U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 8
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STATEMENT OF BASIS

PERMITTEE:	United States General Services Administration (GSA)
FACILITY NAME AND ADDRESS:	Denver Federal Center One Denver Federal Center, Building 41 Denver, CO 80225
PERMIT NUMBER:	COR-042004
RESPONSIBLE OFFICIAL:	Stephanie Downs, Director (303) 945-1476 stephanie.downs@gsa.gov
FACILITY CONTACT:	Dave Williams, Business Center Manager (303) 236-3394 davids.williams@gsa.gov
PERMIT TYPE:	Federal Facility, Municipal Separate Storm Sewer Systems, Permit Renewal
FACILITY LOCATION:	Denver Federal Center Jefferson County, Colorado Lat. 39.715º N, Long. 105.117º W
DISCHARGE LOCATION(S):	Multiple outfalls to McIntyre Gulch (see Table 1 – McIntyre Gulch MS4 Outfalls (as numbered/named by GSA)); Multiple outfalls to Agricultural Ditch (Table 2 – Ag Ditch Outfalls (as numbered/named by GSA).
RECEIVING WATERS:	McIntyre Gulch and Agricultural Ditch

1. INTRODUCTION

This statement of basis (SoB) is for the issuance of a NPDES permit (the Permit) to the United States General Services Administration (GSA), for the Denver Federal Center's municipal separate storm sewer systems (MS4). The Permit establishes discharge limitations for any discharge of municipal stormwater from the Denver Federal Center (DFC). The SoB explains the nature of the discharges, and the EPA's decisions for limiting the pollutants in the stormwater, as well as the regulatory and technical basis for these decisions.

The EPA Region 8 is the permitting authority for Colorado federal facilities and provides implementation of federal and state environmental laws within Colorado.

2. FACILITY BACKGROUND INFORMATION

2.1. Facility Overview

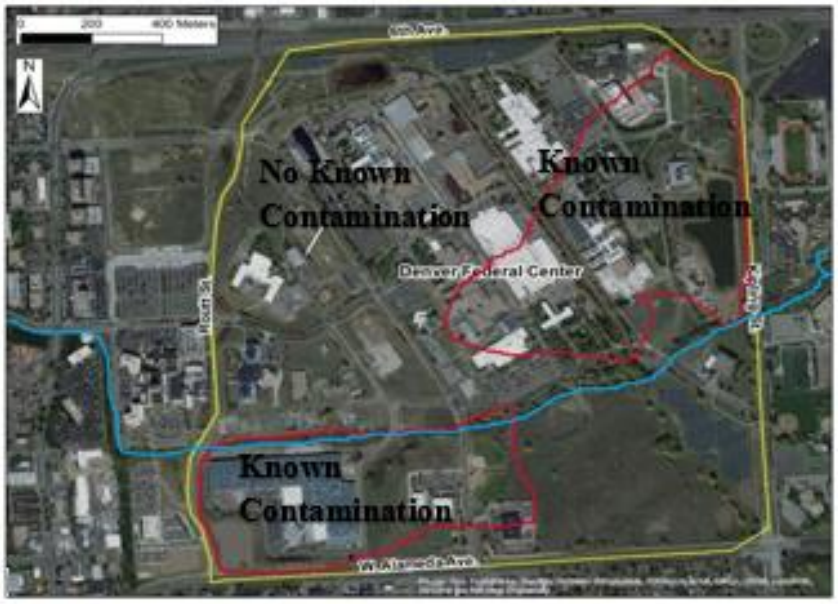
The DFC is located on part of the site of the former Denver Ordnance Plant within the City of Lakewood, Colorado in the SE ¼ of Section 9, T 4S, R 69W. This plant was built and operated by the U.S. Government in the early 1940s to produce small arms ammunition. Several ammunition manufacturing buildings remain on the DFC property and have been converted for use as office, laboratory, and storage space.

After World War II, the Denver Ordnance Plant site became Federal surplus property transferred to GSA and was converted into space for Federal agencies. Many of the original buildings were renovated during the late 1940s and early 1950s to accommodate the new uses.

The DFC is home to about 6,000 employees, most of which are employed by the federal government. The DFC encompasses an area of about 670 acres (2.7 km^2) and has 90 buildings comprising over 4,000,000 square feet (400,000 m^2) of office, warehouse, lab, and special use space. There are 26 different Federal agencies on-site, making it one of the largest concentrations of federal agencies outside of Washington, DC. The major employers at the Denver Federal Center include the United States Department of the Interior (and its Bureau of Land Management, Bureau of Reclamation, and United States Geological Survey), Department of State and the GSA.

Given the history of the DFC as a large-scale ordnance producer in the past and more recent federal activities, there are several plumes of contamination within the DFC boundary. EPA has issued two NPDES permits for pump-and-treat systems (CO-0034860 and CO-0035033) to treat contaminated groundwater and discharge the treated groundwater to McIntyre Gulch (via the MS4 infrastructure). For more in-depth information on the DFC, see Section 2.2 below.

Figure 1 – Facility Location Map



2.2. In-Depth Facility Description

Most of the buildings on the DFC were constructed in 1941 for the Denver Ordnance Plant that produced ammunition in support of World War II. The DFC has since been used by more than 27 different federal agencies. Agencies have used the property for many purposes, including but not limited to, pesticide and herbicide testing, animal testing, landfills (disposal of waste and construction debris), storage of hazardous materials, firing ranges, burn pits, underground storage tanks, a wastewater treatment plant, and disposal of asbestos containing materials.

The Federal Highway Administration (FHWA), an agency of the United States Department of Transportation, occupies part of the DFC pursuant to an agreement with the GSA, and conducts asphalt and other road material testing in a laboratory in Building 52. In the past, FHWA had an approximately 560-gallon underground storage tank (waste tank) located just east of Building 52. The tank was used for the storage of waste 1,1,1-trichloroethane (1,1,1-TCA) and other spent solvents generated by the FHWA during asphalt testing. In 1989, tests were performed on the waste tank and results indicated that the waste tank was leaking. In 1989, FHWA drilled three holes in the vicinity of the waste tank, and soil samples were taken from those holes. Test results indicated the soil was contaminated with 1,1,1-TCA at concentrations as high as 470 mg/L.

In 1991, the Colorado Department of Public Health and the Environment (CDPHE) issued the FHWA, as an operator of a hazardous waste management unit at the DFC, a Compliance Order on Consent number 91-01-24-03 that cited the FHWA for on-site disposal of hazardous waste without a permit or interim status. On January 27, 1995, CDPHE amended this Order on Consent with Compliance Order on Consent number 91-01-24-03a.

Information collected on past practices at the DFC and/or the Denver Ordnance Plant, documented in a December 1995 Quantalex Data Review Report, prepared by Ballofet and Associates Inc. for the GSA dated November 22, 1995, along with other documents prepared by the U.S. Army Corps of Engineers and the FHWA assessing the distribution of contaminants in soil and groundwater at the DFC, indicate that there are other sources of contaminated groundwater on the DFC, in addition to the FHWA's former underground storage tank.

On July 18, 1996, the GSA provided the CDPHE with a copy of the draft document titled "Preliminary Assessment Denver Federal Center, May 24, 1996" in which data on the history and past waste management activities at the former Denver Ordnance Plant and the DFC were evaluated for possible impacts to the environment. Based upon the information in "Preliminary Assessment Denver Federal Center" the CDPHE determined that there has been a release of hazardous waste and hazardous constituents into the environment from the former Denver Ordnance Plant and/or the DFC. Partially as a result of this information, Compliance Order on Consent number 96-04-11-01 (1996 Order on Consent) was issued to GSA to implement a groundwater containment system on the eastern boundary of the DFC to prevent the further off-site migration of groundwater contaminated with hazardous waste or hazardous constituents in excess of established state groundwater standards. The following compounds have been reported from samples taken at the DFC and were specifically identified in the 1996 Order on Consent: 1,1,1-trichloroethane, trichloroethene, 1,1-dichloroethene, tetrachloroethene, vinyl chloride, 1,4 dichlorobenzene, N-nitrosodi-n-propylamine, 1,2,4-trichlorobenzene, 2,4-dinitrotoluene, phenol, 2-chlorophenol, 2-nitrophenol, 4-chloro-3-methylphenol, 4-nitrophenol, pentachlorophenol, acenaphthene, anthracene, benzo(a)anthracene,

benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, fluoranthene, indeno(l,2,3-cd)pyrene, and phenanthrene.

In 1997, Compliance Order on Consent number 97-07-18-01 (1997 Order on Consent) was issued to GSA for its operation of the DFC, a hazardous waste facility, without having either a state or federal permit or interim status for the treatment. The 1997 Order on Consent required GSA to define, assess and remediate, if necessary, all areas of contamination which have been identified through diligent search which are either presently impacting, or may adversely impact human health and the environment. This requirement applies to contamination that originates from past or present activities at the DFC, regardless of whether it is on-site or beyond the boundaries of the DFC. In so doing, GSA shall identify, evaluate and, if necessary, remediate each specific area where solid wastes, hazardous wastes or hazardous constituents may have been disposed or released to the environment as a result of any activities conducted at the DFC and that part of the former Denver Ordnance Plant which is now the DFC, at any time, regardless of whether the location was intended for the management of those materials. The 1997 Order on Consent identified the same 26 chemicals as the 1996 Order on Consent but added lead and "other heavy metals" to the list.

The DFC has three main solvent plumes in groundwater on the eastern half of the facility, which have been sourced from known locations such as the FHWA's leaking underground storage tank and other unknown sources such as facilities that were run during the World War II era. These plumes are primarily associated with volatile organic compounds (VOCs) such as 1,1,1-TCA. In the southwest portion of the DFC, there are several more plumes with petroleum and other solvents that are also affecting the groundwater. These plumes are from an unknown source and may originate off-site.

Numerous wells have been drilled to monitor the fate and transport of groundwater contamination plumes both on and offsite of the DFC property. The locations of groundwater contamination plumes within the DFC property have been mapped by GSA per the terms of the 1997 Order on Consent. Previous versions of this permit, the Denver Federal Center Municipal Separate Storm Sewer System (MS4) permit (Permit Number COR042004), also required monitoring to determine the extent of groundwater infiltration into the storm sewer system and to determine areas where groundwater was contaminated. Results of the monitoring efforts resulted in a conservative assessment of areas where there are "known potential impacts." Areas where sub-surface investigations and/or soil characterization for disposal have revealed no hazardous pollutants and are presumed to be uncontaminated, for the purposes of this Permit, are defined as areas with "no known contamination."

The 1996 and 1997 Orders on Consent require that GSA establish schedules and requirements for the remediation of any and all contamination that may pose a threat to human health and the environment. The CDPHE has interpreted this as Safe Drinking Water Act (SDWA) maximum contaminants levels (MCLs) must be met at the property boundary, which has been determined to be the compliance point for compliance orders. The 1996 and 1997 Orders on Consent do not require a specific clean-up or "safe" level for any pollutant.

3. WATER QUALITY CONSIDERATIONS

3.1. Description of Receiving Waters

Stormwater discharges from the DFC will enter GSA's storm sewer system and discharge through numerous outfalls into McIntyre Gulch (Figure 2). A small part of the historical DFC MS4 system discharges stormwater to the Agricultural Ditch (Ag Ditch).

McIntyre Gulch is located within USGS HUC 10190002 (Upper South Platte). It flows approximately two miles from the DFC before discharging into Lakewood Gulch. Lakewood Gulch flows approximately five miles from its confluence with McIntyre Gulch before entering the South Platte River just south of the Empower Field at Mile High Stadium near downtown Denver (see Figure 3 in Section 7.3).

The Ag Ditch has intermittent flow and carries irrigation water from April 1 to October 31 annually. The Ag Ditch flows south/southeast from the DFC delivering irrigation water to customers along the way, and terminates near the old Lorretta Heights College, northwest of Hwy 285 and South Federal Boulevard in Lakewood, Colorado. Presumably, all water is consumed by the time the Ag ditch terminates and the Ag ditch does not discharge back to a traditional receiving water (e.g., McIntyre Gulch, Lakewood Gulch or South Platte River). Since the Ag Ditch does receive some stormwater from storm events in the historical DFC MS4 and was identified as a receiving water on GSA's permit application, the Ag Ditch has been added as a receiving water to this Permit.

Figure 2 – Stream network downstream of McIntyre Gulch and Ag. Ditch

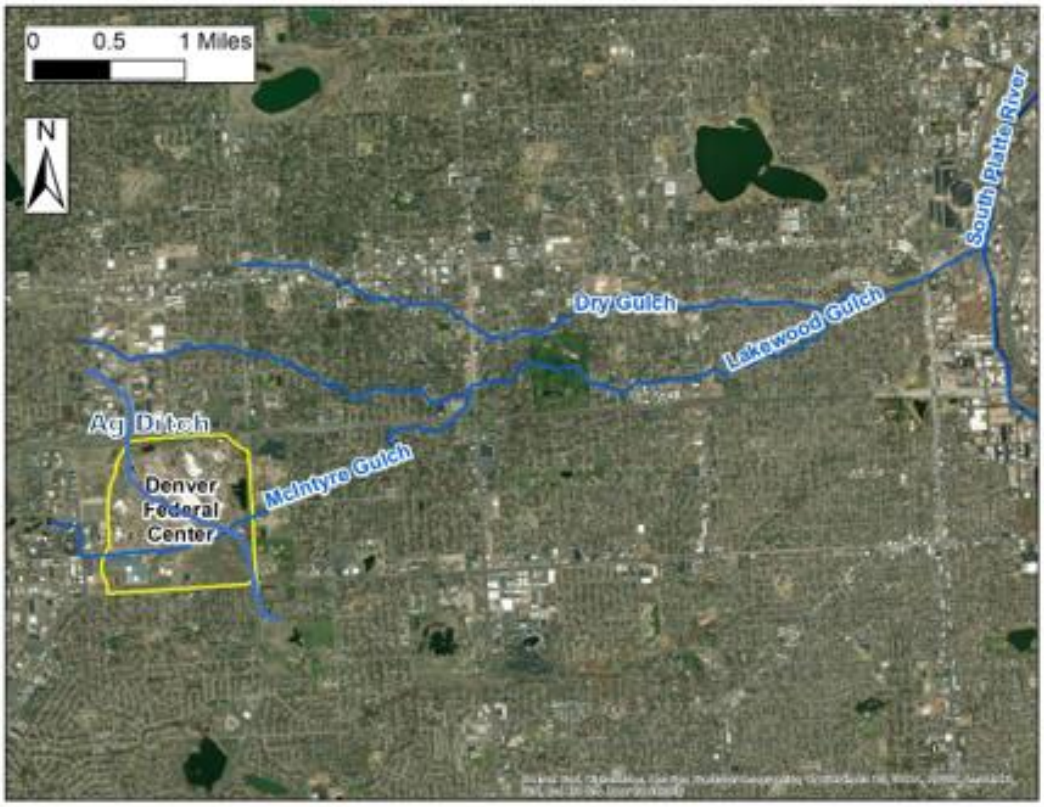


Table 1 – McIntyre Gulch MS4 Outfalls (as numbered/named by GSA)

Outfall no.	**Physical location**
14OUT3001C	Inlet to Downing Reservoir at southwest corner of reservoir
14OUT3002C	North bank of McIntyre Gulch, halfway between east DFC perimeter fence & Outfall 02OUT1005C
02OUT1005C	North bank of McIntyre Gulch, halfway between Kipling St & Main Avenue crossing
02OUT1001C	North bank of McIntyre Gulch, west of Agricultural Ditch aqueduct, 42" diameter concrete pipe
02OUT9008C	Outfall is in the north wing wall of the 5th St bridge (Bridge to Nowhere), west side of bridge, north bank of McIntyre Gulch, 42" diameter pipe.
02OUT1011C	Inside of north box culvert under 5th St bridge (Bridge to Nowhere), north wall
02OUT1009C	North bank of McIntyre Gulch, south end of 6th St projection, 48" diameter pipe
02OUT1017C	Southwest corner of intersection of 7th St bridge and McIntyre Gulch, south side of gulch. Drains marshy area along west side of 7th St, north of Bldg 710
09OUT0003C	South bank of McIntyre Gulch, north of the northwest corner of Bldg 710
12OUT1001C	North side of McIntyre Gulch between Road & Grounds Contractor and BLM storage yards, north of the northeast corner of Bldg 810.
02OUT1014C	Outfall is north of Door N-28 of Bldg 810.
02OUT1013C	Outfall is north of Door N-25 Of Bldg 810, at the water's edge.
02OUT1015C	Directly north of Door N-15 of Bldg 810 and generator bldg.
02OUT9002F	Directly north of Doors N-9 and N-10 of Bldg 810.
02OUT1016C	Outfall directly north from a point halfway between Door N-5 and N-7 of Bldg 810.
02OUT1018C	Directly north of a point halfway between Door N-3 and N-5 of Bldg 810.

Table 2 – Ag Ditch Outfalls (as numbered/named by GSA)

Outfall No.	Physical location	Comments
18OUT3002C	Intersection of North Ave and the Agricultural Ditch - north side of North Ave.	Surface stormwater drainage channel discharges to the Agricultural Ditch. Due to landscaping and grading changes this drainage channel is no longer functional.
18OUT2006C	Intersection of North Ave and the Agricultural Ditch - south side of North Ave.	Surface stormwater drainage channel discharges to the Agricultural Ditch
18OUT2005C	Approximately 30 ft south of Outfall 2.	24-inch corrugated metal pipe. There is no apparent inlet in the area that connects to the outfall. A parking lot, rain gardens and a retention basin, associated with the Bldg 48 renovation, will eliminate the need for this outfall. Upon completion of the renovation project this outfall will be abandoned.
18OUT2004C	Approximately 110 ft northeast of the northeast corner of Building 47.	Corrugated metal pipe that drains the open lot area north of Building 47. Also, a parking lot, rain gardens and a retention basin, associated with the Bldg 48 renovation, will eliminate the need for this outfall. Upon completion of the renovation project this outfall will be abandoned.
18OUT2003C	East of Building 47.	12-inch coated clay pipe. This is the outfall for the Bldg 48 roof drains.
18OUT2001C	Approximately 65 ft southeast of the southeast corner of Building 47.	12-inch coated clay pipe. This is an outfall for a DFC storm sewer line that runs southwest to northeast, south of Bldgs 47 and 48.
18OUT9003C	Approximately 245 ft north of the intersection of Center Ave. and the Agricultural Ditch.	12-inch coated clay pipe. Outfall is associated with the storm sewer system surrounding Bldg 45. It is at the same level as water in the ditch. No flow observed from this outfall between Oct-Apr when water is not in the ditch.
18OUT9004C	Approximately 170 ft north of the intersection of Center Ave. and the Agricultural Ditch.	Corrugated metal pipe. This is an outfall for a DFC storm sewer line that runs southwest to northeast, south of Bldg 45.
18OUT3201C	Approximately 250 ft southeast of the southeast corner of Building 44.	18-inch coated clay pipe. Approximately 50% plugged at outlet. Appears that this line is no longer operational.
18OUT9006F	Approximately 135 ft southeast of the southeast corner of Building 41.	Surface stormwater drainage channel discharges to the Agricultural Ditch. Due to landscaping and grading changes this drainage channel is no longer functional.
18OUT3205C	Approximately 345 ft southeast of the southeast corner (east wing) of Building 40.	12-inch clay pipe. Approx. 60% + plugged with sediment. No longer functional and appears to be abandoned in place.

3.2. Receiving Waters Water Quality Standards

McIntyre Gulch is within the state of Colorado and thus state of Colorado water quality standards (WQS) apply. Colorado Regulation Number 38 provides basic, narrative, and numeric water quality criteria for the specific stream segments affected by the Permit. According to this regulation, McIntyre Gulch is within segment 16c of the South Platte River (COSPUS 16c). COSPUS 16c is described as "all tributaries to the South Platte River, including all wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for specific listings in the subbasins of the South Platte River, and in Segments 16a, 16d, 16e, 16f, 16g, 16h, 16i, 16j, and 16k." Classifications and designations are listed below:

- Classifications: Agriculture, Aquatic Life Warm 2, Recreation E
- Designation: Use Protected

Classifications and Designations are defined in Colorado Regulation Number 31 and these definitions are provided below:

Agriculture: These surface waters are suitable or intended to become suitable for irrigation of crops usually grown in Colorado and which are not hazardous as drinking water for livestock.

Aquatic Life: These surface waters presently support aquatic life uses as described below, or such uses may reasonably be expected in the future due to the suitability of present conditions, or the waters are intended to become suitable for such uses as a goal:

- *Class 2 – Cold and Warm Water Aquatic Life: These are waters that are not capable of sustaining a wide variety of cold or warm water biota, including sensitive species, due to physical habitat, water flows or levels, or uncorrectable water quality conditions that result in substantial impairment of the abundance and diversity of species.*

Recreation (Class) E: These surface waters are used for primary contact recreation or have been used for such activities since November 28, 1975.

Use Protected designation: The purpose of these provisions is to identify waters whose quality is not better than the federal "fishable, swimmable" goal, and which therefore are appropriately not subject to the antidegradation review process.

Table 3 – Stream Segment COSPUS 16c Classifications, Designation and WQS - Physical and Biological [a/] [b/]

Physical and Biological	**Daily Maximum**	**Maximum Weekly Average**	**Acute**	**Chronic**
Temperature °C	WS-II c/	WS-II c/	N/A	N/A
D.O. (mg/L)	N/A	N/A	---	5.0

Physical and Biological	**Daily Maximum**	**Maximum Weekly Average**	**Acute**	**Chronic**
pH	N/A	N/A	6.5-9.0	---
chlorophyll a (mg/m^2)	N/A	N/A	---	150 d/
E. Coli (per 100 mL)	N/A	N/A	---	126

a/ 16c. All tributaries to the South Platte River, including all wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for listings in the subbasins of the South Platte River, and in Segments 16a, 16d, 16e, 16f, 16g, 16h, 16i, 16j, and 16k.
b/ COSPUS 16C Designation UP- use protected; Classifications: Agriculture, Aq Life Warm 2, Recreation E.
c/ WS-II is warm stream temperature tier two. See Colorado Regulation No. 38.6(3).
d/ Applies only to facilities listed at Colorado Regulation No. 38.5(4). GSA's MS4 is not listed in Colorado Regulation No. 38.5(4).

Table 4 – Stream Segment COSPUS 16c Classifications, Designation and WQS - Inorganic a/ b/

Inorganic	**Acute (mg/L)**	**Chronic (mg/L)**
Ammonia	TVS c/	TVS c/
Boron	---	0.75
Chloride	---	---
Chlorine	0.019	0.011
Cyanide	0.005	---
Nitrate	100	---
Nitrite	---	0.5
Phosphorous	---	0.17 d/
Sulfate	---	---
Sulfide	---	0.002

a/ 16c. All tributaries to the South Platte River, including all wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for listings in the subbasins of the South Platte River, and in Segments 16a, 16d, 16e, 16f, 16g, 16h, 16i, 16j, and 16k.
b/ COSPUS 16C Designation UP- use protected; Classifications: Agriculture, Aq Life Warm 2, Recreation E.
c/ TVS is table value standard.
d/ Applies only to facilities listed at Colorado Regulation No. 38.5(4). GSA's MS4 is not listed in Colorado Regulation No. 38.5(4).

Table 5 – Stream Segment COSPUS 16c Classifications, Designation and WQS - Metals a/ b/

Metals	Acute (µg/L)	Chronic (µg/L)
Arsenic	340	---
Arsenic (T)	---	100
Cadmium	TVS c/	TVS c/
Chromium III	TVS c/	TVS c/
Chromium III (T)	---	100
Chromium VI	TVS c/	TVS c/
Copper	TVS c/	TVS c/
Iron (T)	---	1000
Lead	TVS c/	TVS c/
Manganese	TVS c/	TVS c/
Mercury (T)	---	0.01
Molybdenum (T)	---	150
Nickel	TVS c/	TVS c/
Selenium	TVS c/	TVS c/
Silver	TVS	TVS
Uranium	Varies d/	Varies d/
Zinc	TVS c/	TVS c/

a/ 16c. All tributaries to the South Platte River, including all wetlands, from the outlet of Chatfield Reservoir, to a point immediately below the confluence with Big Dry Creek, except for listings in the subbasins of the South Platte River, and in Segments 16a, 16d, 16e, 16f, 16g, 16h, 16i, 16j, and 16k.
b/ COSPUS 16C Designation UP- use protected; Classifications: Agriculture, Aq Life Warm 2, Recreation E.
c/ TVS is table value standard.
d/ See Colorado Regulation No. 38.5(3) for details.

Colorado's water quality standards are established to protect both aquatic life and human health (based on consumption of organisms and/or water). The state of Colorado also implements total maximum daily loads (TMDLs) to address waters that are impaired.

Currently, segment 16c (which includes McIntyre Gulch) is on the 303(d) list as impaired for *E. coli* and dissolved selenium. These listings are both in category 5, which is defined as "impaired without a TMDL completed." Thus, there are no TMDLs developed for McIntyre Gulch at this time. The listing priority for *E. coli* is "High", and the listing priority for dissolved selenium is "Low." *E. coli* is not considered a pollutant of concern at this facility.

McIntyre Gulch discharges to Lakewood Gulch, which then discharges to the South Platte River. The state of Colorado does not have any 303(d) listings or TMDLs for Lakewood Gulch. The state of Colorado has implemented several TMDLs for the South Platte River downstream of this facility, including TMDLs for *E. coli*, cadmium, nitrate, and dissolved oxygen. The GSA's MS4 is not assigned a wasteload allocation (WLA) in any of these TMDLs.

On September 7, 2021, the State of Colorado provided written guidance on the consideration of downstream water quality standards from permitted discharges in the State of Colorado. Some of the considerations for applying downstream water quality standards included in this guidance are:

- The water quality standards or hardness in the downstream waters are more or less stringent than the immediate receiving water;
- Whether the downstream segment has a water supply classification in order to ensure the permit is fully protective;
- Overall flow of facility especially in comparison to the base flow of the receiving water; and
- Distance to downstream segments.

On January 1, 2021, the State of Colorado's Water Quality Control Commission added a water supply classification to Lakewood Gulch due to alluvial wells in the vicinity of Lakewood Gulch. Since Lakewood Gulch is only approximately 2 miles downstream of DFC and now includes a water supply classification, EPA considered the water quality standards of Lakewood Gulch to ensure this permit is fully protective of this new classification.

4. PERMIT HISTORY

The most recent permit was developed by the EPA, signed on October 20, 2011 and was effective on December 1, 2011 with an expiration date of November 30, 2016. GSA submitted the permit application on June 1, 2016. The EPA deemed the permit application on time and complete and issued an administrative extension letter to GSA on September 8, 2016. All of the limits and conditions of the administratively extended permit remain fully effective until the renewal permit (Permit) is issued and effective. According to records maintained for this facility, this Permit is the second individual permit renewal for DFC.

Prior to the issuance of the most recent individual permit, stormwater discharges from the DFC MS4 were authorized under EPA Region 8's General Permit for Storm Water Discharges from Federal Facility Small Municipal Separate Storm Sewer Systems in Colorado (COR42000F). This general

permit was issued on June 23, 2003 and expired on June 22, 2008. This general permit was not reissued after expiration. The eight facilities covered under the general permit have instead been issued individual permits for discharges from their MS4s. The DFC MS4's general permit coverage was administratively continued until issuance of the 2011 individual permit. This approach was being taken so that terms specific to the operations, industrial activities, and receiving water conditions of each facility be included in each individual permit. This approach has resulted in permits with more streamlined conditions specifically tailored to the goal of reducing pollutant loading in stormwater runoff.

5. MAJOR CHANGES FROM PREVIOUS PERMIT

- The Phase II stormwater rule was challenged in petitions for review filed by environmental groups, municipal organizations, and industry groups, resulting in a partial remand of the rule. Environmental Defense Center v. U.S. Environmental Protection Agency, 344 F.3d. 832 (9th Cir. 2003) (EDC). The court remanded the Phase II rule's provisions for small MS4 general permits because they lacked procedures for permitting authority review and public notice and the opportunity to request a hearing on Notices of Intent (NOIs) for authorization to discharge under a general permit. In response to the court's remand, EPA revised its Phase II stormwater rules for Phase II permits in 2016 (i.e. Remand Rule). One of the new requirements is that all Phase II MS4 permits have "clear, specific and measurable" conditions. Therefore, all terms and conditions have changed to be "clear, specific and measurable" to comply with the Remand Rule. Additionally, the standard for reducing pollutants to the "maximum extent practicable" (MEP) has been revised (as required by the Remand Rule) to be determined by the permitting authority (EPA) rather than determined by the permittee (GSA) in this Permit.

- Additionally, EPA added nutrient management terms and conditions to the Permit. In October 2017, the Water Quality Control Commission made changes to Colorado's nutrient management control regulations (Colorado Regulations 85 and 31.17). In response to changing regulations and water quality, both the State of Colorado and EPA have added nutrient provisions to all re-issued Phase II MS4 permits.

- GSA shall be required to sample quarterly for 1,4-Dioxane at Outfalls 02OUT1005C, 02OUT1009C, and in the storm sewer prior to FHWA's discharge for two full years after the effective date of this Permit using a 40 CFR Part 136 approved analytical method **and** one of the following additional methods: 1) a solid waste (SW) analytical method or 2) a drinking water (DW) analytical method. One sample shall be analyzed with each of these two utilized methods. GSA must submit the results of the quarterly monitoring with its annual report.

- GSA shall be required to perform dry weather phosphorus monitoring of McIntyre Gulch to support the Barr Lake/Milton Total Maximum Daily Load (TMDL) as required in the State of Colorado's CWA 401 Certification.

6. FINAL PERMIT LIMITATIONS

6.1.Technology Based Effluent Limitations

NPDES permit coverage for these discharges is required in accordance with the 1987 Amendments to the Clean Water Act (CWA) and final EPA regulations for Phase II stormwater discharges (64 FR 68722, December 8, 1999). The 1987 Water Quality Act (WQA) amended the Clean Water Act (CWA) by adding section 402(p) which requires that NPDES permits be issued for various categories of stormwater discharges. Section 402(p)(2) requires permits for the following five categories of stormwater discharges:

6.1.1. Discharges permitted prior to February 4, 1987;

6.1.2. Discharges associated with industrial activity;

6.1.3. Discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);

6.1.4. Discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and

6.1.5. Discharges judged by the permitting authority to be significant sources of pollutants or which contribute to a violation of a water quality standard.

The five categories listed above are generally referred to as Phase I of the stormwater program. In Colorado, Phase I MS4 permits have been issued by CDPHE to the cities of Denver, Lakewood, Aurora, Colorado Springs, and the highway system operated by the Colorado Department of Transportation within those cities. In Colorado, NPDES permitting authority for Federal Facilities has not been delegated to CDPHE. Therefore, EPA maintains NPDES primacy for those facilities.

Phase II stormwater regulations were promulgated by EPA on December 8, 1999 (64 FR 68722). These regulations set forth the additional categories of discharges to be permitted and the requirements of the program. The additional stormwater discharges to be permitted include:

6.1.6. Small MS4s (DFC is considered a small Phase II MS4) as defined by 40 CFR 122.26(b)(16);

6.1.7. Small construction sites (i.e., sites which disturb one to five acres); and

6.1.8. Industrial facilities owned or operated by small municipalities which were temporarily exempted from the Phase I requirements in accordance with the provisions of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991.

The 1987 CWA amendments clarified the fact that industrial storm water discharges are subject to the best available technology (BAT)/best conventional technology (BCT) requirements of the CWA, and applicable water quality standards. For MS4s, the CWA specifies a new technology-related level of control for pollutants in the discharges - control to the maximum extent practicable (MEP). However, the CWA is silent on the issue of compliance with water quality standards for MS4 discharges. In September 1999, the Ninth Circuit Court addressed this issue and ruled that water quality standards compliance by MS4s is discretionary on the part of the permitting authority (Defenders of Wildlife v. Browner, No. 98-71080).

The technology based effluent limits for this Permit are largely based on the implementation of a Stormwater Management Plan (SWMP) which addresses six minimum measures. The SWMP and additional measures included in this Permit are the means through which GSA complies with the CWA's requirement to control pollutants in the discharges to the MEP and how EPA discretion addresses compliance with the water quality related provisions of the CWA. The EPA considers MEP to be an iterative process in which an initial SWMP is proposed and then periodically upgraded as new best management practices (BMPs) are developed or new information becomes available concerning the effectiveness of existing BMPs (64 FR 68754). The Phase II regulations at 40 CFR §122.34 require the following six minimum pollution control measures to be included in the SWMP:

6.1.9. Public Education and Outreach on Storm Water Impacts;

6.1.10. Public Involvement/Participation;

6.1.11. Illicit Discharge Detection and Elimination;

6.1.12. Construction Site Storm Water Runoff Control;

6.1.13. Post-Construction Storm Water Management in New Development and Redevelopment; and

6.1.14. Pollution Prevention/Good Housekeeping for Municipal Operations.

The regulations specify required elements for each minimum measure and include guidance which provides additional information recommended for an adequate program. The Permit includes a number of additional requirements for each minimum measure which were derived from the recommendations of the regulations, recommendations from the State of Colorado, and from inspection/audit findings by EPA inspectors which could affect the implementation of an effective stormwater program.

The technology based effluent limits and a rationale for these limits are in Part 2 of the Permit.

7. MONITORING REQUIREMENTS

7.1. Monitoring

The Phase II stormwater regulations at 40 CFR §122.34(d)(1) require that small MS4s evaluate program compliance, the appropriateness of the BMPs in their SWMPs and progress towards meeting their measurable goals.

Water quality and streambank stabilization monitoring was required under the previous individual MS4 permit. This monitoring included: chemical monitoring of outfalls and surface water, and streambank and channel erosion monitoring. The reported monitoring data was summarized and shared with EPA in order to determine if the goals of the previous permit were being met and whether the data collected and reported was in compliance with EPA test procedures approved under 40 CFR Part 136.

7.2. Storm Sewer Outfall Monitoring

Based upon information provided by the GSA at the time of the previous permit development, the MS4 was known to discharge groundwater infiltration; however, it was unknown if that groundwater was uncontaminated or contaminated. Per Section 1.4.2 of the Permit, uncontaminated groundwater is an allowable non-stormwater discharge. Therefore, to determine if the extent of groundwater infiltration and if groundwater is contaminated, GSA was required to inspect all MS4 storm sewer outfalls once a month for the first year of the previous permit (beginning in December 2011). GSA was required to determine if there is a non-stormwater discharge and if so, to estimate the flow during the monthly inspections.

Based upon the information obtained during the monthly inspections, GSA was required to monitor at least once per year for every year of the previous permit starting with the second year of the permit term (2012) from every MS4 outfall that had non-stormwater discharge (as described above). If a particular outfall did not discharge at any time during the first year of inspections, GSA was not required to sample that particular outfall. To ensure that only groundwater was being monitored, and not stormwater, GSA was only required to inspect and collect samples if there was no measurable precipitation event 96 hours prior to the inspection or sampling event.

From December 2011 through November of 2012, GSA visually monitored the outfalls along McIntyre Gulch and the Ag Ditch monthly for non-stormwater flows. The Ag Ditch was not required to be monitored in the previous permit; however, since GSA was inspecting McIntyre Gulch, GSA decided to include the Ag Ditch in the process to better understand their infrastructure system.

As part of the RCRA Consent Orders, nineteen outlets were identified on the Ag Ditch. These outlets included: piping from some historical facility function, abandoned outlets, surface water drainage channels and storm sewer outfalls. It was determined that there were three surface water drainage channels, three miscellaneous pipes, eight storm sewer system outfalls, and five abandoned outfalls (the outfall could not be located, or the pipe had been cemented closed). GSA has systematically sealed and abandoned all non-stormwater pipes/outlets/outfalls that had previously discharged to the Ag ditch.

The annual visual monitoring described above starting in December 2011 identified five outfalls that currently have or have had continuous non-stormwater flows on McIntyre Gulch: 02OUT1001C, 02OUT1005C, 02OUT1009C, 02OUT1011C and 14OUT3001C. In 2013, GSA began annual sampling of the non-stormwater flows from McIntyre Gulch outfalls 02OUT1001C, 02OUT1005C, 02OUT1009C, 02OUT1011C, and 14OUT3001C, as well as outfall 18OUT9003C on the Ag Ditch. For compliance purposes, it should be noted that all organic samples were initially analyzed by solid waste or drinking water methods and not 40 CFR Part 136 approved methods, which was identified during an April 2016 EPA inspection. Since April 2016, analytical methods were changed to an approved method under 40 CFR Part 136.

All storm sewer outfalls existing as of December 2012 that discharged non-stormwater as described above were required to be monitored for the following pollutants in Table 6.

Table 6 – Pollutant Monitoring for Non-Stormwater Discharges

Parameter	**Sample Type**	**Frequency**
Flow, Estimate	Instantaneous	Annual
40 CFR 122 Appendix D, Table II	Grab	Annual
Xylene	Grab	Annual
1,1 - Dichloroethylene	Grab	Annual
1,1,1 – Trichloroethane	Grab	Annual
1,4-Dioxane	Grab	Annual
Antimony, Total	Grab	Annual
Arsenic, Total	Grab	Annual
Beryllium, Total	Grab	Annual
Cadmium, Total	Grab	Annual
Chromium, Total	Grab	Annual
Copper, Total	Grab	Annual
Lead, Total	Grab	Annual
Mercury, Total	Grab	Annual
Nickel, Total	Grab	Annual
Selenium, Total	Grab	Annual
Silver, Total	Grab	Annual
Thallium, Total	Grab	Annual
Zinc, Total	Grab	Annual
Asbestos	Grab	Annual
Hardness	Grab	Annual
Total Suspended Solids	Grab	Annual

Parameter	Sample Type	Frequency
Oil and Grease	Visual (unless a sheen was detected)	Annual
Temperature	Grab	Annual
pH	Grab	Annual

A description of each outfall and GSA's findings is provided below:

Outfall 02OUT1001C was sampled every year from 2013-2019. In August 2020, it was dry at the time of sampling. The continuous flow from this outfall is a trickle. Based upon the sampling results from 2013-2020, organic pollutants have always been either non-detect or detected below the reporting limit. Also, since the trickle flow at this outfall is a low quantity, it would suggest that the groundwater infiltration into this storm sewer piping is very minimal and based upon the data, most likely not receiving that infiltration from the areas of the contaminated plumes.

Outfall 02OUT1005C has been sampled almost every year from 2012-2020. The continuous flow from this outfall has been found to be water from a footing drain feature at Building 48 (north end of the DFC) routed to the storm sewer piping (S.S. Papadopulos & Associates, Inc., 2018). The break/gap in the feeder storm sewer west of 3rd Street has been repaired. Additionally, major renovation to Building 48 have begun. Groundbreaking took place in Summer 2021 and the renovation will take approximately one year. The renovation is anticipated to reduce or possibly eliminate all non-stormwater flows from outfall 02OUT1005C once the major civil and structural parts of the renovation occur.

1,4-Dioxane was detected in almost every sample from 2011 through 2017 from this outfall as outlined in Table 7. For reference, CDPHE's water quality criteria for human health for 1,4-Dioxane is 0.35 µg/L. This is also CDPHE's groundwater standard for 1,4-Dioxane. Since 2017, all samples have been reported as non-detect for 1,4-Dioxane. This is most likely attributed to the change in methods to 40 CFR Part 136 approved methods.

Therefore, GSA must notify CDPHE's RCRA program of these findings as part of their clean-up activities since it may indicate the plume is possibly infiltrating into an area previous identified as "No Known Contamination." Notification to CDPHE must occur within 3 months of this Permit's effective date. Subsequently, GSA will also be required to sample quarterly at 02OUT1005C for two full years after the effective date of this Permit using a 40 CFR Part 136 approved method **and** one of the following additional methods: 1) a solid waste (SW) method or 2) a drinking water (DW) method. One sample shall be analyzed with each of these two utilized methods. This is to confirm the 1,4-Dioxane is still present in the discharge regardless of the analytical method.

GSA must submit the result of this quarterly monitoring with its annual report. If GSA has any detectable concentrations of 1,4-Dioxane under any method described above, it must prepare,

develop, and submit to EPA an Organic Pollutant MS4 Reduction Plan to address the findings with the following year's annual report. The Organic Pollutant MS4 Reduction Plan could include measures being conducted through a new or revised CDPHE RCRA corrective action. If after two full years of all non-detectable concentrations of 1,4-Dioxane, GSA make request approval to terminate quarterly sampling from EPA. GSA may only terminate sampling upon written approval from EPA.

Table 7 – 1,4-Dioxane Results from Outfall 02OUT1005C

Date of Sample	**Analytical Result (µg/L) a/, b/**	**Analytical Method**
8/31/2011	9.7	EPA SW 8260
8/31/2011	11	EPA SW 8270C
8/21/2013	1.8	EPA SW 8270C
8/11/2015	2.12	EPA DW 522
8/3/2016	1.6	EPA DW 522
5/30/2017	1.39	EPA DW 522
8/17/2017	0.757	EPA DW 522
8/17/2017	Non-detect RL = 4 MDL = 1.7	EPA CWA 625
8/27/2018	Non-detect RL = 4.1 MDL = 1.7	EPA CWA 625
8/27/2018	Non-detect RL = 4 MDL = 1.7	EPA CWA 625
8/8/2019	Non-detect RL = 3.9 MDL = 0.44	EPA CWA 625
8/8/2019	Non-detect RL = 3.9 MDL = 0.43	EPA CWA 625
8/6/2020	Non-detect RL = 3.9	EPA CWA 625

Date of Sample	**Analytical Result (µg/L) a/, b/**	**Analytical Method**
	MDL = 0.44	

a/ RL is the reporting limit.
b/ MDL is the method detection limit.

Outfall 02OUT1009C has been sampled annually from 2013-2020. The continuous flow from this outfall has been found to be a combination of groundwater from foundation sumps at Building 67 (north end of the DFC) and the route of the storm sewer pipeline in the area of "No Known Contamination", and the discharge from the Federal Highway Administration (FHWA) groundwater treatment plant at Building 52A (S.S. Papadopulos & Associates, Inc., 2018) which is permitted under NPDES CO-0034860. 1,4-Dioxane was detected in almost every sample from 2013 through 2017 at from this outfall as outlined in Table 8. For reference, CDPHE's water quality criteria for human health for 1,4-Dioxane is 0.35 µg/L. This is also CDPHE's groundwater standard for 1,4-Dioxane. Since 2017, all samples have been reported as non-detect for 1,4-Dioxane. This is most likely attributed to the change in methods to 40 CFR Part 136 approved methods.

This outfall includes the discharge from FHWA's Building 52A (pump-and-treat) groundwater treatment plant which does not include treatment for 1,4-Dioxane at this time. Presumably, the high results would indicate the groundwater plume contains 1,4-Dioxane but is not being treated by FHWA.

As with Outfall 02OUT1005C, GSA must notify CDPHE of these findings as part of their clean-up activities since it would indicate the plume is possibly infiltrating into an area previous identified as "uncontaminated." Notification to CDPHE's RCRA program must occur within 3 months of this Permit's effective date. Subsequently, GSA must also sample quarterly at 02OUT1009C for two full years after the effective date of this Permit using a 40 CFR Part 136 approved method **and** one of the following additional methods: 1) a solid waste (SW) method or 2) a drinking water (DW) method. This is to confirm the 1,4-Dioxane is still present in the discharge regardless of the analytical method.

Since this outfall also contains FHWA's discharge along with possible groundwater infiltration, GSA must also sample prior to FHWA's discharge in the storm sewer to determine if the 1,4-Dioxane is coming from the FHWA's discharge or groundwater infiltration into the storm sewer. This will allow for a more targeted sampling effort to determine the source of 1,4-Dioxane. GSA must sample prior to FHWA's discharge for two full years after the effective date of this Permit using a 40 CFR Part 136 approved method **and** one of the following additional methods: 1) a solid waste (SW) method or 2) a drinking water (DW) method. One sample shall be analyzed with each of these two utilized methods. EPA recognizes GSA is no longer the permittee for NPDES CO-0034860 since that permit was transferred from GSA to FHWA on November 1, 2017. EPA is not requiring GSA to address 1,4-Dioxane from FHWA's discharge.

GSA must submit the result of this quarterly monitoring with its annual report. If GSA has any detectable concentrations of 1,4-Dioxane under any method described above, it must prepare, develop, and submit to EPA an Organic Pollutant MS4 Reduction Plan to address the findings with

the following year's annual report. The Organic Pollutant MS4 Reduction Plan could include measures being conducted through a new or revised CDPHE RCRA corrective action. If after two full years of all non-detectable concentrations of 1,4-Dioxane, GSA make request approval to terminate quarterly sampling from EPA. GSA may only terminate sampling upon written approval from EPA.

Table 8 – 1,4-Dioxane Results from Outfall 02OUT1009C

Date of Sample	**Analytical Result (µg/L) a/, b/**	**Analytical Method**
8/21/2013	4.2	EPA SW 8260 SIM
8/11/2015	1.21	EPA SW 8270C
8/2/2016	1.26	EPA SW 8270C
5/30/2017	1.09	EPA DW 522
8/18/2017	Non-detect RL = 3.9 MDL = 1.7	EPA DW 522
8/18/2017	Non-detect RL = 3.9 MDL = 1.7	EPA DW 522
8/27/2018	Non-detect RL = 3.9 MDL = 1.7	EPA DW 522
8/8/2019	Non-detect RL = 3.9 MDL = 0.43	EPA CWA 625
8/6/2020	Non-detect RL = 0.94 MDL = 0.94	EPA CWA 625

a/ RL is the reporting limit.
b/ MDL is the method detection limit.

Outfall 02OUT1011C has been sampled every year from 2013-2018. In August 2019 and 2020 it was dry at the time of sampling. The continuous flow from this outfall has been found to be groundwater from foundation sumps at Building 50. (S.S. Papadopulos & Associates, Inc., 2018). The foundation sumps at Building 50 are south of the perimeter of the Building 52A plume and the route of the storm sewer line from Building 50 to the outfall does not pass through areas typically considered to have "Known Contamination." However, one polycyclic aromatic hydrocarbon (PAH)

pollutant, benzo(a)pyrene, was found above detection in the annual sampling that took place from 2013-2018. EPA is not requiring additional monitoring for this outfall since there was only one organic pollutant in 5 years of sampling detected and this would indicate the groundwater infiltration is most likely not contaminated. The analytical result for benzo(a) pyrene was 0.47 µg/L in 2016. For reference, CDPHE's groundwater standard for benzo(a)pyrene is 0.0048 to 0.2 µg/L.

Outfall 14OUT3001C was only sampled in 2013 and 2014 before it was eliminated by the remediation and re-construction of Downing Reservoir. Downing Reservior has a pump-and-treatment system and is permitting under NPDES CO-0035033.

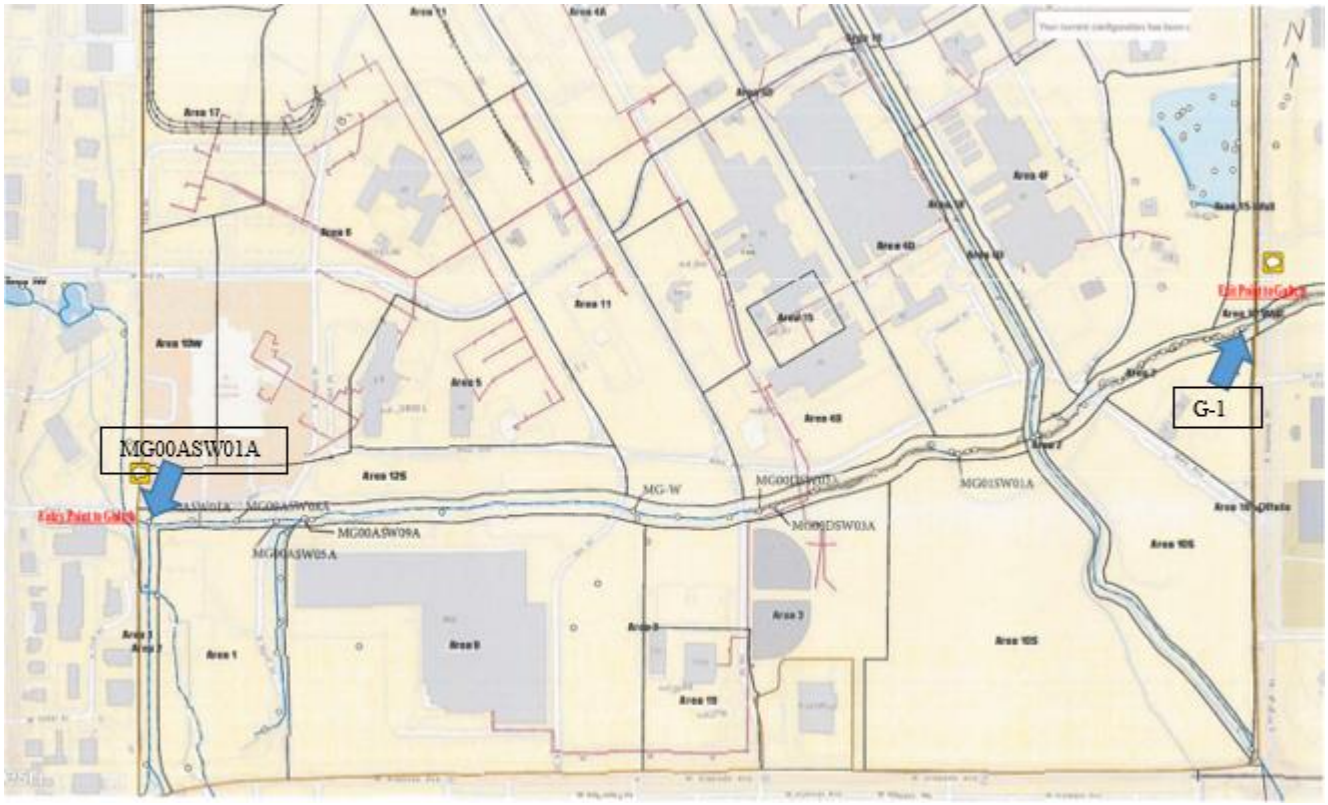
Outfall 18OUT9003C During the irrigation season (April 1-October 31), outfall 18OUT9003C is typically at the same level as the water in the Ag Ditch so GSA was unable to identify if there was a non-stormwater flow prior to 2015. However, from November 1- March 31, the outfall was observable. The only time that a non-stormwater discharge from this outfall was observed was in January 2015. In January 2015, discharge from this outfall was first noted when melted snow was observed at the outfall. Subsequent investigation revealed that floor and bathroom drains in Building 45 were connected to the storm sewer and were the source of the discharge. The associated bathroom was immediately closed, and the cross-connection was disconnected, and bathroom wastewater is now routed to the sanitary sewer. Occupants (DFC Road & Grounds contractor) of the building were instructed to not dispose of anything into the floor drains or store any materials near or on top of the floor drains.

7.3. Stream Sampling

Under the current permit, GSA was required to implement a monitoring program which can be used to assess the effectiveness of the MS4 program as whole. The most recent permit conditions required that GSA develop a program to evaluate the water quality in McIntyre Gulch, as it both enters and leaves the DFC. The most recent permit required at a minimum monitoring to include evaluations of streambank stabilization, and a water quality monitoring program which may include indicators such as chemical monitoring, assessment of macro invertebrates or other aquatic life, or watershed assessment of river stability and sediment supply, provided that the monitoring program provides meaningful data to evaluate the effectiveness of the stormwater management plan.

Surface water quality sampling was conducted for McIntyre Gulch under the most current permit. See Figure 3 for sample locations.

Figure 3: McIntyre Gulch Stream Sampling Locations



An analysis of the monitoring data was conducted to assess if any monitored pollutants had higher concentrations at the entry and exit points of the DFC. Monitoring was conducted in 2012 and indicated that Naphthalene and Methylene chloride were at slightly higher concentrations at the exit point compared the entry point of the DFC. Table 9 displays all the results from the surface water quality monitoring data in 2012. Site identifier MG00ASW01A is the monitoring point closest to where surface flow enters the DFC and site identifier G-1 is furthest monitoring point where surface flow exits the DFC. Figure 3 displays the surface monitoring locations that are shown in Table 9.

Table 9 – McIntyre Gulch Stream Sample Results (as entering and exiting DFC)

Site Identifier	**Sample Date**	**Chemical Class**	**Parameter**	**Analytical Result (µg/L)**
G-1 (exiting DFC)	2/16/2012	Polynuclear Aromatic Hydrocarbon	Naphthalene	0.011
MG00ASW01A (entering DFC)	2/16/2012	Polynuclear Aromatic Hydrocarbon	Naphthalene	0.0077
G-1 (exiting DFC)	5/15/2012	Volatile Organic	Methylene chloride	0.39
MG00ASW01A (entering DFC)	5/15/2012	Volatile Organic	Methylene chloride	0.35

Site Identifier	Sample Date	Chemical Class	Parameter	Analytical Result (µg/L)
G-1 (exiting DFC)	8/24/2012	Polynuclear Aromatic Hydrocarbon	Naphthalene	0.01
MG00ASW01A (entering DFC)	8/24/2012	Polynuclear Aromatic Hydrocarbon	Naphthalene	0.0052

Given the history of industrial activity at the DFC, the results in Table 9 could be anticipated. Per the State of Colorado's Basic Standards for Organic Chemicals (Water Quality Control Commission, Regulation 31), the approved water quality standards for these parameters are the following:

Table 10 – State of Colorado WQS for Naphthalene and Methylene Chloride

Parameter	Human Health Based Water Supply (µg/L)	Human Health Based Water + Fish (µg/L)	Human Health Based Fish Ingestion(µg/L)	Aquatic Life Based Chronic (µg/L)	Aquatic Life Based Acute (µg/L)
Naphthalene	Not applicable	Not applicable	Not applicable	620	2,300
Dichloromethane (methylene chloride)[a/]	5	4.6	590	No criteria	No criteria

a/For dichloromethane (methylene chloride) there is no aquatic life-based criteria. For comparison purposes only, EPA selected the human health-based criteria approved by the State of Colorado for this parameter.

Comparing the analytical results to the State's standards in Table 10, the analytical results are well below the State's water quality standards. While the trend indicates there may be an increase in the concentration as the stream flows through the DFC, the apparent increase is still well below any water quality standard in Table 8, and therefore, warrants no additional measures.

7.4. Stream Channel and Bank Erosion Monitoring

Stream channel and bank erosion monitoring was conducted under the previous permit by GSA contractors and documented in Otak, Inc. & Amec Foster Wheeler Environment and Infrastructure, Inc., 2016. Table 11 displays the results from the stream bank erosion rates measured from 2015 – 2016. Evidence of mass wasting of the banks exists in several locations on DFC. The top Erosion Pin 3 had the highest annual erosion rate calculated as 7.54 inches of erosion per year from October 2015 to September 2016 measurement period. An annual sediment erosion volume from October 2015 to September 2015 was calculated for each of the erosion pins based on the average annual erosion rate at each pin (Table 12).

Table 11 – McIntyre Gulch Annual Stream Bank Erosion Rates (Oct 2015-Sept 2016)[a/]

Location	**Annual Erosion Rate (inches/year)**
EP1 Bottom	2.84
EP1 Top	-1.03
EP2	0.06
EP3 Bottom	7.54
EP3 Top	2.64
EP4 Bottom	0.00
EP4 Top	-0.32
EP5	1.72

a/ From Otak, Inc. & Amec Foster Wheeler Environment and Infrastructure, Inc., 2016

Table 12 – Annual Sediment Erosion Volume[b/]

Erosion Pin (EP)	Average Annual Erosion Rate (inches/year)	Geomorphic Unit (GU)	GU Length (ft)	GU Bank Height (ft)	GU Area (sq. ft)	GU Sediment Volume (cubic yard/year)	GU Sediment Volume a/ (tons/year)	EP Sediment Volume (cubic yard/year)	EP Sediment Volume[a/] (tons/year)
EP 1	0.90	2	68.8	18	1238	3.5	4.3	3.5	4.3
EP 2	0.06	4	68.7	25	1718	0.3	0.4		
		5	70.3	20	1406	0.3	0.3		
		6	66.3	20	1326	0.3	0.3		
EP 2 Total								0.9	1.1
EP 3	5.09	7	119.1	20	2382	37.5	46.8		
		8a	19.3	20	386	6.1	7.6		
EP 3 Total								43.5	54.4
EP 4	-0.16	10	141.3	25	3533	-1.8	-2.2	-1.8	-2.2
EP 5	1.72	15	44.4	15	666	3.5	4.4		
		16	104.3	15	1565	8.3	10.4		
		17	43.1	15	647	3.4	4.3		
		18	71.6	15	1074	5.7	7.1		
EP 5 Total								21.0	26.2
Overall Total								67.1	83.8

a/ Assumes 1.25 tons of sediment/cubic yard

b/ From Otak, Inc. & Amec Foster Wheeler Environment and Infrastructure, Inc., 2016

The majority of the McIntyre Gulch stream banks are not represented by the erosion pin measurements including several geomorphic units that were listed as unstable and actively eroding. This means that the annual totals presented in the Table 12 should be interpreted as minimum estimates as they are underestimating the sediment load loss by only capturing select banks.

7.5. Master Planning/Stream Restoration

The DFC has developed sustainable design guidelines to meet its vision of becoming the "most sustainable campus in the nation by 2020." This includes several goals applicable to this Permit such as zero emissions of stormwater and wastewater reuse, waste reduction, and chemical use reduction. Where possible, every effort should be made to not only conserve the portions of McIntyre Gulch but improve the structure, habitat, and flow patterns to create a more sustainable wildlife and riparian community or organisms.

A requirement of the previous permit was for GSA to develop a vision and/or design guidelines for McIntyre Gulch which define how it can be re-configured, conserved, and managed as a high quality receiving water and as an amenity for the DFC. This could include a vision for how to reconstruct channels to include meanders, drop structures, and to utilize and enhance the function of the existing wetlands. This could also include a vision of how to connect McIntyre Gulch to existing pedestrian corridors or to provide alternative access points so it could be utilized as a recreational amenity for the DFC if so desired.

Due to the findings of significant mass wasting and erosion documented in *Otak, Inc. & Amec Foster Wheeler Environment and Infrastructure, Inc., 2016*, EPA coordinated with GSA and its local partners on how to improve McIntyre Gulch as outlined in *Amec Foster Wheeler Environment & Infrastructure, Inc., Draft Final McIntyre Gulch Stream Stabilization Conceptual Design, Rough Order-of-Magnitude Cost Estimate, and Ranking of Possible Projects* (April 26, 2018). The City of Lakewood surrounds the DFC on all sides and therefore, McIntyre Gulch flows from the City of Lakewood onto the DFC and exits the DFC flowing back onto City of Lakewood. As a vital partner in stormwater management and overall stream health on the DFC, EPA and GSA coordinated with the City of Lakewood on the proposed permit stream restoration condition to allow for a holistic approach to restore McIntyre Gulch.

As such, in this Permit EPA is proposing an annual requirement for a McIntyre Gulch Planning Meeting. The purpose of the McIntyre Gulch Planning Meeting is to have a structured process for coordination and consultation between participants to help ensure that the participants may be able to address the stormwater issues in and along the portions of McIntyre Gulch under their control from a more holistic, watershed-based perspective. Below is a summary of the Master Planning action items required however, for the specific requirements, see Part 4 of the Permit.

Annually, GSA shall plan and coordinate a McIntyre Gulch planning meeting. At a minimum, GSA shall invite to this annual planning meeting: the Environmental Protection Agency (EPA) Region 8, City of Lakewood, the Mile High Flood District (MHFD), the Colorado Department of Transportation (CDOT), and the Colorado Department of Public Health and Environment Water Quality Control Division (CDPHE-WQCD). Under this Permit, GSA is responsible for the invitation, not the attendance, of all identified parties and must give at least a 60-day notice regarding the date of the annual planning meeting.

At each annual McIntyre Gulch planning meeting, GSA shall identify and prioritize upcoming restoration projects, if any, for that portion of McIntyre Gulch under its control. These projects may include either those identified in the consultant's report, *Amec Foster Wheeler Environment &*

Infrastructure, Inc., Draft Final McIntyre Gulch Stream Stabilization Conceptual Design, Rough Order-of-Magnitude Cost Estimate, and Ranking of Possible Projects (April 26, 2018), or other projects of a similar nature developed independently by GSA or its contractors.

To the extent practicable, GSA shall implement any upcoming restoration projects in McIntyre Gulch based on the prioritized list developed in the annual planning meetings. Implementation of such projects is not contingent on participation by any of the parties. If GSA determines it is impracticable to implement an upcoming restoration project on the timeline identified in the most recent annual planning meeting, it shall document its justification.

GSA shall record and report the information on the invitation and coordination, prioritized list of any selected restoration project, and coordination between such parties, to EPA as part of its MS4 Annual Report.

7.6. Per- and Polyfluoroalkyl Substances (PFAS)

Prior to 1975, the DFC had its own Fire Department which was housed in DFC Building 44. The DFC stopped having onsite fire services in 1975. Since the DFC Fire Department was eliminated, fire protection services have been provided by Lakewood/Bancroft, which became the current West Metro Fire Authority. Even though aqueous film-forming foam (AFFF) was developed in the mid-1960s, the DFC Fire Department never used AFFF. Prior to joining GSA, the Regional Fire Protection Engineer was a command officer with the Lakewood/Bancroft and West Metro Fire Authority. During his tenure from 1970 to 2002, he indicated that AFFF was never used at the DFC.

For the last two years, the Hazardous Waste Corrective Action Unit of the Hazardous Materials Division of CDPHE has required each of the regulated RCRA Corrective Action Facilities in Colorado that are considered to have a high potential to have used PFAS containing compounds at the property to conduct groundwater screening for PFAS constituents. The Hazardous Materials Division did not require GSA to conduct a PFAS groundwater screening at the DFC, because they believe there is a very low probability that chemicals that contain or breakdown to PFAS constituents were ever used at the DFC. Additionally, on November 6, 2020, GSA sampled the groundwater at the DFC for PFAS as part of their dewatering permit renewal (NPDES #CO-0034878) and submitted the sample results to CDPHE. Based on these sample results, CDPHE made a qualitative determination that no reasonable potential existed on the DFC for PFAS constituents.

Based on this information, EPA is not requiring PFAS monitoring in this Permit at this time. However, the CDPHE has recently finalized a new water quality policy regarding PFAS (Water Quality Policy 20-1, July 2020). The CDPHE may provide additional input on their new policy during the CWA 401 certification process.

8. REPORTING REQUIREMENTS

8.1 Annual Report

40 CFR 122.34(d)(3) requires small MS4s to submit reports to the EPA. Annual reports are required to allow for regular evaluation of the MS4 program. See Part 6.2 of the Permit for specifics on annual reporting requirements.

9. ENDANGERED SPECIES CONSIDERATIONS

The Endangered Species Act (ESA) of 1973 requires all Federal Agencies to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any Federal action carried out by the Agency is not likely to jeopardize the continued existence of any endangered species or threatened species (together, "listed" species), or result in the adverse modification or destruction of habitat of such species that is designated by the FWS as critical ("critical habitat"). See 16 U.S.C. § 1536(a)(2), 50 CFR Part 402. When a Federal agency's action "may affect" a protected species, that agency is required to consult with the FWS, depending upon the endangered species, threatened species, or designated critical habitat that may be affected by the action (50 CFR Part 402.14(a)).

The U. S. Fish and Wildlife Information for Planning and Conservation (IPaC) website program was accessed on September 5, 2021 to determine federally-listed Endangered, Threatened, Proposed and Candidate Species that may be present in the portion of Jefferson County, Colorado near the DFC (Table 13).

Table 13 – Potentially Affected Species at this Location

Species	**Scientific Name**	**Status**
Canada lynx	*Lynx canadensis*	Threatened
Least tern	*Sterna antillarum*	Endangered
Mexican spotted owl	*Strix occidentalis lucida*	Threatened
Piping plover	*Charadrius melodus*	Threatened
Whooping Crane	*Grus americana*	Endangered
Pallid sturgeon	*Scaphirhynchus albus*	Endangered
Ute ladies'-tresses	*Spiranthes diluvialis*	Threatened
Western Prairie Fringed Orchid	*Platanthera praeclara*	Threatened

Additionally, IPaC determined there are no critical habitats at this location.

9.1. Biological Evaluations and Conclusions

Biological evaluations of the potential effects of the final action on the eight listed species and their critical habitat are provided below. These biological evaluations are based on information obtained from the IPaC site and knowledge regarding the final action.

The final action is reissuance of this NPDES Permit. This is a continuation of existing operating conditions; no significant changes to habitat or discharge volumes or quality are planned or expected due to the reissuance of this Permit. Since this is a MS4 permit, there is no consumptive use, and no

water depletions will result from this Permit. Permit effluent limitations are protective of the immediate receiving water quality.

Canada lynx, *lynx canadensis* – This species is currently listed as threatened. This location is outside the critical habitat for this species. Canada lynx inhabit alpine or boreal forests and are unlikely to be found in the urban setting of the DFC. Regardless, the Permit does not authorize changes to habitat that supports this species, nor are discharges from the MS4 anticipated to affect this species. Additionally, the DFC does not provide supporting habitat for this species. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Least tern, *Sterna antillarum* – This species is currently listed as endangered. No critical habitat has been designated for this species, and IPaC notes that this species only needs to be considered if water related activities/use in the South Platte River Basin may affect listed species in Nebraska. MS4 permits also have no water depletions/withdrawals. Continuation of this MS4 permit in the Denver metropolitan area will not affect populations in Nebraska. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Mexican spotted owl, *Strix occidentalis lucida* – This species is currently listed as threatened. This location is outside the critical habitat for this species. Mexican spotted owls typically inhabit mature, old growth mixed forests and rocky canyonlands with minimal human disturbance and are unlikely to be found in the urban setting of the DFC. Regardless, the Permit does not authorize changes to habitat that supports this species, nor are discharges from the MS4 anticipated to affect it. Additionally, the DFC does not provide supporting habitat for this species. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Piping plover, *Charadrius melodus* – This species is currently listed as threatened. This location is outside the critical habitat for this species, and IPaC notes that this species only needs to be considered if water related activities/use in the South Platte River Basin may affect listed species in Nebraska. MS4 permits also have no water depletions/withdrawals. Continuation of this MS4 permit in the Denver metropolitan area will not affect populations in Nebraska. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Whooping crane, *Grus americana* – This species is currently listed as endangered. This location is outside the critical habitat for this species, and IPaC notes that this species only needs to be considered if water related activities/use in the South Platte River Basin may affect listed species in Nebraska. MS4 permits also have no water depletions/withdrawals. Continuation of this MS4 permit in the Denver metropolitan area will not affect populations in Nebraska. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Pallid sturgeon, *Scaphirhynchus albus* – This species is currently listed as endangered. No critical habitat has been designated for this species, and IPaC notes that this species only needs to be considered if water related activities/use in the South Platte River Basin may affect listed species in Nebraska. MS4 permits also have no water depletions/withdrawals. Continuation of this MS4 permit

in the Denver metropolitan area will not affect populations in Nebraska. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Ute ladies'-tresses orchid, *Spiranthes diluvialis* – This species is currently listed as threatened. No critical habitat has been designated for this species. The Ute ladies'-tresses orchid typically occurs in riparian, wetland and seepy areas associated with old landscape features within historical floodplains of major rivers. They are also found in wetland and seepy areas near freshwater lakes or springs. Ute ladies'-tresses orchids are unlikely to be found in the disturbed urban setting of the DFC. Regardless, the Permit does not authorize changes to habitat that supports this species, nor are discharges from this MS4 permit anticipated to affect it. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Western prairie fringed orchid, *Platanthera praeclara* – This species is currently listed as threatened. No critical habitat has been designated for this species, and IPaC notes that this species only needs to be considered if water related activities/use in the South Platte River Basin may affect listed species in Nebraska. MS4 permits also have no water depletions/withdrawals. Continuation of this MS4 permit in the Denver metropolitan area will not affect populations in Nebraska. Based on this information, EPA has determined that the reissuance of the Permit will have **no effect** on this species.

Per an informal consultation with the FWS on September 7, 2021, and the *Endangered Species Consultation Handbook* and the *Memorandum of Agreement Between EPA, FWS, and NMFS Regarding Enhanced Coordination Under the Clean Water Act and Endangered Species Act*, the "no effect" determinations above do not require further consultation with the FWS. During public notice of the Permit, FWS was notified as an interested party. The EPA did not receive any information from FWS during the public notice period.

10. NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS

Section 106 of the National Historic Preservation Act, 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The U.S. National Park Service National Register of Historic Places database was used to determine and evaluate resources of concern in or near the DFC.

The U.S. Government purchased what is the DFC property in the early 1940s and developed it into the Denver Ordnance Plant. Currently, most of the buildings constructed on the DFC have been renovated, thus making them potentially ineligible for National Historic designation. Only two buildings have currently maintained enough structural and physical integrity to meet the criteria for consideration for National Register designation: the original Office of Civil Defense Emergency Operations Center adjacent to Building 50 and Building 710. Both of these buildings are underground. Because this Permit is associated with discharges into McIntyre Gulch, EPA's preliminary determination is that this permit renewal will not impact any historic properties.

During public notice of the Permit, Colorado's State Historic Preservation Office (SHPO) was notified as an interested party to ensure that historic properties are not negatively affected by the

conditions of the Permit. The EPA did not receive any information from the SHPO during the public notice period.

11. 401 CERTIFICATION CONDITIONS

Colorado is the Clean Water Act (CWA) Section 401 certifying authority for the Permit, and Colorado provided the following conditions in their Section 401 certification to EPA on March 31, 2022.

"Condition #1

Under Total Maximum Daily Loads (TMDL) requirements need to include conditions consistent with the Barr Lake-Milton Reservoir pH, dissolved oxygen, and total phosphorus TMDLs (Barr-Milton).

1. ***Permit Language***

Current Language

3. TOTAL MAXIMUM DAILY LOADS (TMDLs)
Not applicable as no TMDLs exist for McIntyre or Lakewood Gulch. See the Statement of Basis for more information about CWA 303(d) listed impaired receiving waters.

Additional Permit Terms and Conditions (in bold)

3.1 ***The TMDL assessment for Barr Lake and Milton Reservoir, COSPMS04, pH (Barr Lake/Milton Reservoir TMDL) assigned MS4 permittees a 20 percent reduction in phosphorus loads. The TMDL did not identify specific MS4s, but instead included a single Wasteload Allocation (WLA) for all MS4 permittees within the datashed, as defined within the TMDL, for three averaging periods, as shown in the below Table 1.***

Table 1
Summary of Allowable MS4 Loads for Barr and Milton

Source Wasteload	*Target Load (kg/yr)*	*Daily Mean Target Load (kg/day)*	*Total Max. Daily Load (kg/day)*
Barr Lake	*1,751*	*7.3*	*19.3*
Milton Reservoir	*362*	*2.2*	*4.8*

3.1.1 ***The GSA Federal Center is located within the Barr - Milton datashed. To support the implementation of this TMDL, the Permittee is required to perform dry weather outfall phosphorus monitoring on outfalls that discharge to McIntyre Gulch. Dry weather outfall discharges are flows greater than 5 gallons per minute (gpm) and a discharge not resulting from surface runoff from stormwater. In the first year of the permit term, the Permittee must identify which outfalls contain dry weather flows greater than 5 gpm. Upon identification of dry weather flows at outfalls, the Permittee***

must begin quarterly total phosphorus monitoring for a minimum of 8 quarterly samples. The samples must be analyzed using a 40 CFR Part 136 approved analytical method. The permittee must submit the results of the quarterly monitoring with its annual report required in Part 6.2. The Permittee must either measure or estimate the outfall flow at the time the sample is collected. If flow is estimated the permittee must briefly document the method of estimation. The Permittee may remove the outfall from monitoring requirements if it meets one of the following requirements.

3.1.1.1 ***The Permittee has identified and eliminated all sources of the dry weather discharge such that the dry weather flow is less than 5 gpm.***

3.1.1.2 ***The dry weather flow has ceased or decreased to below 5 gpm for at least 3 quarterly samples and there are no indicators present of an illicit discharge****.*

3.1.1.3 ***The Permittee may use phosphorus data from previous permit terms to satisfy the requirement to collect and analyze 8 quarterly samples provided the previous samples are 10 years old or less, representative of the current dry weather discharge, and samples were analyzed in accordance with 40 CFR Part 136.***

Rationale

The discharge from the permittee's facility and its boundaries are to receiving waters within the Barr-Milton datashed as outlined within the TMDL, including McIntyre Gulch (COSPUS16c).

Although the facility also has minor MS4 discharges to Ag Ditch, this ditch does not discharge into or terminate in a receiving water that drains to the South Platte River. McIntyre Gulch drains to Lakewood Gulch which ultimately drains into the South Platte River upstream of Barr Lake and Milton Reservoir. The TMDL does not assign specific MS4 permittees a WLA, but instead assigns a 20% percent reduction and a single WLA to all MS4 permittees within the Barr-Milton datashed. Table 1 outlines the WLA and the three averaging periods.

Table 1
Summary of Allowable MS4 Loads for Barr and Milton

Source Wasteload	***Target Load (kg/yr)***	***Daily Mean Target Load (kg/day)***	***Total Max. Daily Load (kg/day)***
Barr Lake	*1,751*	*7.3*	*19.3*
Milton Reservoir	*362*	*2.2*	*4.8*

Additional conditions are needed in order to ensure that the permitted discharge does not cause or contribute to an exceedance of a WQS and that the permit includes appropriate effluent limits and monitoring requirements in accordance with the TMDL.

To do this, the division used the monitoring framework of the division's general permit used to cover non-standard MS4 permittees that are included in the small Phase 2 MS4 descriptions that serve a user population of over 1,000, Non-Standard MS4 General Permit COR070000.

Condition #2

Under section 2.5 for the Post-Construction Stormwater Management for New Development and Redevelopment the post-construction control measure design standard needs conditions to ensure post-construction control measures are installed if infiltration is infeasible.

2. ***Permit Language***

Current Language

2.5.9 Control Measure Design Standards. The Permittee's requirements and oversight must be implemented to address selection, installation, implementation, and maintenance of Control Measures using one of the following design standards:

- *Any new or redevelopment footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. For the purposes of this Permit only, pre-development hydrology shall equate to a performance standard that retains, detains, infiltrates or treats stormwater runoff from the 80th percentile storm event.*

Additional Permit Terms and Conditions (in bold)

2.5.9 Control Measure Design Standards. The Permittee's requirements and oversight must be implemented to address selection, installation, implementation, and maintenance of Control Measures using one of the following design standards:

- *Any new or redevelopment footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. For the purposes of this Permit only, pre-development hydrology shall equate to a performance standard that retains, detains, infiltrates or treats stormwater runoff from the 80th percentile storm event.*

2.5.9.1 ***If the Permittee determines that it is not technically feasible to utilize this design standard for the site, for sites 1 acre or greater or part of a larger common plan of development, the Permittee must ensure the post construction Control Measure(s) is designed to provide treatment and/or infiltration of the runoff from the***

80th percentile storm event for 80% of the site with a minimum drain time of 12 hours. 12 hours does not apply to stormwater runoff that is treated with filtration (e.g. bioretention) or is infiltrated (e.g. permeable pavement).

Rationale

Additional conditions are needed in order to ensure that the permitted discharge does not cause or contribute to an exceedance of a WQS and that the permit includes appropriate MS4 practice- based effluent limit requirements in accordance with the Regulation 61.

To do this, the division used the post construction development and redevelopment design

standards framework of the division's general permit used to cover non-standard MS4 permittees that are included in the small Phase 2 MS4 descriptions that serve a user population of over 1,000, Non-Standard MS4 General Permit COR070000.

The rationale for changes to the design standard for post construction development and redevelopment is based on a comparison of the design standards in the COR070000 permit for the Water Quality Capture Volume Standard and the Runoff Reduction Standard as they are the most similar. While EPA's proposed design standard as it applies to development and redevelopment sites goes below the 1 acre threshold found in the COR70000 permit, it does not provide a design standard for those sites that demonstrate a technical infeasibility. The addition of a design criteria for those instances would ensure that this practice-based design standard would be equally as protective as Colorado's COR070000 MS4 permit."

In response to the State of Colorado's CWA 401 Certification, EPA has added verbatim (minus grammatic and formatting corrections), the Part 3 TMDL requirements listed above and a new Part 2.5.9.1.

12. MISCELLANEOUS

The effective date of the Permit is September 1, 2022 and the Permit expiration date is August 31, 2027. This NPDES Permit shall be effective for a fixed term not to exceed 5 years.

Permit written by: Amy Clark, 8WD-CWW, 303-312-7014, May 2022

ADDENDUM:

PUBLIC NOTICE AND RESPONSE TO COMMENTS

The Permit and statement of basis were public noticed in the EPA's website (https://www.epa.gov/npdes-permits/colorado-npdes-permits) on October 28, 2021. The comments received and the responses are provided below.

COMMENTS ON THE DRAFT MS4 PERMIT

Comment: Pg. No. 1, middle of the page, sentence that says: "McIntyre Gulch entering Lakewood Gulch, tributary to the South Platte River, and the Agricultural Ditch and other associated waters of the United States…" Is the Agricultural Ditch being classified as a Water of the U.S.?

Response: The permit has been changed to reflect that EPA is not making a Waters of the United States jurisdiction determination regarding the Agricultural Ditch.

Comment: Pg. No. 6, Section 1.4.2: In the current active permit, fire hydrant flushing is listed as an allowable non-stormwater discharge. In this draft permit fire hydrant flushing has been removed from the list of allowable non-stormwater discharges. In this draft permit does the allowable non-stormwater discharge of water line flushing, include fire hydrants?

Response: No change has been made. Part 1.4.2 still retains water line flushing as an allowable non-stormwater discharge. Fire hydrants are considered water line flushing.

Comment: Pg. No. 6, Section 1.4.2: In the current active permit, discharges resulting from a spill due to severe weather is listed as an allowable non-stormwater discharge. In this draft permit, discharges resulting from a spill due to severe weather has been removed. How will these discharges be handled in the new permit?

Response: EPA has included spills from severe weather as allowed in the previous permit. The exact language added is "Non-storm water discharges resulting from a spill which are the result of an unusual and severe weather event where reasonable and prudent measures have been taken to minimize the impact of such discharge."

Comment: Pg. No. 8, Section 2.2.1, 2nd line of section: There are no "inmates" on the DFC.

Response: "Inmates" has been removed from Part 2.2.1. since no inmates reside on the DFC.

Comment: Pg. No. 9, Section 2.3.5: Please explain why the significant change in days to investigate and eliminate the source of illicit discharges? In the current active permit, it says: "*Investigate any illicit discharge within 15 days of its detection"*. In this draft permit that timeframe has been changed to *two (2) business days.* The current active permit also said, *"…and take action to eliminate the source of the discharge within forty five (45) days".* In this draft permit that has been changed to fifteen (15) business days.

Many of the illicit discharges that have been discovered at the DFC have involved cross-connects between building floor drains and the storm sewer system. Eliminating these cross-connects often takes significantly longer than 45 days, due to their presence within an active building and the timeframe to secure funding to address the problem. GSA requests further discussions with EPA to develop a more reasonable timeframe to address illicit discharges.

Response: Since cross-connections are a source of illicit discharges on the DFC due to the age of the campus and its infrastructure, EPA will allow the previous permit language in the final permit regarding taking action to eliminate the illicit discharge. EPA recognizes that eliminating cross-connections can take significant time. Therefore, the final permit language in Part 2.3.5 is "Investigate any illicit discharge within two (2) business days of its detection, and take action to eliminate the source of the discharge within forty-five (45) business days of its detection (or obtain permission from the delegated EPA official for such longer periods as may be necessary in particular instances)…" EPA believes these are reasonable timeframes.

Comment: Pg. No. 21, Section 2.6.6.1.3: Does this include trash and recycling dumpsters?

Response: No, Part 2.6.6.1.3 does not include or pertain to trash and recycling dumpsters.

Comment: Pg. No. 26, Section 5.1, 4th sentence: Please explain why this sentence requires "…any detectable concentrations of 1,4-Dioxane…"; rather than a detection of 1,4-Dioxane above the Colorado Basic Standard for Groundwater of 0.35 ug/L.

Response: Current analytical methods for 1,4-Dioxane may not be able to detect to the level of the Colorado Basic Standard for Groundwater which is 0.35 ug/L. Therefore, EPA will keep in Part 5.1 "…any detectable concentrations of 1,4-Dioxane…" rather than citing the Colorado Basic Standard for Groundwater of 0.35 ug/L in the final permit.

Comment: Section 5.1: GSA is aware that EPA treats the DFC as federal campus and that whether the source of 1,4-Dioxane, which may or may not be impacting McIntyre Gulch, is from GSA or Federal Highways (FHWA), FHWA is no direct concern. However, GSA wants to go "On the Record" that the source of 1,4 Dioxane entering McIntyre Gulch is from the leaking underground waste solvent storage tank which was located just east of BD52 in the alleyway. The waste solvent was 1,1,1-TCA. 1,4-Dioxane is a known water scavenger added to solvents. FHWA, the tenant in BD52 used 1,1,1-TCA to dissolve asphalt cores associated with geotechnical testing.

Depending on the outcome of the testing required by EPA, GSA may pursue funding from FHWA to cover any treatment which may be required by EPA.

Response: EPA recognizes GSA's public comment. No response to comment is required.

Comment: Section 5.1.3: FHWA's treatment plant historically treated groundwater for 1,4-Dioxane, but in the NPDES permit issued by EPA, which allowed the discharge of treated water from the plant, the 1,4-Dioxane treatment equipment was removed. While historic sampling detected levels of 1,4-Dioxane, with the return of FHWA Compliance Order Program to FHWA in 2017, GSA reduced/removed sampling locations for 1,4-Dioxane from its Long-Term Groundwater Monitoring

Program. FHWA, not GSA, is responsible for current testing, so GSA is not privy to the results of that groundwater monitoring.

Response: EPA recognizes GSA's public comment. No response to comment is required.

Comment: Section 7.2: Under this new permit if 1,4-dioxane is detected, will these detections be classified as violation to this permit.

Response: No, under Part 7.2 detection of 1,4-Dioxane is not a violation of the permit, however, the conditions in Part 5.1 would apply. Under Part 5.1 GSA would be required to prepare, develop, and submit to EPA an Organic Pollutant MS4 Reduction Plan to address the findings or update and submit to EPA a previously developed Organic Pollutant MS4 Reduction Plan. Upon submittal to EPA, the Organic Pollutant MS4 Reduction Plan shall be implemented.

Comment: In the current active permit, there are several references to EISA and 5,000 sq ft. Is there a particular reason these have been removed from this draft permit, other than Section 2.5.9 on page 19?

Response: EPA still retained the 5,000 square feet threshold. Specifically, the permit states, "Any new or redevelopment footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." Part 2.5 was updated to comply with the State of Colorado's Post-Construction Control Measure Design Standards. No changes made in response to this comment.

Comment: The current active permit in Section 2.1.8, referenced enforcement mechanisms available to GSA. Is there a particular reason this section has been removed from this draft permit?

Response: EPA has added to the final permit a Part 2.1.8 from the previous permit with minor updates to the notification method. This provision states, "GSA shall utilize the enforcement mechanisms available to ensure compliance with this permit (tenant leases, easement agreements, contracts, etc.). Once aware of noncompliance, GSA shall take the necessary steps to return to compliance including, but not limited to, notifying GSA and tenant management and escalating enforcement including utilizing the mechanisms mentioned previously. If GSA utilizes the available enforcement mechanisms as appropriate (including providing documentation) and is unable to achieve compliance, GSA shall notify the EPA Region 8 NPDES and Wetlands Enforcement Section at 1595 Wynkoop Street, Mail code: 8ENF-W-NW, Denver, Colorado 80202-1129. GSA is only responsible for complying with the terms and conditions of this permit."

Comment: In the current active permit, there are references to the GSA DFC excavation (dig) permit. Is there a particular reason these references to the dig permit have been removed from this draft permit?

Response: In discussions with EPA on May 12, 2022, GSA asked for reference for the evacuation (dig) permit to be added to the final permit to help increase awareness for contractors operating on the DFC. As requested, EPA has added reference to the evacuation (dig) permit to Parts 2.2.2

and 2.5.6 in the final permit. Additionally, a new Part (Part 2.5.11.5) has been added which states "Include or reference in the evacuation (dig) permit, applicable requirements and available guidance to design post-construction stormwater features or low impact development practices designed to comply with Part 2.5.9." This was synonymous with the requirement in the previous permit.

COMMENTS ON THE DRAFT STATEMENT OF BASIS

Comment: Many of the Ag Ditch outfalls have been abandoned in-place or removed. Should they not also be removed from Table 2?

Response: EPA has updated Table 2 of the Statement of Basis per GSA's most current information on Ag Ditch outfalls.