

Park City Municipal Corporation PFAS in Drinking Water

Executive Summary

June 15, 2022, the United States Environmental Protection Agency (USEPA) issued new interim lifetime Health Advisories (HAs) for two man-made chemicals in drinking water and finalized two HAs for two other chemicals. All four chemicals are part of a group of chemicals commonly referred to as PFAS, which stands for “per- and polyfluoroalkyl substances”. The full announcement from the USEPA can be found at [this link < https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan >](https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan). This action is relevant to Park City because the groundwater we extract from three of our wells contains measurable levels of two PFAS, specifically perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS), that are above the interim HAs announced by the USEPA. By nature of what a lifetime HA is, the presence of PFAS in the City’s groundwater at the levels noted below by no means constitutes an immediate threat to public health. By all measures, the City’s groundwater remains fully suitable for consumption by the City’s residents and businesses. Nonetheless, the City takes this development seriously and will be working with the State of Utah’s Department of Environmental Quality’s Division of Drinking Water (DDW) to identify and implement a proper response.

Our water quality scientists are evaluating the potential that fluorocarbon ski wax may be responsible for low level PFAS concentrations in groundwater.

The City has been monitoring for PFAS in its sources since 2019 and has detected no PFAS in any of our other sources including surface water, tunnel waters or Spring water.

As we navigate this matter and confer with the State’s Division of Drinking Water on the necessary and appropriate actions to be taken, we want to ensure that all City residents and businesses are fully informed of this matter, and of the actions undertaken by the City to address it. The following presents brief discussions of PFAS, the new interim HAs, and their relevance to the City’s drinking water supply. Please listen to [discussions regarding PFAS in the wells <https://www.kpcw.org/park-city/2022-06-18/forever-chemicals-detected-in-park-city-groundwater-state-and-federal-regulations-expected-later-this-year >](https://www.kpcw.org/park-city/2022-06-18/forever-chemicals-detected-in-park-city-groundwater-state-and-federal-regulations-expected-later-this-year) following the June 16, 2022 City Council meeting on KPCW. In addition, please scroll to the bottom of this page for links to additional information on PFAS from the Centers for Disease Control and Prevention (CDC), the USEPA, and regarding ski wax PFAS bans.

What are PFAS?

PFAS is a collective name for a large group of chemicals introduced into the market since the 1940's and have made their way into a large number of consumer and industrial products. These chemicals have unique properties. For example, when incorporated into fabric coatings, PFAS make the fabric water-repellent and prevent staining. For this reason, they have been incorporated into clothing, carpets, furniture, and other products. PFAS also tolerate high temperatures, which is why they are key components of non-stick cookware. PFAS is also found in food wrappers and food packaging. PFAS are also the main chemical ingredient in several types of fire-fighting foam products and various other industrial products that benefit from their unique properties.

Consumers can be exposed to PFAS by their use of and contact with the many PFAS-containing products listed above. However, unfortunately PFAS have also spread into the natural environment in many communities via water runoff from various sources such as airports that used fire-fighting foam, landfills that contain PFAS-containing products, and occasional releases from industrial users.

Recent research has also determined that PFAS are key ingredients in ski wax products. [A study conducted at Colby College <https://www.sciencedirect.com/science/article/pii/S0045653520322736>](https://www.sciencedirect.com/science/article/pii/S0045653520322736), a ski race location in Maine, found PFAS compounds that match those found in Park City's well water. Earlier this year, the USEPA issued an [enforcement alert <https://www.epa.gov/system/files/documents/2022-01/pfasskiwax.pdf>](https://www.epa.gov/system/files/documents/2022-01/pfasskiwax.pdf) that recognizes the ski industry has banned use of fluorinated ski wax in competition from all disciplines in North America beginning with the 2020-21 ski and snowboard season. Local wax shops have also indicated that they were removed from the market over the last few years. This should considerably reduce continued PFAS prevalence in mountain towns across the west.

Sampling of water sources across the United States shows that PFAS have found their way to groundwater supplies and some surface water supplies throughout the country. Many chemicals degrade in the environment over time. However, PFAS are highly stable in the environment by nature of their special properties, which is why they are sometimes referred to as "forever chemicals".

What is a USEPA's lifetime health advisory level and what does it mean?

In October 2021, the USEPA published a document titled: "*PFAS Strategic Roadmap: EPA's Commitments to Action 2021–2024*". The document can be found at [this link](https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf). <https://www.epa.gov/system/files/documents/2021-10/pfas-roadmap_final-508.pdf>. In this document, the USEPA outlines its plan to propose national primary drinking water standards for PFOA and PFOS by Fall 2022 and finalize the standards by Fall 2023. The document also noted that the USEPA would publish health advisories for two other PFAS by the Spring of 2022, specifically perfluorobutane sulfonic acid (PFBS) and a subgroup of chemicals referred to as GenX.

As part of the process of developing a drinking water standard, the USEPA conducts a toxicity assessment of the target chemical. Upon completion of the toxicity assessment, the USEPA may issue a health advisory for the chemical in question before its drinking water standard is developed. A lifetime health advisory represents the level of a constituent in drinking water below which adverse health effects are not expected to occur over a lifetime of water consumption. A health advisory is not a drinking water standard because it does not include other assessments that the USEPA conducts in the process of developing a standard. The USEPA does not require water agencies to maintain constituents below their health advisory levels. However, advisory levels may prompt water agencies to increase the monitoring of their water supplies and assess the potential need to install treatment systems, and to understand the costs of these systems to the communities they serve.

In 2016, the USEPA issued a health advisory for the sum of the concentrations of PFOA and PFOS in water at 70 parts-per-trillion (ppt). A ppt is a concentration expression. For example, one drop in a 55-gallon barrel of water is equivalent to 240,000 ppt. In the June 15 announcement, the USEPA issued separate and lower lifetime health advisories for PFOA at 0.004 ppt and for PFOS at 0.02 ppt. The USEPA announcement also included new lifetime health advisories for GenX at 10 ppt and for PFBS at 2,000 ppt.

What are the PFAS levels in the City's drinking water?

The City's water supplies include Weber River water upstream of Rockport Reservoir that is treated at the Quinns Junction Water Treatment Plant (WTP), Thiriot Spring water, Spiro and Judge tunnel waters to be treated at the 3Kings WTP currently under construction, and groundwater extracted from three wells: the Park Meadows Well, the Divide Well, and the Middle School Well. The City has been monitoring for PFAS in its

sources since 2019 and has detected no PFAS in any of our surface water, tunnel waters or Spring water. Some PFAS were detected in our groundwater. The levels measured have been reported in the City's 2021 Water Quality Consumer Confidence Report

<<https://www.parkcity.org/home/showpublisheddocument/63322/637908117051800000>>. Specifically, the following are the maximum levels of PFOA, PFOS, PFBS, and GenX, in ppt, measured in the City's three groundwater wells compared to the newly released lifetime health advisories:

	New Lifetime Health Advisory Level, ppt	Highest level measured in ppt		
		Park Meadows Well	Divide Well	Middle School Well
PFOA	0.004	2.7	5.4	4.6
PFOS	0.02	Not Detected	7.2	4.9
PFBS	2,000	Not Detected	2.8	3.5
GenX	10	Not Detected	Not Detected	Not Detected

As shown in the table above, the maximum levels measured in the City's three wells are well below the 2016 health advisory of 70 ppt for the sum of PFOA and PFOS. However, the levels of PFOA and PFOS are above the new lifetime health advisory levels shown in the table. The levels of PFBS are far below the lifetime health advisory of 2,000 ppt, and GenX has not been detected in any of the groundwater wells.

What actions are the City and others taking about PFAS?

By nature of what a lifetime health advisory is, the presence of PFAS in the City's groundwater at the levels noted above by no means constitutes an immediate threat to public health. By all measures, the City's groundwater remains fully suitable for consumption by the City's residents and businesses.

Nonetheless, the City takes this development seriously and will be working with the State of Utah's Department of Environmental Quality's Division of Drinking Water (DDW) to identify and implement a proper response. To that end, since the issuance of the advisories by the USEPA, DDW has already communicated with the City and other Utah water systems on this matter stating that: *"We [DDW] are in the process of working to understand what the new advisory levels mean for Utah, and are committed to supporting water systems if in the future action is needed."*

In the meantime, the City will continue to closely monitor its groundwater for PFAS levels and share the results with the State and the public. A targeted public information campaign is being considered regionally to limit further use and negative impacts of ski wax on the local environment. In addition, the City will begin developing a contingency plan to prepare for the possible issuance of PFAS drinking water standards later this year or early 2023 that may be below the PFAS levels in the City's groundwater.

Where can I get additional information on PFAS?

The following links are for additional information on PFAS from the Centers for Disease Control and Prevention (CDC) and the USEPA:

CDC: <https://www.atsdr.cdc.gov/pfas/index.html>

USEPA: <https://www.epa.gov/pfas>

Additional information about ski wax ban can be found at these links:

<https://abcnews.go.com/Sports/wireStory/instant-testing-toxic-ski-waxes-olympics-82485861>

<https://www.boisestatepublicradio.org/sports-recreation/2022-02-22/ski-wax-industry-giving-forever-chemicals-the-boot>

<https://www.outsideonline.com/outdoor-adventure/snow-sports/nordic-skiing-fluorinated-wax-swix/>