

Northern Nevada Water Planning Commission

STAFF REPORT

DATE: December 28, 2016

TO: Chairman and Members, Northern Nevada Water Planning Commission (“NNWPC”)

FROM: Jim Smitherman, NNWPC Water Resources Program Manager

SUBJECT: Review, discussion and possible direction to staff regarding the draft Regional Water Balance for possible inclusion in the “Population Forecast and Projections of Water Demand, Peak Day Requirements and Wastewater Flow” chapter of the 2016 Regional Water Management Plan (“RWMP”) update.

SUMMARY

On December 7, 2016, John Buzzone, P.E., of Stantec provided a presentation and status report on his progress in updating the Regional Water Balance model. Mr. Buzzone explained the key elements of the model and described what changes to expect in the 2035 future scenario relative to the 2030 version developed 5 years ago. Presently, Mr. Buzzone is waiting for confirmation of assumptions for 2035 wastewater service area boundaries in Lemmon Valley and Truckee River effluent discharge constraints. Once confirmed, the final product will be produced for review and inclusion in the “Population Forecast and Projections of Water Demand, Peak Day Requirements and Wastewater Flow” chapter of the 2016 RWMP update.

BACKGROUND

Stantec Consulting Services (“Stantec”) is updating the regional water balance model for inclusion in the “Population Forecast and Projections of Water Demand, Peak Day Requirements and Wastewater Flow” chapter of the 2016 RWMP update. The final product will be a spreadsheet model and a GIS-generated geographical flow diagram of a projected 2035 future conditions scenario for water supply, wastewater treatment, reclaimed water and wastewater disposal requirements.

The regional water balance is useful to answer questions such as the following.

- How much potable water will be required and in what locations?
- From what sources will potable water originate?
- Once potable water is used, where will wastewater treatment happen?
- Once treated, how much water is reused and in what locations?
- Where is the remaining effluent disposed?
- Are there future imbalances in water supply, wastewater reuse/disposal, and if so, where?
- Are there planning areas with adequate capacity to address imbalances?

Stantec has compiled future water demand and wastewater flow projections for 2035 provided by the Truckee Meadows Regional Planning Agency (“TMRPA”), which are distributed within the Truckee Meadows Service Area (“TMSA”) into the six geographic areas listed below that coincide with the

service areas of the 4 major water reclamation facilities (“WRF”). The TMSA is the area designated in the 2012 Truckee Meadows Regional Plan where municipal water and sewer service is currently provided or may be provided in the future.

<u>Area</u>	<u>WRF</u>
1. Cold Springs	Cold Springs WRF
2. Lemmon Valley/Stead	Reno-Stead WRF
3. South Truckee Meadows	South Truckee Meadows WRF
4. Sparks/Spanish Springs	Truckee Meadows WRF
5. Sun Valley GID	Truckee Meadows WRF
6. Truckee Meadows	Truckee Meadows WRF

Water demand projections are a function of residential and non-residential unit projections based on the 2014 Consensus Forecast, derived using the TMRPA parcel-based population and employment model and Truckee Meadows Water Authority (“TMWA”) water use coefficients. Projections are reviewed by TMWA for consistency with water demand projections in its 2035 Water Resources Plan.

Wastewater flow projections are derived similarly, using TMWA’s indoor water use coefficients. The methodology is calibrated by modeling 2015 average day annual flows and comparing them to 2015 observed flows at each WRF.

Water demand and wastewater flow projections are compared to plans provided by the service providers for future water supply, wastewater treatment capacity, and effluent management to create a high-level, 20-year water balance scenario for each of the 6 areas.

RECOMMENDATION

Staff recommends that the NNWPC accept the report and provide direction to staff as appropriate.

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