

McIntyre Gulch Storm Sewer Outfalls - Denver Federal Center: Annual Dry Weather Survey - August 2012

Outfall no.	Physical location	Year	Survey date	Avg Flow Rate gals/min	Dissolved O2 mg/l	Conductivity mS/cm	Temperature (degrees C)	PH	Salinity %	Turbidity	Comments
mid-stream	McIntyre Gulch where it leaves the DFC on the east side. Measurement taken from mid-stream.	2012	8/31/2012	NA	7.87	1.03	15.6	7.68	0.04	6	
14OUT3001C	Inlet to Downing Reservoir at southwest corner of reservoir	2012	8/31/2012	1.5	8.53	1.94	17.8	7.98	0.09	69	
02OUT9016C	North bank of McIntyre Gulch, inside of the fence just before it goes under Kipling St	2012	8/31/2012	trickle							Not enough flow to measure. This appears to be a seep rather than an outfall.
02OUT1005C	North bank of McIntyre Gulch, halfway between Kipling St & Main Avenue crossing	2012	8/31/2012	9	7.33	2.03	17	7.92	0.09	68	
02OUT1003C	North bank of McIntyre Gulch, west of Main St bridge, south end of 3rd St projection	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	Outfall destroyed. See note *1 below.
02OUT1001C	North bank of McIntyre Gulch, west of Agricultural Ditch aqueduct, 42" diameter concrete pipe	2012	8/31/2012	0.5	8.27	0.8	14.7	8.15	0.03	1	
02OUT1011C	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	2012	8/31/2012	2	7.64	1.48	15.6	8.04	0.06	3	
02OUT9008C	Inside of north box culvert under 5th St bridge (Bridge to Nowhere), north wall	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	No flow
02OUT1009C	North bank of McIntyre Gulch, south end of 6th St projection, 48" diameter pipe	2012	8/31/2012	18	6.91	1.59	18.2	7.88	0.07	0	
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	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	No flow
09OUT0003C	South bank of McIntyre Gulch, north of the northwest corner of Bldg 710	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	No flow
12OUT1001C	North side of McIntyre Gulch between Joppa and BLM storage yards, north of the northeast corner of Bldg 810.	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	No flow
02OUT1014C	Outfall is north of Door N-28 of Bldg 810.	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	Outfall discharges the stormwater retention basin located between Door N-28 and McIntyre Gulch. The stormwater retention basin does not discharge unless water is deep enough in the basin to reach the drain, approximately 18-inches deep.
02OUT1013C	Outfall is north of Door N-25 Of Bldg 810, at the waters edge.	2012	8/31/2012	NA							Outfall discharge is at the same level as the water in McIntyre Gulch, therefore it is not possible to determine if flow is discharging from the outfall. The outfall is connected to a manhole 29 ft. to the southwest. The manhole is subsequently connected, via underground pipe, to a manhole approximately 20 feet north of the emergency generator structure on the north side of Bldg 810 (see outfall 02OUT1015C comments).
02OUT1015C	Directly north of Door N-15 of Bldg 810 and generator bldg.	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	Manhole has a trickle in it. Flow enters the manhole from the south, makes a 90° turn to the east and exits the manhole to the east. The flow travels 306ft east in an underground pipe, to another manhole. Flow then exits this manhole to the northeast and discharges to outfall 02OUT1013C. Flow exiting the 02OUT1015C manhole does not discharge directly to an outfall on McIntyre Gulch (see comments for outfall 02OUT1013C).
02OUT9002F	Directly north of Doors N-9 and N-10 of Bldg 810.	2012	8/31/2012	NA							Outfall discharge is at the same level as the water in McIntyre Gulch, therefore it is not possible to determine if flow is discharging from the outfall. There is no manhole between outfall and Bldg 810.
Outfall Door N-5 N-7	Outfall directly north from a point halfway between Door N-5 and N-7 of Bldg 810.	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	No flow
02OUT1016C	Directly north of a point halfway between Door N-3 and N-5 of Bldg 810.	2012	8/31/2012	NA	NA	NA	NA	NA	NA	NA	Manhole between outfall and Bldg 810 also dry (manhole is 14 ft north of the north edge of the pavement).
mid-stream	McIntyre Gulch where it enters the DFC on the west side. Measurement taken from mid-stream.	2012	8/31/2012	NA	7.09	0.676	17.5	7.51	0.02	11	

\*1 - During the summer of 2011, the banks of McIntyre Gulch were reconfigured where the gulch crosses Main Ave. This work was performed as part of the DFC-wide Utility Infrastructure Project (UIP). During this work, Outfall No. 02OUT1003C was destroyed. It is believed that this outfall was part of the old DFC storm sewer system and was no longer operational. Therefore, it was not replaced. Flow had not been noted at this outfall during the Annual Dry Weather Survey since July of 2007.