

**2021 Annual Review of Policies Guiding Fish Consumption Advisories**

**Virginia Department of Health - Office of Environmental Health Services**

**July 20, 2021**

## VDH-OEHS-2021 Annual Review of Policies Guiding Fish Consumption Advisories

## Executive Summary

The Code of Virginia §32.1-248.01 directs the Virginia Department of Health (VDH) to develop a written policy, which shall be revised annually, that identifies the level of concern for certain toxic substances in fish that the Department will use to issue a fish consumption advisory. This annual review was conducted in July 2021 and included a review of current guidelines and applicable science related to polychlorinated biphenyls (PCBs), polybrominated diphenyl ethers (PBDEs), mercury, dioxin, and Kepone. VDH does not recommend changing any of the current fish consumption advisory guidelines.

## Introduction

Virginia has many bodies of water with abundant fish available for consumption by recreational fishermen. However, natural, intentional, and unintentional releases of chemicals into many of the state's waterways have resulted in fish that are contaminated with elevated levels of toxic chemicals. Currently, mercury and PCBs continue to be the primary contaminants found in fish tissue resulting in issuing a fish consumption advisory. The VDH determines the level of concern for each contaminant in fish tissue by reviewing the current toxicity data on each contaminant and what we know about consumption habits of recreational fisherman. Additionally, the Department of Game and Inland Fisheries and the Department of Environmental Quality are engaged before issuing a fish consumption advisory.

## Background

In October 2000, pursuant to § 32.1-248.01 of the *Code of Virginia*, the VDH published guidelines for issuance of fish consumption advisories due to contamination of fish with PCBs, polybrominated diphenyl ethers (PBDEs), mercury, dioxin, and Kepone. The initial guidelines established the criteria and contaminant levels of concern that VDH would use for determining whether a fish consumption advisory should be issued for certain fish species in state waters. Yearly, VDH reviews the guidelines' criteria and levels of concern for determining whether these toxic substances in fish warrant issuing a fish consumption advisory.

## Findings

In July 2021, the VDH State Public Health Toxicologist reviewed the current guidelines and applicable science related to PCBs, PBDEs, mercury, dioxin, and Kepone. The most current guidelines are available on the Virginia Regulatory Town Hall through the following links: [dioxin](#), [Kepone](#), [mercury](#), [PBDEs](#), and [PCBs](#). Below is the current list of contaminants and associated action levels that prompt the issuance of a fish consumption advisory in Virginia:

**PCBs** – When PCBs levels in fish range from 100 to below 500 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ), VDH recommends limiting consumption of contaminated fish species to two, 8-

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oz meals per month. When levels equal or exceed 500 µg/kg in fish, VDH recommends avoiding consumption of contaminated fish species.

**PBDEs** – When PBDEs levels in fish range from 0.5 to below 1.0 milligrams per kilogram (mg/kg), VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels equal or exceed 1.0 mg/kg in fish, VDH recommends avoiding consumption of contaminated fish species.

**Mercury** – When mercury levels in fish range from 0.5 to below 1.0 mg/kg, VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels range from 1.0 to below 2.0 mg/kg, VDH recommends limiting consumption to one, 8-oz meal per month. When levels equal or exceed 2.0 mg/kg in fish, VDH recommends avoiding consumption of contaminated fish species.

**Dioxin** – When dioxin levels in fish range from 2.0 to below 5.0 nanograms per kilogram (ng/kg), VDH recommends limiting consumption of contaminated fish species to two, 8-oz meals per month. When levels range from 5.0 to below 10 ng/kg, VDH recommends limiting consumption to one, 8-oz meal per month. When levels equal or exceed 10 ng/kg, VDH recommends avoiding consumption of contaminated fish species.

**Kepone** – VDH is currently using the U.S. Food and Drug Administration action level of 0.3 mg/kg. When Kepone levels in fish are 0.3 mg/kg or higher, VDH recommends avoiding consumption of contaminated fish species.

### Conclusion

Based on the review of current guidelines and applicable science, VDH recommends that the current fish consumption advisory guidelines remain the same at this time.