

MHO B: Limit groundwater depletions to streamflow to a relatively constant level over the long-term, both across the Basin as a whole and within each NRD.¹



Assessment: Did average groundwater depletions to streamflow during the analysis period exceed average groundwater depletions to streamflow during the baseline period? For this assessment, annual depletions may be weighted or adjusted to account for variations in hydrologic condition. For the purposes of this assessment:

- “Hydrologic condition” refers to whether each year was wet, dry, or normal,
- “Analysis period” refers to a period representing the five years preceding each assessment, and
- “Baseline period” refers to a period representing the years preceding the start of Plan implementation.

Results:

	This MHO is being achieved for an NRD or for the Basin if the average groundwater depletions to streamflow for the analysis period for that NRD or Basin <u>were not higher ($\alpha = 0.05$)²</u> than average groundwater depletions to streamflow for the baseline period.
	Caution. If the average groundwater depletions to streamflow for the analysis period for an NRD or for the Basin <u>were higher at $\alpha = 0.05$ but were not higher at $\alpha = 0.1$</u> than average groundwater depletions to streamflow for the baseline period, NeDNR and the affected NRDs will consider possible management actions to prevent future non-compliance.
	This MHO is not being achieved for an NRD or for the Basin if the average groundwater depletions to streamflow for the analysis period for that NRD or Basin <u>were significantly higher ($\alpha = 0.1$)</u> than average groundwater depletions to streamflow for the baseline period. NeDNR and the NRDs will follow the procedures described under “Process if MHO is Not Being Achieved,” (page [#]).

¹ For the purposes of MHO B, depletions to streamflow for Tri-Basin NRD and for the Basin as a whole will be evaluated as the net of groundwater depletions to streamflow plus the mound credit.

² $\alpha = 0.05$ is a statistics industry standard, which means there is only a 5% chance the pattern seen is due to chance. Therefore, when the result of the tested data is less than 0.05, the industry deems this to be a change due to the variable of interest. Often, when the result is between 0.05 and 0.1, it is interpreted as unclear whether the effect was due to the variable of interest or not.

MHO C: Ensure there is enough groundwater for all groundwater uses within the timeframe of this Plan by stabilizing groundwater levels.



Assessment: The following two-part assessment of groundwater levels for each NRD will take place within the hydrologically connected area for groundwater, at the management scale identified by that NRD (for example, by square mile, township, county, or subbasin).

First, did average groundwater levels for the analysis period exceed average groundwater levels to streamflow for the baseline period? For this assessment, annual groundwater levels may be weighted or adjusted to account for variations in hydrologic condition. For the purposes of this assessment:

- "Hydrologic condition" refers to whether each year was wet, dry, or normal,
- "Analysis period" refers to a period representing the five years preceding each assessment, and
- "Baseline period" refers to a period representing the years preceding the start of Plan implementation.

Second, in areas for which the first assessment reveals a decline in groundwater levels, are groundwater levels declining at a rate such that groundwater modeling of the remaining aquifer saturated thickness indicates sufficient amounts of water are likely to exist to allow for crop irrigation, municipal, and industrial uses of groundwater at the end of the 25-year Plan period?

Results:

	This MHO is being achieved in areas where the average groundwater levels for the analysis period <u>were not lower ($\alpha = 0.05$)</u> than average groundwater levels for the baseline period.
	Caution. In areas where the first part of the assessment indicates a groundwater level decline ($\alpha = 0.05$) and groundwater modeling projects that sufficient amounts of groundwater <u>are likely to exist</u> for all groundwater uses at the end of the 25-year Plan period, NeDNR and the affected NRDs will consider possible management actions to prevent future non-compliance.
	This MHO is <u>not</u> being achieved in areas where the first part of the assessment indicates a groundwater level decline ($\alpha = 0.05$) and groundwater modeling projects that sufficient amounts of groundwater <u>are not likely to exist</u> for all groundwater uses at the end of the 25-year Plan period. NeDNR and the NRDs will follow the procedures described under "Process if MHO is Not Being Achieved," (page [#]).