

Surface Water Supply Index by HUC Data Dictionary

This document describes the Surface Water Supply Index by 8-digit Hydrologic Unit Code (HUC), otherwise referred to as sub-basin, dataset in the Colorado Information Marketplace.

The Surface Water Supply Index (SWSI) is used as an indicator of surface water supply conditions in Colorado. The SWSI compares the total volume of water in a basin or sub-basin against the volume available in the same month of historical years. Depending on the month, the volume is a combination of streamflow, streamflow forecast, and reservoir storage. The SWSI is calculated for Colorado's river basins and sub-basins; this data set provides information on the Colorado's sub-basin-level SWSI calculation. More information is available at <http://water.state.co.us/DWRDocs/Reports/Pages/SWSIReport.aspx>.

Data Dictionary

Field Name	Description	Data Type
Basin	Major river basin where the sub-basin is located. There are seven major river basins in Colorado.	Text
HUC8	8-digit Hydrologic Unit Code (HUC) associated with a specific sub-basin.	Number
HUC8 Name	Name of 8-digit HUC, otherwise referred to as sub-basin, that the SWSI is being calculated for. SWSIs are calculated for 41 sub-basins in Colorado.	Text
Report Year	Year of SWSI.	Number
Report Month	Month of SWSI.	Number
SWSI	<p>Surface Water Supply Index. The SWSI value is used as an indicator of water supply conditions in Colorado's basins/sub-basins; it is developed based on the NEP. The value ranges between 4.16 and -4.16:</p> <ul style="list-style-type: none"> • $\geq +3$, Abundant Supply • +2 to +2.9, Very Wet • +1 to +1.9, Wet • -0.9 to +0.9, Near Normal • -1 to -1.9, Dry • -2 to -2.9, Very Dry • ≤ -3, Extreme Drought 	Number

NEP	Non Exceedance Probability. The NEP indicates how often the current volume of water in the basin/sub-basin has been exceeded during the same month of the historical period. A value of 0 indicates that the volume of water has always been exceeded in the past and therefore represents extreme drought; a value of 100 indicates that the volume of water has never been exceeded in the past and therefore indicates an extremely abundant water supply. A value of 50 is considered normal. The NEP is calculated using natural flow, forecasted natural flow, and active storage data over a historical period of record.	Number
SWSI Previous Year	SWSI value for the same month during the previous year.	Number
Change from Previous Year	SWSI value change from previous year.	Number
Reservoir Storage NEP	Non Exceedance Probability of the combined volume of water available to the reservoirs in the sub-basin that are being used in the SWSI analysis.	Number
Stream Flow NEP	Non Exceedance Probability of the combined volume of water available to the streams in the sub-basin that are being used in the SWSI analysis.	Number
Forecasted Runoff NEP	Probability of the combined volume of water forecasted to be available to the streams in the sub-basin that are being used in the SWSI analysis.	Number