



Aquifer Storage and Recovery

The Florida Section of the American Water Works Association (FS AWWA) believes that it will take alternative water supplies to help meet the demand of the State's growth and development. The FS AWWA supports Aquifer Storage and Recovery (ASR) as an alternative water resource to be considered for meeting current and future demands.

ASR is a process where water is injected into wells to store it in aquifers and is later recovered for beneficial use. About 50 sites are used for Aquifer Storage and Recovery operations in Florida, with more in various stages of planning and development.

Florida's water treatment plants typically face their peak demand for short periods each year. The use of ASR can provide these benefits for Florida's communities:

- Added storage capacity for potable water supplies at comparatively little cost
- Plant construction at a capacity closer to average daily demand, minimizing capital and operating costs.
- Reduced water loss to evaporation when compared to surface reservoir storage

Unlike deep (Class I) injection wells where the purpose is simply disposal, the degree of success of an ASR project depends on the percentage of water recovered for later use.

The primary factors affecting the ASR project success are:

- Permeability characteristics of the storage zone
- Storage zone thickness
- Effectiveness of the overlying confining interval
- Well construction techniques and well locations
- Salinity of the formation water in the storage aquifer.

In addition to applications related to community drinking water supplies, ASR may be applied to stormwater, wastewater, and groundwater management, although treatment processes before ground injection may increase the cost.

ASR also has a role to play in solving the challenges of wet weather surface flows and groundwater management.

Ideally, ASR facilities should be constructed close to communities to be served to reduce capital costs of construction.

(Note: It is recommended that contact information, Web site address and FSAWWA mission statement is added to each issue paper.)