

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

PERMITTEE:	U.S. Department of Veterans Affairs
FACILITY NAME AND ADDRESS:	Regional Veterans Affairs Medical Center 13611 E. Colfax Ave. Aurora, CO 80045
PERMIT NUMBER:	COR-042008
RESPONSIBLE OFFICIAL:	Sallie A. Houser-Hanfelder, Director Denver Medical Center 1055 Clermont Street Denver, CO 80220
FACILITY CONTACT:	Ray Marsh, GEMS Program Manager 13611 E. Colfax Ave. Denver, CO 80220
PERMIT TYPE:	Renewal, Non-traditional Small Phase II Municipal Separate Storm Sewer System (MS4)
FACILITY LOCATION:	39.74278 N, 104.82972 W

1. INTRODUCTION

This statement of basis (SoB) is for the issuance of a NPDES permit to the U.S. Department of Veterans Affairs (VA), for the Rocky Mountain Regional Veterans Affairs Medical Center (RMRVAMC) or more commonly referred to as the “VA Hospital” MS4. The permit establishes discharge limitations for any discharge of municipal stormwater from the VA Hospital. 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 Description

Since 2007 the U.S. Department of Veterans Affairs has been in the process of constructing a new medical campus called the Rocky Mountain Regional Veterans Affairs Medical Center or VA Hospital in Aurora, Colorado to replace the existing VA Medical Facility located at East 9th Avenue and Colorado Boulevard in Denver, Colorado. This proposed permit is for the new VA Hospital in Aurora, Colorado. Upon issuance of this permit the decommissioned VA Medical Facility in Denver, Colorado will no longer be a regulated MS4 requiring permit coverage since it will only conduct out-patient activities for approximately 500 patients.

The VA Hospital in Aurora, Colorado officially opened in August 2018. The site was previously part of the Fitzsimons Army Hospital. It includes a total of 12 new buildings, including a conventional hospital facility, two inpatient treatment facilities, two new and one renovated clinical care buildings, a central plant building, three parking structures, a rehabilitation facility, a medical research facility and a central concourse. In total, the new and renovated square footage is approximately 1,250,000 square feet with an additional 1,200,000 square feet for parking structures.



Figure 1 - Overview of the VA Hospital Campus next to the Anschutz Medical Campus in Aurora, Colorado

3. WATER QUALITY CONSIDERATIONS

3.1. Description of Receiving Water

The VA Hospital lies within the larger South Platte River watershed. All stormwater discharges from the VA Hospital discharge to Toll Gate Creek via the City of Aurora's MS4 permitted by

the State of Colorado. Stormwater is conveyed to the City of Aurora's MS4, and ultimately to Toll Gate Creek, via three stormwater outfalls.

The City of Aurora's MS4 discharges to Toll Gate Creek approximately 0.75 of a mile upstream of the confluence of Toll Gate Creek with Sand Creek. Sand Creek is a tributary of the South Platte River. All portions of Sand Creek (COSPUS16a) are impaired for selenium and *E. coli*; however, no Total Maximum Daily Load (TMDL) has been developed to date.

In terms of stream classification by the Colorado Water Quality Control Commission, Toll Gate Creek is in Segment 16h of the Upper South Platte River Basin (COSPUS16h), which includes the main stem of West Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with East Toll Gate Creek, the main stem of East Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with West Toll Gate Creek, and the main stem of Toll Gate Creek, downstream of the confluence of East and West Toll Gate Creeks, to the confluence with Sand Creek. The designated uses are Aquatic Life Warm 2, Recreation E, and Agriculture.

Toll Gate Creek, East Toll Gate Creek, and West Toll Gate Creek are meeting adopted ambient selenium standards. Toll Gate Creek, East Toll Gate Creek, and West Toll Gate Creek were re-segmented from Upper South Platte segment 16c to segment 16h at the 2008 Temporary Modifications Rulemaking Hearing (RMH) but never formally delisted from the 303(d) List for selenium.

Re

REGULATION #38 STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS Upper South Platte River Basin

16h. Mainstem of West Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with East Toll Gate Creek. Mainstem of East Toll Gate Creek, including all tributaries and wetlands, upstream of the confluence with West Toll Gate Creek. Mainstem of Toll Gate Creek, downstream of the confluence of East and West Toll Gate Creeks, to the confluence with Sand Creek.						
COSPUS16H	Classifications	Physical and Biological			Metals (ug/L)	
Designation	Agriculture		DM	MWAT	acute	chronic
Reviewable	Aq Life Warm 2	Temperature °C	WS-II	WS-II	Aluminum	—
	Recreation E		acute	chronic	Arsenic	340
Qualifiers:		D.O. (mg/L)	—	5.0	Arsenic(T)	7.6
Fish Ingestion Standards		pH	6.5 - 9.0	—	Beryllium	—
Other:		chlorophyll a (mg/m2)	—	150*	Cadmium	TVS
*chlorophyll a (mg/m2)(chronic) = applies only above the facilities listed at 38.5(4). *Phosphorus(chronic) = applies only above the facilities listed at 38.5(4). *Selenium(acute) = See section 38.6(4)(b) for selenium standards and assessment locations. *Selenium(chronic) = See section 38.6(4)(b) for selenium standards and assessment locations.		E. Coli (per 100 mL)	—	126	Chromium III	TVS
		Inorganic (mg/L)			Chromium III(T)	100
			acute	chronic	Chromium VI	TVS
		Ammonia	TVS	TVS	Copper	TVS
		Boron	—	0.75	Iron(T)	1000
		Chloride	—	—	Lead	TVS
		Chlorine	0.019	0.011	Manganese	TVS
		Cyanide	0.005	—	Mercury	0.01(t)
		Nitrate	100	—	Molybdenum(T)	150
		Nitrite	—	0.5	Nickel	TVS
		Phosphorus	—	0.17*	Selenium	varies*
		Sulfate	—	—	Silver	TVS
		Sulfide	—	0.002	Uranium	—
					Zinc	TVS

4. PERMIT HISTORY

The current permit for the VA Medical Facility in Denver, Colorado was issued December 15, 2015 and expires on December 31, 2020. The EPA received a complete, renewal permit application on May 1, 2018 for the new VA Hospital in Aurora, Colorado. According to records, this is the third permit renewal for the original permit issued in 2003.

5. MAJOR CHANGES FROM PREVIOUS PERMIT

Besides a physical location change from East 9th Avenue and Colorado Boulevard in Denver, Colorado to the newly constructed VA Hospital in Aurora, Colorado the following changes are being proposed in this permit renewal:

- The Permittee shall map their entire MS4 sewer system (outfalls, manholes, pipes, conduits, etc.) for the new VA Hospital in Aurora, Colorado within one year of permit issuance.
- The Permittee shall conduct annual dry weather outfall monitoring at all MS4 outfalls existing at the time of permit issuance. Monitoring is required to ensure there are no illicit discharges such as sanitary cross connections in the newly constructed MS4 system.
- The Permittee must install permanent stormwater control measures designed to retain, detain, infiltrate or treat runoff from newly and redeveloped impervious surfaces in a manner consistent with the Control Measure Design Standards in the permit. The Permittee must select a Control Measure using either the Water Quality Capture Volume (WQCV) Standard or an Infiltration Standard.
- The Permittee shall stencil all storm drains (e.g., paint, placards, stenciling) to notify there shall be no dumping of waste or drains to river, as practicable, in all areas with industrial uses by the end of year two of this permit.

6. PROPOSED 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 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:

1. Discharges permitted prior to February 4, 1987;
2. Discharges associated with industrial activity;
3. Discharges from large municipal separate storm sewer systems (MS4s) (systems serving a population of 250,000 or more);

4. Discharges from medium MS4s (systems serving a population of 100,000 or more, but less than 250,000); and
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 the Colorado Department of Public Health and Environment (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:

1. Small MS4s (the VA Hospital is considered a small Phase II MS4);
2. Small construction sites (i.e., sites which disturb one to five acres); and
3. 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 as required by regulation (40 CFR §122.34). The SWMP and additional measures included in this permit are the means through which the VA Hospital complies with the CWA's requirement to control pollutants in the discharges to the maximum extent practicable (MEP) and how the EPA discretionarily 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 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:

1. Public Education and Outreach on Storm Water Impacts;
2. Public Involvement/Participation;

3. Illicit Discharge Detection and Elimination;
4. Construction Site Storm Water Runoff Control;
5. Post-Construction Storm Water Management in New Development and Redevelopment;
and
6. 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 nearly verbatim the required program elements for each minimum measure. The permit also includes a number of additional requirements for each minimum measure which were derived from the guidance in the regulations and from findings recognized during the facility inspections which could affect the implementation of an effective stormwater program. The technology based effluent limits and a rationale for these limits is in Parts 2.1 through 2.6 of the Permit.

7. MONITORING REQUIREMENTS

7.1. Monitoring

The Phase II stormwater regulations at 40 CFR §122.34(g) require that small MS4s evaluate program compliance, the appropriateness of the BMPs in their SWMPs and progress towards meeting their measurable goals. Monitoring and assessment activities are included as part of each of the minimum measures of the permit. In addition, the VA Hospital is required to implement a dry weather monitoring program for this permit term to ensure illicit discharges such as cross connections do not exist in the newly constructed MS4. All MS4 outfalls existing at the time of permit issuance shall be required to be monitored annually for dry weather flow as described below.

Dry weather screening and sampling shall proceed only when no more than 0.1 inches of rainfall/snowmelt has occurred in the previous 24-hour period and landscape irrigation is not occurring (e.g. spring, fall). When a dry weather flow is observed at an outfall, a grab sample of the flow shall be collected and analyzed at a minimum for pH, ammonia, chlorine, temperature, and *E. coli*. All analyses with the exception of *E. coli* can be performed with field test kits or field instrumentation. Screening level tests may utilize less expensive “field test kits” using test methods not approved by the EPA under 40 CFR Part 136, provided the manufacturer’s published detection ranges are adequate for the illicit discharge detection purposes. Analytical results shall be reported in the annual report and follow-up actions to identify the source of any illicit discharge in Part 2.3.5. of the Permit.

If no dry weather flow is observed, the Permittee shall record the condition of the outfall and any other pertinent information. If no flow is observed, but evidence of dry weather flow exists (e.g. excrement, toilet paper, gray filamentous bacterial growth, or sanitary products present), the Permittee shall revisit the outfall during dry weather within one week of the initial observation, if practicable, to perform a second dry weather screening and sample any observed flow. The Permittee shall identify in the annual report any other necessary follow-up actions to identify the source of any apparent intermittent flow not sampled.

8. ANNUAL REPORT

The Permittee must submit an annual report to the EPA for each year of the Permit term. The first report is due April 1, 2020, and must cover the activities during the period beginning on the effective date of the Permit through December 31, 2019. Each subsequent annual report is due on April 1 of each year following 2020 for the remainder of the Permit term. Reports must be signed in accordance with the signatory requirements in Part 5.7. Reports may be posted on the EPA Region 8 web site. Therefore, parts of the annual report which cannot be publicly available should be marked as “confidential” or “for official use only.” Reports must be submitted to the EPA at the following address:

U.S. EPA, Region 8
 Attention: Stormwater Coordinator
 1595 Wynkoop Street (Mail Code: 8WD-CWW)
 Denver, Colorado 80202-1129

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 C.F.R. 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 C.F.R. § 402.14(a)).

The U. S. Fish and Wildlife Information for Planning and Conservation (IPaC) website program was utilized to determine federally-Listed Endangered, Threatened, Proposed and Candidate Species. The IPaC Trust Resource Report findings are provided below for the VA Hospital campus:

Species	Scientific Name	Status
Least Tern	<i>Sternula antillarum</i>	E
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T
Piping Plover	<i>Charadrius melodus</i>	T
Whooping Crane	<i>Grus americana</i>	E
Pallid Sturgeon	<i>Scaphirhynchus albus</i>	E
Colorado Butterfly Plant	<i>Gaura neomexicana</i> var. <i>coloradensis</i>	T
Ute Ladies’-tresses Orchid	<i>Spiranthes diluvialis</i>	T

Western Prairie Fringed Orchid	<i>Platanthera praeclara</i>	T
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Symbols/Acronyms:

T = Threatened

E = Endangered

According to the IPAC, there is no critical habitat on the VA Hospital. The discharge should not impact the above listed species due to the following reasons:

Least Tern: No habitat exists on the VA Hospital or downstream from the VA Hospital to support this species.

Mexican Spotted Owl: No effect since this is a highly urbanized area and no known habitats or populations exist.

Piping Plover: No effect since the permit would not create water depletion issues.

Whooping Crane: No effect since the permit would not create water depletion issues.

Pallid Sturgeon: No effect since the permit would not create water depletion issues.

Colorado Butterfly Plant: The habitat for the Colorado butterfly plant includes alluvial soils on level or slightly sloping floodplains and drainage bottoms at elevations of 5,000 to 6,400 feet. Colonies are often found in low depressions or along bends in wide, meandering stream channels, a short distance upslope of the actual channel. Given the highly urban nature of the VA Hospital, as well as the lack of meandering streams, the Colorado butterfly plant is not expected to occur and has not been observed on the VA Hospital.

Ute ladies' tresses Orchid: The Ute ladies'-tresses orchid is supported primarily in riparian areas, which are present in the southern portion of the site. This species is not expected to occur in areas where prairie dogs are present since these animals decimate any vegetation species available. Furthermore, riparian areas at the VA Hospital do not exhibit the terraced topography and subsurface hydrology preferred by the Ute ladies' tresses.

Western Prairie Fringed Orchid: No habitat exists on the VA Hospital to support this species.

Per the informal phone consultation with FWS on June 5, 2019 and based upon the above biological evaluation, the EPA finds that this permit will have "No Effect" to any of the species listed as threatened or endangered on the VA Hospital campus.

10. NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS

The National Register of Historic Places is the official list of the Nation's historic places worthy of preservation. Authorized by the National Historic Preservation Act (NHPA) of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America's historic and archeological resources.

Section 106 of the NHPA, 16 U.S.C. § 470(f) requires that federal agencies consider the effects of federal undertakings on historic properties. The EPA has evaluated its planned issuance of the NPDES permit for the VA Hospital to assess this action's potential effects on any listed or eligible historic properties or cultural resources. The only listed historic building in the vicinity of the VA Hospital is the Fitzsimons General Hospital, Main Hospital Building which is located at 12101 East Colfax Avenue, Aurora, Colorado. The historic building opened in 1941 and was associated with the history of military medicine in the United States and served as a national center for the treatment of tuberculosis in military personnel. As the largest building in the state at the time of its construction, it quickly became a regional visual landmark. The University of Colorado Health Sciences Center secured much of the Fitzsimons site in 1995 for its relocation from the VA Medical Facility at East 9th Avenue and Colorado Boulevard. The old Fitzsimons General Hospital, Main Hospital Building forms the historic centerpiece of the new medical. The EPA does not anticipate any impacts on the listed/eligible historic property or cultural resources because the VA Hospital will not be associated with any ground disturbance on the listed historic property nor will its point of discharge. A copy of the draft permit will be sent to the State Historic Preservation Officer (SHPO) during public notice for their review. Any comments received during public notice by the SHPO will be addressed in the final permit.

11. MISCELLANEOUS

The effective date of the permit and the permit expiration date will be determined upon issuance of the permit. This permit shall be effective for a fixed term not to exceed 5 years.

Permit Drafted by: Amy Clark, 8WD-CWW, 303-312-7014