

Fish mercury consumption advisories

June 2023

Summary

Table 1 provides summary statistics and screening results for mercury levels in fish samples from waterbodies currently under advisory. **Table 2** provides data and screening results for waterbodies that do not have an advisory listed as of June 2023. Mean mercury concentrations in fish fillet tissues were compared to EPA's screening value (SV) for mercury of 0.3 mg/kg. If mercury levels were above the SV, allowable monthly meal limits were calculated for adults, women of childbearing age, children 6 to 16 years old, pregnant woman, and children younger than age 6. Five sites were updated (Big Sand Wash, New Castle, Starvation Reservoir, Steinaker Reservoir, and Weber River). Small mouth bass were added to the list at Starvation Reservoir. Brown and rainbow trout were also added to Steinaker Reservoir. Largemouth bass at Steinaker Reservoir were just below the SV at 0.299 mg/kg. To be health protective, the current advisory for largemouth bass was updated based on the most recent results. **Table 3** provides updated monthly meal limits for waterbodies currently under an advisory. Six new sites were also added (Cottonwood Reservoir, Currant Creek Reservoir, Electric Lake, Newton Reservoir, Pelican Lake, and Rockport Reservoir). Cottonwood Reservoir had 2 species above the screening level, black bullhead and wiper. Only tiger trout at Currant Creek exceeded the SV. Cutthroat trout and tiger trout also exceeded the SV at Electric Lake. Largemouth bass at Newton Reservoir and smallmouth bass at Rockport Reservoir exceeded the SV. Bluegill and largemouth bass at Pelican Lake also exceeded the SV. Recommended monthly meal limits for the new advisories are provided in **Table 4**.

Recommended monthly meal limits for the general public (men older than age 16; women older than age 50), women of childbearing age (16–50 years) and children aged 6 to 16 are based on 8 ounces of uncooked fish. Pregnant or breastfeeding women and children younger than age 6 are especially vulnerable to mercury. Monthly meal limits for this population are based on a portion size of 4 ounces of uncooked fish.

Table 1. Summary statistics for mercury wet weight concentrations (mg/kg) in fish tissue samples collected from Utah waterbodies in 2021 already under advisory.

| Waterbody | Species | n | Mean (mg/kg) | Range (mg/kg) | St. Dev | Above SV* (Y or N) |
|--------------------------------|------------------------|-----------|--------------|-------------------|-------------|--------------------|
| Big Sand Wash Reservoir | Rainbow trout | 10 | 0.231 | 0.2 — 0.4 | 0.07 | No |
| Big Sand Wash Reservoir | Walleye | 10 | 0.420 | 0.3 — 0.5 | 0.05 | Yes |
| Newcastle Reservoir | Rainbow trout | 10 | 0.273 | 0.08 — 0.6 | 0.2 | No |
| Newcastle Reservoir | Small wiper | 10 | 0.685 | 0.5 — 0.9 | 0.1 | Yes |
| Starvation Reservoir | Rainbow trout | 10 | 0.084 | 0.04 — 0.2 | 0.08 | No |
| Starvation Reservoir | Smallmouth bass | 11 | 0.584 | 0.4 — 0.8 | 0.1 | Yes |
| Starvation Reservoir | Yellow perch | 11 | 0.270 | 0.2 — 0.4 | 0.08 | No |
| Starvation Reservoir | Walleye | 10 | 0.920 | 0.2 — 2 | 0.6 | Yes |
| Steinaker Reservoir | Brown trout | 11 | 0.477 | 0.3 — 0.6 | 0.1 | Yes |
| Steinaker Reservoir | Largemouth bass | 11 | 0.299 | 0.2 — 0.6 | 0.2 | No |
| Steinaker Reservoir | Rainbow trout | 11 | 0.408 | 0.2 — 0.6 | 0.1 | Yes |
| Weber River near Morgan | Brown trout | 20 | 0.312 | 0.1 — 0.9 | 0.2 | Yes |

*Screening value = SV

Results in bold exceed SV for mercury

[] New species under advisory

Table 2. Summary statistics for mercury wet weight concentrations (mg/kg) in fish tissue samples collected from Utah waterbodies in 2021.

| Waterbody | Species | n | Mean (mg/kg) | Range (mg/kg) | St. Dev | Above SV* (Y or N) |
|-----------------------------|------------------------|-----------|--------------|------------------|-------------|--------------------|
| Bear Lake | Bonneville whitefish | 17 | 0.070 | 0.03 — 0.1 | 0.02 | No |
| Bear Lake | Cutthroat trout | 20 | 0.115 | 0.04 — 0.3 | 0.07 | No |
| Bear Lake | Lake trout | 19 | 0.184 | 0.02 — 0.5 | 0.1 | No |
| Browns Draw Reservoir | Rainbow trout | 11 | 0.195 | 0.08 — 0.3 | 0.07 | No |
| Browns Draw Reservoir | Tiger trout | 11 | 0.226 | 0.2 — 0.3 | 0.06 | No |
| Cottonwood Reservoir | Black bullhead | 10 | 0.445 | 0.4 — 0.5 | 0.07 | Yes |
| Cottonwood Reservoir | Wiper | 10 | 0.378 | 0.2 — 0.7 | 0.2 | Yes |
| Currant Creek | Cutthroat trout | 11 | 0.207 | 0.1 — 0.5 | 0.1 | No |
| Currant Creek | Tiger trout | 13 | 0.527 | 0.1 — 1 | 0.4 | Yes |
| Electric Lake | Cutthroat trout | 9 | 0.513 | 0.3 — 1 | 0.2 | Yes |
| Electric Lake | Kokanee | 10 | 0.194 | 0.1 — 0.3 | 0.06 | No |
| Electric Lake | Tiger trout | 10 | 0.450 | 0.1 — 0.9 | 0.3 | Yes |
| Forsyth Reservoir | Splake trout | 10 | 0.118 | 0.09 — 0.1 | 0.02 | No |
| Forsyth Reservoir | Tiger trout | 10 | 0.124 | 0.09 — 0.2 | 0.02 | No |
| Kents Lake | Cutthroat trout | 10 | 0.239 | 0.1 — 0.4 | 0.09 | No |
| Kents Lake | Rainbow trout | 10 | 0.233 | 0.1 — 0.4 | 0.07 | No |
| Kents Lake | Tiger trout | 10 | 0.209 | 0.1 — 0.3 | 0.06 | No |
| Kolob Reservoir | Rainbow trout | 10 | 0.120 | 0.08 — 0.2 | 0.03 | No |

| Waterbody | Species | n | Mean (mg/kg) | Range (mg/kg) | St. Dev | Above SV* (Y or N) |
|---------------------------|------------------------|-----------|--------------|------------------|-------------|--------------------|
| Kolob Reservoir | Tiger trout | 10 | 0.112 | 0.08 — 0.1 | 0.02 | No |
| Mantua Reservoir | Bluegill | 11 | 0.035 | 0.03 — 0.04 | 0.006 | No |
| Mantua Reservoir | Largemouth bass | 11 | 0.157 | 0.08 — 0.4 | 0.1 | No |
| Mill Meadow Reservoir | Brown trout | 9 | 0.074 | 0.05 — 0.1 | 0.02 | No |
| Mill Meadow Reservoir | Rainbow trout | 11 | 0.049 | 0.04 — 0.1 | 0.02 | No |
| Newton Reservoir | Black crappie | 7 | 0.225 | 0.08 — 0.3 | 0.07 | No |
| Newton Reservoir | Bluegill | 10 | 0.172 | 0.07 — 0.3 | 0.08 | No |
| Newton Reservoir | Largemouth bass | 10 | 0.605 | 0.3 — 1 | 0.4 | Yes |
| Newton Reservoir | Yellow perch | 10 | 0.174 | 0.09 — 0.3 | 0.06 | No |
| Oak Creek Reservoir | Brook trout | 10 | 0.233 | 0.2 — 0.7 | 0.2 | No |
| Pelican Lake | Bluegill | 10 | 0.447 | 0.2 — 1 | 0.2 | Yes |
| Pelican Lake | Common carp | 11 | 0.085 | 0.03 — 0.2 | 0.05 | No |
| Pelican Lake | Largemouth bass | 10 | 0.476 | 0.3 — 0.6 | 0.09 | Yes |
| Rockport Reservoir | Brown trout | 10 | 0.104 | 0.04 — 0.2 | 0.05 | No |
| Rockport Reservoir | Kokanee | 10 | 0.096 | 0.07 — 0.1 | 0.01 | No |
| Rockport Reservoir | Rainbow trout | 9 | 0.140 | 0.06 — 0.2 | 0.04 | No |
| Rockport Reservoir | Smallmouth bass | 10 | 0.699 | 0.3 — 1 | 0.3 | Yes |
| Rockport Reservoir | Yellow perch | 9 | 0.224 | 0.2 — 0.3 | 0.03 | No |
| Scofield Reservoir | Cutthroat trout | 11 | 0.122 | 0.06 — 0.2 | 0.06 | No |
| Scofield Reservoir | Tiger trout | 10 | 0.045 | 0.02 — 0.09 | 0.02 | No |
| Yankee Meadow Reservoir | Brook trout | 10 | 0.124 | 0.08 — 0.2 | 0.04 | No |
| Yankee Meadow Reservoir | Cutthroat trout | 10 | 0.113 | 0.09 — 0.1 | 0.01 | No |
| Yankee Meadow Reservoir | Rainbow trout | 10 | 0.088 | 0.07 — 0.1 | 0.01 | No |

*Screening value = SV

Results in bold exceed SV for mercury

Table 3. Updated consumption advisories for Utah water bodies based on 2021 sampling data.

| Waterbody | Species | Maximum meals per month | | |
|-------------------------|-----------------|-------------------------|---------------------------|-------------------------|
| | | General public | WCB*; children 6–16 years | PW*; children < 6 years |
| Big Sand Wash Reservoir | Walleye | 7 | 2 | 1 |
| New Castle Reservoir | Rainbow trout | 10 | 3 | 1 |
| New Castle Reservoir | Small wiper | 4 | 1 | Do not eat |
| Starvation Reservoir | Smallmouth bass | 6 | 2 | Do not eat |
| Starvation Reservoir | Walleye | 3 | 1 | Do not eat |
| Steinaker Reservoir | Brown trout | 6 | 2 | Do not eat |
| Steinaker Reservoir | Largemouth bass | 10 | 3 | 1 |

| Waterbody | Species | Maximum meals per month | | |
|-------------------------|---------------|-------------------------|---------------------------|-------------------------|
| | | General public | WCB*; children 6–16 years | PW*; children < 6 years |
| Steinaker Reservoir | Rainbow trout | 7 | 2 | 1 |
| Weber River near Morgan | Brown trout | 10 | 3 | 1 |

*Abbreviations: WCB = women of childbearing age; PW = pregnant and breastfeeding women

Table 4. New fish consumption advisories for Utah waterbodies based on 2021 sampling data.

| Waterbody | Species | Maximum meals per month | | |
|-------------------------|-----------------|-------------------------|---------------------------|-------------------------|
| | | General public | WCB*; children 6–16 years | PW*; children < 6 years |
| Cottonwood Reservoir | Black bullhead | 7 | 2 | 1 |
| Cottonwood Reservoir | Wiper | 8 | 2 | 1 |
| Currant Creek Reservoir | Tiger trout | 6 | 2 | Do not eat |
| Electric Lake | Cutthroat trout | 6 | 2 | Do not eat |
| Electric Lake | Tiger trout | 7 | 2 | 1 |
| Newton Reservoir | Largemouth bass | 5 | 1 | Do not eat |
| Pelican Lake | Lake bluegill | 8 | 2 | 1 |
| Pelican Lake | Largemouth bass | 6 | 2 | Do not eat |
| Rockport Reservoir | Smallmouth bass | 4 | 1 | Do not eat |

*Abbreviations: WCB = women of childbearing age; PW = pregnant and breastfeeding women