

State Agencies Issue Consumption Advisory for All Fish Species on Yellowstone River Near Train Derailment

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BILLINGS – The Fish Consumption Advisory Board, consisting of representatives from Montana Department of Public Health & Human Services (DPHHS), Montana Department of Environmental Quality (DEQ) and Montana Fish, Wildlife & Parks (FWP), has issued a consumption advisory on all fish species in the Yellowstone River from Indian Fort Fishing Access Site (FAS) near Reed Point to the Highway 212 bridge in Laurel. Various polycyclic aromatic hydrocarbons, or PAHs, were detected at levels high enough to warrant this advisory for all fish species, both game and nongame.

Sampling Results

FWP crews collected longnose suckers, shorthead redhorse, rainbow trout, brown trout and mountain whitefish from areas upstream and downstream of the June 24 train derailment site at Twin Bridges Road railroad bridge. Multiple species showed levels of various PAHs high enough to warrant an advisory to avoid all consumption. Specific PAHs found in these fish include naphthalene, found in multiple species, and 1- and 2-methylnaphthalene and acenaphthylene found only in mountain whitefish. Fish were collected 6.5 river miles upstream of the derailment site near Indian Fort FAS, and 6.2 river miles downstream near Holmgren FAS.

FWP crews previously collected rainbow trout and mountain whitefish from the Yellowstone River below the derailment site to assess human consumption restrictions as a follow-up to the train derailment. This sampling showed elevated levels of phenanthrene, another PAH, in mountain whitefish and a consumption advisory was put in place on Aug. 11 to avoid all consumption of this fish species and motivated the agency to conduct additional sampling. Phenanthrene was not found in any fish during the most recent sampling.

Many species of fish, especially brown and rainbow trout, found in this section of the Yellowstone River migrate seasonally for spawning and to find colder water in the warmer summer months. Out of an abundance of precaution and unknown conditions in adjacent sections of the river, those with specific concerns may want to avoid consuming all species of fish from the Yellowstone River at any location until more is known on the severity and prevalence of this contamination.

Next Steps

The source of the PAHs remains unknown. Determining a specific source could be challenging, as PAHs, including those found in these fish, are present in many common materials. Some PAHs occur naturally in the environment, especially in the shale rock common in the Yellowstone River Basin. PAHs are also found in products such as oil, gas, plastics, and pesticides—and are produced through combustion of these products.

Further testing is still needed to determine the potential contamination source and long-term guidance. FWP plans to expand sampling on the Yellowstone River to further understand the extent of PAHs for human consumption concerns. Final plans for this additional sampling are still being discussed by FWP, DEQ, and DPHHS, but will include sampling fish from locations on the Yellowstone River further upstream and further downstream of the derailment site.

The U.S. Environmental Protection Agency and the International Agency for Research on Cancer have classified naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene as possibly cancer-causing in humans. The other two PAHs that have been detected in fish tissue samples, phenanthrene and acenaphthene, have not been classified as cancer-causing chemicals. Other health effects from ingesting high levels of PAHs that have been shown in animal studies include effects on the gastrointestinal system, immune system, reproductive system, kidneys, and skin. These effects from eating fish have not been recorded in humans.

For more information on PAHs, including the specific PAHs found in the fish tissue samples, visit: www.atsdr.cdc.gov/csem/polycyclic-aromatic-hydrocarbons/health_effects.html.

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