

From Exhibit C – General Guidelines for Regional Water Plan Development (dated October 2012)

5.2 Management Supply Factor

The IPP and adopted RWP shall include a TWDB-provided table that presents the calculated decimal ‘management supply factors’ for each decade and for each WUG and WWP as follows:

$$\frac{[\textit{total volume of: existing water supply + recommended WMSs supply associated with WUG or WWP}]}{[\textit{total identified water demand to be met by both the existing supply + recommended WMSs) for WUG or WWP}]}$$

For example, all existing water supplies + all supplies from recommended WMSs to be provided to a WUG are divided by the WUG water demand that would be met with these supplies. If existing water supplies + all recommended WMSs supplies would provide 11,000 acre-ft/yr of supply to a WUG with 10,000 acre-ft/yr in water demands, the factor would be ‘1.1’ (i.e., 11,000/10,000).

WUGs with unmet needs, for example associated with irrigation demands, will result in management supply factors less than 1.0.

Management supply factors of all WWPs shall be presented individually, by decade. WUGs may be grouped by category and similar management supply factors in a summary format when appropriate. If the management supply factor was predetermined by the RWPG, the underlying basis for this magnitude of the management supply factor shall be explained in the RWP and may be summarized within the management supply factor table.

To address uncertainty in the planning and project implementation process over the current planning horizon and/or to address potential water needs beyond the planning horizon, RWPGs may incorporate a predetermined water management supply factor (e.g., beyond just meeting identified water needs) for WUGs and WWPs when developing the RWP.

Management supply factors may be used to take into account uncertainties associated with:

- projections of populations;
- projections of water demands;
- climate variability;
- yield of recommended WMSs;
- permitting or other uncertainties impacting implementation of projects; and/or
- other uncertainties.

The RWPG may choose to predetermine appropriate management supply factors as the basis for recommending WMSs that, together, provide water volumes in excess of the identified water needs. RWPGs shall provide an explanation for any predetermined management supply factors and may present these factors based, for example, on sizes of water users, types of water uses, types of WMSs, or any other factors the RWPG considers relevant at the project or water user level.

If a RWPG chooses not to predetermine or standardize management supply factors, the management supply factors will simply be reported in the RWP based on the recommended WMSs.

Examples of Management Supply Factors from the 2011 Region C Water Plan

North Texas Municipal Water District

	2010	2020	2030	2040	2050	2060
Projected Demands (including losses for Treatment & Delivery) (Ac-ft)	387,574	492,634	580,720	667,921	736,274	789,676
Total Supplies (Ac-Ft)	416,752	540,986	770,144	778,905	996,967	1,053,267
Reserve or (Shortage) (Ac-Ft)	29,178	48,352	189,424	110,984	260,693	263,591
Safety Factor	1.08	1.10	1.33	1.17	1.35	1.33
Total Supplies without Texoma (Ac-Ft)	339,452	463,686	623,644	633,105	806,667	862,967
Safety Factor without Texoma	0.88	0.94	1.07	0.95	1.10	1.09

Tarrant Regional Water District

	2010	2020	2030	2040	2050	2060
Projected Demands (Ac-Ft)	448,806	560,680	657,866	754,210	860,389	985,584
Total Supplies (Ac-Ft)	523,122	645,927	800,456	813,572	1,066,719	1,134,518
Reserve or (Shortage) Ac-Ft)	74,315	85,247	142,590	59,362	206,330	148,934
Safety Factor	1.17	1.15	1.22	1.08	1.24	1.15

City of Fort Worth (customer of Tarrant Regional Water District)

	2010	2020	2030	2040	2050	2060
Projected Demands (Ac-Ft)	256,732	314,875	377,372	444,688	523,473	618,676
Total Supplies (Ac-Ft)	256,732	314,875	377,372	444,688	523,473	618,676
Reserve or (Shortage) Ac-Ft)	0	0	0	0	0	0
Safety Factor	1.00	1.00	1.00	1.00	1.00	1.00

City of Aurora (self-supplied groundwater)

	2010	2020	2030	2040	2050	2060
Projected Demands (Ac-Ft)	187	218	237	253	292	338
Total Supplies (Ac-Ft)	255	311	315	317	320	360
Reserve or (Shortage) Ac-Ft)	68	93	78	64	28	22
Safety Factor	1.36	1.43	1.33	1.25	1.10	1.07