Staff Report
Board Meeting Date: July 25, 2024

DATE:	July 18, 2024
TO:	District Board of Health
FROM:	Robert Fyda, Division Director, Environmental Health Services 775-328-2644, rfyda@nnph.org
SUBJECT:	Recommendation to approve a letter of support for the OneWater Nevada Advanced Purified Water Facility at American Flats. (FOR POSSIBLE ACTION)

SUMMARY

In 2016, the Nevada Legislature passed legislation allowing reclaimed water for indirect potable reuse (IPR) if the effluent is treated to Category A+ (A+). As part of the legislation, NAC 445A.27616 requires that prior to the Nevada Division of Environmental Protection (NDEP) permitting any indirect IPR permit, the permittee must provide written approval from the local District Board of Health in support of the proposed use.

Under the umbrella of OneWater Nevada, a regional organization that ensures the resiliency and sustainability of local water resources, the Advanced Purified Water Facility at American Flats (APW FACILITY) project was created. A joint effort between the City of Reno (COR) and Truckee Meadows Water Authority (TMWA), the project will divert effluent from the Reno-Stead Water Reclamation Facility (RSWRF), treat it to A+ quality, reinject it into a groundwater aquifer, and store it for future use.

The project will yield many benefits to the community, including providing a local, reliable, drought-proof water source, diversion of effluent from the wastewater treatment plant, and reduction of discharge into Swan Lake. It will also demonstrate the viability of an innovative treatment process in the first purification and potable reuse project in Nevada.

District Health Strategic Priorities supported by this item:

2. **Healthy Environment:** Create a healthier environment that allows people to safely enjoy everything Washoe County offers.
4. **Impactful Partnerships:** Extend our impact by leveraging partnerships to make meaningful progress on health issues.

PREVIOUS ACTION

On December 14, 2023, the District Board of Health (DBOH) received a presentation on the project from TMWA. The presentation outlined the treatment processes and reviewed outreach that had occurred over the project's life. Several elected officials, including members of the DBOH, were also provided the opportunity to tour a potable reuse facility in Monterey in January 2024.

BACKGROUND

Droughts are common in Washoe County and can cause challenges in managing regional water resources. There is increasing risk to ensuring access to safe, sustainable water sources for the region due to sustained low precipitation years and increased growth in the community. TMWA has been working on mitigating these risks and addressing challenges since 2001. As technological advancements in water treatment have improved and the public desire for better water reuse has increased, the potential for wastewater reuse has become a feasible option. TMWA began testing the treatment techniques utilized in the APW FACILITY as early as 2009. A path forward was created when the Nevada legislature passed regulations creating the Category A+ IPR in 2016. Testing of the treatment technologies through pilot studies and benchtop experiments continued until 2020, when the first demonstration study was performed at RSWRF. At that point, planning began in earnest, though testing continues today.

The project is projected to have many public benefits, including expanding access to clean water and proper sewage disposal, which are core public health needs. The project can reduce the reliance on the Truckee River, which currently provides the bulk of water within Washoe County, by diversifying the water resource portfolio and diverting wastewater. Underground aquifer storage has added benefits from reservoir storage in that it does not suffer from evaporation and continues treating water through natural processes. This storage can supplement the available water supply during years of low precipitation or drought. The project will also benefit the community by diverting effluent from RSWRF. RSWRF discharges are treated effluent into Swan Lake, which is prone to flooding. The project will reduce the discharge by up to 2 million gallons per day, and the effluent the lake receives will be of higher quality. Finally, as these reuse techniques are proven, they will lay the groundwork for diverting effluent releases from other facilities, potentially reducing the cost of sewage infrastructure and allowing for more growth in the community.

To achieve Category A+ IPR, the water will need to meet or exceed all state and federal drinking water standards. Taking a forward-looking approach, the innovative treatment train for APW also treats currently unregulated constituents and recently regulated contaminants such as PFAS. Testing was conducted for a variety of unregulated constituents, and the treatment was found to be highly effective at removing personal care products and pharmaceuticals as well. See the attached pilot study results for various contaminants.

The source water for the APW FACILITY will be treated effluent from the RSWRF that undergoes additional polishing steps of filtration and ultraviolet (UV) disinfection prior to undergoing the advanced treatment process utilizing ozonation and biological activated carbon filtration. The water will then undergo further polishing and disinfection using granular activated carbon filtration, PFAS removal, and a secondary UV light treatment process. After completing the treatment train, the A+ water will be recharged into the groundwater aquifer via an injection well. A process flow diagram of the treatment process can be found on page 12 of the PowerPoint presentation provided.

With any project of this type, outreach and education are paramount. Outreach efforts began with residents in 2018 and ramped up dramatically in 2023 with multiple public meetings. Discussions with NDEP regarding the permitting process in 2020 and outreach to all involved public agencies have continued since then. The provided roadmap and companion document detail these efforts and provide the timeline moving forward.

As shown in the roadmap, in August of 2024, the Phase 1 application for a permit will be submitted to NDEP. NAC 445A.27616 requires that the application includes proof of approval from the local board of health, which is the purpose of the letter of support. The application will also include a 60% design set, which will also be provided to Northern Nevada Public Health (NNPH). Construction is planned for 2025-2027, with aquifer injection projected to begin in 2028. Water pulled from the aquifer will be used first for irrigation while testing

continues, with the earliest potential for potable reuse coming in 2029.

FISCAL IMPACT

The letter will have no fiscal impact on Northern Nevada Public Health.

RECOMMENDATION

Staff recommends that the board approve a letter of support for the OneWater Nevada Advanced Purified Water Facility at American Flats.

Should the Board agree with the recommendation, a possible motion would be:

1. "Move to approve a letter of support for the OneWater Nevada Advanced Purified Water Facility at American Flat."

Or, should the Board wish to consider an alternative motion, the possible motion may be:

1. "Move to approve a letter of support for the OneWater Nevada Advanced Purified Water Facility at American Flat with modifications." Or
2. Move to deny a letter of support for the OneWater Nevada Advanced Purified Water Facility at American Flat with modifications." Or
3. "Move to continue the item to the next meeting to allow for additional consideration by the Board."