

# Class I Deep Injection Wells in Miami-Dade



**Well Head**

Approximately 30 percent of Class I wells are municipal wastewater disposal wells. These wells are located exclusively in Florida. They have an average depth of 3,200 feet and are used to dispose of treated effluent from the Wastewater treatment plants into the Boulder Zone (A very permeable zone within the Lower Floridan Aquifer).

0 ft

250 ft

500 ft

Drinking water Biscayne Aquifer

750 ft

1,000 ft

Low Permeability Rock

1,250 ft

1,500 ft

Steel Well Casings

1,750 ft

Confining Zone

2,000 ft

2,250 ft

2,500 ft

2,750 ft

24-inch final seamless steel casing

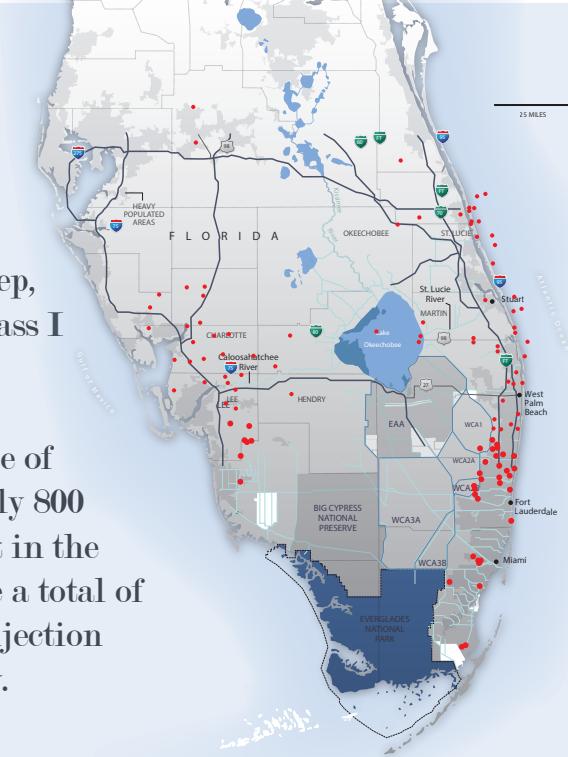
3,000 ft

Permeable layer

3,250 ft

Injection/Boulder Zone Hazardous and on-hazardous industrial waste

Class I deep injection wells are used to inject hazardous and non-hazardous wastes into deep, confined rock formations. Class I wells are typically drilled thousands of feet below the lowermost underground source of drinking water. Approximately 800 operational Class I wells exist in the United States, while there are a total of 23 Municipal Wastewater Injection Wells in Miami-Dade County.



## Miami-Dade Water and Sewer Department Deep Injection Wells

**South District:** 17 Injection Wells

**Central District:** 2 Injection Wells

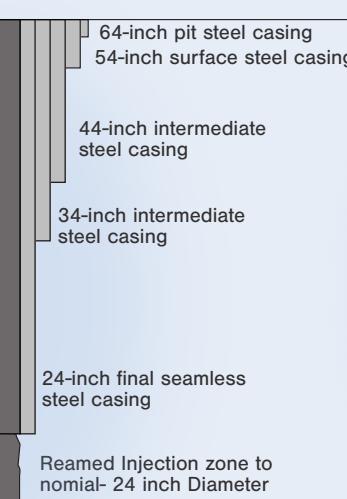
**North District:** 4 Injection Wells

## Monitoring Wells

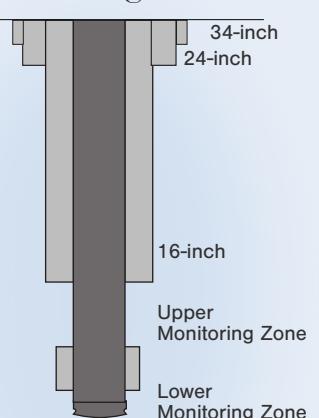
Monitoring wells provide controlled access for sampling groundwater near an agricultural waste storage or treatment facility to detect seepage and monitor groundwater quality.



## Deep Injection Well



## Monitoring Well



## Volume Injected by Miami -Dade Water and Sewer Department (WASD) in the Last 20 Years

