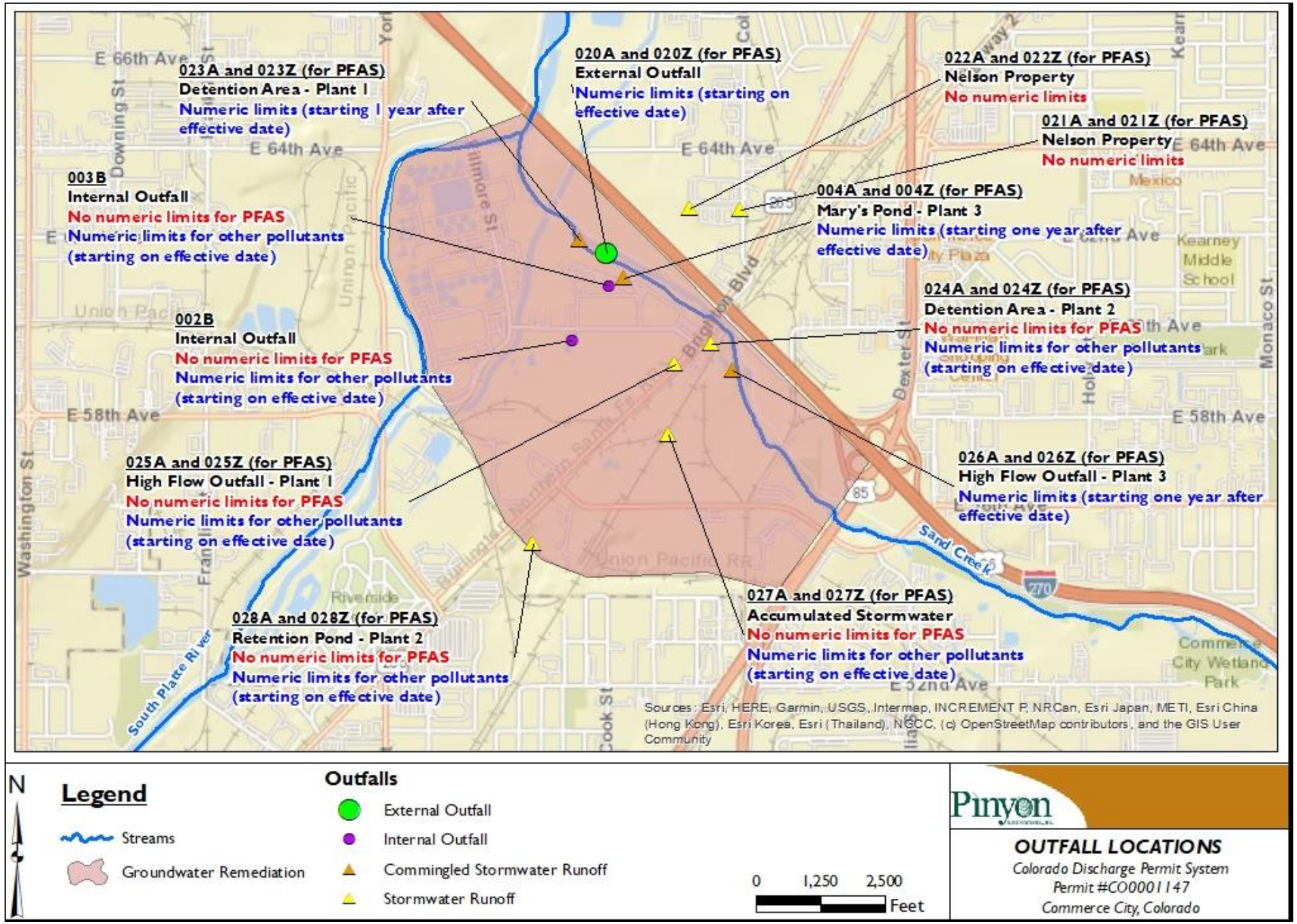
Suncor Energy (USA) Inc.
Colorado Discharge Permit System
Permit #CO0001147 Review

January 17, 2022


023A and 023Z (for PFAS)
Detention Area - Plant 1
Numeric limits (starting 1 year after effective date)
020A and 020Z (for PFAS)
External Outfall
Numeric limits (starting on effective date)
022A and 022Z (for PFAS)
Nelson Property
No numeric limits
021A and 021Z (for PFAS)
Nelson Property
No numeric limits
003B
Internal Outfall
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
004A and 004Z (for PFAS)
Mary's Pond - Plant 3
Numeric limits (starting one year after effective date)
024A and 024Z (for PFAS)
Detention Area - Plant 2
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
002B
Internal Outfall
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
025A and 025Z (for PFAS)
High Flow Outfall - Plant 1
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
026A and 026Z (for PFAS)
High Flow Outfall - Plant 3
Numeric limits (starting one year after effective date)
027A and 027Z (for PFAS)
Accumulated Stormwater
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
028A and 028Z (for PFAS)
Retention Pond - Plant 2
No numeric limits for PFAS
Numeric limits for other pollutants (starting on effective date)
E 66th Ave
E 64th Ave
E 58th Ave
Downing St
Washington St
Monaco St
Dexter St
Holly St
Union Pacific
Union Pacific RR
Riverside
Kearney Middle School
Commerce City Wetland Park
Sand Creek
South Platte River
Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community
N
Legend
Streams
Groundwater Remediation
Outfalls
External Outfall
Internal Outfall
Commingled Stormwater Runoff
Stormwater Runoff
0 1,250 2,500
Feet
Pinyon
OUTFALL LOCATIONS
Colorado Discharge Permit System
Permit #CO0001147
Commerce City, Colorado

Summary of Receiving Waters

Receiving Stream Name	Segment ID	Designation	Classified Uses	Regulation 93 Listing	Existing TMDL
Sand Creek	COSPUS16i	Reviewable (antidegradation review required)	Aquatic Life Warm 1 Recreation Class E Agriculture	303(d) List: Dis. Selenium	--
South Platte River	COSPUS15	Use Protected (no antidegradation review required)	Aquatic Life Warm 1 Recreation Class E Agriculture Water supply	Monitor and Evaluation: Temperature	Dis. Oxygen Ammonia Dis. Cadmium E. Coli 4b plan: Ammonia and Nitrite

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Summary of Major Changes in Draft Permit #CO0001147

- Combination of permits (#CO0001147 and #COS000009)
- Re-classification of stormwater outfalls to process-water discharges
  - Changes to classification for Outfalls 023A, 004A and 026A
- Studies to evaluate arsenic sources and reductions
- Inspections to prevent future spills and unpermitted discharges
- Conditions to protect drinking water supplies in Burlington Ditch
- Conditions to keep the public informed
- Conditions that require the permit to be modified to adjust to any new antidegradation designation for South Platte Segment 15.

Summary of Major Changes in Draft Permit #CO0001147 (cont.)

New Limits and Monitoring Requirements

- Inclusion of PFAS limits for the facility's process water outfalls
- New limits and monitoring requirements for organic chemicals associated with petroleum refining and commercial chemicals
- More frequent monitoring requirements
- New or more stringent limits for aquatic life
- New limits for stormwater outfalls
- Flow limitations for stormwater-only outfalls 024A, 025A, 027A and 028A

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Summary of Major Changes in Draft Permit #CO0001147 (cont.)

- Stormwater
  - “Technology-based limits for benzene and BTEX were implemented in the renewal permit for stormwater outfalls 024A, 025A, 027A and 028A.”
  - “flow limitations were added to the renewal permit for stormwater-only outfalls 024A, 025A, 027A and 028A
  - PFAS monitoring requirements implemented at all stormwater-only outfalls 021A, 022A, 024A, 025A, 027A, and 028A

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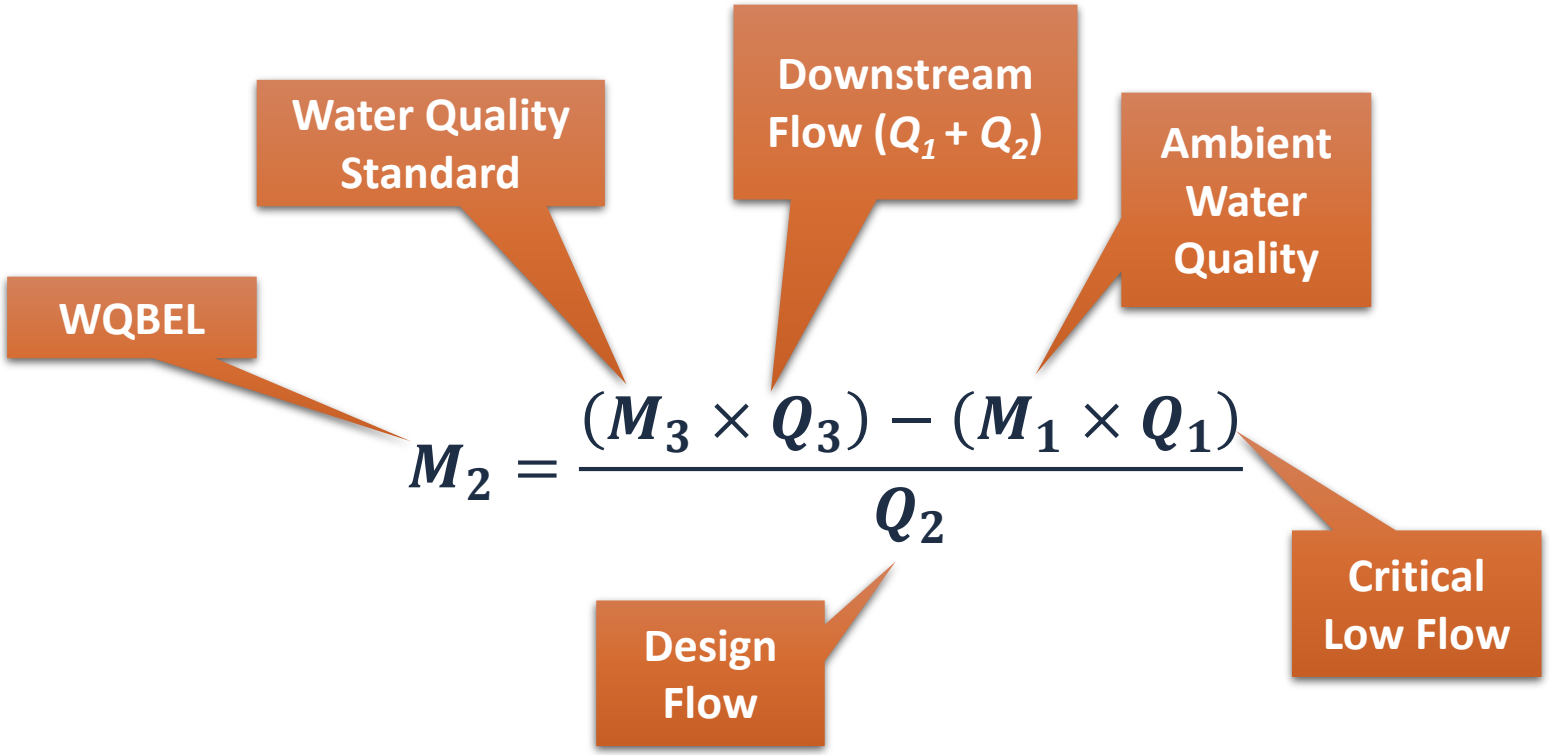
Calculation of Permit Limits

Water Quality Based Effluent Limits (WQBELs) are calculated using mass balance equation:



Critical Low Flows (Q_1)

	2012 Current Permit	2021 Draft Permit
Acute 1E3 (cfs)	1.0	0
7-Day Avg. Flow 7E3 (cfs)	1.0	0
Chronic 30E3 (cfs)	1.6	0.7

$$M_2 = \frac{(M_3 \times Q_3) - (M_1 \times Q_1)}{Q_2}$$

- Critical low flows (Q_1) describe upstream low flow conditions.
- Water Quality Analysis critical low flows are lower in draft than existing permit.
- Lower critical low flows result in lower (more protective) limits.
- When the critical low flow (Q1) = 0, the limit (M2) equals the Water Quality Standard (M3).

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Permit Limit Comparison – Existing (2012) versus Draft (2021)
*Blue font indicates new and/or more stringent limits

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Effluent Flow (MGD)	3.66	Report			Report	
pH (su)		6.5 - 9.0			6.5 - 9.0	
Oil and Grease (Visual Sheen)		--			Pass/Fail[1]	
DO (mg/l)		5			5	
TRC (mg/l)	--	--		0.012	0.019	
Total Inorganic Nitrogen as N (mg/l)	--	--		--	10	
Al, TR (µg/l)	--	--		1615	10071	
As, TR (µg/l)	10			4 until 6/1/2026; 0.02 starting 6/1/2026		
Cd, TR (µg/l)	--	--		--	5	
Cd, PD (µg/l)	--	--		1.1	4.8	
Cr, TR (µg/l)		--			50	
Cr+6, Dis (µg/l)	--	--		12	16	
Cu, PD (µg/l)	Report	Report		19	261	
CN, WAD (µg/l)	--	Report		--	17 until one year after effective date; 5 starting one year after effective date	
Fe, Dis (µg/l)	--	--		610 until one year after effective date; 314 starting one year after effective date	--	

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Fe, TR (µg/l)	917	--		861	--	
Pb, TR (µg/l)	--	--		--	50	
Pb, PD (µg/l)	Report	Report		9.4	281	
Mn, PD, AQ (µg/l)				2270	4738	
Mn, Dis, WS (µg/l)	1294	5063		426 until one year after effective date; 403 starting one year after effective date	--	
Mo, TR (µg/l)	--	--		158	--	
Hg, Tot (µg/l)	0.009	--		0.011	--	
Ni, TR (µg/l)	--	--		105	--	
Ni, PD (µg/l)	Report	Report	--	177	1513	28
Se, PD (µg/l)	4.6	18.4		24 until 12/31/2024; 4.6 starting 1/1/2025	Report until 12/31/2023; 37 from 1/1/2024 to 12/31/2024; 18 starting 1/1/2025	
U, TR (µg/l)	--	--		Report	--	
Zn, PD (µg/l)	298	Report		450	564	88
B, Tot (mg/l)	--	--		0.79	--	
Chloride (mg/l)	--	--		250	--	
Sulfate (mg/l)	--	--		250	--	
Sulfide as H2S (mg/l)	Report	--		0.038 until one year after effective date; 0.0021 starting one year after effective date	--	
Phosphorus	--			Report		
Fluoride		--			Report	
Calcium (mg/l)	Report	Report		Report	Report	
Magnesium (mg/l)	Report	Report		Report	Report	
Sodium (mg/l)	Report	Report		Report	Report	
Bicarbonate as HCO3 (mg/l)	Report	Report		Report	Report	
SAR calculated limit*	Report	Report		Report	Report	

Permit Limit Comparison - Existing (2012) versus Draft (2021)

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
SAR calculated limit*	Report	Report		Report	Report	
Adjusted SAR effluent**	Report	Report		Report	Report	
SAR pass/fail***	--			Pass/Fail		
EC (dS/m)	Report	Report		3.4 until one year after effective date; 1.7 starting one year after effective date	--	
Radium 226 & 228, total (pci/l)	--	--		Report	--	
Thorium 230 and 232, total (pci/l)	--	--		Report	--	
WET, chronic						
Static Renewal 7 Day Chronic Pimephales promelas		Report			NOEC or IC25 > IWC	
Static Renewal 7 Day Chronic Ceriodaphnia dubia		Report			NOEC or IC25 > IWC	

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Permit Limit Comparison – Organic Industrial Parameters (Existing versus Draft Permits)
*Blue font indicates new and/or more stringent limits. Limits begin one year after effective date.

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Acenaphthene (µg/l)				584	1700	
Acetone (µg/l)				215001	--	
Acrolein (µg/l)				Report	Report	
Acrylamide (µg/l)				0.71	7500	
Acrylonitrile (µg/l)				Report	--	
Aniline (µg/l)				198	--	
Anthracene (PAH) (µg/l)				44912	--	
Azobenzene (µg/l)				Report	--	
Benzene (µg/l)	5			57	5	8.6
Benzidine (µg/l)				Report	Report	
Benzo (g,h,i)perylene (PAH) (µg/l)				0.0038	--	
Benzo (k)fluoranthene (PAH) (µg/l)				0.051	--	
Benzo(a)anthracene (PAH) (µg/l)				0.0051	--	
Benzo(a)pyrene (PAH) (µg/l)				0.00051	--	
Benzo(b)fluoranthene (PAH) (µg/l)				0.0051	--	
Bromodichloromethane (µg/l)				12	11000	
Bromoform (µg/l)				Report	--	
BTEX (ug/l)		100			100	
Butyl benzyl phthalate (µg/l)				2133	--	
Carbon tetrachloride (µg/l)				3.4	35200	

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Chlorethyl ether (BIS-2) (µg/l)				Report	--	
Chlorobenzene (µg/l)				1796	--	
Chlorodibromomethane (µg/l)				Report	--	
Chloroform (µg/l)				72	28900	
4-Chloro-3methylphenol (µg/l)				6805	30	
Chloronapthalene, 2- (µg/l)				Report	Report	
Chlorophenol, 2- (µg/l)				168	4380	
Chrysene (µg/l)				0.51	--	
Dibenzo(a,h)anthracene (PAH) (µg/l)				0.00051	--	
Dibromoethane 1,2 [Ethylene Dibromide] (µg/l)				0.58	--	
Dichlorobenzene 1,2 (µg/l)				Report	--	
Dichlorobenzene 1,3 (µg/l)				Report	--	
Dichlorobenzene 1,4 (µg/l)				213	--	
Dichloroethane 1,2 (µg/l)				12	118000	
Dichloroethylene 1,1 (µg/l)				Report	--	
Dichloroethylene 1,2-trans (µg/l)				3240	--	
Dichloromethane (methylene chloride) (µg/l)				140	--	
Dichlorophenol 2,4 (µg/l)				326	2020	
3,3'-Dichlorobenzidine (µg/l)				Report	--	
Diethylphthalate (µg/l)				49404	--	
Dimethyl phthalate (µg/l)				1235088		

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Dimethylphenol 2,4 (µg/l)				954	2120	
Di-n-butyl phthalate (µg/l)				5053	--	
Dinitro-o-cresol 4,6 (µg/l)				8.7	--	
Dinitrophenol 2,4 (µg/l)				454	--	
Dinitrotoluene 2,4 (µg/l)				3.6	--	
Dinitrotoluene 2,6 (µg/l)				Report	Report	
Dioxane 1,4 (µg/l)				11	--	
Dioxin (µg/l)				5.7E-09	0.01	
Diphenolhydrazine, 1,2- (µg/l)				0.22	270	
Ethylbenzene (µg/l)				2358	32000	
Ethylhexyl phthalate (BIS-2) (µg/l)				1.2	--	
Fluorene (PAH) (µg/l)				5951	--	
Fluoranthene (PAH) (µg/l)				157	3980	
Hexachlorobenzene (µg/l)				Report	--	
Hexachlorobutadiene (µg/l)				Report	Report	
Hexachlorocyclopentadiene (µg/l)				Report	Report	
Hexachlorodibenzo-p-dioxin (µg/l)				Report	--	
Hexachloroethane (µg/l)				Report	Report	
Indeno(1,2,3-cd)pyrene (PAH) (µg/l)				0.0051	--	
Isophorone (µg/l)				4042	--	
Methanol (µg/l)				453649	--	
Methyl bromide [Bromomethane] (µg/l)				Report	--	
Methyl chloride [Chloromethane] (µg/l)				Report	--	
Methyl tert-butyl ether [MTBE] (µg/l)	384			647	151000	
Naphthalene (PAH) (µg/l)				696	2300	

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Nitrobenzene (µg/l)				Report	Report	
Nitrophenol 4 (µg/l)				1815	--	
Nitrosodimethylamine N (µg/l)				Report	--	
Nitrosodiphenylamine N (µg/l)				6.7	--	
N-Nitrosodi-n-propylamine (µg/l)				Report	--	
Nonylphenol (µg/l)				7.0	28	
PCBs (µg/l)				7.19E-05	2	
Pentachlorobenzene (µg/l)				Report	--	
Pentachlorophenol (µg/l)				1.0	19	
Phenol (µg/l)				2874	10200	
Propylene oxide (µg/l)				4.9	--	
Pyrene (PAH) (µg/l)				4491	--	
Quinoline (µg/l)				Report	--	
Styrene (µg/l)				3240	--	
Tetrachloroethane 1,1,2,2 (µg/l)				Report	--	
Tetrachloroethylene (PCE) (µg/l)				70	5280	
Toluene (µg/l)				6625	17500	
Trichlorobenzene 1,2,4 (µg/l)				Report	Report	
Trichloroethane 1,1,1 (µg/l)				6481	--	
Trichloroethane 1,1,2 (µg/l)				Report	Report	
Trichloroethylene (TCE) (µg/l)				34	45000	
Trichlorophenol 2,4,6 (µg/l)				Report	--	
Trimethyl benzene 1,3,5						

Permit Limit Comparison
*Blue font indicates new or more robust limits

Effluent Parameter	2012 Permit			Draft 2021 Permit		
	30-Day Average	Daily Maximum	2-Year Average	30-Day Average	Daily Maximum	2-Year Average
Trimethylbenzene 1,2,3 (µg/l)				2171	--	
Trimethylbenzene 1,2,4 (µg/l)				2171	--	
Vinyl Chloride (µg/l)				Report	--	
Xylenes (total) (µg/l)				45365	--	

Pinyon Environmental, Inc.

NEW PFAS Limitations and Monitoring Requirements

Effluent Parameter	Effluent Limitation		Monitoring Requirements	
	Daily Maximum	30-day Average	Frequency	SampleType
Perfluorooctanoic Acid [PFOA], ng/l	Report	Report	Weekly	Grab
Perfluorobutanoic Acid [PFBA], ng/l	Report	Report	Weekly	Grab
Perfluorooctanesulfonamide [PFOSA (or FOSA)], ng/l	Report	Report	Weekly	Grab
Perfluoropentanoic acid [PFPeA], ng/l	Report	Report	Weekly	Grab
Perfluorohexanoic acid [PFHxA], ng/l	Report	Report	Weekly	Grab
Perfluoroheptanoic acid [PFHpA], ng/l	Report	Report	Weekly	Grab
Perfluorononanoic acid [PFNA], ng/l	Report	Report	Weekly	Grab
Perfluorodecanoic acid [PFDA], ng/l	Report	Report	Weekly	Grab
Perfluoroundecanoic acid [PFUnA (or PFUdA)], ng/l	Report	Report	Weekly	Grab
Perfluorododecanoic acid [PFDoA], ng/l	Report	Report	Weekly	Grab
Perfluorotridecanoic acid [PFTrDA (or RFTriA)], ng/l	Report	Report	Weekly	Grab
Perfluorotetradecanoic acid [PFTeDA (or PFTA or PFTeA)], ng/l	Report	Report	Weekly	Grab
2-[N-ethylperfluorooctanesulfonamido] acetic acid [NEtFOSAA], ng/l	Report	Report	Weekly	Grab
2-[N-methylperfluorooctanesulfonamido] acetic acid [NMeFOSAA], ng/l	Report	Report	Weekly	Grab
Outfall 020Z Perfluorobutanesulfonic acid [PFBS], ng/l	Report	421537	Weekly	Grab
Outfalls 023Z, 004Z, 026Z Perfluorobutanesulfonic acid [PFBS], ng/l[Until 1 year after effective date]	Report	Report	Weekly	Grab
Outfalls 023Z, 004Z, 026Z Perfluorobutanesulfonic acid [PFBS], ng/l[Starting 1 year after effective date]	Report	421537	Weekly	Grab
Perfluorododecanesulfonic acid [PFDS], ng/l	Report	Report	Weekly	Grab
Perfluoroheptanesulfonic acid [PFHpS], ng/l	Report	Report	Weekly	Grab
Outfall 020Z Perfluorohexanesulfonic acid [PFHxS], ng/l	Report	731	Weekly	Grab
Outfalls 023Z, 004Z, 026Z Perfluorohexanesulfonic acid [PFHxS], ng/l[Until 1 year after effective date]	Report	Report	Weekly	Grab

Pinyon Environmental, Inc.

NEW PFAS Limitations and Monitoring Requiremetnts

Effluent Parameter	Effluent Limitation		Monitoring Requirements	
	Daily Maximum	30-day Average	Frequency	SampleType
Outfalls 023Z, 004Z, 026Z Perfluorohexanesulfonic acid [PFHxS], ng/l[Starting 1 year after effective date]	Report	731	Weekly	Grab
Perfluorooctanesulfonic acid [PFOS], ng/l	Report	Report	Weekly	Grab
4:2 Fluorotelomer sulfonic acid [4:2 FTS], ng/l	Report	Report	Weekly	Grab
6:2 Fluorotelomer sulfonic acid [6:2 FTS], ng/l	Report	Report	Weekly	Grab
8:2 Fluorotelomer sulfonic acid [8:2 FTS], ng/l	Report	Report	Weekly	Grab
Perfluoropentane sulfonic acid [PFPeS], ng/l	Report	Report	Weekly	Grab
Perfluorononane sulfonic acid [PFNS], ng/l	Report	Report	Weekly	Grab
Hexafluoropropylene oxide dimer acid [Gen-X (or HFPO-DA or HPFA-DA], ng/l	Report	Report	Weekly	Grab
Outfall 020Z PFAS Sum, ng/l*	70**	70**	Weekly	Calculated
Outfalls 023Z, 004Z, 026Z PFAS Sum, ng/l* [Until 1 year after effective date]	Report	Report	Weekly	Calculated
Outfalls 023Z, 004Z, 026Z PFAS Sum, ng/l* [Starting 1 year after effective date]	70**	70**	Weekly	Calculated

**The PFAS sum is calculated based on the following equation:

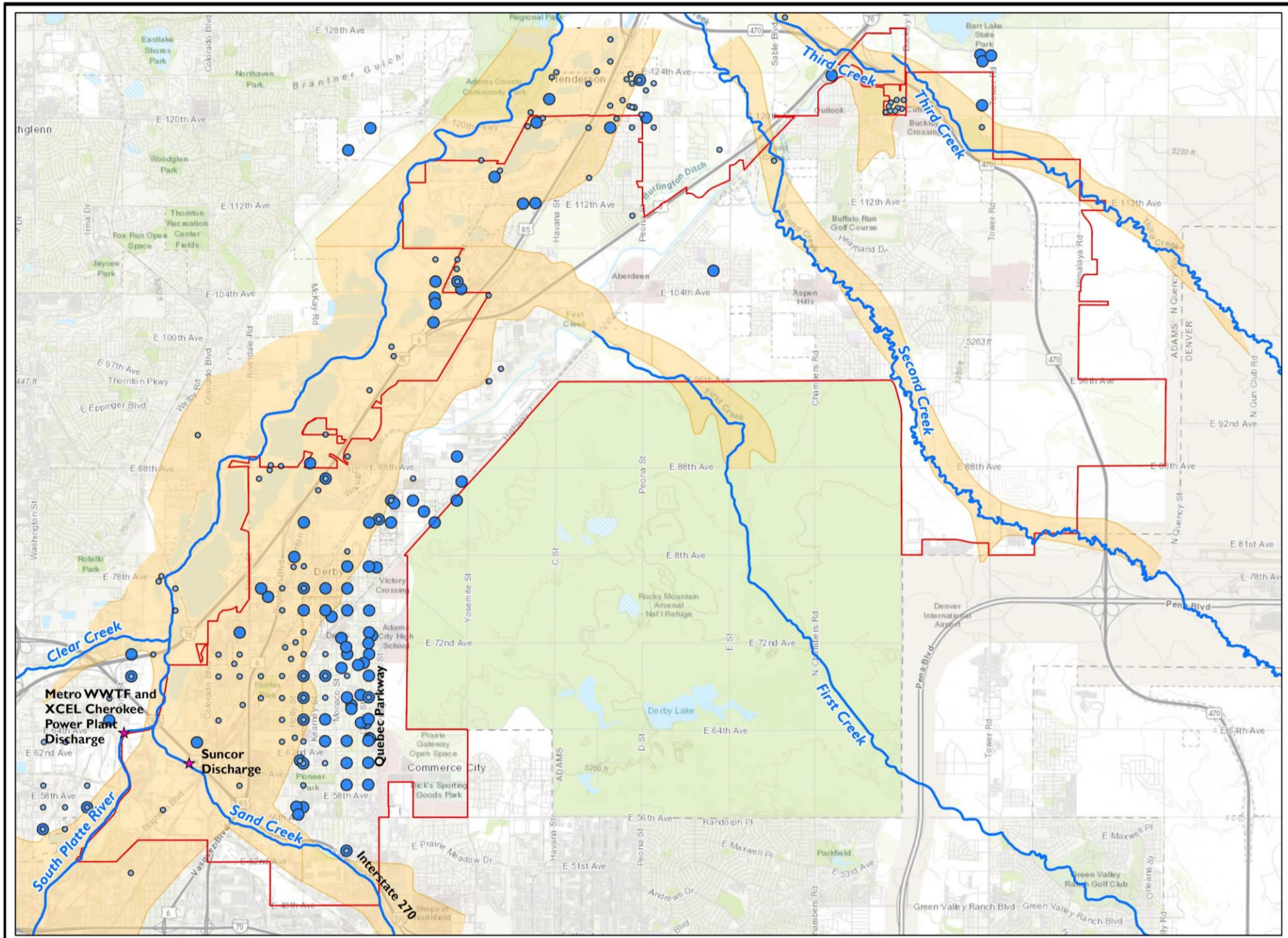
PFAS Sum (ng/l) = [**PFOA**] (ng/l) + [**PFOSA**] (ng/l) + [**PFNA**] (ng/l) + ([**NEtFOSAA**] (ng/l) * 0.85) + ([**NMeFOSAA**] (ng/l) * 0.88) + [**PFOS**] (ng/l) + ([**8:2 FTS**] (ng/l) * 0.78)

This calculation is performed for each sampling event, and the resulting daily maximum and 30-day average results shall be reported on the discharge monitoring report submitted for the monthly monitoring period.

Pinyon Environmental, Inc.

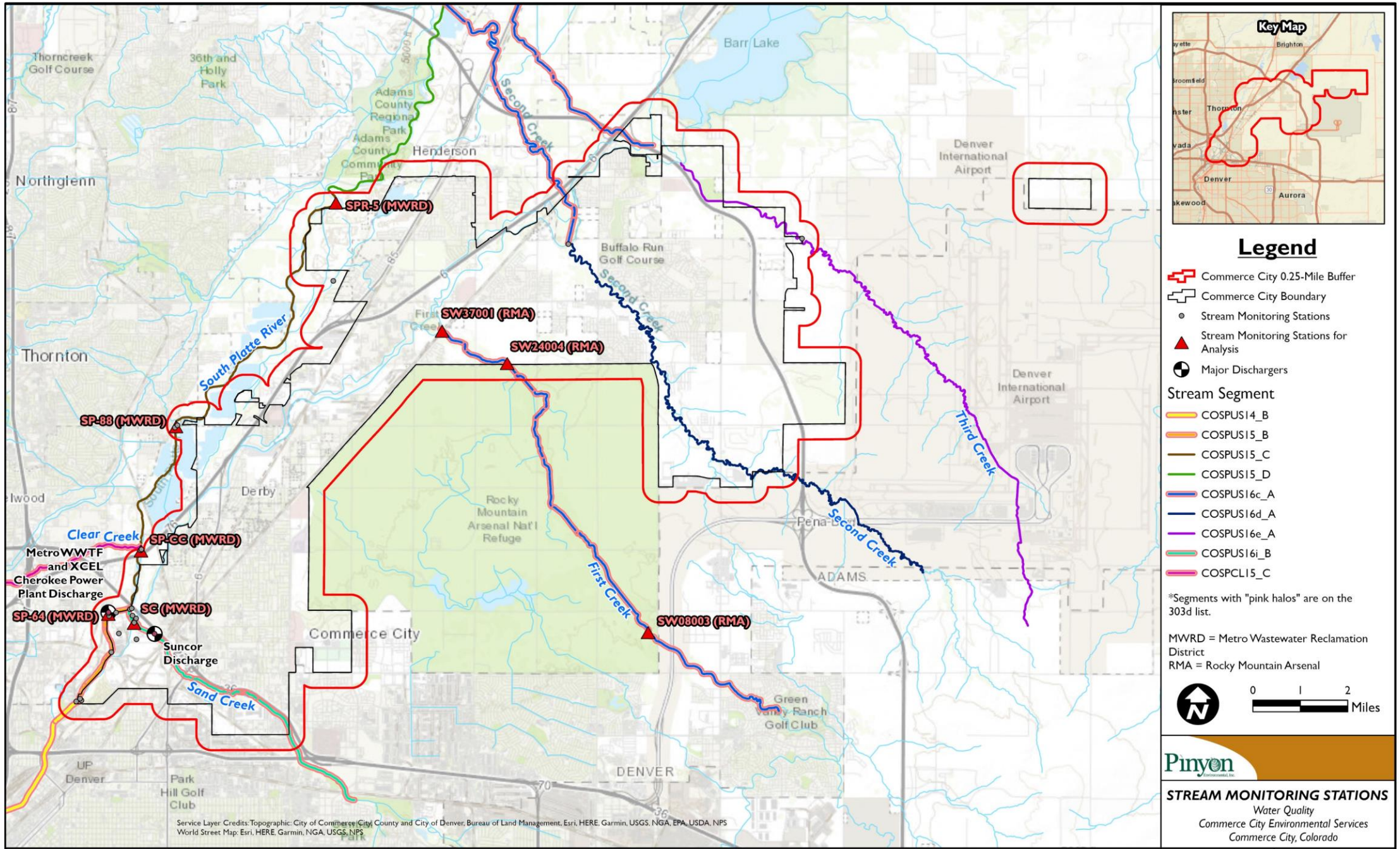
PFAS Background

- PFAS, or perfluoroalkyl substances, are known as “forever chemicals” because they build up in the body over time. PFAS has been linked with cancer, liver problems, and developmental effects.
- The EPA recommended level is70 parts per trillion (ppt) for two PFAS chemicals: PFOS and PFOA. PFOS/PFOA. Compounds are present in Sand Creek and the South Platte River both upstream and downstream the refinery at levels above and below the 70 ppt threshold. PFOS/PFOA is also present in groundwater below the refinery.
- Elevated PFOS/PFOA at the Commerce City refinery is attributed in part to the historical use of Class B firefighting foam. This foam has since been replaced with new foam that complies with the EPA’s PFOA Stewardship Program – 2015 Requirements
- Commerce City intends to file suit under the Resource Conservation and Recovery Act, alleging the facility may have polluted the City’s water supply with PFAS


Metro WWTF and XCEL Cherokee Power Plant Discharge
Suncor Discharge
Quebec Parkway
Clear Creek
South Platte River
Sand Creek
Interstate 270
First Creek
Second Creek
Third Creek
Burlington Ditch
Brantner Gulch
Commerce City
Derby
Henderson
Aberdeen
Aspen Hills
Buffalo Run Golf Course
Rocky Mountain Arsenal Nat'l Refuge
Denver International Airport
Derby Lake
Barr Lake State Park
Green Valley Ranch Golf Club
Green Valley Ranch Blvd
Pena Blvd
E 128th Ave
E 124th Ave
E 120th Ave
E 112th Ave
E 104th Ave
E 100th Ave
E 97th Ave
E 88th Ave
E 78th Ave
E 72nd Ave
E 64th Ave
E 62nd Ave
E 58th Ave
E 56th Ave
E 51st Ave
E 92nd Ave
E 81st Ave
Thornton Pkwy
E Eppinger Blvd
Randolph Pl
E Maxwell Pl
E Prairie Meadow Dr
Andrews Dr
Parkfield
E 53rd Ave
Havana St
Peoria St
Tower Rd
Chambers Rd
Quebec St
Yosemite St
Colorado Blvd
Washington St
Welby Rd
Riverdale Rd
McKay Rd
Jaycee Park
Woodglen Park
Northaven Park
Eastlake Shores Park
Thornton Recreation Center Fields
Fox Run Open Space
Adams County Community Park
Pioneer Park
Fairfax Park
Rotella Park
Prairie Gateway Open Space
Victory Crossing
Adams City High School
Dick's Sporting Goods Park
Shops at Northfield
Outlook
Buckley Crossing
Key Map
Brighton
Thornton
Denver
Aurora
Legend
Streams
Drinking Water Well Depth (ft)
0 - 50
50 - 100
Alluvial Aquifer
Commerce City Boundary
Major Dischargers
Note: PFC contamination was noted in municipal wells along Quebec Parkway near Interstate 270.
The Aurora Sand Creek Water Reclamation Facility is located upstream Sand Creek, outside the boundary of this map.
0
0.75
1.5
Miles
Pinyon
DRINKING WATER WELLS
Colorado Discharge Permit System
Permit #CO0001147
Commerce City, Colorado

Select Water Quality Comparisons

January 17, 2022



Pinyon

STREAM MONITORING STATIONS

Water Quality
Commerce City Environmental Services
Commerce City, Colorado

Site Location: Adams County, Colorado, USA	Drawn By: PJW / Figure: 1
Pinyon Project Number: 1/21-1435-01	Reviewed By: CEB / Date: 10/13/2021

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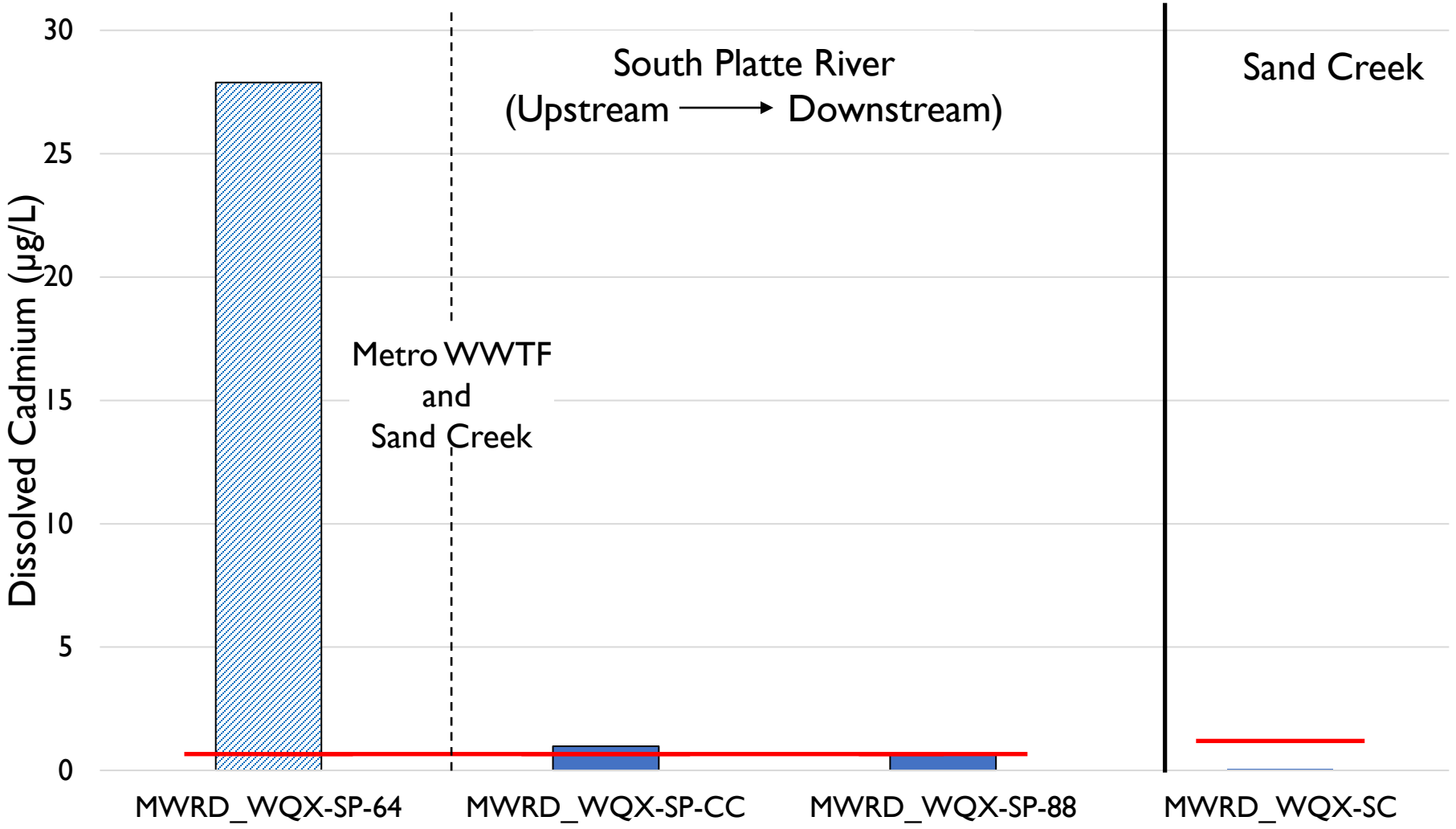
Surface Water Cadmium Concentrations – South Platte River



Note: Water quality standards are sourced from existing Metro (South Platte River) and Suncor (Sand Creek) discharge permits.

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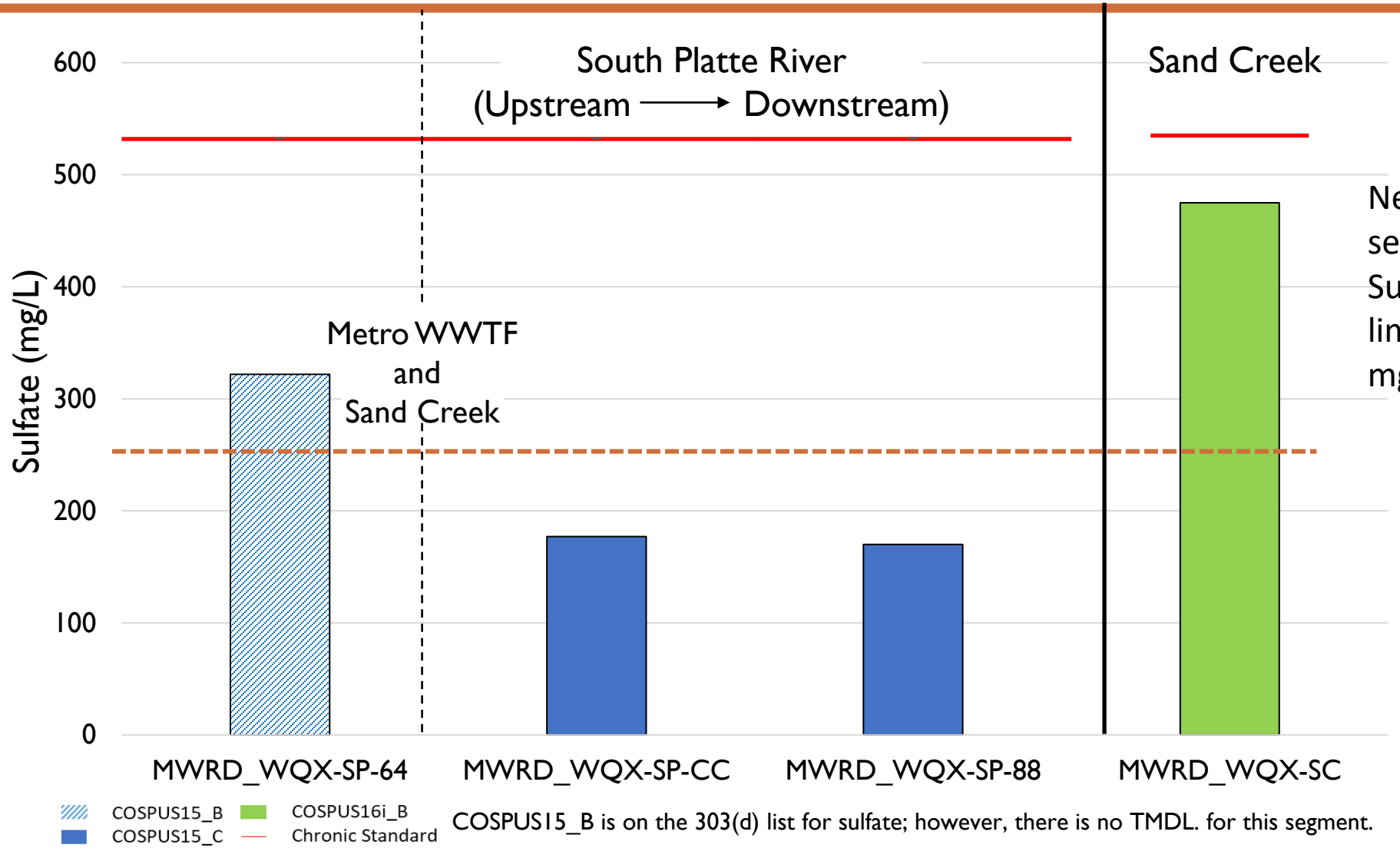
Surface Water Cadmium Concentrations – South Platte River

- Surface water cadmium concentrations are over 25 times higher above the Metro WWTF (28 ug/L) than below the WWTF.
- Below the Metro WWTF and Sand Creek confluence, concentrations are 1.0 ug/L compared to the standard of 0.67 ug/L.
- No cadmium concentrations were monitored in Sand Creek
- Results suggest high cadmium concentrations may be from groundwater above the Metro WWTF discharge.
- Appears that Metro WWTF discharge and Sand Creek are diluting upstream cadmium concentrations.

Surface Water Sulfate Concentrations



New sulfate standard set = to 250 mg/L. Suncor draft sulfate limit is set equal to 250 mg/L.

COSPUS15_B is on the 303(d) list for sulfate; however, there is no TMDL. for this segment.

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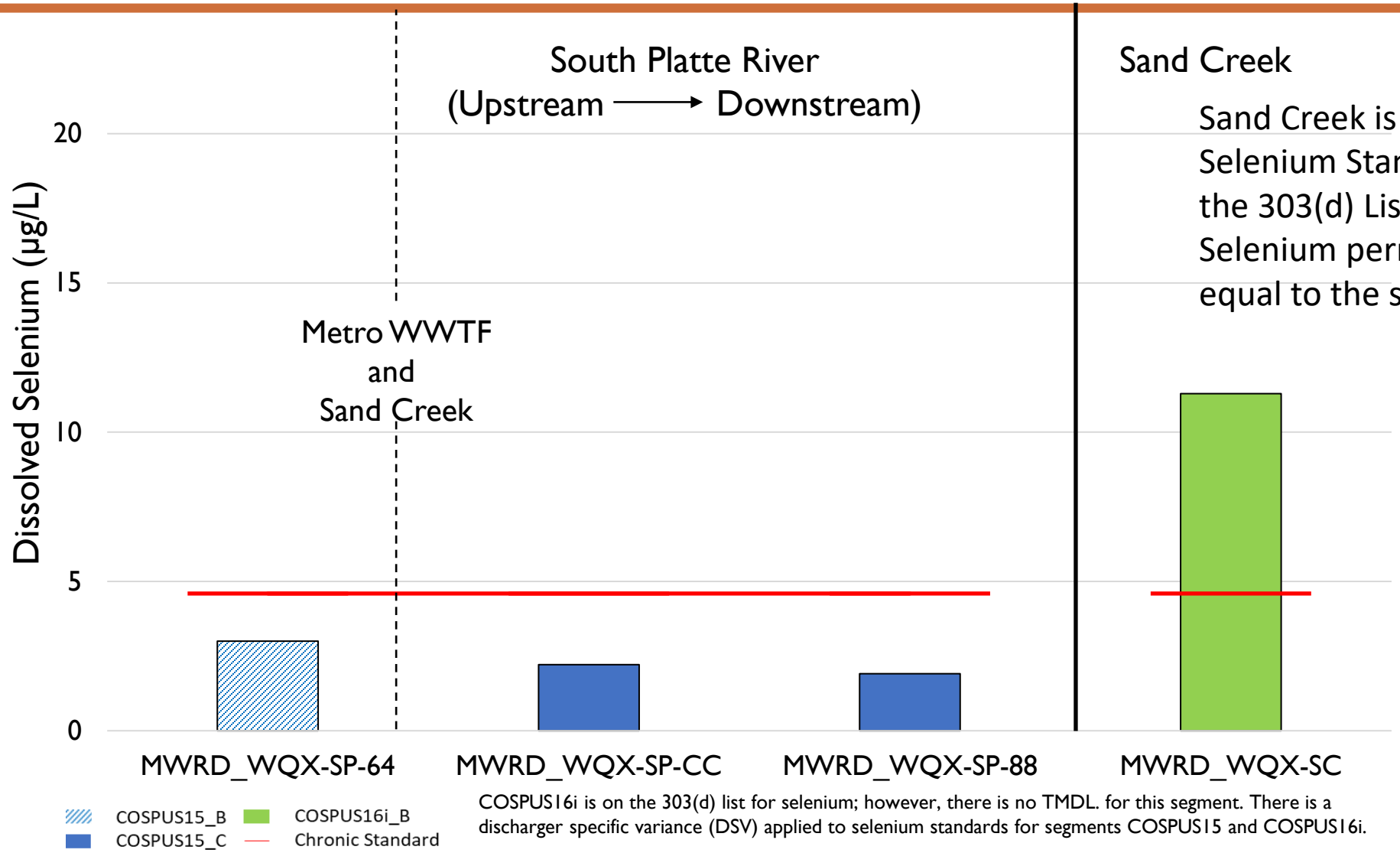
Surface Water Dissolved Selenium Concentrations



Sand Creek is exceeding the Selenium Standard and is on the 303(d) List. The draft Selenium permit limit is equal to the standard.

COSPUS16i is on the 303(d) list for selenium; however, there is no TMDL. for this segment. There is a discharger specific variance (DSV) applied to selenium standards for segments COSPUS15 and COSPUS16i.

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