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Water Reuse Task Force
City of Boise, Idaho

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The City of Boise is working with the Idaho Department of Environmental Quality on a Recycled Water Reuse permit application.

Objectives:

There are two main drivers to obtain a recycled water permit: for regulatory compliance and to align with the City's environmental sustainability objectives.

Regulatory Compliance

Current NPDES permits (issued in 2012) contain future effluent temperature limits that the City is unable to meet. A thorough analyses of temperature compliance alternatives determined that the only strategy to ensure year-round compliance was the installation of wastewater evaporative cooling towers and chillers. In addition to the high capital cost, evaporative cooling towers and chillers consume large amounts of energy and negatively impact the environment through emissions of air pollutants and greenhouse gases. Technological chilling would create artificially cool plumes that would quickly warm to thermal equilibrium in the river downstream of the water renewal facilities and provide very little aquatic environmental benefit. The City is investigating long term management of WRF thermal loads discharged into the Lower Boise River.

Environmental Sustainability

The City of Boise has recently changed the name of the two wastewater treatment plants to the Lander Street and West Boise Water Renewal Facilities (WRFs). The objective of the renaming is to better reframe wastewater as a precious, reusable resource rather than something to discard of. Our purpose is not simply to treat wastewater, but rather to give new life to used

water. Recycling water fits into the City's objective and provides an opportunity for a better environmental outcome while also supporting economic development and our community.

Application Overview:

The City is investigating several recycled water uses including but not limited to: agricultural irrigation, groundwater recharge, industrial reuse, car washes, and landscape watering. The City has a contract in place with a local ditch company to receive all of the Lander Street WRF Class A water April 1 – November 30th. Lander Street WRF has a design flow discharge of 15 mgd (9.7 cfs). Lander Street WRF does not currently discharge Class A water and is undergoing infrastructure and treatment upgrades.

Key Regulatory Hurdles and/or Issues:

Jurisdictional Uncertainty

The Environmental Protection Agency and other agencies are in the process of reviewing and revising the definition of the term "Waters of the United States" ("WOTUS"). The rule issued in 2015 stretched the definition of WOTUS to its maximum supportable extent, The future definition of WOTUS and its applicability to man-made waterways is uncertain.

Man-made Waterways and Undesignated Waters

Idaho's rules provide that man-made waterways are to be protected for the use for which they were developed, however are not designated in IDAPA. Undesignated waters are those have not been assigned aquatic life or recreational beneficial uses. Until uses are assigned to these waters, they are presumed to support both cold water aquatic life (CWAL) and contact recreation, therefore standards that apply to these uses, apply to these waters. EPA has indicated that these preemptions are equivalent to a use designation and require a use attainability analysis to change. IDEQ, in 2017 triennial review meetings, has maintained that the use presumptions were intended to be a placeholder until the appropriate use designation could be determined.

Ideal Outcome:

The next WRF permits for the City of Boise will be issued by the Idaho Department of Environmental Quality. A combined permit for the IPDES and Recycled Water Reuse permit monitoring and reporting requirements would streamline analytical and reporting activities. For example, a combined permit would prevent the two permits from including different analytical testing methods or detection levels.