

## **DRAFT**

### **TUCSON AMA SAFE-YIELD TASK FORCE ISSUE OUTLINE 7/3/00**

#### **ISSUE: RECHARGE SITING**

Most recharge facilities in the AMA have been sited based on proximity to the CAP canal and cost rather than where the recharge will be most beneficial. Recharge facilities are frequently not located in areas where the water is needed. Also, additional infrastructure has not yet been constructed to allow parts of the AMA other than those adjacent to the canal to receive CAP water. In addition, some entities believe that the Department's interpretation of A.R.S. § 45-815.01 (Facilities not qualifying as storage facilities) precludes projects designed to have significant benefits other than recharge (multiple benefit projects), such as recreation and riparian habitat. The Department discourages recharge projects that are not designed and constructed primarily to store water underground, and are in fact recreational amenities such as lakes.

#### **BACKGROUND**

There are no statutory siting requirements for recharge facilities except that the facility must not cause unreasonable harm to land or other water users. The Second Management Plan contains siting criteria that require a facility either to "contribute to groundwater supplies which are currently being used or could be used in the future..." or contribute to a remediation program for a contaminant plume or poor groundwater quality area. The Third Management Plan contains similar siting criteria. Therefore, the Department is limited in its ability to direct the siting of recharge facilities to promote water management concerns.

To date, facilities have primarily been constructed in areas close to the CAP canal and where the land is already owned or is readily available. Recharge facilities in the outlying, rapidly growing portions of the metropolitan area have not been built because the necessary infrastructure has been cost prohibitive. Moreover, ADWR is not authorized to consider local or subarea water management issues when reviewing recharge applications. Therefore, ADWR cannot presently create incentives for recharge in critical areas.

The recharge statutes and policies developed by ADWR specifically address projects that do not qualify as recharge facilities. These statutes and policies may limit the ability of a facility to satisfy multiple objectives, such as recharge and riparian habitat restoration or recreation. Some entities perceive ADWR's policies as a general prohibition on multiple benefit recharge projects. In fact, the Department's position is based on a desire to avoid recharge projects that are used to evade Lakes Bill provisions, and is not intended to limit multiple benefit projects. A.R.S. 45-815.01 indicates that bodies of water do not qualify for USF permits unless they have been designed, constructed or altered so that water storage is a principal purpose of the body of water. In addition, Arizona law generally prohibits artificial "bodies of water" constructed for landscape, scenic or recreational purposes, unless the body of water is "unsealed and an integral

part of an underground storage facility.” A.R.S. 45-132(B)(6). The Department will not issue a permit for a facility if the facility appears to be designed to evade the prohibition on recreational lakes. In general, the design and operation of the facility needs to minimize evaporation and transpiration, because if storage is a primary purpose, efficiency is important.

Currently, the recharge program requires applicants for an Underground Storage Facility (a direct recharge facility) to show hydrologic feasibility, usually through a hydrologic model. If the water that is stored is likely to leave the AMA, the project does not meet the statutory criteria for hydrologic feasibility. These considerations are not part of the review of applications for Groundwater Savings Facilities (in-lieu, or indirect recharge facilities). Groundwater Savings permits cannot be withheld because the stored water could migrate across an AMA boundary.

## **SOLUTIONS CONSIDERED**

The following ideas have been considered. Additional ideas may be added to this list.

- Incentives to recharge in critical areas (see Sub-Area Management Issue Paper).
- Change the recharge statutes to require consideration of where existing pumping is occurring so that the stored water will be beneficially used.
- Develop clearer policies including consideration of multiple benefit projects.
- Create a siting criterion for Groundwater Savings Facilities, similar to that used for Underground Storage Facilities, that requires an evaluation of whether the stored water will leave the AMA. Permits for Groundwater Savings Facilities should be denied if the stored water will not be available for future use within the AMA where it was stored.
- Through a management plan amendment or statutory authorization, allow ADWR to develop incentives for recharge in locations that would accomplish water management objectives even if the critical area management concept does not move forward.

## **PRELIMINARY RECOMMENDATIONS**

- Incentives should be developed to recharge in critical areas (with planned recovery outside of a critical area). Incentives could include: a reduction in the cut to the aquifer, a reduction in permitting fees for the facility, or grants to aid in feasibility assessment or construction of the facility.
- Through a management plan amendment or statutory authorization, allow ADWR to develop incentives for recharge in locations that would accomplish water management objectives even if the critical area management concept does not move forward.
- Create a siting criterion for Groundwater Savings Facilities, similar to that used for Underground Storage Facilities, that requires an evaluation of whether the stored water will leave the AMA. Permits for Groundwater Savings Facilities should be denied if the stored water will not be available for future use within the AMA where it was stored.
- Develop clearer ADWR policies including consideration of multiple benefit projects.

## **OBSERVATIONS**

The existing management plan siting criterion that requires the stored water at Groundwater Savings Facilities and Underground Storage Facilities add to supplies that are being used or could be used in the future can be satisfied by future pumping by entities other than the storer. This means that the groundwater that has been saved at a Groundwater Savings Facility may not be available to those who paid for the credits to be accrued.

Incentives to recharge in one location also act as disincentives to store water elsewhere. There may be unintended consequences from a water quality or other policy perspective.