



Draft water quality permit renewal Suncor Refinery



About Suncor and water

[¿Desea leer este en español? Haga clic aquí.](#)

The Suncor facility is a petroleum refinery in Commerce City, Colorado. It makes gasoline, jet fuel, diesel fuels, and asphalt. The facility is along the banks of Sand Creek, close to the South Platte River. The Burlington Ditch crosses through the property.

The contaminated groundwater at the site has petroleum products, like benzene, as well as toxic chemicals known as PFAS. The Hazardous Materials and Waste Management Division supervises the groundwater cleanup.

Discharge permit basics

Discharge permits limit the amount of used water from the facility, treated groundwater, and stormwater that Suncor can put into Sand Creek. The permit will better protect the creeks and rivers surrounding the facility.

Major changes

→ Combined wastewater and stormwater permit.

The facility had two separate permits issued in 2012. This renewal combines them into one permit (CO0001147).

→ Per- and Polyfluoroalkyl Substances (PFAS).

PFAS are a group of human-made chemicals with thousands of compounds. These chemicals have been used for decades in firefighting foams and common products. Health effects from these chemicals may include pregnancy complications, developmental effects, and liver and kidney effects. Additionally, there is evidence linking exposure to PFAS to certain cancers. This [CDPHE FAQ](#) gives more information.

In July 2020, Colorado's Water Quality Control Commission issued [Policy 20-1, Policy for Interpreting the Narrative Water Quality Standards for PFAS](#) (July 14, 2020). This policy established specific limits for PFAS to protect drinking water supplies, like the South Platte River.

- PFOA/PFOS/PFNa and their parents -- 70 parts per trillion (ppt)
- PFXs and parents -- 700 ppt
- PFBS and parents -- 400,000 ppt

A large amount of firefighting foams containing PFAS are used on the Suncor property. Suncor's groundwater has high levels of PFAS: as of 2020, levels in some groundwater wells were above 1,000 ppt for PFOA+PFOS. When Suncor treats this groundwater and releases it into Sand Creek, it has lower levels of PFAS but those levels are still above the limits referenced above. Sand Creek also has high levels of PFAS, as can be seen on this January [2021 Suncor map](#). Suncor currently is storing 28,055 gallons of the foam on their property and can legally continue to use it for firefighting and training at this time.

A key goal of the permit is to limit the discharge of PFAS to state waters. The draft permit includes PFAS limits for the facility's process water outfalls based on Policy 20-1. The limits at the facility's main Outfall 20 become effective immediately when the permit is issued. The limits at the other process water outfalls become effective one year later. Suncor is required to monitor for PFAS at process water outfalls weekly. The permit does not include numeric limits for stormwater outfalls, but it does ban PFAS foams from entering Suncor's stormwater management system. The permit also requires Suncor to monitor for PFAS monthly at stormwater outfalls.

→ **Re-classifying stormwater outfalls as process water outfalls.**

During the [June EPA inspection](#), the Environmental Protection Agency (EPA) found that Suncor was also releasing other waste into some of its stormwater pipes, known as "outfalls" (Outfalls 023A, 004A and 026A). This permit now treats those outfalls as process water outfalls, not stormwater outfalls. With this change, these outfalls get the same or similar limits as Suncor's largest outfall (Outfall 20).

→ **New limits and monitoring requirements for organic chemicals associated with petroleum refining.**

The draft permit includes new limits for many dangerous organic chemicals related to petroleum refining. The permit also includes new monitoring requirements for these chemicals. Some of these organic chemicals can cause cancer, cell mutations, birth defects, and/or death for aquatic life and wildlife.

→ **New or more robust limits to protect aquatic life.**

The draft permit includes new monitoring requirements and limits for metals that can harm fish. These metals include aluminum, cadmium, chromium, and iron. More stringent limits exist for arsenic, iron, mercury, and silver. Thorough toxicity testing will occur monthly instead of quarterly.

→ **New limits for pollutants within commercial chemicals.**

Suncor uses 41 separate commercial chemicals in its industrial processes. Many of these chemicals were not authorized in its previous permit. This permit sets limits for the pollutants found in these chemicals.

→ **New limits for stormwater outfalls.**

The permit includes new limits at all the stormwater outfalls for pollutants like benzene and BTEX.

→ **New conditions to prevent future spills, unpermitted discharges, and maintenance failures.**

The Suncor site has frequent problems with poor maintenance, spills, and violations. These often become worse during site shutdowns (i.e. turnarounds). The draft permit seeks to prevent future spills and improve maintenance. To do this, frequent facility and pond inspections are required. An *asset management plan* and a *turnaround plan* will also be required. Under the *asset management plan*, Suncor will be required to map and do an inspection using a special camera for all of the Suncor facility's pipes and conduits, and map all of the abandoned pipes. They will also be required to create and put in place a schedule for their water treatment equipment to make sure it is maintained and replaced when needed.

→ New limits and conditions to prevent the illegal release of contaminated groundwater to Sand Creek and the Burlington Ditch.

The draft permit requires that Suncor frequently inspect their property and review data for evidence of seeps and other illegal releases of contaminated groundwater to surrounding waters. If a seep or illegal release is identified, Suncor may have to apply for a permit modification to add it to their permit. To specifically protect the Burlington Ditch, the permit allows three years to line the Burlington Ditch or conduct a study to demonstrate that groundwater is not, and has not, seeped into the Burlington Ditch.

→ Conditions to keep the public informed.

The permit requires that any spills that must be reported to the division be reported to the public as well. These reports will be sent through [Suncor's existing text program](#).

→ Antidegradation.

The permit requires that Suncor apply to modify their permit if the Water Quality Control Commission gives Segment 15 of the South Platte River antidegradation protections. (Sand Creek already has antidegradation protections.)

Public comment period / public meeting opportunities

Written comment

There are two ways to submit feedback on the permit:

- You can use [this online comment form](#); OR
- For longer comments, [use this comment template](#) and [email the document to the division](#). Please submit your comments in Microsoft Word format. Do not submit comments in PDF format. You can also attach other documents to the email, but please reference them in your comments.

You must submit your comments to CDPHE no later than February 10, 2022.

Educational meeting (to ask questions about the draft permit)

The division will host a [virtual educational meeting on Nov. 18, 2021, 6:30-8 p.m.](#), to review the details of the draft permit. Use [this registration link](#) for this meeting.

Once registered, you will receive a confirmation email with instructions for joining the meeting, and you can add it to your calendar at that time.

Formal public comment meetings (to give comments on the draft permit)

The public must request a public meeting. To request a public meeting, please [email the division](#) by Dec. 9, 2021, with the request.

The division plans on hosting two virtual formal public comment meetings on:

- Thursday, Dec. 9, 2021, starting at 6:30 p.m.
- Saturday, Dec. 11, 2021, starting at 9:30 a.m.

In order to speak at these meetings, you must use [this online registration form](#) and sign-up no later than 9:00 p.m. on Thursday, December, 9, 2021. Each speaker will have three minutes to provide oral comments. We encourage stakeholders to provide written comments as well if oral comments may take longer than three minutes.

More information

Please visit the [Suncor water quality permits page](#) for more information.