Memo

To: Bob Brueggeman, PE, Newman Lake Flood Control Zone District Administrator
Via: Marianne Barrentine, PE, Environmental Programs Manager
From: Jane Anderson, Environmental Programs

Date: February 9, 2010

Subject: Newman Lake Snow Pack/Lake Level Update

We completed the first snow course monitoring of the year on January 27th in the Newman Lake watershed. Snow pack is below average this year with snow pack at Quartz Peak at about 73% of average. Here is the comparison of Snow Water Equivalent readings (in inches) with previous year's data as of Feb 1:

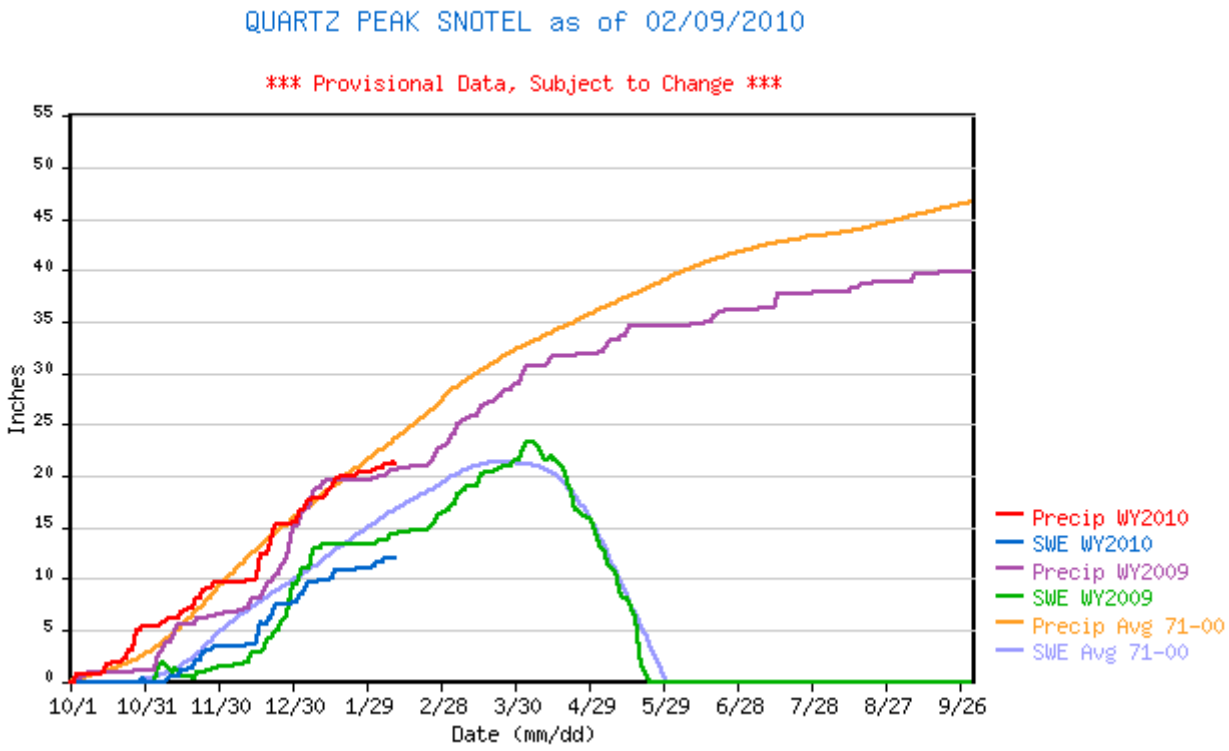
	Thompson Creek	**Ragged Ridge**	**Round Top**	**Quartz Peak**
Date	Elev. 2500'	Elev. 3250'	Elev. 4020'	Elev. 4700'
1997	8.6	11.3	16.0	24.8
1998	4.7	7.7	11.7	14.7
1999	3.8	9.5	12.9	21.2
2000	6.6	10.6	14.7	19.7
2001	5.0	6.2	7.2	8.6
2002	5.8	9.5	13.1	22.8
2003	1.3	2.9	5.3	11.1
2004	6.3	7.6	11.0	17.4
2005	0.4	0.8	0.0	4.8
2006	2.2	5.6	10.9	20.1
2007	3.4	6.1	9.6	15.2
2008	8.4	13.2	-	21.5
2009	8.1	10.2	11.7	13.4
2010	**0.0**	**0.2**	**5.8**	**11.3**
Average	5.0*	7.1	10.3*	15.4
2010 % of Average	**0.0**	**2.8**	**56.1**	**73.4**

*Avg. of previous years since 1997 (only available data)

Per the HSPF model, we have an estimated 4,100 ac-ft of runoff based on an average precipitation the rest of the season. This is based on the snow depth at Quartz peak on Feb. 1. This is about 3.4 ft of water spread out over the lake surface. The long term forecast is for a drier than average February with the precipitation levels increasing again in March and April.

This winter season has been quite warm. The lake level in January stayed right around the goal winter elevation of 2123.9 feet +/- 0.1. With the lake frozen but the temperatures in the low-mid forties, the gates are cracked. We will continue to monitor the lake level and begin to slowly raise the lake elevation as the ice begins to thin.

With the below average snowpack and long range forecast predicting average precipitation, we have to maximize the mountain runoff and keep lake level as near to normal winter elevation or slightly above as possible at this point.



SWE = Snow Water Equivalent, Precip = Precipitation