[] Dendrochronology Program Library Run FINAL Program COF 14:52 Wed 03 Jul 2013 Page 1

[]

[] P R O G R A M C O F E C H A Version 6.06P 28675

------------------------------------------------------------------------------------------------------------------------------------

QUALITY CONTROL AND DATING CHECK OF TREE-RING MEASUREMENTS

Title of run: Final

File of DATED series: SNCHigh\_PCRU\_Final

CONTENTS:

Part 1: Title page, options selected, summary, absent rings by series

Part 2: Histogram of time spans

Part 3: Master series with sample depth and absent rings by year

Part 4: Bar plot of Master Dating Series

Part 5: Correlation by segment of each series with Master

Part 6: Potential problems: low correlation, divergent year-to-year changes, absent rings, outliers

Part 7: Descriptive statistics

RUN CONTROL OPTIONS SELECTED VALUE

1 Cubic smoothing spline 50% wavelength cutoff for filtering

32 years

2 Segments examined are 50 years lagged successively by 25 years

3 Autoregressive model applied A Residuals are used in master dating series and testing

4 Series transformed to logarithms Y Each series log-transformed for master dating series and testing

5 CORRELATION is Pearson (parametric, quantitative)

Critical correlation, 99% confidence level .3281

6 Master dating series saved N

7 Ring measurements listed N

8 Parts printed 1234567

9 Absent rings are omitted from master series and segment correlations (Y)

Time span of Master dating series is 1841 to 2012 172 years

Continuous time span is 1841 to 2012 172 years

Portion with two or more series is 1856 to 2012 157 years

>> 579A 1957 absent in 1 of 13 series, but is not usually narrow: master index is .276

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*C\* Number of dated series 23 \*C\*

\*O\* Master series 1841 2012 172 yrs \*O\*

\*F\* Total rings in all series 1706 \*F\*

\*E\* Total dated rings checked 1691 \*E\*

\*C\* Series intercorrelation .552 \*C\*

\*H\* Average mean sensitivity .237 \*H\*

\*A\* Segments, possible problems 4 \*A\*

\*\*\* Mean length of series 74.2 \*\*\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

ABSENT RINGS listed by SERIES: (See Master Dating Series for absent rings listed by year)

577A 1 absent rings: 1877

579A 1 absent rings: 1957

2 absent rings .117%

PART 2: TIME PLOT OF TREE-RING SERIES: Final 14:52 Wed 03 Jul 2013 Page 2

------------------------------------------------------------------------------------------------------------------------------------

1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050 Ident Seq Time-span Yrs

: : : : : : : : : : : : : : : : : : : : : -------- --- ---- ---- ----

. . . . . . . . . . . . . . . . . . . <===> . 573A 1 1970 2012 43

. . . . . . . . . . . . . . . . . <==========> . 574A 2 1909 2012 104

. . . . . . . . . . . . . . . . . . <========> . 574B 3 1920 2012 93

. . . . . . . . . . . . . . . . . . .<====> . 575B 4 1967 2012 46

. . . . . . . . . . . . . . . . . . <========> . 576A 5 1929 2012 84

. . . . . . . . . . . . . . . . . . <=======> . 576B 6 1932 2012 81

. . . . . . . . . . . . . . . . <================> . 577A 7 1841 2012 172

. . . . . . . . . . . . . . . . . . <=====> . 577B 8 1950 2012 63

. . . . . . . . . . . . . . . . . .<=========> . 578A 9 1910 2012 103

. . . . . . . . . . . . . . . . <===============> . 578B 10 1856 2012 157

. . . . . . . . . . . . . . . . . . <=======> . 579A 11 1934 2012 79

. . . . . . . . . . . . . . . . . <==========> . 579B 12 1908 2012 105

. . . . . . . . . . . . . . . . . . .<====> . 580A 13 1963 2012 50

. . . . . . . . . . . . . . . . . . .<====> . 580B 14 1967 2012 46

. . . . . . . . . . . . . . . . . . <=====> . 581B 15 1950 2012 63

. . . . . . . . . . . . . . . . . . .<====> . 582A 16 1969 2012 44

. . . . . . . . . . . . . . . . . . .<====> . 582B 17 1965 2012 48

. . . . . . . . . . . . . . . . . . .<====> . 583A 18 1968 2012 45

. . . . . . . . . . . . . . . . . . . <===> . 583B 19 1973 2012 40

. . . . . . . . . . . . . . . . . . <======> . 584A 20 1946 2012 67

. . . . . . . . . . . . . . . . . . <=====> . 573B 21 1958 2012 55

. . . . . . . . . . . . . . . . . . <=====> . 575A 22 1958 2012 55

. . . . . . . . . . . . . . . . . . <=====> . 581A 23 1950 2012 63

: : : : : : : : : : : : : : : : : : : : :

1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000 2050

PART 3: Master Dating Series: Final 14:52 Wed 03 Jul 2013 Page 3

------------------------------------------------------------------------------------------------------------------------------------

Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab Year Value No Ab

------------------ ------------------ ------------------ ------------------ ------------------ ------------------

1850 .395 1 1900 -.771 2 1950 -.155 13 2000 -.193 23

1851 3.138 1 1901 -1.138 2 1951 .233 13 2001 1.352 23

1852 1.366 1 1902 -.725 2 1952 .958 13 2002 1.239 23

1853 -.168 1 1903 .839 2 1953 .573 13 2003 -1.338 23

1854 -1.042 1 1904 1.913 2 1954 .752 13 2004 -2.397 23

1855 -.889 1 1905 .434 2 1955 1.337 13 2005 -1.566 23

1856 -.266 2 1906 .292 2 1956 -1.304 13 2006 -1.450 23

1857 .443 2 1907 .826 2 1957 .276 13 1<< 2007 .016 23

1858 -.626 2 1908 .023 3 1958 .384 15 2008 -.196 23

1859 -.273 2 1909 -.573 4 1959 -.083 15 2009 .138 23

1860 .260 2 1910 .521 5 1960 .199 15 2010 1.120 23

1861 1.582 2 1911 -1.288 5 1961 .889 15 2011 -.068 23

1862 .509 2 1912 -1.112 5 1962 -.189 15 2012 1.339 23

1863 1.037 2 1913 -.087 5 1963 -1.005 16

1864 .169 2 1914 .262 5 1964 -.465 16

1865 -2.021 2 1915 .320 5 1965 -1.085 17

1866 -.822 2 1916 -.004 5 1966 -.971 17

1867 -2.388 2 1917 .506 5 1967 -.199 19

1868 -1.084 2 1918 -.617 5 1968 -.287 20

1869 .912 2 1919 -.426 5 1969 .080 21

1870 1.570 2 1920 .042 6 1970 .087 22

1871 .993 2 1921 -.488 6 1971 .582 22

1872 .887 2 1922 -.415 6 1972 -.713 22

1873 1.227 2 1923 -.264 6 1973 .333 23

1874 1.662 2 1924 1.836 6 1974 .552 23

1875 -.087 2 1925 -.335 6 1975 .927 23

1876 -1.632 2 1926 .856 6 1976 .360 23

1877 -.522 2 1 1927 .714 6 1977 -.152 23

1878 -.333 2 1928 1.019 6 1978 -.331 23

1879 .414 2 1929 -.556 7 1979 -.097 23

1880 .371 2 1930 .892 7 1980 1.160 23

1881 .014 2 1931 1.467 7 1981 -1.126 23

1882 .858 2 1932 .533 8 1982 -1.042 23

1883 .492 2 1933 -.079 8 1983 .088 23

1884 -1.442 2 1934 .744 9 1984 -.890 23

1885 -.571 2 1935 -2.795 9 1985 -.307 23

1886 -.682 2 1936 -1.075 9 1986 -.997 23

1887 -.524 2 1937 -.583 9 1987 .496 23

1888 -.441 2 1938 -.113 9 1988 .851 23

1889 -.159 2 1939 -.492 9 1989 -.989 23

1890 .413 2 1940 -2.925 9 1990 -.280 23

1841 1.120 1 1891 -.587 2 1941 .536 9 1991 -.354 23

1842 .406 1 1892 .266 2 1942 .727 9 1992 .340 23

1843 -2.209 1 1893 .528 2 1943 .394 9 1993 1.119 23

1844 -.131 1 1894 1.576 2 1944 .132 9 1994 .619 23

1845 1.422 1 1895 2.759 2 1945 -.037 9 1995 1.156 23

1846 1.001 1 1896 1.434 2 1946 -.382 10 1996 -.835 23

1847 -.920 1 1897 -2.077 2 1947 .750 10 1997 .301 23

1848 -2.195 1 1898 -1.564 2 1948 -1.628 10 1998 -.065 23

1849 -.946 1 1899 -.377 2 1949 .161 10 1999 1.196 23

------------------------------------------------------------------------------------------------------------------------------------

PART 4: Master Bar Plot: Final 14:52 Wed 03 Jul 2013 Page 4

------------------------------------------------------------------------------------------------------------------------------------

Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value Year Rel value

1850-------B 1900--c 1950----a 2000----a

1851----------M 1901-e 1951------A 2001----------E

1852----------E 1902--c 1952---------D 2002---------E

1853----a 1903--------C 1953-------B 2003e

1854-d 1904----------H 1954--------C 2004j

1855-d 1905-------B 1955---------E 2005f

1856----a 1906------A 1956-e 2006f

1857-------B 1907--------C 1957------A 2007-----@

1858--c 1908-----@ 1958------B 2008----a

1859----a 1909--b 1959----@ 2009-----A

1860------A 1910-------B 1960------A 2010---------D

1861----------F 1911-e 1961--------D 2011-----@

1862-------B 1912-d 1962----a 2012---------E

1863---------D 1913----@ 1963-d

1864------A 1914------A 1964---b

1865h 1915------A 1965-d

1866--c 1916-----@ 1966-d

1867j 1917-------B 1967----a

1868-d 1918--b 1968---a

1869--------D 1919---b 1969-----@

1870----------F 1920-----@ 1970-----@

1871---------D 1921---b 1971-------B

1872--------D 1922---b 1972--c

1873---------E 1923----a 1973------A

1874----------G 1924----------G 1974-------B

1875----@ 1925---a 1975--------D

1876g 1926--------C 1976------A

1877--b 1927--------C 1977----a

1878---a 1928---------D 1978---a

1879-------B 1929--b 1979----@

1880------A 1930--------D 1980---------E

1881-----@ 1931----------F 1981-e

1882--------C 1932-------B 1982-d

1883-------B 1933----@ 1983-----@

1884f 1934--------C 1984-d

1885--b 1935k 1985---a

1886--c 1936-d 1986-d

1887--b 1937--b 1987-------B

1888---b 1938----@ 1988--------C

1889----a 1939---b 1989-d

1890-------B 1940l 1990---a

1841---------D 1891--b 1941-------B 1991---a

1842-------B 1892------A 1942--------C 1992------A

1843i 1893-------B 1943-------B 1993---------D

1844----a 1894----------F 1944-----A 1994-------B

1845----------F 1895----------K 1945-----@ 1995---------E

1846---------D 1896----------F 1946---b 1996-c

1847-d 1897h 1947--------C 1997------A

1848i 1898f 1948g 1998-----@

1849-d 1899---b 1949------A 1999---------E

PART 5: CORRELATION OF SERIES BY SEGMENTS: Final 14:52 Wed 03 Jul 2013 Page 5

------------------------------------------------------------------------------------------------------------------------------------

Correlations of 50-year dated segments, lagged 25 years

Flags: A = correlation under .3281 but highest as dated; B = correlation higher at other than dated position

Seq Series Time\_span 1850 1875 1900 1925 1950 1975

1899 1924 1949 1974 1999 2024

--- -------- --------- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ---- ----

1 573A 1970 2012 .50

2 574A 1909 2012 .57 .76 .49 .55

3 574B 1920 2012 .77 .78 .55 .55

4 575B 1967 2012 .58

5 576A 1929 2012 .34 .57 .47

6 576B 1932 2012 .44 .49 .51

7 577A 1841 2012 .41 .32A .58 .73 .36 .32A

8 577B 1950 2012 .40 .59

9 578A 1910 2012 .60 .68 .65 .62

10 578B 1856 2012 .41 .27A .49 .75 .64 .68

11 579A 1934 2012 .26A .48 .64

12 579B 1908 2012 .55 .71 .62 .68

13 580A 1963 2012 .55

14 580B 1967 2012 .64

15 581B 1950 2012 .50 .60

16 582A 1969 2012 .51

17 582B 1965 2012 .64

18 583A 1968 2012 .67

19 583B 1973 2012 .61

20 584A 1946 2012 .66 .64 .62

21 573B 1958 2012 .54 .64

22 575A 1958 2012 .63 .64

23 581A 1950 2012 .52 .64

Av segment correlation .41 .29 .59 .61 .55 .58

PART 6: POTENTIAL PROBLEMS: Final 14:52 Wed 03 Jul 2013 Page 5

------------------------------------------------------------------------------------------------------------------------------------

For each series with potential problems the following diagnostics may appear:

[A] Correlations with master dating series of flagged 50-year segments of series filtered with 32-year spline,

at every point from ten years earlier (-10) to ten years later (+10) than dated

[B] Effect of those data values which most lower or raise correlation with master series

Symbol following year indicates value in series is greater (>) or lesser (<) than master series value

[C] Year-to-year changes very different from the mean change in other series

[D] Absent rings (zero values)

[E] Values which are statistical outliers from mean for the year

====================================================================================================================================

573A 1970 to 2012 43 years Series 1

[B] Entire series, effect on correlation ( .502) is:

Lower 2012< -.104 1987< -.039 1971< -.020 1982> -.014 2005> -.013 1998> -.012 Higher 2003 .051 1989 .051

====================================================================================================================================

574A 1909 to 2012 104 years Series 2

[B] Entire series, effect on correlation ( .558) is:

Lower 1911> -.038 1912< -.023 1918> -.017 1921> -.013 1923> -.009 1916> -.008 Higher 1935 .053 1940 .039

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1935 -6.3 SD

====================================================================================================================================

574B 1920 to 2012 93 years Series 3

[B] Entire series, effect on correlation ( .698) is:

Lower 1929> -.016 1920< -.016 1985< -.015 1996> -.014 1982> -.009 1970< -.008 Higher 1935 .048 1940 .025

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1960 +3.2 SD

====================================================================================================================================

575B 1967 to 2012 46 years Series 4

[B] Entire series, effect on correlation ( .585) is:

Lower 1996> -.041 1975< -.040 1972> -.020 1978> -.011 1985> -.011 1977> -.009 Higher 1981 .051 2003 .028

====================================================================================================================================

576A 1929 to 2012 84 years Series 5

[B] Entire series, effect on correlation ( .400) is:

Lower 1940> -.078 1929< -.036 1982> -.018 2003> -.017 1989> -.013 2005> -.012 Higher 1956 .038 1948 .025

[E] Outliers 4 3.0 SD above or -4.5 SD below mean for year

1929 -5.4 SD; 1940 +5.5 SD; 1941 +3.0 SD; 2005 +3.2 SD

====================================================================================================================================

576B 1932 to 2012 81 years Series 6

[B] Entire series, effect on correlation ( .496) is:

Lower 1940> -.081 1973< -.027 1962< -.026 1982> -.017 1966> -.012 1977< -.008 Higher 1956 .042 1948 .037

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1940 +4.9 SD

====================================================================================================================================

577A 1841 to 2012 172 years Series 7

[\*] Early part of series cannot be checked from 1841 to 1855 -- not matched by another series

[A] Segment High -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 +0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10

--------- ---- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

1875 1924 0 .15 .18 .06 .09 .01 -.10 -.01 -.09 -.26 .06 .32\* .00 .07 -.08 .00 -.08 -.18 -.13 -.09 .01 .05

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

1963 2012 0 .07 .06 -.23 -.01 -.03 -.10 -.09 -.12 .20 -.06 .32\* - - - - - - - - - -

[B] Entire series, effect on correlation ( .436) is:

Lower 1877< -.042 1884> -.030 1868> -.018 1975< -.017 1989> -.014 1981> -.011 Higher 1940 .028 1935 .023

1875 to 1924 segment:

Lower 1877< -.084 1884> -.066 1908> -.023 1902> -.019 1918< -.016 1901> -.014 Higher 1897 .077 1895 .043

1963 to 2012 segment:

Lower 1975< -.067 1989> -.056 1981> -.047 1963> -.027 1978< -.024 1974< -.021 Higher 2012 .037 1996 .032

[C] Year-to-year changes diverging by over 4.0 std deviations:

1876 1877 -4.5 SD

[D] 1 Absent rings: Year Master N series Absent

1877 -.522 2 1

Present in series 10 578B time span 1856 to 2012

[E] Outliers 6 3.0 SD above or -4.5 SD below mean for year

1868 +3.9 SD; 1869 +3.2 SD; 1877 -6.6 SD; 1884 +4.7 SD; 1902 +3.1 SD; 1975 -5.2 SD

====================================================================================================================================

577B 1950 to 2012 63 years Series 8

[B] Entire series, effect on correlation ( .507) is:

Lower 1975< -.049 1995< -.038 1950> -.031 2002< -.024 1956> -.021 1961< -.018 Higher 2004 .038 2003 .036

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1950 +3.2 SD

====================================================================================================================================

578A 1910 to 2012 103 years Series 9

[B] Entire series, effect on correlation ( .608) is:

Lower 1923< -.018 1925> -.016 1929> -.016 2003> -.010 1916< -.009 1987< -.007 Higher 1935 .025 1948 .022

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1940 -6.6 SD

====================================================================================================================================

578B 1856 to 2012 157 years Series 10

[A] Segment High -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 +0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10

--------- ---- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

1875 1924 0 .02 .09 -.11 -.36 -.22 .06 -.06 .09 -.08 -.01 .27\* .17 -.21 -.05 -.01 -.12 -.05 .15 .03 .00 .03

[B] Entire series, effect on correlation ( .547) is:

Lower 1884< -.023 1868< -.019 1908> -.015 1911< -.009 1989> -.009 1902< -.008 Higher 1940 .021 1948 .020

1875 to 1924 segment:

Lower 1884< -.046 1908> -.040 1912> -.020 1902< -.020 1906> -.019 1919> -.017 Higher 1897 .097 1895 .051

[E] Outliers 2 3.0 SD above or -4.5 SD below mean for year

1884 -4.7 SD; 1920 +3.5 SD

====================================================================================================================================

579A 1934 to 2012 79 years Series 11

[A] Segment High -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 +0 +1 +2 +3 +4 +5 +6 +7 +8 +9 +10

--------- ---- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- --- ---

1934 1983 0 -.09 -.13 .09 -.23 .04 -.19 -.05 .18 -.19 .13 .26\*-.15 .24 -.34 .11 .06 -.15 .15 -.09 .05 .15

[B] Entire series, effect on correlation ( .434) is:

Lower 1945> -.034 1940> -.033 1948> -.023 1957< -.018 1961< -.018 1983< -.014 Higher 2003 .036 1956 .028

1934 to 1983 segment:

Lower 1945> -.039 1940> -.031 1957< -.026 1961< -.024 1948> -.022 1983< -.020 Higher 1956 .060 1935 .034

[D] 1 Absent rings: Year Master N series Absent

1957 .276 13 1 >> WARNING: Ring is not usually narrow

[E] Outliers 2 3.0 SD above or -4.5 SD below mean for year

1940 +3.5 SD; 1945 +4.4 SD

====================================================================================================================================

579B 1908 to 2012 105 years Series 12

[B] Entire series, effect on correlation ( .589) is:

Lower 1908< -.065 1939< -.019 1985< -.013 1909> -.013 1962> -.010 1912> -.009 Higher 1940 .037 1935 .020

====================================================================================================================================

580A 1963 to 2012 50 years Series 13

[B] Entire series, effect on correlation ( .550) is:

Lower 1990< -.035 1965> -.032 1991< -.029 1963< -.014 1969< -.014 2004> -.011 Higher 2003 .058 1989 .022

====================================================================================================================================

580B 1967 to 2012 46 years Series 14

[B] Entire series, effect on correlation ( .640) is:

Lower 1988< -.051 1981> -.049 1982> -.024 1984> -.023 1967< -.013 2001< -.012 Higher 2003 .071 2004 .037

====================================================================================================================================

581B 1950 to 2012 63 years Series 15

[B] Entire series, effect on correlation ( .523) is:

Lower 2003> -.025 1956> -.018 1955< -.017 1978> -.015 1950> -.013 1960< -.012 Higher 2001 .021 2012 .015

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1981 -6.7 SD

====================================================================================================================================

582A 1969 to 2012 44 years Series 16

[B] Entire series, effect on correlation ( .507) is:

Lower 2001< -.099 1974< -.038 1984> -.016 2004> -.015 1973< -.015 1996> -.014 Higher 2003 .086 1989 .026

====================================================================================================================================

582B 1965 to 2012 48 years Series 17

[B] Entire series, effect on correlation ( .638) is:

Lower 1986> -.022 2003> -.020 1981> -.019 1980< -.016 1970> -.013 1983< -.013 Higher 1996 .026 2004 .024

====================================================================================================================================

583A 1968 to 2012 45 years Series 18

[B] Entire series, effect on correlation ( .668) is:

Lower 1981> -.064 1972> -.030 1968< -.013 1982> -.013 1978< -.009 1980< -.009 Higher 2003 .073 1989 .023

====================================================================================================================================

583B 1973 to 2012 40 years Series 19

[B] Entire series, effect on correlation ( .608) is:

Lower 1978< -.127 1989> -.035 1974< -.015 1981> -.013 2006> -.011 1977> -.007 Higher 2003 .055 2004 .030

====================================================================================================================================

584A 1946 to 2012 67 years Series 20

[B] Entire series, effect on correlation ( .671) is:

Lower 1978< -.042 1981> -.027 2004> -.026 1972> -.015 1953< -.012 1950< -.011 Higher 1956 .036 1948 .023

====================================================================================================================================

573B 1958 to 2012 55 years Series 21

[B] Entire series, effect on correlation ( .551) is:

Lower 1960< -.048 1961< -.023 1963> -.020 1962> -.015 1964> -.013 1973< -.011 Higher 2004 .047 2003 .033

[E] Outliers 1 3.0 SD above or -4.5 SD below mean for year

1964 +3.4 SD

====================================================================================================================================

575A 1958 to 2012 55 years Series 22

[B] Entire series, effect on correlation ( .639) is:

Lower 1996> -.024 2004> -.016 1969< -.015 1978> -.014 1992< -.013 1968< -.012 Higher 2003 .062 1981 .033

====================================================================================================================================

581A 1950 to 2012 63 years Series 23

[B] Entire series, effect on correlation ( .554) is:

Lower 2003> -.030 1978> -.026 1954< -.017 1960< -.016 1962> -.012 1979< -.012 Higher 1981 .026 1989 .023

[E] Outliers 2 3.0 SD above or -4.5 SD below mean for year

1960 -4.6 SD; 2003 +3.0 SD

====================================================================================================================================

PART 7: DESCRIPTIVE STATISTICS: Final 14:52 Wed 03 Jul 2013 Page 6

------------------------------------------------------------------------------------------------------------------------------------

Corr //-------- Unfiltered --------\\ //---- Filtered -----\\

No. No. No. with Mean Max Std Auto Mean Max Std Auto AR

Seq Series Interval Years Segmt Flags Master msmt msmt dev corr sens value dev corr ()

--- -------- --------- ----- ----- ----- ------ ----- ----- ----- ----- ----- ----- ----- ----- --

1 573A 1970 2012 43 1 0 .502 2.41 3.70 .488 .458 .164 2.52 .577 -.072 1

2 574A 1909 2012 104 4 0 .558 1.14 2.95 .650 .903 .197 2.34 .303 -.081 1

3 574B 1920 2012 93 4 0 .698 1.20 3.36 .712 .916 .204 2.59 .387 -.030 1

4 575B 1967 2012 46 1 0 .585 1.65 2.57 .482 .544 .232 2.43 .439 .023 1

5 576A 1929 2012 84 3 0 .400 1.43 4.82 .764 .742 .249 2.68 .454 -.117 2

6 576B 1932 2012 81 3 0 .496 1.81 3.99 .819 .786 .218 2.60 .525 -.040 1

7 577A 1841 2012 172 6 2 .436 .83 2.16 .435 .835 .239 2.67 .388 -.015 1

8 577B 1950 2012 63 2 0 .507 1.14 2.65 .789 .853 .367 2.78 .538 .007 1

9 578A 1910 2012 103 4 0 .608 1.38 5.34 1.267 .957 .276 2.68 .321 -.057 1

10 578B 1856 2012 157 6 1 .547 .79 1.81 .378 .864 .204 2.62 .450 -.059 1

11 579A 1934 2012 79 3 1 .434 .95 3.04 .883 .863 .441 3.24 .556 .136 1

12 579B 1908 2012 105 4 0 .589 1.14 4.30 .933 .935 .235 2.73 .562 .033 1

13 580A 1963 2012 50 1 0 .550 1.49 2.80 .624 .867 .188 2.55 .559 .075 1

14 580B 1967 2012 46 1 0 .640 2.29 4.28 .814 .863 .134 2.70 .633 .171 1

15 581B 1950 2012 63 2 0 .523 1.38 3.10 .827 .801 .269 2.56 .341 -.052 1

16 582A 1969 2012 44 1 0 .507 1.58 6.12 1.050 .804 .229 2.78 .620 .042 2

17 582B 1965 2012 48 1 0 .638 2.02 4.70 .742 .668 .195 2.70 .523 -.066 1

18 583A 1968 2012 45 1 0 .668 1.82 3.95 .734 .853 .166 2.51 .483 .044 1

19 583B 1973 2012 40 1 0 .608 1.53 5.17 .904 .885 .189 2.51 .496 .013 1

20 584A 1946 2012 67 3 0 .671 1.11 2.12 .487 .811 .246 2.79 .585 -.071 2

21 573B 1958 2012 55 2 0 .551 1.11 1.72 .237 .189 .212 2.59 .542 .079 1

22 575A 1958 2012 55 2 0 .639 1.78 2.97 .698 .772 .211 2.51 .484 -.040 1

23 581A 1950 2012 63 2 0 .554 1.08 2.85 .710 .807 .290 2.81 .406 -.127 1

--- -------- --------- ----- ----- ----- ------ ----- ----- ----- ----- ----- ----- ----- ----- --

Total or mean: 1706 58 4 .552 1.31 6.12 .698 .809 .237 3.24 .466 -.018

- = [ COFECHA FINALCOF ] = -