



The tank has a 1,000,000-gallon capacity.



Dome Technology also built the adjacent pump house.



The pump house is the heart of the operation, securing all mechanical and electrical systems.

Scope of Work

- Value Engineering
- Structural Engineering
- Mechanical Engineering
- Electrical Engineering
- Civil Engineering
- Foundation Construction
- Dome Construction
- Procurement & Subcontract Management
- Additional Steel & Concrete Construction

None Some All

Dimensions

- 1 tank: 30.5m (100ft) wide x 8.8m (29ft) tall
- 1,000,000 gallons, water

Qualifications

- All-Weather Construction
- ACI-Certified Shotcrete Nozzlemen



Overview

Dome Technology built a million-gallon water tank for the city of Iona, similar to two other tanks completed for other cities in the region.

“(Dome Technology was) the low bid, but I will tell you we were impressed with the product that was built in Shelley (Idaho). We really wanted to try to make the bidding process competitive, so we jumped through a lot of hoops to accommodate everyone that wanted to bid the project,” Iona mayor Daniel Gubler said. “We are happy with the outcome.”

The project was driven not so much by city growth but by insufficient water for fighting potential fires. The city’s existing tank had a capacity of 500,000 gallons.

Dome Technology’s water tank is a steel-reinforced concrete structure with a domed roof; because concrete is sprayed in place, there are no joints in the wall or the roof. The D1150 model has post-tensioning embedded in the walls for seamless robustness, rather than wrapping the post-tensioning wire around the outside of a tank as seen in D110 tanks. This allows for higher overflow than other tanks on the market and greater storage.

“We can actually store water up into the dome roof. We have that advantage over other precast concrete tanks,” said Dome Technology project manager Daren Wheeler.

The city passed a bond election to fund the project, and water rates increased to accommodate bond costs, but citizens realize the potential value of the new tank, Gubler said. “My full expectation is a generation or two from now can say Iona has great water (and) the product they chose when they did is benefitting us today and into the future. We fully anticipate that tank will be here in 100 years,” he said.

The adjacent well house was an important part of the project and is Dome Technology’s first “square dome.” The four-walled structure has a domed roof, and walls are robust with polyurethane foam insulation, structural reinforced steel, and shotcrete. Beneath the building, 330 feet of underground iron piping and valves connect the well to the tank and the city water line, while inside the mechanical systems and diesel backup generator maintain operations.

Read more about this project [here](#).