



RADIAL COLLECTOR WELLS

For Ground Water and Infiltration Water Supplies...

Where ground water supplies are needed, it is often cost-effective to consider the use of a radial collector well. Collector wells can be used in almost any geologic setting where the subsurface materials are unconsolidated, consisting of sand and/or gravel deposits. A radial collector well can be used to develop water supplies from both freshwater and seawater sources.



The reinforced concrete central shaft, or caisson, serves as the collection point for the water that enters the system through the network of well screens. This wet well or pumping station, allows entry for periodic inspection of the system and permits any required maintenance to be performed at a later date.

The caisson can be completed with a pump house or flushgrade top slab to minimize visual impact on the surroundings, which is often important in riverfront settings.

Riverbank Infiltration

Riverbank Infiltration (RBI) is the process where water can be induced to infiltrate into local ground water aquifers from a surface water source where favorable hydrogeologic conditions exist near rivers and streams. Since the rate of infiltration is very slow, particles (even microscopic) in the surface waters are filtered. This natural filtration can provide cost-efficient removal of particles, at a lower cost, than many conventional treatment processes. Where suitable geologic deposits exist, collector wells can be used to develop moderate to very high capacities.

Operational Advantages

Collector wells are constructed with longer lengths of well screens projected horizontally near the base of the aquifer formation. This results in lower entrance velocities through the screen which reduce the rate of plugging, and extend the interval between well rehabilitation.

Other advantages include:

- Higher well yields per site: up to 28,000 gpm from a single well
- Reduction of surface water-borne organisms
- Elimination of zebra mussels
- Lower operating & maintenance costs
- Raised caisson offers flood protection
- Simple operator requirements
- Higher efficiency pumps and motors can be used to reduce power costs
- Fewer wells required: less connecting pipelines and electrical service needed
- Minimum property needs
- Minimum environmental impact

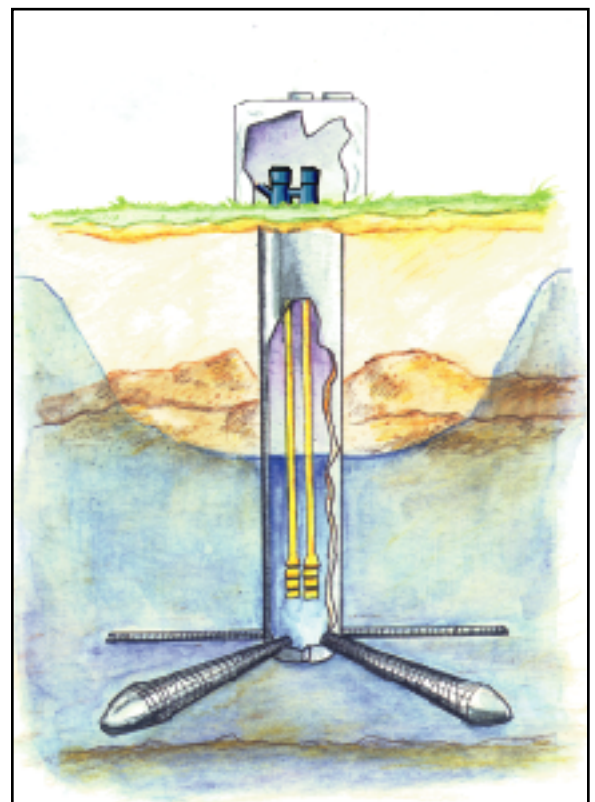


Diagram of Radial Collector Well