
From: Hilts, Derek <derek_hilts@fws.gov>
Sent: Friday, March 1, 2019 4:06 PM
To: Barbara Byrne - NOAA Federal
Subject: Re: [EXTERNAL] Re: ROC on LTO Stanislaus info by yeartype
Attachments: NM storages & Goodwin flows by yeartype - Food for thought for BB.xlsx

Just in case storage isn't enough to mull over, I've added Goodwin flows to the workbook. See attached - AFTER the weekend! :)

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On Fri, Mar 1, 2019 at 1:31 PM Barbara Byrne - NOAA Federal <barbara.byrne@noaa.gov> wrote:
Responses embedded below, in blue.

On Fri, Mar 1, 2019 at 12:48 PM Hilts, Derek <derek_hilts@fws.gov> wrote:

Hi Barb,

As you may know, the results in Appendix D Atch 3-1 Tables 7.1, 7.2 & 7.3, although arrayed as Jan - Dec, actually are displaying Oct, Nov, & Dec values based on the previous water year type (which I think is good). For example, the value for NM storage in Oct 1976 is used in the calculation of Wet Yeartype average because WY75 was a wet year. (WY76 winds up being a critically dry year). *I thought this was the case, but wasn't sure -- meant to ask you so thanks for flagging this!*

I will use this same approach to tabulate NM storages on a NMI-based yeartype basis. The problem of course with tabulating water year type-based averages using NMI bins is that each run may have its own set of W, AN, BN, DRY, CRT years. Below is a table of the three runs' NMI yeartypes (WET=5, ..., CRT=1)

COS	PA w/o Ops	
NMI	NMI	NMI
YRT	YRT	YRT
1922	4	4 1
1923	4	4 1
1924	2	2 1
1925	3	3 1
1926	2	2 1
1927	2	3 1
1928	2	3 1
1929	1	2 1
1930	1	2 1
1931	1	1 1
1932	1	2 1
1933	1	1 1
1934	1	1 1

1935 1 1 1
1936 2 2 1
1937 2 2 1
1938 5 4 2
1939 3 2 1
1940 3 3 1
1941 4 4 1
1942 5 4 1
1943 5 5 1
1944 3 3 1
1945 3 3 1
1946 3 4 1
1947 2 3 1
1948 2 3 1
1949 2 2 1
1950 2 2 1
1951 3 4 1
1952 5 5 2
1953 4 4 1
1954 3 3 1
1955 2 2 1
1956 4 4 1
1957 3 3 1
1958 4 4 1
1959 3 3 1
1960 2 2 1
1961 1 2 1
1962 1 2 1
1963 2 2 1
1964 1 2 1
1965 3 3 1
1966 2 2 1
1967 4 4 2
1968 3 3 1
1969 5 5 2
1970 4 4 1
1971 3 4 1
1972 3 3 1
1973 3 4 1
1974 3 4 1
1975 3 4 1
1976 2 3 1
1977 1 2 1
1978 2 3 1
1979 3 3 1
1980 4 4 1
1981 2 3 1
1982 5 5 2
1983 5 5 3
1984 4 4 1
1985 3 3 1

1986 5 5 2
1987 3 3 1
1988 1 2 1
1989 1 2 1
1990 1 1 1
1991 1 1 1
1992 1 1 1
1993 1 1 1
1994 1 1 1
1995 3 3 2
1996 4 4 1
1997 4 4 2
1998 5 5 2
1999 4 4 1
2000 4 4 1
2001 2 3 1
2002 2 3 1
2003 2 3 1

Do you want me to tabulate each run's NM storage averages based on its own NMI yeartypes? I need to think about this -- don't want to ask for everything and not use it. Will check in Mon or Tuesday!

The above all applies to tabulating Stan flows below Goodwin (Appendix D Attch 3-2 Tables 37.1, 37.2 & 37.3) as well. I need to think about this -- don't want to ask for everything and not use it. Will check in Mon or Tuesday!

For Appendix D Attch 3-4, do you want me to re-do all five sets of temperature tables or is there a particular location of interest? I need to think about this -- don't want to ask for everything and not use it. Will check in Mon or Tuesday!

Derek

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