

# **CEDAR CITY VALLEY GROUNDWATER MANAGEMENT PLAN**

**Adoption Date: XXX XX, XXXX**

## **Introduction**

The objectives of this groundwater management plan are to ensure groundwater withdrawals do not exceed safe yield, to safeguard the physical integrity of the aquifer, and to protect water quality in the groundwater basin of Cedar City Valley in Iron County. The intent of this plan is to provide specific management guidelines for this area pursuant to Section 73-5-15 of the Utah Code.

Studies indicate average annual groundwater withdrawals in Cedar City Valley exceed safe yield, making this groundwater basin a critical management area as defined in Section 73-5-15.1 of the Utah Code. The safe yield for the groundwater basin is estimated to be 21,000 acre-feet per year, while the current average depletion from the groundwater basin is estimated to be 28,000 acre-feet per year. If all groundwater rights that are approved or perfected were to be used the total depletion from the groundwater basin would be approximately 50,000 acre-feet per year. It is estimated that average actual depletion must be reduced by 7,000 acre-feet per year in order to balance recharge and depletion amounts in this groundwater basin.

## **Affected Area**

This groundwater management plan applies to the groundwater basin within the surface drainage area of Cedar City Valley in Iron County. The groundwater management plan area is more particularly described as Water Right Area 73 and is shown in Figure 1.

## **Priority Regulation**

In order to reduce actual depletion to balance recharge, water rights will be regulated according to priority and regardless of a water right's nature of use. Regulation will follow the schedule described in Table 1. A regulated water right will no longer be authorized to divert water beginning on the target date corresponding to the phase wherein the water right is to be regulated. A list of groundwater rights and corresponding priority dates and depletion estimates are posted on the Division of Water Rights website.

The regulated priority date for a given phase in Table 1 may be adjusted by the State Engineer to a later priority date based on the average annual artificial recharge or reductions in depletions that occur within the groundwater basin during the 10 years prior to the target date. Each year in the Cedar City Valley Pumpers annual distribution system report, the State Engineer will report on the status of the aquifer, the estimated annual depletion resulting from groundwater withdrawals, amount and disposition of artificial recharge, and any adjustments to the regulated priority date for a given phase. Recharged water under projects for which a recovery application has been approved and actively pursued will not be considered in adjusting the regulated priority date for a given phase.

**Table 1** Priority Regulation Schedule

Phase	Target Date	Priority Dates Regulated Through	Acre-Feet Reduction in Estimated Depletion	Cumulative Acre-Feet Reduction in Depletion	Remaining Depletion (acre-feet)
1	January 1, 2035	December 31, 1957	5,434	5,434	45,530
2	January 1, 2050	December 31, 1954	7,330	12,764	38,200
3	January 1, 2060	December 31, 1951	8,814	21,578	29,386
4	January 1, 2070	December 31, 1935	6,761	28,339	22,625
5	January 1, 2080	July 25, 1934	1,518	29,857	21,107

## Depletion Calculations

For purposes of this groundwater management plan, annual depletion from irrigation will be calculated using an annual crop survey prepared by the distribution system commissioner. The crop survey will tabulate the irrigated acreage for every crop type in the management plan boundary. It will include acreage supplied by groundwater and acreage supplied by both surface and groundwater sources. The crop survey will be published every year in the Cedar Valley Pumps annual distribution system report. For irrigated acreage supplied by both surface and groundwater sources, water users may be required to meter the amount of groundwater diverted to that acreage so that the groundwater depletion attributable to this acreage can be estimated.

Entities with municipal use will be required to report the following on an annual basis:

1. Amount of water diverted from all sources
2. Amount of water depleted from the municipal uses

Depletion due to municipal use will be the groundwater diversion minus any return flow resulting from the groundwater portion of wastewater effluent returning to the groundwater system and minus any return flow resulting from the groundwater portion of water used for lawn and garden irrigation and any other municipal purposes.

Depletion due to any other uses will be evaluated on an individual basis. Water users will be required to report diversions and depletions associated with these uses as directed by the State Engineer.

Artificial recharge due to recharge projects will be considered as an accretion of groundwater and will be a part of the depletion calculations. To be considered in the depletion calculations, the artificial recharge must be reported to the Division of Water Rights under a recharge permit approved by the State Engineer. The recharged water, if not diverted and left in its natural course, must not have previously recharged the groundwater aquifer.

## **Voluntary Arrangements**

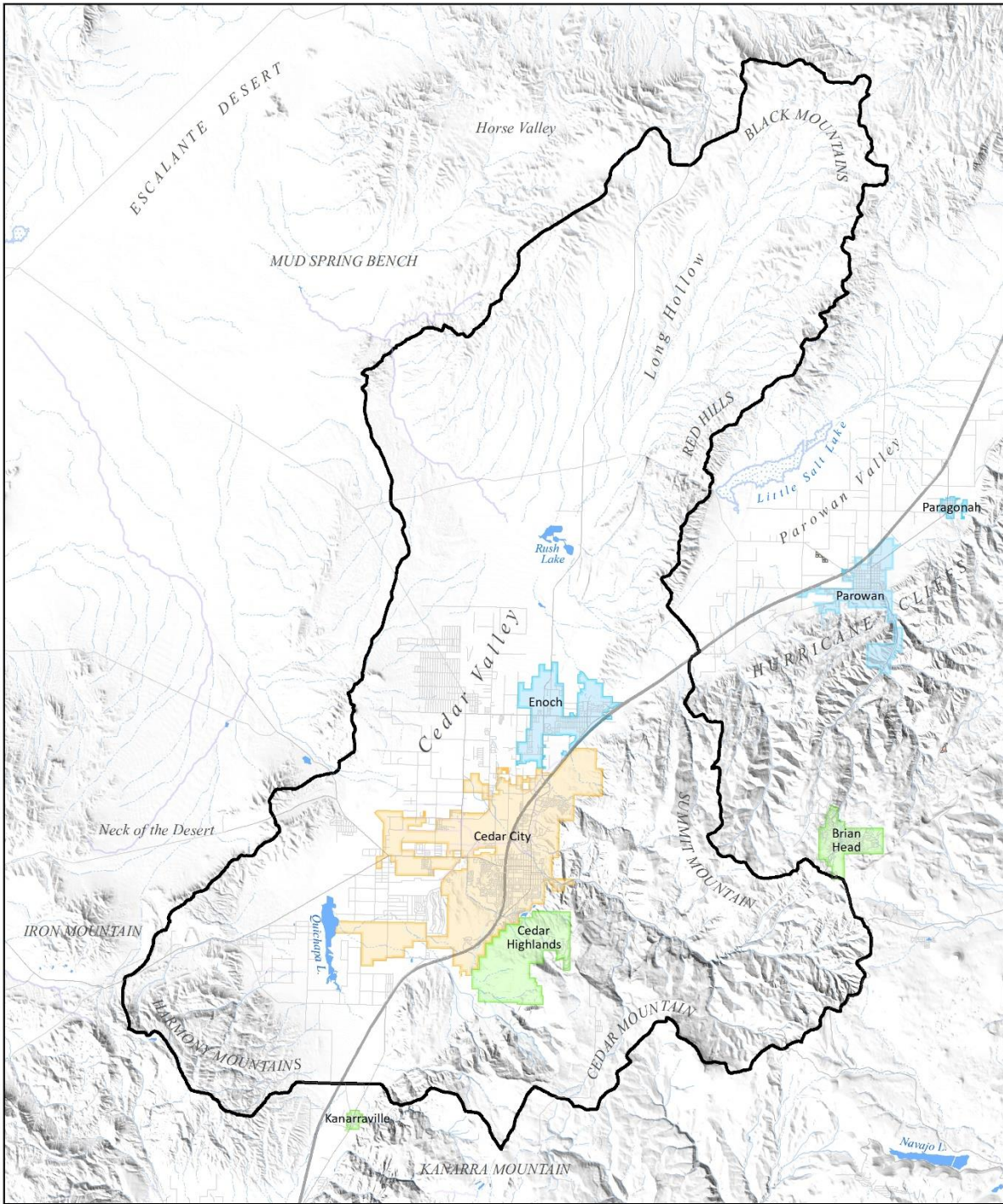
Pursuant to Subsection (4)(b) of Section 73-5-15 of the Utah Code, in consultation with the State Engineer, water users may agree to participate in a voluntary arrangement to manage withdrawals on a system other than by priority date. Any voluntary arrangement shall be consistent with existing statute and must not affect the rights of water users who do not agree with or do not participate in the voluntary arrangement.

The State Engineer has approved applications for the Central Iron County Water Conservancy District (CICWCD) to import water from Pine and Wah Wah Valleys to its service area in Cedar City Valley. Presuming the project is constructed and successfully imports water to this basin, a possible effect of this alternative water supply will be to increase recharge to the groundwater basin. The State Engineer will monitor development of this project which may be used in a voluntary arrangement between water users to offset future priority regulation.

Voluntary Arrangements associated with this Groundwater Management Plan will be posted on the State Engineer's website.

## **Adaptive Management**

To determine the effectiveness of the plan, depletion calculations and groundwater level measurements will be used. As groundwater depletions approach safe yield it is anticipated that groundwater levels will stabilize with time. The phased reductions in depletions over long intervals as specified in Table 1 provide an opportunity for groundwater levels to respond to changes in groundwater depletions. A reduction in the rate of groundwater level decline over time will be used as an indicator of approaching equilibrium of depletion versus safe yield. If during any phase of the plan it is determined by the State Engineer that safe yield has been reached, future reductions in depletion will not be implemented. This plan may also be amended at any time in the same manner through which it was adopted.



**Figure 1**  
**Cedar City Valley Groundwater Management Plan Area**

0 5 Miles

Management Plan and Area 73 Boundary