Response to Constituent
Water Quality Questions Related to Salt Lake County's Wasatch Canyons General Plan Process
Salt Lake City Department of Public Utilities
June 4, 2020

Salt Lake City Department of Public Utilities (Salt Lake City or City) is pleased to provide responses to questions posed by constituent Ms. Dea Theodore regarding the quality of our drinking water and the water in the Wasatch Mountain watersheds in Salt Lake County. Salt Lake City is a public water system and the drinking water supplier to more than 360,000 residents in Salt Lake County, and along with other government agencies monitors and protects water quality in the mountain streams and at the public's taps for public health and environmental purposes. Other agencies directly involved include the U.S. Forest Service, Utah Department of Environmental Quality (Division of Water Quality and Division of Drinking Water), and Salt Lake County (Health Department and Watershed Division).

Below are Ms. Theodore's questions in italics and the responses from Salt Lake City.

Question - What's really in our drinking water?
If Sandy City's "fluoride in our drinking water" crisis taught us anything, it is, Salt Lake County residents deserve concise information, better data, and more transparency about our drinking water.

My inquisitive mind and degree in Biology just wouldn't let go of the question, "What's really in our drinking water"?

Everyday, whether consciously or subconsciously, we look at our gorgeous Wasatch Mountains, but how often do we take the time to really find out what, in those canyons, affects our drinking water?

The Director of Salt Lake City Public Utilities confidently states:

1. It takes less than 24 hours for a drop of water at the top of the Wasatch Mountains to reach a faucet in Salt Lake City.
2. The Wasatch Canyons provide water to Salt Lake City, Cottonwood Heights, Holladay, Millcreek, and parts of unincorporated Salt Lake County.
3. By starting out with the cleanest possible source waters, we are better able to protect public health and safety.
4. Salt Lake City Public Utilities reports to the public an annual Water Quality Report that shows drinking water contaminant levels http://www.slcdocs.com/utilities/CCR.pdf

Ok, so far so good.

However, a deeper dive reveals Little Cottonwood Canyon and Big Cottonwood Canyon watersheds have been declared impaired waters by the State of Utah for Cadmium, Zinc, and Copper.

Wait! What did you just say? Did you just say our Wasatch Canyons; the pristine source of our drinking water have been listed as "impaired" waters by the State of Utah as required by the Federal Clean Water Act?
Yes, that's what records show. https://slco.org/globalassets/1-site-files/watershed/2015_slco_integratedwatershedplan_revsep2017.pdf Page 27

Salt Lake City Response

In Utah, the Environmental Protection Agency (EPA) has delegated the primary responsibility of implementing the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA) to the state. This process ensures national consistency and minimum standards while providing flexibility to states in implementing rules. The Division of Water Quality (DWQ) is responsible for implementing the CWA. The Division of Drinking Water is responsible for implementing SDWA.

These jurisdictions include a variety of programs that monitor, assess, and protect the surface water and groundwater of the state, and regulate public water systems such as Salt Lake City. As part of their CWA responsibility, the DWQ determines beneficial-use classifications for waters of the state including streams, rivers, lakes, and reservoirs. Designated beneficial use of a waterbody must consider its actual use, the ability of the water to support future uses that are not currently supported, and to meet the basic goal of the CWA that all waters support aquatic life and recreation where attainable. Based on the beneficial-use classifications, specific numeric water quality standards are applied (Utah Administrative Code [UAC] Rule R317-2-14, Table 1). Narrative standards apply to all waters with beneficial-use designations (UAC R317-2-7.2). Also, waters of the state must support beneficial uses as determined by biological assessment processes and biological criteria (UAC R317-2-7.3). Section 303(d) of the CWA requires states to identify waters that are not attaining beneficial uses according to state CWA water quality standards (UAC R317.2.7.1).

LCC and BCC from the drinking water treatment plants to the headwaters include beneficial use classifications of Class 1C -- Protected for use as raw water source for domestic water system; Class 2B-- Protect for infrequent primary contact recreation; and Class 3A-- Protected for cold water species of game fish and aquatic life R317-2-6). Currently It is impaired for metals for Beneficial Use Class 3A -- Protected for cold water species of game fish and other cold-water aquatic life, including the necessary aquatic organisms in their food chain (R317-2-14). The DWQ prioritizes protection of public health. As the metal impairments are due to violations of aquatic life criterion (Class 3A) and not violations of drinking water (Class 1C), DWQ considers the impairments as low priority.
The DWQ (801-536-4300) is a good resource for additional information regarding the DWQ Cold Water Fish impairments, priority of the impairment, and sampling.

Table 1. Designated Beneficial Uses of Utah Waters (UAC R317-2-7.2)

Class	Definition
1	**Protected for use as raw water source for domestic water systems**
1A, IB, IC	Reserved
2	**Protected for recreational use and aesthetics**
2A	Protect for frequent primary contact recreation where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.
2B	Protect for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.
3	**Protected for use by aquatic wildlife**
3A	Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
3B	Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

3C	Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
3D	Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including necessary aquatic organisms in their food chain.
3E	Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife
4	**Protected for agricultural uses including irrigation of crops and stock watering**
5	**The Great Salt Lake**
5A	Gilbert Bay. Protected for frequent primary and secondary contact recreation, waterfowl, shore birds and other water-orientated wildlife including their necessary food chain.
5B	Gunnison Bay. Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-orientated wildlife including their necessary food chain.
5C	Bear River Bay. Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-orientated wildlife including their necessary food chain.
5D	Farmington Bay. Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-orientated wildlife including their necessary food chain.
5E	Transitional Waters along the Shoreline of the Great Salt Lake. Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-orientated wildlife including their necessary food chain.

Question: But what does that impairment have to do with our drinking water and should we be concerned about these metal contaminants in our drinking water? For instance, exactly what is Cadmium?

According to GreenFacts https://www.greenfacts.org/en/cadmium/l-2/index.htm, Cadmium, in its elemental form, is a soft, silver-white metal.

Well, surely this silver-white metal is harmless to the human body, right?

Cadmium is toxic and it is not an element used by the body. It mainly affects kidneys and bones. It is also a carcinogen by inhalation. Cadmium can accumulate in the liver, kidneys, and bones, which may serve as sources of exposure later in life.

Um, so where does Cadmium come from?

Cadmium is produced mainly as a by-product of mining and, as everyone knows, lots of mining occurred in our watershed over the past 150 years.

Well, surely our water suppliers are testing for this toxic material in our drinking water; Right?

Well, maybe. It appears Salt Lake City Public Utilities samples for all contaminants only once a year; in January. They do not sample multiple times throughout the year, especially during the spring runoff when surface contaminants might be more evident. When asked about that, they say they are doing the minimum as required by law. Metropolitan Water District of Salt Lake and Sandy also sample for toxic materials. They sample at least once a month.

Salt Lake City Response

Salt Lake City does sample for metals, including Cadmium. Although the City is required by DDW to sample the finished drinking water once every nine (9) years, the City takes pride in exceeding regulatory

sampling requirements to further ensure protection of public health. The City had been sampling for these metals once a year, and recently began collecting samples for these metals twice a year, including during low flow and runoff. This includes sampling and analysis for raw water (above the treatment plant) and the finished treated water. In addition, the DWQ performs sampling as the Environmental Protection Agency (EPA) has delegated the primary responsibility of implementing the Clean Water Act (CWA) to the state. The reason Cadmium does not appear on the City's Consumer Confidence Report table is because the results were all Non-Detect, as the report only includes constituents that have been detected. The constituents that are Non-Detect are not listed.

Also, City Creek is listed as impaired for 1C Beneficial Use. The assessment date range for this was 2008 through 2013. During the assessment range, one Cadmium sample triggered this listing. This one sample was taken on October 15, 2008. Since the sample from October 15, 2008, all samples and data have been Non-Detect or below the standard. Due to the continued Non-Detect results, the DWQ has moved to delist the Cadmium impairment for City Creek. DWQ is a good resource for additional information regarding the impairment and move to delist the impairment.

Question: Surely this testing information is readily available to the public, right?
Well, yes and no. Results from the annual sampling conducted by Salt Lake City Public Utilities is summarized in an annual Water Quality Report that is published and readily available to the public. ***However, curiously, Cadmium is not included.*** *The Metropolitan Water District of Salt Lake and Sandy monitoring results are not readily available to the public. However, one can file a GRAMA request, spend hundreds of dollars in fees, and hope public officials comply with transparency laws. https://openrecords.utah.gov/*

Salt Lake City Response
The data from the DWQ, Salt Lake County, Metropolitan Water District of Salt Lake and Sandy (Metro), and Salt Lake City are available to the public. The reason Cadmium does not appear on the Consumer Confidence Report table is because the results were all Non-Detect, as the report only includes constituents that have been detected. The constituents that are Non-Detect are not listed. The purpose of why the City and Metro ask that a GRAMA request is completed is to facilitate the process in order to ensure they have appropriate tracking of such requests, and it is clear as to what exact information is requested.

Question: Well, surely Salt Lake City Public Utilities and Metropolitan Water District of Salt Lake and Sandy reports their once a year test results to Salt Lake County Health Department, Right?

Salt Lake City Response
Salt Lake City reports monthly fluoride, as required by Salt Lake County Health Regulation #33, and other monthly regulatory sampling to Salt Lake County Health (SLCo Health) and the Utah Division of Drinking Water (DDW). As for the annual regulatory sampling data, Salt Lake City and Metro report all regulatory data to the DDW. The DDW is a good resource for additional information regarding the reporting of results.