Municipal Permittee	2025-2026
Miles of sanitary sewer line inspected, and miles of sanitary sewer line repaired or jetted.	City of Henderson	62 miles inspected and 4,579 manholes inspected
		278 miles repaired or jetted
	City of Las Vegas	142 miles inspected
		689 miles repaired or jetted and 146 sewer manhole collars raised and repaired
	City of North Las Vegas	150 miles inspected and 3,478 manholes inspected
		0.2 miles repaired or jetted
	Clark County	201 miles inspected and 48,436 manholes inspected
		807 miles repaired or jetted and 64 manholes repaired

15.12 Sand/Oil Separators

The purpose of sand/oil separators is to remove solids and floatables, including hydrocarbons from stormwater. Sand/oil separator and sand filter installations are provided in Table 15-8.

Table 15-8. Sand/Oil Separators and Sand Filters Additional Activities

SWMP Target	Municipal Permittee	2025-2026
Install sand/oil separators and sand filters that discharge to the storm sewer system	City of Las Vegas	4 sand filters installed
	Clark County	6 sand/oil separators installed

15.13 Grease Interceptor Program

Municipal Permittees have existing ordinances requiring proper removal and disposal of grease from grease interceptors in restaurants and industrial facilities. Clogged grease interceptors could allow wastewater to be directed to the MS4. BMPs are enforced by each of the Permittees in the Las Vegas Valley. Table 15-9 presents number of grease interceptor inspections.

Table 15-9. Grease Interceptor Additional Activities

SWMP Target	Municipal Permittee	2025-2026
Number of grease interceptor inspections	City of Henderson	92 inspections
	City of Las Vegas	65 inspections
	City of North Las Vegas	624 inspections
	Clark County	3,705 inspections

15.14 Industrial Pretreatment Program

Permittees have industrial pretreatment programs associated with their wastewater NPDES permits. All new qualifying industrial facilities must comply with the industrial pretreatment program and are subject to

periodic pretreatment inspections. Activities associated with this BMP are reported separately under individual NPDES discharge permits.

15.15 Southern Nevada Health District Inspections

The Southern Nevada Health District (SNHD) performs inspections of commercial and industrial facilities that are conditionally exempt small quantity generators of hazardous waste (CESQG). These are smaller facilities that do not fall under the State's hazardous materials regulations. In addition, the SNHD Solid Waste and Compliance Division inspected several underground storage tanks (UST) and permitted disposal facilities (PDF). SNHD sets policies and procedures to comply with the BMP. Table 15-10 presents inspections performed by the SNHD.

Table 15-10. Southern Nevada Health District Inspections Additional Activities

SWMP Target	Municipal Permittee	2025-2026
SNHD Facility Inspection Quantity	Permitted Disposal Facilities	205
	Underground Storage Tank	681
	Waste Management Audit	3,148



Appendices



Appendix A-1

Historic Wet Weather Data

Notes for Wet Weather Monitoring Data, 1992-2026

Refer to these notes for all set of databases

1) In computing median values, concentrations below detection limits were assumed to equal the detection limit.
2) In computing average values, concentrations less than the detection limit were assumed to be 1/2 the detection limit.
3) NA = Not Available
4) Total Nitrogen = TKN + NO_3 + NO_2. If TKN, NO_3, or NO_2 are below the detection limit, the concentration was assumed to be equal to the detection limit.
5) Insitu pH used for 3/25/94 Western Trib.
6) Phenol values are Lab measurements when both lab and in-situ measurements are available.

(a) VOC detected is Acetone
(b) VOC detected is 2-Butanone
(c) Pesticide detected is Atrazine
(d) VOC detected is Chloroform
(e) VOC detected is Trichloromethane
(f) Herbicide detected is MCCP
(g) SOC detected is Butylbenzylphthalate
(h) SOC detected is Caffeine
(i) SOC detected is Di-(2-Ethylhexyl)adipate
(j) SOC detected is Di-n-Butylphthalate
(k) SOC detected is Phenanthrene
(l) SOC detected is Pyrene
(m) SOC detected is Simazine
(n) SOC detected is Dimethylphthalate
(o) SOC detected is Diethylphthalate
(p) SOC detected is Alachlor
(q) SOC detected is Benzopyrene
(s) SOC detected is Metolalchlor
(t) SOC detected is Propachlor
(u) SOC detected is Benzo(g,h,I)Perylene
(v) SOC detected is Benzo(k)Fluoranthene
(w) Denotes grab sample taken from bottle X
(x) SOC detected is Di(2-Ethylhexyl)phthalate
(y) Denotes grab sample taken from flow stream while bottle X is filling
(z) SOC detected is Heptachlor
(aa) SOC detected is Lindane
(bb) SOC detected is Metribuzin
(cc) VOC detected is Chlorodibromomethane
(dd) VOC detected is Bromodichloromethane
(ee) VOC detected is Total THM
(ff) VOCs detected is Carbon Disulfide
(gg) Pesticides detected is Glyoxal

1992-2026
Wet Weather Data

(hh) Herbicide detected is 2,4-D
(ii) Pesticide detected is Chlorpyrifos (Dursban)
(jj) Pesticide detected is Metachlor
(kk) Pesticide detected is Malathion
(ll) Pesticide detected is Prometon
(nn) SOC detected is Fluoranthene
(oo) Pesticide detected is Dieldrin
(pp) VOC detected is Benzenaldehyde
(qq) VOC detected is Acetaldehyde
(ss) VOC detected is Butanal
(tt) VOC detected is Decanol
(uu) Herbicide detected is 2,4-DB
(vv) VOC detected is Formaldehyde
(ww) Pesticide detected is Diazinone
(xx) Pesticide detected is Dicamba
(yy) VOC detected is p-Dichloropropane
(zz) SOC detected is Methyl Glyoxal
(aaa) VOC detected is Octanal
(bbb) VOC detected is Propanal
(ccc) Herbicide detected is Pentachlorophenol
(ddd) VOC detected is Toluene
(eee) VOC detected is Dichloroacetonitrile
(fff) VOC detected is Dibromochloromethane
(ggg) VOC detected is Pentanal
(hhh) VOC Heptanal
(iii) VOC Hexanal
(jjj) VOC Dibromochloropropane
(kkk) Pesticide Duiron
(lll) Herbicide 2,4,5-T
(mmm) SOC Benzoic Acid
(nnn) VOC Naphthalene
(ooo) SOC Dimethylphenol
(ppp) VOC 2-methylphenol
(qqq) VOC 4-methylphenol
(rrr) Herbicide Picloram
(sss) SOC Benzene
(ttt) Pesticide Alpha-bhc
(uuu) Pesticide Beta-bhc
(vvv) Pesticide delta-bhc
(www) SOC Methyl isobutyl ketone
(xxx) Herbicide Bentazon
(yyy) VOC Cyclohexanone
(zzz) VOC Benzyl alcohol
(aaaa) Phenol
(bbbb) Benezene
(cccc) Herbicide Benzoic Acid
(dddd) Pesticide Methyl Glyoxal
(eeee) VOC Nonanal

1992-2026
Wet Weather Data

Location	Date	Q	Temp	Oil & Grease	TSS	TDS	Specific Conductance	Lab pH	Surfactants MBAS	Ortho-Phosphate	Total Phosphorous	NO3-N	NO-2	NH3-N	TKN	Total Nitrogen
		cfs	Deg. C	mg/L	mg/L	mg/L	umho/cm	units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	04/02/97		12.6	< 3	480	1,060	1,549	7.1	0.63	0.55	0.91	3.30		1.30	8.50	11.80
	07/28/97		26.6	1,180	400	1,200	1,092	7.6	1.34	0.04	0.52	2.10		0.80	3.90	6.00
	02/04/98			< 3	2,590	980		7.7	0.60	0.17	1.97	0.63		0.70	7.30	7.93
	02/24/98		12.0		5,580	540		7.9	< 0.50	0.09	1.46	1.00		0.20	< 1.00	2.00
	04/24/99	112		4	1,240	1,000					0.93	2.80		0.50	7.45	10.25
	04/30/99	550		< 3	1,870	440					1.83	1.90		0.78	8.73	10.63
	02/21/00			5	1,910	100					2.10	0.64		0.18	3.20	3.84
	10/23/00	312		5	1,390	2,430					1.20	3.48		0.60	7.40	10.88
	02/26/01	400		< 3	2,940	1,250					1.70	2.64		0.40	4.90	7.54
	11/24/01	75		15	630	1,590					0.86	2.00		1.61	7.80	9.80
	09/11/02	83		< 3	110	1,300	1,570	7.1	2.18		0.49	3.90	< 2.50	1.13	5.40	11.80
	02/12/03	400		5	5,980	1,180	819	7.7	< 0.05	0.13	2.40	1.50	< 0.20		4.70	6.40
	02/25/03	775		8							0.44			0.38	3.00	3.00
	07/19/03				500	1,330			0.72			0.63	1.20		7.70	9.53
	02/21/04				340	660	274	7.5	0.48		0.42	1.80	< 0.20		2.90	4.90
	11/09/04			< 5		1,500	1,730	6.7	< 0.05		0.77	165	< 0.10		2.50	167.60
	01/04/05			< 5	1,730	290	428	7.9	< 0.05	0.22	1.20	0.70	< 0.10			0.80
	07/24/05			< 5	1,160	390	535	7.6	0.12	0.04	0.77	1.50	6.50		4.10	12.10
	10/05/06					298	446		0.09	0.19	0.75	1.10	< 0.20		2.00	3.30
	01/05/08				1,520	536	846	7.6	0.81	0.56	3.30	1.90	< 0.20		12.00	14.10
	08/07/08			7	5,810	1,450	1,890	7.4	0.19		3.90	< 5.00	< 5.00		26.00	36.00
	11/26/08			4	1,200	1,320	1,800	7.9	0.09	0.51	1.80	2.80	< 0.50		9.90	13.20
	12/17/08			7	26	294	439	7.4	0.19	0.41	0.41	0.76	0.10		2.00	2.86
	02/07/09			5	18	726	1,020	7.6	0.07	0.25	1.80	1.60	< 0.20		8.60	10.40
	07/22/09			14	500	1,300	1,700	7.4	0.74		1.60	< 0.50	< 0.25		14.00	14.75
	01/20/10			5	3,400	610	870	7.7	0.23	1.50	2.10	1.70	< 0.13		7.90	9.73
	02/06/10			6	620	230	340	7.9	0.09	0.09	0.59	0.82	0.09		2.50	3.41
	04/22/10			3	1,000	840			0.46	0.05	0.80	1.70			4.10	5.80
	10/17/10			< 5	230	1,100	1,500	7.3	1.00	0.05	0.67	< 0.25	< 0.25		7.40	7.90
	12/20/10			< 5	1,700	1,300	1,900	7.9	0.46	1.20	1.80	2.70	< 0.13		6.80	9.63
	12/22/10			< 5	1,600	130		8.2	0.09	0.37	0.74	0.54		0.09	1.60	2.14
	03/21/11			< 5	750	2,500	3,000	7.5	0.45	0.05	0.82	3.20	< 0.13		6.00	9.33
	09/11/11			< 5	7,600	1,100	1,300	7.4	< 0.05	< 0.01	3.00	1.40	1.10		9.30	11.80
	10/03/11			< 5	4,700	700	970	7.5	0.07	0.04	1.40	1.30	< 0.25		9.40	10.95
	03/17/12			5	1,600	1,100	1,500	7.4	< 0.16	0.19	1.20	< 0.25	0.51		7.30	8.06
	07/23/12			< 5	970	870	1,200	7.6	< 0.05	0.15	1.20	1.50	0.49		0.85	2.84
	07/31/12			< 5	1,400	440	600	7.8	< 0.05	0.05	0.90	1.20	< 0.25		< 0.20	1.65
	08/12/12			< 5	110	660	920	7.3	0.60	0.19	0.52	< 0.25	1.10		3.80	5.15
	08/18/12			< 5	4,500	470	NA	7.5	< 0.05	0.10	2.00	1.80	0.11		4.50	6.41
	08/30/12			< 5	4,100	920	NA	7.7	< 0.05	0.03	3.10	2.00	< 0.13		7.50	9.63
	01/26/13			< 5	1,900	360	NA	7.6	< 0.05	0.50	1.50	0.90	< 0.25		4.70	5.85
	07/19/13			< 5	8,350	590	763	7.5	0.63	0.16	0.64	< 0.10	< 0.10	0.65	22.10	21.50
	08/18/13			12	1,840	590	657	7.6	1.20	0.05	0.74	0.14	< 0.10	0.25	19.70	20.00
	08/25/13			< 5	4,090	NA	NA	7.9	NA	0.09	1.47	1.25	< 0.10	0.45	6.25	7.60
	11/21/13			< 5	555	105	698	7.9	0.76	0.21	1.32	1.30	< 0.10	1.55	2.08	3.63
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project														
	08/20/14															
	09/08/14															
	01/11/15			9	305	445	661	7.8	0.46	0.48	0.57	1.77	< 0.10	0.77	1.54	0.77
	01/30/15			6	165	265	NA	7.8	0.56	0.15	0.17	1.19	< 0.10	0.36	0.67	1.96
	03/02/15			5	175	375	567	7.3	0.50	0.11	0.33	1.25	< 0.10	0.36	0.91	0.55
	07/06/15			6	564	416	578	7.1	0.37	0.15	0.55	< 0.10	0.26	0.18	1.47	1.29
	10/05/15			< 5	7,450	450	NA	6.9	0.24	0.11	2.18	3.41	< 0.10	0.81	28.00	NA
	04/09/16			< 5	850	235	215	7.3	0.24	0.10	0.34	0.74	< 0.10	0.35	2.49	2.14
	04/28/16			6	1,360	525	NA	7.6	0.42	0.26	2.93	1.10	< 0.10	< 0.10	2.91	NA
	05/06/16			< 5	410	510	NA	7.4	0.10	0.24	1.37	1.52	< 0.10	0.55	3.81	NA
	08/04/16			5	360	165	NA	7.8	0.29	0.37	0.83	1.73	< 0.10	0.57	3.27	2.70
	08/23/16			< 5	4,340	455	NA	7.4	0.23	N/A	N/A	1.69	< 0.10	0.37	5.61	5.24
	12/22/16			< 5	310	1,820	NA	7.7	0.64	0.24	0.57	1.34	< 0.10	0.64	3.54	2.90
	01/20/17			< 5	522	230		8.6	0.89	0.25	0.60	0.57	< 0.10	0.25	2.04	
	02/18/17			< 5	248	1,260		6.8	0.21	0.14	0.39	10.20	< 0.10	< 0.10	< 1.00	
	07/17/17			6.6	444	765	N/A	7.06	1.40	0.10	0.93	0.14	< 0.10	0.38	5.22	4.84
	07/25/17			2.4	2,740	340	~	7.71	0.48	0.50	1.78	1.06	< 0.10	0.14	2.79	2.65
	01/09/18			7.1	665	255	~	7.87	< 0.07	0.24	0.91	1.01	< 0.10	1.28	2.43	1.15
	07/15/18			< 5.0	185	365	NA	7.20	< 0.10	< 0.05	0.45	1.36	< 0.10	0.62	2.80	2.18
	01/14/19			6.4	455	220	NA	7.26	0.60	0.09	3.58	0.61	< 0.10	1.10	2.68	1.58
	02/14/19			9.3	440	115	NA	7.59	0.30	< 0.05	0.47	0.40	< 0.10	0.48	3.11	2.63
	11/20/19			< 5.0	120	625	NA	7.40	0.85	0.38	1.66	1.56	< 0.10	0.99	6.10	5.11
	11/28/19			< 5.0	410	180	NA	5.92	0.28	0.48	0.58	0.58	< 0.10	0.90	2.30	1.40
	03/11/20			< 5.0	204	160	NA	7.83	0.36	0.25	0.42	0.41	< 0.10	0.34	1.55	1.21
	07/25/21		NA	< 5.0	2,800	485	NA	7.20	0.25	0.06	2.36	6.19	< 0.20	1.25	6.15	4.90
	07/25/22		NA	10.3	825	456	NA	7.41	1.53	0.18	1.57	< 0.10	< 0.10	1.74	6.99	5.25
	08/11/22		NA	7.3	860	230	NA	7.78	0.91	0.35	1.42	1.55	< 0.10	1.41	5.99	4.58
	06/16/23		22.3	3.6	560	250	NA	7.60	0.81	0.94	1.42	1.27	0.11	1.44	6.12	4.68
	09/01/23		27.3	10.0	867	93	NA	8.18	0.31	1.54	2.04	1.05	< 0.10	0.64	3.66	3.02
	02/13/25		11.0	7.9	1,130	200	NA	7.17	0.17	1.01	1.52	0.65	0.04	1.47	6.70	5.23
	10/10/25		23.0	< 5.0	720	306	NA	7.45	0.50	0.70	1.04	1.03	0.29	0.60	5.50	4.90
	11/15/25		18.2	5.2	574	165	NA	7.36	0.46	0.73	0.84	0.77	0.20	0.70	4.10	3.30
	11/18/25		15.2	6.4	456	111	NA	7.00	0.23	0.23	0.80	0.75	0.12	0.40	3.70	3.40
	Median	**356**	**18.2**	**< 5**	**850**	**498**	**870**	**7.53**	**0.34**	**0.19**	**0.99**	**1.27**	**< 0.10**	**0.60**	**4.50**	**5.15**
	Maximum	**775**	**27.3**	**1,180**	**8,350**	**2,500**	**3,000**	**8.57**	**2.18**	**1.54**	**3.90**	**165.00**	**6.50**	**1.74**	**28.00**	**167.60**
	Minimum	**75**	**11.0**	< **2.4**	**18**	**93**	**215**	**5.92**	**< 0.05**	**< 0.010**	**0.17**	**< 0.10**	**0.036**	**0.09**	< **0.20**	**0.55**

Location	Date	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L	Nickel mg/L	Selenium mg/L	Dissolved Selenium mg/L
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	04/02/97	0.024			< 0.100				0.18					
	07/28/97	0.023			< 0.100				0.15					
	02/04/98	0.065			0.180				0.55					
	02/24/98	< 0.010			0.180				0.32					
	04/24/99	< 0.010	< 0.010		< 0.100	< 0.1000			0.28	< 0.02				
	04/30/99	0.130	< 0.010		< 0.100	< 0.1000			0.54	< 0.02				
	02/21/00	0.012	< 0.010		< 0.100	< 0.1000			0.83	< 0.02				
	10/23/00	0.090	< 0.010		< 0.100	< 0.1000			0.54	0.03				
	02/26/01	0.055	< 0.010		0.029	0.0006			0.28	0.04				
	11/24/01	0.012	< 0.010		< 0.100	< 0.1000			0.07	0.04				
	09/11/02	0.098	0.110	< 0.0100	0.010	< 0.1000	< 0.0002	0.0069	0.18	0.22	< 0.0005	0.019		
	02/12/03	0.110	< 0.010	0.0150	0.096	< 0.1000	< 0.0002	0.0028	0.39	< 0.02	< 0.0005	0.045	< 0.0500	
	02/25/03	0.390		0.0094	0.014			0.0006	0.19			0.012		
	07/19/03	0.075	0.020		0.020	< 0.1000			0.25	0.05				
	02/21/04	0.027	< 0.010	< 0.0100	0.077	< 0.0200	< 0.0002	< 0.0005	0.89	0.40	0.0006	< 0.050	< 0.0250	
	11/09/04	0.029		0.0180	0.031		< 0.0002	< 0.0006	0.36		< 0.0005	0.024	< 0.0500	
	01/04/05	0.019	< 0.010	< 0.0001	0.047	< 0.0200	< 0.0002	< 0.0050	2.70	0.04	< 0.0050	< 0.050	< 0.0500	
	07/24/05	0.110	0.022	0.0230	0.046	0.0460	< 0.0002	0.0008	4.60	0.38	< 0.0050	0.035	< 0.0100	
	10/05/06	0.690	0.013	15.000	0.016	< 0.0005	< 0.0002	< 0.0005	0.73	0.02		0.017		
	01/05/08	0.100	0.024	0.0170	0.017	< 0.0005	< 0.0002	0.0005	0.59	0.09	< 0.0005	0.012	< 0.0050	
	08/07/08	0.190		0.0470	0.071		< 0.0002	0.0016	0.74		0.0011	0.043	0.0160	
	11/26/08	0.120	0.018	0.0290	0.059	0.0006	< 0.0002	0.0013	0.13	0.03	< 0.0005	0.039	0.0110	
	12/17/08	0.050	0.008	0.0070	0.019	< 0.0005	< 0.0002	0.0005	0.24	0.24	< 0.0005	0.008	< 0.0050	
	02/07/09	0.094	0.004	0.0310	0.049	< 0.0005	< 0.0002	0.0016	0.70	< 0.02	< 0.0005	0.029	0.0070	
	07/22/09	0.087	0.004	0.0310	0.022	< 0.0005	< 0.0002	0.0008	0.39	0.03	< 0.0005	0.017	0.0055	
	01/20/10	0.100	0.006	0.0270	0.043	< 0.0005	< 0.0002	0.0011	0.41	< 0.02	< 0.0050	0.031	0.0063	
	02/06/10	0.038	0.006	0.0130	0.021	< 0.0005	< 0.0002	0.0005	0.18	< 0.02	< 0.0050	0.014	< 0.0050	
	04/22/10	0.088	0.013		0.012	< 0.0005			0.13	< 0.02				
	10/17/10	0.071	0.006	0.0057	0.009	< 0.0005	< 0.0002	< 0.0005	0.18	< 0.02	< 0.0005	0.012	0.0058	
	12/20/10	0.084	0.004	0.0310	0.050	< 0.0005	< 0.0002	0.0008	0.34	< 0.02	< 0.0005	0.040	0.0069	
	12/22/10	0.009	0.002		0.006	< 0.0005			0.04	< 0.02				
	03/21/11	0.048	0.002	0.0170	0.017	< 0.0005	< 0.0002	0.0006	0.19	< 0.02	< 0.0005	0.026	0.0150	
	09/11/11	0.220	< 0.002	0.1200	0.130	< 0.0005	0.0003	0.0038	0.92	< 0.02	< 0.0025	0.140	0.0110	
	10/03/11	0.092	0.005	0.0510	0.049	< 0.0005	< 0.0002	0.0011	0.30	< 0.02	< 0.0005	0.050	< 0.0100	
	03/17/12	0.060	0.004	0.0140	0.019	0.0006	< 0.0002	0.0007	0.22	0.03	< 0.0005	0.018	0.0064	
	07/23/12	0.082	0.008	0.0240	0.030	< 0.0005	< 0.0002	0.0008	0.26	< 0.02	< 0.0005	0.028	< 0.0050	
	07/31/12	0.033	0.008	0.0250	0.018	< 0.0005	< 0.0002	0.0006	0.11	< 0.02	< 0.0005	0.026	< 0.0050	
	08/12/12	0.025	0.009	0.0033	0.004	< 0.0005	< 0.0002	< 0.0005	0.07	0.03	< 0.0005	0.007	< 0.0050	
	08/18/12	0.060	0.005	NA	0.045	< 0.0005	NA	NA	0.21	< 0.02	NA	NA	< 0.0050	
	08/30/12	0.062	0.006	NA	0.056	< 0.0005	NA	NA	0.27	< 0.02	NA	NA	< 0.0050	
	01/26/13	0.042	< 0.002	NA	0.023	< 0.0005	NA	NA	0.18	< 0.02	NA	NA	< 0.0050	
	07/19/13	0.137	0.002	0.0684	0.089	< 0.0005	< 0.0002	0.0027	0.56	0.01	< 0.0005	0.054	< 0.0050	
	08/18/13	0.098	0.011	0.0382	0.040	< 0.0005	< 0.0002	0.0012	0.33	0.01	< 0.0005	0.031	0.0036	
	08/25/13	0.084	0.005	NA	0.055	< 0.0010	NA	NA	0.30	0.00	NA	NA	0.0137	
	11/21/13	0.079	0.002	0.0309	0.031	< 0.0005	< 0.0002	0.0014	0.29	0.01	< 0.0005	0.025	0.0030	
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project												
	08/20/14													
	09/08/14													
	01/11/15	0.043	0.022	0.0060	0.007	< 0.0005	0.0014	0.0009	0.11	0.05	< 0.0005	0.011	0.0030	
	01/30/15	0.031	0.014	NA	0.007	< 0.0005	NA	NA	0.10	0.05	NA	NA	< 0.0050	
	03/02/15	0.043	0.018	0.0060	0.007	< 0.0005	< 0.0002	< 0.0005	0.10	0.06	< 0.0005	0.008	0.0030	
	07/06/15	0.106	0.021	0.0070	0.029	0.0020	0.0011	< 0.0005	0.61	0.09	< 0.0005	0.015	0.0020	
	10/05/15	0.017	0.017	NA	0.004	0.0030	0.0015	NA	0.02	0.04	NA	NA	< 0.0050	
	04/09/16	0.029	0.017	0.0040	0.013	< 0.0005	< 0.0002	0.0009	0.06	< 0.001	< 0.0005	0.009	< 0.0050	
	04/28/16	0.033	0.010	NA	0.023	< 0.0005	< 0.0002	NA	0.13	0.05	NA	NA	< 0.0050	
	05/06/16	0.027	0.016	NA	0.012	< 0.0005	< 0.0002	NA	0.09	0.04	NA	NA	0.0030	
	08/04/16	0.033	0.028	0.0015	< 0.001	< 0.0005	0.0002	< 0.0005	0.04	0.01	< 0.0005	0.004	0.0011	
	08/23/16	0.005	0.004	0.0034	0.002	< 0.0005	< 0.0002	0.0015	0.04	0.03	< 0.0005	0.024	0.0026	
	12/22/16	0.051	0.022	0.0041	0.006	0.0005	< 0.0002	0.0005	0.11	0.11	< 0.0005	0.006	0.0012	
	01/20/17	0.023	0.009		0.009	0.0005			0.10	0.05			0.0015	
	02/18/17	0.012	0.007		0.004	< 0.0005			0.04	0.03			0.0041	
	07/17/17	0.026	0.013	NA	0.006	< 0.0005	< 0.0002	NA	0.13	0.02	NA	NA	0.0039	
	07/25/17	0.011	0.008	0.0199	0.001	< 0.0005	< 0.0003	< 0.00100	0.01	0.00	< 0.0010	0.023	0.0024	
	01/09/18	0.031	0.007	0.0058	0.015	0.0010	< 0.0002	< 0.00107	0.17	0.05	< 0.0010	0.014	0.0021	
	07/15/18	0.032	0.013	0.0050	0.008	0.0025	< 0.0002	< 0.00100	0.11	0.07	< 0.0005	0.0075	0.0018	
	01/14/19	0.037	0.007	0.0174	0.014	< 0.0005	< 0.0002	< 0.00100	0.14	0.04	< 0.0010	0.0194	0.0012	
	02/14/19	0.035	0.005	0.0118	0.014	0.0007	< 0.0002	< 0.00100	0.14	0.01	< 0.0010	0.0194	< 0.0010	
	11/20/19	0.088	0.009	0.0190	0.025	< 0.0020	< 0.0003	< 0.00200	0.37	0.07	< 0.0020	0.0540	< 0.0100	< 0.0100
	11/28/19	0.016	0.005	0.0031	0.007	< 0.0010	< 0.0003	< 0.00100	0.12	0.02	< 0.00100	0.0052	0.0013	< 0.0010
	03/11/20	0.035	0.006	0.0096	0.008	< 0.0005	< 0.0002	< 0.00100	0.12	0.02	< 0.00050	0.0120	< 0.0010	< 0.0005
	07/25/21	0.048	0.005	0.0278	0.034	< 0.0005	< 0.0003	0.00152	0.22	0.02	0.00148	0.0319	< 0.0020	< 0.0013
	07/25/22	0.039	0.006	0.0117	0.015	< 0.0012	< 0.0003	< 0.00125	0.16	0.10	< 0.00120	0.0159	< 0.0025	< 0.0025
	08/11/22	0.032	0.004	0.0102	0.024	< 0.0012	0.0051	< 0.00125	0.16	0.03	< 0.00120	0.0126	< 0.0012	< 0.0012
	06/16/23	0.038	0.006	0.0116	0.012	< 0.0010	< 0.0003	< 0.00100	0.24	0.05	< 0.00100	0.0101	< 0.0010	< 0.0010
	09/01/23	0.043	0.003	0.0242	0.028	< 0.0010	< 0.0003	< 0.00100	0.29	0.01	< 0.00100	0.0176	0.0011	< 0.0010
	02/13/25	0.063	0.003	0.0230	0.024	0.0004	< 0.0002	0.00042	0.31	0.01	0.00019	0.0160	0.0016	0.0008
	10/10/25	0.056	0.046	0.0110	0.024	0.0270	< 0.0003	< 0.00100	0.29	0.35	< 0.00100	0.0100	0.0015	0.0011
	11/15/25	0.035	0.005	0.0080	0.012	< 0.0010	< 0.0003	< 0.00100	0.18	0.01	< 0.00100	0.0080	< 0.0010	< 0.0010
	11/18/25	0.035	0.007	0.0100	0.013	0.0008	< 0.0001	< 0.000046	0.19	0.02	0.00010	0.0080	0.0008	0.0004
	Median	**0.043**	**0.008**	**0.0135**	**0.023**	**< 0.001**	**< 0.0002**	**< 0.001**	**0.200**	**< 0.023**	**< 0.0005**	**0.018**	**< 0.0050**	**< 0.0010**
	Maximum	**0.690**	**0.110**	**15**	**0.180**	**< 0.100**	**0.00506**	**0.0069**	**4.600**	**0.400**	**< 0.005**	**0.140**	**< 0.0500**	**< 0.0100**
	Minimum	**0.0052**	**< 0.002**	**< 0.00010**	**< 0.0005**	**0.0004**	**< 0.0001**	**< 0.000046**	**0.010**	**< 0.001**	**0.00010**	**0.0038**	**< 0.0008**	**< 0.0004**

Location	Date	Arsenic mg/L	Boron mg/L	Total Alkalinity as CaCO3 mg/L	Aluminum mg/L	Antimony mg/L	Barium mg/L	Beryllium mg/L	Bicarbonate Alkalinity as HCO3 mg/L	Bromide mg/L	Bromate mg/L	CO2 Free Calculated mg/L	Carbonate mg/L	Calcium mg/L	Chlorate mg/L	Chloride mg/L	Chlorite mg/L
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	04/02/97		0.52														
	07/28/97		0.57														
	02/04/98		0.37	F													
	02/24/98		0.21														
	04/24/99		0.55														
	04/30/99		0.36														
	02/21/00		0.25														
	10/23/00		0.57														
	02/26/01		0.24														
	11/24/01		0.70														
	09/11/02	0.006	0.41	118	2.7	0.006	0.11	< 0.001	114	0.32	< 0.005	22.9	0.12	200	0.270	160	< 0.05
	02/12/03	0.034	< 0.05	106	3.1	0.005	0.41	< 0.001	129	0.11	< 0.005	5.2	0.42	89	0.031	43	< 0.04
	02/25/03	0.006	0.22														
	07/19/03		0.33	138	6.2	0.005	0.19	< 0.001	168	0.29	< 0.005	13.4	0.27	200	0.220	150	< 0.10
	02/21/04	0.005	0.24	105	2.5	0.003	0.08	< 0.001	128	0.07	< 0.005	8.2	0.27	120	0.170	80	< 0.04
	11/09/04	0.008	0.11	69	< 5.0	< 0.001	0.32	0.001	85	0.05	< 0.005	33.7	0.03	280	0.075	18	< 0.01
	01/04/05	< 0.020	0.10	55	< 2.5	< 0.100	0.41	< 0.010	67	0.03	< 0.005	1.7	0.35	410	0.035	13	< 0.01
	07/24/05	0.010	0.16	74	< 2.5	0.003	0.45	< 0.001	91	0.06	< 0.005	3.7	0.24	370	0.069	23	0.06
	10/05/06	0.006	0.12	87	7.9	0.002	0.17			0.06	< 0.005			170	0.116	21	< 0.01
	01/05/08	0.008	0.27	69	8.1	0.005	0.18	< 0.001	84	0.10	< 0.005	3.5	< 2.00	300	0.199	62	< 0.01
	08/07/08	0.023	0.57	153	24.8	0.004	0.69	0.001	187	0.27	< 0.005	12.0	< 2.00	510	0.567	140	< 0.01
	11/26/08	0.019	0.62	155	< 2.0	0.005	0.42	< 0.001	189	0.24	< 0.005	3.9	< 2.00	370	0.077	140	< 0.01
	12/17/08	0.004	0.10	141	2.4	0.002	0.12	< 0.001	172	0.05	< 0.005	11.0	< 2.00	150	0.115	23	< 0.01
	02/07/09	< 0.020	0.34	94	20.5	0.003	0.44	< 0.001	115	0.15	< 0.005	4.7	< 2.00	390	0.024	63	0.02
	07/22/09	0.018	0.46	150	15.7	0.005	0.45	< 0.002	183	0.23	< 0.005	12.0	< 2.00	420	0.370	130	< 0.05
	01/20/10	0.014	0.24	98	13.0	0.003	0.44	< 0.001	120	0.12	< 0.005	3.5	< 2.00	330	< 0.020	48	< 0.01
	02/06/10	0.007	0.11	92	7.6	0.002	0.21	< 0.001	112	0.05	< 0.005	2.3	< 2.00	150	0.019	15	< 0.01
	04/22/10																
	10/17/10	0.006	0.43	140	2.2	0.016	0.10	< 0.001	180	0.20	< 0.005	14.0	< 2.00	150	0.260	130	< 0.02
	12/20/10	0.016	0.37	130	2.9	< 0.001	0.37	< 0.001	160	0.24	< 0.005	3.5	< 2.00	370	0.280	200	< 0.01
	12/22/10																
	03/21/11	0.014	0.84	180	8.1	0.006	0.22	< 0.001	220	0.53	< 0.005	12.0	< 2.00	350	0.280	240	< 0.01
	09/11/11	0.046	0.44	100	56.0	< 0.005	1.80	0.003	130	0.15	< 0.005	7.2	< 2.00	1,400	< 0.010	70	< 0.01
	10/03/11	0.018	0.27	99	28.0	0.002	0.60	0.001	120	0.11	< 0.005	6.6	< 2.00	470	0.050	45	< 0.01
	03/17/12	0.010	0.41	140	7.0	0.004	0.18	< 0.001	170	0.27	< 0.005	< 2.0	< 2.00	190	< 0.020	100	0.01
	07/23/12	0.018	0.27	94	18.0	0.002	0.34	< 0.001	110	0.12	< 0.005	< 2.0	< 2.00	360	0.550	94	< 0.01
	07/31/12	0.015	0.19	190	15.0	< 0.001	0.23	< 0.001	230	0.09	< 0.005	< 2.0	< 2.00	260	0.110	30	< 0.01
	08/12/12	0.006	0.28	82	0.9	0.004	0.08	< 0.001	100	0.17	< 0.005	< 2.0		79	0.083	56	< 0.01
	08/18/12	NA	0.23	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/30/12	NA	0.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/26/13	NA	0.15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/19/13	0.030	0.34	110	43.1	0.003	0.90	0.003	134	< 0.01	< 0.100	NA	< 10.00	886	< 0.100	54	< 0.10
	08/18/13	0.019	0.26	305	25.5	0.004	0.50	0.001	372	< 0.01	< 0.100	NA	< 10.00	425	< 0.100	34	< 0.10
	08/25/13	NA	0.21	NA	NA	NA	NA	NA	NA	< 0.01	NA	NA	NA	NA	NA	NA	NA
	11/21/13	0.012	0.18	155	17.7	0.005	0.36	0.001	189	< 0.01	< 0.005	NA	< 10.00	326	0.050	266	< 0.10
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project															
	08/20/14																
	09/08/14																
	01/11/15	0.003	0.28	65	3.2	0.004	0.08	< 0.001	79	< 0.01	< 0.005	NA	< 2.00	82	< 0.010	45	< 0.01
	01/30/15	NA	0.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/02/15	0.004	0.21	123	2.0	0.003	0.07	< 0.001	150	0.06	< 0.005	NA	< 2.00	69	< 0.010	41	< 0.01
	07/06/15	0.004	0.17	203	1.9	0.008	0.25	< 0.001	248	< 0.01	< 0.005	NA	< 2.00	145	< 0.010	38	< 0.01
	10/05/15	NA	0.19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/09/16	0.003	0.09	198	1.6	0.005	0.13	< 0.0010	242	< 0.01	< 0.005		< 2.00	226	< 0.010	7	< 0.01
	04/28/16	NA	0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	05/06/16	NA	0.18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/04/16	0.001	0.11	60	0.011	0.002	0.08	< 0.0010	73	< 0.01	< 0.005	NA	< 2.00	NA	< 0.010	20	< 0.01
	08/23/16	0.010	0.12	65	0.3	0.005	0.21	< 0.0010	79	< 0.01	NA	NA	< 2.00	NA	NA	36	NA
	12/22/16	0.003	0.14	75	0.7	0.003	0.06	< 0.001	92	0.03	NA	NA	< 2.00	NA	NA	25	NA
	01/20/17		0.10														
	02/18/17		0.34														
	07/17/17	NA	0.21	125	NA	NA	NA	NA	153	NA	NA		< 5.00	NA	NA	NA	NA
	07/25/17	0.0086	0.09	75	0.07	0.0019	0.14	< 0.0010	92	0.03	~		< 2.00	~	~	26	~
	01/09/18	0.0047	0.16	90	1.11	0.0047	0.09	< 0.0010	110	0.02	~		< 5.00	~	~	17	~
	07/15/18	0.0025	0.18	85	0.48	0.0058	0.08	< 0.0010	104	0.03	NA	NA	< 2.00	NA	NA	21	NA
	01/14/19	0.0037	0.13	62	7.58	0.0036	0.12	< 0.0010	76	0.13	NA	NA	< 5.00	NA	NA	13	NA
	02/14/19	0.0033	0.09	78	4.55	0.0036	0.17	< 0.0010	95	< 0.01	NA	NA	< 5.00	NA	NA	< 10	NA
	11/20/19	0.0080	0.17	84	2.71	0.0040	0.25	< 0.0020	84	< 0.05	NA	NA	< 5.00	NA	NA	24	NA
	11/28/19	0.0036	< 0.05	60	2.70	0.0024	0.08	< 0.0010	60	< 0.05	NA	NA	< 5.00	NA	NA	6	NA
	03/11/20	0.0041	0.02	51	5.52	0.0043	0.10	< 0.0010	51	0.02	NA	NA	< 5.00	NA	NA	6	NA
	07/25/21	0.0094	0.20	960	5.18	0.0020	0.51	< 0.0020	960	0.05	NA	NA	< 5.00	NA	NA	20	NA
	07/25/22	0.0071	0.18	102	10.10	0.0041	0.47	< 0.0012	102	0.07	NA	NA	< 5.00	NA	NA	28	NA
	08/11/22	0.0041	0.09	130	12.80	0.0036	0.34	< 0.0012	130	0.03	NA	NA	< 5.00	NA	NA	10	NA
	06/16/23	0.0058	0.11	204	5.47	0.0044	0.15	< 0.0010	204	0.03	NA	NA	< 5.00	NA	NA	13	NA
	09/01/23	0.0081	0.10	228	14.10	0.0036	0.27	< 0.0010	228	< 0.05	NA	NA	< 5.00	NA	NA	9	NA
	02/13/25	0.0095	0.11	428	13.10	0.0035	0.28	0.0007	428	0.03	NA	NA	< 5.00	NA	NA	8	NA
	10/10/25	0.0064	0.21	295	6.25	0.0063	0.23	< 0.0010	295	< 0.50	NA	NA	< 5.00	NA	NA	20	NA
	11/15/25	0.0040	0.09	228	7.22	0.0020	0.16	< 0.0010	228	< 0.50	NA	NA	< 5.00	NA	NA	10	NA
	11/18/25	0.0040	0.06	186	6.01	0.0040	0.15	0.0003	186	< 0.50	NA	NA	< 5.00	NA	NA	7	NA
	Median	**0.007**	**0.210**	**106**	**5.495**	**0.004**	**0.215**	**< 0.001**	**129.500**	**0.051**	**< 0.005**	**4.925**	**< 2.000**	**290.000**	**0.077**	**29.05**	**< 0.01**
	Maximum	**0.046**	**0.840**	**960**	**56.0**	**0.100**	**1.800**	**< 0.010**	**960.000**	**0.530**	**< 0.100**	**33.700**	**< 10.000**	**1,400.000**	**0.567**	**266**	**< 0.10**
	Minimum	**0.0014**	**< 0.020**	**51**	**0.0113**	**< 0.001**	**0.058**	**0.0003**	**51.000**	**< 0.005**	**< 0.005**	**1.680**	**< 0.028**	**69.400**	**< 0.010**	**5.86**	**< 0.01**

Location	Date	Diuron mg/L	Diquat mg/L	Paraquat mg/L	Endothall mg/L	Fluoride mg/L	Glyphosate mg/L	Hardness as CaCo3 mg/L	Hydroxide as OH mg/L	Iron mg/L	Langelier Index None	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Reactive Silica mg/L
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	04/02/97														
	07/28/97														
	02/04/98														
	02/24/98														
	04/24/99														
	04/30/99														
	02/21/00														
	10/23/00														
	02/26/01														
	11/24/01														
	09/11/02				< 0.020	0.810	0.020		0.002	4	0.11	71	0.14	18.0	20
	02/12/03		< 0.0004	< 0.002	< 0.005	0.550	0.010	839	0.009	2	0.32	30	0.79	9.6	11
	02/25/03														
	07/19/03				< 0.020	0.620	0.014	775	0.004	7	0.48	67	0.23	15.0	
	02/21/04					0.530		481	0.005	3	0.25	44	0.08	12.0	14
	11/09/04					0.260	< 0.006	1,060	0.001	57	-0.29	87	0.49	23.0	
	01/04/05	< 0.0010	< 0.0004	< 0.002	< 0.005	0.220	< 0.006	1,440	0.010	24	0.89	100	0.58	11.0	160
	07/24/05	0.0087	< 0.0004	< 0.002	< 0.020	0.260	0.010	1,310	0.007	17	0.68	96	0.43	11.0	10
	10/05/06						0.007	610		9		44	0.22	7.6	12
	01/05/08					0.076	0.008	1,100	13.000	13	0.60	82	0.22	14.0	9
	08/07/08	0.0011	< 0.0040	< 0.002	< 0.020	0.480	0.020	2,060	< 2.000	34	0.90	190	1.00	28.0	18
	11/26/08	< 0.0010	< 0.0040	< 0.002	< 0.020	0.530	0.029	1,500	< 2.000	19	1.30	140	0.55	33.0	14
	12/17/08	< 0.0010	< 0.0040	< 0.002	< 0.020	0.230	0.008	552	< 2.000	9	0.40	43	0.16	7.2	5
	02/07/09	< 0.0080	< 0.0040	< 0.002	< 0.020	0.470	0.062	1,430	< 2.000	23	0.80	110	0.73	19.0	12
	07/22/09	< 0.0040	< 0.0016	< 0.008	< 0.020	0.540	0.075	1,600	< 2.000	20	0.83	140	0.51	27.0	15
	01/20/10	< 0.0010	< 0.0004	< 0.002	< 0.020	0.260	0.018	1,100	< 2.000	10	0.88	79	0.53	13.0	88
	02/06/10	< 0.0010	< 0.0004	< 0.002	< 0.005	0.180	< 0.006	570	< 2.000	8	0.69	44	0.23	6.3	81
	04/22/10														
	10/17/10	< 0.0010	< 0.0004	< 0.002	< 0.009	0.390	0.240	690	< 2.000	3	0.31	77	0.12	18.0	30
	12/20/10	< 0.0010	< 0.0004	< 0.002	< 0.009	0.280	< 0.006	1,500	< 2.000	30	1.20	140	0.95	24.0	110
	12/22/10														
	03/21/11	< 0.0020	< 0.0004	< 0.002	< 0.005	0.490	0.011	1,700	< 2.000	11	0.93	200	0.41	35.0	29
	09/11/11	< 0.0010	< 0.0004	< 0.002	< 0.020	0.330	0.024	5,600	< 2.000	100	1.30	490	2.40	46.0	150
	10/03/11	< 0.0010	< 0.0004	< 0.002	< 0.020	0.220	0.008	1,900	< 2.000	30	0.78	170	0.79	20.0	120
	03/17/12	< 0.0010	< 0.0004	< 0.002	< 0.020	0.410	0.070	890	< 2.000	9	0.45	100	0.38	23.0	75
	07/23/12					0.320	0.055	1,200	< 2.000	22	0.73	82	0.58	21.0	99
	07/31/12					0.280	< 0.006	970	< 2.000	20	1.10	75	0.40	15.0	150
	08/12/12					0.270	0.014	390	< 2.000	1	-0.24	47	0.08	12.0	13
	08/18/12					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/30/12					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/26/13					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/19/13					< 0.100	NA	2,793	< 2.000	41	NA	141	2.06	34.7	119
	08/18/13					0.130	NA	1,530	< 2.000	23	NA	114	0.66	18.3	108
	08/25/13					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/13					0.410	NA	1,155	< 2.000	17	NA	83	0.60	13.3	87
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project													
	08/20/14														
	09/08/14														
	01/11/15					0.420	NA	362	< 2.000	4	NA	38	0.10	15.6	22
	01/30/15					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/02/15					< 0.100	NA	320	< 2.000	2	NA	36	0	10	21
	07/06/15					0.340	NA	500	< 2.000	2	NA	34	0.27	66.5	12
	10/05/15					NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	04/09/16					0.220		707	< 2.000	1	NA	35	0.23	4.8	6
	04/28/16					NA		NA	NA	NA	NA	NA	NA	NA	NA
	05/06/16					NA	N	NA	NA	NA	NA	NA	NA	NA	NA
	08/04/16					0.186	NA	101	< 2.000	0.305	NA	6	0.03	NA	NA
	08/23/16					0.315	NA	1,410	< 2.000	0.764	NA	44	0.53	NA	NA
	12/22/16					0.699	NA	243	< 2.000	0.689	NA	18	0.10	NA	NA
	01/20/17														
	02/18/17														
	07/17/17					NA	~	NA	< 5.000	NA	~	NA	NA	NA	NA
	07/25/17					0.136	~	653	< 2.000	0.02	~	18.5	0.21	~	~
	01/09/18					0.458	~	438	< 5.000	1.47	~	28.7	0.20	~	~
	07/15/18					0.362	NA	231	< 2.000	0.76	NA	16.2	0.06	NA	NA
	01/14/19					0.201	NA	392	< 5.000	6.68	NA	27.4	0.19	NA	NA
	02/14/19					0.162	NA	344	< 5.000	5.70	NA	25	0.14	NA	NA
	11/20/19					1.080	NA	622	< 5.000	3.01	NA	37.1	0.32	NA	NA
	11/28/19					< 0.100	NA	295	< 5.000	1.91	NA	19.2	0.09	NA	NA
	03/11/20					0.324	NA	203	< 5.000	0.71	NA	13.3	0.10	NA	NA
	07/25/21					0.464	NA	1,600	< 5.000	29.30	NA	100	0.50	NA	NA
	07/25/22					0.406	NA	629	< 5.000	9.24	NA	43.1	0.17	NA	NA
	08/11/22					0.178	NA	606	< 5.000	11.60	NA	41.1	0.19	NA	NA
	06/16/23					0.265	NA	390	< 5.000	5.14	NA	26.8	0.15	NA	NA
	09/01/23					< 0.100	NA	715	< 5.000	12.30	NA	45.7	0.31	NA	NA
	02/13/25					0.230	NA	819	< 5.000	10.90	NA	53.6	0.30	NA	NA
	10/10/25					0.240	NA	421	< 5.000	3.40	NA	34	0.20	NA	NA
	11/15/25					0.190	NA	452	< 5.000	3.40	NA	31.7	0.14	NA	NA
	11/18/25					0.110	NA	363	< 5.000	2.80	NA	26.2	0.14	NA	NA
	Median	**< 0.001**	**< 0.000**	**< 0.002**	**< 0.020**	**0.280**	**0.013**	**707**	**< 2.000**	**8.350**	**0.710**	**44.850**	**0.230**	**16.800**	**21.500**
	Maximum	**< 0.009**	**< 0.004**	**< 0.008**	**< 0.020**	**1.080**	**0.240**	**5600**	**13.000**	**100.000**	**1.300**	**490.000**	**2.400**	**66.500**	**160.000**
	Minimum	< 0.001	< 0.000	< 0.002	< 0.005	**0.076**	< 0.006	**101**	**0.001**	**0.018**	**-0.290**	**6.210**	**0.030**	**4.800**	**5.400**

Location	Date	Sodium mg/L	Sulfate mg/L	Thallium mg/L	Organic Carbon mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	04/02/97					0.015	77	290	150	230	0.010	4			
	07/28/97					0.007	35	240	180	220	< 0.010	< 1			< 0.10
	02/04/98					< 0.005	74	260	25	1,660	0.013				
	02/24/98					< 0.005	10	90	10	1,050	< 0.010	< 1			
	04/24/99														
	04/30/99														
	02/21/00														
	10/23/00														
	02/26/01														
	11/24/01														
	09/11/02	130	460	< 0.0010	116										
	02/12/03	43	230	< 0.0010	36										
	02/25/03														
	07/19/03	98	420	< 0.0010	66										
	02/21/04	64	280	< 0.0100											
	11/09/04	20	180	< 0.0010											
	01/04/05	15	130	< 0.0010	6										
	07/24/05	29	140	< 0.0010	34										
	10/05/06	23	110	< 0.0010	21										
	01/05/08	55	220	< 0.0010	55										
	08/07/08	120	660	< 0.0010	68										
	11/26/08	120	440	< 0.0010	54										
	12/17/08	439	97	< 0.0010	28										
	02/07/09	1,020	300	< 0.0010	26										
	07/22/09	110	530	< 0.0020	99										
	01/20/10	49	270	< 0.0010	28										
	02/06/10	16	64	< 0.0010	16										
	04/22/10														
	10/17/10	100	490	< 0.0010	66					28					
	12/20/10	150	580	< 0.0010	18					1,200					
	12/22/10									760					
	03/21/11	220	1,300	< 0.0010	38					210					
	09/11/11	75	500	< 0.0050	54					5,200					
	10/03/11	48	350	< 0.0010	29					1,100					
	03/17/12	95	520	< 0.0010	68					560	< 0.005				
	07/23/12	64	380	< 0.0010						700					
	07/31/12	34	150	< 0.0010						780					
	08/12/12	58	290	< 0.0010						43					
	08/18/12	NA	NA	NA			25			2,300					
	08/30/12	NA	NA	NA			18			2,600					
	01/26/13	NA	NA	NA			30			860					
	07/19/13	46	323	0.0012	47	< 0.050	36	189		193	0.810				
	08/18/13	38	162	< 0.0010	47	< 0.050	40	990		790	0.360				
	08/25/13	NA	NA	NA			< 2	566		368	NA				
	11/21/13	31	395	< 0.0010	46	< 0.050	47	160		746	0.360				
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project													
	08/20/14														
	09/08/14														
	01/11/15	39	185	< 0.0010	32	< 0.050	41	98		136	0.250				
	01/30/15	NA	NA	NA	NA	NA	22	76		147					
	03/02/15	116	167	< 0.0010	24	< 0.050	16	146		198	0.120				
	07/06/15	70	114	< 0.0010	37	< 0.050	41	275		340	0.460				
	10/05/15	NA	NA	NA	NA	NA	26	306		485	NA				
	04/09/16	11	44	< 0.0010	16	< 0.050	58	127		1,152	0.440				
	04/28/16	NA	NA	NA	NA	NA	263	243		939	NA				
	05/06/16	NA	NA	NA	NA	NA	17	232		628	NA				
	08/04/16	11	63	< 0.0010	41	< 0.050	179	103		340	0.170				
	08/23/16	30	173	< 0.0010	45	< 0.050	< 2	73		401	0.121				
	12/22/16	20	103	< 0.0010	51	< 0.050	75	522		292	0.358				
	01/20/17						15	< 39		164					
	02/18/17						29	< 39		271					
	07/17/17	NA	NA	NA	NA		42.3	130		355.0					
	07/25/17	27	111	< 0.001	131	< 0.050	23.8	< 39		2,190.0	0.38				
	01/09/18	18	55	< 0.001	64	< 0.050	44.5	269		326.0	0.13				
	07/15/18	22	76	< 0.001	39	< 0.050	< 2	95.9		160.0	0.13				
	01/14/19	11	39	< 0.001	44	< 0.010	93.0	178.0		328.0	0.07				
	02/14/19	11	21	< 0.001	15	< 0.005	< 2	45.0		278.0	0.13				
	11/20/19	21.3	72	< 0.001	64	< 0.005	54.8	282.0		495.0	0.44				
	11/28/19	6.5	20	< 0.001	15	< 0.010	5.7	98.6		62.9	0.12				
	03/11/20	6.8	19	< 0.001	16	< 0.005	25.5	76.1		169.0	0.75				
	07/25/21	23.5	99	< 0.001	56	< 0.050	35.7	102.0		1,060	< 0.05				
	07/25/22	26.2	113	< 0.001	59	< 0.050	52.8	202.0		526	0.08				
	08/11/22	9.2	40	< 0.001	22	< 0.050	27.8	256.0		666	1.29				
	06/16/23	12.9	48	< 0.001	103	< 0.050	34.7	231.0		353	0.12				
	09/01/23	9.7	42	< 0.001	19	< 0.050	< 20.0	251.0		731	3.54				
	02/13/25	10.7	27	0.0002	4	0.014	42.0	78.0		1,280	< 0.05				
	10/10/25	19.0	68	< 0.0010	22	< 0.050	29.8	98.0		813	< 0.20				
	11/15/25	10.0	24	< 0.0010	22	< 0.005	22.0	70.0		597	< 0.20				
	11/18/25	7.1	18.6	0.0001	14	< 0.003	60.0	57.0		548	< 0.20				
	Median	**30.35**	**145**	**< 0.001**	**38.00**	**< 0.05**	**32.35**	**146.00**	**87.50**	**510.50**	**0.15**	**< 1.0**			**< 0.100**
	Maximum	**1,020**	**1300**	**< 0.01**	**131.00**	**< 0.05**	**263.00**	**990.00**	**180.00**	**5,200.00**	**3.54**	**4.3**			**< 0.100**
	Minimum	**6.51**	**18.60**	**0.0001**	**4.05**	**< 0.003**	**< 2.00**	**< 38.60**	**10.00**	**28.00**	**< 0.01**	**< 1.0**			**< 0.100**

Location	Date	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	*E. Coli* MPN/100mL	Salmonella MPN/100 mL	VOC # of detects		Pesticides # of detects		SOC # of detects		Herbicides # of detects	
	04/02/97	7,500			90,000				< 2.0			1				4	
	07/28/97	1,600,000			1,600,000				< 2.2								
	02/04/98	8,000			28,000				< 2.2	2						1	
	02/24/98	2,400			8,000				< 2.2			1				1	
	04/24/99									1	a	0				1	hh
	04/30/99									2	a,ff	0				1	hh
	02/21/00									1	a					0	
	10/23/00											0				0	
	02/26/01	2,200			220,000					1	a	0				0	
	11/24/01									1	a	0				0	
	09/11/02	300,000			500,000												
	02/12/03	500,000			22,000					1	a	0		4	g,i,o,x	0	
	02/25/03	30,000			30,000					0		0					
	07/19/03									1		0		0		0	
	02/21/04	1,600			33,000					1	a	0		0		0	
	11/09/04	16,000			5,000					0							
	01/04/05	500			28,000					3	d,dd,ee	0		2	g,k	0	
	07/24/05	1,600,000			170,000					2	a,k	0		0		2	hh,uu
	10/05/06	300,000			50,000					14		1	c,m,ii,jj,kk,ll	0		1	
	01/05/08	3,000			28,000					14		0		1		0	
	08/07/08									7		2		1		1	
	11/26/08	130			900					5		0		2		2	
	12/17/08	14,000			90,000					6		0		7		1	
	02/07/09	17,000			9,000					10		2		2		1	
	07/22/09	160,000,000			700,000					0		1		1		0	
	01/20/10	28,000			8,000					6		0		2		0	
	02/06/10	70,000			90,000					6		0		1		0	
	04/22/10	> 16,000			30,000					0		0		0		0	
	10/17/10	16,000,000			600,000					11	a,b,pp,qq,rr,ss,	1	gg	3	h,j,o	1	ccc
	12/20/10				50,000					5	d,ee,qq,vv,bbb	0		0		0	
	12/22/10	300,000			< 16,000												
	03/21/11	< 16,000			170					5	a, d, vv, qq, bbb	1	gg	1	o		
	09/11/11	2,100,000			900,000					7	a,b,qq,pp,tt,vv,zz	1	gg	0		0	
	10/03/11	330,000			70,000					10	a,b,e,pp,qq,vv,aaa,bbb	0		0		0	
	03/17/12	50,000			3,300,000					11	a,b,d,ff,gg,ss,vv,zz,aaa,bbb,ggg	0		0		0	
	07/23/12	2,200,000			230,000					6	b, ff, pp, qq, vv, bbb	2	gg, zz	1	x	1	lll
	07/31/12	790,000			NA					10	a, b, ff, qq, ss, vv, bbb, ggg, hhh, iii	1	gg	1	j	0	
	08/12/12	1,700,000			NA					8	a, b, ff, pp, qq, ss, vv, bbb	1	gg	2	h, j	0	
Las Vegas Wash @ The Club at Sunrise (Formerly known as Desert Rose Golf Course) (USGS)	08/18/12	130,000			540,000						NA		NA		NA		NA
	08/30/12	1,700,000			35,000						NA		NA		NA		NA
	01/26/13	17,000			260,000						NA		NA		NA		NA
	07/19/13	> 241,960			72,700					9	a, b, qq, vv, ddd, nnn, ooo, ppp, qqq	2	gg, zz	5	h,j,o,x, aaaa	1	mmm
	08/18/13	> 241,960			2,160					7	a, b, qq, vv, hhh, yyy, bbbb	2	gg, zz	2	h, aaaa	1	mmm
	08/25/13	> 241,960			200						NA		NA		NA		NA
	11/21/13	5,040			24,066					9	a, b, pp, qq, vv, bbb, ggg, hhh, iii,	5	gg, zz, ttt, uuu, vvv	6	h, j, o, x, www, aaaa	3	hh, rrr, xxx
	08/04/14	Samples not Taken due to Las Vegas Channel Improvements, Sloan Channel to Bonanza Road and Flamingo Wash below Nellis Boulevard Improvement Project															
	08/20/14																
	09/08/14																
	01/11/15	3,830			6,270					8	a, b, bbb, qq, vv, qqq, yyy, eeee	2	gg, dddd	6	h, i, j, o, www, aaaa	1	hh
	01/30/15	2,210			6,510					0		0		0		0	
	03/02/15	860			20,140					7	a, b, qq, ss, vv, bbb, iii	2	gg, dddd	6	h, j, n, o, x, www	3	hh, rrr, cccc
	07/06/15	> 241,960			92,080					4	a,b,qq,vv	1	gg	4	ssss, www, h,zz	1	hh
	10/05/15	120,330			113,700												
	04/09/16	123,400			16,160					6	a, b, zzz, qq, ss, bbb			2	o, h	1	hh
	04/28/16	92,080			6,630												
	05/06/16	298,700			8,200					6		2		2		1	
	08/04/16	198,630			15,531					2		0		1		1	
	08/23/16	1,299,700			30,000					3		0		1		1	
	12/22/16	59,600			29,800					1		0		2		2	
	01/20/17	241,960			< 1												
	02/18/17	23,600			530												
	07/17/17	> 2,419,600			12,030						NA		NA		NA		NA
	07/25/17	1,080			5,200					2	~	0	~	2	~	1	~
	01/09/18	7,710			2,590					2	~	0	~	5	~	0	~
	07/15/18	> 241,960			23,820					2		0		3		0	
	01/14/19	5,120			> 2,420					1		0		3		1	
	02/14/19	2,420			5,910					2		0		4		0	
	11/20/19	24,196			19,863					1		1		4		1	
	11/28/19	> 2,420			> 2,420					1		1		1		1	
	03/11/20	5,475			10,462					2		1		0		1	
	07/25/21	> 48,392			48,392					2		0		2		2	
	07/25/22	> 24,196			375					0		0		2		0	
	08/11/22	58,100			15,200					2		0		0		0	
	06/16/23	435,200			6,100			172,000		0		0		3		1	
	09/01/23	> 241,960			23,820			32,600		1		0		0		0	
	02/13/25	5,630			23,100			7,710		1		0		6		0	
	10/10/25	129,970			39,680			199,000		6		0		1		0	
	11/15/25	18,600			17,290			38,700		4		0		3		0	
	11/18/25	14,390			6,200			13,700		1		0		0		0	
	Median	**54,050**			**23,820**			**35,650**	**< 2.2**	**2**		**0**		**2**		**1**	
	Maximum	**160,000,000**			**3,300,000**			**199,000**	**< 2.2**	**14**		**5**		**7**		**4**	
	Minimum	**130**			**< 1**			**7,710**	**< 2.0**	**0**		**0**		**0**		**0**	

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03	560			11,100	1,160	1,650	7.50	< 0.05	3.00	4.30	5.0	0.520	
	12/28/04			< 5.0	1,970	1,120	1,560	7.60	0.05	0.49	2.30	4.7	0.490	
	02/11/05			< 5.0	1,360	910	1,290	7.60	0.09	0.67	0.67	4.6	< 0.050	
	10/25/05				2,480	590				0.58	2.40		1.900	
	10/14/06				3,600	1,250	1,720	7.30	< 0.05	0.13	1.30	3.4	0.620	
	04/16/07				78	1,730	2,460	8.30	< 0.05	0.15	0.15	14.0	< 1.000	
	07/24/07			1.7	178	1,420	1,930	7.40	0.62	0.13	0.13	8.4	< 0.500	
	08/01/07			< 5.0	74	1,430	1,900	8.00	< 0.05	0.14	0.14	12.0	< 1.000	
	08/27/07			2.9	3,140	732	1,030	7.50	0.11	1.40	2.20	2.8	< 0.500	
	09/22/07			2.1	1,440	574	838	7.60	< 0.05	1.30	1.90	2.9	< 0.200	
	01/27/08			< 5.0	98	1,620	2,260	7.50	< 0.05	0.26	0.26	45.0	< 0.001	
	08/07/08			1.4	6,540	2,560	2,820	7.50	0.04	2.60	2.60	7.4	< 0.500	
	11/26/08			4.9	1,020	1,150	1,720	7.40	0.16	0.47	0.77	7.6	< 0.500	
	02/07/09			1.9	206	1,050	1,450	7.60	0.09	0.39	0.42	6.7	< 0.100	
	01/20/10			5.3	540	910	1,400	7.30	< 0.05	0.59	0.59	8.8	< 0.130	
	01/27/10			< 5.0	430	1,400	2,000	7.00	0.12	0.30	0.31	12.0	< 0.130	
	02/06/10			< 4.8	240	1,500	2,100	7.10	0.09	0.27	0.39	13.0	< 0.130	
	02/22/10			< 4.8	120	1,500				0.06	0.20	13.0		
	12/20/10			< 5.0	180	1,100	1,800	7.10	0.16	0.12	0.27	11.0	< 0.050	
	12/22/10			< 5.0	4,000	460		7.80	0.76	1.60	1.90	1.8		0.06
	07/03/11			< 5.0	3,800	2,200	2,600	7.40	< 0.05	0.14	2.70	4.2	1.500	
	09/13/11			< 5.0	630	1,000	1,400	7.60	0.07	0.08	0.84	3.7	< 0.250	
	10/03/11			< 5.0	420	1,200	1,800	7.60	0.13	0.10	0.52	8.0	< 0.250	
	07/16/12			< 4.9	150	980	1,400	7.40	0.09	0.09	0.57	7.6	< 0.250	
	07/31/12			5.2	150	1,400	NA	8.10	0.48	0.09	0.24	11.0	< 0.250	
	08/22/12			< 4.8	2,800	1,200	1,600	7.70	< 0.05	0.10	3.40	2.6	< 0.250	
	09/11/12			< 4.9	12,000	1,000	1,300	7.70	0.26	0.10	1.80	3.4	< 0.250	
	10/11/12			< 4.9	1,200	1,200	NA	7.60	< 0.05	0.05	1.20	8.9	< 0.130	
	01/26/13			5.1	370	1,300	NA	7.90	0.12	0.46	0.50	9.2	< 0.130	
	07/19/13			5.1	2,585	1,175	1,723	7.45	0.26	< 0.01	1.10	3.0	< 0.100	0.37
	08/18/13			5.1	153	1,330	1,784	8.01	< 0.20	0.10	0.51	7.0	< 0.100	< 0.10
	08/25/13			5.1	1,003	NA	NA	7.81	NA	0.11	0.74	6.6	< 0.100	< 0.10
	11/21/13			< 5.0	860	695	1,158	7.51	0.68	0.12	0.61	3.6	< 0.100	0.70
	08/04/14			5.7	548	1,140	1,766	7.97	0.14	0.10	0.55	10.8	< 0.100	< 0.10
	08/20/14			< 5.0	260	1,125	1,610	7.98	< 0.10	0.08	0.73	8.5	< 0.100	< 0.10
	09/08/14			6.7	850	915	1,375	7.13	0.30	0.08	1.20	7.4	< 0.100	< 0.10
	01/11/15			< 5.0	295	1,345	NA	7.84	0.18	0.37	0.48	9.9	< 0.100	0.27
	01/30/15			< 5.0	110	1,270	NA	7.90	< 0.10	0.06	0.09	10.8	< 0.100	< 0.10
	03/02/15			< 5.0	120	1,290	NA	7.80	0.11	0.07	0.07	11.0	< 0.100	0.14
	07/06/15			10.0	365	1,100	1,686	7.14	< 0.10	0.06	0.38	7.8	< 0.100	< 0.10
	10/05/15			< 5.0	725	1,260	NA	6.90	0.40	0.11	0.99	4.8	< 0.100	0.45
	01/31/16			< 5.0	45	1,260	2,010	7.86	0.32	0.09	0.48	10.3	< 0.100	0.28
	04/09/16			< 5.0	175	1,390		7.41	0.10	0.04	0.36	10.5	< 0.100	< 0.10
	04/28/16													
	08/04/16			5.0	155	980		7.66	0.26	0.24	0.36	9.4	< 0.100	0.12
	08/23/16			< 5.0	525	955		7.51	0.14	N/A	N/A	6.7	< 0.100	0.25
	12/22/16			< 5.0	92	1,090		7.73	0.24	0.12	0.20	10.3	< 0.100	0.15
	01/20/17			< 5.0	166	1,100		8.48	0.26	0.14	0.31	9.5	< 0.100	0.12
	02/18/17			9.7	492	270		7.33	0.57	0.15	0.60	1.2	< 0.100	0.28
	07/17/17			5.3	< 5.0	1,380	NA	7.56	0.23	0.10	0.16	7.4	< 0.1	< 0.10
	08/04/17			2.2	21	1,240	~	7.80	0.21	0.11	0.13	< 0.1	< 0.1	< 0.10
	01/09/18			< 5.0	775	1,020	~	7.70	< 0.069	0.15	0.97	7.2	< 0.1	0.74
	07/15/18			< 5.0	145	1,100	NA	7.57	< 0.10	< 0.05	0.28	8.65	< 0.100	0.19
	02/14/19			5.4	1,180	475	NA	7.23	0.10	0.08	0.79	2.38	< 0.100	0.60
	11/20/19			< 5.0	105	995	NA	7.35	0.55	0.24	0.77	5.79	< 0.100	0.55
	11/28/19			< 5.0	120	790	NA	7.33	0.19	0.26	0.40	5.32	< 0.100	0.80
	03/11/20			< 5.0	92	605	NA	7.49	0.37	0.23	0.31	4.47	< 0.100	0.17
	07/26/21		NA	< 5.0	2,600	1,020	NA	7.08	0.07	0.20	1.98	6.20	< 0.100	1.01
	07/25/22		NA	5.7	125	1,400	NA	7.91	0.29	< 0.05	0.35	9.78	< 0.100	0.33
	08/12/22		NA	6.8	786	690	NA	7.52	0.63	0.30	2.22	4.97	< 0.100	1.06
	06/16/23		25.3	< 5.0	268	940	NA	6.90	0.88	< 0.05	0.77	6.26	0.408	1.10
	09/01/23		27.1	7.6	680	335	NA	8.03	0.28	1.23	1.56	2.89	0.240	0.52
	02/14/25		11.2	< 5.0	370	774	NA	7.00	0.25	0.86	0.95	6.04	< 0.050	1.58
	10/10/25		25.6	7.1	199	1,100	NA	7.76	< 0.28	0.49	0.52	9.19	< 0.050	< 0.01
	11/15/25		25.6	< 5.0	598	853	NA	7.29	0.23	0.87	0.77	5.82	< 0.004	0.40
	11/18/25		19.4	< 5.0	692	691	NA	7.50	0.57	0.39	0.97	4.49	< 0.004	0.50
	Median	**560**	**25.4**	**< 5.0**	**420.0**	**1,100**	**1720.0**	**7.56**	**0.139**	**0.138**	**0.593**	**7.285**	**< 0.100**	**0.250**
	Maximum	**560**	**27.1**	**10**	**12,000**	**2,560**	**2820**	**8.48**	**0.88**	**3.00**	**4.30**	**45.00**	**1.90**	**1.58**
	Minimum	**560**	**11.2**	**1.4**	**< 5.0**	**270.0**	**838.0**	**6.9**	**< 0.035**	**< 0.010**	**0.074**	**< 0.100**	**< 0.001**	**0.010**

Location	Date	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03	9.6	15.14	0.082		0.0430	0.0920		< 0.0002	< 0.00250	0.35	
	12/28/04	5.5	10.60	< 0.010	< 0.010	0.0330	0.0500	< 0.0200	< 0.0002	< 0.00500	0.27	< 0.020
	02/11/05	2.3	6.90	0.041	< 0.010	0.0230	0.0310	< 0.0200	< 0.0002	0.61000	0.17	< 0.020
	10/25/05			0.056	0.014	0.0570		0.1090			0.21	0.109
	10/14/06	2.3		0.120	0.007	0.0700	0.1300	0.0005	< 0.0002	0.00120	0.45	< 0.005
	04/16/07	1.0		0.150	0.011	2.5000	0.0016	< 0.0005	< 0.0002	< 0.00050	0.09	0.030
	07/24/07	1.4		0.026	0.015	0.0031	0.0041	< 0.0005	< 0.0002	< 0.00050	0.08	0.025
	08/01/07	1.1		0.023	0.022	0.0025	0.0031	0.0029	< 0.0002	< 0.00050	0.06	0.054
	08/27/07	5.0		0.006	0.008	0.0240	< 0.0005	< 0.0005	< 0.0002	< 0.00050	0.17	< 0.005
	09/22/07	4.3		0.051	0.011	0.0280	0.0160	< 0.0005	< 0.0002	< 0.01000	0.17	< 0.005
	01/27/08	1.8		0.003	0.006	0.0027	0.0016	< 0.0005	< 0.0002	< 0.00050	0.05	0.027
	08/07/08	6.5		0.027	0.008	0.0140	0.0180	< 0.0005	< 0.0002	< 0.00100	0.12	< 0.005
	11/26/08	5.6		0.034	0.011	0.0067	0.0100	< 0.0005	< 0.0002	< 0.00050	0.05	0.037
	02/07/09	2.0		0.022	0.005	0.0047	0.0120	< 0.0005	< 0.0002	< 0.00052	0.21	< 0.020
	01/20/10	2.0	10.93	0.036	0.011	0.0081	0.0140	< 0.0005	< 0.0002	< 0.00050	0.11	< 0.020
	01/27/10	2.1	14.23	0.021	0.008	0.0083	0.0068	< 0.0005	< 0.0002	< 0.00050	0.07	< 0.020
	02/06/10	1.4	14.53	0.018	0.008	0.0051	0.0035	< 0.0005	< 0.0002	< 0.00050	0.06	0.024
	02/22/10	1.6	14.60	0.013	0.007	NA	0.0017	< 0.0005	NA	NA	0.06	0.030
	12/20/10	1.2	12.25	0.011	0.005	0.0038	0.0040	< 0.0005	< 0.0002	< 0.00050	0.04	< 0.020
	12/22/10	2.4	4.20	0.031	0.002	NA	0.0230	< 0.0005	NA	NA	0.12	< 0.020
	07/03/11	6.2	11.90	0.047	0.004	0.0330	0.0470	< 0.0005	< 0.0002	0.00006	0.17	< 0.020
	09/13/11	3.5	7.45	0.100	0.015	0.0190	0.0210	< 0.0005	< 0.0002	< 0.00050	0.12	< 0.020
	10/03/11	2.4	10.65	0.032	0.011	0.0092	0.0078	< 0.0005	< 0.0002	< 0.00050	0.08	< 0.020
	07/16/12	1.7	9.55	0.010	0.006	0.0033	0.0028	< 0.0005	< 0.0002	< 0.00050	0.03	< 0.020
	07/31/12	0.9	12.17	0.011	0.008	NA	0.0022	< 0.0005	NA	NA	0.04	< 0.020
	08/22/12	4.9		0.032	0.006	0.0250	0.0350	< 0.0005	< 0.0002	< 0.00050	0.10	0.026
	09/11/12	2.6		0.170	< 0.002	0.1100	0.1400	< 0.0005	< 0.0002	0.00240	0.62	< 0.020
	10/11/12	2.9		0.034	0.005	NA	0.0180	< 0.0005	NA	NA	0.14	< 0.020
	01/26/13	1.6		0.013	0.004	NA	0.0047	< 0.0005	NA	NA	0.07	< 0.020
	07/19/13	24.5	27.62	0.218	0.013	0.0542	0.0553	< 0.0005	< 0.0002	0.00176	0.43	0.013
	08/18/13	3.5	10.57	0.034	0.021	0.0041	0.0027	< 0.0005	< 0.0002	< 0.00100	0.05	0.016
	08/25/13	3.5	10.21	0.052	0.013	NA	0.0162	< 0.0010	NA	NA	0.15	0.012
	11/21/13	< 1.0	4.69	0.069	0.014	0.0207	0.0249	< 0.0005	< 0.0002	< 0.00100	0.17	0.013
	08/04/14	< 1.0	11.90	0.048	0.012	0.0137	0.0122	< 0.0005	< 0.0002	< 0.00100	0.12	0.016
	08/20/14	< 1.0	9.56	0.043	0.015	0.0085	0.0082	< 0.0005	< 0.0002	< 0.00100	0.07	0.012
	09/08/14	1.3	8.76	0.051	0.010	0.0173	0.0143	< 0.0005	< 0.0002	< 0.00100	0.13	0.012
	01/11/15	0.7	10.67	0.020	0.018	NA	0.0030	< 0.0005	NA	NA	0.06	0.050
	01/30/15	0.5	NA	0.014	0.009	NA	0.0020	< 0.0005	NA	NA	0.05	0.047
	03/02/15	1.2	NA	0.023	0.016	NA	0.0023	< 0.0005	NA	NA	0.06	0.051
	07/06/15	< 0.2	< 0.2	0.030	0.016	0.0020	0.0110	< 0.0005	0.0019	< 0.00050	0.20	0.066
	10/05/15	5.3	NA	0.019	0.016	NA	0.0150	0.0010	< 0.0002	NA	0.06	0.023
	01/31/16	1.5	1.19	0.021	0.019	0.0010	< 0.0005	< 0.0005	< 0.0002	< 0.00100	0.05	0.046
	04/09/16	1.3		0.001	0.011		0.0200	< 0.0005	< 0.0002		0.04	0.040
	04/28/16											
	08/04/16	1.9	1.82	0.032	0.033	0.0019	< 0.0005	< 0.0005	< 0.0001	< 0.00050	0.05	0.017
	08/23/16	2.2	1.97	0.022	0.013	0.0050	0.0104	< 0.0005	< 0.0002	0.00060	0.04	0.035
	12/22/16	1.5	1.38	0.025	0.021	0.0020	0.0021	< 0.0010	< 0.0002	< 0.00050	0.05	0.032
	01/20/17	1.1		0.013	0.010		0.0029	0.0005			0.04	0.033
	02/18/17	< 1.0		0.013	0.006		0.0080	< 0.0005			0.05	0.041
	07/17/17	< 1.0	< 0.10	0.029	0.022	NA	< 0.0005	< 0.0005	< 0.0003	NA	0.05	0.030
	08/04/17	1.13	1.13	0.014	0.014	0.0044	0.0010	< 0.0005	< 0.0003	< 0.00100	0.03	0.024
	01/09/18	1.49	0.75	0.020	0.006	0.0048	0.1510	0.0020	< 0.0002	< 0.00100	0.11	0.060
	07/15/18	1.68	1.49	0.008	0.004	0.0032	0.0044	0.0008	< 0.0002	< 0.00100	0.04	0.049
	02/14/19	2.39	1.79	0.027	< 0.001	0.0177	0.0199	< 0.0005	< 0.0002	0.00142	0.10	0.023
	11/20/19	4.00	3.45	0.025	0.012	0.0090	0.0070	0.0020	< 0.0003	< 0.00200	0.10	0.100
	11/28/19	2.50	1.70	0.008	0.007	0.0013	0.0026	< 0.0010	< 0.0003	< 0.0010	0.05	0.049
	03/11/20	1.57	1.40	0.023	0.003	0.0076	0.0044	0.0005	< 0.0002	< 0.0010	0.05	0.044
	07/26/21	6.79	5.78	0.037	< 0.001	0.0200	0.0467	< 0.0010	< 0.0003	< 0.0013	0.18	0.042
	07/25/22	2.89	2.56	0.006	0.002	0.0030	0.0066	< 0.0012	< 0.0003	< 0.0012	0.05	0.031
	08/12/22	9.32	8.26	0.029	0.003	0.0095	0.0203	< 0.0012	0.0008	< 0.0012	0.16	0.056
	06/16/23	5.75	4.65	0.019	< 0.001	0.0064	0.0072	< 0.0010	< 0.0003	< 0.0010	0.14	< 0.050
	09/01/23	3.66	3.02	0.027	0.005	0.0161	0.0163	< 0.0010	< 0.0003	< 0.0010	0.17	0.028
	02/14/25	6.99	5.41	0.030	0.006	0.0093	0.0092	0.0004	< 0.0002	0.0001	0.15	0.029
	10/10/25	1.70	1.70	0.016	0.012	0.0075	0.0100	0.0085	< 0.0003	< 0.0010	0.06	0.051
	11/15/25	3.90	2.80	0.031	0.004	0.0120	0.0150	0.0002	0.0002	0.0020	0.18	0.012
	11/18/25	3.30	3.50	0.025	0.003	0.0120	0.0160	0.0006	0.0003	< 0.00005	0.13	0.012
	Median	**2.050**	**5.595**	**0.026**	**0.009**	**0.0090**	**0.010**	**< 0.0005**	**< 0.0002**	**< 0.0010**	**0.087**	**0.0239**
	Maximum	**24.50**	**27.62**	**0.22**	**0.0329**	**2.50**	**0.151**	**0.1090**	**0.0019**	**0.6100**	**0.620**	**0.109**
	Minimum	**< 0.200**	**< 0.100**	**0.0013**	**< 0.001**	**0.001**	**< 0.0005**	**< 0.00020**	**< 0.00010**	**< 0.00005**	**0.029**	**< 0.005**

Location	Date	Silver mg/L	Nickel mg/L	Selenium mg/L	Dissolved Selenium mg/L	Arsenic mg/L	Boron mg/L	Alkalinity In CaCo3 mg/L	Aluminum mg/L	Antimony mg/L	Barium mg/L	Beryllium mg/L	Bicarbonate Alkalinity as HCO3 mg/L	Bromide mg/L	Bromate mg/L
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03	< 0.0025	0.0600					122	< 2.50	< 0.005	0.82	< 0.0050	149		
	12/28/04	< 0.0005	0.0560	< 0.1500		0.032	0.510	87	31.00	0.001	0.68	0.0016	106	0.15	< 0.005
	02/11/05	< 0.0005	0.0350	< 0.0100		0.017	0.330	93	15.00	0.001	0.34	< 0.0010	113	0.13	< 0.005
	10/25/05														
	10/14/06	1.0000	0.0940	< 0.0050		0.049	0.370	65	59.00	< 0.001	0.93	0.0033	79	0.09	< 0.005
	04/16/07	< 0.0005	0.0093	< 0.0050		0.009	0.700	132	0.14		0.05	< 0.0010	160	0.29	< 0.005
	07/24/07	< 0.0005	0.0100	< 0.0050		0.013	0.560	120	1.20	0.003	0.09	0.00018	150	0.18	< 0.005
	08/01/07	< 0.0005	0.0100	< 0.0050		0.009	0.580	127	0.97	< 0.001	0.08	< 0.0010	150	0.24	< 0.005
	08/27/07	< 0.0005	< 0.0050	< 0.0050		0.023	0.360	100	< 0.02	0.003	0.31	< 0.0010	120	0.07	< 0.005
	09/22/07	< 0.0100	0.0160	< 0.0010		0.017	0.260	110	12.70	< 0.020	0.22	< 0.0020	130	0.08	< 0.005
	01/27/08	< 0.0005	< 0.0050	< 0.0054		0.010	0.750	117	1.33	< 0.001	0.05	< 0.0020	140	0.26	< 0.005
	08/07/08	< 0.0005	0.0280	0.0110		0.039	0.480	257	8.84	< 0.002	0.27	< 0.0020	313	0.22	< 0.005
	11/26/08	< 0.0005	0.0150	0.0070		0.014	0.480	135	3.90	0.003	0.11	< 0.0010	165	0.19	< 0.005
	02/07/09	< 0.0005	0.0110	< 0.0050		0.015	0.410	87	2.30	0.002	0.11	< 0.0010	106	0.15	< 0.005
	01/20/10	< 0.0005	0.0140	< 0.0050		0.088	0.320	97	7.00	< 0.001	0.28	< 0.0010	120	0.14	< 0.005
	01/27/10	< 0.0005	0.0130	0.0058		0.013	0.490	120	4.60	0.003	0.15	< 0.0010	150	0.24	< 0.005
	02/06/10	< 0.0005	0.0100	< 0.0050		0.011	0.530	120	2.70	0.001	0.11	< 0.0010	120	0.23	< 0.005
	02/22/10	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/20/10	< 0.0005	0.0084	< 0.0050		0.007	0.430	130	3.50	< 0.001	0.75	< 0.0010	150	0.16	< 0.005
	12/22/10	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/03/11	< 0.0005	0.0440	< 0.0250		0.057	0.640	130	51.00	< 0.001	0.52	0.0011	150	0.20	< 0.005
	09/13/11	< 0.0005	0.0230	< 0.0050		0.020	0.410	91	13.00	0.002	0.25	< 0.0010	110	0.12	< 0.005
	10/03/11	< 0.0005	0.0140	< 0.0050		0.011	0.440	110	5.00	0.002	0.13	< 0.0010	130	0.17	< 0.005
	07/16/12	< 0.0005	0.0080	< 0.0050		0.009	0.360	120	2.30	< 0.001	0.09	< 0.0010	140	0.15	< 0.005
	07/31/12	NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/22/12	< 0.0005	0.0380	0.0056		0.039	0.390	80	19.00	0.001	0.38	< 0.0010	98	0.10	< 0.005
	09/11/12	0.0019	0.1400	0.0075		0.099	0.380	80	69.00	< 0.001	1.60	0.0034	98	0.10	< 0.005
	10/11/12	NA	NA	< 0.0050		NA	0.460	NA	NA	NA	NA	NA	NA	NA	NA
	01/26/13	NA	NA	< 0.0050		NA	0.490	NA	NA	NA	NA	NA	NA	NA	NA
	07/19/13	< 0.0005	0.0450	< 0.0100		0.041	0.491	148	33.10	0.003	0.60	0.003	180	4.07	< 0.100
	08/18/13	< 0.0005	0.0051	0.0026		0.008	0.462	130	2.66	0.001	0.09	< 0.0010	159	< 0.10	< 0.100
	08/25/13	NA	NA	0.0077		NA	0.444	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/13	< 0.0005	0.0192	0.0034		0.017	0.265	115	13.00	0.003	0.28	< 0.0010	140	< 0.01	< 0.005
	08/04/14	< 0.0005	0.0163	< 0.0010		0.012	0.413	127	9.57	0.002	0.18	< 0.0010	155	< 0.01	< 0.005
	08/20/14	< 0.0005	0.0096	0.0018		0.009	0.319	185	7.81	0.001	0.21	< 0.0010	226	< 0.01	< 0.005
	09/08/14	< 0.0005	0.0149	0.0022		0.012	0.251	346	11.60	0.003	0.18	< 0.0010	346	< 0.01	< 0.005
	01/11/15	NA	NA	0.0050		NA	0.277	NA	NA	NA	NA	NA	NA	NA	NA
	01/30/15	NA	NA	0.0040		NA	0.530	NA	NA	NA	NA	NA	NA	NA	NA
	03/02/15	NA	NA	< 0.0050		NA	0.474	NA	NA	NA	NA	NA	NA	NA	NA
	07/06/15	< 0.0005	0.0100	0.0020		0.009	0.350	213	1.08	0.003	0.15	< 0.0010	260	0.14	< 0.005
	10/05/15	NA	NA	0.0020		NA	0.560	NA	NA	NA	NA	NA	NA	NA	NA
	01/31/16	< 0.0005	0.0080	0.0030		0.005	0.190	138	2.12	0.001	0.60	< 0.0010	168	0.13	< 0.005
	04/09/16			< 0.0050			0.500								
	04/28/16														
	08/04/16	< 0.0005	0.0076	0.0029		0.005	0.347	115	0.01	0.002	0.08	< 0.0010	140	< 0.01	< 0.005
	08/23/16	< 0.0005	0.0014	0.0025		0.008	0.516	95	1.62	0.001	0.10	< 0.0010	116	< 0.01	
	12/22/16	< 0.0005	0.0067	0.0042		0.008	0.394	115	0.34	0.002	0.05	< 0.0010	140	0.13	
	01/20/17			0.0042			0.372								
	02/18/17			< 0.0010			0.052								
	07/17/17	NA	NA	0.0040		NA	0.420	130	NA	NA	NA	NA	159	NA	NA
	08/04/17	< 0.0010	0.0072	0.0040		0.009	< 0.500	130	0.19	0.001	0.06	< 0.001	159	< 0.001	~
	01/09/18	< 0.0010	0.0176	0.0030		0.031	0.398	110	1.78	0.003	0.16	< 0.001	134	< 0.20	~
	07/15/18	< 0.0005	0.0084	0.0042		0.007	0.444	110	0.45	< 0.001	0.07	< 0.0010	134	0.06	NA
	02/14/19	< 0.0010	0.0308	< 0.0010		0.011	0.267	81	8.88	0.001	0.22	< 0.0010	99	0.02	NA
	11/20/19	< 0.0020	0.0350	< 0.0100	< 0.0100	0.011	0.362	100	1.51	0.003	0.11	< 0.0020	100	0.11	NA
	11/28/19	< 0.0010	0.0052	0.00302	0.0027	0.007	0.303	98	1.69	0.002	0.04	< 0.0010	98	0.08	NA
	03/11/20	< 0.0005	0.0114	0.00185	0.0018	0.006	0.242	88	5.02	0.004	0.10	< 0.0010	88	0.14	NA
	07/26/21	< 0.0013	0.0234	< 0.00200	0.0019	0.017	0.411	420	3.78	< 0.001	0.52	< 0.0020	420	0.05	NA
	07/25/22	< 0.0012	0.0105	0.00308	0.0021	0.007	0.434	136	1.75	< 0.001	0.10	< 0.0012	136	0.17	NA
	08/12/22	< 0.0012	0.0140	< 0.0025	< 0.0020	0.007	0.258	94	13.10	0.003	0.24	< 0.0012	94	0.08	NA
	06/16/23	< 0.0010	0.0081	0.0025	0.0019	0.010	0.388	164	3.11	0.003	0.12	< 0.0010	164	0.12	NA
	09/01/23	< 0.0010	0.0128	0.0019	0.0016	0.009	0.213	256	9.86	0.003	0.19	< 0.0010	256	0.05	NA
	02/14/25	0.0001	0.0094	0.0031	0.0021	0.012	0.340	164	5.53	0.004	0.14	0.0003	164	0.11	NA
	10/10/25	< 0.0010	0.0095	0.0024	0.0023	0.011	0.450	137	6.07	0.001	0.19	< 0.0010	137	< 5.00	NA
	11/15/25	0.0001	0.0120	0.0030	0.0020	0.014	0.335	202	8.84	0.002	0.22	0.0004	202	< 5.00	NA
	11/18/25	0.0002	0.0110	0.0020	0.0010	0.014	0.284	224	9.92	0.002	0.22	0.0004	224	< 2.50	NA
	Median	**< 0.0005**	**0.0117**	**< 0.0042**	**0.0020**	**0.0110**	**0.4100**	**120**	**4.250**	**< 0.0018**	**0.1795**	**< 0.0010**	**140.3**	**0.13**	**< 0.005**
	Maximum	**1.0000**	**0.1400**	**< 0.1500**	**< 0.0100**	**0.0990**	**0.7500**	**420**	**69.0**	**0.0200**	**1.60**	**< 0.0050**	**420.0**	**< 4.07**	**< 0.100**
	Minimum	**< 0.00010**	**0.0014**	**< 0.0010**	**0.0010**	**0.0048**	**0.0515**	**65**	**0.0096**	**< 0.0010**	**0.0442**	**0.00018**	**79.0**	**< 0.0010**	**< 0.005**

Location	Date	CO2 Free Calculated mg/L	Carbonate mg/L	Calcium mg/L	Chlorate mg/L	Chloride mg/L	Chlorite mg/L	Diuron mg/L	Diquat mg/L	Paraquat mg/L	Endothall mg/L	Fluoride mg/L
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03	9.42	0.31	120		160						0.64
	12/28/04	5.33	0.27	480	0.07	140	< 0.010	0.005	< 0.0040	< 0.002	< 0.020	0.58
	02/11/05	5.68	0.29	240	0.08	120	< 0.040	0.003	< 0.0040	< 0.002	< 0.020	0.55
	10/25/05											
	10/14/06	6.50	< 2.00	510	0.05	97	< 0.010				< 0.020	0.42
	04/16/07	< 2.00	2.10	150	0.39	350	< 0.010				< 0.020	1.00
	07/24/07	9.80	< 2.00	180	0.15	230	< 0.020	0.007			< 0.020	0.80
	08/01/07	2.50	< 2.00	140	0.28	280	< 0.010	0.003			< 0.020	0.86
	08/27/07	6.20	< 2.00	450	0.06	66	< 0.010	0.161			< 0.020	0.39
	09/22/07	5.40	< 2.00	230	0.06	68	0.012				< 0.020	0.39
	01/27/08	7.30	< 2.00	160	0.11	251	0.117				< 0.020	0.79
	08/07/08	16.00	< 2.00	660	0.06	290	< 0.010	0.003	< 0.0040	< 0.002	< 0.020	0.58
	11/26/08	11.00	< 2.00	180	0.14	190	< 0.010	0.002	< 0.0040	< 0.002	< 0.020	0.62
	02/07/09	4.40	< 2.00	260	0.14	67	< 0.010	0.007	< 0.0040	< 0.002	< 0.020	0.55
	01/20/10	2.80	< 2.00	120	0.18	180	< 0.010	0.001	< 0.0004	< 0.002	< 0.020	0.51
	01/27/10	2.80	< 2.00	170	0.28	240	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.009	0.70
	02/06/10	< 2.00	< 2.00	150	0.39	260	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.020	0.74
	02/22/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/20/10	2.30	< 2.00	130	0.36	230	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.005	0.64
	12/22/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/03/11	10.00	< 2.00	650	0.06	230	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.005	0.69
	09/13/11	4.70	< 2.00	220	0.09	130	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.020	0.36
	10/03/11	6.20	< 2.00	170	0.24	190	< 0.010	< 0.001	< 0.0004	< 0.002	< 0.020	0.70
	07/16/12	< 2.00	< 2.00	130	0.30	170	< 0.010	NA	NA	NA	NA	0.32
	07/31/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	08/22/12	< 2.00	< 2.00	460	0.11	93	< 0.010	0.001	NA	NA	NA	0.34
	09/11/12	< 2.00	< 2.00	900	0.05	84	< 0.010	< 0.001	NA	NA	NA	0.35
	10/11/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/26/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/19/13	NA	< 10.00	558	< 0.1	201	< 0.100	NA	NA	NA	NA	0.86
	08/18/13	NA	< 10.00	144	< 0.1	199	< 0.100	NA	NA	NA	NA	0.60
	08/25/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/13	NA	< 10	225	< 0.01	173	< 0.0100	NA	NA	NA	NA	0.34
	08/04/14	NA	< 2	210	< 0.01	266	< 0.0050	NA	NA	NA	NA	0.36
	08/20/14	NA	< 2	149	< 0.01	181	< 0.0050	NA	NA	NA	NA	0.47
	09/08/14	NA	< 2	223	< 0.01	369	< 0.0050	NA	NA	NA	NA	0.42
	01/11/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/30/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/02/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/06/15	NA	< 2.00	159	< 0.01	229	< 0.010	NA	NA	NA	NA	0.25
	10/05/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/31/16	NA	< 2.00	116	0.09	266	< 0.010					0.82
	04/09/16											
	04/28/16											
	08/04/16		< 2.00		< 0.01	203	< 0.010					0.46
	08/23/16		< 2.00			181						0.45
	12/22/16		< 2.00			264						0.76
	01/20/17											
	02/18/17											
	07/17/17		< 5.00	NA	NA	NA	NA					NA
	08/04/17		< 5.00	~	~	215	~					< 0.10
	01/09/18		< 5.00	~	~	171	~					0.71
	07/15/18	NA	< 2.00	NA	NA	202	NA	NA	NA	NA	NA	0.46
	02/14/19	NA	< 5.00	NA	NA	59	NA	NA	NA	NA	NA	0.32
	11/20/19	NA	< 5.00	NA	NA	192	NA	NA	NA	NA	NA	0.87
	11/28/19	NA	< 5.00	NA	NA	125	NA	NA	NA	NA	NA	< 0.10
	03/11/20	NA	< 5.00	NA	NA	95	NA	NA	NA	NA	NA	0.52
	07/26/21	NA	< 5.00	NA	NA	152	NA	NA	NA	NA	NA	0.55
	07/25/22	NA	< 5.00	NA	NA	259	NA	NA	NA	NA	NA	0.63
	08/12/22	NA	< 5.00	NA	NA	98	NA	NA	NA	NA	NA	0.32
	06/16/23	NA	< 5.00	NA	NA	159	NA	NA	NA	NA	NA	0.99
	09/01/23	NA	< 5.00	NA	NA	56	NA	NA	NA	NA	NA	0.44
	02/14/25	NA	< 5.00	NA	NA	150	NA	NA	NA	NA	NA	0.56
	10/10/25	NA	< 5.00	NA	NA	226	NA	NA	NA	NA	NA	0.56
	11/15/25	NA	< 5.00	NA	NA	146	NA	NA	NA	NA	NA	0.50
	11/18/25	NA	< 5.00	NA	NA	114	NA	NA	NA	NA	NA	0.40
	Median	**5.330**	**< 2.00**	**180**	**< 0.09**	**181**	**< 0.010**	**< 0.0014**	**< 0.0004**	**< 0.002**	**< 0.020**	**0.55**
	Maximum	**16.00**	**< 10.00**	**900**	**0.390**	**369**	**0.117**	**0.161**	**< 0.004**	**< 0.002**	**0.020**	**1.00**
	Minimum	**< 2.00**	**0.27**	**116**	**0.005**	**56**	**< 0.005**	**< 0.001**	**< 0.0004**	**< 0.002**	**< 0.005**	**< 0.100**

Location	Date	Glyphosate mg/L	Hardness as CaCO3 mg/L	Hydroxide as OH mg/L	Iron mg/L	Langelier Index 25 degree None	Magnesium mg/L	Manganese mg/L	Potassium mg/L	Reactive Silica mg/L	Sodium mg/L	Sulfate mg/L	Thallium mg/L	Organic Carbon mg/L
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03		1,980	0.005	56.00	0.95	33	2.80	14		75	490	< 0.005	
	12/28/04	< 0.006	1,600	0.007	26.00	0.84	120	1.30	26	150	120	520	< 0.001	29
	02/11/05	< 0.006	908	0.007	11.00	0.59	75	0.54	16	14	110	370	< 0.001	14
	10/25/05													
	10/14/06	< 0.006	1,600	< 2.000	16.00	0.50	71	2.60	22	130	82	700	< 0.001	14
	04/16/07	< 0.006	690	< 2.000	0.31	1.20	76	0.06	28	20	290	650	< 0.001	6
	07/24/07	0.009	730	< 2.000	0.67	0.40	68	0.22	26	17	190	540	< 0.001	12
	08/01/07	< 0.006	620	< 2.000	0.40	0.90	66	0.21	22	20	240	240	< 0.001	8
	08/27/07	0.013	1,400	< 2.000	11.00	0.80	64	0.93	19	9	64	320	< 0.001	31
	09/22/07	< 0.006	830	< 2.000	12.00	0.60	61	0.64	17	15	64	210	< 0.001	21
	01/27/08	< 0.006	720	< 2.000	0.67	0.40	79	0.15	25	23	210	650	< 0.001	12
	08/07/08	0.016	2,140	< 2.000	2.10	1.40	120	1.21	37	17	210	1,100	< 0.002	29
	11/26/08	0.026	738	< 2.000	6.90	0.40	70	0.66	26	15	160	440	< 0.001	38
	02/07/09	0.011	913	< 2.000	1.40	0.60	64	0.75	19	12	130	380	< 0.001	15
	01/20/10	< 0.006	510	< 2.000	7.70	0.56	49	0.41	19	77	150	320	< 0.001	9
	01/27/10	< 0.006	740	< 2.000	5.10	0.89	74	0.27	21	61	200	530	< 0.001	8
	02/06/10	< 0.006	650	< 2.000	2.60	1.00	68	0.18	22	41	220	510	< 0.001	7
	02/22/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	12/20/10	< 0.006	560	< 2.000	3.40	0.91	56	0.15	21	37	190	410	< 0.001	8
	12/22/10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	07/03/11	< 0.006	2,200	< 2.000	45.00	0.94	140	1.30	45	88	170	1,100	< 0.001	24
	09/13/11	0.012	800	< 2.000	10.00	0.52	64		21	91	100	420	< 0.001	27
	10/03/11	< 0.006	630	< 2.000	4.90	0.46	65	0.29	20	59	160	440	< 0.001	15
	07/16/12	< 0.006	530	< 2.000	2.00	0.21	48	0.01	19	34	140	370	< 0.001	
	07/31/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	08/22/12	< 0.006	1,400	< 2.000	17.00	0.93	73	1.20	24	120	98	540	< 0.001	
	09/11/12	< 0.006	3,000	< 2.000	71.00	1.20	200	3.60	37	150	83	520	< 0.002	
	10/11/12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	01/26/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	07/19/13	NA	1,999	< 2.000	33.20	NA	147	1.68	45	106	172	497	0.004	21
	08/18/13	NA	616	< 2.000	2.35	NA	62	0.16	22	33	183	369	< 0.001	8
	08/25/13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/21/13	NA	564	< 2.000	12.40	NA	64	0.56	16	72	89	273	< 0.001	27
	08/04/14	NA	835	< 2.000	8.90	NA	75	0.44	34	67	143	395	< 0.001	11
	08/20/14	NA	612	< 2.000	6.48	NA	58	0.30	29	55	129	342	< 0.001	6
	09/08/14	NA	843	< 2.000	10.70	NA	69	0.52	30	79	120	729	< 0.001	14
	01/11/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/30/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	03/02/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	07/06/15	NA	598	< 2.000	0.80	NA	49	0.42	32	15	293	420	< 0.001	14
	10/05/15	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/31/16		459	< 2.000	0.09		41	0.05	31	16	303	299	< 0.001	6
	04/09/16													
	04/28/16													
	08/04/16		384	< 2.000	0.14		33	0.07			303	421	< 0.001	40
	08/23/16		616	< 2.000	0.74		36	0.28			94	466	< 0.001	68
	12/22/16		437	< 2.000	0.31		39	0.14			163	599	< 0.001	36
	01/20/17													
	02/18/17													
	07/17/17		NA	< 5.000	NA		NA	NA	NA	NA	NA	NA	NA	NA
	08/04/17		520	< 5.000	0.16		43	0.07	~	~	167	457	< 0.001	42
	01/09/18		675	< 5.000	1.66		52	1.36	~	~	172	417	< 0.001	52
	07/15/18	NA	441	< 2.000	0.56	NA	40	0.12	NA	NA	207	410	< 0.001	8.22
	02/14/19	NA	628	< 2.000	12.90	NA	48	0.33	NA	NA	74	165	< 0.001	11.10
	11/20/19	NA	534	< 5.000	1.41	NA	48	0.31	NA	NA	141	394	< 0.001	41.90
	11/28/19	NA	394	< 5.000	0.72	NA	35	0.09	NA	NA	119	273	< 0.001	13.30
	03/11/20	NA	323	< 5.000	0.58	NA	29	0.16	NA	NA	84	208	< 0.001	12.50
	07/26/21	NA	957	< 5.000	24.90	NA	73	0.98	NA	NA	120	334	< 0.001	16.90
	07/25/22	NA	514	< 5.000	1.32	NA	48	0.24	NA	NA	201	440	< 0.001	8.88
	08/12/22	NA	678	< 5.000	12.00	NA	49	0.51	NA	NA	81	233	< 0.001	17.40
	06/16/23	NA	539	< 5.000	2.95	NA	48	0.32	NA	NA	133	350	< 0.001	82.70
	09/01/23	NA	570	< 5.000	8.67	NA	38	0.29	NA	NA	53	156	< 0.001	15.70
	02/14/25	NA	582	< 5.000	4.85	NA	51	0.43	NA	NA	124	274	< 0.0001	3.15
	10/10/25	NA	549	< 5.000	4.90	NA	54	0.32	NA	NA	162	310	< 0.0010	7.00
	11/15/25	NA	664	< 5.000	4.47	NA	60	0.52	NA	NA	126	221	0.0002	13.90
	11/18/25	NA	602	< 5.000	4.00	NA	53	0.43	NA	NA	102	200	0.0002	< 2.00
	Median	**< 0.006**	**640**	**< 2.000**	**4.66**	**0.8**	**61**	**0.331**	**22**	**39**	**141**	**410**	**< 0.001**	**14.0**
	Maximum	**0.026**	**3,000**	**< 5.000**	**71.0**	**1.40**	**200**	**3.60**	**45**	**150**	**303**	**1,100**	**< 0.005**	**82.7**
	Minimum	**< 0.006**	**323**	**0.005**	**0.090**	**0.210**	**29.0**	**0.012**	**14**	**9**	**53**	**156**	**< 0.0001**	**< 2.0**

Location	Date	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03											1,600,000	
	12/28/04											7,000	
	02/11/05											50,000	
	10/25/05					2,140						220,000	
	10/14/06											220,000	
	04/16/07											23	
	07/24/07											> 1,600,000	
	08/01/07											5,000	
	08/27/07											900,000	
	09/22/07											1,600,000	
	01/27/08											11,000	
	08/07/08											24,000	
	11/26/08											900,000	
	02/07/09											22,000	
	01/20/10					320						170,000	
	01/27/10					200						3,000	
	02/06/10					48						2,200	
	02/22/10					61						2,000	
	12/20/10					100						NA	
	12/22/10											30,000	
	07/03/11					260						5,000,000	
	09/13/11					240						2,600,000	
	10/03/11					110						300,000	
	07/16/12					170						230,000	
	07/31/12		3			83						14,000	
	08/22/12					2,100						790,000	
	09/11/12					3,700						330,000	
	10/11/12		10			720						680,000	
	01/26/13		9			170						11,000	
	07/19/13	< 0.050	20	176		203	1.08					> 241,960	
	08/18/13	< 0.050	5	909		133	0.06					> 241,960	
	08/25/13	NA	4	804		906	NA					> 241,960	
	11/21/13	< 0.050	24	128		734	0.66					25,820	
	08/04/14	< 0.050	36	302		473	< 0.05					68,670	
	08/20/14	< 0.050	4	48		305	0.25					5,780	
	09/08/14	< 0.050	13	80		658	0.13					86,640	
	01/11/15	NA	26	67		183						2,130	
	01/30/15	NA	4	36		54						310	
	03/02/15	NA	< 2	34		112						2,420	
	07/06/15	< 0.050	13	42		324	0.3					173,250	
	10/05/15	NA	15	222		813	NA					209,800	
	01/31/16	< 0.050	< 2	51		25	< 0.05					81,640	
	04/09/16		< 2	72		111						155,300	
	04/28/16												
	08/04/16	< 0.050	< 2	26		157	0.089					241,960	
	08/23/16	< 0.050	< 2	89		730	0.113					980,400	
	12/22/16	< 0.050	63	108		80	0.392					40,000	
	01/20/17		9	64		308						196,630	
	02/18/17		77	184		152						20,870	
	07/17/17		27	39		3						~	
	08/04/17	< 0.050	< 2	55		10	0.101					32,550	
	01/09/18	< 0.050	42	184		512	0.101					12,500	
	07/15/18	< 0.050	< 2	19		137	0.184					> 241,960	
	02/14/19	< 0.005	9	28		605	0.128					2,099	
	11/20/19	< 0.005	44	161		190	0.283					> 24,196	
	11/28/19	< 0.010	56	62		47	0.497					> 2,420	
	03/11/20	< 0.005	< 50	48		52	0.522					19,863	
	07/26/21	< 0.050	13	232		1,000	0.05					> 48,392	
	07/25/22	< 0.050	16	40		45	0.262					> 24,196	
	08/12/22	< 0.050	19	186		564	< 0.05					648,800	
	06/16/23	< 0.050	80	182		202	0.208					2,419,600	
	09/01/23	< 0.050	< 20	174		581	2.24					198,630	
	02/14/25	< 0.050	49	110		527	< 0.05					1,730	
	10/10/25	< 0.050	5	29		225	< 0.2					4,870	
	11/15/25	< 0.003	15	39		523	< 0.2					34,480	
	11/18/25	< 0.003	18	28		721	< 0.2					24,890	
	Median	< **0.050**	**13**	**70**		**203**	**0.20**					**50,000**	
	Maximum	< **0.050**	**80**	**909**		**3,700**	**2.24**					**5,000,000**	
	Minimum	< **0.003**	< **2**	**19.3**		**3**	< **0.05**					**23**	

Location	Date	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	*E. Coli* MPN/100 mL	Salmonella MPN/100 mL	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Lake Las Vegas & Rainbow Gardens *LLV Ends 2009-2010 RG Starts 2010-2012	02/12/03		300,000								
	12/28/04		17,000					4 x,o,d,ee	0	2 o,g	1 uu
	02/11/05		50,000					3 a,d,ee	1 oo	0	0
	10/25/05		5,000								
	10/14/06		50,000					12	0	0	1
	04/16/07		110					5	0	1	0
	07/24/07		500,000					9	0	2	2
	08/01/07		16,000					5	0	1	0
	08/27/07		110,000					4	0	0	4
	09/22/07		110,000					3	0	1	0
	01/27/08		17,000					7	0	1	0
	08/07/08		30,000					9	1	0	1
	11/26/08		160,000					10	2	2	1
	02/07/09		16,000					5	1	1	1
	01/20/10		9,000					5	1	0	1
	01/27/10		2,200					5	0	0	0
	02/06/10		1,100					11	1	0	0
	02/22/10		300					0	0	0	0
	12/20/10		5,000					8 d, e, cc, dd, ee, ddd, eee, fff	0	0	0
	12/22/10		50,000								
	07/03/11		30,000								
	09/13/11		16,000					4 d,ff,vv,bbb	1 gg	2 x,i	0
	10/03/11		> 1,600					7 d,e,dd,ee,qq,vv,bbb	0	1 x	0
	07/16/12		13,000					8 d, e, dd, ee, qq, vv, bbb, ddd	0	2 x, j	0
	07/31/12		16,000					NA	NA	NA	NA
	08/22/12		28,000					3 ff, qq, vv	0	1 x	1 kkk
	09/11/12		54,000					5 a, ff, qq, vv, jjj	0	0	0
	10/11/12		170					NA	NA	NA	NA
	01/26/13		22,000					NA	NA	NA	NA
	07/19/13		11,000					7 a, b,d,qq,vv,ddd, qqq	2 gg,zz	5 h,j,o,x, aaaa	0
	08/18/13		100					3 a,vv, yyy	2 gg,zz	3 j,x, aaaa	0
	08/25/13		100					NA	NA	NA	NA
	11/21/13		20,924					9 a,b,d,qq,vv,bbb,ggg,iii,zzz	3 gg,zz, uuu	5 h,j,o,x, aaaa	3 hh,rrr,xxx
	08/04/14		6,830					3 a, d, qq	2 gg, dddd	3 h, j, x	0
	08/20/14		1,080					3 a, d, vv	0	3 j, x, aaaa	0
	09/08/14		2,560					5 a, b, d, qq, vv	2 gg, dddd	2 x, aaaa	1 hh
	01/11/15		1,105					0	0	0	0
	01/30/15		310					0	0	0	0
	03/02/15		1,850					0	0	0	0
	07/06/15		11,780					4 qq, vv, b, a, d,	1 gg	3 zz, j, o	1 hh
	10/05/15		15,760					NA	NA	NA	NA
	01/31/16		14,670					2 qq, vv,	1 gg	3 o, j, zz	0
	04/09/16		1,460					2	2	4	0
	04/28/16										
	08/04/16		17,329					4	0	3	1
	08/23/16		41,400					4	0	1	2
	12/22/16		10,000					4	0	1	1
	01/20/17		< 1								
	02/18/17		83								
	07/17/17		~					NA	NA	NA	NA
	08/04/17		410					2 ~	0	3	0
	01/09/18		3,950					3 ~	0	2	0
	07/15/18		2,380					0	0	1	0
	02/14/19		3,873					1	0	0	0
	11/20/19		> 24,196					1	1	1	2
	11/28/19		> 2,420					1	1	0	2
	03/11/20		9,804					3	0	1	1
	07/26/21		48,392					1	0	1	0
	07/25/22		> 24,196					0	0	0	0
	08/12/22		21,600					3	0	0	0
	06/16/23		7,300			1,410,000		0	0	2	1
	09/01/23		13,330			130,000		1	0	0	0
	02/14/25		20,640			13,500		1	0	4	0
	10/10/25		520			4,320		2	0	0	0
	11/15/25		4,820			64,900		4	0	0	1
	11/18/25		5,120			7,760		2	0	0	1
	Median		**11,390**			**39,200**		**3**	**0**	**1**	**0**
	Maximum		**500,000**			**1,410,000**		**12**	**3**	**5**	**4**
	Minimum		**< 1**			**4,320**		**0**	**0**	**0**	**0**

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L
Western Tributary at Civic Center	08/30/92		26.3	4	92	1,110		7.2	2.67	< 0.05	0.29
	10/24/92		17.3	3	66	760		7.3	1.02	0.18	0.50
	02/08/93		12.0	3	950	300		7.9	0.24	0.26	0.55
	05/14/93	839	26.4	4	110	600		7.2	1.64	0.19	0.51
	08/04/93	211	26.0	3	840	980		7.6	1.13	0.06	0.88
	02/04/94	181	8.2	6	3,720	400	465	7.5	0.44	2.34	2.10
	03/25/94	353	12.9	10	2,800	520	2,530		0.73	0.75	1.40
	07/19/94		23.6	< 3	81	400	535	7.8	1.49	0.11	0.23
	08/09/94	4	29.5	< 3	5,550	370	525	7.9	0.35	0.18	0.87
	01/24/95	624	9.7	< 3	880	5,210	187	8.0	0.24	0.06	
	05/24/95		19.7	6	125	300	488	7.5	1.35	0.08	0.32
	08/12/95	583	27.5	4	450	690	633	7.2	1.50	0.09	0.83
	03/13/96			4	510	780		7.5		0.45	0.97
	11/21/96	163	15.6	< 3	2,500	290	498	7.8	< 0.05	0.59	2.80
	07/28/97		25.7	6	890	380	588	7.7	1.84	0.11	0.30
	09/01/97			4	290	580		7.5	1.75	< 0.01	0.33
	Median	**282**	**21.7**	**4**	**675**	**550**	**525**	**7.5**	**1.13**	**0.15**	**0.55**
	Maximum	**839**	**29.5**	**10**	**5,550**	**5,210**	**2,530**	**8.0**	**2.67**	**2.34**	**2.80**
	Minimum	**4**	**8.2**	**< 3**	**66**	**290**	**187**	**7.2**	**< 0.05**	**< 0.01**	**0.23**

Location	Date	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L	Dissolved Lead mg/L	Mercury mg/L
Western Tributary at Civic Center	08/30/92	3.9		0.66	9.8	13.7	0.024		< 0.010	< 0.010		< 0.0002
	10/24/92	2.9		0.73	6.2	9.1	0.017		< 0.010	< 0.010		< 0.0002
	02/08/93	1.1		0.30	1.1	2.2	0.018		0.024	0.018		< 0.0002
	05/14/93	2.4		1.30	5.5	7.9	0.015		< 0.010	0.009		< 0.0002
	08/04/93	2.1		1.40	6.6	8.7	0.033		0.027	0.022		< 0.0002
	02/04/94	1.1		1.10	16.0	17.1	0.092		0.050	0.150		0.0008
	03/25/94	1.2		1.10	6.7	7.9	0.058		0.033	0.076		< 0.0002
	07/19/94	1.4		0.47	< 1.0	2.4	0.016		< 0.010	0.006		< 0.0002
	08/09/94	1.4		0.47	2.7	4.1	0.052		0.035	0.140		< 0.0002
	01/24/95	4.5		< 0.05	< 1.0	5.5	0.012		< 0.010	< 0.100		< 0.0002
	05/24/95	1.2		0.60	4.9	6.1	0.023		< 0.010	0.020		< 0.0002
	08/12/95	0.9		0.60	7.2	8.1	0.042		0.013	0.025		< 0.0002
	03/13/96	1.7		0.90	6.2	2.6	0.041					
	11/21/96	1.7		0.80	11.0	12.7	0.038			< 0.100		
	07/28/97	1.6		1.20	4.8	6.4	0.100			0.170		
	09/01/97	1.0		0.90	7.2	8.2	0.044			< 0.100		
	Median	**1.5**		**0.77**	**6.2**	**7.9**	**0.04**		**0.012**	**0.03**		**< 0.0002**
	Maximum	**4.5**		**1.40**	**16.0**	**17.1**	**0.10**		**0.050**	**0.17**		**0.0008**
	Minimum	**0.9**		**< 0.05**	**< 1.0**	**2.2**	**0.01**		**< 0.010**	**< 0.01**		**< 0.0002**

Location	Date	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L	Nickel mg/L	Selenium mg/L	Arsenic mg/L	Boron mg/L	Cyanide mg/L	BOD mg/L
Western Tributary at Civic Center	08/30/92	< 0.005	0.06		< 0.01	< 0.040		< 0.025	0.42	0.029	85
	10/24/92	< 0.005	0.07		< 0.01	< 0.040		< 0.025	0.25	0.009	31
	02/08/93	< 0.005	0.27		< 0.01	< 0.040	< 0.005	0.010	0.14	< 0.005	25
	05/14/93	< 0.005	0.08		< 0.01	< 0.040	< 0.005	0.005	0.27	0.010	63
	08/04/93	< 0.005	0.18		< 0.01	0.021	< 0.005	0.011	0.05	0.008	83
	02/04/94	< 0.005	0.44		< 0.01	0.023	< 0.020	0.027	0.23	< 0.005	57
	03/25/94	< 0.005	0.32		< 0.01	0.020	< 0.005	0.016	0.17	< 0.005	59
	07/19/94	< 0.005	0.05		< 0.01	0.011	< 0.005	< 0.005	0.16	0.009	110
	08/09/94	< 0.005	0.24		< 0.01	0.025	< 0.005	0.050	0.19	< 0.005	19
	01/24/95	< 0.005	0.06		< 0.01	< 0.010	< 0.005		2.40	0.007	< 6
	05/24/95	< 0.005	0.09		< 0.01	0.011	< 0.005	< 0.005	0.18	0.010	35
	08/12/95	< 0.005	0.20		< 0.01	0.020	< 0.005	0.007	0.28	0.030	77
	03/13/96		0.12						0.27	0.009	52
	11/21/96		0.24						0.19	< 0.005	45
	07/28/97		0.63						0.21	< 0.005	36
	09/01/97		0.16						0.25	0.052	38
	Median	**< 0.005**	**0.17**		**< 0.01**	**0.022**	**< 0.005**	**0.011**	**0.22**	**0.009**	**49**
	Maximum	**< 0.005**	**0.63**		**< 0.01**	**0.040**	**< 0.020**	**0.050**	**2.40**	**0.052**	**110**
	Minimum	**< 0.005**	**0.05**		**< 0.01**	**< 0.010**	**< 0.005**	**< 0.005**	**0.05**	**< 0.005**	**< 6**

Location	Date	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L
Western Tributary at Civic Center	08/30/92	559	313	60	0.09				< 0.10
	10/24/92	210	90	45	0.04				< 0.10
	02/08/93	98	25	750	0.10				< 0.10
	05/14/93	220	200	70	0.10				< 0.10
	08/04/93	390	400	130	0.20				< 0.10
	02/04/94	475	750	950	0.10				< 0.10
	03/25/94	310	1,000	1,200	0.04				< 0.10
	07/19/94	215	150	44	0.08				0.10
	08/09/94	300	75	7	< 0.01				0.10
	01/24/95	23	10	100	0.10		< 1	< 1	< 0.01
	05/24/95	215	40	68	0.02	< 1			< 0.01
	08/12/95	345	250	11	< 0.10		< 2	< 2	< 0.01
	03/13/96	250	100	32					0.05
	11/21/96	400	80	5,600	< 0.01	< 1			< 0.01
	07/28/97	930	110	600	< 0.01	< 1			< 0.10
	09/01/97	160	128	160	0.02				
	Median	**275**	**119**	**85**	**0.08**	**< 1**	**< 2**	**< 2**	**< 0.1**
	Maximum	**930**	**1,000**	**5,600**	**0.20**	**< 1**	**< 2**	**< 2**	**0.1**
	Minimum	**23**	**10**	**7**	**< 0.01**	**< 1**	**< 1**	**< 1**	**< 0.01**

Location	Date	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL
Western Tributary at Civic Center	08/30/92	< 160,000			> 16			
	10/24/92	130,000			300,000			
	02/08/93	30,000	5,000		22,000	30,000		
	05/14/93	5,000,000	240,000	13,000	1,700,000	160,000	50,000	
	08/04/93	30,000	110,000	500,000	160,000	500,000	700,000	
	02/04/94	3,000	500		90,000	28,000		
	03/25/94	< 2	8,000	8,000	50,000	230,000	90,000	< 2.0
	07/19/94		> 160,000	1,600,000		50,000	140,000	8.0
	08/09/94		80,000	2,300		130,000	50,000	< 2.0
	01/24/95			5,000			22,000	< 2.0
	05/24/95			> 160,000			> 160,000	2.0
	08/12/95						> 1,600	6.0
	03/13/96	5,000			11,000			< 2.2
	11/21/96	40,000			50,000			< 2.2
	07/28/97	160,000			90,000			5.1
	09/01/97	160,000			90,000			< 2.2
	Median	**40,000**	**80,000**	**13,000**	**90,000**	**130,000**	**70,000**	**< 2.2**
	Maximum	**5,000,000**	**240,000**	**1,600,000**	**1,700,000**	**500,000**	**700,000**	**8.0**
	Minimum	**< 2**	**500**	**2300**	**16**	**28,000**	**1,600**	**< 2.0**

Location	Date	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Western Tributary at Civic Center	08/30/92				
	10/24/92				
	02/08/93				
	05/14/93				
	08/04/93				
	02/04/94				
	03/25/94				
	07/19/94				
	08/09/94				
	01/24/95				
	05/24/95				
	08/12/95				
	03/13/96				
	11/21/96		0		1 hh
	07/28/97		0		1
	09/01/97		0		1
	Median				
	Maximum				
	Minimum				

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units
Las Vegas Creek at Pecos or Lena	08/30/92	75	27.1	4	550	830		7.2
	10/24/92	204	17.5	4	500	530		7.3
	10/28/92	76	18.1	< 3	460	440		7.4
	02/08/93	454	11.1	64	300	190		7.8
	05/14/93	138	26.9	7	220	490		7.1
	08/04/93	34	30.7	< 3	560	1,070		7.1
	02/04/94	114	8.2	5	1,050	320	984	7.6
	09/19/94		22.0	5	230	880	950	7.3
	03/11/95	23	13.4	4	93	150	1,150	7.6
	05/24/95	24	26.5	12	330	270	680	7.5
	08/20/95	4	26.7	4	42	520	883	7.3
	05/24/96		17.8	15	490	500	500	7.0
	07/15/96	148	27.0	23	480	470		7.4
	02/24/98		12.0	< 3	200	100		8.0
	03/26/98		15.2	< 3	1,390	200	570	8.2
	09/22/99			4	950	100		
	02/12/03			< 3	110	130	200	7.4
	07/25/03				880	580		
	08/16/03				1,570	580		
	08/16/04			< 5	3,020	340	401	7.6
	01/03/05			5	51	120	177	7.7
	Median	**76**	**18.1**	**4**	**480**	**440**	**625**	**7.4**
	Maximum	**454**	**30.7**	**64**	**3,020**	**1,070**	**1,150**	**8.2**
	Minimum	**4**	**8.2**	**< 3**	**42**	**100**	**177**	**7.0**

Location	Date	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L
Las Vegas Creek at Pecos or Lena	08/30/92	3.10	0.06	1.10	1.80		0.42	9.5	11.3
	10/24/92	1.89	0.55	< 0.05	1.80		1.20	8.8	10.6
	10/28/92	1.12	0.18	0.51	1.40		0.33	3.7	5.1
	02/08/93	0.17	0.25	0.55	0.70		0.22	1.1	1.8
	05/14/93	1.34	0.36	1.00	0.10		2.30	6.5	6.6
	08/04/93	1.41	0.12	0.96	1.50		2.40	10.0	11.5
	02/04/94	0.83	0.87	1.50	1.30		0.92	5.3	6.6
	09/19/94	1.00	0.78	1.50	4.30		1.70	13.0	17.3
	03/11/95	0.25	0.21	0.36	0.40		0.20	1.6	2.0
	05/24/95	0.87	0.21	1.15	1.40		0.70	7.2	8.6
	08/20/95	1.55	0.20	0.55	1.10		0.30	5.0	6.1
	05/24/96	4.74	6.50	7.00	3.40		1.90	10.0	11.9
	07/15/96		0.68	0.94			1.20	8.5	8.7
	02/24/98	< 0.50	0.20	0.46	0.58		0.30	< 1.0	0.6
	03/26/98	0.73	0.54	0.85	0.56		0.23	3.2	3.8
	09/22/99			0.61	0.68		0.32	2.9	3.6
	02/12/03	0.36			0.71	< 0.10		1.9	2.6
	07/25/03				2.70	0.23		18.0	20.9
	08/16/03		0.29	2.40	1.40	0.13		10.0	11.5
	08/16/04	0.22	0.15	1.70	2.40	< 0.50		8.9	11.3
	01/03/05	0.41	0.10	0.20	0.50	< 0.10		1.0	1.5
	Median	**0.87**	**0.23**	**0.94**	**1.35**	**0.13**	**0.56**	**6.5**	**6.6**
	Maximum	**4.74**	**6.50**	**7.00**	**4.30**	**0.50**	**2.40**	**18.0**	**20.9**
	Minimum	**0.17**	**0.06**	**< 0.05**	**0.10**	**< 0.10**	**0.20**	**< 1.0**	**0.6**

Location	Date	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L
Las Vegas Creek at Pecos or Lena	08/30/92	0.010		0.019	0.072		< 0.0002	< 0.0050	0.32		< 0.0100
	10/24/92	0.190		0.057	0.280		0.0060	< 0.0050	0.96		< 0.0100
	10/28/92	0.055		0.019	0.071		< 0.0002	< 0.0050	0.28		< 0.0100
	02/08/93	0.019		< 0.010	0.036		< 0.0002	< 0.0050	0.29		< 0.0100
	05/14/93	0.027		< 0.010	0.026		< 0.0002	< 0.0050	0.15		< 0.0100
	08/04/93	0.078		0.021	0.078		< 0.0002	< 0.0050	0.38		< 0.0100
	02/04/94	0.047		0.018	0.057		0.0003	< 0.0050	0.23		< 0.0100
	09/19/94	0.057		0.015	0.053		< 0.0002	< 0.0050	0.30		< 0.0100
	03/11/95	< 0.010		< 0.010	0.017		< 0.0002	< 0.0050	0.08		< 0.0100
	05/24/95	0.098		0.023	0.140		< 0.0002	< 0.0050	0.59		< 0.0100
	08/20/95	0.024		< 0.010	0.008		< 0.0002	< 0.0050	0.12		< 0.0100
	05/24/96	0.070							0.43		
	07/15/96	0.091			< 0.100				0.35		
	02/24/98	0.013			< 0.100				0.07		
	03/26/98	0.012			< 0.100				0.11		
	09/22/99	0.049	< 0.010		< 0.100	< 0.10			0.29	< 0.200	
	02/12/03	0.020	< 0.010	0.004	0.008	< 0.10	< 0.0002	0.0011	0.09	< 0.200	< 0.0005
	07/25/03	0.066	< 0.010		0.043	< 0.10			0.45	0.042	
	08/16/03	0.220	< 0.010		0.120	< 0.10			1.00	0.020	
	08/16/04	0.170	< 0.010	0.004	0.099	< 0.02	0.0002	< 0.0025	0.85	0.021	< 0.0025
	01/03/05	0.020	< 0.010	0.004	0.006	< 0.02	< 0.0002	< 0.0005	0.07	< 0.020	< 0.0005
	Median	**0.049**	**< 0.010**	**0.013**	**0.072**	**< 0.10**	**< 0.0002**	**< 0.005**	**0.290**	**0.032**	**< 0.010**
	Maximum	**0.220**	**< 0.010**	**0.057**	**0.280**	**< 0.10**	**0.006**	**< 0.005**	**1.0**	**0.2**	**0.010**
	Minimum	**< 0.010**	**< 0.010**	**0.004**	**0.006**	**< 0.02**	**< 0.0002**	**< 0.001**	**0.070**	**< 0.02**	**< 0.001**

Location	Date	Nickel mg/L	Selenium mg/L	Arsenic mg/L	Boron mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L
Las Vegas Creek at Pecos or Lena	08/30/92	< 0.040		< 0.025	0.43	0.032	80	760	300	275	0.10
	10/24/92	< 0.040		< 0.025	0.26	0.024	69	500	120	340	0.10
	10/28/92	< 0.040		< 0.025	0.22	0.015	35	195	5	300	0.03
	02/08/93	< 0.040	< 0.005	< 0.005	0.08	< 0.005	27	230	15	180	0.10
	05/14/93	< 0.020	< 0.005	< 0.005	0.27	0.011	86	400	320	90	0.20
	08/04/93	0.020	0.017	0.015	0.30	0.011	115	690	560	65	0.10
	02/04/94	< 0.020	< 0.010	0.008	0.15	0.006	57	360	100	350	0.10
	09/19/94	0.026	< 0.005	0.008	0.40	0.016	99	720	500	20	0.06
	03/11/95	< 0.010	< 0.005	< 0.005	0.10	< 0.005	10	85	50	62	< 0.10
	05/24/95	0.016	< 0.005	0.007	0.13	0.005	34	295	30	270	0.02
	08/20/95	0.011	< 0.005	0.007	0.19	< 0.005	29	245	200		0.10
	05/24/96				0.30	0.010	265	550	175	8	0.09
	07/15/96				0.19	< 0.005	58	380	300	190	< 0.01
	02/24/98				0.06	< 0.005	17	100	15	132	< 0.01
	03/26/98				0.08	< 0.005	27	130	30	720	< 0.01
	09/22/99				0.06						
	02/12/03	< 0.005	< 0.005	< 0.002	< 0.05						
	07/25/03				0.22						
	08/16/03				0.15						
	08/16/04	0.036	< 0.025	0.015	0.14						
	01/03/05	< 0.005	< 0.010	< 0.002	0.06						
	Median	**< 0.020**	**< 0.005**	**0.008**	**0.15**	**0.006**	**57**	**360**	**120**	**185**	**< 0.10**
	Maximum	**< 0.040**	**< 0.025**	**0.025**	**0.43**	**0.032**	**265**	**760**	**560**	**720**	**0.20**
	Minimum	**< 0.005**	**< 0.005**	**< 0.002**	**< 0.05**	**< 0.005**	**10**	**85**	**5**	**8**	**< 0.01**

Location	Date	Petroleum Hydrocarbon	TPH (diesel) MPN/100 mL	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL
Las Vegas Creek at Pecos or Lena	08/30/92				< 0.10	160,000			> 16	
	10/24/92				< 0.10	700,000			500,000	
	10/28/92				< 0.10	80,000			500,000	
	02/08/93				< 0.10	17,000	8,000	13,000	160,000	30,000
	05/14/93				< 0.10	5,000,000	1,700,000	300,000	6,000,000	1,300,000
	08/04/93				< 0.10	5,000,000	300,000	1,300,000	160,000	1,700,000
	02/04/94				< 0.10	2,200	2,400		35,000	1,300
	09/19/94				< 0.01			900,000		
	03/11/95		< 1	< 1	< 0.01			24,000		
	05/24/95	< 1			< 0.01			160,000		
	08/20/95		< 1	< 1	0.20			28,000		
	05/24/96					11,000			> 16,000	
	07/15/96				< 0.01	3,000,000			80,000	
	02/24/98	< 1			0.10	5,000			13,000	
	03/26/98	< 1			< 0.10	160,000			90,000	
	09/22/99					8,000			170,000	
	02/12/03					5,000			90,000	
	07/25/03					900,000			500,000	
	08/16/03					1,600,000			240,000	
	08/16/04					> 1,600,000			220,000	
	01/03/05					1,300			11,000	
	Median	**< 1**	**< 1**	**< 1**	**< 0.10**	**160,000**	**154,000**	**160,000**	**160,000**	**665,000**
	Maximum	**< 1**	**< 1**	**< 1**	**0.20**	**5,000,000**	**1,700,000**	**1,300,000**	**6,000,000**	**1,700,000**
	Minimum	**< 1**	**< 1**	**< 1**	**< 0.01**	**1,300**	**2,400**	**13,000**	**16**	**1,300**

Location	Date	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Las Vegas Creek at Pecos or Lena	08/30/92						
	10/24/92						
	10/28/92						
	02/08/93	5,000					
	05/14/93	3,000,000					
	08/04/93	3,000,000					
	02/04/94						
	09/19/94	160,000	< 2				
	03/11/95	160,000	22				
	05/24/95	> 160,000	< 2				
	08/20/95	90,000	7				
	05/24/96		160		1		
	07/15/96		9		0		0
	02/24/98		< 2		0		1
	03/26/98		< 2		1		4
	09/22/99			1 e			0
	02/12/03			1 a	0	4 g,k,n,x	0
	07/25/03			1 k	4	7	2
	08/16/03			2 k,l	0	7	0
	08/16/04			1 a	0	5 x,h,o,l	3 y,uu,xx
	01/03/05			0	0	8 x,o,i, nn,g,l.k	3 hh,uu.xx
	Median	**160,000**	**5**				
	Maximum	**3,000,000**	**160**				
	Minimum	**5,000**	**< 2**				

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L
Duck Creek at Boulder Highway	08/30/92	30	27.1	< 3	120	4,590		7.8	0.64	< 0.05
	10/24/92	73	17.7	< 3	130	4,670		7.6	0.62	0.06
	02/08/93	43	11.5	< 3	23	4,700		8.1	< 0.10	< 0.05
	08/04/93	15	27.5	< 3	150	5,150		7.3	0.54	< 0.05
	02/04/94	22	9.0	< 3	4,430	3,360	7,380	7.5	0.15	2.26
	03/25/94	22	17.3	< 3	240	3,990	17,480	7.7	0.23	0.11
	07/19/94	38	23.0	< 3	280	3,350	4,930	7.3	2.25	0.07
	01/24/95	21	9.4	3	360	230	2,520	8.0	0.30	0.11
	02/20/96			4	2,170	2,910		7.4		0.33
	07/14/96	177	29.1	3	1,270	2,450	2,900	7.1		0.65
	04/02/97		12.3	< 3	170	1,660	2,050	7.2	0.77	< 0.05
	07/22/97		24.8	375	6,540	2,960	389	7.5		0.04
	02/03/98		12.0	< 3	2,020	2,290	290	7.5	< 0.50	0.09
	09/08/98	171		< 3	5,720	1,520				
	06/02/99	10		< 3	50	1,100				
	09/22/99			< 3	210	870				
	02/16/00			< 3	1,920	1,240				
	08/30/00	108		< 3	4,360	1,300				
	07/06/01	242		< 3	8,420	1,610				
	02/12/03	489		< 3	2,580	1,270	1,580	7.4	0.23	0.08
	07/24/03				1,080	3,290				
	08/16/04			5	3,960	1,920	2,320	7.2	0.28	0.09
	09/09/04			< 5	26,300	2,040	2,080	7.7	0.22	0.04
	Median	**41**	**18**	**< 3**	**1,270**	**2,290**	**2,320**	**7.5**	**0.30**	**0.08**
	Maximum	**489**	**29**	**375**	**26,300**	**5,150**	**17,480**	**8.1**	**2.25**	**2.26**
	Minimum	**10**	**9**	**< 3**	**23**	**230**	**290**	**7.1**	**< 0.10**	**0.04**

Location	Date	Total Phosphorous mg/L	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L
Duck Creek at Boulder Highway	08/30/92	0.12	3.5		0.06	2.6	4.5	< 0.010	
	10/24/92	0.16	3.8		0.42	3.7	7.5	< 0.010	
	02/08/93	0.06	4.6		< 0.10	< 1.0	5.6	< 0.010	
	08/04/93	0.13	4.1		0.68	3.1	7.2	< 0.010	
	02/04/94	1.30	4.5		0.69	4.3	8.8	0.044	
	03/25/94	0.20	< 2.0		0.40	3.4	5.4	0.016	
	07/19/94	0.37	4.1		2.30	5.5	9.6	0.025	
	01/24/95		1.0		0.20	1.5	2.5	0.022	
	02/20/96	1.00	3.6		1.00	8.1	9.1	0.062	
	07/14/96	5.60	2.3		1.20	11.0	13.3	0.046	
	04/02/97	0.38	3.2		1.00	5.2	8.4	0.016	
	07/22/97	0.41	< 1.0		0.60	6.8	7.8	0.140	
	02/03/98	1.34	3.8		0.60	5.2	9.0	< 0.010	
	09/08/98	1.20	2.2		0.44	13.0	2.3	0.240	0.02
	06/02/99	0.58	2.4		0.79	4.7	7.1	0.040	< 0.01
	09/22/99	0.44	1.9		0.40	2.5	4.3	< 0.010	< 0.01
	02/16/00	2.29	3.0		0.89	6.9	9.9	0.150	< 0.01
	08/30/00	3.60	1.8		0.26	4.9	6.7	0.240	< 0.01
	07/06/01	7.50	2.0		< 0.05	11.0	13.0	0.240	< 0.01
	02/12/03	2.70	1.3	< 0.5		9.7	11.0	0.094	< 0.01
	07/24/03		2.8	1.8		6.2	10.8	< 0.200	< 0.02
	08/16/04	1.70	3.6	2.6		11.0	17.2	0.280	0.53
	09/09/04	2.40	2.4	< 0.4		8.9	11.3	0.094	< 0.01
	Median	**1.00**	**2.80**	**1.15**	**0.60**	**5.20**	**8.40**	**0.04**	**< 0.01**
	Maximum	**7.50**	**4.60**	**2.60**	**2.30**	**13.00**	**17.20**	**0.28**	**0.53**
	Minimum	**0.06**	**< 1.00**	**< 0.40**	**< 0.05**	**< 1.00**	**2.33**	**< 0.01**	**< 0.01**

Location	Date	Chromium mg/L	Lead mg/L	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L
Duck Creek at Boulder Highway	08/30/92	< 0.0100	< 5.000		< 0.0002	< 0.0050	0.053		< 0.010
	10/24/92	< 0.0100	< 0.010		< 0.0002	< 0.0050	0.038		< 0.010
	02/08/93	< 0.0100	< 0.004		< 0.0002	< 0.0050	0.097		< 0.010
	08/04/93	< 0.0100	< 0.004		< 0.0002	< 0.0050	0.035		< 0.010
	02/04/94	0.0450	0.031		0.0002	< 0.0050	0.200		< 0.010
	03/25/94	0.0100	0.006		< 0.0002	< 0.0050	0.053		< 0.010
	07/19/94	0.0100	0.007		< 0.0002	< 0.0050	0.073		< 0.010
	01/24/95	< 0.0100	< 0.100		0.0002	< 0.0050	0.110		< 0.010
	02/20/96						0.160		
	07/14/96		< 0.100				0.210		
	04/02/97		< 0.100				0.083		
	07/22/97		< 0.100				0.190		
	02/03/98		0.120				0.340		
	09/08/98		0.220	< 0.100			0.730	< 0.020	
	06/02/99		< 0.100	< 0.100			0.130	< 0.020	
	09/22/99		< 0.100	< 0.100			0.079	< 0.020	
	02/16/00		< 0.100	< 0.100			0.500	< 0.020	
	08/30/00		< 0.100	< 0.100			0.910	< 0.020	
	07/06/01		0.150	< 0.100			0.850	0.029	
	02/12/03	0.0091	0.040	< 0.100	< 0.0002	0.0011	0.270	< 0.020	< 0.001
	07/24/03		0.019	< 0.200			0.140	< 0.040	
	08/16/04	0.0450	0.046	< 0.020	< 0.0002	0.0030	0.530	0.025	< 0.003
	09/09/04	0.0670	0.077	0.020	< 0.0002	0.0016	0.480	< 0.020	0.013
	Median	**< 0.0100**	**< 0.100**	**< 0.1000**	**< 0.0002**	**< 0.0050**	**0.160**	**< 0.020**	**< 0.010**
	Maximum	**0.0670**	**< 5.000**	**< 0.2000**	**0.0002**	**< 0.0050**	**0.910**	**0.040**	**0.013**
	Minimum	**0.0091**	**< 0.004**	**< 0.0200**	**< 0.0002**	**0.0011**	**0.035**	**< 0.020**	**< 0.001**

Location	Date	Nickel mg/L	Selenium mg/L	Arsenic mg/L	Boron mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU
Duck Creek at Boulder Highway	08/30/92	< 0.04		0.060	2.70	0.013	19	99	100
	10/24/92	< 0.04		0.038	2.50	0.007	21	125	225
	02/08/93	< 0.04	< 0.025	0.042	2.30	< 0.005	< 6	30	25
	08/04/93	< 0.02		0.037	3.00	< 0.005	77	230	200
	02/04/94	0.03	< 0.020	0.100	1.50	< 0.005	28	175	225
	03/25/94	< 0.01	0.019	0.046	1.80	< 0.005	15	89	60
	07/19/94	0.01	< 0.010	0.034	1.60	0.011	67	445	60
	01/24/95	< 0.01	< 0.005		0.08	0.009	12	90	30
	02/20/96				1.20	0.030	50	245	30
	07/14/96				1.60	< 0.005	110	780	200
	04/02/97				0.79	0.006	40	280	150
	07/22/97				1.60	0.022	20	170	150
	02/03/98				1.20	< 0.005	48	190	75
	09/08/98				0.72				
	06/02/99				0.77				
	09/22/99				0.46				
	02/16/00				0.77				
	08/30/00				0.56				
	07/06/01				0.79				
	02/12/03	0.03	< 0.050	0.089	0.33				
	07/24/03				1.30				
	08/16/04	0.05	< 0.025	0.063	0.70				
	09/09/04	0.12	< 0.025	0.190	0.84				
	Median	**< 0.03**	**< 0.023**	**0.053**	**1.20**	**< 0.006**	**28**	**175**	**100**
	Maximum	**0.12**	**< 0.050**	**0.190**	**3.00**	**0.030**	**110**	**780**	**225**
	Minimum	**< 0.01**	**< 0.005**	**0.034**	**0.08**	**< 0.005**	**< 6**	**30**	**25**

Location	Date	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL
Duck Creek at Boulder Highway	08/30/92	55	0.02				< 0.10	50,000		
	10/24/92	55	0.50				< 0.10	50,000		
	02/08/93	14	0.10				< 0.10	400	800	
	08/04/93	34	0.02				< 0.10	1,700,000	1,400,000	1,300,000
	02/04/94	650	0.10				< 0.10	1,100	2,300	220
	03/25/94	70	< 0.01				< 0.10	3,000		3,000
	07/19/94	45					< 0.10	900,000	300,000	500,000
	01/24/95	120	< 0.10		< 1	< 1	< 0.01			5,000
	02/20/96	14	< 0.01	< 1				3,000		
	07/14/96	3,800	< 0.01				< 0.01	5,000,000		
	04/02/97	72	< 0.01	< 1				7,000		
	07/22/97	2,300	< 0.01	< 1			0.40	22,000		
	02/03/98	370	< 0.01	< 1			< 0.10	1,100		
	09/08/98							17,000		
	06/02/99							7,900		
	09/22/99							160,000		
	02/16/00							8,000		
	08/30/00							110,000		
	07/06/01							900,000		
	02/12/03							30,000		
	07/24/03							1,600,000		
	08/16/04							900		
	09/09/04							900,000		
	Median	**70**	**< 0.02**	**< 1**	**< 1**	**< 1**	**< 0.10**	**26,000**	**151,150**	**5,000**
	Maximum	**3800**	**0.50**	**< 1**	**< 1**	**< 1**	**0.40**	**5,000,000**	**1,400,000**	**1,300,000**
	Minimum	**14**	**< 0.01**	**< 1**	**< 1**	**< 1**	**< 0.01**	**400**	**800**	**220**

Location	Date	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Duck Creek at Boulder Highway	08/30/92	> 16							
	10/24/92	30,000							
	02/08/93	3,000	13,000						
	08/04/93	160,000	160,000	3,000,000					
	02/04/94	8,000	2,300	230					
	03/25/94	13,000		30,000	< 2.0				
	07/19/94	240,000	240,000	240,000	2.0				
	01/24/95			17,000	< 2.0				
	02/20/96	13,000			5.0				
	07/14/96	500,000			2.2		0		0
	04/02/97	90,000			4.0		0		3
	07/22/97	17,000			9.2		0		1
	02/03/98	50,000			< 2.2		0		1
	09/08/98	24,000			< 2.2	0	0		0
	06/02/99	130,000				1 a	0		0
	09/22/99	35,000				1 a	0		0
	02/16/00	80,000				1 a	0		0
	08/30/00	90,000				0	0		0
	07/06/01	300,000				2 a,b	0		2 f
	02/12/03	160,000				1 a	0	3 g,m,x	0
	07/24/03	80,000				1	0	7	0
	08/16/04	70,000				1 a	0	2 x,o	0 y,hh
	09/09/04	> 160,000				1 a	0	2 o,g	1 uu
	Median	**75,000**	**86,500**	**30,000**	**< 2.2**				
	Maximum	**500,000**	**240,000**	**3,000,000**	**9.2**				
	Minimum	**16**	**2,300**	**230**	**< 2.0**				

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L
Flamingo Wash at Nellis	10/24/92	115	18.0	< 3.0	1,710	1,270		7.4	1.51	0.18	1.20
	02/08/93	160	12.3	< 3.0	1,130	130		8.2	< 0.05	0.46	0.66
	06/05/93	41	17.7	3.9	1,420	1,520		7.5	1.84	0.44	0.82
	08/05/93	57	26.1	< 3.0	5,910	2,290		7.6	1.18	0.06	1.20
	02/04/94	45	9.0	5.3	620	1,180	2,300	7.4	0.69	0.61	0.68
	03/25/94	79	17.4	6.5	3,860	1,140	7,570	7.4	0.78	0.84	1.80
	07/19/94		24.4	7.0	6,710	1,200	1,501	7.4	3.49	0.19	2.10
	08/19/94	37	26.0	3.8	4,750	1,060	2,080	7.7	0.05	< 0.05	1.00
	01/24/95	125	9.3	4.5	1,960	600	389	7.9	0.22	0.08	
	05/24/95	30	18.3	< 3.0	255	1,160	1,302	7.5	0.71	0.06	0.32
	08/12/95	335	26.4	7.2	1,050	1,010	1,003	7.2	1.70	0.14	1.50
	01/31/96			18.0	560	1,920		7.0	1.99	0.44	1.30
	11/21/96	184	17.3	< 3.0	2,620	440	3,830	7.8	< 0.05	0.15	1.50
	09/25/97		19.7	< 3.0	324	580	710	7.3	1.75	0.57	0.66
	02/04/98		11.2	5.2	1,800	680	240	7.6	0.92	0.22	2.94
	02/24/98		12.0	< 3.0	660	380		7.8	< 0.50	0.08	0.88
	02/12/03	538		< 3.0	1,900	260	415	7.6	0.33	0.15	1.05
	04/14/03	411			3,410	505	650	7.4	< 0.05		
	07/24/03	120			2,230	790					
	08/16/03	366			19,200	810				0.34	1.00
	08/13/04			< 5.0	18,800	940	1,020	7.2	0.06	0.11	5.00
	08/16/04			< 5.0	5,760	1,040	1,210	7.3	0.59	0.09	3.20
	Median	**120**	**17.7**	**< 4**	**1,930**	**975**	**1,115**	**7.5**	**0.70**	**0.17**	**1.20**
	Maximum	**538**	**26.4**	**18**	**19,200**	**2,290**	**7,570**	**8.2**	**3.49**	**0.84**	**5.00**
	Minimum	**30**	**9.0**	**< 3**	**255**	**130**	**240**	**7.0**	**< 0.05**	**< 0.05**	**0.32**

Location	Date	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L
Flamingo Wash at Nellis	10/24/92	2.30		1.40	7.6	9.9	0.100		0.038	0.079
	02/08/93	0.40		0.13	< 1.0	1.4	0.020		0.031	0.019
	06/05/93	3.20		1.10	4.9	8.1	0.059		0.031	0.051
	08/05/93	4.30		1.90	6.6	10.9	0.067		0.040	0.086
	02/04/94	2.60		1.00	3.7	6.3	0.046		0.011	0.014
	03/25/94	< 0.50		0.80	7.1	7.6	0.094		0.048	0.100
	07/19/94	3.00		2.50	6.1	9.1	0.130		0.050	0.130
	08/19/94	2.00		0.82	9.1	11.1	0.094		0.043	0.125
	01/24/95	1.30		0.30	2.6	3.9	0.061		0.028	< 0.100
	05/24/95	2.10		0.40	3.1	5.2	0.027		< 0.010	0.018
	08/12/95	< 0.30		1.00	9.3	9.6	0.069		0.017	0.049
	01/31/96	5.10		2.50	13.0	18.1	0.070			0.130
	11/21/96	1.00		0.60	3.8	4.8	0.057			< 0.100
	09/25/97	0.50		0.30	2.7	3.2	0.026			< 0.100
	02/04/98	1.70		0.80	19.0	20.7	0.065			0.120
	02/24/98	0.98		0.30	2.2	3.2	0.020			< 0.100
	02/12/03	0.97	< 0.10		3.2	4.2	0.039	< 0.010	0.006	0.030
	04/14/03	1.23	0.13		7.6	9.0	0.100	< 0.010	34.000	0.047
	07/24/03	1.80	< 0.50		6.6	8.4	0.170	< 0.010		0.074
	08/16/03	2.00	< 0.20		5.4	7.4	0.320	< 0.010		0.120
	08/13/04	2.20	< 0.20		16.0	2.2	0.270	< 0.020	< 0.100	0.410
	08/16/04	2.60	0.09		11.0	14.5	0.220	< 0.010	0.066	0.220
	Median	**1.90**	**0.17**	**0.81**	**6.4**	**7.9**	**0.068**	**< 0.010**	**0.038**	**0.100**
	Maximum	**5.10**	**0.50**	**2.50**	**19.0**	**20.7**	**0.320**	**0.020**	**34.000**	**0.410**
	Minimum	**< 0.30**	**0.09**	**0.13**	**< 1.0**	**1.4**	**0.020**	**< 0.010**	**0.006**	**0.014**

Location	Date	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L	Nickel mg/L	Selenium mg/L	Arsenic mg/L
Flamingo Wash at Nellis	10/24/92		0.0002	< 0.0050	0.43		< 0.010	< 0.040		< 0.0250
	02/08/93		< 0.2000	< 0.0050	0.18		< 0.010	< 0.040	< 0.025	0.0150
	06/05/93		0.0002	< 0.0050	0.26		< 0.010	< 0.020	< 0.015	0.0160
	08/05/93		< 0.0002	< 0.0050	0.27		< 0.010	0.030		0.0270
	02/04/94		< 0.0002	< 0.0050	0.09		< 0.010	< 0.020	< 0.010	0.0080
	03/25/94		0.0004	< 0.0050	0.37		< 0.010	0.032	< 0.015	0.0310
	07/19/94		0.0004	< 0.0050	0.55		< 0.010	0.054	< 0.010	0.0320
	08/19/94		0.0002	< 0.0050	0.44		< 0.010	0.026	< 0.005	0.0310
	01/24/95		< 0.0002	< 0.0050	0.26		< 0.010	0.016	< 0.005	
	05/24/95		< 0.0002	< 0.0050	0.09		< 0.010	0.011	0.007	< 0.0050
	08/12/95		< 0.0002	< 0.0050	0.37		< 0.010	0.027	< 0.005	0.0090
	01/31/96				0.86					
	11/21/96				0.28					
	09/25/97				0.13					
	02/04/98				0.36					
	02/24/98				0.15					
	02/12/03	< 0.100	< 0.0002	0.0007	0.17	0.100	< 0.050	0.015	< 0.050	0.0120
	04/14/03	< 0.100	< 0.0002	< 0.0025	0.45	< 0.020	0.006	0.038	< 0.040	0.0140
	07/24/03	< 0.100			1.10	0.023				
	08/16/03	< 0.100			1.50	< 0.020				
	08/13/04	< 0.020	0.0003	< 0.0500	< 0.01	1.900	< 0.005	0.500	< 0.025	< 0.0120
	08/16/04	< 0.020	0.0026	0.0030	1.10	0.026	< 0.003	0.062	< 0.025	0.0270
	Median	**< 0.100**	**< 0.0002**	**< 0.0050**	**0.32**	**0.025**	**< 0.010**	**0.030**	**< 0.015**	**0.016**
	Maximum	**< 0.100**	**0.2000**	**< 0.0500**	**1.50**	**1.900**	**0.050**	**0.500**	**< 0.050**	**0.032**
	Minimum	**< 0.020**	**< 0.0002**	**0.0007**	**< 0.01**	**< 0.020**	**< 0.003**	**0.011**	**< 0.005**	**< 0.005**

Location	Date	Boron mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL
Flamingo Wash at Nellis	10/24/92	0.49	0.008	54	555	175	750.0	0.020		
	02/08/93	0.09	< 0.005	< 6	57	15	700.0	0.100		
	06/05/93	0.58	< 0.005	56	375	320	390.0	< 0.010		
	08/05/93	0.97	0.008	85	415	320	200.0	0.020		
	02/04/94	0.41	< 0.005	37	185	100	190.0	0.100		
	03/25/94	0.37	0.008	55	395	1,000	1,400.0	0.010		
	07/19/94	0.44	0.013	22	630	150	0.2	0.130		
	08/19/94	0.35	< 0.005	40	465	150	950.0	< 0.100		
	01/24/95	0.18	< 0.005	33	155	25	510.0	0.100		< 1
	05/24/95	0.50	0.007	19	115	35	180.0	0.010	< 1.00	
	08/12/95	0.34	< 0.005	78	450	250	8.0	< 0.100		< 1
	01/31/96	0.71	0.030	116	660	230	520.0	0.020	< 1.00	
	11/21/96	0.12	< 0.005	18	220	30	3,300.0	< 0.010	< 1.00	
	09/25/97	0.30	< 0.005	42	160	60	280.0	< 0.010	1.50	
	02/04/98	0.22	< 0.005	63	570	75	2,200.0	< 0.010	< 1.00	
	02/24/98	0.13	< 0.005	13	98	15	740.0	< 0.010	< 1.00	
	02/12/03	< 0.05								
	04/14/03	0.18								
	07/24/03	0.24								
	08/16/03	0.27								
	08/13/04	0.56								
	08/16/04	0.28								
	Median	**0.32**	**< 0.005**	**41**	**385**	**125**	**515**	**0.020**	**< 1.00**	**< 1**
	Maximum	**0.97**	**0.030**	**116**	**660**	**1,000**	**3,300**	**0.130**	**1.50**	**< 1**
	Minimum	**< 0.05**	**< 0.005**	**< 6**	**57**	**15**	**0.2**	**< 0.010**	**< 1.00**	**< 1**

Location	Date	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL
Flamingo Wash at Nellis	10/24/92		< 0.10	80,000			80,000			
	02/08/93		< 0.10	1,700	3,000		90,000	30,000		
	06/05/93		< 0.10	8,000	28,000	5,000	50,000	160,000	90,000	
	08/05/93		< 0.10	300,000	500,000	50,000	90,000	160,000	90,000	
	02/04/94		< 0.10	1,300	500	2,300	22,000	1,300	500	
	03/25/94		< 0.10	24,000	30,000	30,000	160,000	160,000	90,000	< 2
	07/19/94		< 0.10		1,600,000	500,000		500,000	170,000	13
	08/19/94		< 0.10	170,000	80,000	140,000	300,000	130,000	130,000	8
	01/24/95	< 1	< 0.01			3,000			22,000	8
	05/24/95		< 0.01			160,000			90,000	2
	08/12/95	< 1	< 0.01			> 160,000			> 1,600	2
	01/31/96			13,000			3,000			< 2
	11/21/96		< 0.01	240			738			< 2
	09/25/97			90,000			160,000			< 2
	02/04/98		0.10	5,000			50,000			< 2
	02/24/98		0.20	13,000			17,000			< 2
	02/12/03			7,000			17,000			
	04/14/03			130,000			70,000			
	07/24/03			1,600,000			170,000			
	08/16/03			300,000			10,000			0
	08/13/04			> 1,600,000			170,000			
	08/16/04			> 1,600,000			900,000			
	Median	**< 1**	**< 0.10**	**52,000**	**30,000**	**50,000**	**75,000**	**160,000**	**90,000**	**< 2**
	Maximum	**< 1**	**0.20**	**1,600,000**	**1,600,000**	**500,000**	**900,000**	**500,000**	**170,000**	**13**
	Minimum	**< 1**	**< 0.01**	**240**	**500**	**2300**	**738**	**1,300**	**500**	**0**

Location	Date	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Flamingo Wash at Nellis	10/24/92				
	02/08/93				
	06/05/93				
	08/05/93				
	02/04/94				
	03/25/94				
	07/19/94				
	08/19/94				
	01/24/95				
	05/24/95				
	08/12/95				
	01/31/96		0		0
	11/21/96		0		0
	09/25/97		0		0
	02/04/98		2		1
	02/24/98		1		1
	02/12/03	1 a	0	9 g,h,j,o,q,s,t,u,x	0
	04/14/03	1 d		8 g,h,k,o,x,z,aa,bb	0
	07/24/03	2	0	3	0
	08/16/03	1	0	0	0
	08/13/04	2 k,l	0	2 x,o	0
	08/16/04	1 a	0	3 x,o,g	2 y,uu
	Median				
	Maximum				
	Minimum				

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L
C-1 Channel at Warm Springs	08/30/92	500	24.5	< 3	17,800	230		8.0	0.26	< 0.05	2.20
	02/08/93	181	11.1	< 3	3,670	140		8.3	< 0.05	1.50	3.90
	07/19/94		24.1	3	77	290	486	7.5	1.81	0.41	0.42
	09/19/94		22.7	3	120	930	888	7.6	2.60	1.20	2.70
	01/24/95	5	9.5	< 3	1,190	210	274	8.2	0.14	0.41	
	11/21/96	30	17.0	< 3	1,980	150	575	8.2	< 0.05	0.52	1.90
	08/10/97		17.5	< 3	4,800	260		8.5	0.60	0.37	1.48
	02/24/98		12.0	< 3	1,460	88		8.4	< 0.50	0.61	6.04
	02/16/00			< 3	610	62					2.15
	08/16/00	76		5	1,170	380					1.50
	02/25/03	9		< 3	187	100	139	7.7	0.19		
	09/04/03	29			3,850	440					6.80
	11/12/03	156			110	150				0.26	0.38
	11/07/04			< 5	810	80	93	8.4	0.05	1.40	1.50
	Median	**53**	**17.3**	**< 3**	**1,180**	**180**	**380**	**8.2**	**0.22**	**0.47**	**2.03**
	Maximum	**500**	**25**	**5**	**17,800**	**930**	**888**	**9**	**3**	**2**	**7**
	Minimum	**5**	**9.5**	**< 3**	**77**	**62**	**93**	**7.5**	**< 0.05**	**< 0.05**	**0.38**

Location	Date	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L
C-1 Channel at Warm Springs	08/30/92	1.60		0.07	8.3	9.9	0.27		0.1900	0.2200
	02/08/93	0.30		0.11	< 1.0	1.3	0.09		0.0630	0.0600
	07/19/94	0.80		0.97	2.8	3.6	0.02		< 0.0100	0.0100
	09/19/94	5.20		1.60	4.1	9.3	0.03		0.0140	0.0220
	01/24/95	0.80		0.06	< 1.0	1.8	0.04		0.0190	< 0.1000
	11/21/96	0.80		0.30	2.1	2.9	0.03			< 0.1000
	08/10/97	2.00		0.20	5.2	7.2	0.03			< 0.1000
	02/24/98	0.59		0.20	1.7	2.3	< 0.01			< 0.1000
	02/16/00	0.49		0.36	1.9	2.4	0.07	< 0.010		< 0.1000
	08/16/00	4.12		1.13	6.1	10.2	0.15	0.034		< 0.1000
	02/25/03	0.44	< 0.10		0.9	1.4	0.03	< 0.010	0.0089	0.0055
	09/04/03	1.70	< 0.10		10.0	11.5	< 0.20	< 0.010		0.0900
	11/12/03	0.61	< 0.10		2.4	3.0	0.02	0.038		0.0045
	11/07/04	0.20	< 0.10		1.4	1.6	0.04	< 0.010	0.0160	0.0170
	Median	**0.80**	**< 0.10**	**0.25**	**2.3**	**3.0**	**0.03**	**< 0.010**	**0.0160**	**< 0.1000**
	Maximum	**5**	**< 0.10**	**2**	**10**	**12**	**0.27**	**0.038**	**0.1900**	**0.2200**
	Minimum	**0.20**	**< 0.10**	**0.06**	**0.9**	**1.3**	**0.01**	**< 0.010**	**0.0089**	**0.0045**

Location	Date	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L	Nickel mg/L	Selenium mg/L	Arsenic mg/L
C-1 Channel at Warm Springs	08/30/92		0.0014	< 0.0050	0.89		< 0.0100	0.210		0.120
	02/08/93		< 0.0002	< 0.0050	0.37		< 0.0100	0.077	< 0.0250	0.021
	07/19/94		< 0.0002	< 0.0050	0.08		< 0.0100	0.017	< 0.0050	< 0.005
	09/19/94		< 0.0002	< 0.0050	0.20		< 0.0100	0.022	< 0.0050	0.008
	01/24/95		0.0002	< 0.0050	0.18		< 0.0100	0.068	< 0.0050	
	11/21/96				0.23					
	08/10/97				0.20					
	02/24/98				0.17					
	02/16/00	< 0.10			0.32	< 0.20				
	08/16/00	< 0.10			0.49	< 0.02				
	02/25/03	< 0.10	< 0.0002	< 0.0005	0.08	0.10	< 0.0005	0.007	< 0.0050	0.003
	09/04/03	< 0.10			0.45	< 0.02				
	11/12/03	< 0.02			0.08	0.08				
	11/07/04	< 0.02	< 0.0002	< 0.0005	0.15	< 0.02	< 0.0005	0.020	< 0.0100	0.006
	Median	**< 0.10**	**< 0.0002**	**< 0.0050**	**0.20**	**< 0.05**	**< 0.0100**	**0.022**	**< 0.005**	**0.007**
	Maximum	**< 0.10**	**0.0014**	**< 0.0050**	**0.89**	**< 0.20**	**< 0.0100**	**0.210**	**< 0.025**	**0.120**
	Minimum	**< 0.02**	**< 0.0002**	**< 0.0005**	**0.08**	**< 0.02**	**< 0.0005**	**0.007**	**< 0.005**	**0.003**

Location	Date	Boron mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL
C-1 Channel at Warm Springs	08/30/92	0.27	0.015	13	88	30	8,500	0.02		
	02/08/93	0.09	< 0.005	< 6	81	30	1,900	0.10		
	07/19/94	0.10	0.006	27	190	200	26	0.08		
	09/19/94	0.23	0.009	105	560	400	18	0.02		
	01/24/95	0.06	0.007	7	60	25	380	0.10		< 1
	11/21/96	0.07	< 0.005	< 6	58	32	840	< 0.01	< 1	
	08/10/97	0.15	< 0.005	8	230	< 3	4,400	< 0.01		
	02/24/98	0.09	< 0.005	13	120	20	850	< 0.01	< 1	
	02/16/00									
	08/16/00	0.12								
	02/25/03	< 0.05								
	09/04/03	0.11								
	11/12/03	< 0.05								
	11/07/04	< 0.05								
	Median	**0.09**	**0.006**	**11**	**104**	**30**	**845**	**0.02**	**< 1**	**< 1**
	Maximum	**0.27**	**0.015**	**105**	**560**	**400**	**8,500**	**0.10**	**< 1**	**< 1**
	Minimum	**< 0.05**	**< 0.005**	**< 6**	**58**	**3**	**18**	**< 0.01**	**< 1**	**< 1**

Location	Date	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL
C-1 Channel at Warm Springs	08/30/92		< 0.100	90,000			> 16			
	02/08/93		< 0.100	3,000			30,000			
	07/19/94		< 0.100		11,000	30,000		80,000	300,000	4.0
	09/19/94		< 0.010			30,000			90,000	8.0
	01/24/95	< 1	< 0.010			1,700			13,000	< 2.0
	11/21/96		< 0.010	240			1,230			< 2.2
	08/10/97		< 0.100	3,000			50,000			9.2
	02/24/98		0.100	5,000			24,000			< 2.2
	02/16/00			13,000			30,000			
	08/16/00			30,000			90,000			
	02/25/03			8,000			2,400			
	09/04/03			17,000			30,000			
	11/12/03			24,000			16,000			
	11/07/04			5,000			17,000			
	Median	**< 1**	**< 0.100**	**8,000**	**11,000**	**30,000**	**24,000**	**80,000**	**90,000**	**3.1**
	Maximum	**< 1**	**0.100**	**90,000**	**11,000**	**30,000**	**90,000**	**80,000**	**300,000**	**9.2**
	Minimum	**< 1**	**< 0.010**	**240**	**11,000**	**1,700**	**> 16**	**80,000**	**13,000**	**< 2.0**

Location	Date	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
C-1 Channel at Warm Springs	08/30/92				
	02/08/93				
	07/19/94				
	09/19/94				
	01/24/95				
	11/21/96		0		1 hh
	08/10/97		0		1
	02/24/98		0		2
	02/16/00	1 d	0		0
	08/16/00	1 a	1 ww		1 hh
	02/25/03	0	0	5 g,h,l,o,x	0
	09/04/03	0	0	0	0
	11/12/03	4	0	4	0
	11/07/04	0	0	1 x	0
	Median				
	Maximum				
	Minimum				

Location	Date	Q cfs	Temp Deg. C	Oil & Grease mg/L	TSS mg/L	TDS mg/L	Specific Conductance umho/cm	Lab pH units	Surfactants (MBAS) mg/L	Ortho-Phosphate mg/L	Total Phosphorous mg/L
Sloan Channel (Range Wash) at Charleston	10/24/92	32	17.8	< 3	280	100		7.9	0.21	0.41	0.4
	02/08/93	56	10.5	< 3	830	130		8.2	< 0.10	0.64	4.7
	07/19/94	24	23.4		6,540	430	611	7.3	0.61	0.09	2.1
	08/09/94	5	24.1	< 3	16,200	440	598	7.9	0.31	0.09	2.0
	08/19/94	2	23.1	< 3	4,010	390	626	8.0	< 0.05	< 0.05	0.8
	01/24/95		10.0	< 3	3,540	230	3	8.1	0.22	0.08	
	08/12/95	5	27.3	3	3,390	510	620	7.4	0.75	0.24	3.1
	11/21/96	63	16.9	< 3	5,230	240	413	8.0	< 0.05	0.51	1.7
	07/22/97		27.0	1,060	230	200	297	8.1		0.44	0.1
	08/08/97			4	1,500	240		7.9	1.53	0.08	0.5
	08/14/98	30		< 3	4,060	330					1.0
	02/16/00			< 3	1,970	200					1.7
	02/26/01			< 3	220	110					0.3
	02/12/03	99		< 3	79	110	172	7.2	0.31	0.18	0.3
	10/20/04			< 5	270	180	263	7.9	0.56	0.30	0.5
	Median	**30**	**23.1**	**< 3**	**1,970**	**230**	**413**	**7.9**	**< 0.31**	**0.21**	**0.9**
	Maximum	**99**	**27.3**	**1,060**	**16,200**	**510**	**626**	**8.2**	**1.53**	**0.64**	**4.7**
	Minimum	**2**	**10.0**	**< 3**	**79**	**100**	**3**	**7.2**	**< 0.05**	**< 0.05**	**0.1**

Location	Date	NO3-N mg/L	NO-2 mg/L	NH3-N mg/L	TKN mg/L	Total Nitrogen mg/L	Copper mg/L	Dissolved Copper mg/L	Chromium mg/L	Lead mg/L
Sloan Channel (Range Wash) at Charleston	10/24/92	0.50		0.20	1.1	1.6	0.028		0.019	0.020
	02/08/93	0.40		0.14	< 1.0	1.4	0.017		0.021	0.018
	07/19/94	2.30		1.20	1.7	4.0	0.068		0.057	0.063
	08/09/94	1.30		0.14	2.7	4.0	0.049		0.031	0.086
	08/19/94	2.00		0.37	3.1	5.1	0.040		0.035	0.037
	01/24/95	8.70		0.70	2.5	11.2	0.064		0.058	< 0.100
	08/12/95	< 0.20		0.40	8.0	8.2	0.056		0.035	0.029
	11/21/96	1.10		0.50	3.7	4.8	0.033			< 0.100
	07/22/97	0.90		1.00	2.5	3.4	0.029			< 0.100
	08/08/97	2.00		2.50	6.1	8.1	0.150			0.210
	08/14/98	2.50		0.66	5.8	8.3	0.110	0.011		< 0.100
	02/16/00	1.74		0.49	3.9	5.6	0.012	< 0.010		< 0.100
	02/26/01	0.64		0.28	1.3	1.9	0.029	< 0.010		0.011
	02/12/03	0.73	< 0.1		2.0	2.7	0.018	< 0.010	0.004	0.006
	10/20/04	0.90	< 0.1		2.6	3.5	0.028	0.013		0.010
	Median	**1.10**	**< 0.1**	**0.49**	**2.6**	**4.0**	**0.033**	**0.010**	**0.033**	**0.063**
	Maximum	**8.70**	**< 0.1**	**2.50**	**8.0**	**11.2**	**0.150**	**0.013**	**0.058**	**0.210**
	Minimum	**< 0.20**	**< 0.1**	**0.14**	**< 1.0**	**1.4**	**0.012**	**< 0.010**	**0.004**	**0.006**

Location	Date	Dissolved Lead mg/L	Mercury mg/L	Cadmium mg/L	Zinc mg/L	Dissolved Zinc mg/L	Silver mg/L	Nickel mg/L	Selenium mg/L	Arsenic mg/L
Sloan Channel (Range Wash) at Charleston	10/24/92		< 0.0002	< 0.005	0.17		< 0.010	< 0.040		< 0.025
	02/08/93		< 0.0002	< 0.005	0.11		< 0.010	< 0.040	< 0.005	0.010
	07/19/94		< 0.0002	< 0.005	0.31		< 0.010	0.046	< 0.010	0.049
	08/09/94		0.0002	< 0.005	0.17		< 0.010	0.028	< 0.005	0.061
	08/19/94		< 0.0002	< 0.005	0.15		< 0.010	0.026	0.027	0.027
	01/24/95		< 0.0002	< 0.005	0.29		< 0.010	0.044	< 0.005	
	08/12/95		< 0.0002	< 0.005	0.30		< 0.010	0.030	< 0.005	0.018
	11/21/96				0.20					
	07/22/97				0.26					
	08/08/97				0.62					
	08/14/98	< 0.1000			0.44	< 0.02				
	02/16/00	< 0.1000			0.05	< 0.02				
	02/26/01	< 0.0005			0.12	< 0.02				
	02/12/03	< 0.1000	< 0.0002	< 0.001	0.08	< 0.02	< 0.001	< 0.001	< 0.050	0.003
	10/20/04	< 0.0200	0.0002	< 0.005			< 0.001	0.009	< 0.010	0.005
	Median	**< 0.1000**	**< 0.0002**	**< 0.005**	**0.19**	**< 0.02**	**< 0.010**	**0.030**	**< 0.008**	**0.022**
	Maximum	**< 0.1000**	**0.0002**	**< 0.005**	**0.62**	**< 0.02**	**< 0.010**	**0.046**	**< 0.050**	**0.061**
	Minimum	**< 0.0005**	**< 0.0002**	**< 0.001**	**0.05**	**< 0.02**	**< 0.001**	**< 0.001**	**< 0.005**	**0.003**

Location	Date	Boron mg/L	Cyanide mg/L	BOD mg/L	COD mg/L	Color ACU	Turbidity NTU	Phenol mg/L	Petroleum Hydrocarbons	TPH (diesel) MPN/100 mL
Sloan Channel (Range Wash) at Charleston	10/24/92	0.08	0.005	12	74	10.0	0	< 0.01		
	02/08/93	0.08	< 0.005	< 6	46	15.0	600	0.20		
	07/19/94	0.24	0.007	28	135	100.0	3	0.04		
	08/09/94	0.93	< 0.005	15	295	75.0	1	< 0.01		
	08/19/94	0.24	< 0.005	10	115	150.0	1,350	< 0.01		
	01/24/95	0.11	0.010	14	97	15.0	1,100	0.10		< 1
	08/12/95	0.20	< 0.005	59	375	250.0	63	0.10		< 1
	11/21/96	0.15	< 0.005	17	140	37.0	1,600	< 0.01	< 1	
	07/22/97	0.12	< 0.005	26	130	200.0	240	< 0.01	< 1	
	08/08/97	0.18	0.330	41	310	150.0	600	0.01		
	08/14/98	0.24								
	02/16/00	0.10								
	02/26/01									
	02/12/03	< 0.05								
	10/20/04	0.10								
	Median	**0.14**	**< 0.005**	**16**	**133**	**87.5**	**420**	**< 0.01**	**< 1**	**< 1**
	Maximum	**0.93**	**0.330**	**59**	**375**	**250.0**	**1,600**	**0.20**	**< 1**	**< 1**
	Minimum	**< 0.05**	**< 0.005**	**< 6**	**46**	**10.0**	**0.170**	**< 0.01**	**< 1**	**< 1**

Location	Date	TPH (gasoline) MPN/100 mL	Total Chlorine mg/L	Fecal Coliform MPN/100 mL	Fecal* Coliform MPN/100 mL	Fecal** Coliform MPN/100 mL	Fecal Strep. MPN/100 mL	Fecal* Strep. MPN/100 mL	Fecal** Strep. MPN/100 mL	Salmonella MPN/100 mL
Sloan Channel (Range Wash) at Charleston	10/24/92		< 0.10	5,000			130,000			
	02/08/93		< 0.10	1,300		1,400	24,000		50,000	
	07/19/94		< 0.10	28,000	23,000	23,000	22,000	30,000	30,000	12.0
	08/09/94		< 0.10		170,000	30,000		70,000	23,000	< 2.0
	08/19/94		< 0.10	30,000	80,000	130,000	23,000	35,000	9,000	170.0
	01/24/95	< 1	< 0.01			3,000			17,000	4.0
	08/12/95	< 1	< 0.01			> 160,000			> 1,600	< 14.0
	11/21/96		< 0.01	240			9,300			< 2.2
	07/22/97		< 0.10	90,000			90,000			< 2.2
	08/08/97			5,000			160,000			< 2.2
	08/14/98			3,000			160,000			< 2.2
	02/16/00			11,000			30,000			
	02/26/01			5,000			50,000			
	02/12/03			5,000			80,000			
	10/20/04			17,000			30,000			
	Median	**< 1**	**< 0.10**	**5,000**	**80,000**	**26,500**	**40,000**	**35,000**	**20,000**	**< 2.2**
	Maximum	**< 1**	**< 0.10**	**90,000**	**170,000**	**160,000**	**160,000**	**70,000**	**50,000**	**170.0**
	Minimum	**< 1**	**< 0.01**	**240**	**23,000**	**1,400**	**9,300**	**30,000**	**> 1,600**	**< 2.0**

Location	Date	VOC # of detects	Pesticides # of detects	SOC # of detects	Herbicides # of detects
Sloan Channel (Range Wash) at Charleston	10/24/92				
	02/08/93				
	07/19/94				
	08/09/94				
	08/19/94				
	01/24/95				
	08/12/95				
	11/21/96		1 c,m,ii,jj,kk,ll		1 hh
	07/22/97		0		1
	08/08/97		0		0
	08/14/98	1 a	0		1 hh
	02/16/00	1 a	0		0
	02/26/01	1 a	0		0
	02/12/03	1 a	0	9 g,h,i,j,k,l,u,v,x	
	10/20/04	1 a	0	4 x,h,g,k	1 uu
	Median				
	Maximum				
	Minimum				



Appendix A-2

Storm and Wet Weather Reports (2025-2026)

NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise		
Date:	Friday, October 10th, 2025		
Samplers' Name:	Alisson Boeing, Naomi Espiritu		
Sample Collection Information			
Time of 1st Sample Collected:	7:18 PM		
Time of Grab Sample Collected:	7:54 PM		
Time of 24th Sample Collected:	8:30 PM		
Sample Intervals:	3 minutes		
Air Temperature (°F):	67	**Water Temperature (°F):**	73
Relative Humidity (%RH):	79	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	-
Turbidity (NTU):	422 (avg)	**Photos:**	Attached
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 7:18 PM and the sample identification name was FW-100-CS.		

Weather Conditions

(Temperature, storm location, etc.)

On Friday, October 10th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04 – 0.67 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 63°F and 73°F. Wind speeds ranged from 4 mph to 12 mph (Southwest). Relative humidity ranged between 73% and 84%.

Site Status

(Any maintenance required? Any equipment missing or damaged?)

No new updates.

Additional Information

No further information.

Photos (10/10/2025, 7:18 PM)





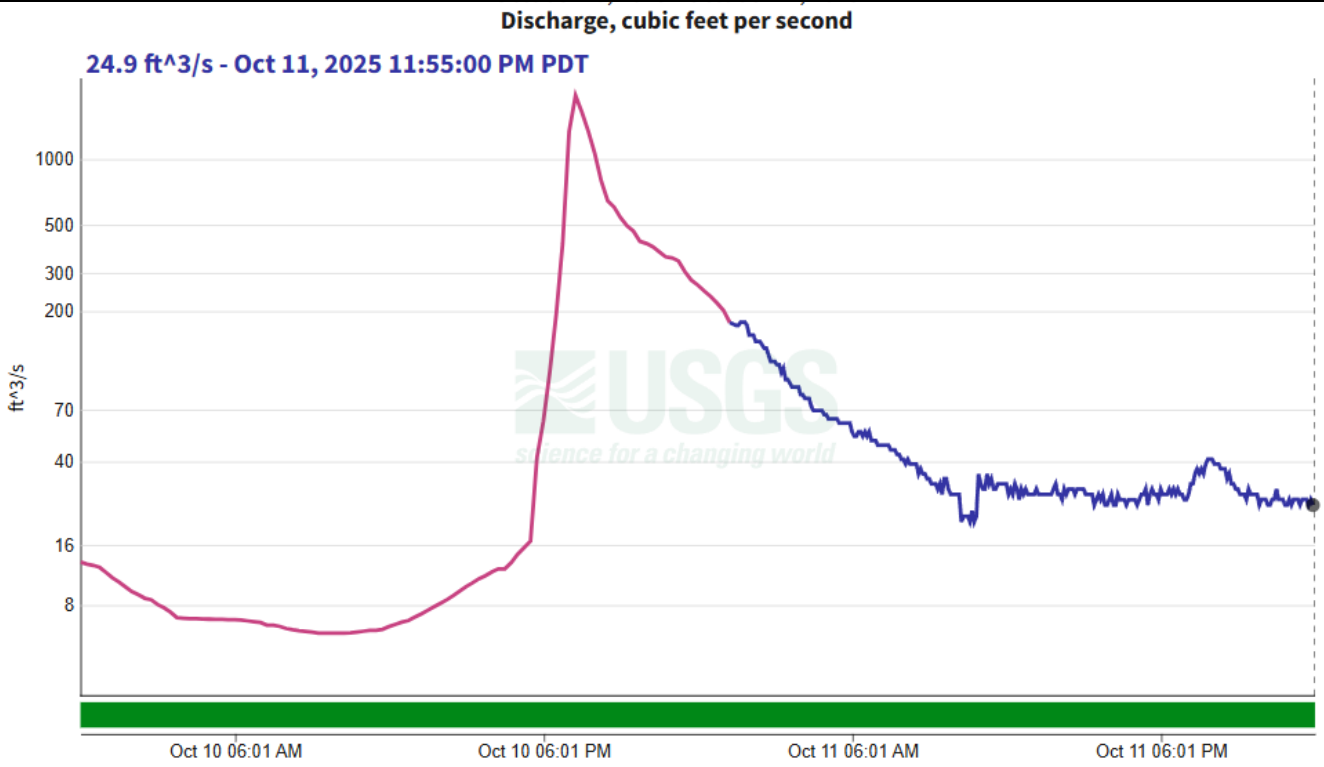


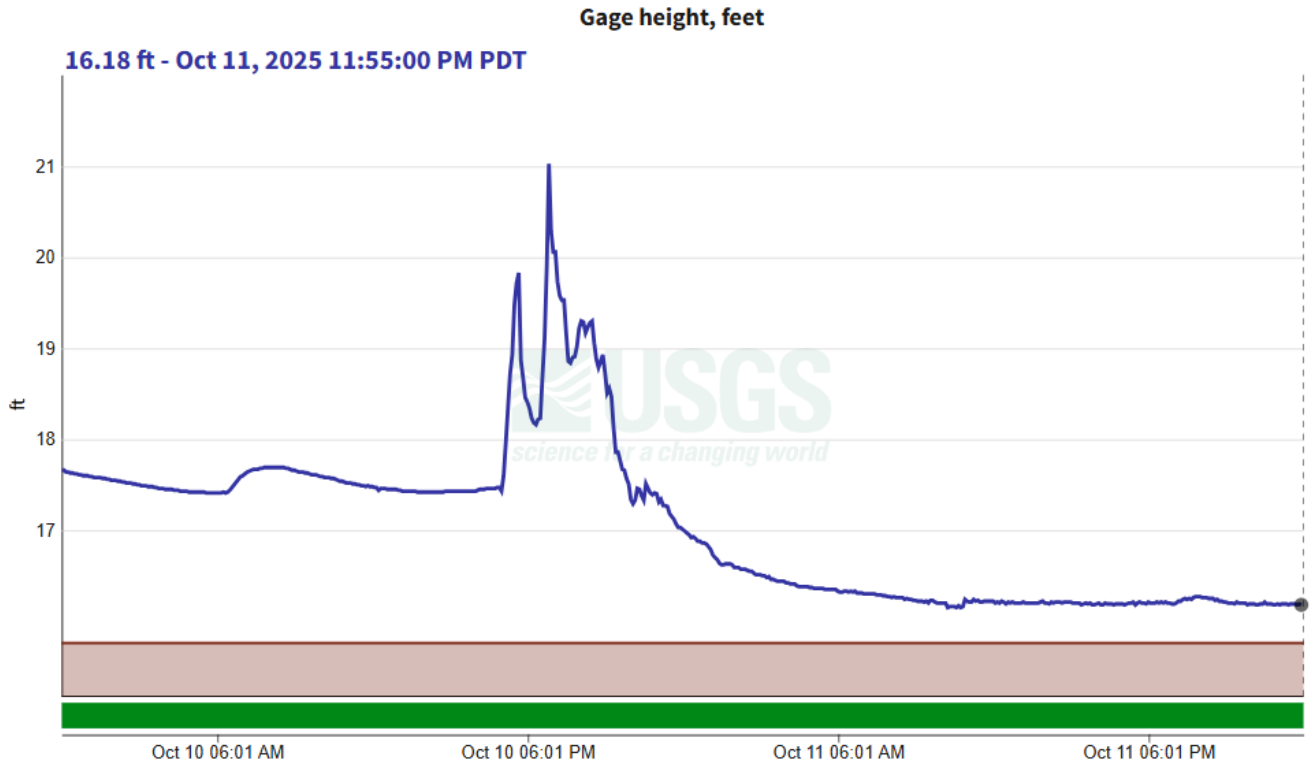


NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Friday, October 10th, 2025
Samplers' Name:	Alisson Boeing, Naomi Espiritu

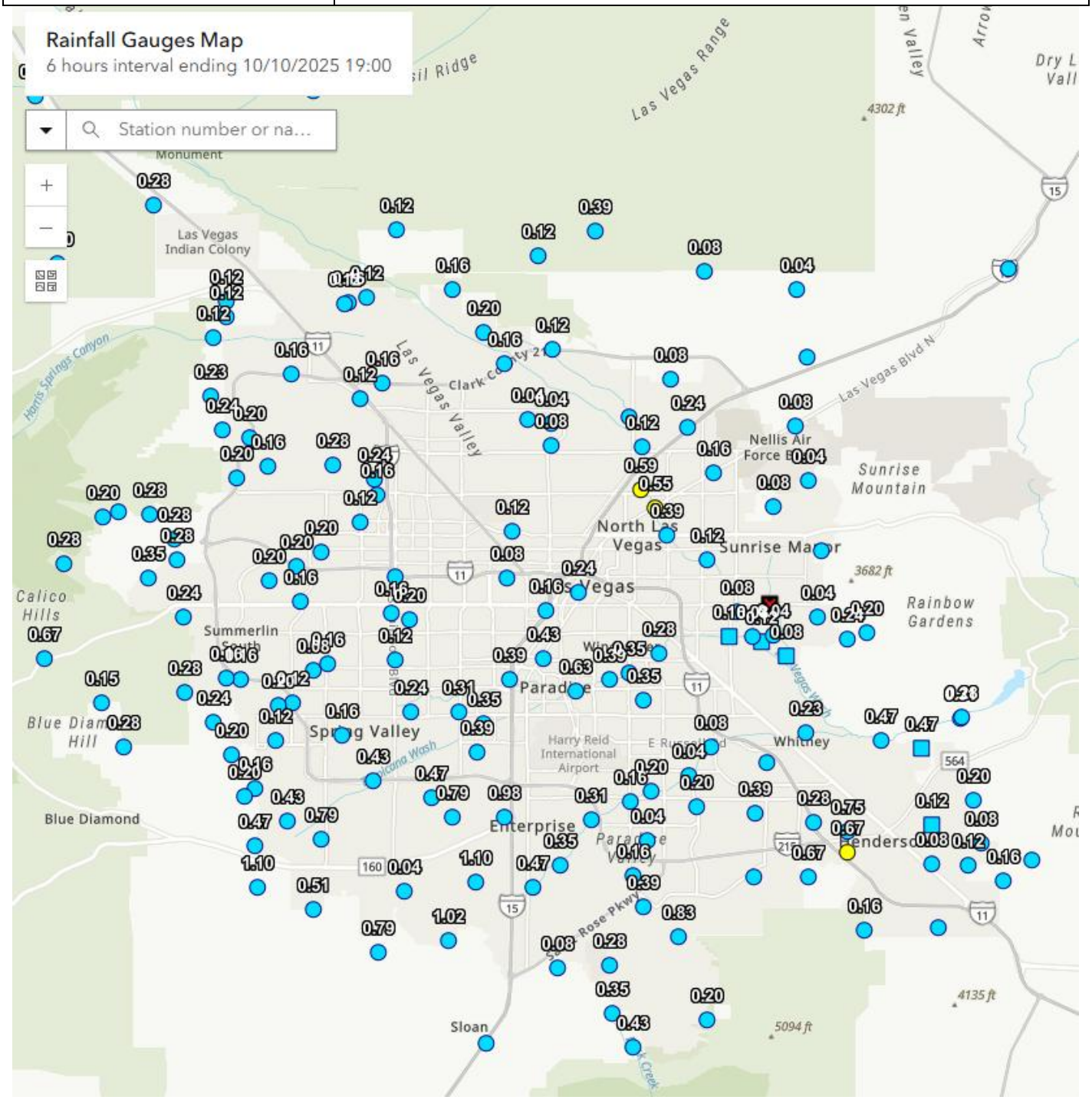




NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

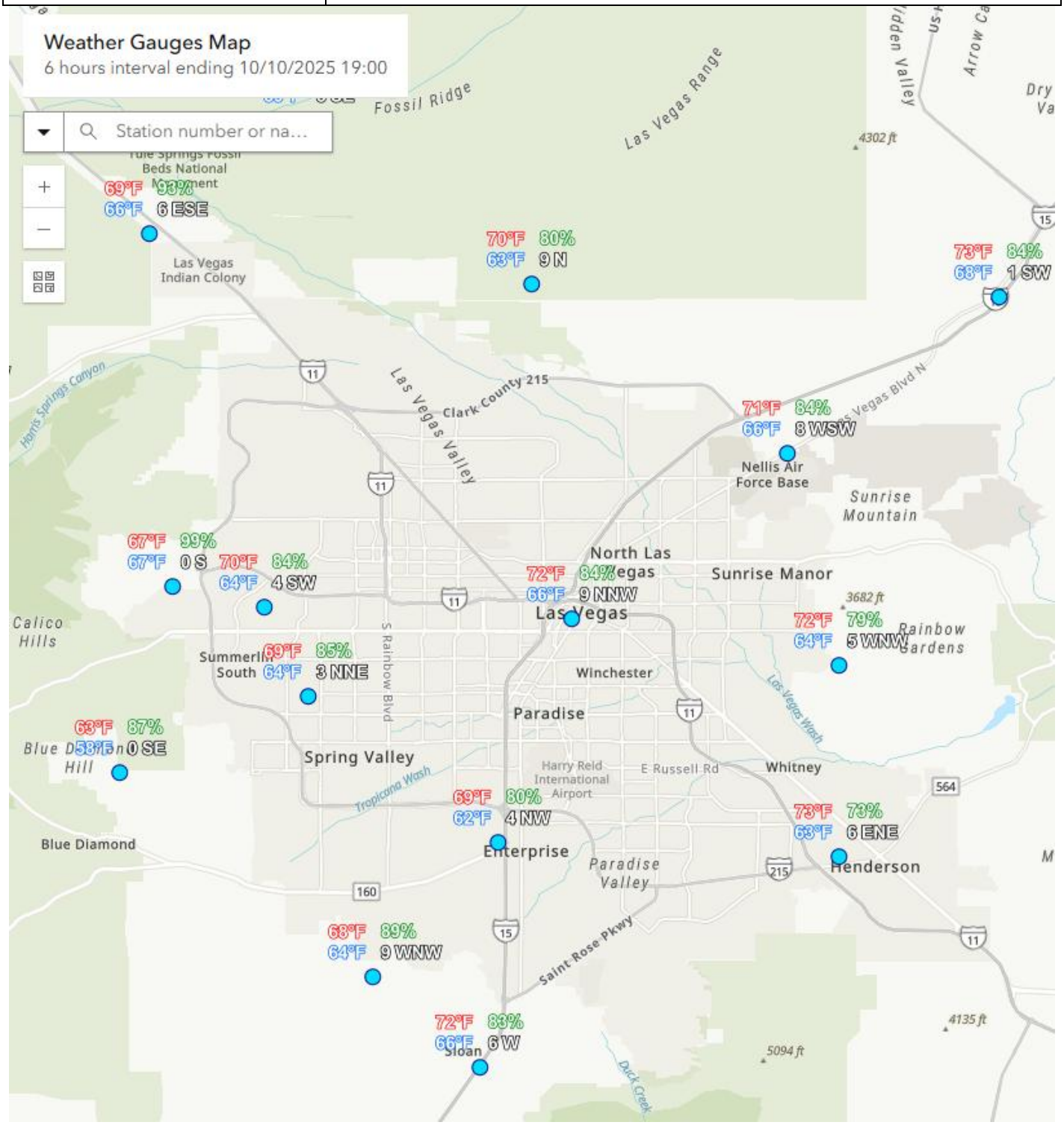
Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Friday, October 10th, 2025
Samplers' Name:	Alisson Boeing, Naomi Espiritu



NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Friday, October 10th, 2025
Samplers' Name:	Alisson Boeing, Naomi Espiritu



NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens		
Date:	Friday, October 10th, 2025		
Samplers' Name:	Brian Corpus, Jessica Horton, Neil Tugadi		
Sample Collection Information			
Time of 1st Sample Collected:	7:44 PM		
Time of Grab Sample Collected:	8:01 PM		
Time of 24th Sample Collected:	8:24 PM		
Sample Intervals:	2 minutes		
Air Temperature (°F):	73	**Water Temperature (°F):**	78
Relative Humidity (%RH):	82	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	See below
Turbidity (NTU):	156 (avg)	**Photos:**	See below
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 8:24 pm and the sample identification name was FW-100-RG. USGS graphs with real-time water data were updated with limited support due to government shutdown.		

Weather Conditions

(Temperature, storm location, etc.)

On Friday, October 10th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04 – 0.67 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 68°F and 73°F. Wind speeds ranged from 8 mph to 10 mph (Southwest). Relative humidity ranged between 79% and 82%.

Site Status

(Any maintenance required? Any equipment missing or damaged?)

No new updates.

Additional Information

No further information.

Photos (10/10/2025, 7:44 PM)





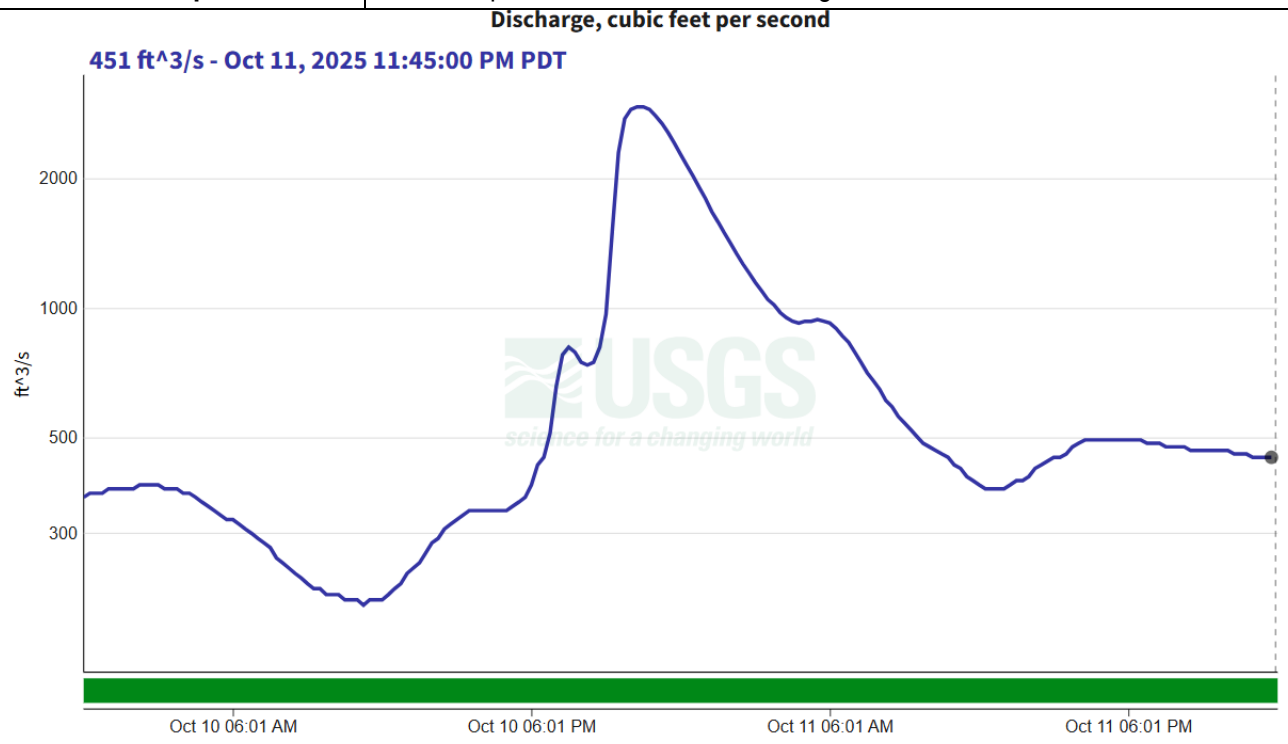


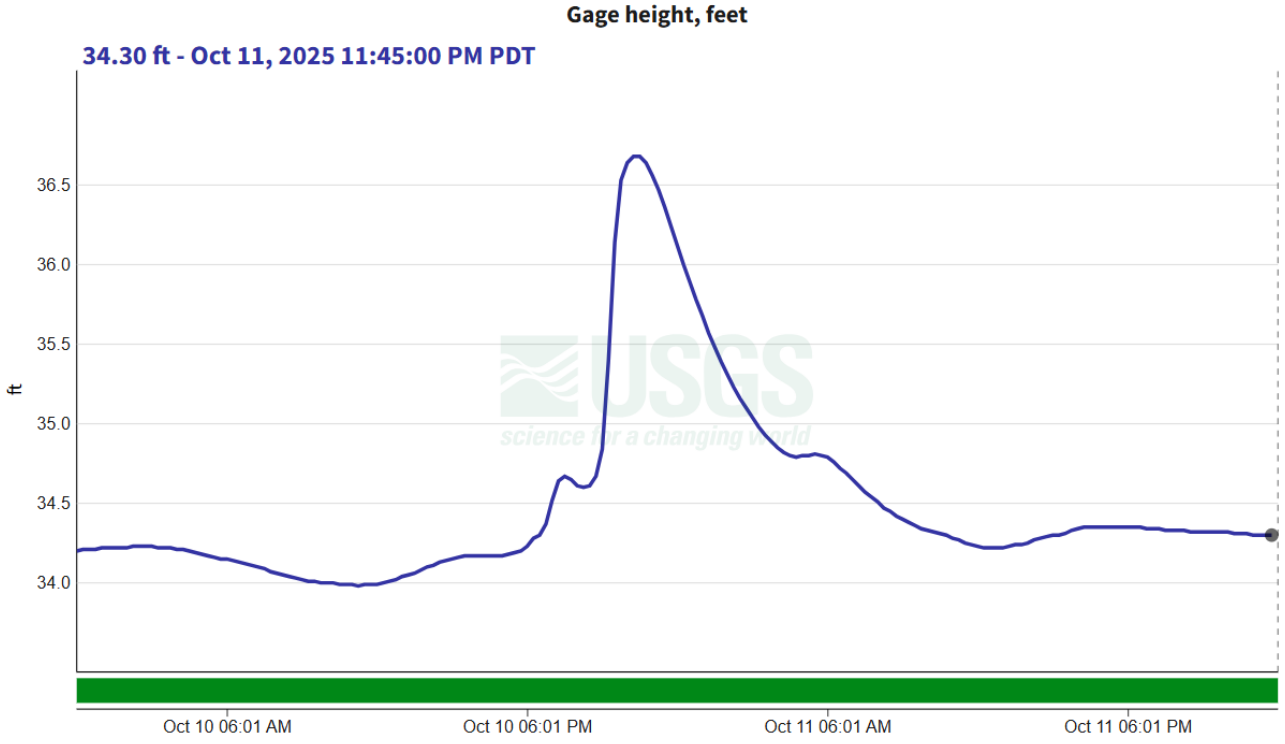


NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Friday, October 10th, 2025
Samplers' Name:	Brian Corpus, Jessica Horton, Neil Tugadi

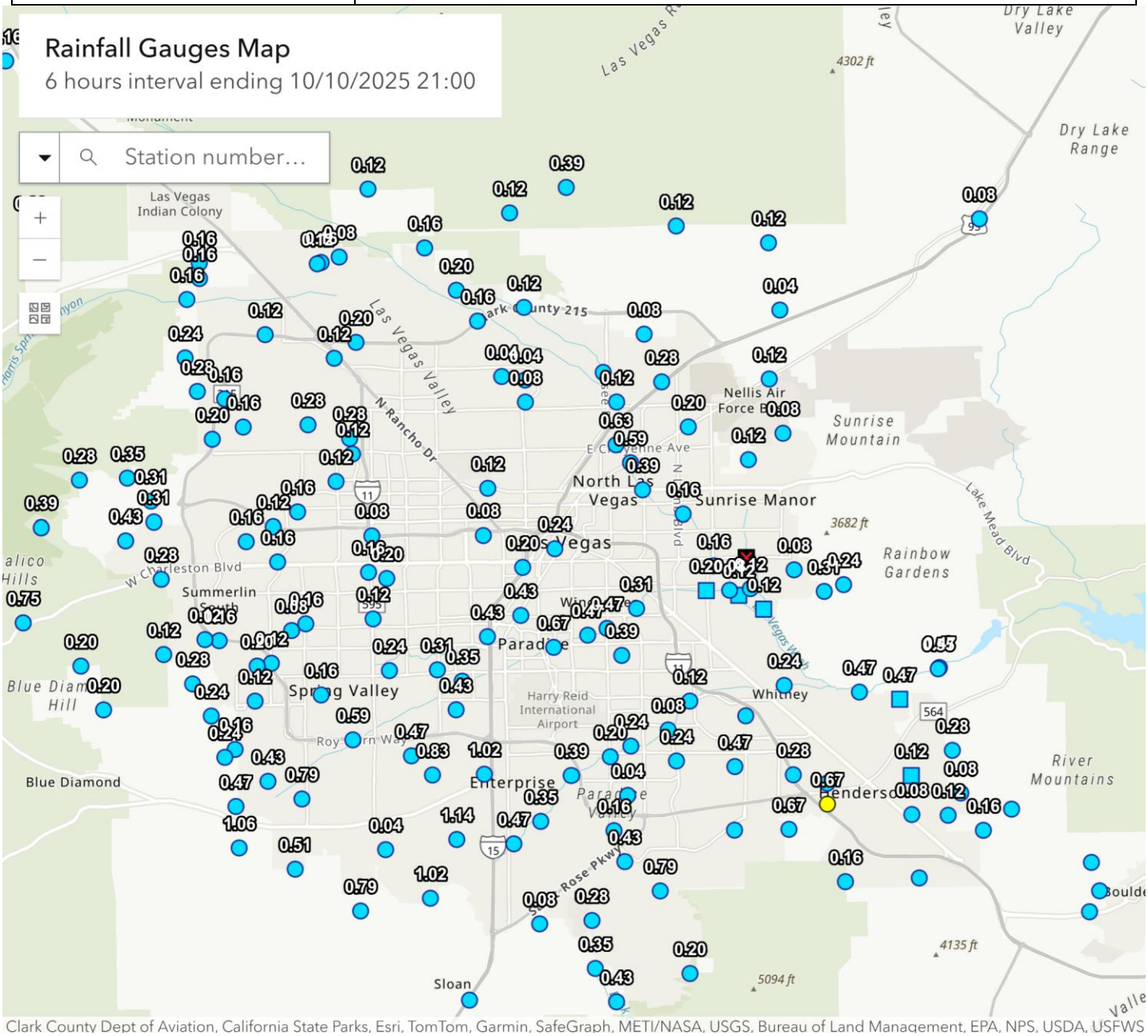




NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

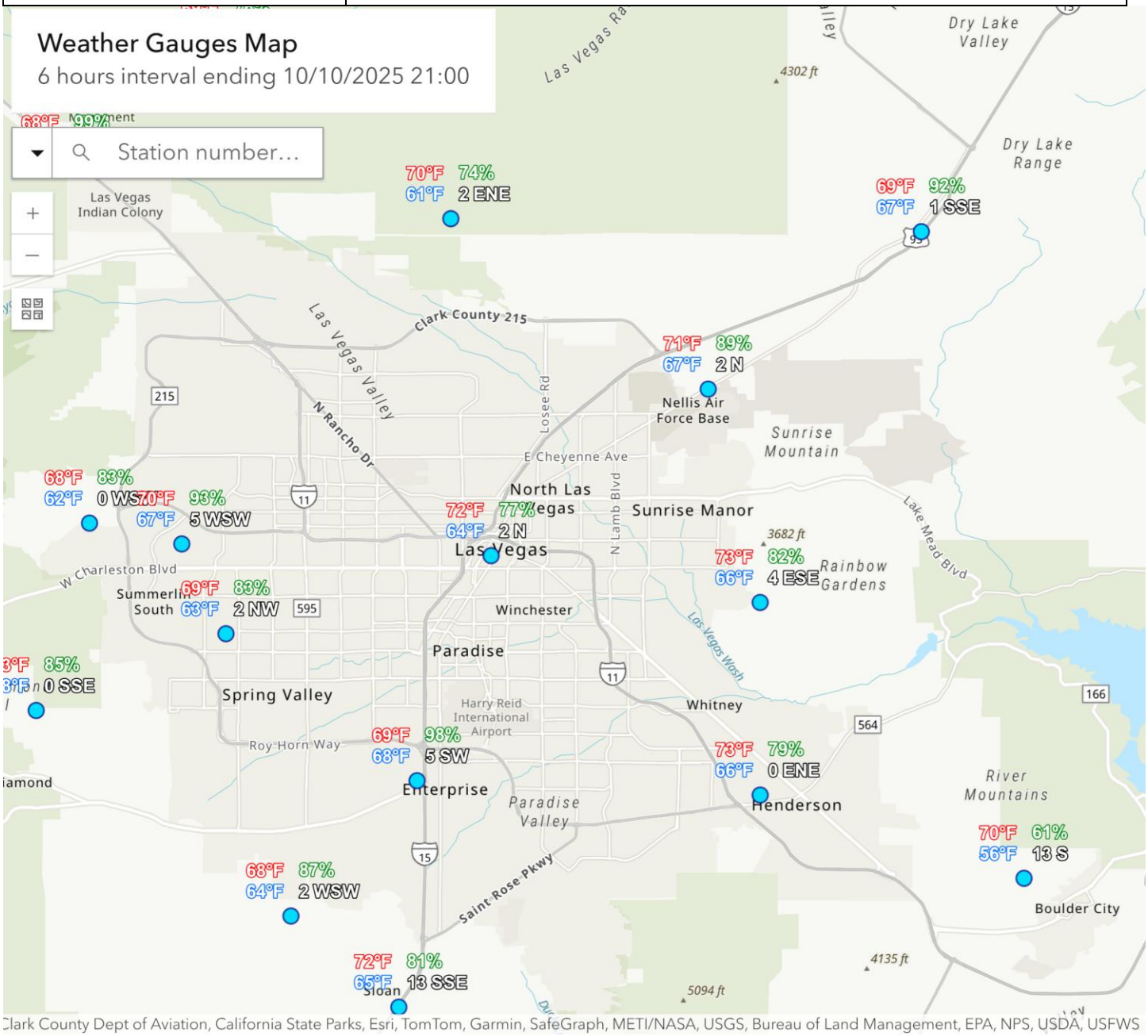
Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Friday, October 10th, 2025
Samplers' Name:	Brian Corpus, Jessica Horton, Neil Tugadi



NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Friday, October 10th, 2025
Samplers' Name:	Brian Corpus, Jessica Horton, Neil Tugadi



NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise		
Date:	Saturday, November 15th, 2025		
Samplers' Name:	Alisson Boeing, Alexandro Guerrero		
Sample Collection Information			
Time of 1st Sample Collected:	6:18 PM		
Time of Grab Sample Collected:	6:30 PM		
Time of 24th Sample Collected:	6:42 PM		
Sample Intervals:	1 minute		
Air Temperature (°F):	55	**Water Temperature (°F):**	65
Relative Humidity (%RH):	92	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	-
Turbidity (NTU):	411 (avg)	**Photos:**	Attached
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 6:18 PM and the sample identification name was FW-200-CS.		

Weather Conditions

(Temperature, storm location, etc.)

On Saturday, October 15th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04-0.75 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 54°F and 61°F. Wind speeds ranged from 2 mph to 11 mph (south). Relative humidity ranged between 77% and 92%.

Site Status

(Any maintenance required? Any equipment missing or damaged?)

The Sloan Lane Improvements Project includes the construction of a new bridge over the Las Vegas Wash, providing a connection between Ruby Creek Drive and Vegas Valley Drive. As a result of this work, the existing vehicle access to the sampling box location has been closed. The new sampling location for the Club at Sunrise is situated approximately 0.25 miles upstream from the current sampling site.

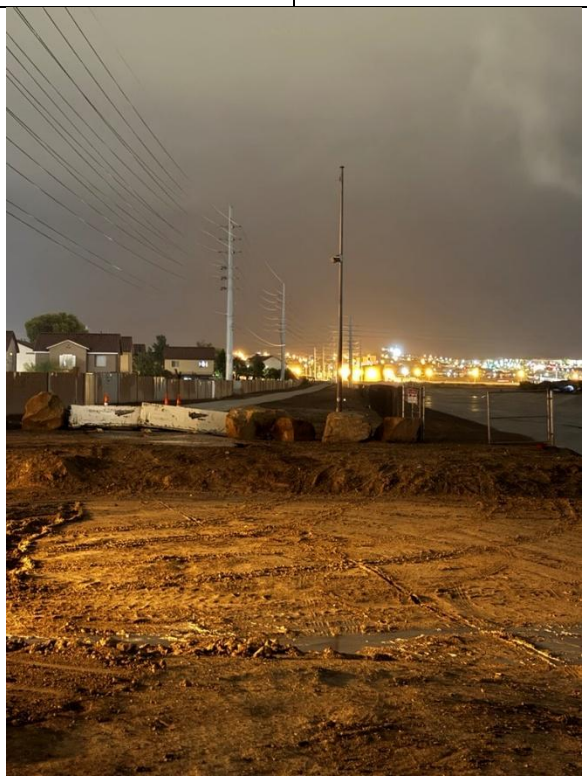
Additional Information

No further information.

Photos (11/15/2025, 6:18 PM)



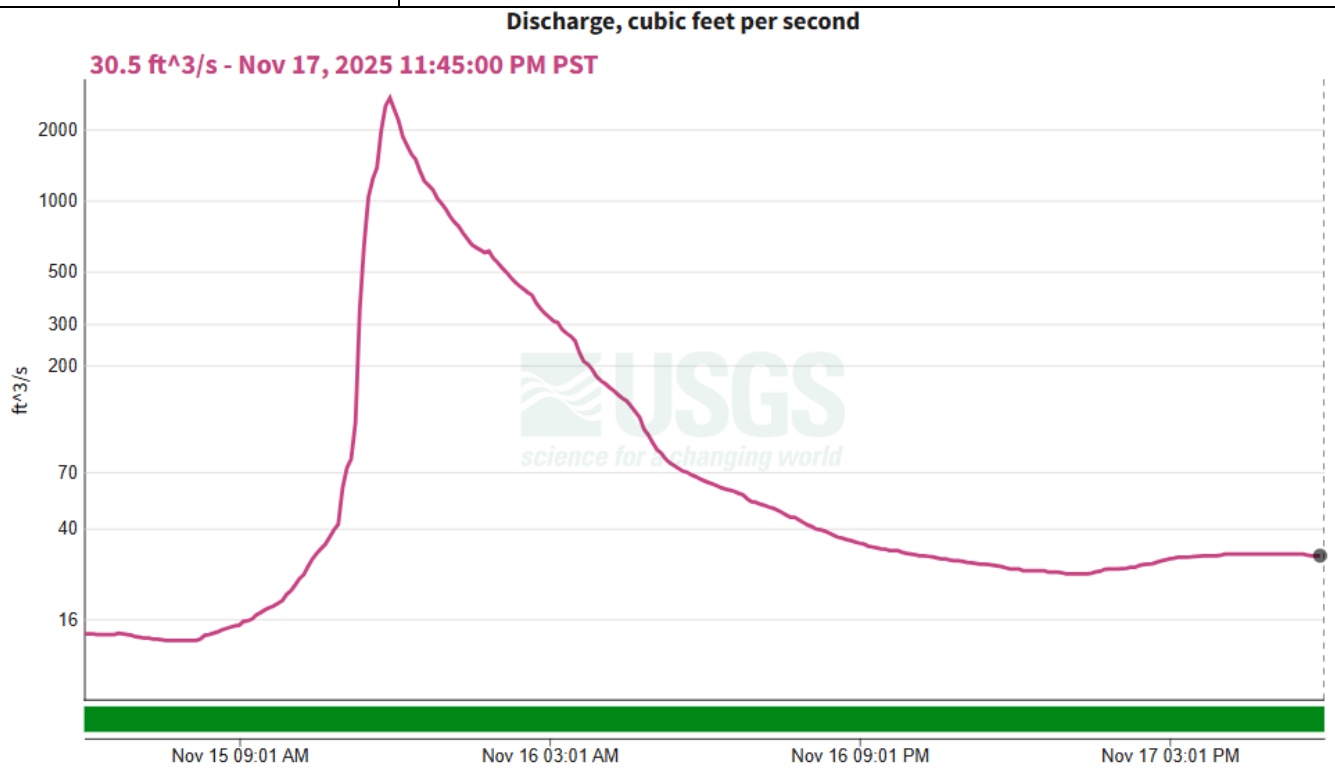


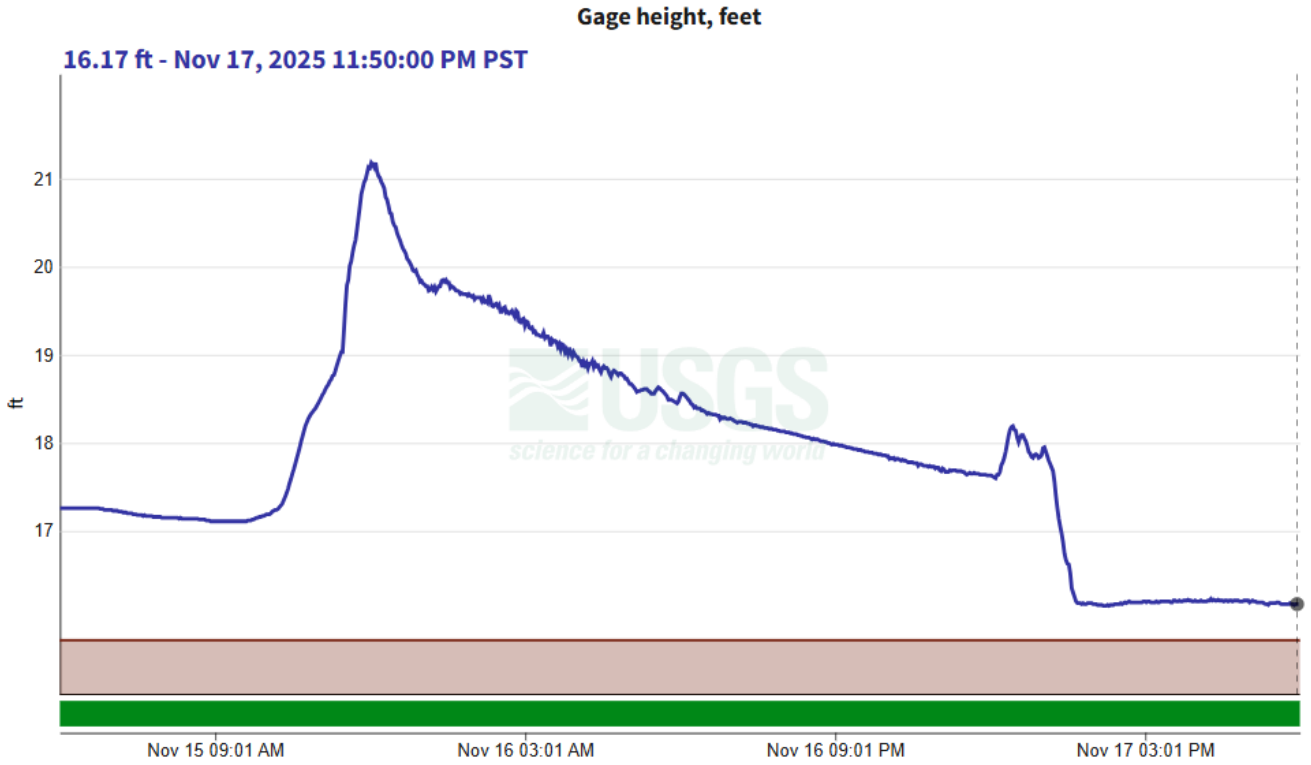


NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Saturday, November 15th, 2025
Samplers' Name:	Alisson Boeing, Alexandro Guerrero

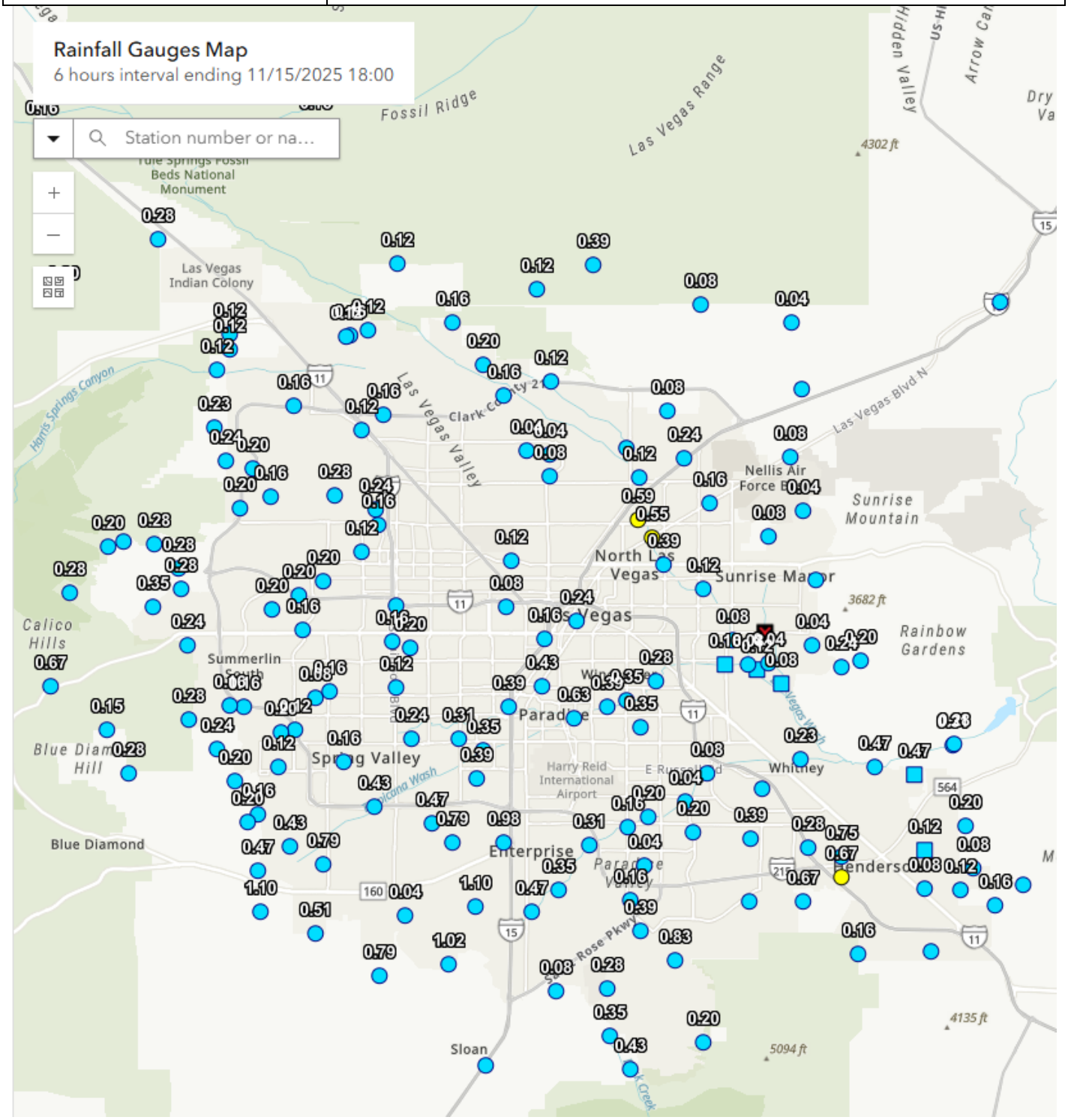




NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

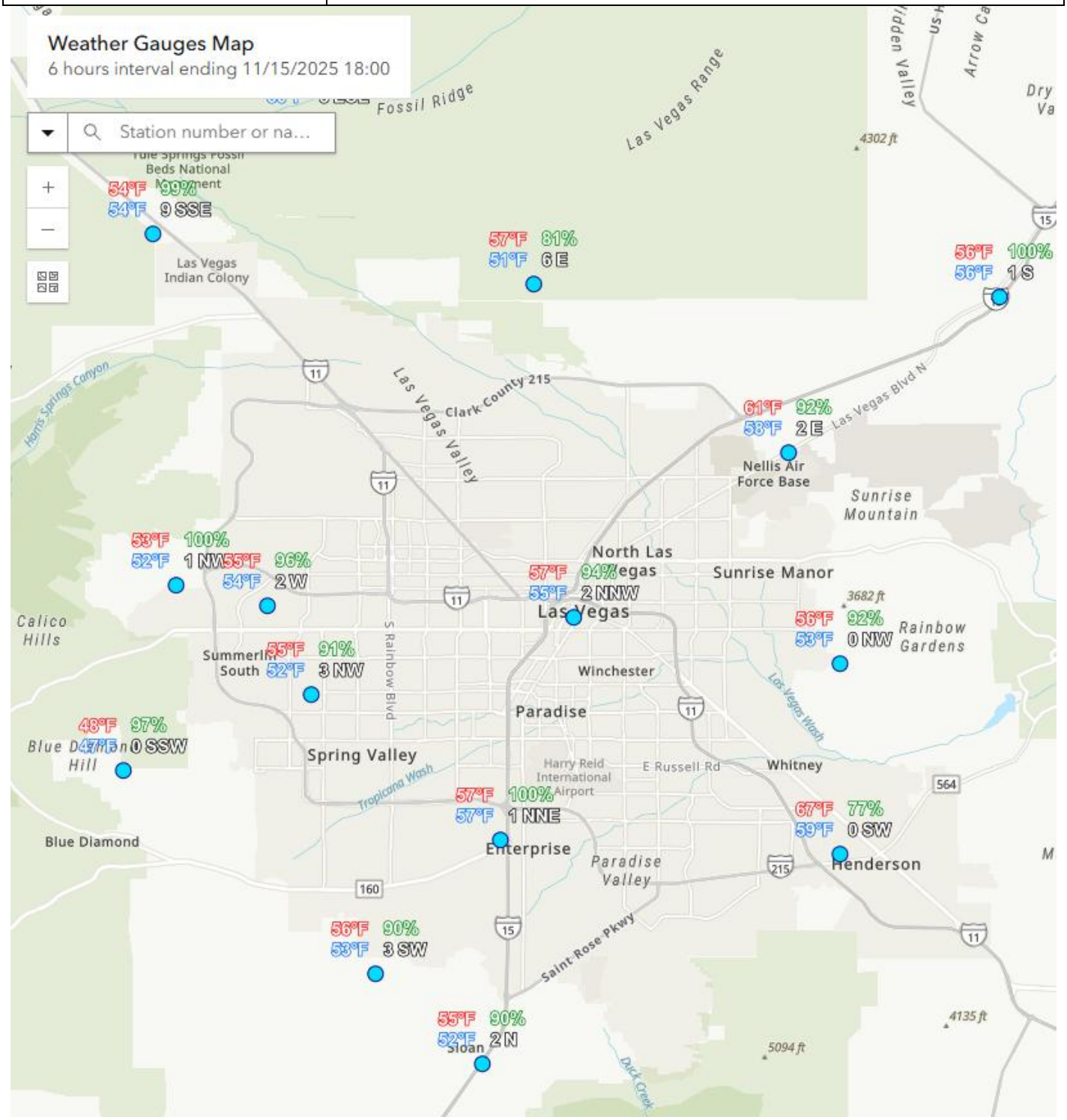
Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Saturday, November 15th, 2025
Samplers' Name:	Alisson Boeing, Alexandro Guerrero



NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Saturday, November 15th, 2025
Samplers' Name:	Alisson Boeing, Alexandro Guerrero



NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens		
Date:	Saturday, November 15th, 2025		
Samplers' Name:	Neil Tugadi, Gerardo Ojeda		
Sample Collection Information			
Time of 1st Sample Collected:	7:40 PM		
Time of Grab Sample Collected:	8:40 PM		
Time of 24th Sample Collected:	9:35 PM		
Sample Intervals:	5 minutes		
Air Temperature (°F):	58	**Water Temperature (°F):**	78
Relative Humidity (%RH):	96	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	See below
Turbidity (NTU):	116 (avg)	**Photos:**	See below
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 9:35 PM and the sample identification name was FW-200-RG.		

Weather Conditions

(Temperature, storm location, etc.)

On Saturday, October 15th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04-0.55 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 52°F and 59°F. Wind speeds ranged from 0 mph to 9 mph. Relative humidity ranged between 90% and 100%.

Site Status

(Any maintenance required? Any equipment missing or damaged?)

No new updates.

Additional Information

No further information.

Photos (11/15/25, 7:40 PM)





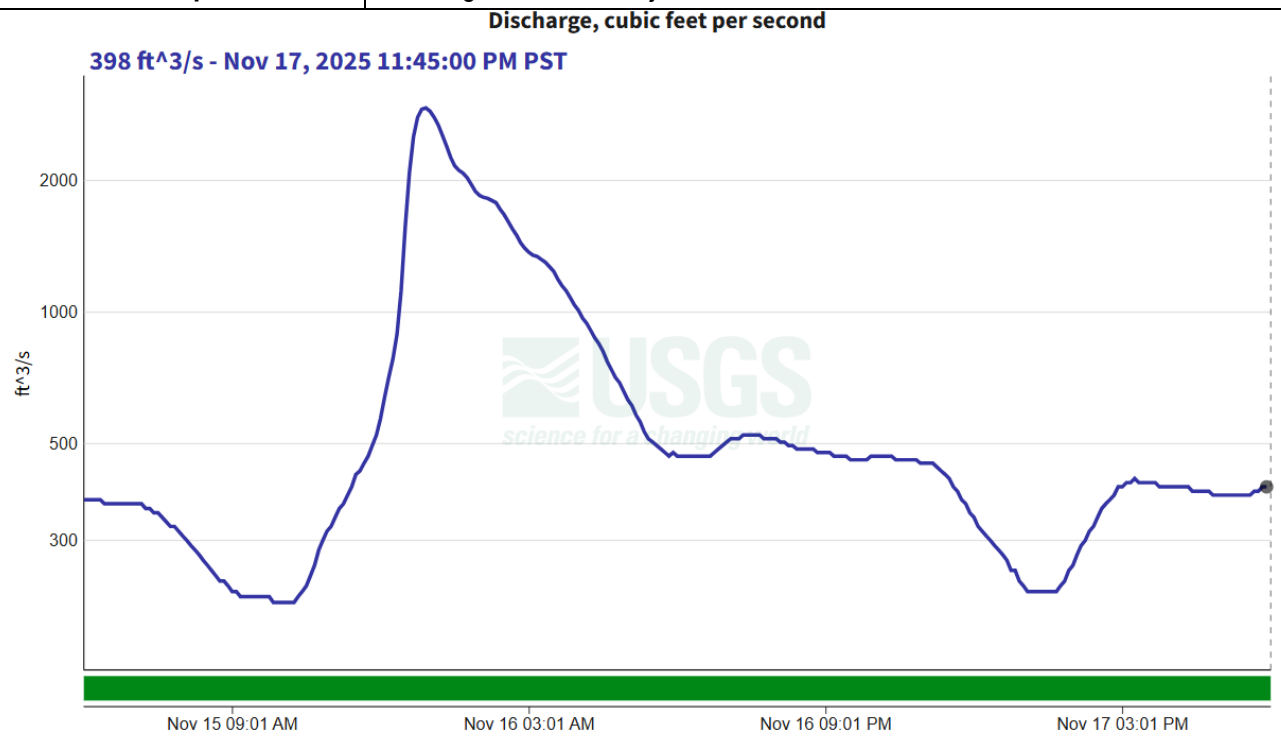


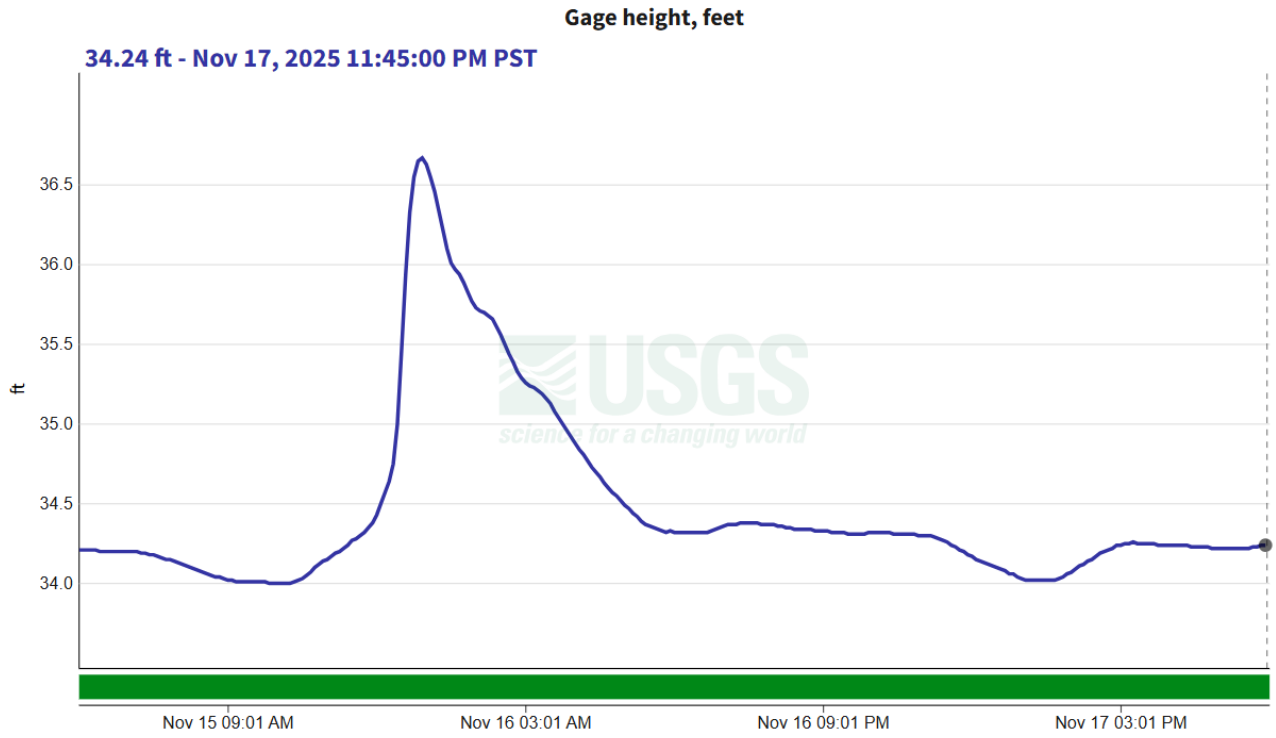


NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Saturday, November 15th, 2025
Samplers' Name:	Neil Tugadi, Gerardo Ojeda

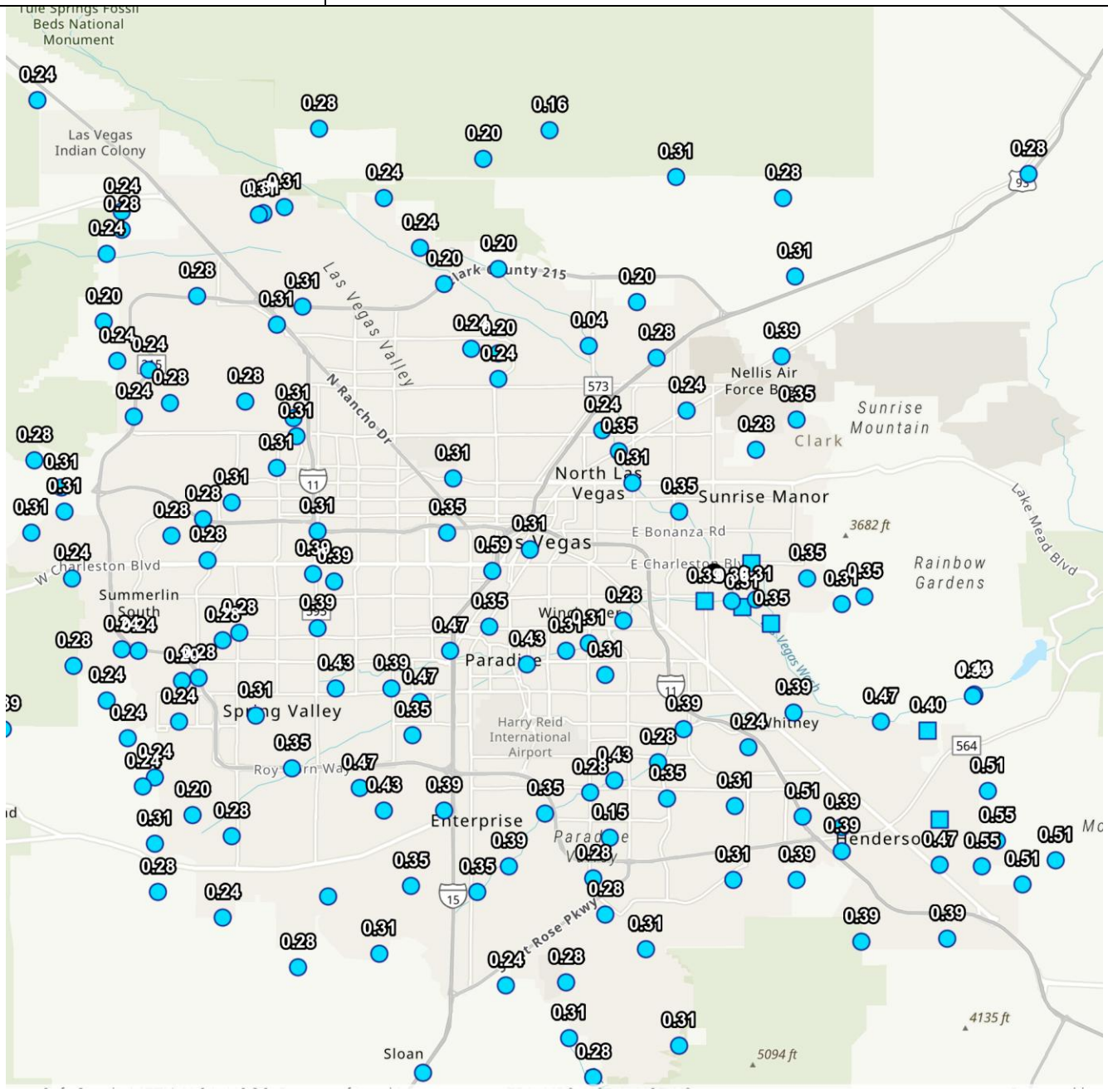




NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

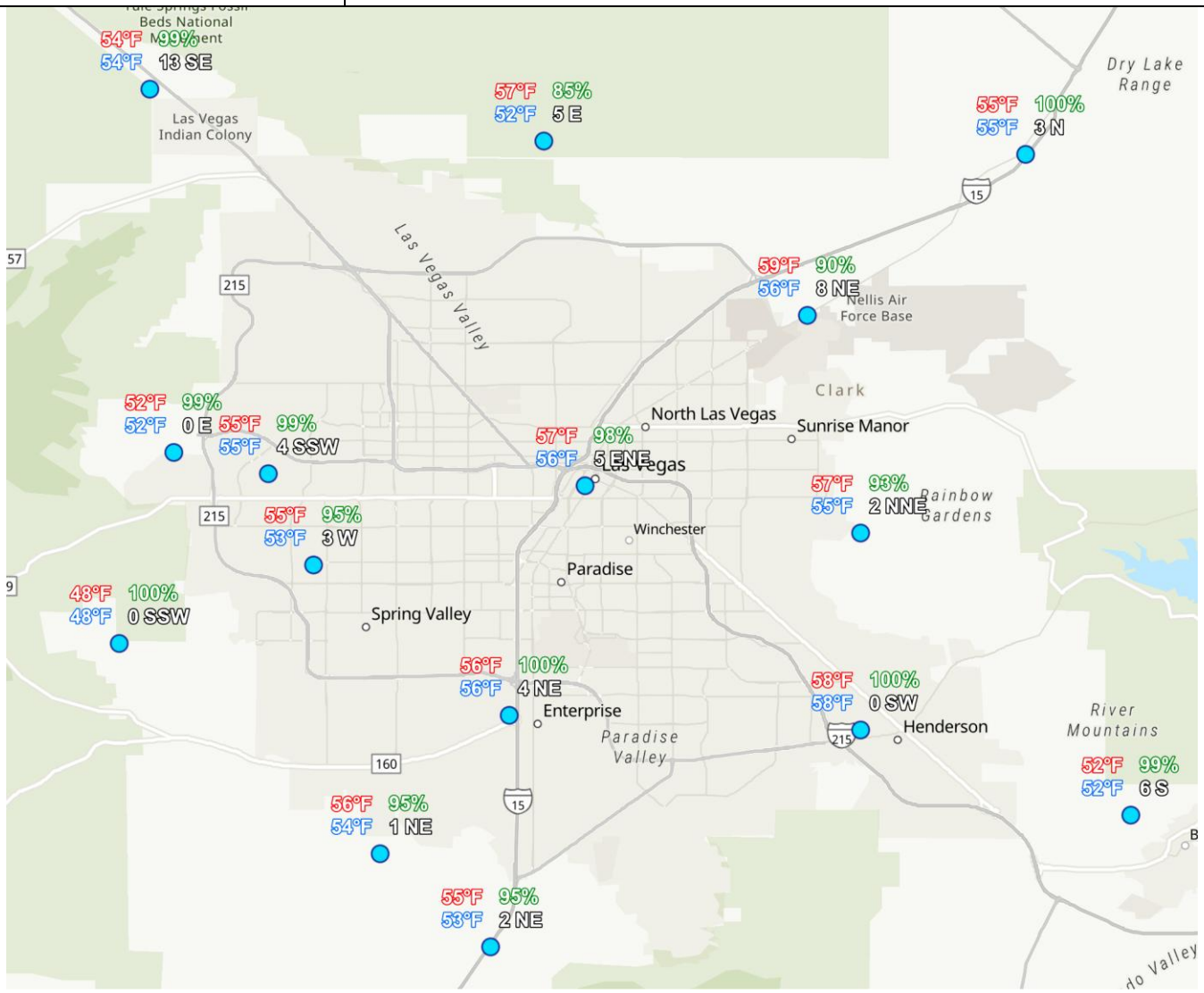
Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Saturday, November 15th, 2025
Samplers' Name:	Neil Tugadi, Gerardo Ojeda



NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens
Date:	Saturday, November 15th, 2025
Samplers' Name:	Neil Tugadi, Gerardo Ojeda



NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise		
Date:	Tuesday, November 18th, 2025		
Samplers' Name:	Alisson Boeing, Alexandro Guerrero, Vanessa Aumiller		
Sample Collection Information			
Time of 1st Sample Collected:	2:51 PM		
Time of Grab Sample Collected:	3:15 PM		
Time of 24th Sample Collected:	3:39 PM		
Sample Intervals:	2 minutes		
Air Temperature (°F):	53	**Water Temperature (°F):**	60
Relative Humidity (%RH):	90	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	-
Turbidity (NTU):	343 (avg)	**Photos:**	Attached
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 2:51 PM and the sample identification name was FW-300-CS.		

Weather Conditions

(Temperature, storm location, etc.)

On Tuesday, November 18th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04 – 0.55 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 48°F and 53°F. Wind speeds ranged from 3 mph to 8 mph (Southwest). Relative humidity ranged between 82% and 95%.

Site Status

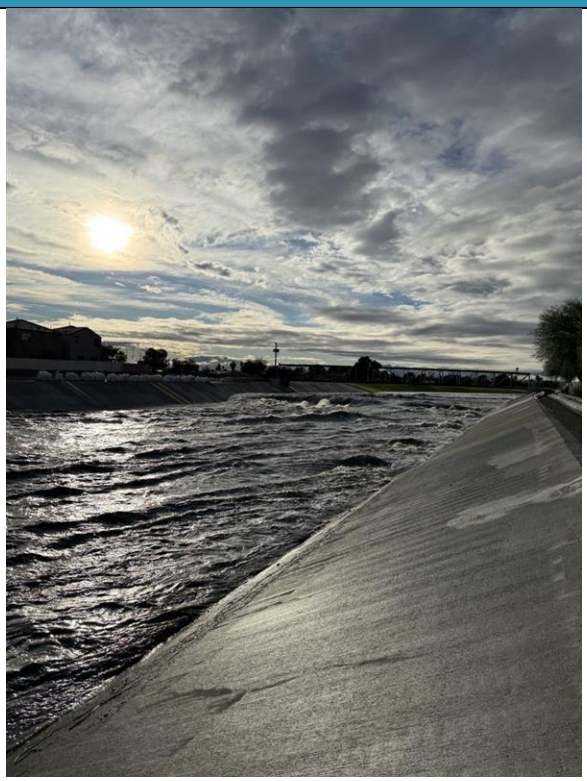
(Any maintenance required? Any equipment missing or damaged?)

The Sloan Lane Improvements Project includes the construction of a new bridge over the Las Vegas Wash, providing a connection between Ruby Creek Drive and Vegas Valley Drive. As a result of this work, the existing vehicle access to the sampling box location has been closed. The new sampling location for the Club at Sunrise is situated approximately 0.25 miles upstream from the current sampling site.

Additional Information

No further information.

Photos (11/18/2025, 2:51 PM)

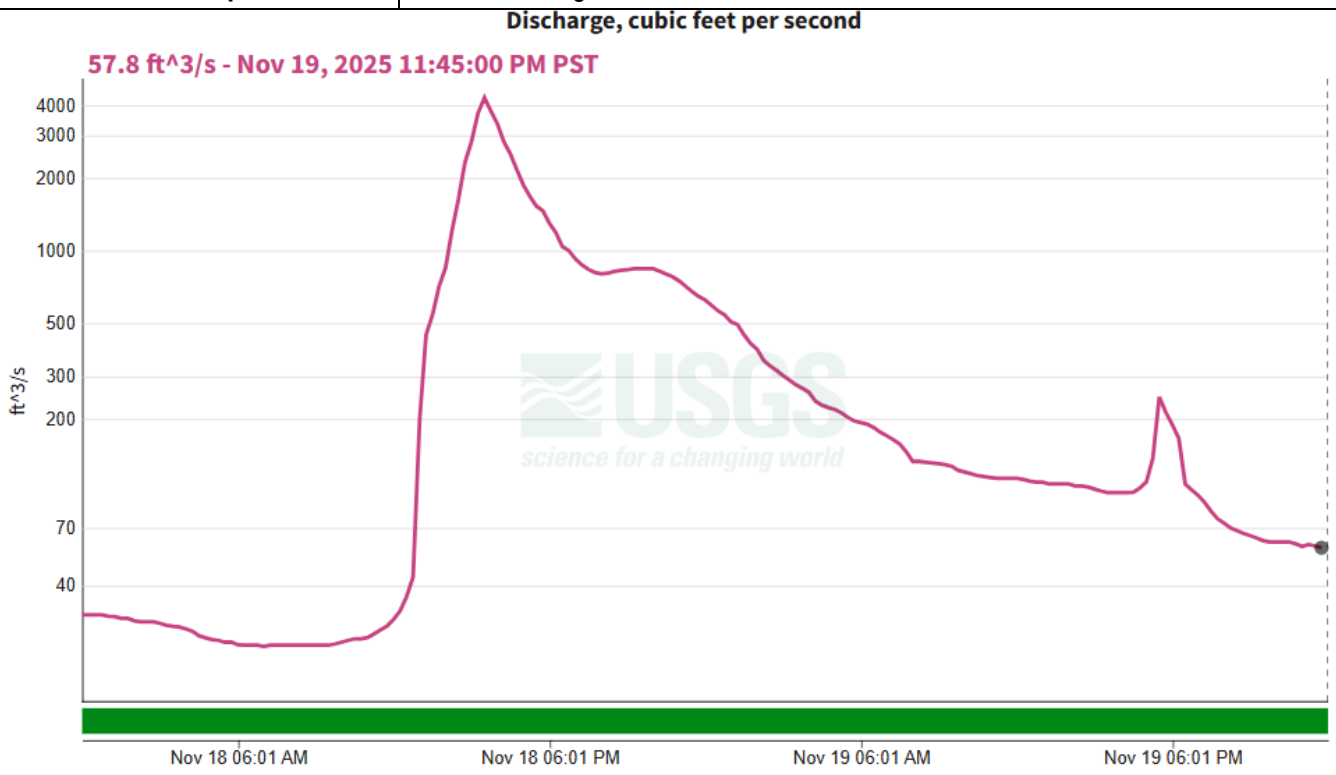


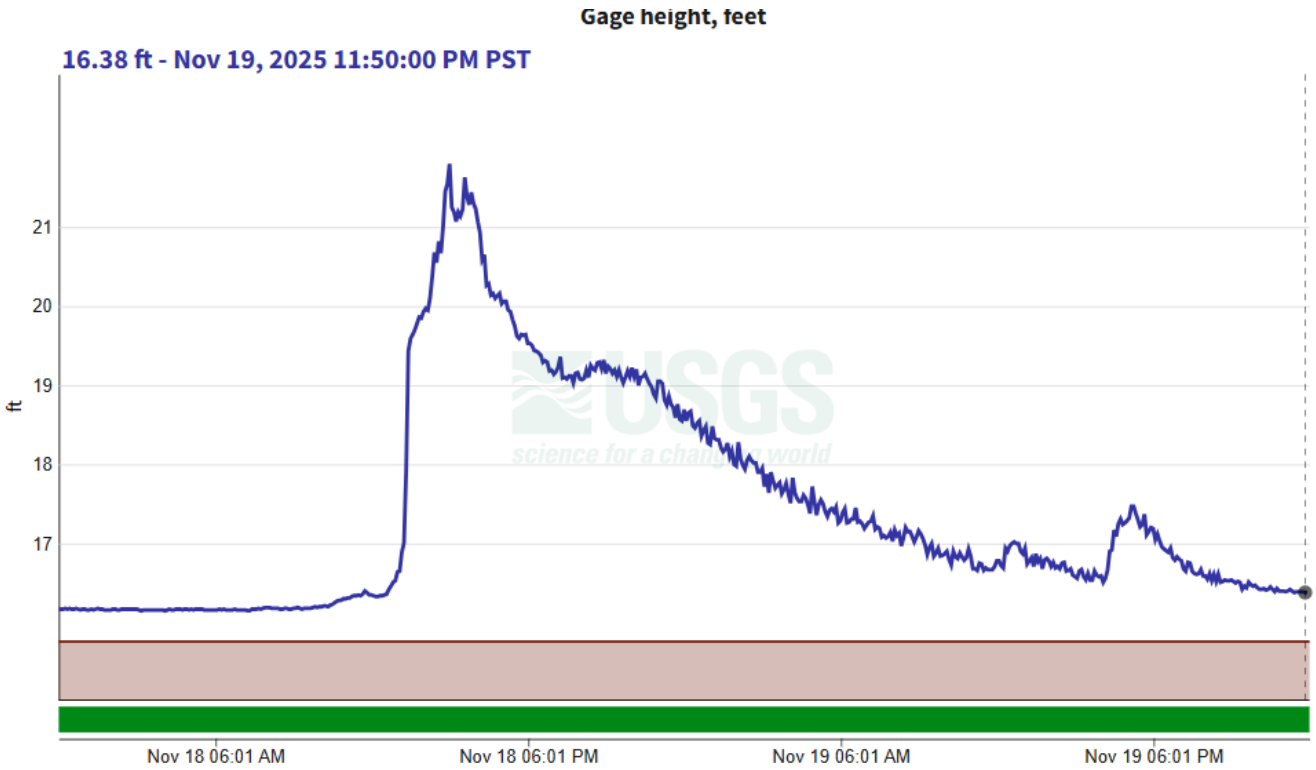


NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Tuesday, November 18th, 2025
Samplers' Name:	Alisson Boeing, Alexandro Guerrero, Vanessa Aumiller

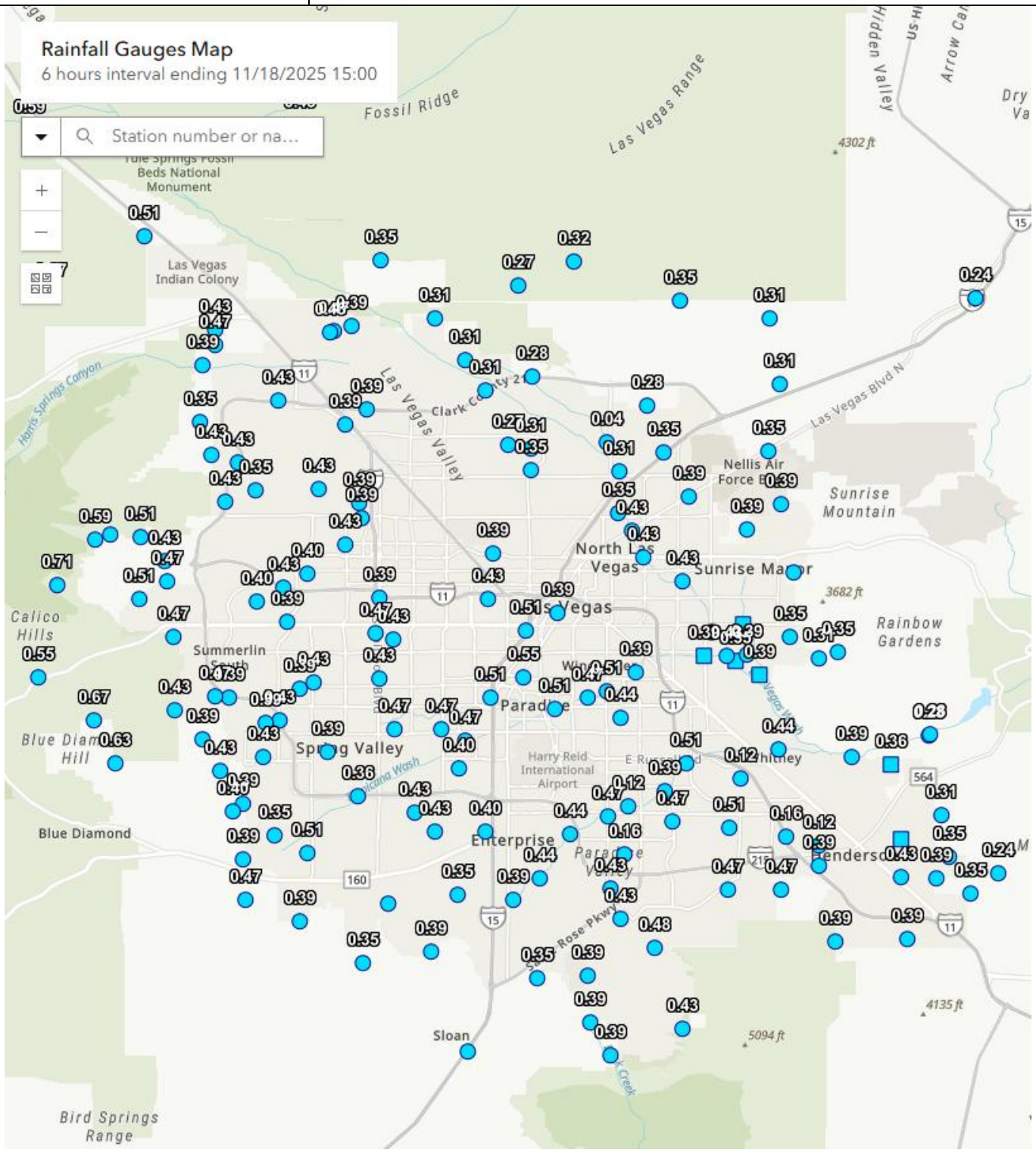




NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at The Club at Sunrise
Date:	Tuesday, November 18th, 2025
Samplers' Name:	Alisson Boeing, Alexandro Guerrero, Vanessa Aumiller



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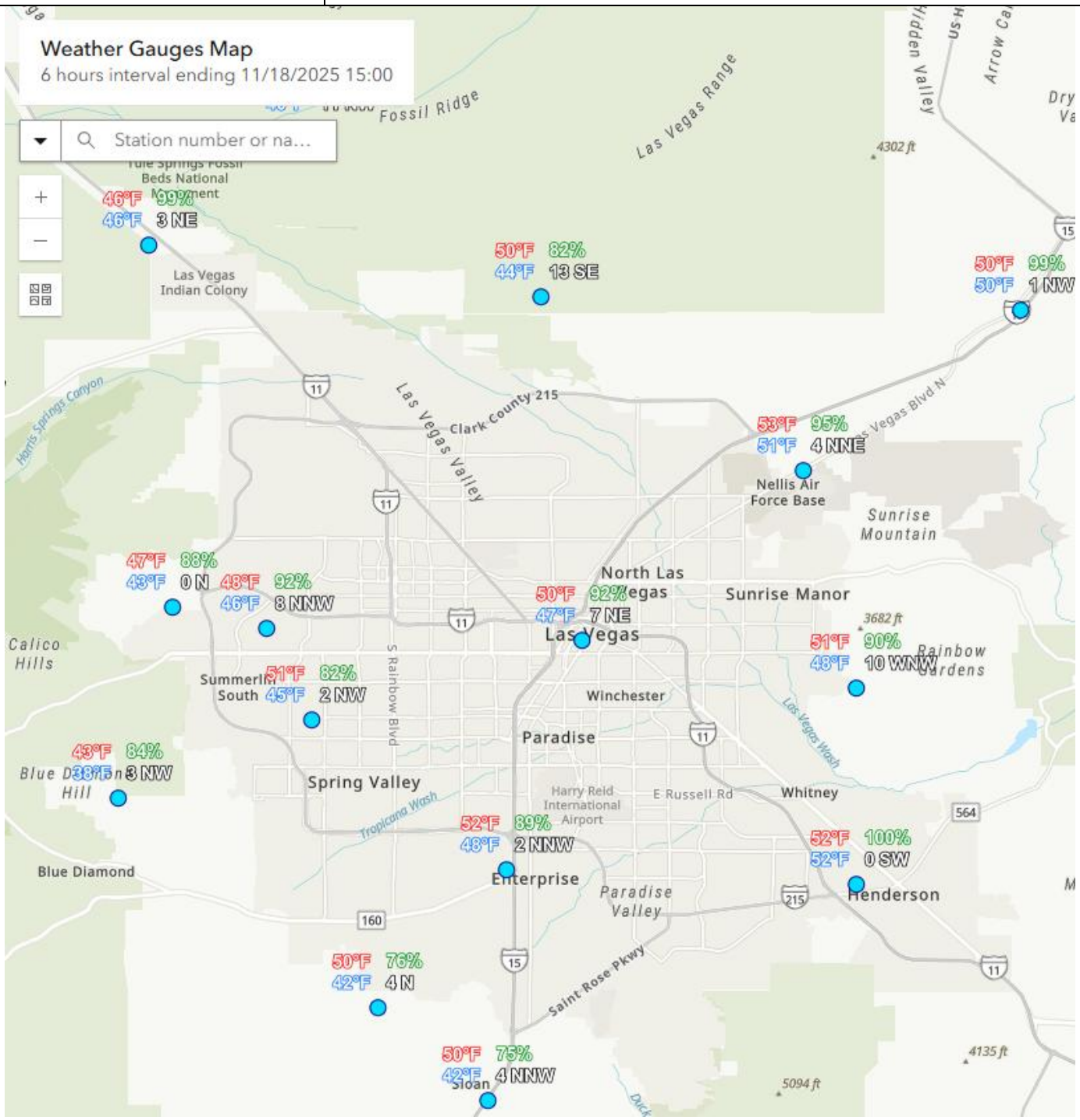

NPDES Storm Write Up and Wet Weather Sample Collection Form

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT | LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

Sample Location:	Las Vegas Wash at Rainbow Gardens		
Date:	Tuesday, November 18th, 2025		
Samplers' Name:	Brian Corpus, Jessica Horton		
Sample Collection Information			
Time of 1st Sample Collected:	4:00 PM		
Time of Grab Sample Collected:	5:00 PM		
Time of 24th Sample Collected:	5:55 PM		
Sample Intervals:	5 minutes		
Air Temperature (°F):	53	**Water Temperature (°F):**	67
Relative Humidity (%RH):	83	**Conductivity (mS/cm):**	-
5-minute Precipitation (inches):	-	**Discharge (cfs):**	See below
Turbidity (NTU):	341 (avg)	**Photos:**	See below
Sampling Notes:	All 24 bottled samples were combined into one composite sample. The sample time on the Chain of Custody (COC) form was 5:55 pm and the sample identification name was FW-300-RG.		

Weather Conditions

(Temperature, storm location, etc.)

On Tuesday, November 18th, 2025, thunderstorms covered the Las Vegas Valley. Rain depths increased through the afternoon. Rain gages reported between 0.04 – 0.59 inches before sampling. Throughout the Las Vegas Valley, temperatures were between 46°F and 53°F. Wind speeds ranged from 5 mph to 10 mph (Southwest). Relative humidity ranged between 77% and 94%.

Site Status

(Any maintenance required? Any equipment missing or damaged?)

No new updates.

Additional Information

No further information.

Photos (11/18/2025, 4:00 PM)









NPDES Storm Write Up and Wet Weather Sample Summary

CLARK COUNTY REGIONAL FLOOD CONTROL DISTRICT| LAS VEGAS VALLEY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PROJECT

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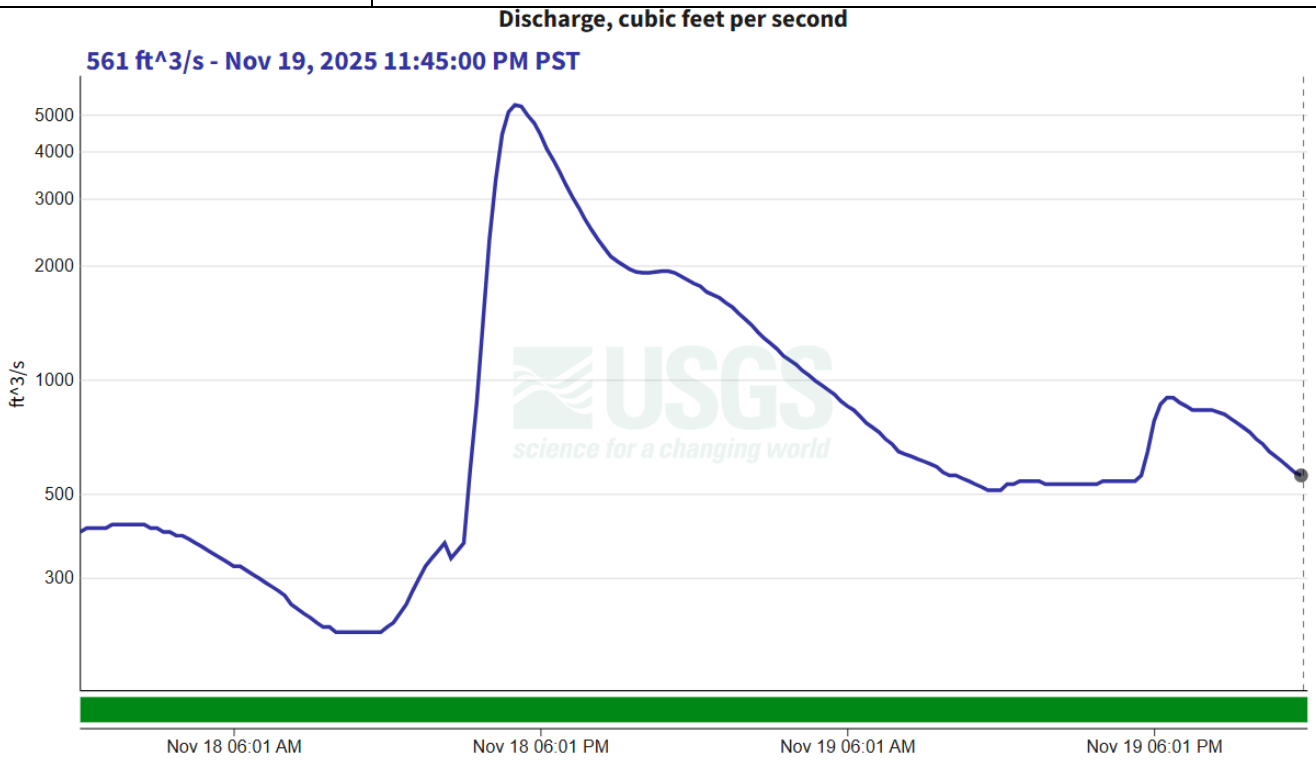

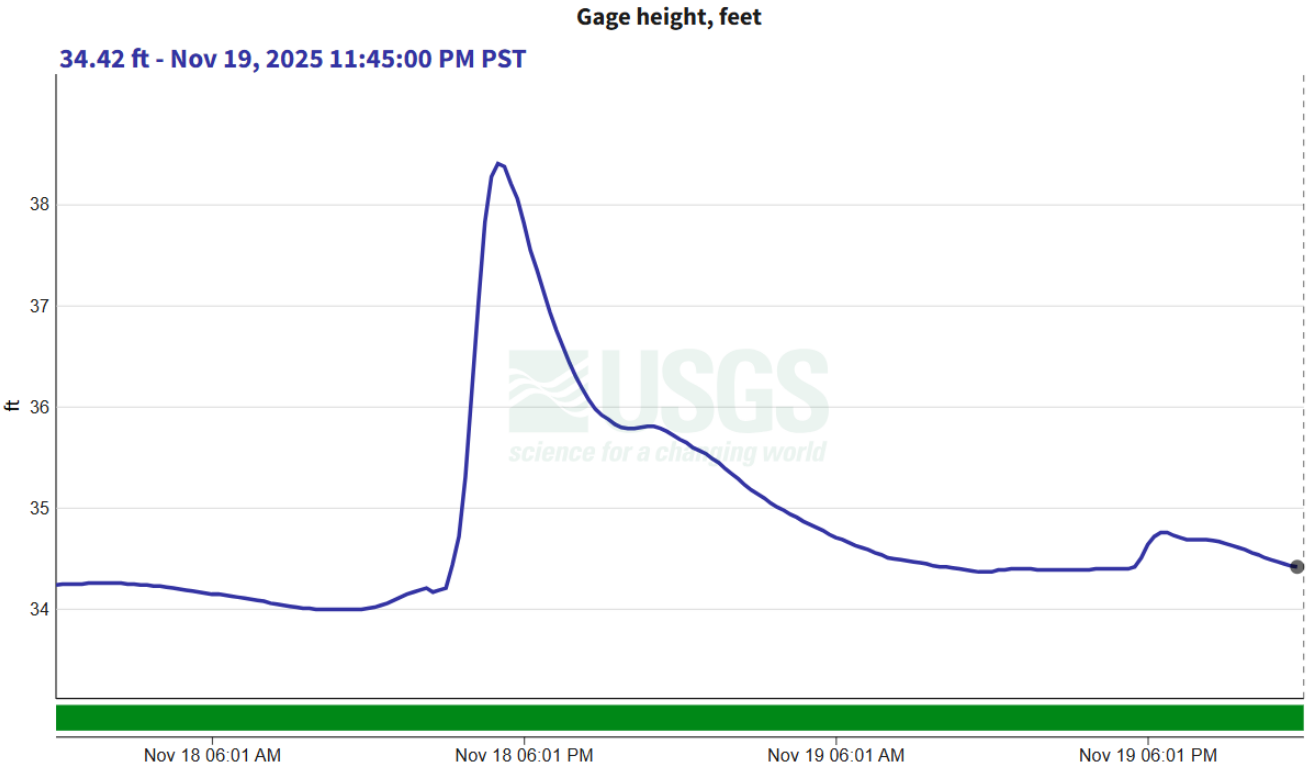

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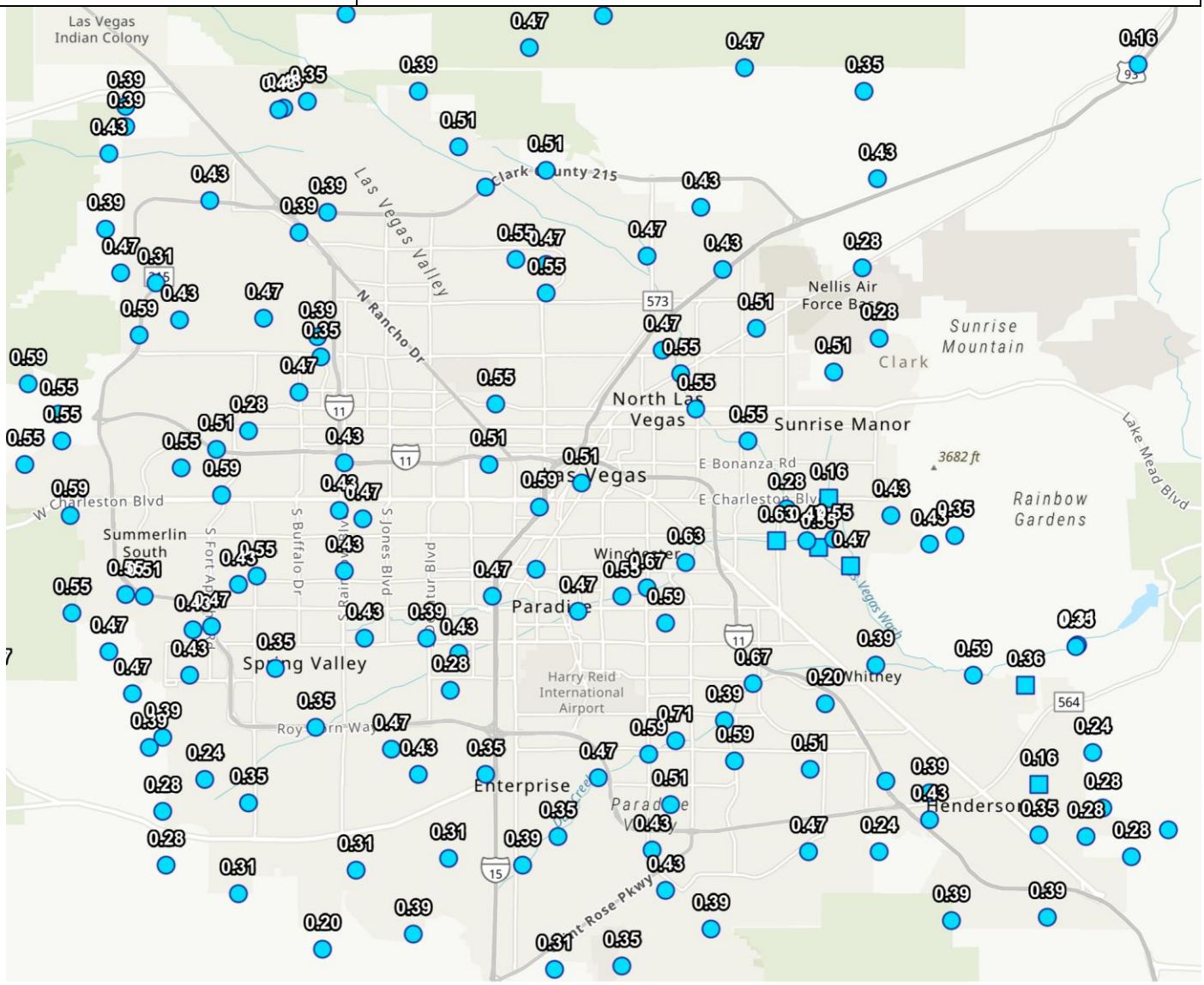

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