What is a Municipal Water Well?

A municipal water well is a deep, engineered well drilled into underground formations that store water, known as aquifers. These aquifers are layers of sand, gravel, or porous rock that hold groundwater beneath the earth's surface. By drilling a municipal well, a utility district can reliably access and distribute this naturally stored water to the community.

Once drilled, the well is lined with steel or PVC casing to prevent the hole from collapsing and to keep surface contaminants from seeping into the water supply. At the lower section of the casing, well screens are installed to allow water to flow in while filtering out sand and sediment from the aquifer.

A pump system—usually an electric motor driving a turbine pump or submersible pump—lifts the water from the aquifer up through the well. From there, the water enters the District's treatment and distribution system, where it may be disinfected, tested, and pressurized before being delivered to homes and businesses.

Why It Matters

• Dependability: Municipal wells provide a consistent and reliable source of drinking water, independent of surface water supplies that can fluctuate with drought or weather conditions.

• System Redundancy: Additional wells act as backups, ensuring that water service remains stable if one source is offline for maintenance or repair.

• Infrastructure Integration: The new well ties directly into the District's network of storage tanks, distribution mains, and monitoring equipment.

Construction Process

Building a municipal water well is a complex, multi-step project that typically takes months to complete:

1. Drilling – Specialized rotary drilling rigs bore through layers of soil and rock to reach the target aquifer, sometimes hundreds or even thousands of feet below ground.

2. Casing and Screens – Steel or PVC casing is installed to stabilize the well and isolate the aquifer, with precision-slotted screens at the water-bearing zones.

3. Well Development – Water and air are surged through the well to clear fine particles, improve flow, and enhance water quality.

4. Pump Installation – A motor and pump assembly are placed to lift water from the aquifer.

5. Testing and Sampling – The well is pumped at different rates to test capacity, and samples are collected to ensure water quality meets state and federal standards.

6. Connection to System – The well is tied into the District's treatment, storage, and distribution system.

What Residents May Notice

Drilling a municipal water well is a large-scale construction activity. Residents may notice:

• Noise from drilling rigs, generators, and pumps.

• Extended work hours, sometimes 24 hours a day, during certain phases of drilling.

• Heavy equipment such as drill rigs, cranes, and supply trucks entering and leaving the site.

While the process may be disruptive in the short term, the end result is a critical long-term investment in the community's water reliability and resilience.