



4.0 Kansas River Water Assurance District

The Kansas River Water Assurance District (KRWAD) was created in December 1989 to clearly define water management along the Kansas River. The objective of the KRWAD is to assure that each of its members has adequate supply to meet current water rights and to plan for future projected water rights for long-term needs.

Every five years the KWO, the Division of Water Resources, and the members of KRWAD update an operations agreement defining the rules for making releases from Milford, Tuttle Creek, and Perry reservoirs to meet member demands. The operations agreement is currently being updated. The most recent version is titled draft August 19, 2002, but includes the status as of September 30, 2002. The remainder of this section is based on this most recent version of the operation’s agreement.

Within the agreement, each member provides records of current use and estimates of projected use in 2020. The current use of members is approximately 95 mgd and the projected use is approximately 194 mgd. It should be noted that the City’s projected demand for year 2020 is 12,546 ac-ft/year (11.2 mgd). This is much lower than permitted in the recently approved water right for the Kansas River.

The operations agreement also provides estimates of the reliable yield of current KRWAD controlled storage as well as projections for the future yield once the sediment allocations are filled. The following table summarizes the yield estimates.

Table II-5 Assurance District Yield		
Reservoir	Current Yield	Yield after Sediment Allocation is Filled mgd
Milford	25	20
Tuttle Creek	216	89
Perry	18	13
Totals	259	122

The table indicates that current KRWAD storage is adequate to meet current demands, but as sediment allocations fill and demands increase KRWAD may need additional storage to meet member demands. This indicates that it is critical to periodically update the estimated rate and volume of sedimentation in the reservoirs.



Three pools of water within the reservoirs are available for purchase by KRWAD. The set-aside pool is included in the operation’s agreement and KRWAD has first right to this water. If the set-aside storage is not purchased by KRWAD by December 31, 2020, the State then has sole discretion on its use. The table below summarizes the yield of the available set aside storage.

Table II-6 Set-Aside Storage Yield, mgd		
Reservoir	Current Yield Mgd	Yield after Sediment Allocation is Filled Mgd
Milford	27	22
Tuttle Creek	0	0
Perry	11	8
Totals	38	30

Assuming sediment allocations are filled, the total available yield is 152 mgd, when the set-aside storage is combined with the current storage yield. The table below summarizes the yield from future use or uncommitted storage that is also available. Because KRWAD membership includes all of the major water users in the Kansas River basin, this water should be available for use by KRWAD, even though it is presently uncommitted.

Table II-7 Future Use or Uncommitted Storage Yield, mgd		
Reservoir	Current Yield	Yield after Sediment Allocation is Filled
Milford	63	51
Tuttle Creek	46	19
Perry	79	58
Totals	188	128

This table indicates that the yield of future use or uncommitted storage is adequate to meet projected member demands beyond year 2020 when combined with the yield from existing and set-aside storage even after sediment allocations have filled. Marketing storage that is available would add another 17 mgd of yield to the system after sediment allocations have filled, if purchased by KRWAD. It will be important for the City to work with the KRWAD board to ensure that the future use or uncommitted storage is available to KRWAD as demands grow and sediment allocations fill.



Based on the current operations agreement, the Kansas River should be a reliable source of water supply for the City for the foreseeable future.