



## COLLECTOR WELLS FOR FILTERED SEAWATER

### *Collector Wells Filter Seawater Naturally*

Where water supplies are needed along coastlines, it is often cost-effective to develop a filtered raw water supply using some type of infiltration system in a beach setting. These systems can be used to develop water supplies from both freshwater and seawater sources. A radial collector well (shown below in a general schematic drawing) can be used to develop a filtered water supply by projecting well screens laterally adjacent to and underneath the water source from a central caisson.

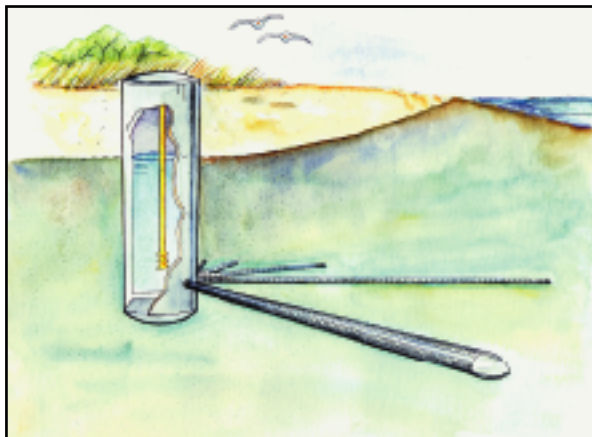


Diagram of Filtered Seawater Collector Well

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

The caisson can be completed with a flush-grade top slab to minimize visual impact on the surroundings, often important in beach settings. Alternately, a pump house structure can be built that blends in with local architectural styles.

In many beach or coastal settings, the geologic deposits are often fairly fine-grained. Typically, it is necessary to install an artificial gravel pack filter around a well screen to develop higher capacities and reduce the plugging of the screen. This permits collector wells with lateral well screens to be used in virtually all geologic settings involving sand or gravel deposits.

Collector well screens can be installed using a variety of materials to be compatible with anticipated water quality, including steel, stainless steel, plastic, alloy and fiberglass materials.

Applications for seawater collectors:

- Desalination systems for drinking water
- Fire water supplies
- Source of sodium to regenerate ion-exchange filters
- Filtered aquarium supplies
- Salt water intrusion control
- Industrial Water Sources
- Recharging of brine

