



Design Review Committee Briefing #1

Subject: Nampa WWTP Phase II/III Upgrades Background

Date: September 17, 2018

The Issue

The Nampa Wastewater Treatment Plant (WWTP) provides wastewater treatment for the residential, commercial, and industrial customers within the City of Nampa (City). The City was 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 WWTP and will require investments to maintain the City's desired level of service expectations.

Background and Analysis

The City completed the *Nampa Wastewater Program Facility Plan* (Plan) in February 2018. The intent of the Plan was 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. 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.

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 achieve the following:

- meet increasingly stringent regulatory requirements
- provide additional capacity for growth
- cost effectively manage for the biosolids produced from treatment
- an approach to 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, 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.

Potential Consequences

The capital improvements plan recommended from the Preferred Alternative totals \$279.2M (2017 dollars) in capital investments between 2018 and 2040. The Preferred Alternative is proposed to be implemented in

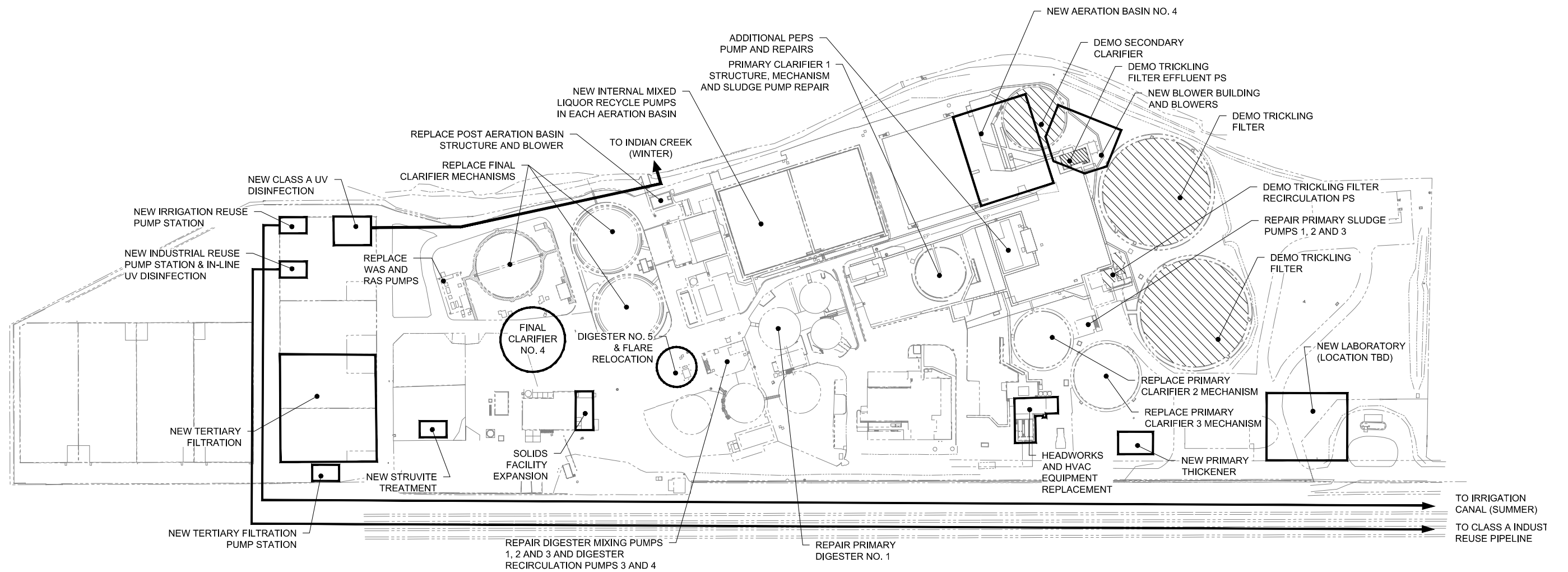
phases, with Phase II and Phase III Upgrades completed by 2026 and 2031, respectively. The total capital investment for the Preferred Alternative is \$149.6M (2017 dollars). A delivery schedule for these phases has been established with design activities beginning in August 2018 and the Phase II Upgrades construction beginning in 2021.

The Phase II and Phase III Upgrades are comprised of projects that address regulatory, condition and capacity projects at the Nampa WWTP. Throughout these phases nearly all of the existing major processes at the Nampa WWTP will be impacted. The attached figure shows the upgrades planned as part of the Phase II and Phase III Upgrades. The approach for each of these processes will be further developed through the preliminary design process.

Recommendation

This DRC briefing is intended to provide background information as the Nampa WWTP Phase II/III Upgrades commences.

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LEGEND

- RECOMMENDED UPGRADES
- EXISTING ASSETS



REPORT TITLE: CITY OF NAMPA

DATE: 11/09/2017

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FIGURE 3-7
PREFERRED ALTERNATIVE
SITE EXPANSION PLAN

