



Follow-up Evaluation of the Potential Health Risks Associated with Recreational Use of Willow Springs Ponds

June 2012

The Hazardous Materials and Waste Management Division (HM&WMD) of the Colorado Department of Health and Environment (CDPHE) requested assistance from the Colorado Cooperative Program for Environmental Health Assessments (CCPEHA) to evaluate the potential health hazards associated to fish tissue and water quality at the Willow Spring Ponds (WSP) site. The purpose of this evaluation is to update past health consultations by reviewing the available fish tissue and water quality data collected since the ponds were reopened and determine if fish consumption still poses unacceptable theoretical cancer risk for high-use anglers.

Site Background

- WSP is located within Fountain Creek Regional Park in Fountain, Colorado. In 1996, the source water for the ponds, Widefiel Aquifer, was found to be contaminated with tetrachloroethene (PCE) from industrial activities of the Schlage Lock (Schlage Lock) manufacturing company.
- In September 1997, the ponds were closed to fishing by the El Paso Board of Commissioners. Remediation by mechanical aeration to remove PCE from the ponds has been ongoing since 1998. Past evaluation indicated that PCE in fish taken from the ponds could result in excessive theoretical cancer risks for individuals consuming substantial amounts of certain types of fish. It was recommended that the ponds remained closed to fishing until more current fish tissue data was collected and analyzed for PCE (ATSDR 2006).
- In 2007, an additional health consultation, based on new fish tissue data, determined that fish consumption from WSP could harm the health of high-end anglers due to excessive theoretical cancer risks associated with eating large amounts of certain fish from the ponds. However, it was also concluded that some types of fish from WSP could safely be consumed within limits (ATSDR 2007).
- Based on this conclusion and other actions taken by Schlage Lock to further control contamination, Schlage Lock, El Paso County, and the State of Colorado (Division of Wildlife) entered into a settlement agreement in January 2007, which led to the reopening of the Ponds under a fish consumption advisory issued by the CDPHE.
- The purpose of this evaluation was to determine if fish consumption at WSP still posed a health hazard for high-end anglers based on fish tissue data collected since the ponds were reopened under the fish consumption advisory.

What did CCPEHA find in the Health Consultation?

CCPEHA has reached the following two conclusions based on the evaluation of available fish and surface water data collected at WSP site:

- *It cannot currently be determined if consuming fish caught from Willow Springs Ponds could harm people's health.* This conclusion was reached because the recent fish tissue data collected from Willow Springs Ponds is inadequate to evaluate the public health implications of fish consumption. Although we cannot make definitive conclusions regarding the public health implications of consuming the fish from the pond, the PCE levels found in these fish (if present at all) were at or below the reporting limit of 5 ppb which is below the CDPHE action level of 5.7ppb (at 1×10^{-5} cancer risk level). Under these assumptions, consumption of PCE in fish at the reporting limit would result in a theoretical lifetime excess cancer risk of 8.77×10^{-6} (or 9 excess cancer cases in a million people). These risks would result in a low or very low increased risk of developing cancer. However, it should be noted that these risks are highly uncertain because of the inadequate data (e.g., poor analytical quality) and may not be representative of the actual risk (i.e., over- or underestimate risk).
- *Swimming and/or wading in Willow Springs Ponds is not likely to harm people's health.* This conclusion was reached because the estimated non-cancer and cancer exposure doses are well below acceptable levels for PCE. This indicates a very low risk of developing cancer and non-cancer adverse health effects associated with PCE exposure.

What's next?

- CCPEHA will make the findings of this document available to the public and other stakeholders.
- CCPEHA will provide appropriate health education activities on the findings of this health consultation to stakeholders and the community.

- Upon request, CCPEHA will review any additional fish tissue and/or water data that is collected from Willow Springs Ponds and update the health consultation accordingly.

FREQUENTLY ASKED QUESTIONS:

What is a health consultation? A health consultation provides advice on a specific public health issue related to real or possible human exposure to toxic material. A Health Consultation is a way for the Colorado Department of Public Health and Environment to respond quickly to a need for health information on toxic substances and to make recommendations for actions to protect the public's health. Health Consultations may consider:

1. The levels (or "concentrations") of hazardous substances;
2. If and how people might be exposed to contamination (through "exposure pathways" such as breathing air, drinking or contacting water, contacting or eating soil, or eating food);
3. The harm the substances might cause to people (or the contaminants' "toxicity");
4. If and how working or living nearby might affect people's health; and
5. Other dangers to people, such as unsafe buildings, explosive hazards, or other physical hazards.

Where can I find this health consultation?

An electronic copy of this health consultation can be found at: <http://www.cdphe.state.co.us/dc/envtox/ccpehasites.html>
To request a free copy of this health consultation or for more information about the health consultation, please feel free to contact Thomas Simmons, Health Assessor, at 303-692-2961. For other site-related concerns, please call Colleen Brisnehan, CDPHE Site Project Manager, at 303-692-3357(direct) or toll free at 1-888-569-1831, ext. 3357.

What is tetrachloroethene (PCE)? Tetrachloroethene is a manufactured chemical that is widely used for dry cleaning of fabrics and for metal-degreasing. It is also used to make other chemicals and is used in some consumer products. It is a nonflammable liquid at room temperature. It evaporates easily into the air and has a sharp, sweet odor.