

# • Brine Wetlands

(Note: BOR brought their own display board, which is not available for web viewing. This is a substitute for what was displayed at the meeting.)

## Estrella Mountain Regional Park

**RECLAMATION**  
*Managing Water in the West*

### Concentrate Management Wetlands

The Concentrate Management Wetland concept was developed as a way to apply natural processes for the management of Reverse Osmosis (RO) concentrate. This pilot project is testing the ability of Vertical Flow Wetlands to remove regulated contaminants. Vertical flow wetlands can remove contaminants from the concentrate through multiple mechanisms: physical settling, sorption, biological uptake, and chemical reduction and precipitation.

**Cross Section Vertical Flow Wetlands**

The diagram shows a cross-section of a vertical flow wetland. It features an 'Influent Manifold' at the bottom where water enters. The water flows upwards through a layer of '3/4" Rock' at the base, then through a layer of '3/8" Pcs Gravel'. Above the gravel is a layer of 'Ground waste Media' containing plants. The water then flows through the plants and into an 'Effluent Manifold' at the top. A flowchart on the left shows the process from 'Water to Communities' through an 'RO Facility' to 'Concentrate' (TSS = 1,200 ppm), which is then sent to 'Wetlands' and a 'Mixing Pond' before being discharged to the 'Gila River'.

**Logos:** Goodyear, U.S. DEPARTMENT OF THE INTERIOR BUREAU OF RECLAMATION, City of Phoenix, CH2MHILL.



Plant sample in its demonstration container

A cooperative project with City of Goodyear and Bureau of Reclamation



Maricopa County  
Parks and Recreation Department