

Oshara Village Applies Proven Technology for a Unique Application

To compliment the New Urbanism principle of limiting impacts to the environment, Oshara Village and AquaWorks DBO have teamed to provide a water reclamation facility for the purpose of turning sewage wastewater into 30,000 gallons per day of water to irrigate the landscaping and flush some toilets within the development. The concept allows less consumptive water use by the development. The ability to reuse the water is highly valuable considering the limited availability of water in the Santa Fe, New Mexico area.

The water reclamation plant for Oshara Village will consist of a buried Sequencing Batch Reactor (“SBR”) wastewater treatment facility. The SBR is a proven technology with hundreds of applications throughout the United States. The only visible part of the plant will be an above grade operations building which is 14 by 21 feet in size. The system is designed to meet all of the New Mexico design criteria including redundant backup treatment equipment and an emergency power generator. The advanced design allows the facility to discharge to both the water reuse system and the nearby drainage channel. A draft groundwater discharge permit has already been issued by the State for the Project.



The Oshara Village SBR will be similar to the plant shown to the right with the exception of the tank material. The tank will be constructed out of concrete for superior reliability and long life.

The project is designed to meet the strict Class 1A water quality limits designated by the New Mexico Environment Department. By meeting these standards, Oshara Village has the ability to reclaim the wastewater to the fullest extent allowed by the State. The advanced SBR design will allow the plant to meet the following standards:

WASTEWATER QUALITY STANDARDS			
Parameter	Measurement Unit	Class 1A Reclaimed Wastewater Limit	
		30-Day Average	Maximum
BOD ₅	mg/L	10	15
Turbidity	NTU	3	5
Fecal Coliform	Per 100 mL	5	23
UVT	N/A	Monitor Only	Monitor Only
Total Nitrogen (nitrate + nitrite)	mg/L	10 mg/L	TBD

Picture of Unimproved Site



Artistic Rendering of Project



The above is a before and after comparison of a project currently under design for Boulder County, Colorado. The project is designed to blend into the existing environment by burying a majority of the system components.

The project approach has allowed Oshara Village to supply its residents with an environmentally responsible solution for wastewater reuse. Further, this approach allows the modular design of the project to grow in capacity to meet the future needs of the residents.

AquaWorks DBO is a design/build/operate firm headquartered in Denver, Colorado. AquaWorks DBO specializes in the engineering, construction, and operation of small scale wastewater treatment plants throughout the United States. The full suite of services offered by AquaWorks DBO was extremely appealing to Oshara Village. In one contract, the owner was able to acquire a complete reclamation facility with water quality results fully guaranteed by AquaWorks DBO. According to Alan Hoffman, Town Founder for Oshara Village, “Of all the systems that we as the owners examined, this was far and away the best solution in terms of quality and value. We are thrilled with the services provided by our design-builder.”

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