

**Nampa WWTP Phase II/III Upgrades
Design Review Committee
Thursday, January 17, 2019
Nampa Wastewater Treatment Plant | 340 W Railroad St
7:00 AM – 9:00 AM
MEETING SUMMARY**



Meeting Overview

On Thursday, January 17, 2019, the Nampa Wastewater Treatment Plant Design Review Committee (DRC) convened its fifth meeting. The objectives of this meeting were to review and discuss specific design features, as well as continue discussing project packaging and delivery options. The following is a summary of topics discussed and feedback provided at the meeting. Please see meeting materials for more information.

Meeting Summary

Welcome and Project Updates

Elizabeth Spaulding, facilitator, welcomed DRC members and reviewed the agenda. Nate Runyan, City of Nampa, provided an update on the SRF loan application, which is moving forward with no issues.

Capital Cost Discussion

Matt Gregg, Brown and Caldwell, reviewed the capital cost estimate refinement, including detailed Phase I and Phase II program and project cost developments. Matt compared these estimates to similar projects in the Treasure Valley and explained the process for further evaluating and finalizing the estimate. The approach to updating cost estimates and managing the overall program costs were discussed. If program costs come in low, it will not be necessary to use the entire SRF loan.

Questions included:

- 1) Why is there a 10% range in Class 1?
- 2) Is this assuming a Design-Bid-Build approach?
- 3) Would the City consider hiring a third-party to conduct a value engineering audit?
- 4) Will there be unallocated capacity in seven years?

Blowers Approach Recommendation

Matt Greg reviewed the final aeration blowers analysis and potential alternatives. Based on net present value, Brown and Caldwell recommends the DRC approve alternative 4, which includes 6 new blowers in a new building and allows for 2 additional blowers in the future. Please see DRC Briefing # 14 for more information. The DRC approved this recommendation.

Questions included:

- 1) Is interest included in the cost estimate?

Tertiary Filtration BCE Recommendation

Matt Gregg reviewed the tertiary treatment analysis, which necessitates developing multiple scenarios with different discharge limits. Because there is still uncertainty about the reuse permit, Brown and Caldwell recommends that the final selection for which filtration system to choose be postponed until there is more

clarity on the reuse permit. If the permit negotiations are successful, upflow sand filters is the preferred option. However, if the reuse permit ultimately matches the Facility Plan assumptions, than the use of membranes is recommended. Please see DRC Briefing # 15 for more information. The DRC agreed with the proposed approach and postponing the final selection until there is more clarity on the reuse permit.

Questions included:

- 1) Is trading and adopting BMPs an option?

Sidestream Phosphorus Treatment BCE

Matt Gregg reviewed the sidestreat treatment alternatives for controlling struvite and the in-plant phosphorus return. Two alternatives, direct chemical addition and digested sludge precipitation without harvesting, are essentially equal in the business case evaluation. However, due to the need for more information before making a final decision, Brown and Caldwell recommends the decision be postponed until a pilot test can be conducted and additional data collected. Please see DRC Briefing # 16 for more information. The DRC expressed a preference for precipitating phosphorus with the potential for recovery to limit the overall impact on operations. The DRC approved postponing the final decision until pilot testing is complete.

Questions included:

- 1) What do the current WWTP managers prefer?
- 2) What is the risk that the cost of chemicals will increase?
- 3) Whats risks are involved if the plant shuts down due to maintenance issues?

Project Packaging and Delivery Recommendations

Leafwin Clark, Brown and Caldwell, reviewed the Project Delivery Method survey results from the prior meeting, and explained that the results showed that the DRC likely prefers a Progressive Design-Build approach based on their expressed priorities. Please see DRC Briefing # 17 for survey results and Briefing #18 for more information on the project packaging and delivery approach recommendations.

Matt Gregg reviewed the recommended Phase II packaing. Due to several project design decisions needing to be postponed, Brown and Caldwell recommends that the project be designed and constructed with five packages. Two early, smaller packages will be completed within the next several years ahead of the majority of the upgrades. The largest package, Project Group F, will include approximately \$90M in design and construction activities and is recommended to be delivered using a progressive design-build methodology. Two later project groups will be completed after Proeject Group F to control the schedule on the State Revolving Fund loan repayment and allow for pilot testing of struvite equipment. The DRC approved the recommended approach for project packaging and delivery.

Questions included:

- 1) Does the schedule allow for a full year spent on developing designs?
- 2) Would the Progressive Design-Build approach be new for Nampa?
- 3) Does the City feel capable of administering this process?
- 4) Is this model an opportunity for the owner to act as its own contractor?
- 5) Will Brown and Caldwell be eligible to bid on the project?
- 6) Who is the regulator that oversees final design?

Next Steps

- The next DRC Meeting will be Thursday, February 21, 2019, from 7-9 a.m. at the Nampa Public Library.
- Future meetings will likely be less regular after February as many significant decisions have been made at this point.
- Please send questions or concerns to the City as they arise and the project team will work to address these at the upcoming meeting.

DRC Meeting #5 – January 17, 2019

Responses to Questions

Capital Cost Discussion

1) *Why is there a 10% range in Class 1?*

Engineer estimates for costs represent an estimate of the overall construction costs using backward-looking cost data. External factors such as the local market conditions, commodity pricing, and risk tolerance of the contractors all will impact project bids. Therefore, even the Class 1 estimates have a range to account for these factors.

2) *Is this a DesignBid approach?*

The cost estimates at this level don't account for the delivery method. Impacts of the selected delivery method will be considered in a future update to the cost estimates.

3) *Would the City consider hiring a third-party to conduct a value engineering audit?*

The City does not see the need to hire a third-party to perform a value engineering exercise at this stage. The overall program delivery has been setup to provide this function when each of the projects are moved into final design.

4) *Will there be unallocated capacity in seven years?*

Yes, there will be unallocated capacity at the end of the Phase II Upgrades. This capacity is used to provide capacity for future residential, commercial, and industrial growth within the City.

Blowers Approach Recommendation

1) *Is interest included in the cost estimate?*

The cost estimates do not include the cost of the interest related to the State Revolving Fund loan.

Tertiary Filtration BCE Recommendation

1) *Is trading and adopting BMPs an option?*

The City has considered trading and BMPs as a long-term solution to meeting total phosphorus requirements. Due to the complexities of both of these programs and the risks inherent with this approach, these options were not the preferred approach in the Facility Plan.

Sidestream Phosphorus Treatment BCE

1) *What do the current WWTP managers prefer?*

The WWTP staff prefer a more permanent and direct solution to struvite mitigation. Alternatives 1, 3, 4, and 5 presented during the meeting would support this preference.

2) *What is the risk that the cost of chemicals will increase?*

The cost of the chemicals used for struvite mitigation has doubled in the last six years. The risk of this increase continuing to outpace inflation has been accounted for in the analysis.

3) *Whats risks are involved if the plant shutdown due to maintenance issues?*

The Nampa WWTP is required to provide non-stop service for the Nampa residents and businesses. Any challenges related to struvite would increase operations and maintenance time and costs, but would not impact the ability to treat the influential wastewater.

Project Packaging and Delivery Recommendations

- 1) *Does the schedule allow for a full year spent on developing designs?*
Yes, the overall program schedule supports the recommended delivery models.
- 2) *Would the Progressive Design-Build approach be new for Nampa?*
Yes, the Progressive design-build delivery model would be new for the City.
- 3) *Does the City feel capable of administering this process?*
The execution of the Phase II Upgrades will require an increased level of organizational commitment due to the size and complexity of the needed upgrades to the Nampa WWTP. The City is preparing to support these commitments to ensure the successful delivery of the projects.
- 4) *Is there an opportunity for the owner to act as its own contractor?*
The major construction packages exceed the City's capacity for self-performing work. City staff have been working to identify repair projects that can be completed by City staff.
- 5) *Will Brown and Caldwell be eligible to bid on the project?*
No, Brown and Caldwell will not pursue final design for any of the package groups. Brown and Caldwell will serve as the City's representative throughout the Phase II Upgrades.
- 6) *Who is the regulator that oversees final design?*
The Idaho Department of Environmental Quality conducts reviews of the project documents throughout the final design and construction process.