# Exhibit X.C.5 (Water Conservation):

Submit as Exhibit X.C.5. a description of plans for water efficiency and conservation at the Gaming Facility including, without limitation, plans to use low-flow water fixtures, water efficient appliances, and implement water conservation at the Gaming Facility.

Potable water usage for the project constitutes a large portion of freshwater consumption. The design approach will be to employ various strategies and implement a water efficiency and conservation plan utilizing the latest high-efficiency plumbing fixtures and technologies associated with water conservation, coupled with sophisticated use of building automation, domestic water submetering, rainwater harvesting and water treatment of the condenser water system as described herein below. The design approach will be examined further during the exhaustive design process with the consideration of appropriate alternative design solutions.

Fixtures that use 20% to 50% less water than code-mandated levels are widely available and will be utilized for the project.

The project currently utilizes a condenser water system with evaporative cooling towers, which exceeds the water use from fixtures and landscape irrigation. In addition to high-efficiency water-conserving plumbing fixtures, rainwater harvesting will be utilized to reduce the potable water consumption for evaporative losses of the swimming pool and condenser water system.

### **Plumbing Fixtures**

All plumbing fixtures located within public areas, back-of-house and within hotel guest rooms will be high-efficiency water-conserving fixtures meeting all water-conserving statutes in accordance with the New York State Plumbing Code, Energy Policy Act (EPAct) of 1992 as amended and the current LEED rating system for water efficiency. Fixtures that use 20% to 50% less water than code-mandated levels are widely available and will be utilized for the project. By utilizing high-efficiency plumbing fixtures listed in the table below, the project will realize a minimum reduction of 25% in water consumption below the code-mandated baseline.

Plumbing Fixture Type	Location	Flow Rate/Consumption
Water Closets	Public areas, hotel guest rooms and back of house	1.28 gpf
Urinals	Public areas and back of house	0.125 gpf
Lavatory Faucets	Public areas, hotel and back of house	0.25 gal./cycle (metering faucets)
Lavatory Faucets	Hotel guest rooms	0.5 gpm
Showerheads	All	1.5 gpm

The following plumbing fixtures and flow rates will be provided for the project:

### Water Submetering

Often, differences exist between how buildings are designed to operate and how they actually perform. Numerous factors may be responsible such as inadequate commissioning, inaccurate assumptions about occupant behavior, or the everyday operation of building systems. By collecting and analyzing water-consumption data, the project will aim to compare water consumption across the balance of the owner's portfolio to identify common traits among water use in an effort to improve building performance.



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As a first step toward improving efficiency and performance, the project will install water submeters for all large incidental-use areas to track water consumption. The incidental-use areas include each individual hotel tower, restaurant, conference area, spa, irrigation system, rainwater harvesting system, swimming pool and cooling tower makeup supply and other similar occupancies. Water meter data will be compiled into monthly and annual summaries for analysis.

### **Rainwater Harvesting**

Rainwater harvesting will be utilized for additional water conservation measures. The rainwater harvesting system will collect rainwater from the main building roof and parking deck roof to be utilized for cooling tower makeup. The stormwater drainage system for the project will be funneled to multiple detention tanks to retain a minimum 90% of the onsite stormwater in accordance with LEED requirements as well as with Town of Newburgh guidelines for stormwater management. The stormwater will be collected in a stormwater detention tank (approximately 300,000 gallons) serving all roof and terrace areas for the gaming complex and hotel tower. An additional tank (approximately 125,000 gallons) will serve the overflow Parking Garage. The stormwater collection and duplex cooling tower makeup pumps to provide makeup water to the swimming pool and cooling towers. During periods of dry weather, the stormwater tank will be supplemented with water from the domestic water system. The use of stormwater for water closet and urinal flushing will be investigated during the design process.

### **Condenser Water Treatment**

A cooling tower removes heat by evaporating water; as the water absorbs heat, it changes from a liquid to a vapor. As the water evaporates, total dissolved solids become more concentrated in the remaining water and eventually begin to deposit scale on cooling tower elements, making the system less efficient. To prevent buildup of deposits, condenser water systems remove a portion of the water through blowdown. Makeup water is then required to replace evaporation and blowdown losses. Cooling towers for the project will account for a large portion of a building's total water use.

In order to significantly reduce makeup water, it is important to achieve maximum cycles of concentration without sacrificing system performance and condition. Cooling tower water efficiency is measured by the number of recirculation cycles before water must be removed by blowdown. Increasing the number of cycles can save significant amounts of potable water during peak cooling periods. Chemically analyzing makeup water allows for the calculation of optimal cycles. In order to achieve the maximum cycles of concentration without loss of system performance and deterioration, the condenser water system will be provided with a fully automated water treatment and monitoring system. The system will monitor conductivity, pH and oxidation reduction potential (ORP) to maintain the maximum cycles of concentration, thereby reducing the potable water supply to determine which of the five (5) control parameters, including calcium carbonate (CaCO3), total alkalinity, silica (SiO2) free chlorine (Cl-) and conductivity, is the limiting factor for the cycles of concentration. In addition, the condenser water system will be provided with media filtration to remove the total suspended solids, aiding in the water treatment program for the system, reducing the contaminants and thereby potentially reducing blowdown and additional potable water usage for water makeup.

