



Santa Clarita Valley Sanitation District

Meeting the State-Mandated Chloride (Salt) Limit for Santa Clarita Valley: Approved Chloride Compliance Project

To comply with the State-mandated chloride (salt) limit for the Santa Clarita Valley's wastewater (sewage) and avoid further State fines that SC Valley property owners would have to pay, a chloride compliance project was approved in October 2013. This project was approved by the Santa Clarita Valley Sanitation District Board of Directors in October 2013 after nearly two years of extensive public input, numerous public information meetings, environmental review and public hearings.

The approved project combines advanced treatment methods and brine disposal to reduce chloride (salt) levels in the Valley's treated sewage, and complies with the State's chloride (salt) limit for the Santa Clarita Valley.

Project Components

The approved chloride compliance project will provide advanced treatment to wastewater (sewage) from the SC Valley's two wastewater treatment plants. The project includes the following components and treatment steps, illustrated on the following pages:

Microfiltration:

Microscopic strainers provide pretreatment of wastewater (sewage)

Reverse Osmosis:

Pressure forces salty water (brine) through a semi-permeable membrane to remove salts

Second Pass Reverse Osmosis:

Concentrates and reduces brine volume by forcing the Reverse Osmosis brine waste through the semi-permeable membrane a second time

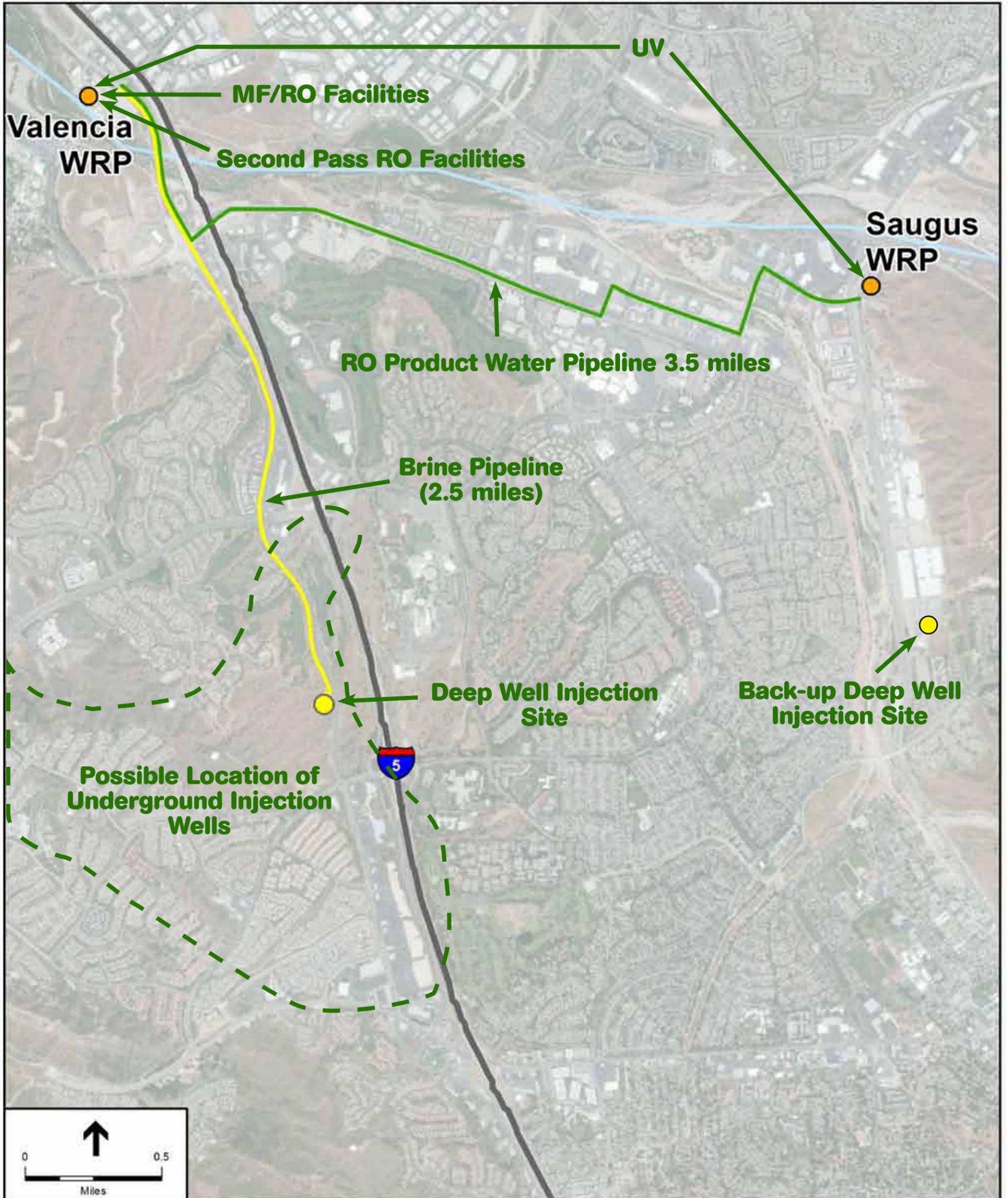
Ultraviolet (UV) Disinfection:

Uses UV lights to kill harmful microorganisms, replacing use of chlorine

Deep Well Injection:

Injects the salty by-product deep into the ground, far below the drinking water supply

Microfiltration, Ultraviolet Disinfection, Deep Well Injection (Compliance at Discharge Point into River)



LEGEND

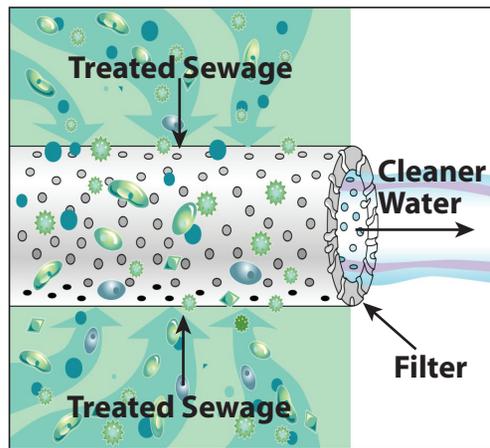
- UV - Ultraviolet Disinfection Facilities**
- MF/RO - Microfiltration/Reverse Osmosis Facilities**
- DWI - Direct Well Injection**
- WRP - Water Reclamation Plant**

Microfiltration, Ultraviolet Disinfection, Deep Well Injection

Complies with California Regional Water Quality Control Board's Salt Limit

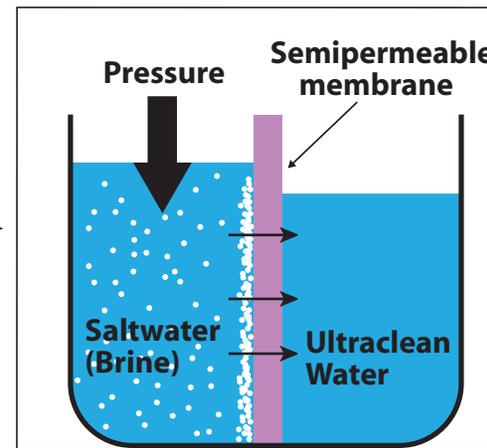
This alternative, a back-up to the recommended project, complies with the State-mandated chloride (salt) limit through a combination of advanced treatment methods and brine disposal.

Microfiltration/Reverse Osmosis (MF/RO) Second Pass Reverse Osmosis



Microfiltration

- Microscopic strainers, 300 times smaller than a human hair, provide efficient pretreatment before reverse osmosis (RO)



Reverse Osmosis

- Under pressure, the salty water (brine) is forced through a semi-permeable membrane
- 14% of total treated wastewater is left behind as a brine (saltwater) waste

Second Pass Reverse Osmosis

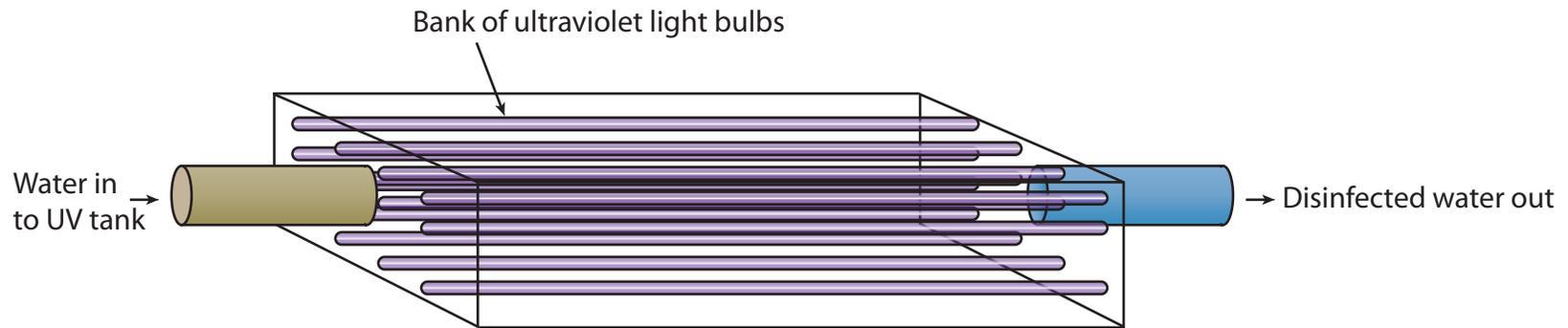
- RO brine waste is forced through a semi-permeable membrane a second time, concentrating and reducing the volume of brine by 50%, resulting in a large cost savings.

Microfiltration, Ultraviolet Disinfection, Deep Well Injection

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Ultraviolet Disinfection



Water in tank is exposed to UV lights which kill harmful microorganisms

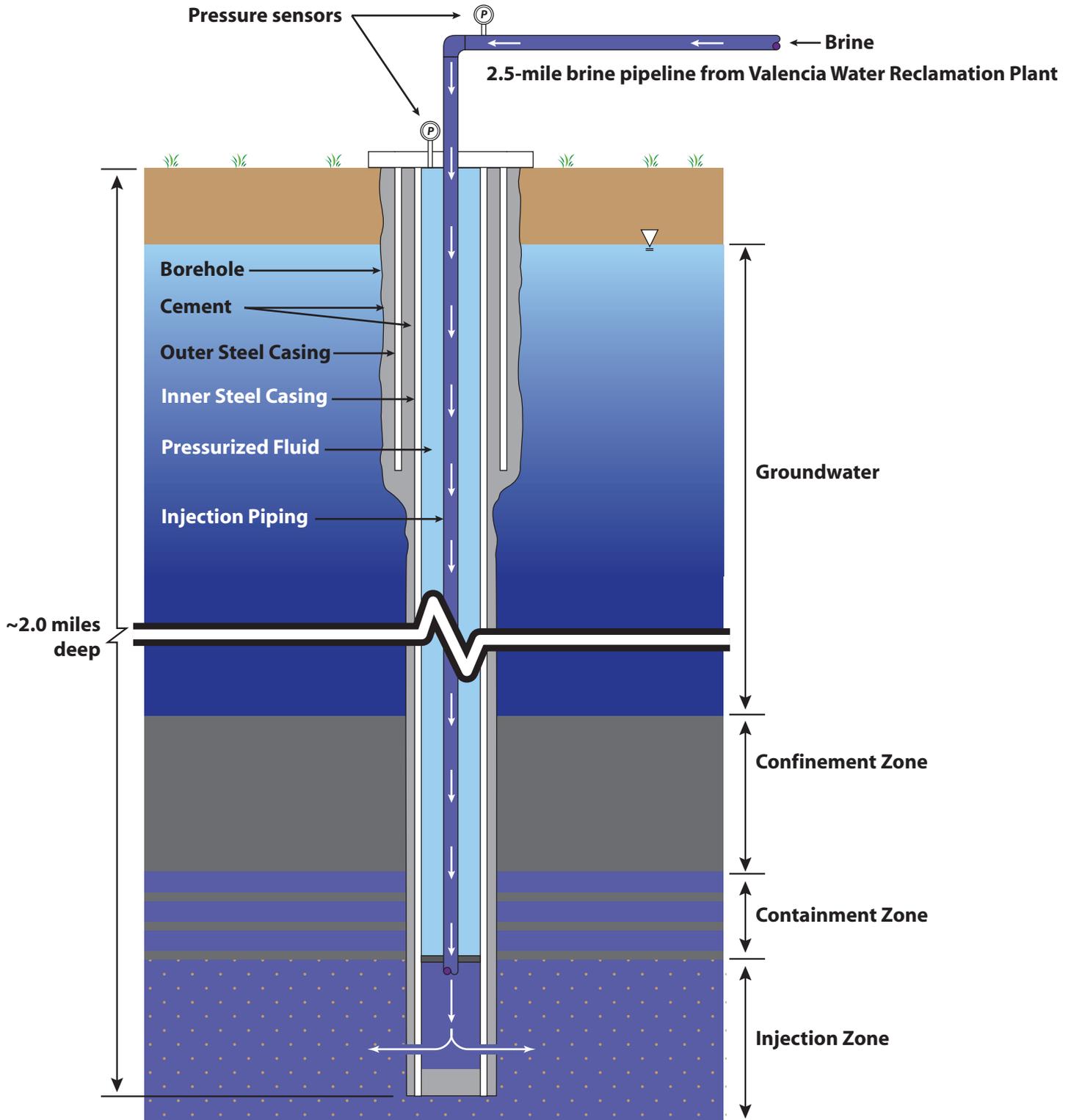
- Replaces use of chlorine to kill harmful microorganisms in wastewater
- Eliminates chlorination by-products
- Does not add chloride (salt)

Microfiltration, Ultraviolet Disinfection, Deep Well Injection

Complies with California Regional Water Quality Control Board's Salt Limit

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Brine Deep Well Injection Cross Section



Deep Well Injection

- Brine, a salty by-product of microfiltration/reverse osmosis, is injected over a mile into the ground, far below the drinking water supply