



## Design Build of Tesuque Casino Features MBR Treatment for Water Re-use

Integrated Water Services, Inc. (IWS) has completed work on its \$4.7 million Design-Build contract with the Tesuque Pueblo to design, permit, and construct a wastewater treatment system to produce disinfected tertiary water to meet the Class 1A New Mexico Reuse Permit. Treated effluent will be utilized to irrigate landscape features for this new 75,000 ft<sup>2</sup> gaming casino located 11 miles north of Santa Fe, New Mexico adjacent to the historic Santa Fe Opera. The new facility will feature 750 slot machines in addition to table games.

To start off the project, IWS provided the general process engineering report, WWTP design, the WWTP permit application, NPDES discharge permit application, and all related plans and specs required to secure the appropriate permits.

The MBR treatment system will have a design capacity at 80,000 GPD at full build out, which includes the Casino and a future 150 room hotel. IWS is providing a



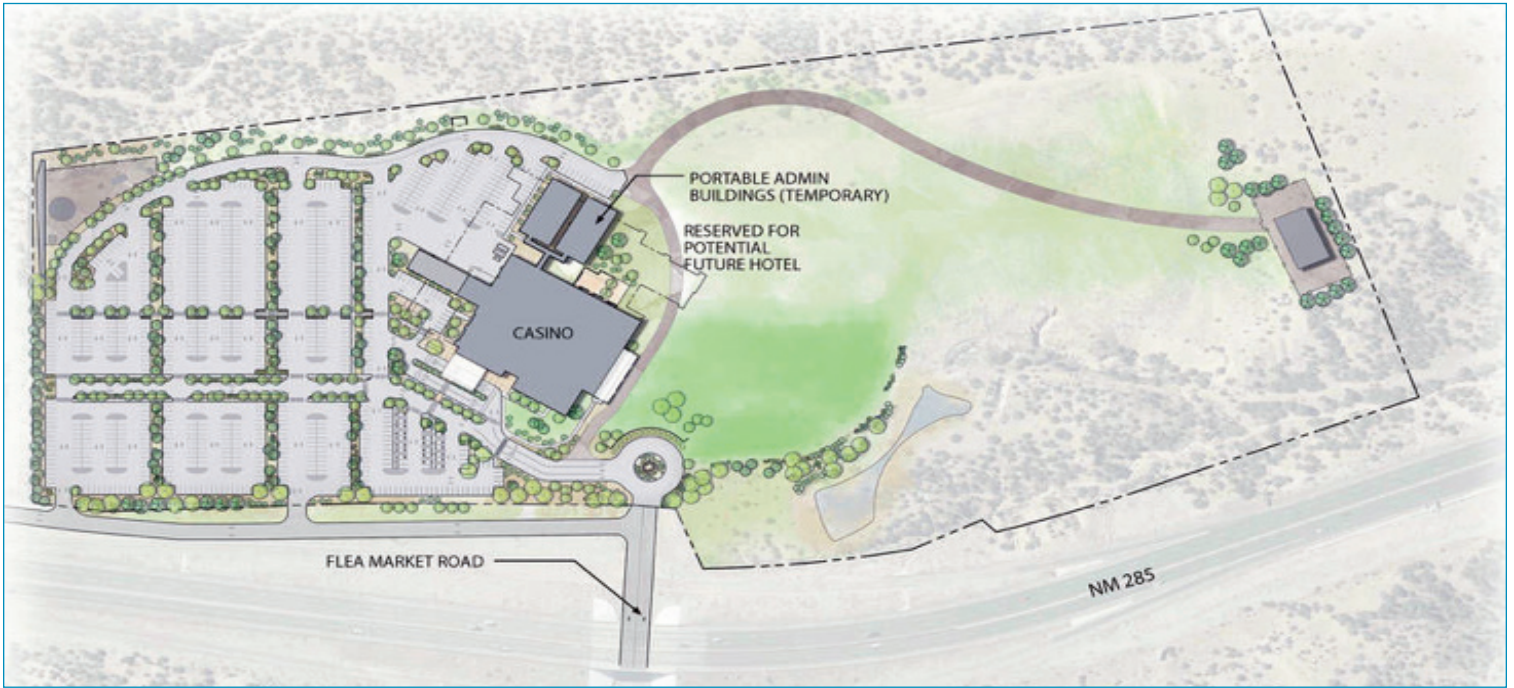
*Constructed Metal Treatment Building*

turn-key treatment system including a 21,000 gallon equalization tank, 8,000 gallon sludge tank, headworks rotary bar screen, Packaged MBR treatment system, chemical feed systems, sludge press, and treated efflu-



*New Tesuque Casino*





*Conceptual Site Plan*

ent storage tank. The WWTP is housed in a new metal building with a climate control/HVAC system.

The specific scope of work included: Construct Head-works and rotary drum screen; Building foundation, and headworks channel; Pre-engineered metal building; Building HVAC, electrical and lighting; Equipment anchor system installation; Construct Treatment System; SCADA software and programming; Provide and Construct Pump System to convey effluent; Provide and Construct WWTP controls and system instrumentation; Electrical

Work for treatment system; and Provide and Install all U/G and A/G Piping, Valves and instrumentation at Treatment Plant Site.

Treated effluent will be stored in a 45,000 gallon above grade FRP storage tank. The advanced wastewater treatment of the MBR will allow the effluent to be re-used to irrigate the parking and casino property landscaping, reducing the potable water demands for the facility. All surplus effluent will be sent to a Low Pressure Dispersal (LPD) system consisting of 5 LPD



*Packaged MBR (left side view)*



*45,000 gallon effluent storage tank being set*





*200,000 gallon water storage tank and pump building*



*Flow equalization tank (21,000 gallons)*

fields of 6 zones for a total of 18,000 linear feet of disposal trench with manifolds, supply lines, and valves.

IWS also installed all the electrical components including: Main control panel (230/460 volt, 60 Hz, 3 phase), enclosure with magnetic starters, circuit breakers, programmable time clock, HOA switches, and master SCADA. All required A/G conduit, pull boxes, wire, cable, terminations and mounting brackets and unistrut for complete fully operating systems. Completed all electrical testing for IWS installed equipment.

IWS also provided domestic water facilities for the project which included: a) 200,000 gallon insulated welded steel water tank (fire and domestic use) with level controls and heater; b) fire water and domestic

skid mounted water pumps housed in a building; and c) water well control and disinfection piping, electrical, and instrumentation.

IWS coordinated Start-up with the Plant Manufacturers Representative and the Owners Operation and Maintenance Provider including providing Operator Training and all related O & M manuals.

IWS teamed with Souder Miller Engineers ([www.soudermiller.com](http://www.soudermiller.com)) of Albuquerque, NM and was selected based on the collective experience of the team and its ability to meet challenging schedules. The IWS/Souder Miller team has previously done work for Tesuque Pueblo at a residential development on tribal land.

**For More Information Contact**

**West, Northeast Regions** Peter C. Balas ([pcbalas@integratedwaterservices.com](mailto:pcbalas@integratedwaterservices.com)) Tel: 925-895-3895

Jay Alman ([jalman@integratedwaterservices.com](mailto:jalman@integratedwaterservices.com)) Tel: 707-291-5283

**Southwest, Midwest, Southeast Regions** Jeff Thomas ([jthomas@integratedwaterservices.com](mailto:jthomas@integratedwaterservices.com)) Tel: 720-221-4366