Executive Summary

The City of Nampa (City) is faced with the significant decision of how to best manage its wastewater in light of increasingly strict regulatory requirements, a fast-growing service population, and aging existing infrastructure. Each of these factors will place increasing demands on the Nampa Wastewater Treatment Plant (Nampa WWTP) and will require investments to maintain the City's desired level of service expectations. The purpose of the Nampa WWTP Facility Plan (Plan) is to describe this long-term vision and bring increased clarity to nearer-term investments. The Plan establishes the preferred approach for the City's wastewater program for decades to come. Because of the magnitude and duration of the impacts from this effort, it is critical that the recommended solution be sustainable and durable to limit the risk of stranded investments. To this end, the City implemented a three-phased approach to the overall planning process that started with understanding the existing conditions, then developing solutions to close the gaps between the current conditions and future expectations, and finally implementing ongoing processes to sustain the Plan.

Developing a sustainable and durable plan requires an acute awareness of the boundary conditions that constrain the Plan's success. The City systematically evaluated and established the conditions that define the Plan's success in four key areas: system demands, existing asset performance, financial capacity, and community interests. These boundary conditions are represented in the following critical success factors established for the Plan:

- Provide a healthy, professional environment that empowers our employees to succeed.
- Preserve our natural resources and our environment to promote a caring community where people live, work, play, worship, and raise their families.
- Anticipate future regulatory requirements by considering economic ramifications to environmental action.
- Stimulate economic development by efficient utilization of resources and providing sufficient utility capacity.
- Maintain affordable wastewater service for rate payers through long-term, fiscally-sound decision making.

Technical analyses of the existing assets' condition, asset capacities, and expected future flow and load growth were used to guide the alternatives developed and analyzed as part of the Plan. Increasing external demands, both increasingly stringent regulatory requirements and growth from domestic and industrial sectors, will require investing in the Nampa WWTP as it currently cannot meet these projected demands. Additionally, maintaining the existing level of service for existing assets will require additional investments. Combined, these items suggest that there is a gap between the current Nampa WWTP and what will be expected in the future, hence the need for additional investments.

The intent of the Plan is to establish the preferred approach to addressing increasingly stringent regulatory requirements, aging infrastructure, and continued residential, commercial, and industrial growth while meeting the stakeholder's expectations. Three primary evaluations were conducted to determine the preferred approach to addressing these needs. These evaluations have considered needed investments in the liquid stream treatment approach to meet increasingly stringent regulatory requirements and provide additional capacity for growth, how the biosolids produced from treatment can be most cost effectively managed, and how system reinvestment should occur for

existing assets. The evaluations used the business case evaluation process, which is a robust decision-making tool that considers capital, operation, risk, and benefit costs for alternatives. For each evaluation, alternatives were developed to address the gap between current conditions and future needs. These alternatives were then evaluated against the critical success factors, descripbed above, to define the next, best decision for the City. The combined results from these evaluations represent the Preferred Alternative for the City's wastewater program.

The Preferred Alternative for the Nampa WWTP is creating a recycled water program that would include the reuse of Class A recycled water for industrial and irrigation purposes. The irrigation reuse is proposed to be accomplished through discharge to an irrigation canal and will occur throughout the irrigation season. The industrial reuse water is proposed to be available year-round. Consistent with the current approach, the Preferred Alternative includes the disposal of Class B biosolids at a landfill. Finally, specific system reinvestment activities (i.e., repair or replacement of existing assets) are planned to maintain the level of service for existing facilities.

The capital improvements plan recommended from the Preferred Alternative totals $279.2M in capital investments between 2018 and 2040. The Preferred Alternative is proposed to be implemented in phases, with Phase II and Phase III Upgrades completed by 2026 and 2031, respectively. The total capital investment for this portion of the Preferred Alternative is $149.6M. A delivery schedule for these phases has been established with design activities beginning in June 2018 and the Phase II Upgrades construction beginning in 2021.