

Appendix D

This appendix contains plots of maximum and minimum 7-, 30-, and 180-day average streamflows at 12 locations and water levels at five reservoirs computed from 20-years of simulation results, with the N-day results plotted at the center of the simulation period. Separate lines are plotted for the maximum, minimum, and median results for the ensemble of level-1 simulations¹ based on the A2 and A1b emission scenarios (described below). Median level-2 simulation² results for 11-year periods centered on 2035, 2055, and 2075 are plotted as triangles. A dashed line is also drawn representing the N-day statistic determined from simulation results for a historical reference period extending from 1991 to 2010.

The following tables list the identifiers or designations shown on the plots that are associated with the emission scenarios and sites.

Special Report on Emissions Scenario Designation	Description
A2	The A2 scenario represents a divided world that is characterized by: <ul style="list-style-type: none">• A world of independently operating, self-reliant nations.• Continuously increasing population.• Regionally oriented economic development.
A1b	The A1b scenario represents a more integrated world that is characterized by: <ul style="list-style-type: none">• Rapid economic growth.• A global population that reaches almost 9 billion in 2050 and then gradually declines.• The quick spread of new and efficient technologies.• A convergent world - income and way of life converge between regions. Extensive social and cultural interactions worldwide.• A balanced emphasis on all energy sources.

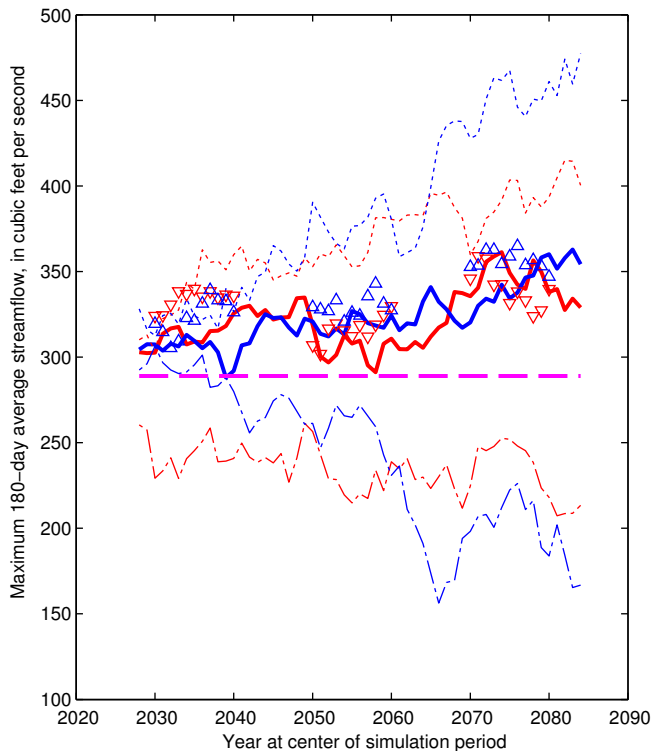
¹ Level 1 simulations account only for anticipated 21st-century changes in climate and operations of three City of Columbus upground reservoirs located in northwest Delaware County, Ohio.

² Level 2 simulations account for development-driven changes in land cover and water use in addition to 21st-century changes in climate and reservoir operations.

Site ID	Description	Latitude	Longitude
AFRI	Alum Creek at Africa, OH	40° 10' 56"	82° 57' 41"
ALUM	Alum Creek Reservoir, OH	40° 11' 11"	82° 57' 59"
CBUS	Scioto River at Columbus, OH	39° 54' 34"	83° 00' 32"
CCOL	Big Walnut Creek at Central College, OH	40° 06' 12"	82° 53' 02"
CIRC	Scioto River at Circleville, OH	39° 36' 05"	82° 57' 18"
CLAR	Olentangy River at Claridon, OH	40° 34' 59"	82° 59' 22"
DELA	Olentangy River near Delaware, OH	40° 21' 18"	83° 04' 05"
DELL	Delaware Lake, OH	40° 21' 31"	83° 04' 09"
GRIG	Griggs Reservoir, OH	40° 00' 58"	83° 05' 38"
HOOV	Hoover Reservoir, OH	40° 06' 30"	82° 52' 53"
LSCI	Little Scioto River at mouth, OH	40° 31' 21"	83° 12' 20"
MILL	Mill Creek near Bellepoint, OH	40° 14' 55"	83° 10' 26"
OLEN	Olentangy River at mouth, OH	39° 57' 54"	83° 01' 01"
OLOC	Olentangy River near Olentangy Caverns, OH	40° 11' 55"	83° 03' 09"
OSHY	O'Shaughnessy Reservoir, OH	40° 09' 14"	83° 07' 32"
PROS	Scioto River near Prospect, OH	40° 25' 10"	83° 11' 50"
SROR	Scioto River at confluence with Olentangy River	39° 57' 54"	83° 01' 01"

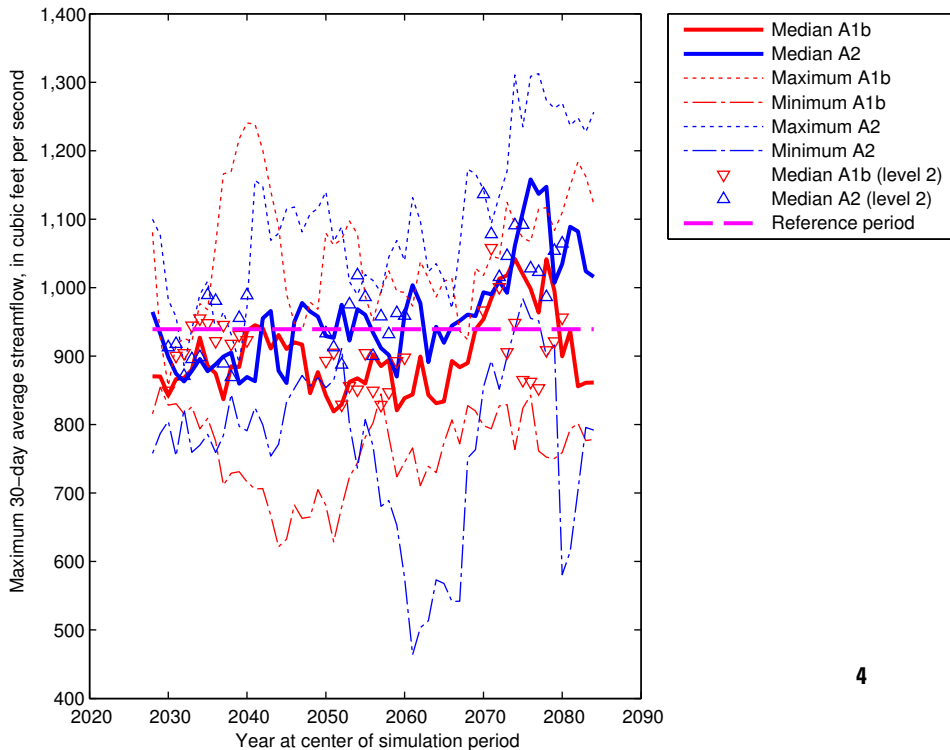
AFRI

EXPLANATION



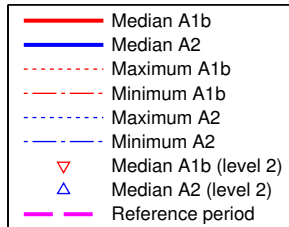
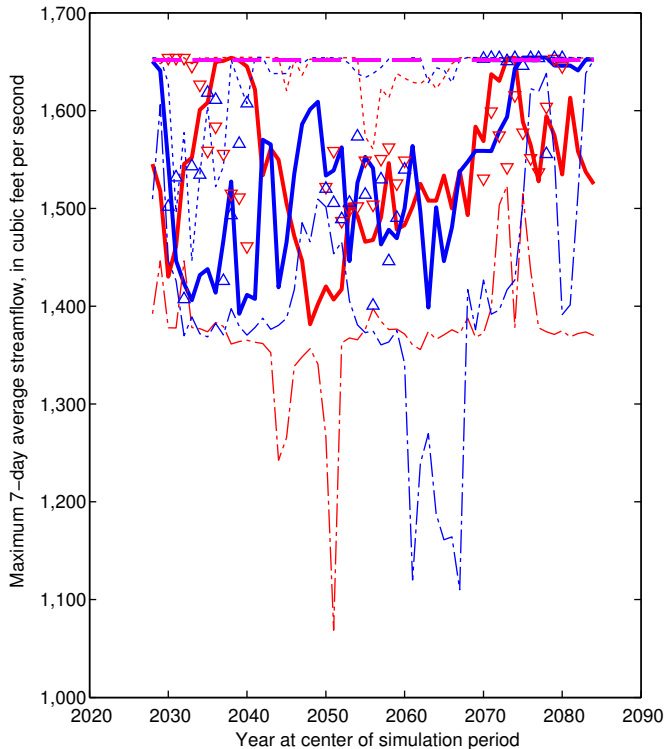
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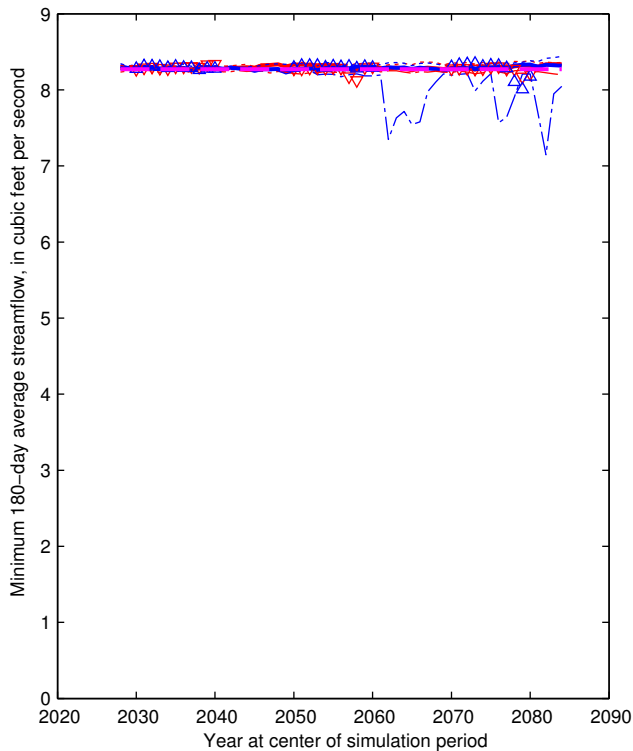


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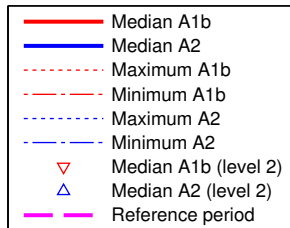
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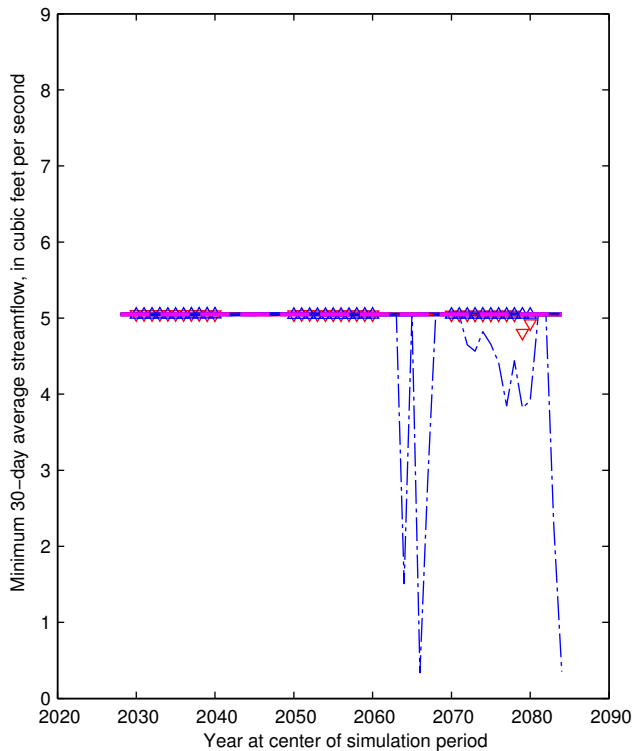
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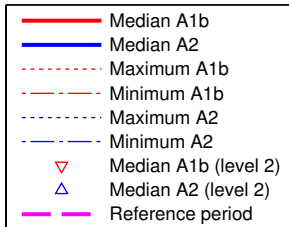
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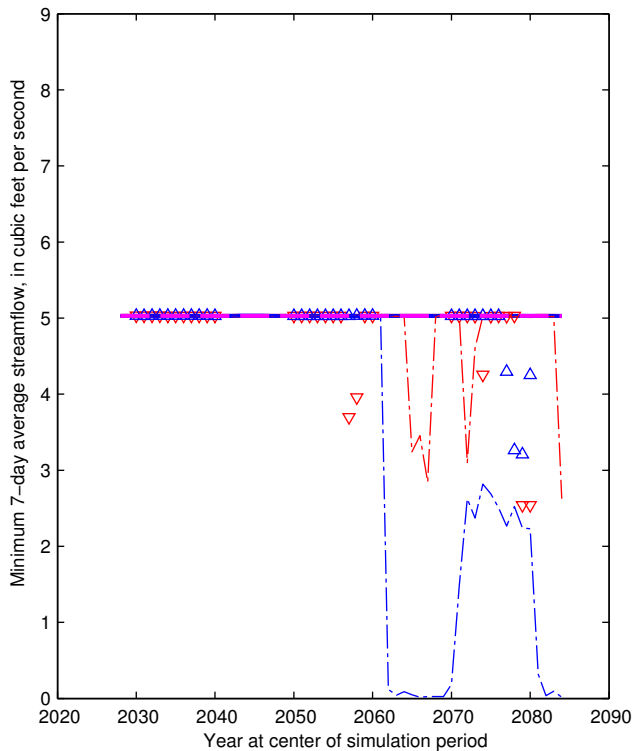
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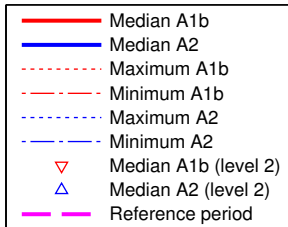
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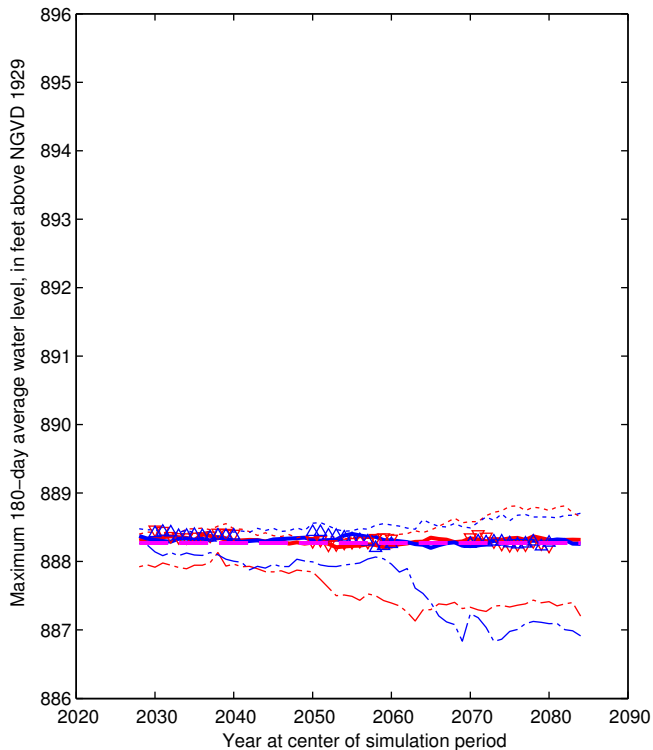
AFRI



EXPLANATION



ALUM

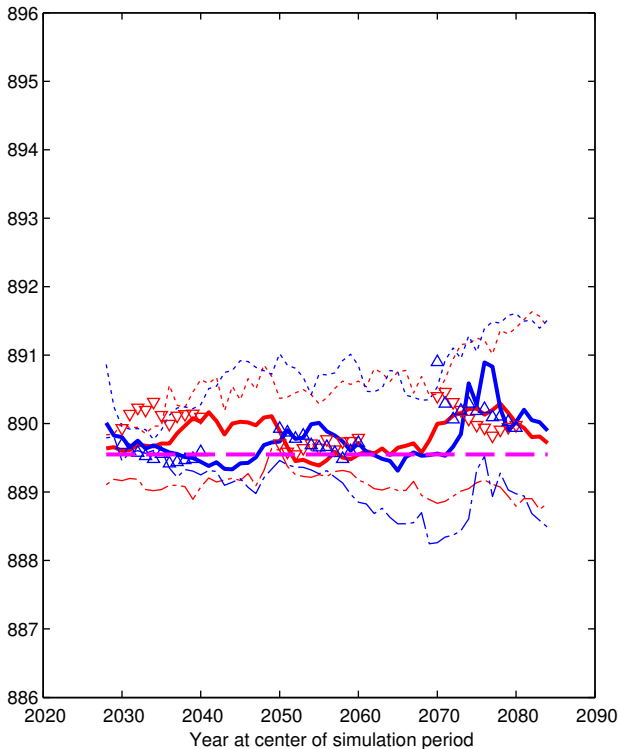


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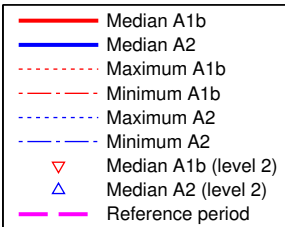
- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

ALUM

Maximum 30-day average water level, in feet above NGVD 1929



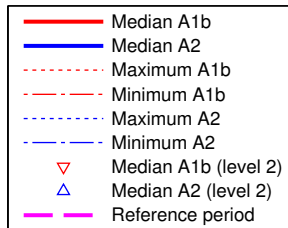
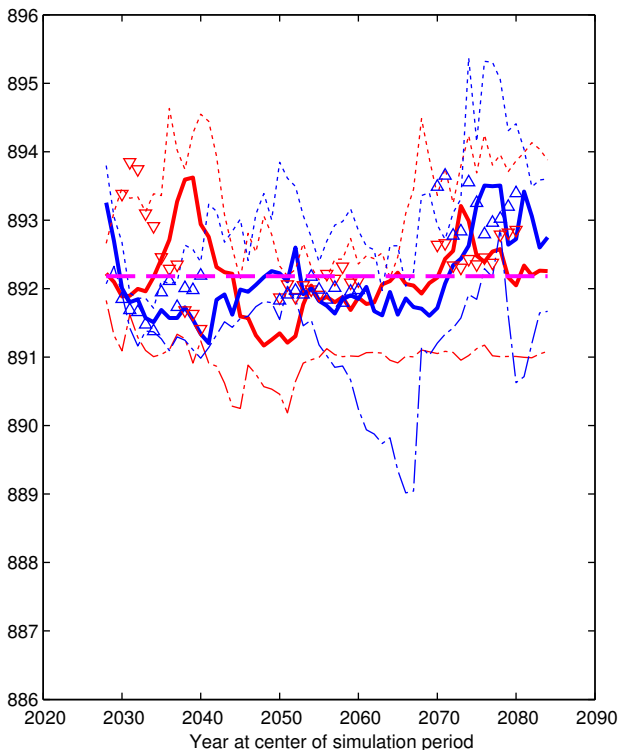
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ALUM

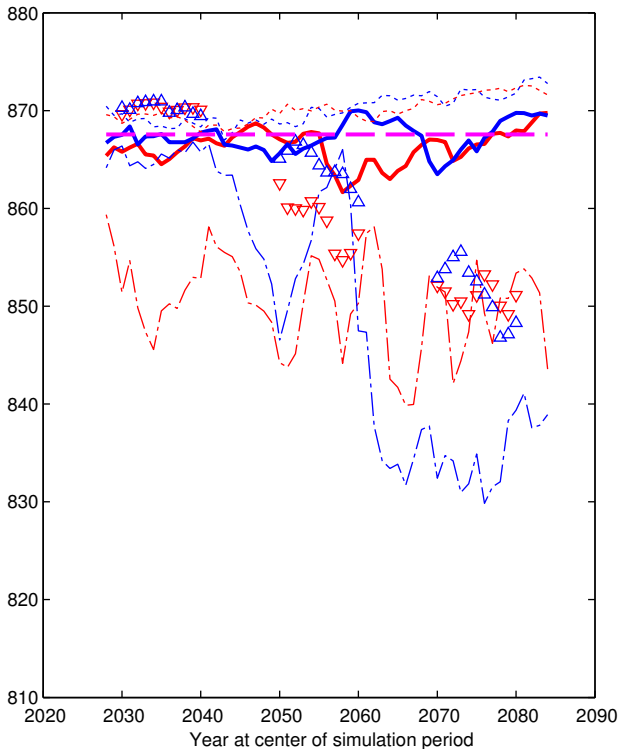
EXPLANATION

Maximum 7-day average water level, in feet above NGVD 1929

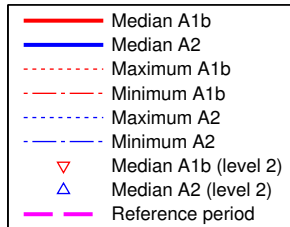


ALUM

Minimum 180-day average water level, in feet above NGVD 1929



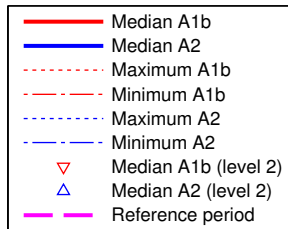
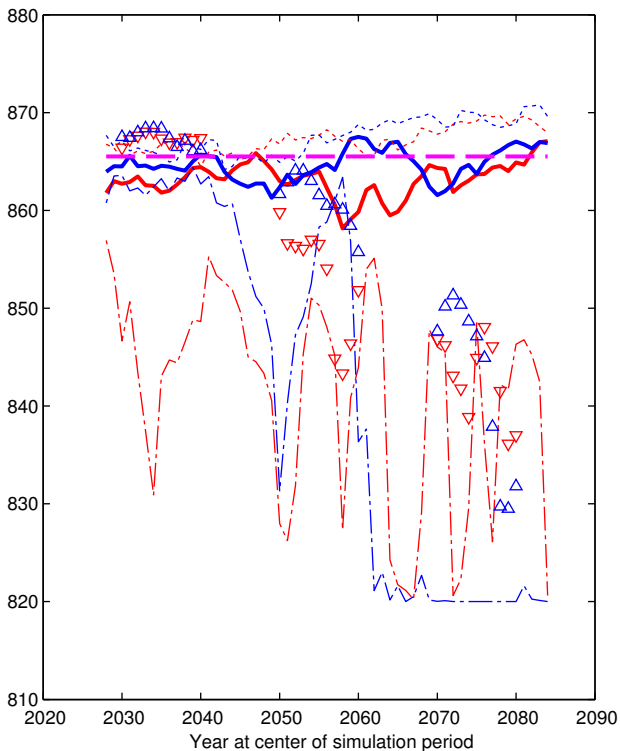
EXPLANATION



ALUM

EXPLANATION

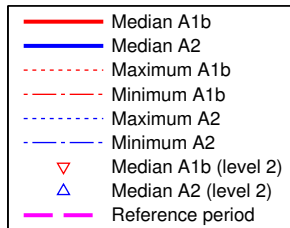
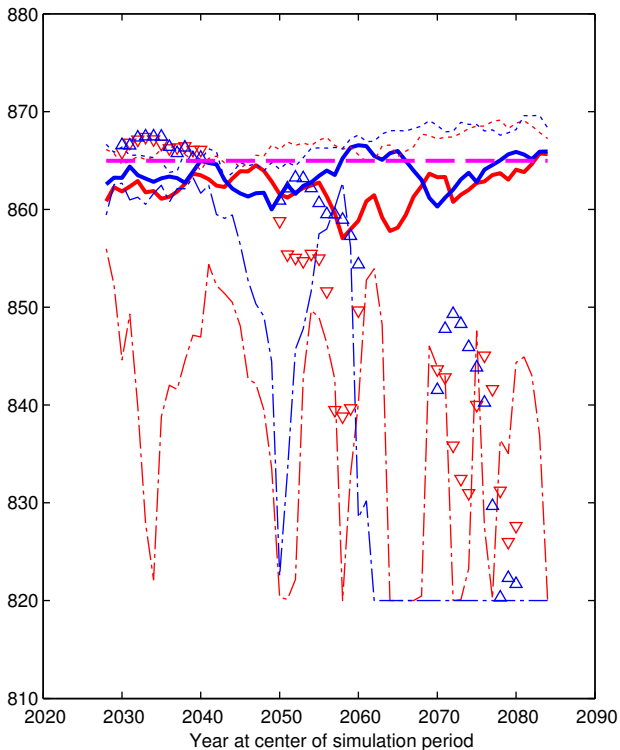
Minimum 30-day average water level, in feet above NGVD 1929



ALUM

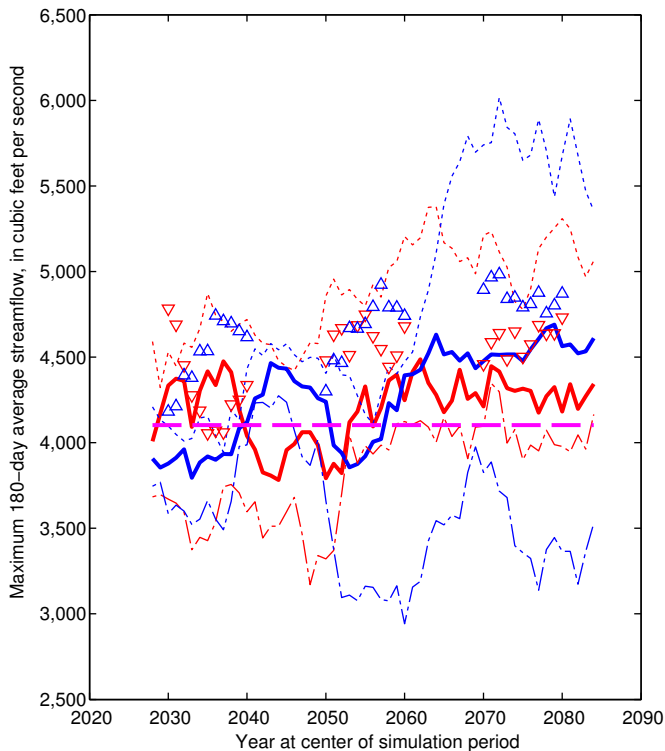
EXPLANATION

Minimum 7-day average water level, in feet above NGVD 1929



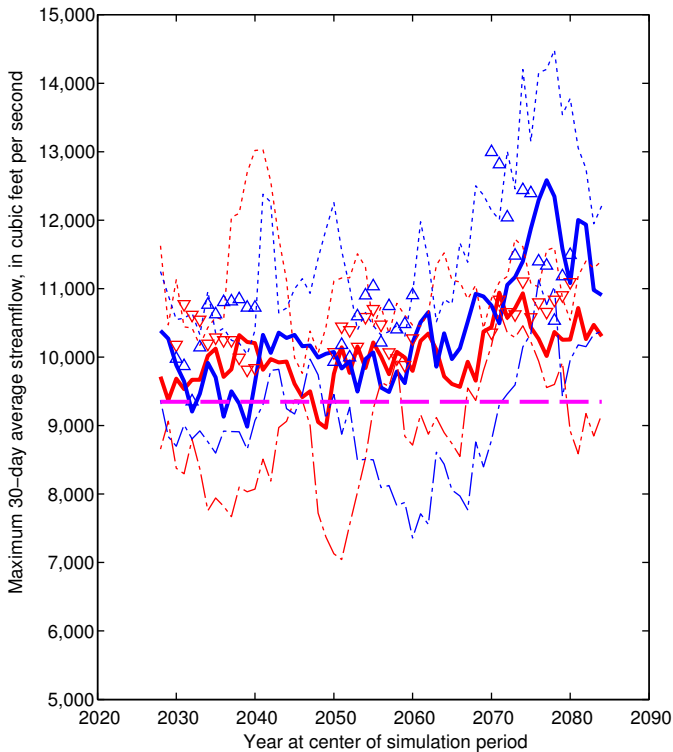
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EXPLANATION



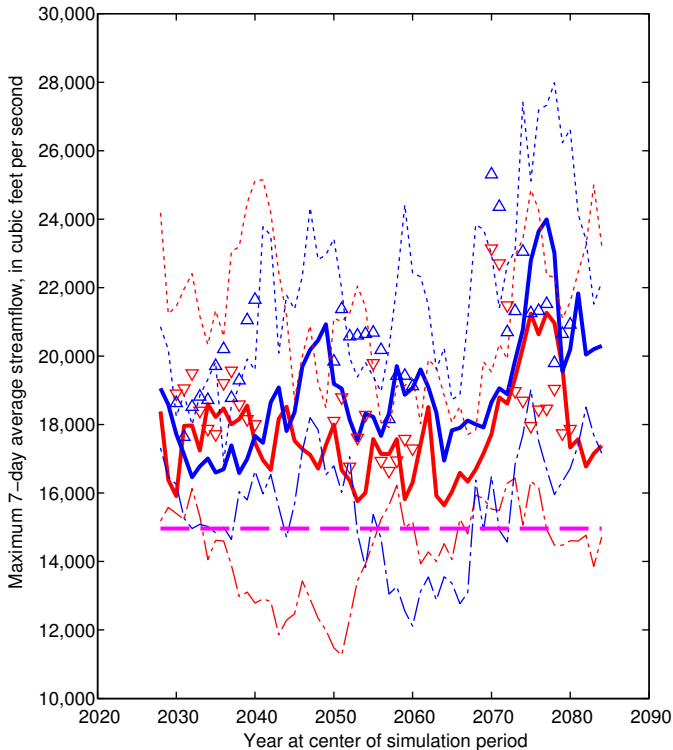
CBUS

EXPLANATION



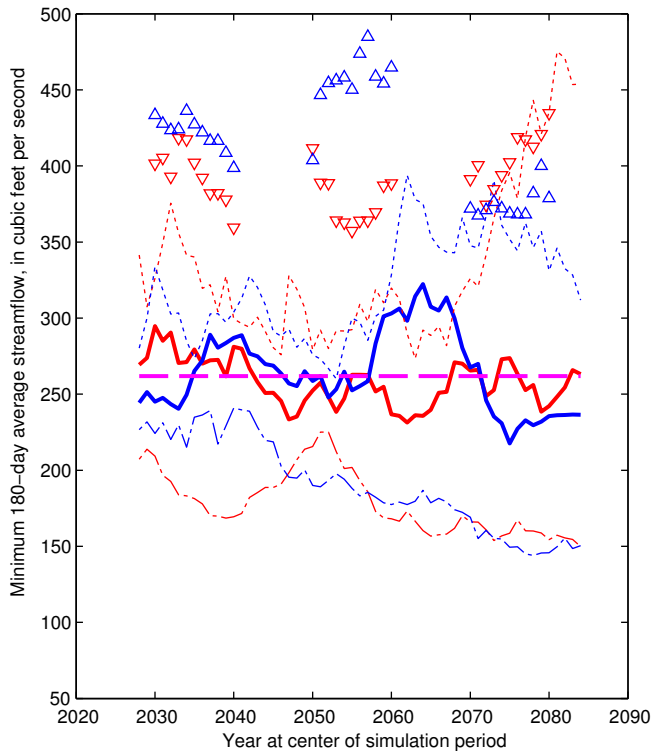
CBUS

EXPLANATION

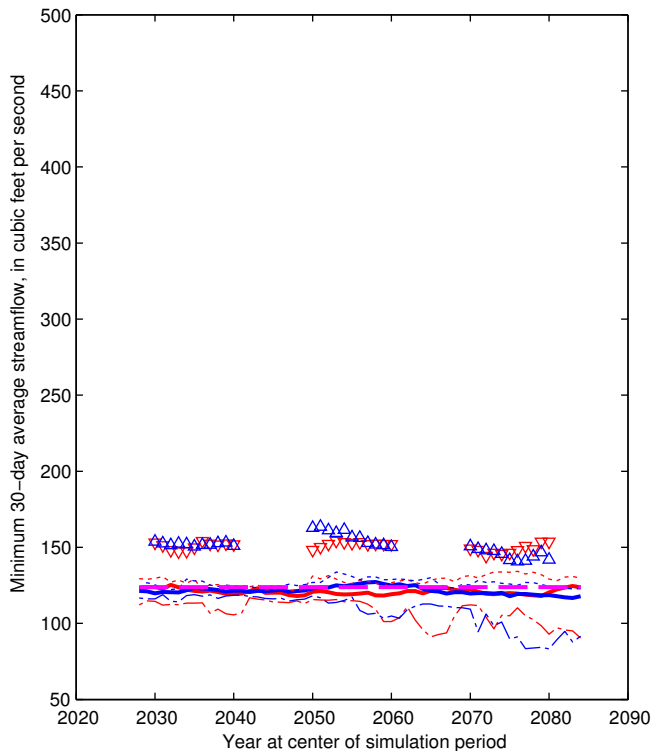


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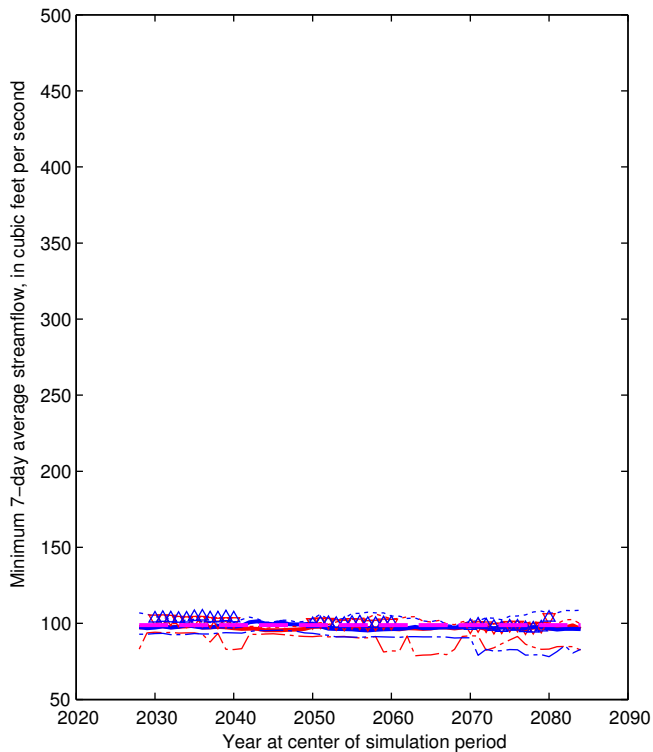
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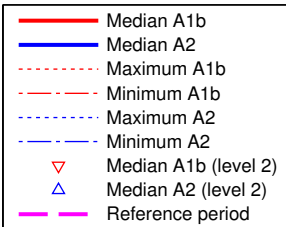
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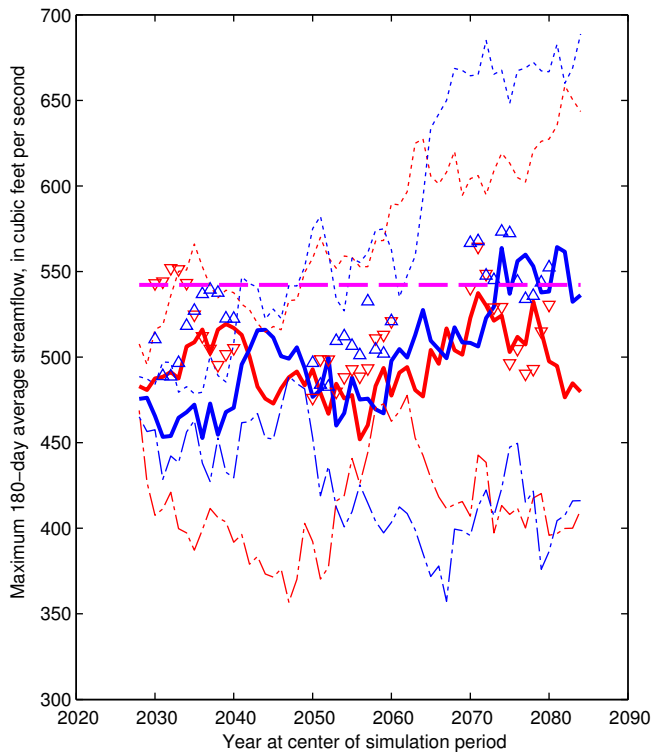
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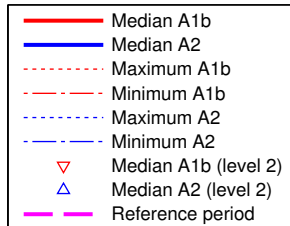
EXPLANATION



CCOL

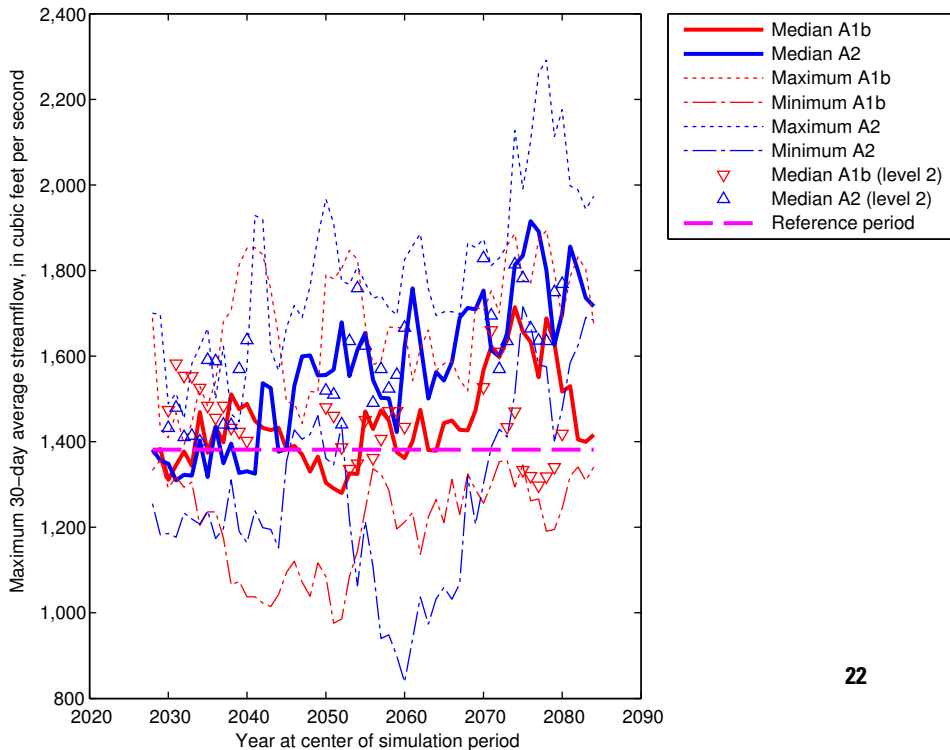


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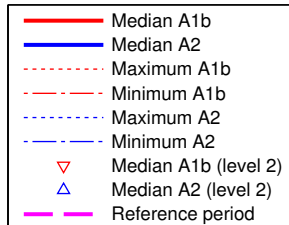
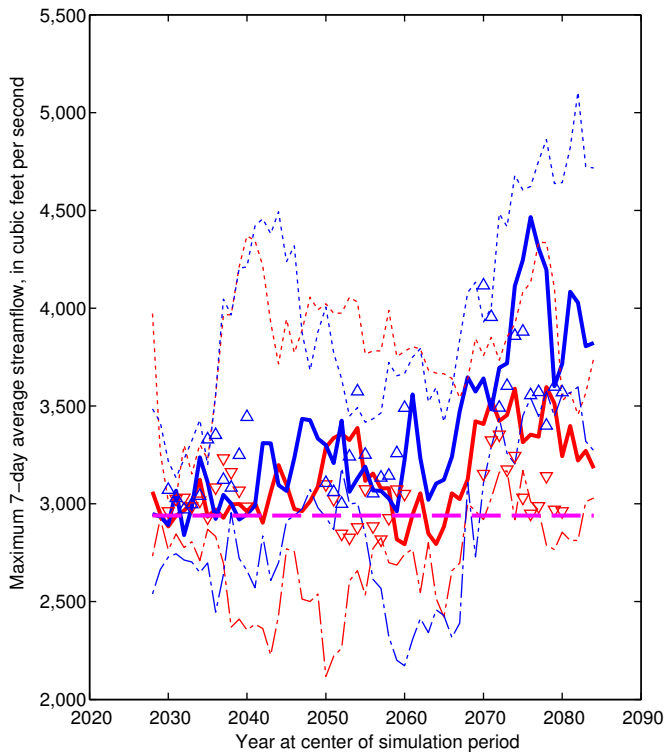
CCOL

EXPLANATION

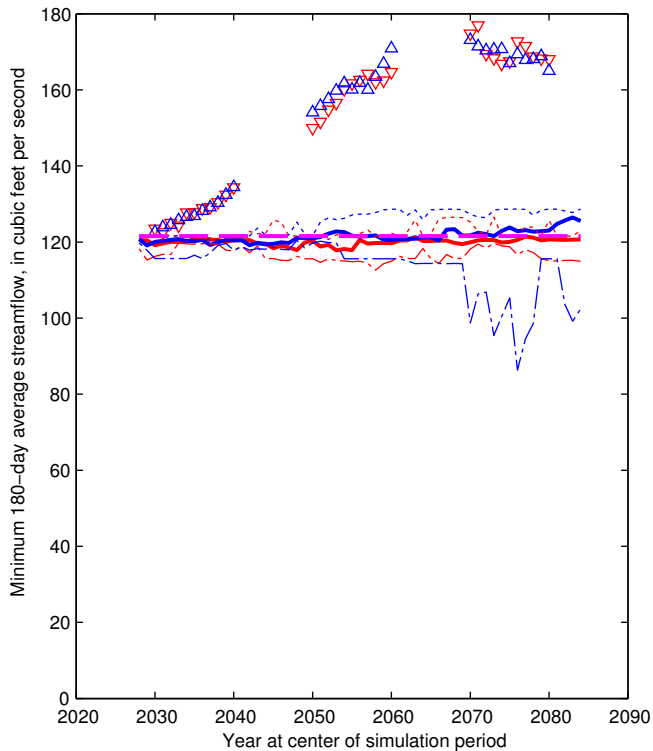


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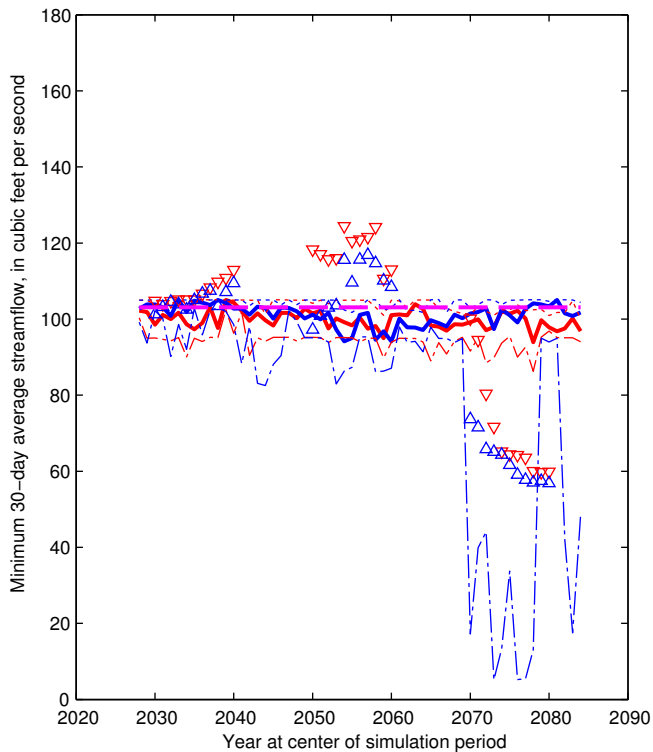
EXPLANATION



CCOL



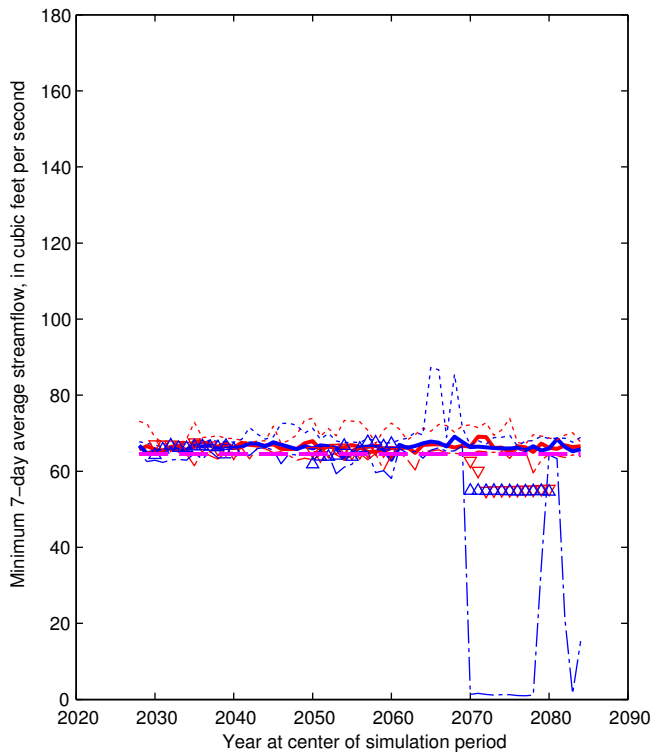
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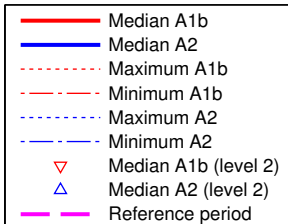
EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

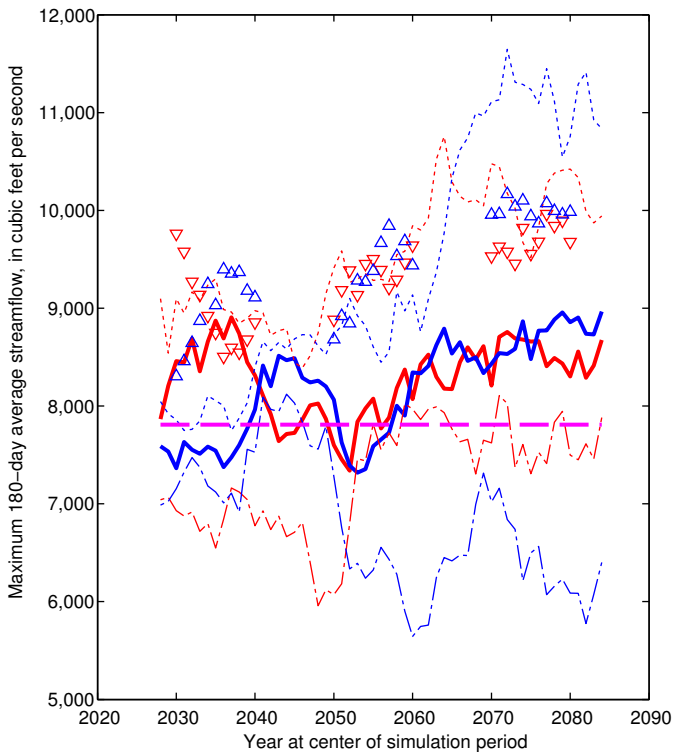
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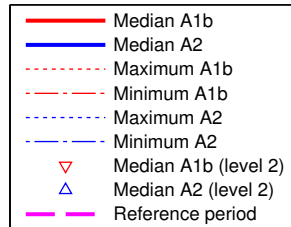
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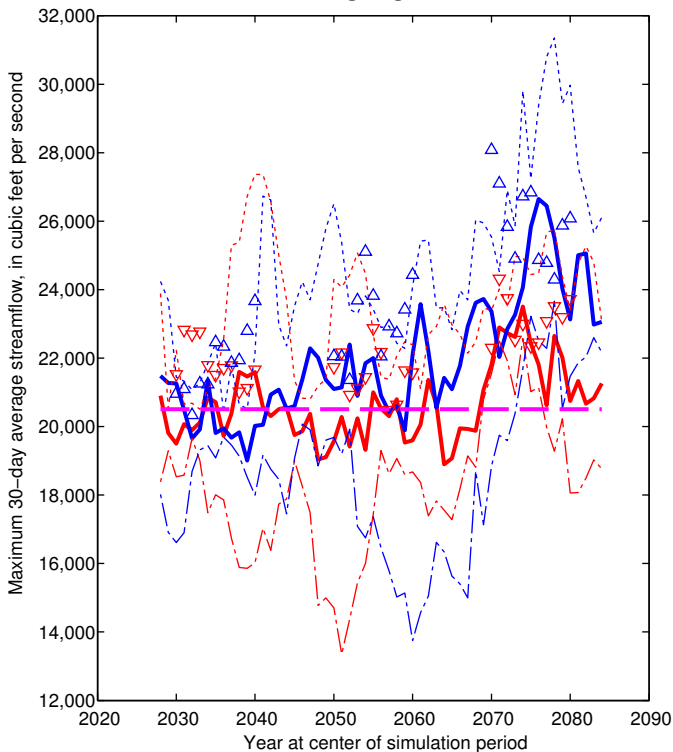
CIRC



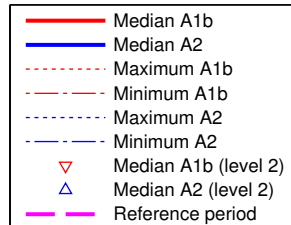
EXPLANATION



CIRC

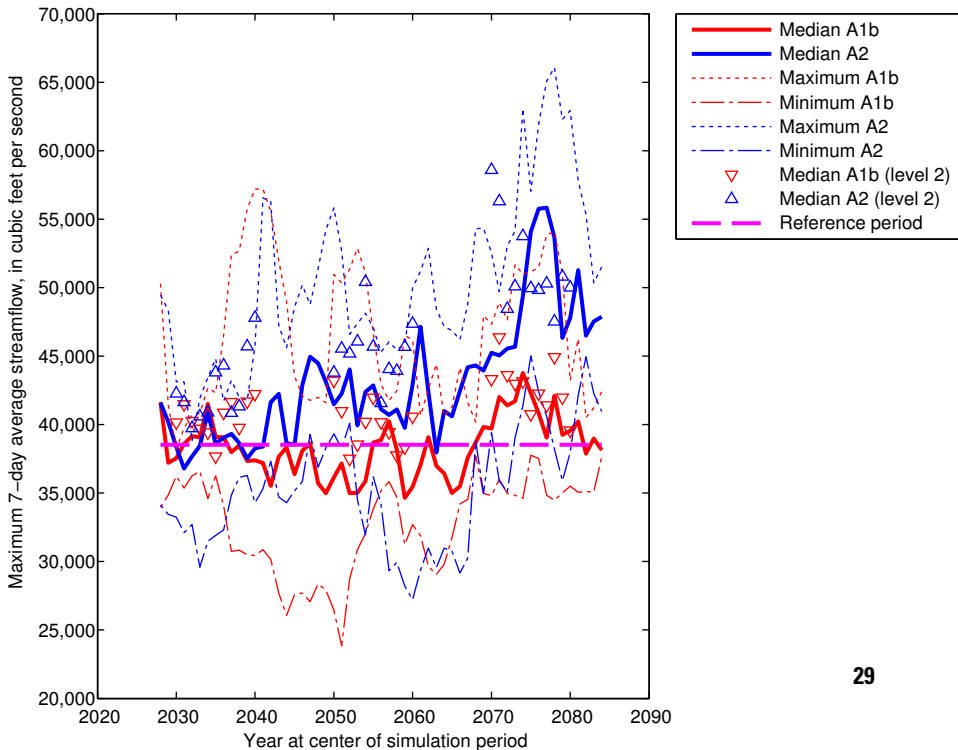


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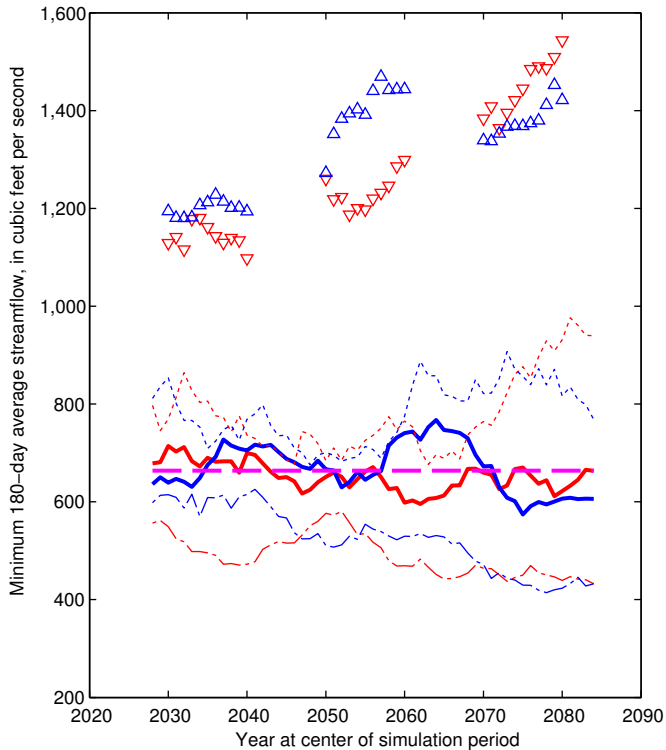


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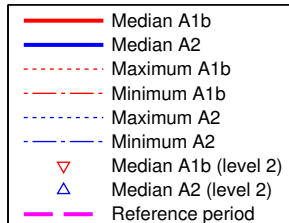
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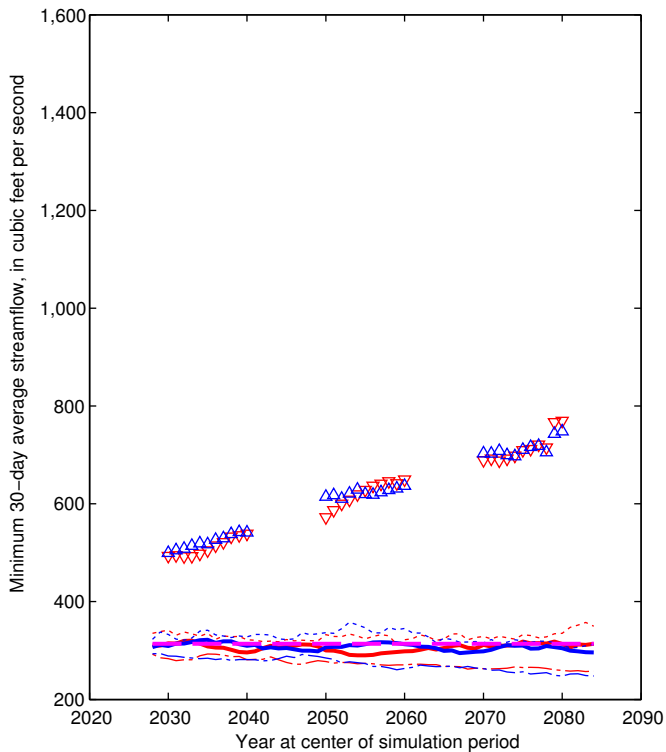
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EXPLANATION



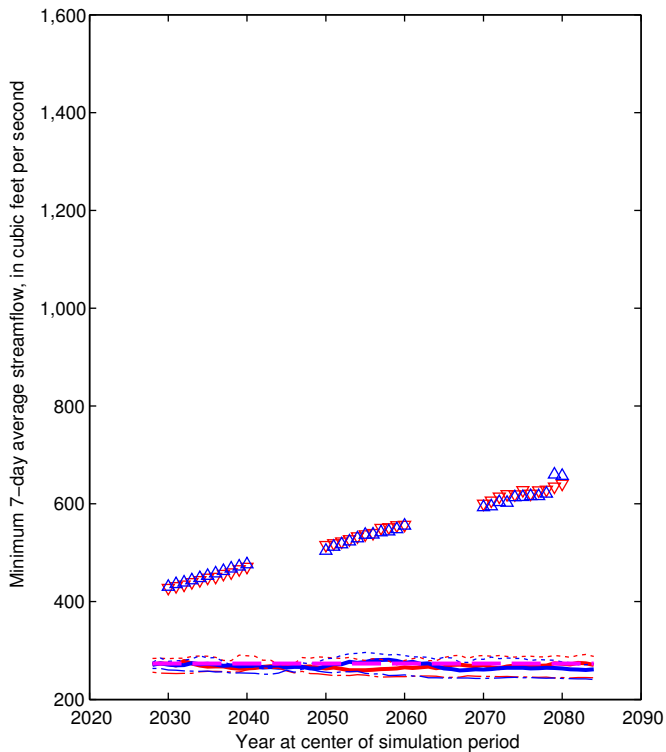
CIRC



EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

CIRC

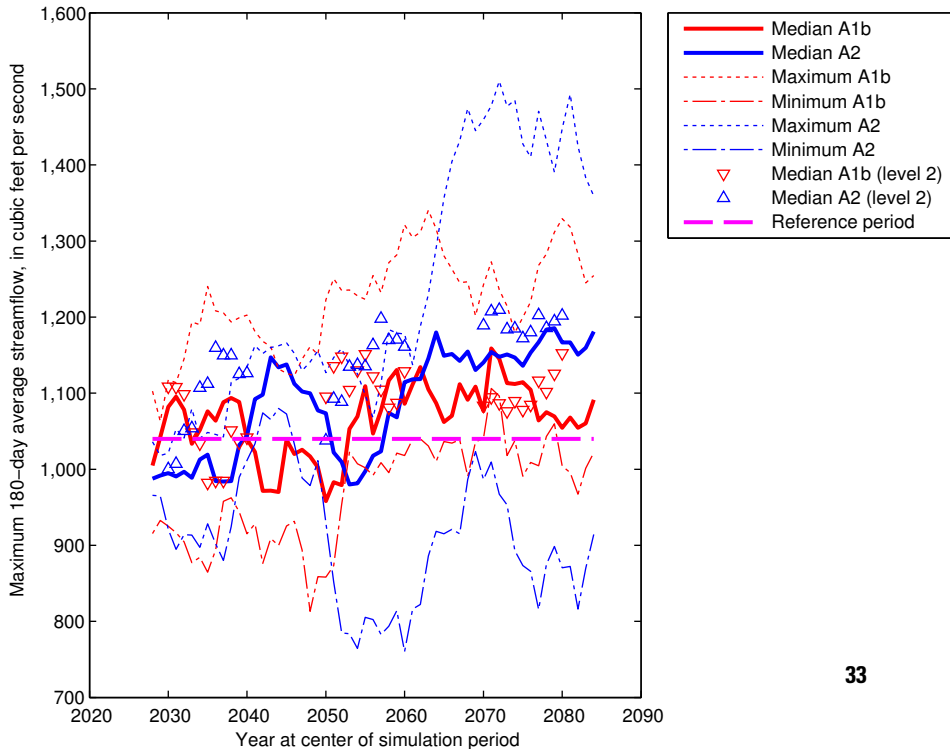


EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
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- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

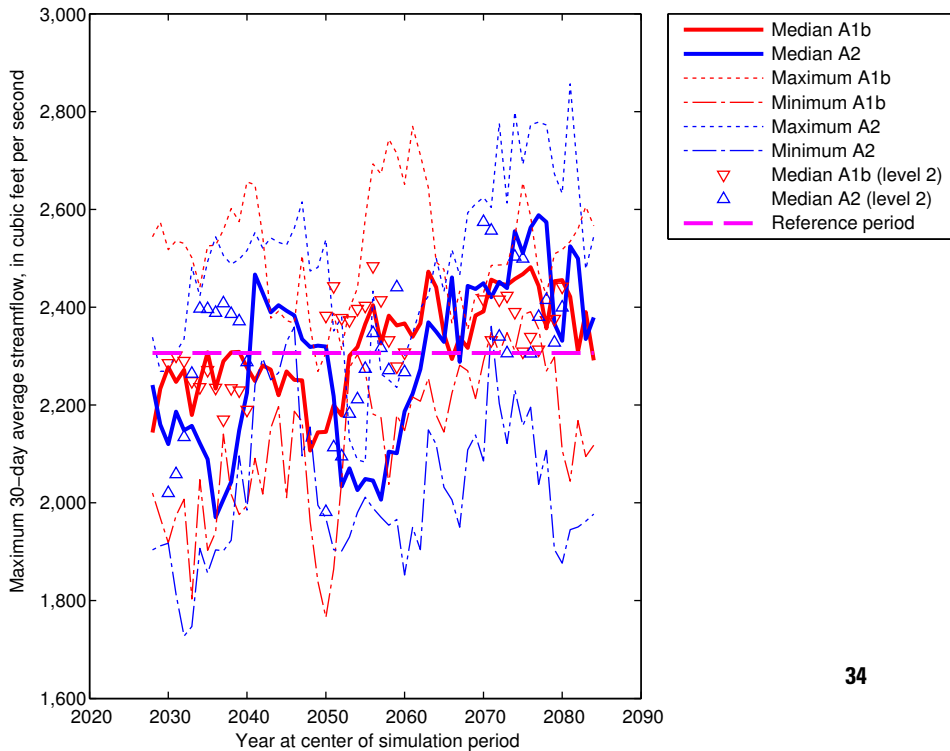
DELA

EXPLANATION



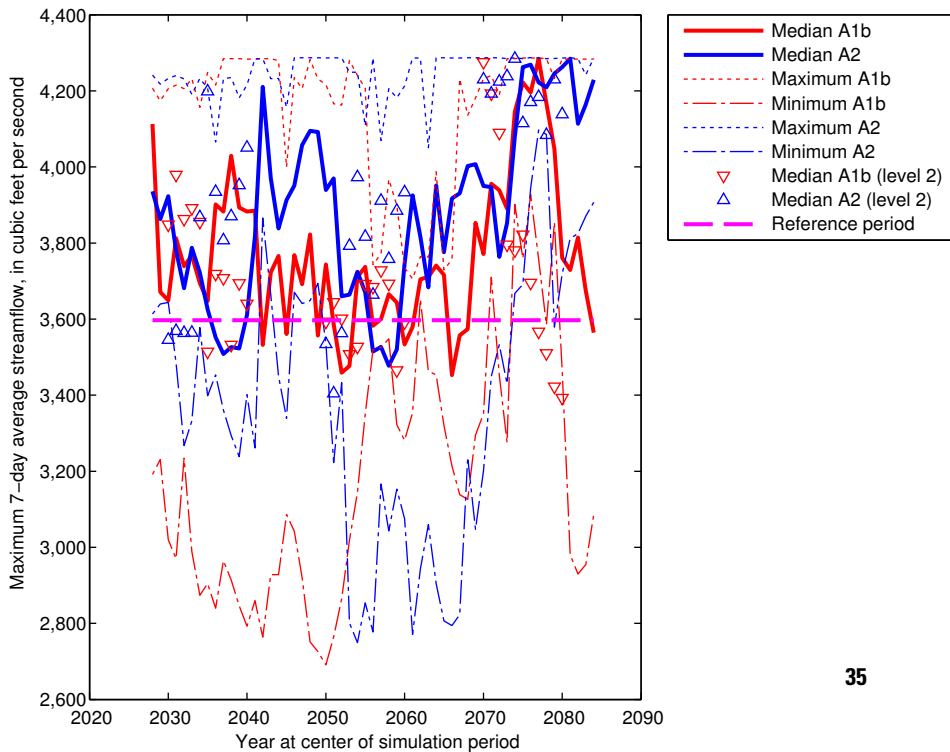
DELA

EXPLANATION

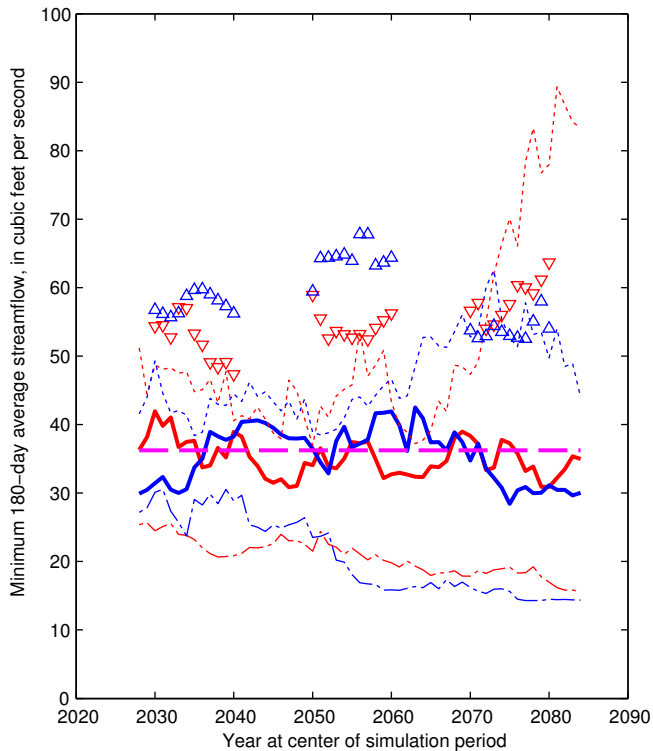


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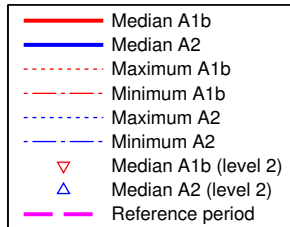
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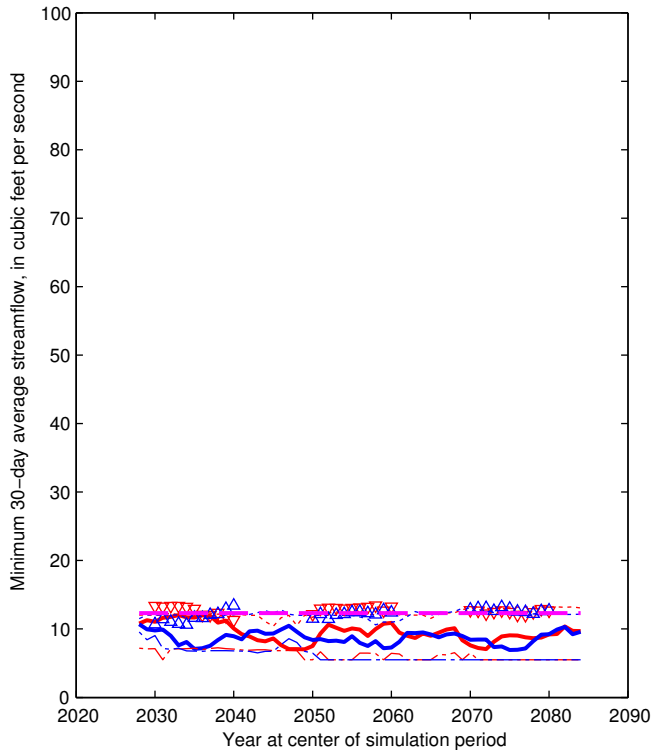
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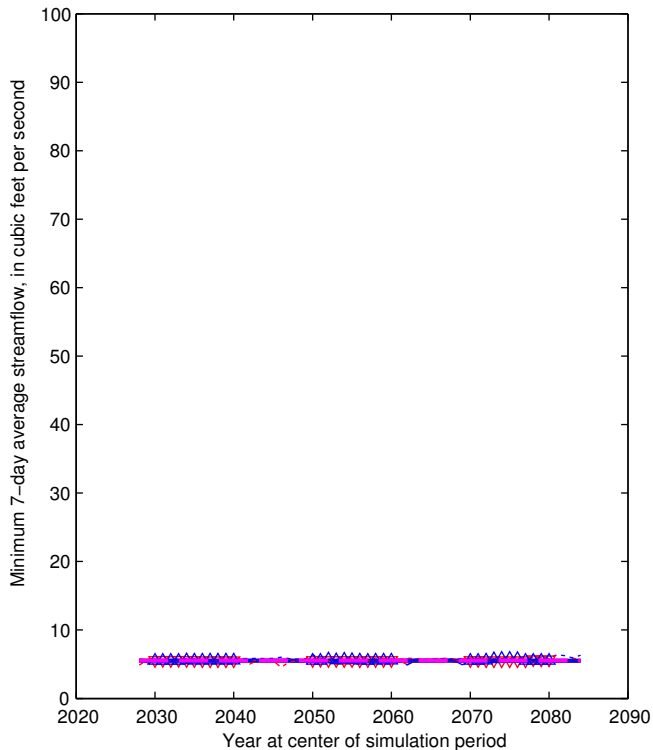
EXPLANATION



DELA



DELA

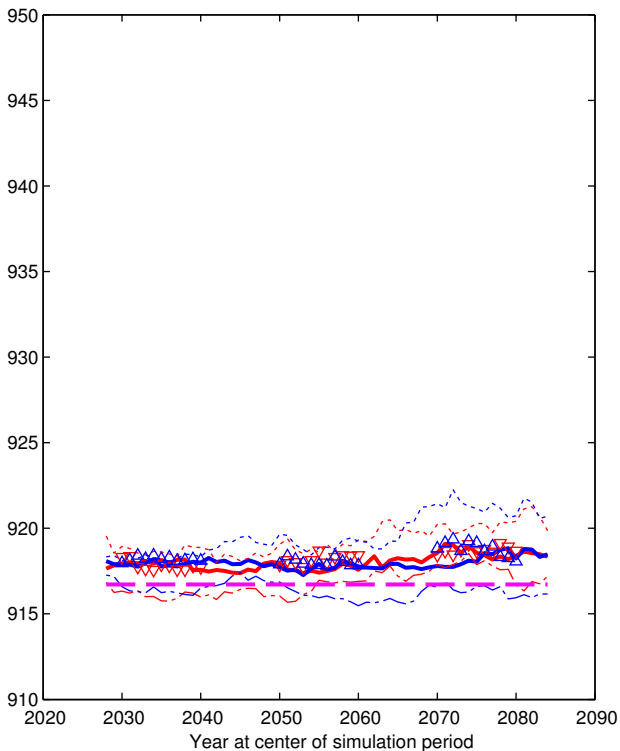


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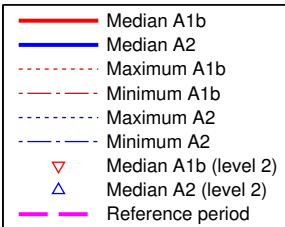
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- Median A2
- Maximum A1b
- Minimum A1b
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- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

DELL

Maximum 180-day average water level, in feet above NGVD 1929

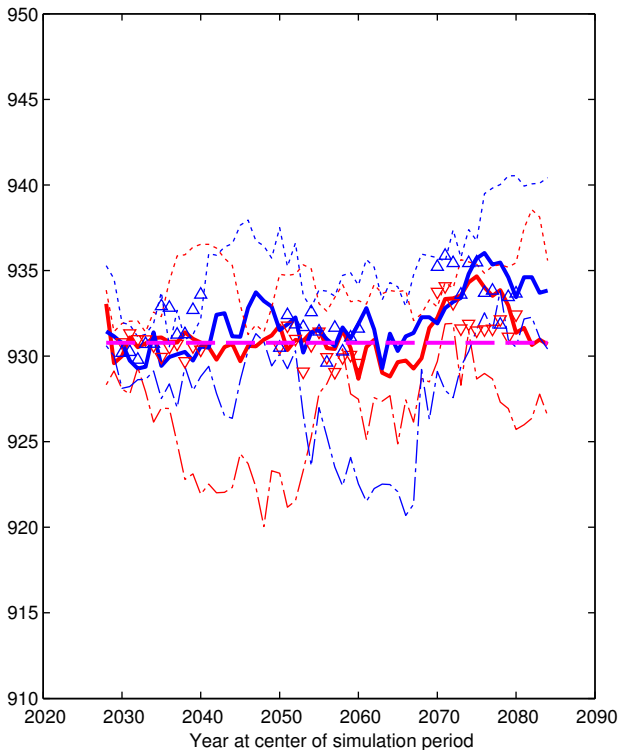


EXPLANATION



DELL

Maximum 30-day average water level, in feet above NGVD 1929

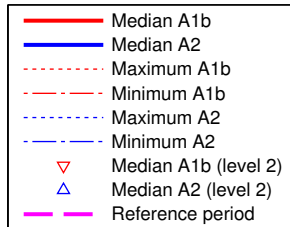
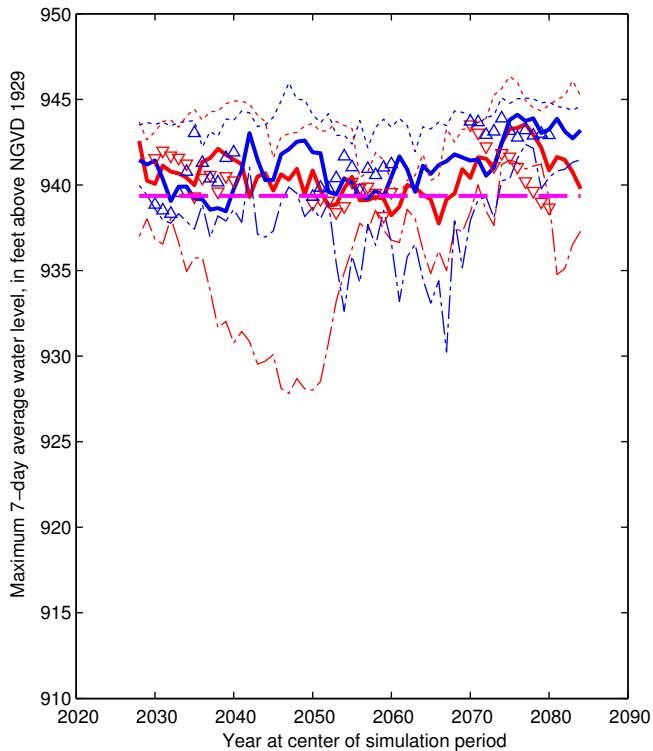


EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
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- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

DELL

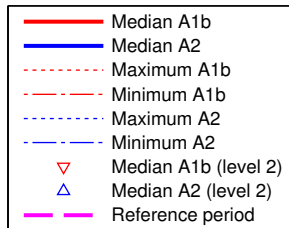
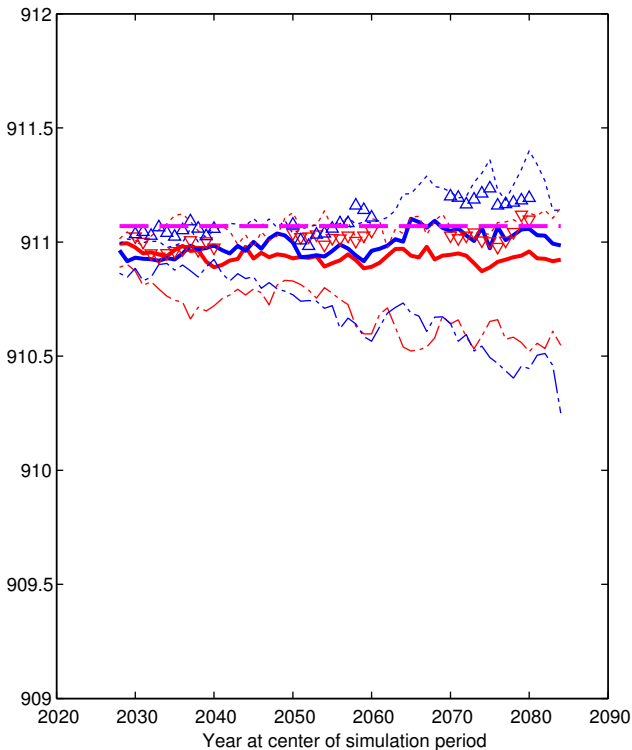
EXPLANATION



DELL

EXPLANATION

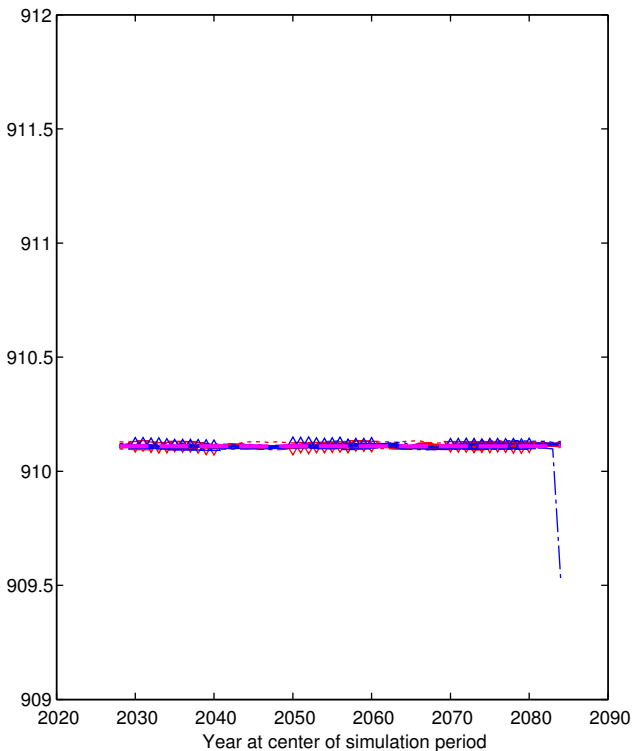
Minimum 180-day average water level, in feet above NGVD 1929



DELL

EXPLANATION

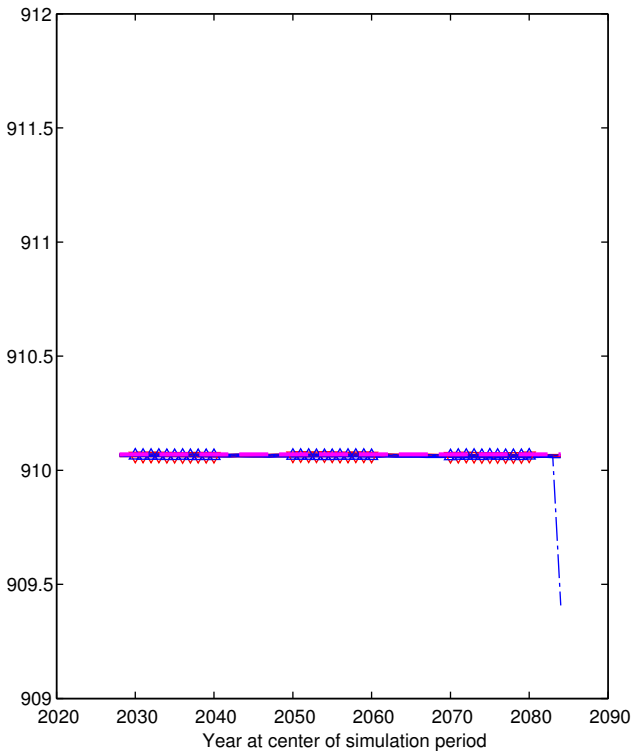
Minimum 30-day average water level, in feet above NGVD 1929



DELL

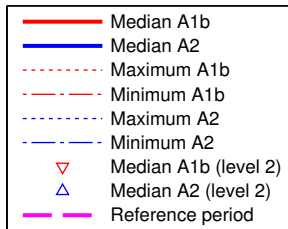
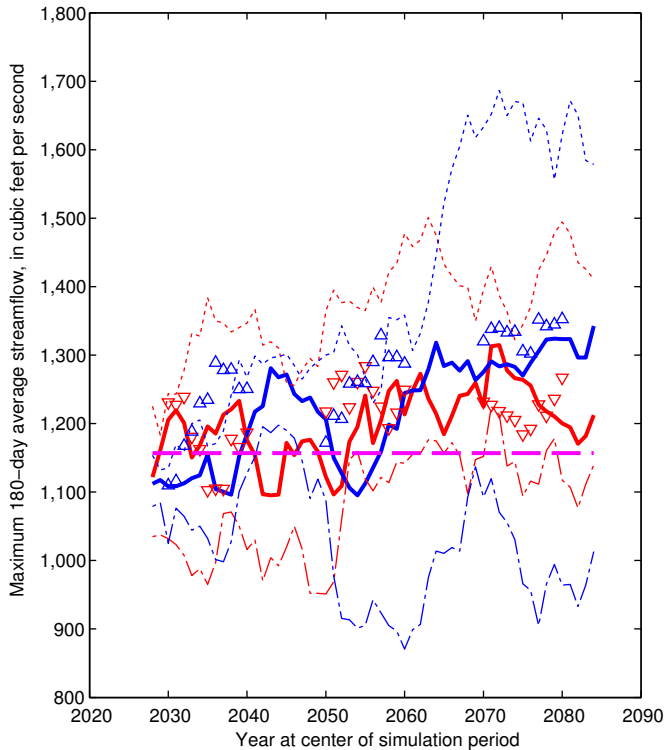
EXPLANATION

Minimum 7-day average water level, in feet above NGVD 1929



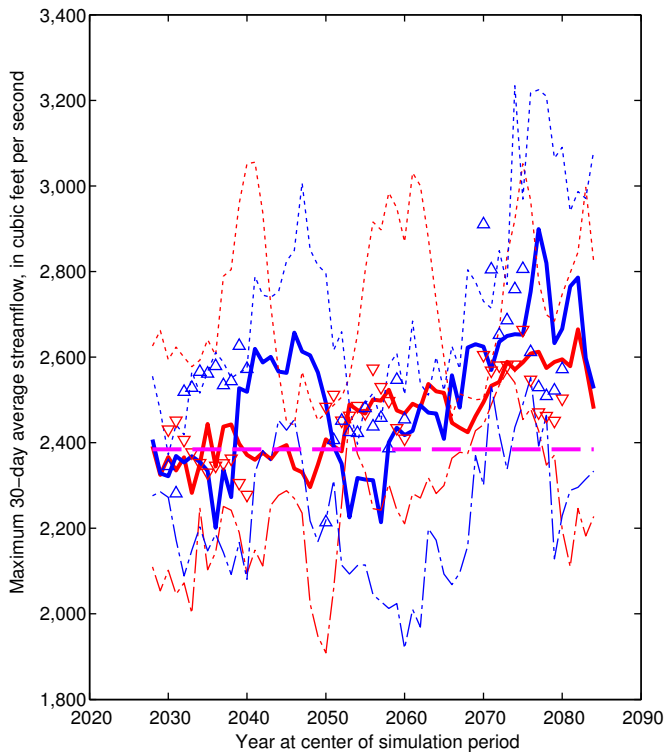
OLOC

EXPLANATION



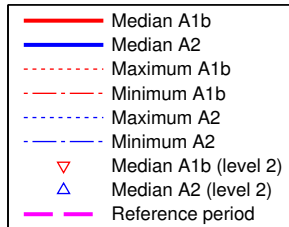
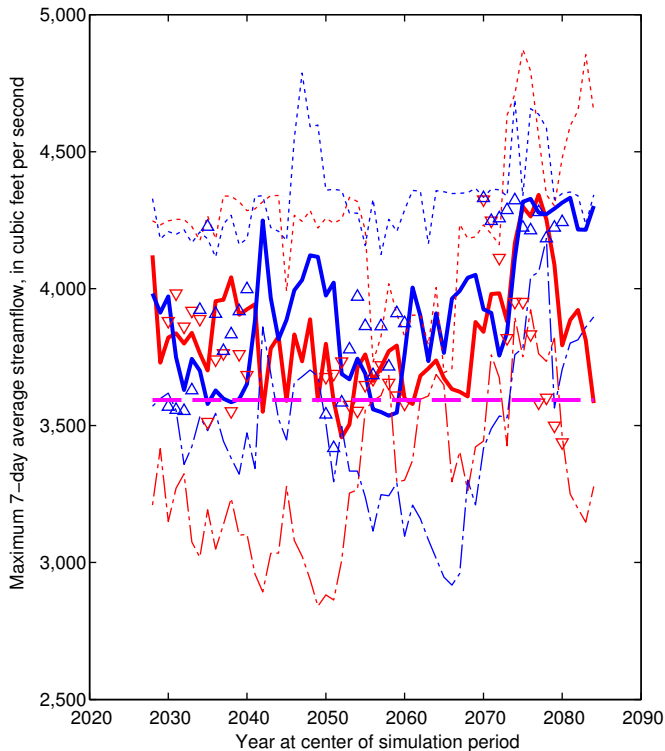
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EXPLANATION



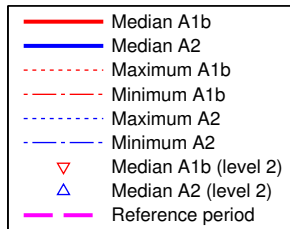
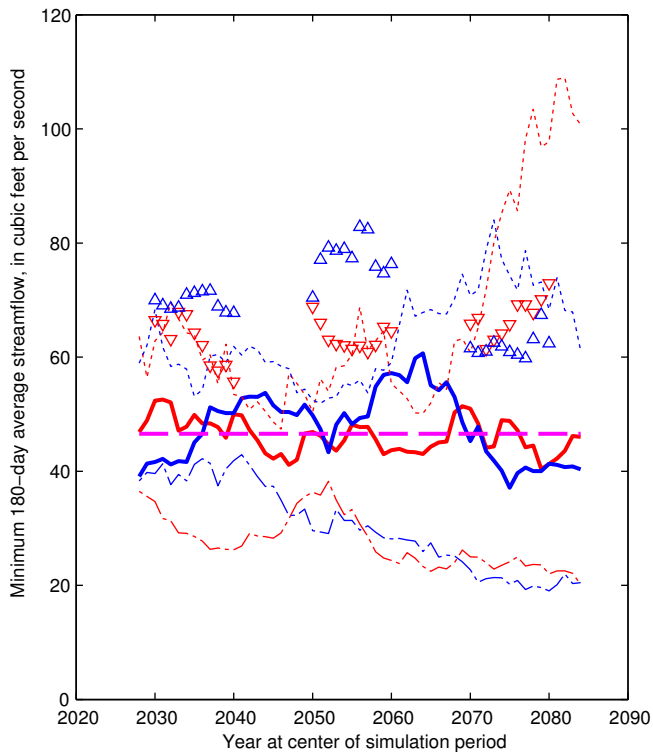
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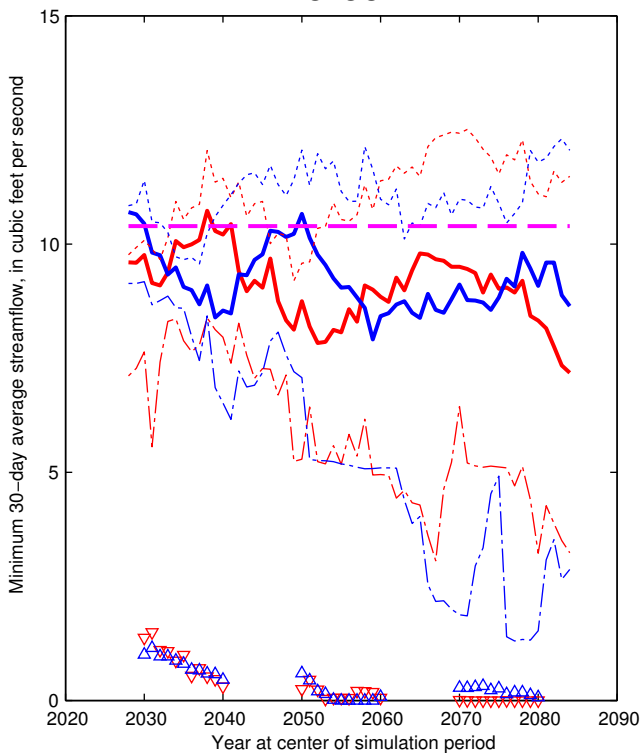


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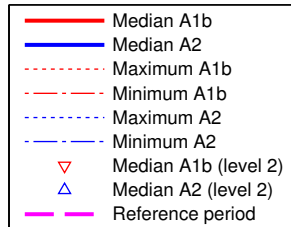
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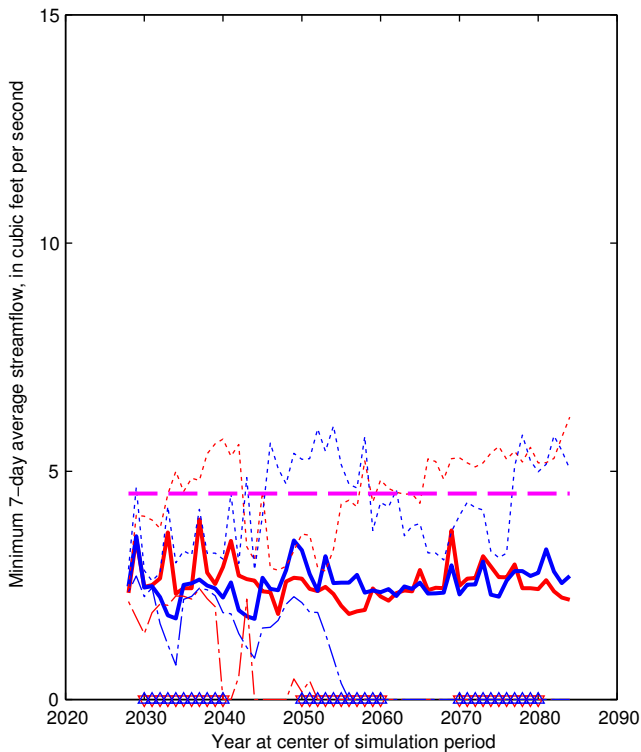
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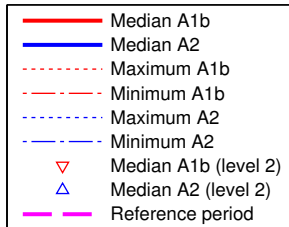
EXPLANATION



OLOC

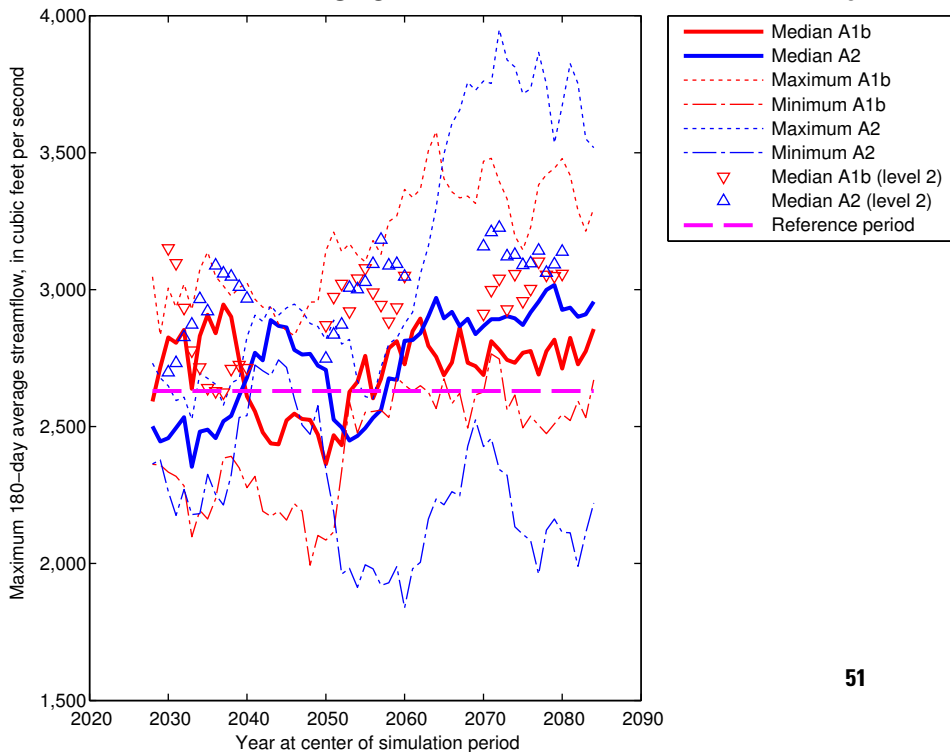


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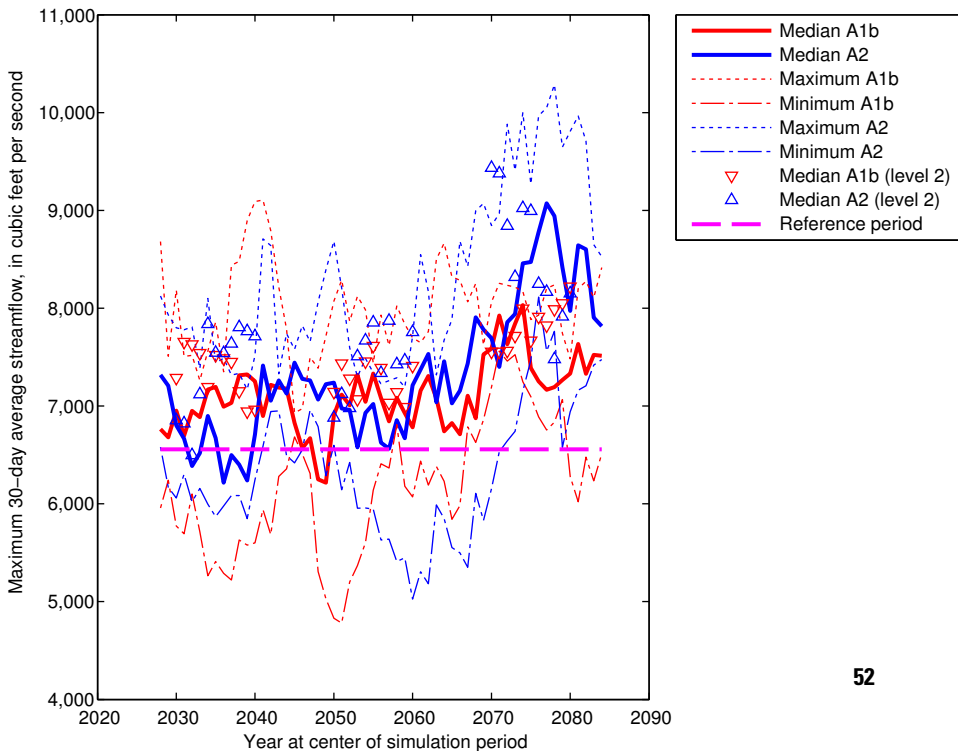
SROR

EXPLANATION



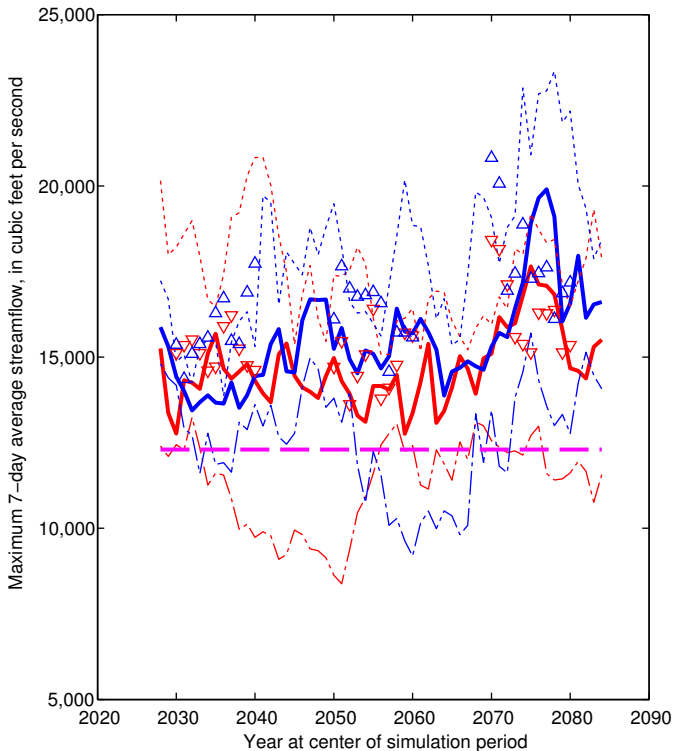
SROR

EXPLANATION



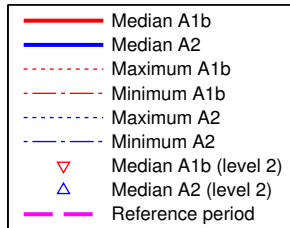
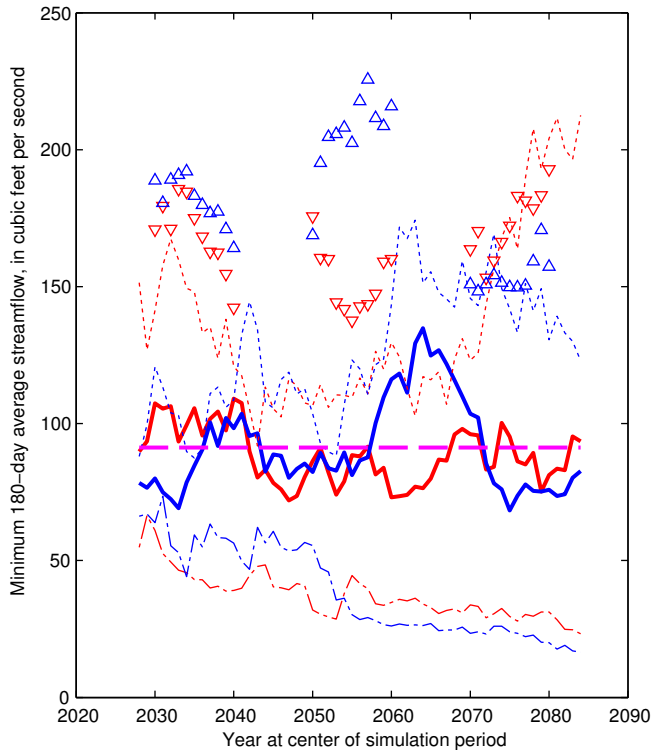
SROR

EXPLANATION



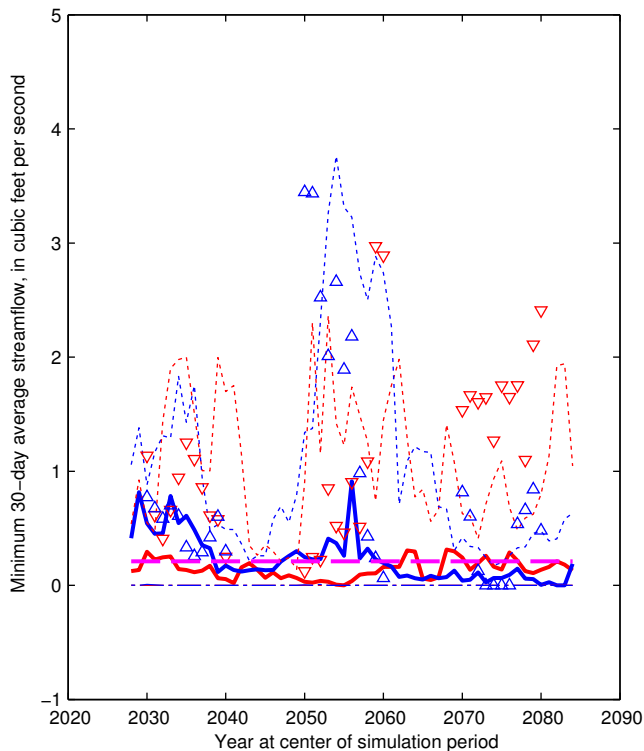
SROR

EXPLANATION

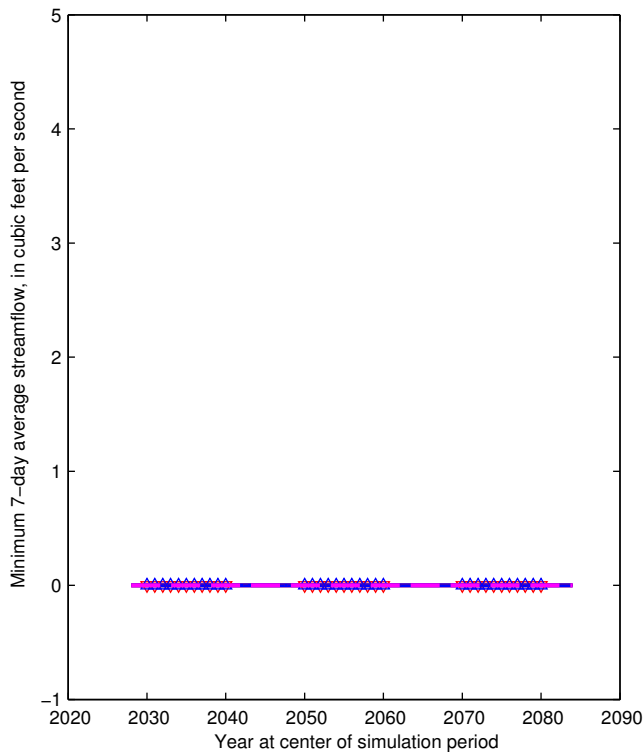


SROR

EXPLANATION



SROR

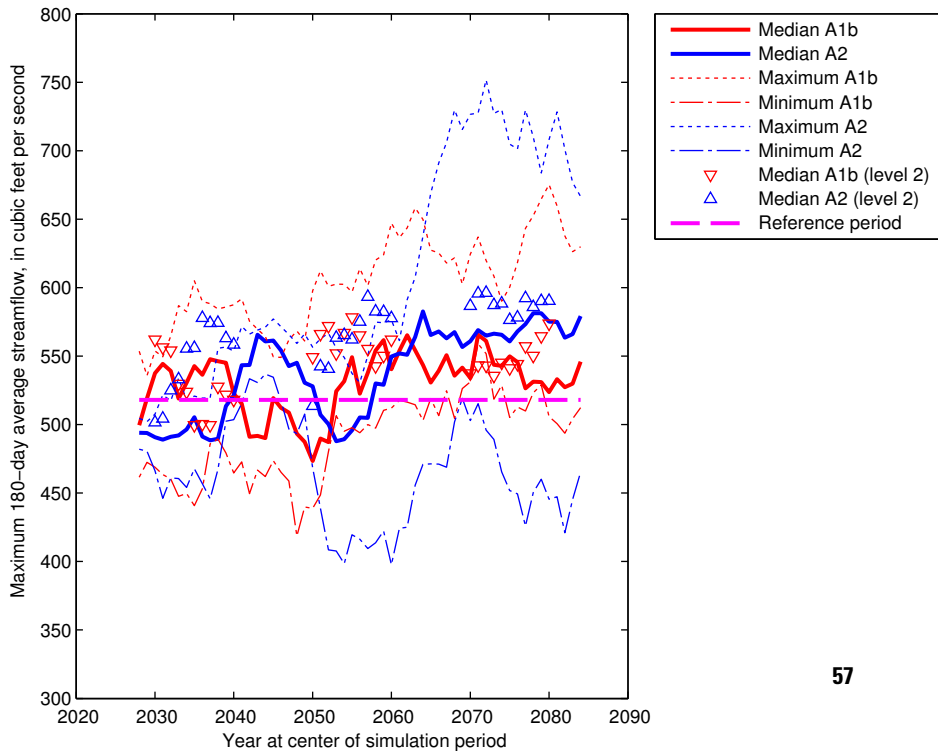


EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

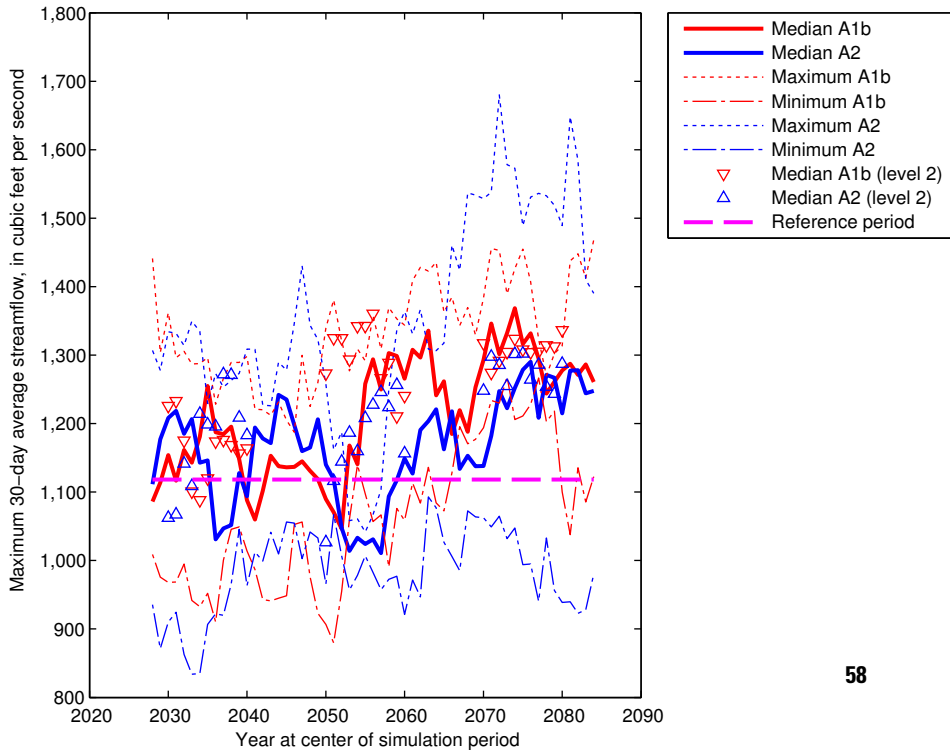
CLAR

EXPLANATION



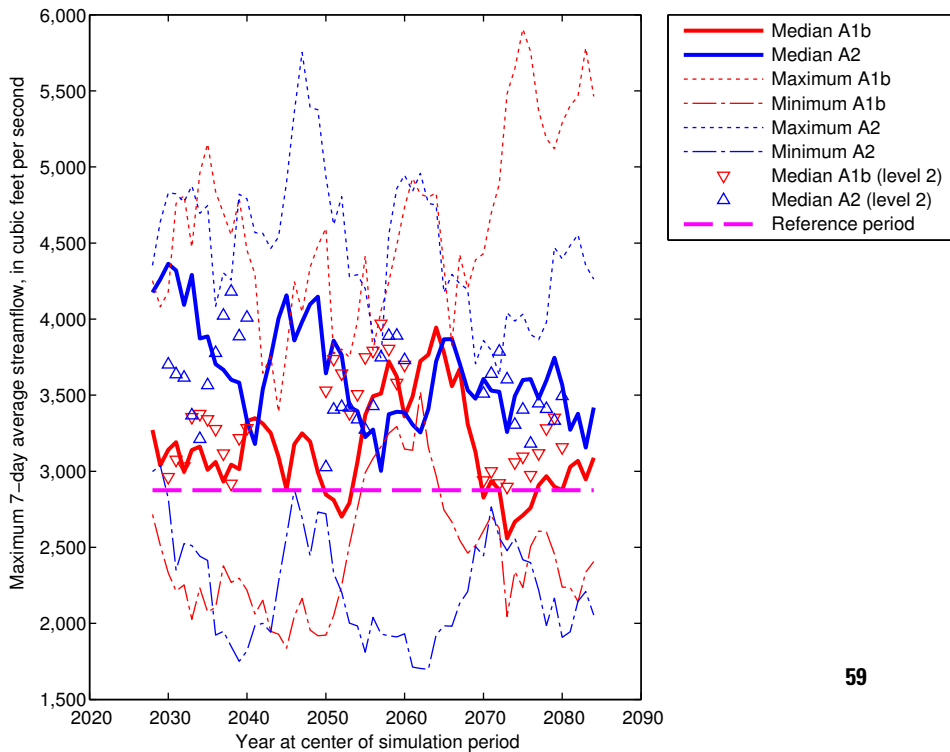
CLAR

EXPLANATION

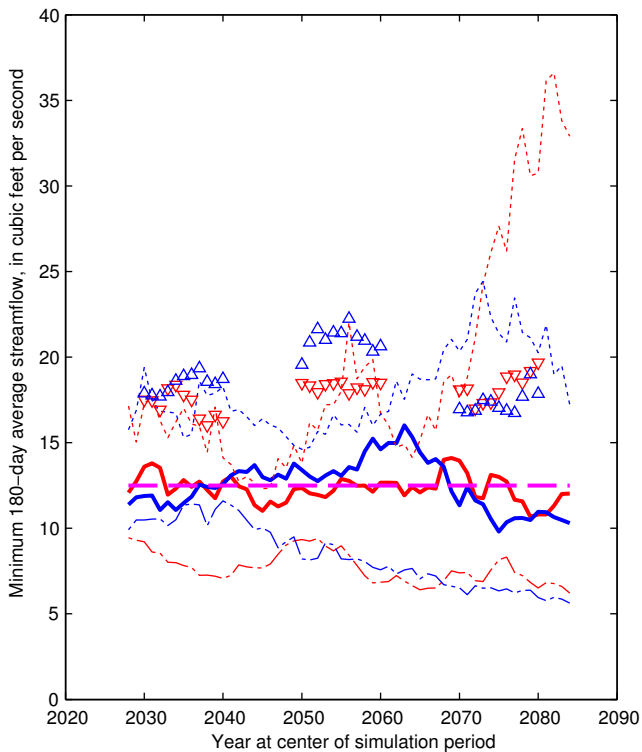


CLAR

EXPLANATION



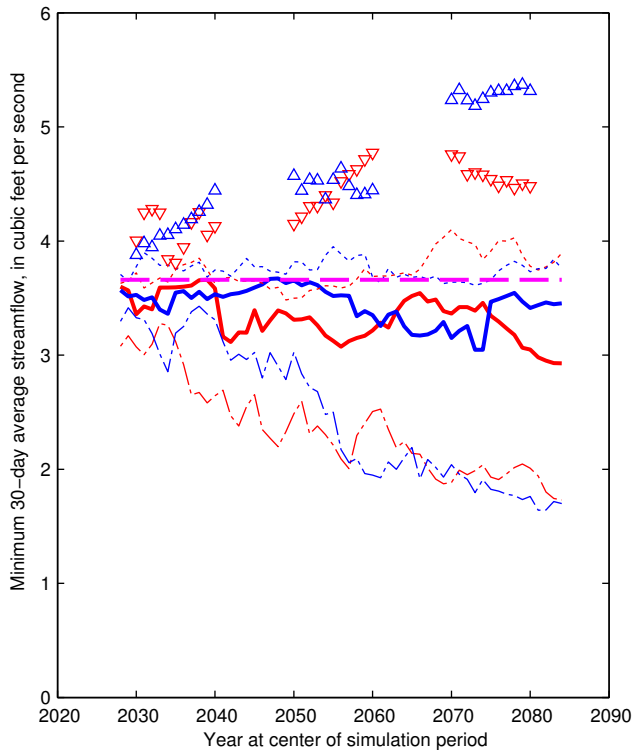
CLAR



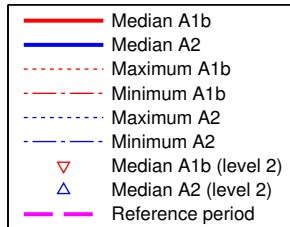
EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

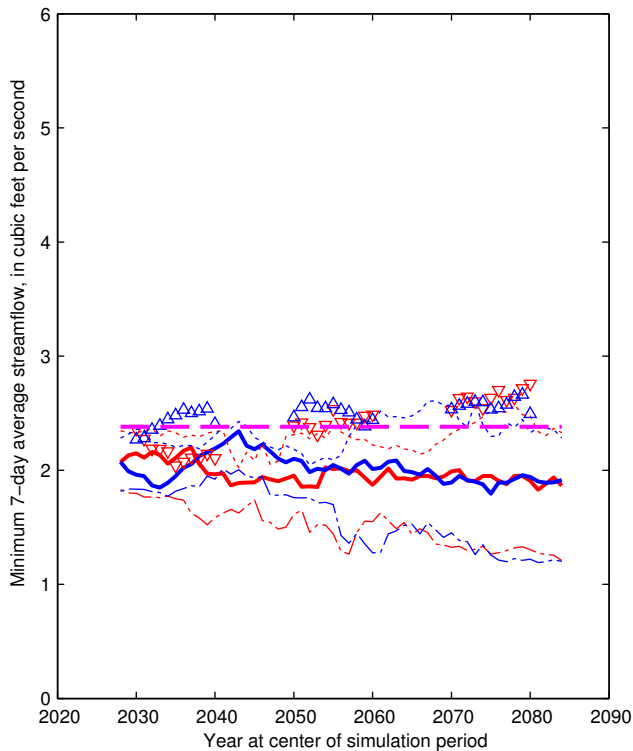
CLAR



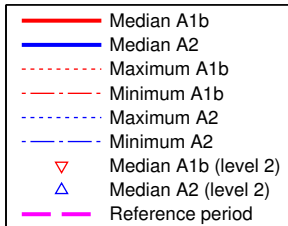
EXPLANATION



CLAR



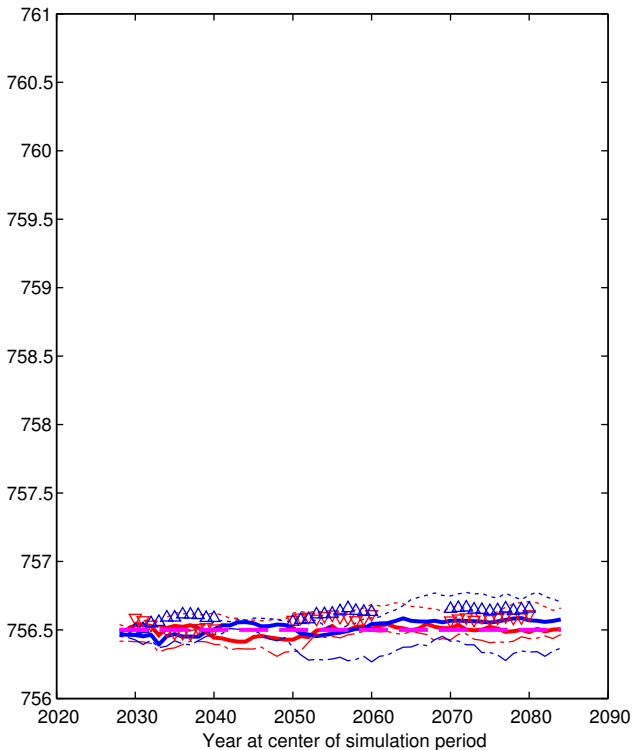
EXPLANATION



GRIG

EXPLANATION

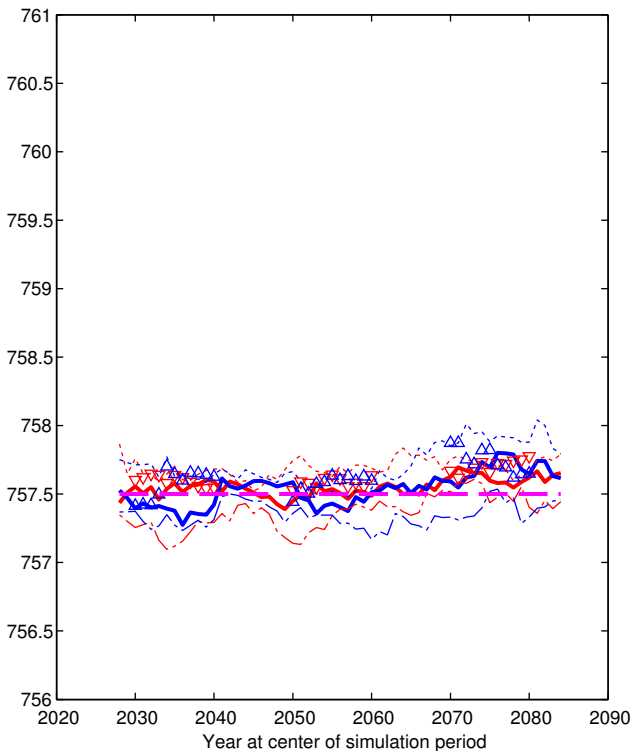
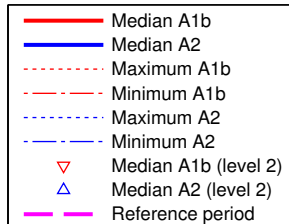
Maximum 180-day average water level, in feet above NGVD 1929



GRIG

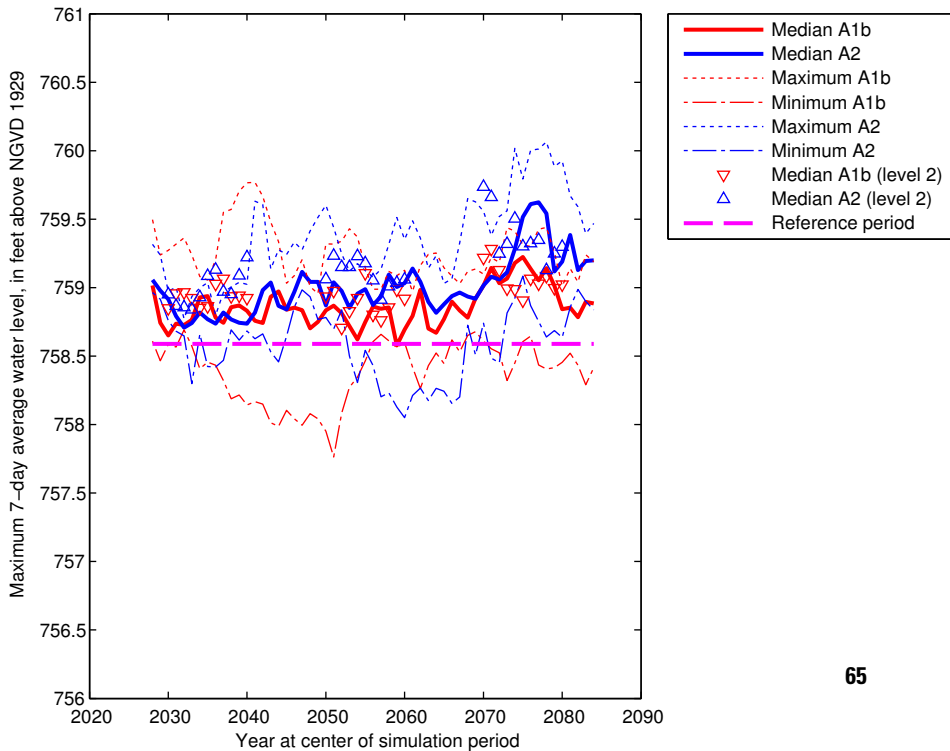
Maximum 30-day average water level, in feet above NGVD 1929

EXPLANATION



GRIG

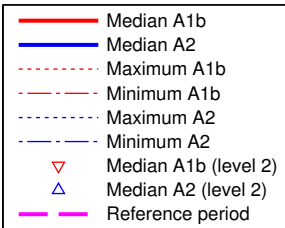
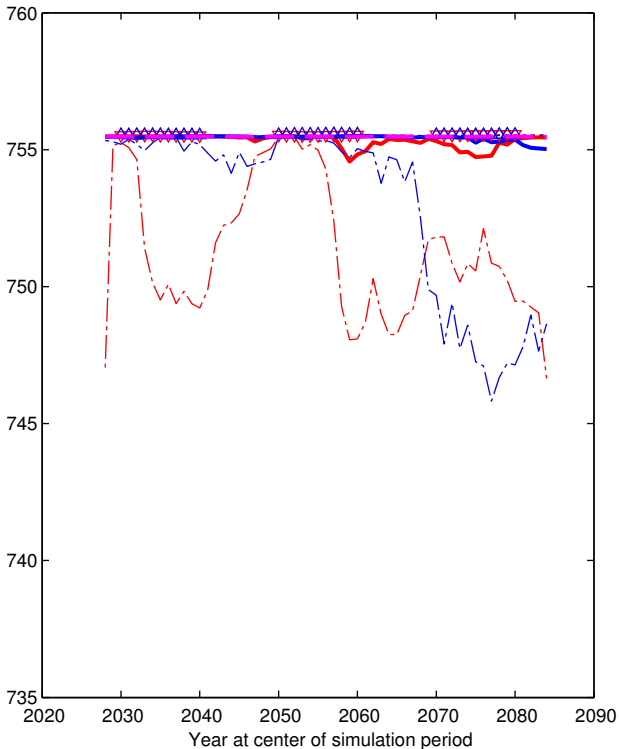
EXPLANATION



GRIG

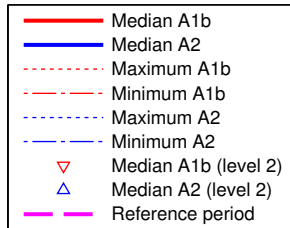
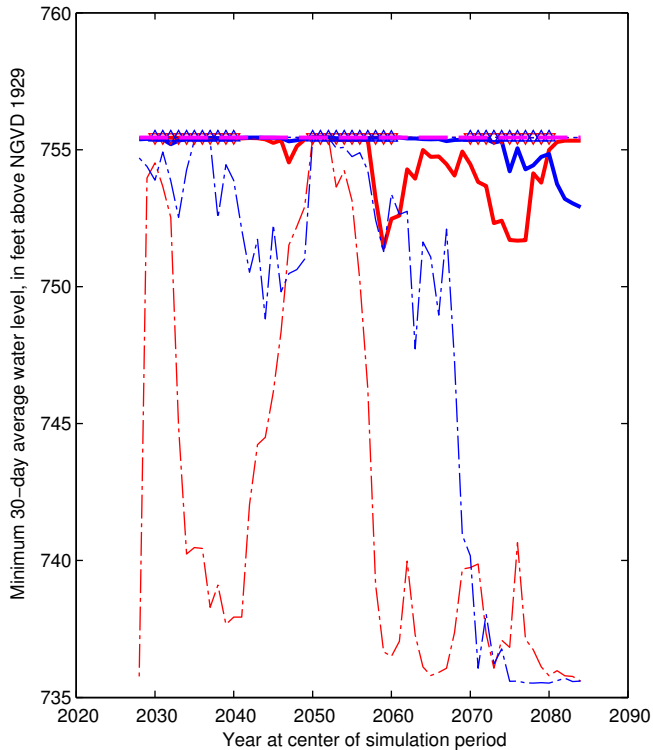
EXPLANATION

Minimum 180-day average water level, in feet above NGVD 1929



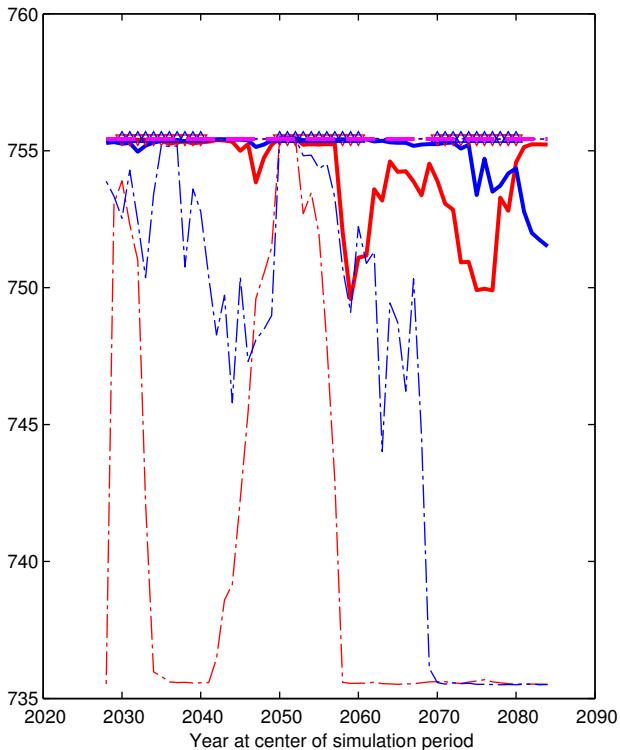
GRIG

EXPLANATION

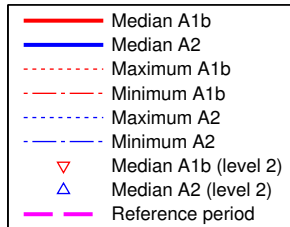


GRIG

Minimum 7-day average water level, in feet above NGVD 1929



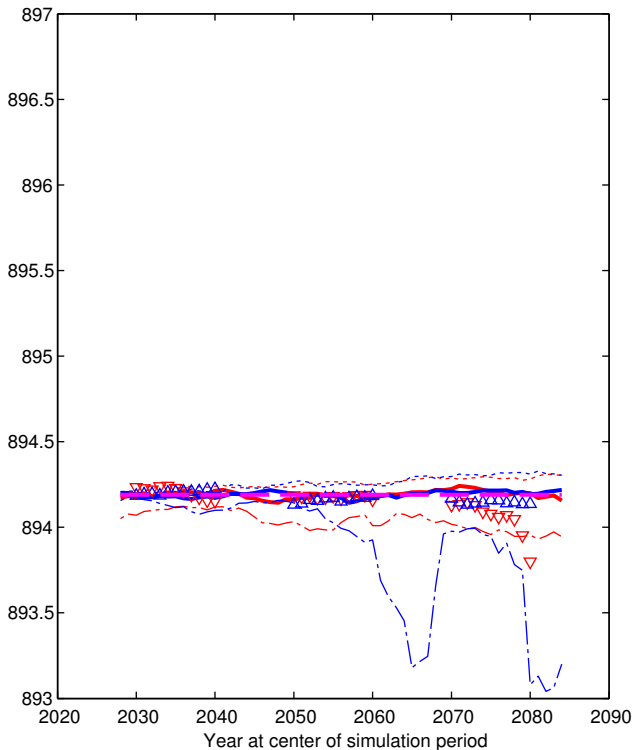
EXPLANATION



HOOV

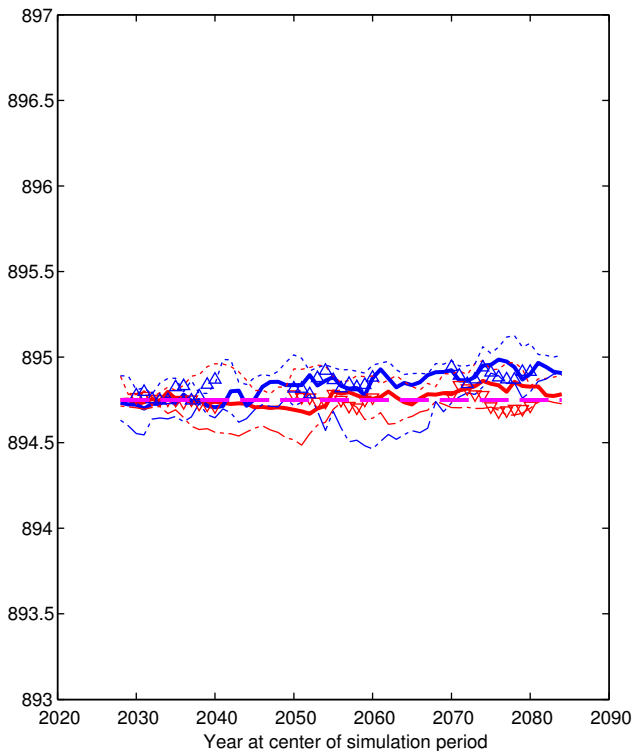
EXPLANATION

Maximum 180-day average water level, in feet above NGVD 1929



HOOV

Maximum 30-day average water level, in feet above NGVD 1929



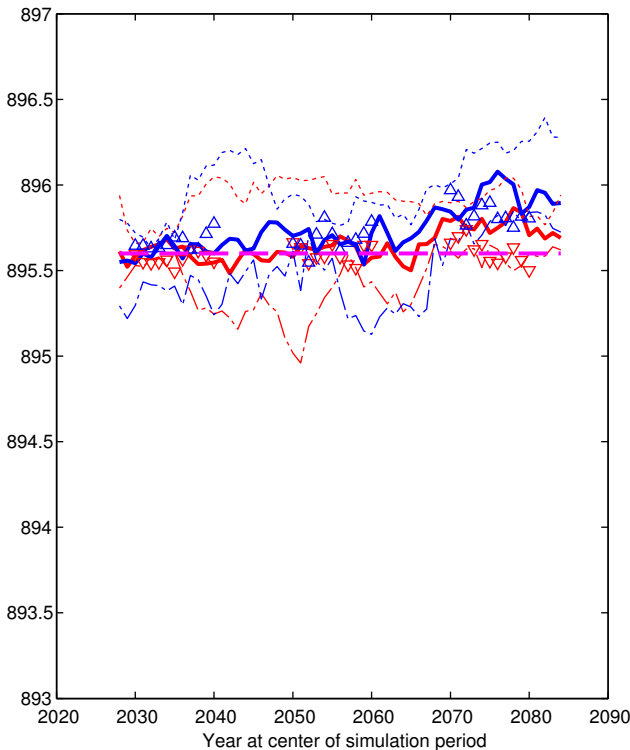
EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

HOOV

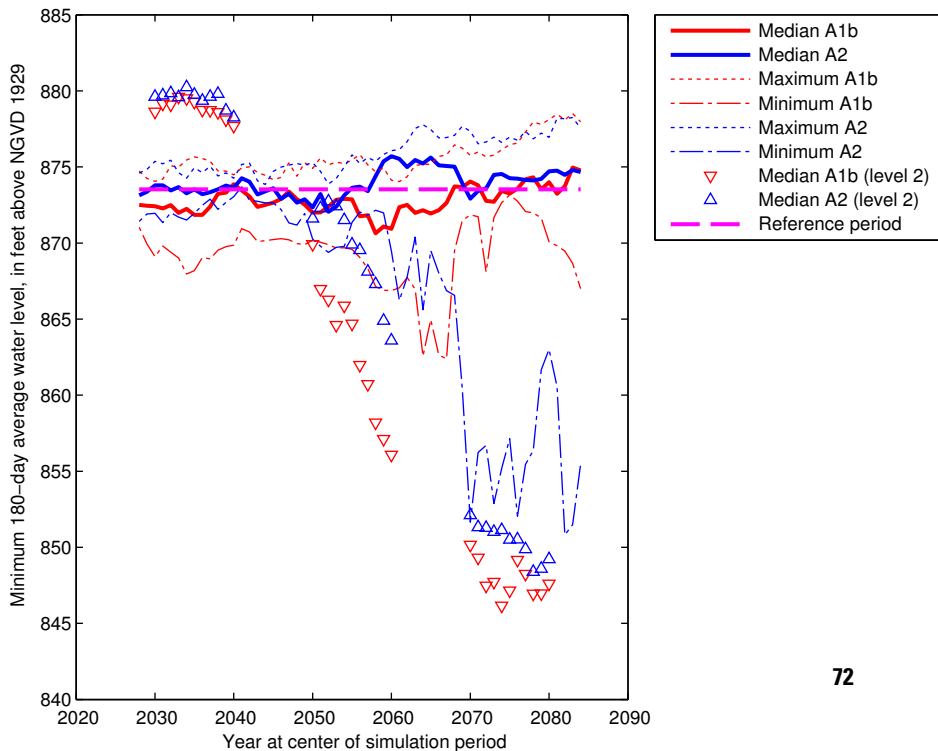
EXPLANATION

Maximum 7-day average water level, in feet above NGVD 1929



HOOV

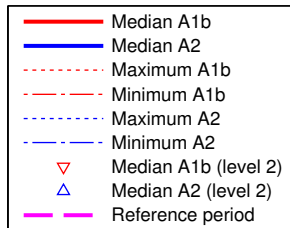
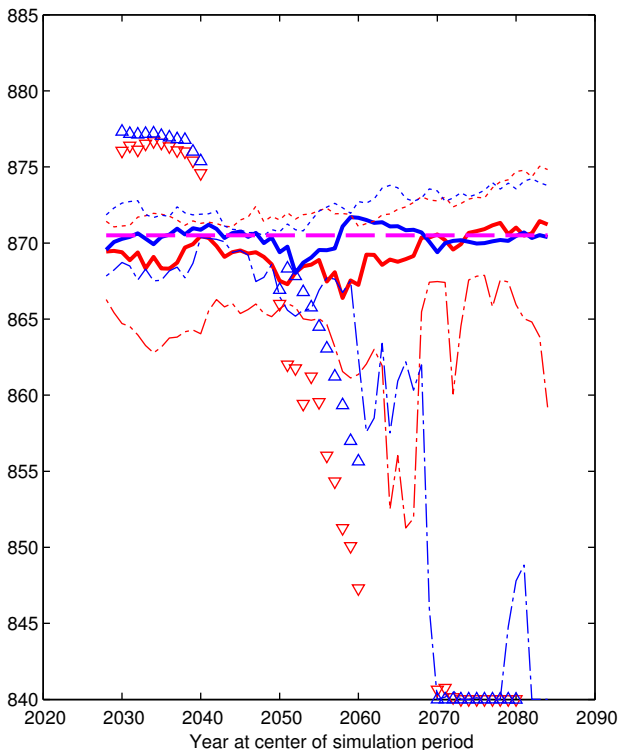
EXPLANATION



HOOV

EXPLANATION

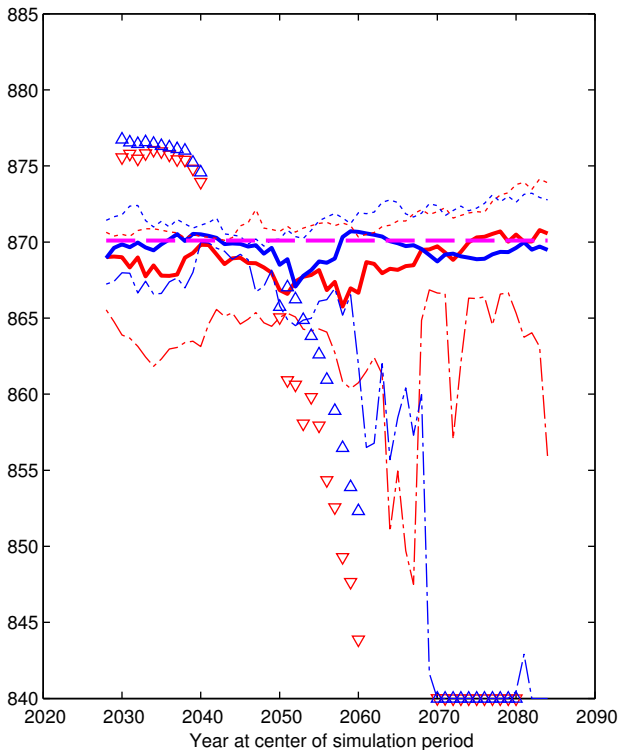
Minimum 30-day average water level, in feet above NGVD 1929



HOOV

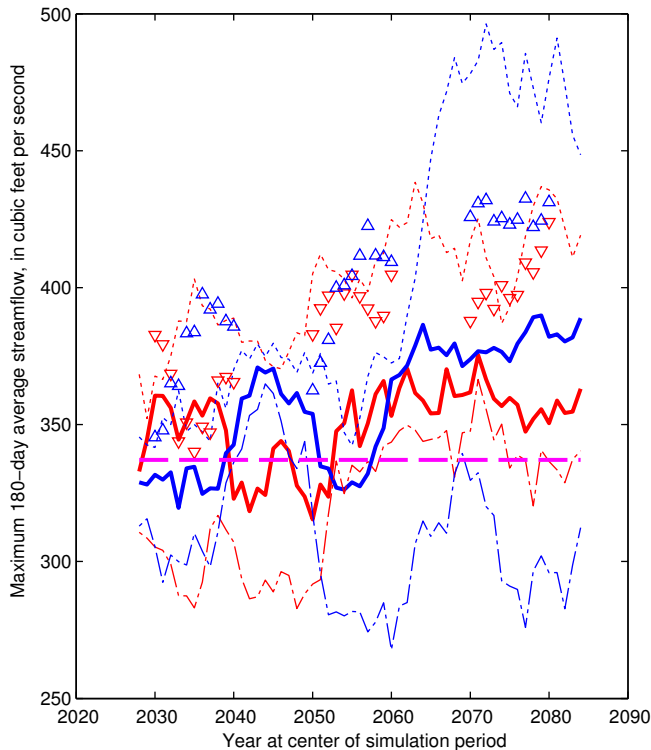
EXPLANATION

Minimum 7-day average water level, in feet above NGVD 1929



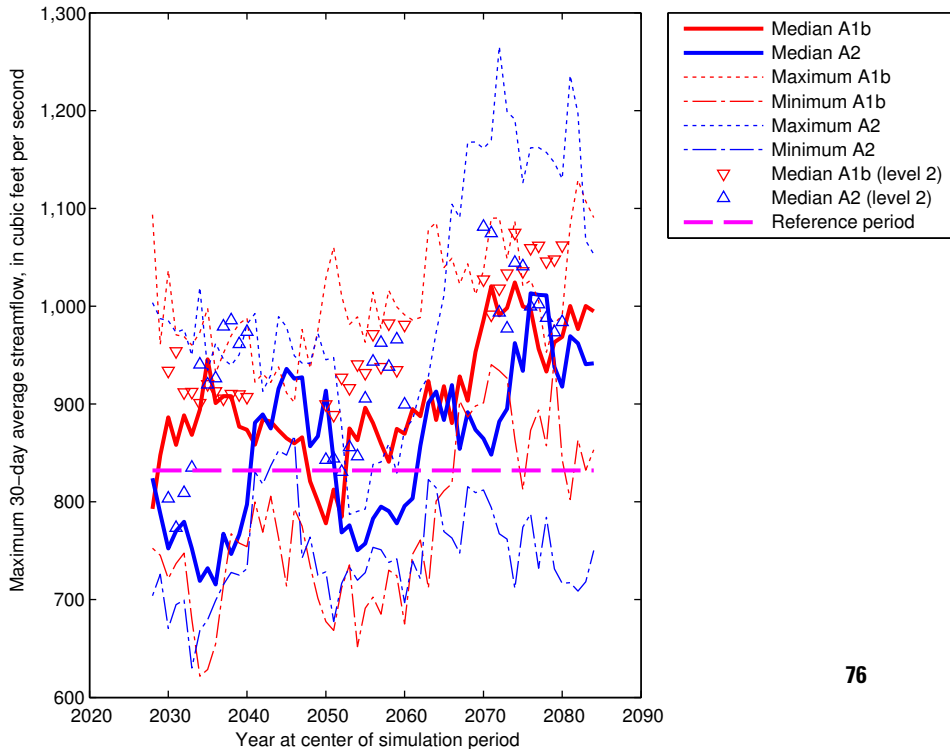
LSCI

EXPLANATION



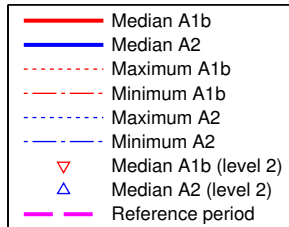
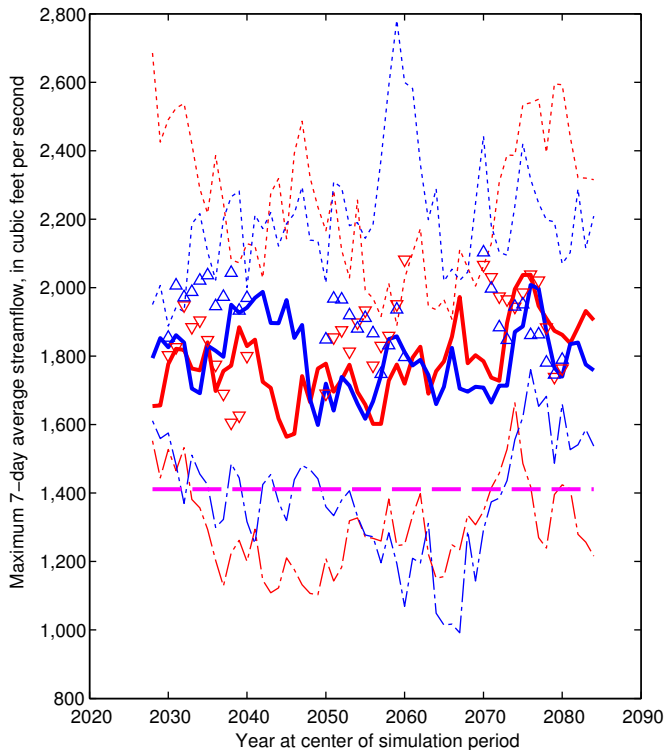
LSCI

EXPLANATION



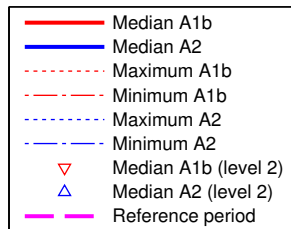
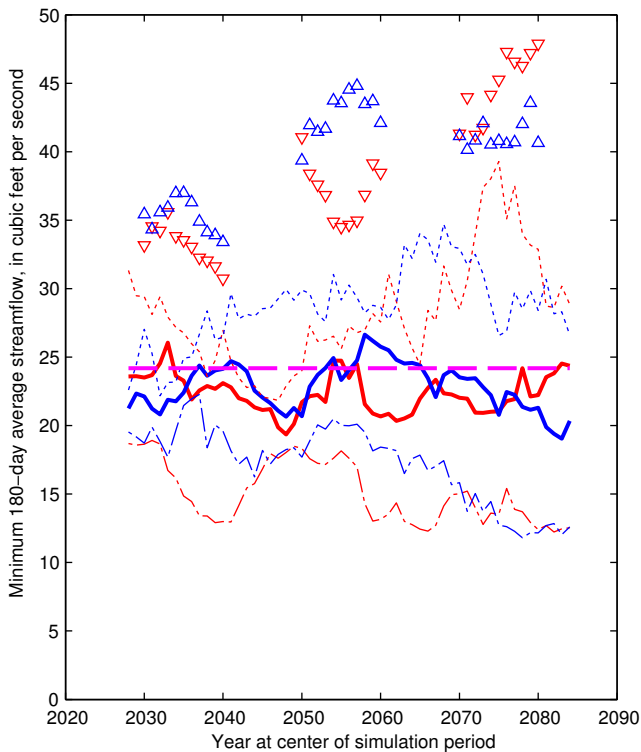
LSCI

EXPLANATION

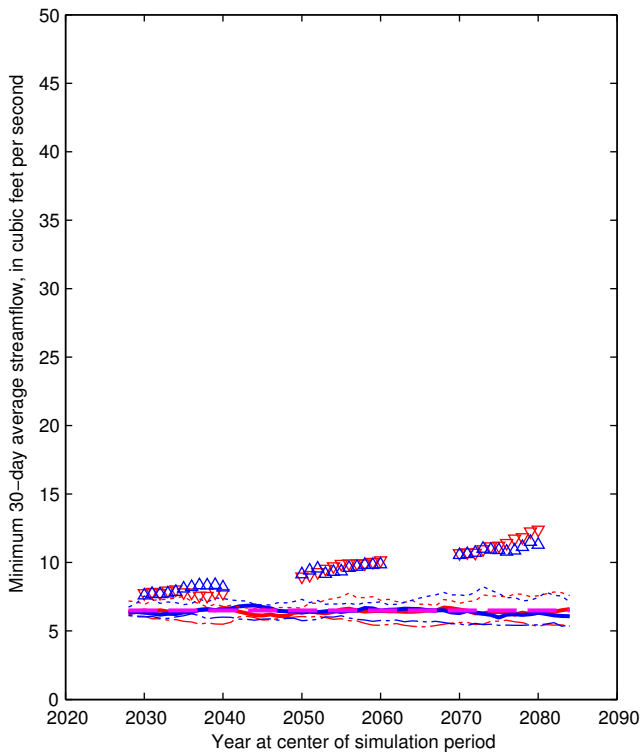


LSCI

EXPLANATION



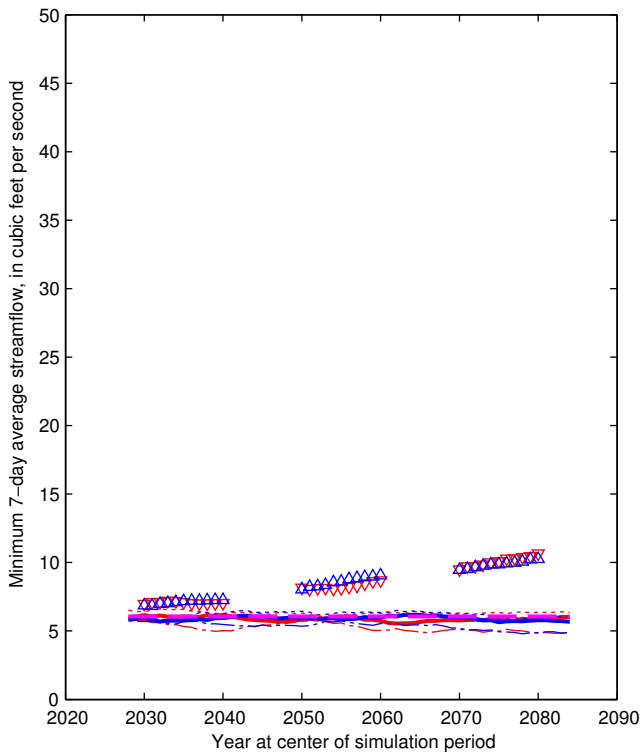
LSCI



EXPLANATION

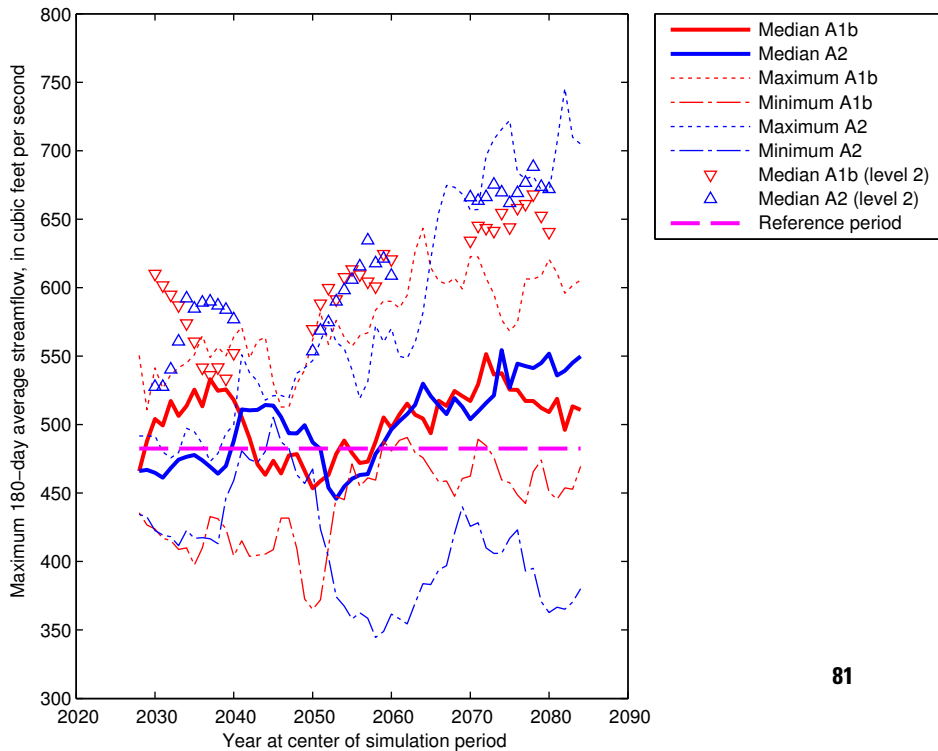
- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

LSCI



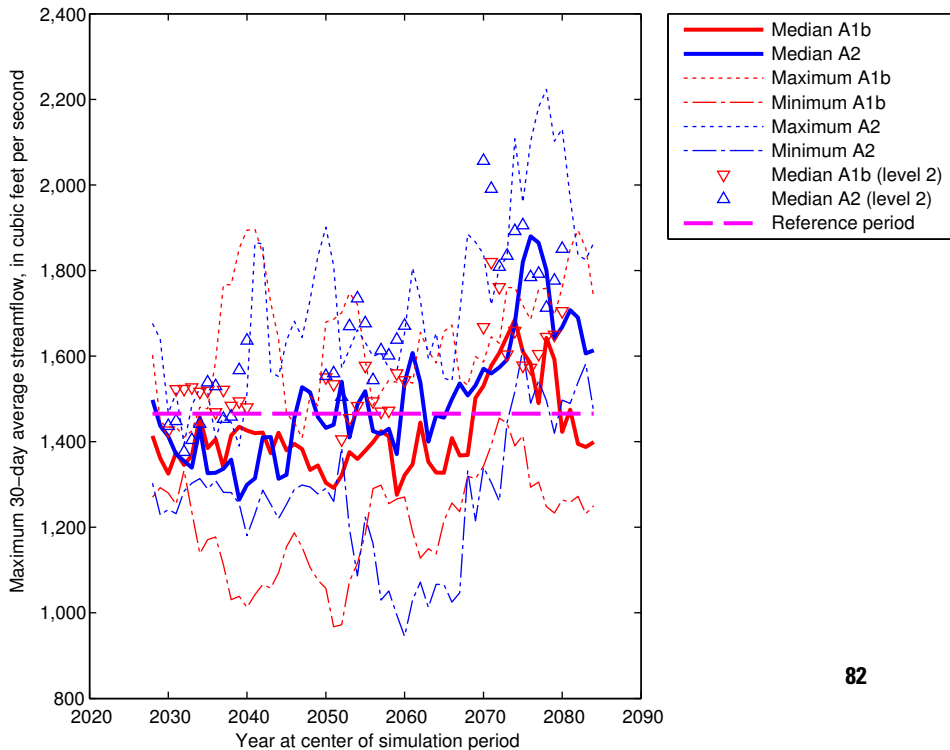
MILL

EXPLANATION



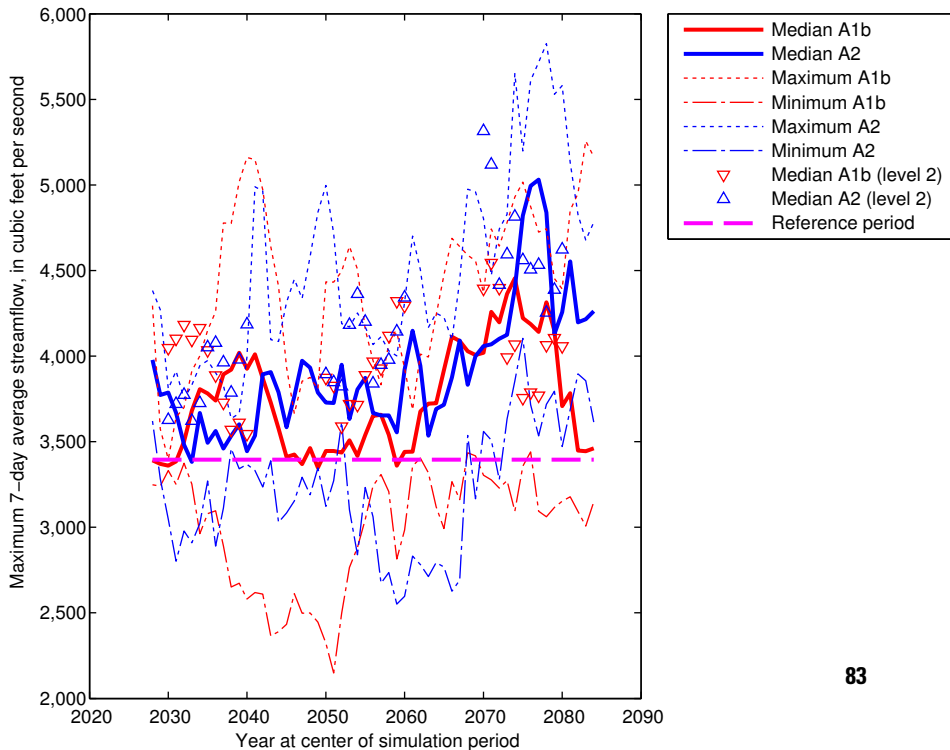
MILL

EXPLANATION

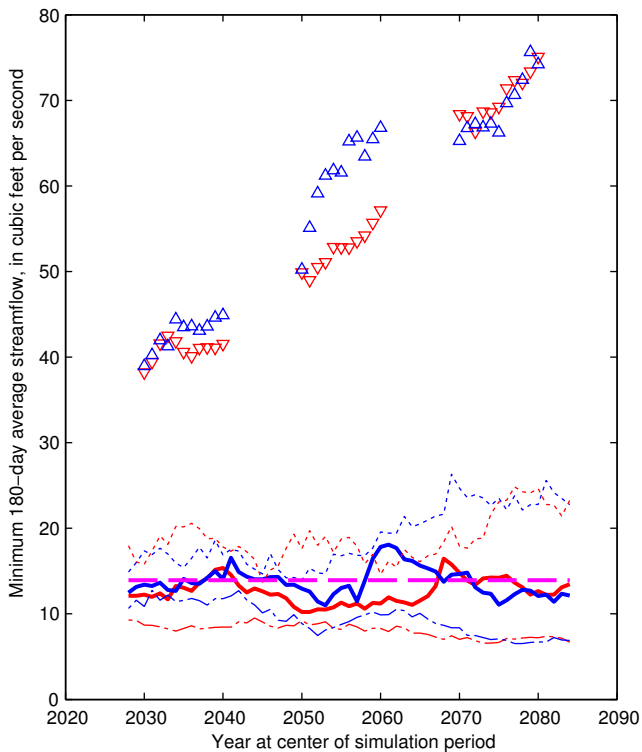


MILL

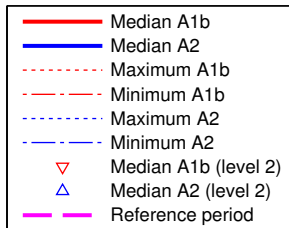
EXPLANATION



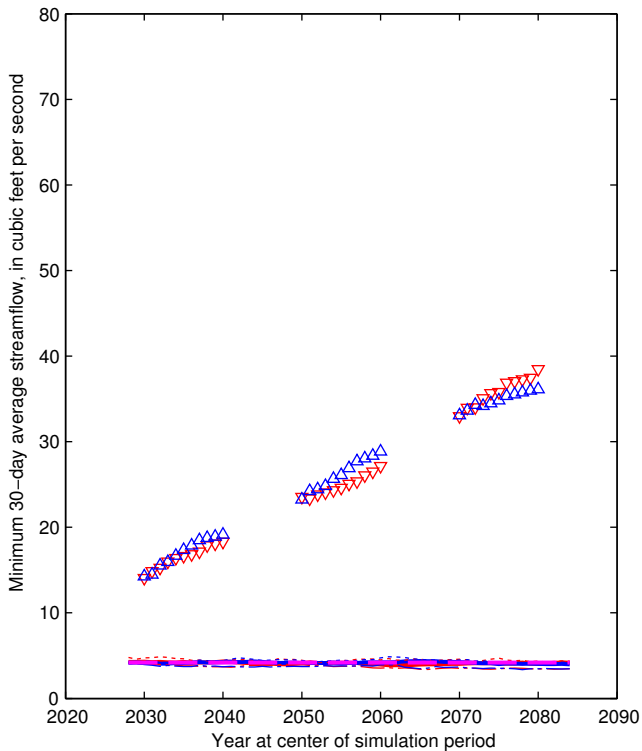
MILL



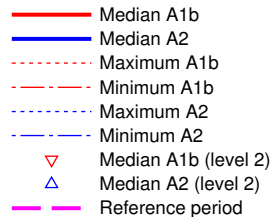
EXPLANATION



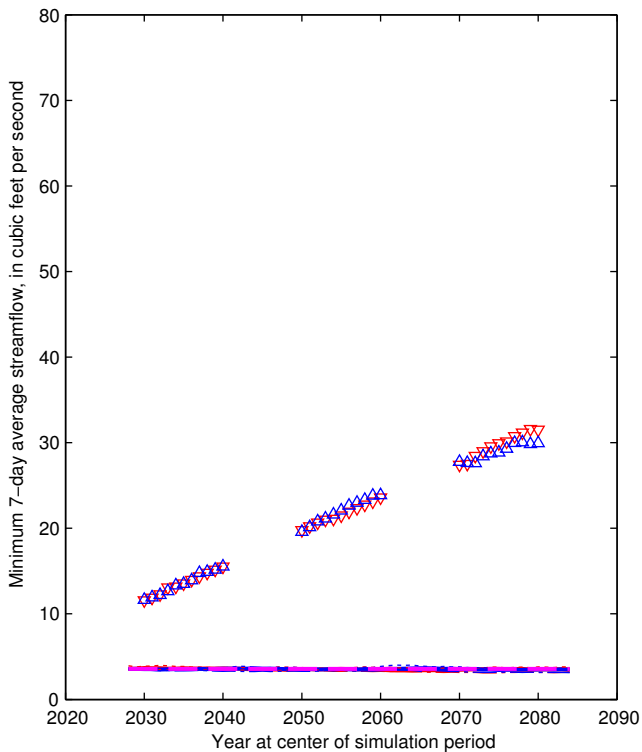
MILL



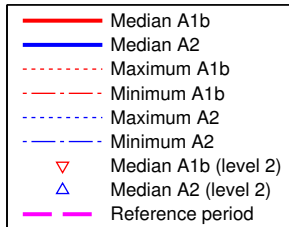
EXPLANATION



MILL

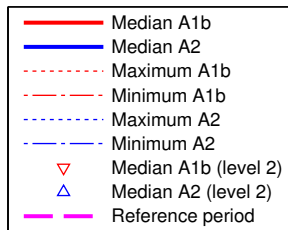
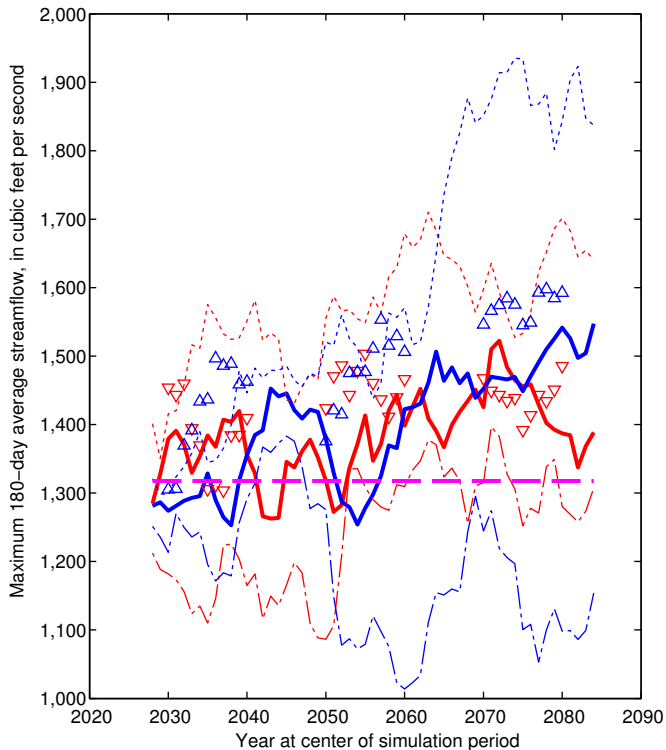


EXPLANATION



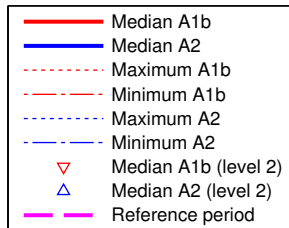
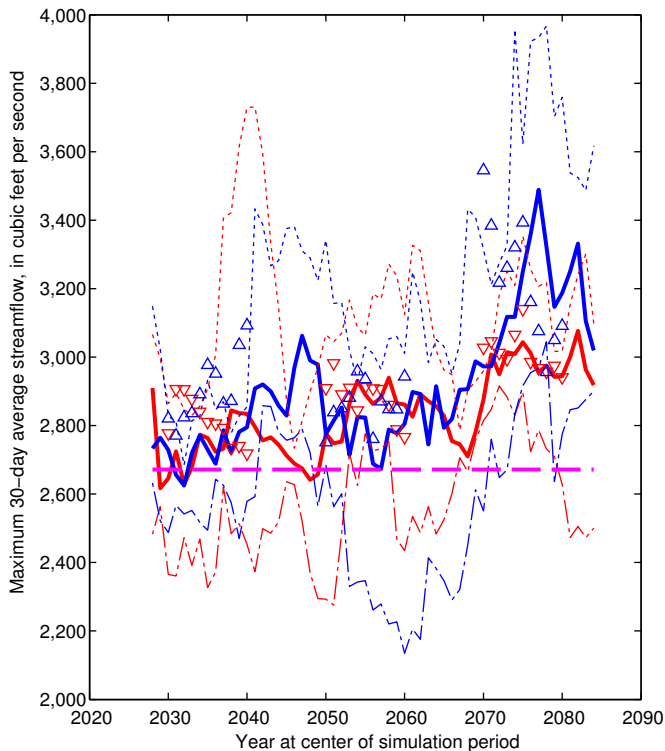
OLEN

EXPLANATION



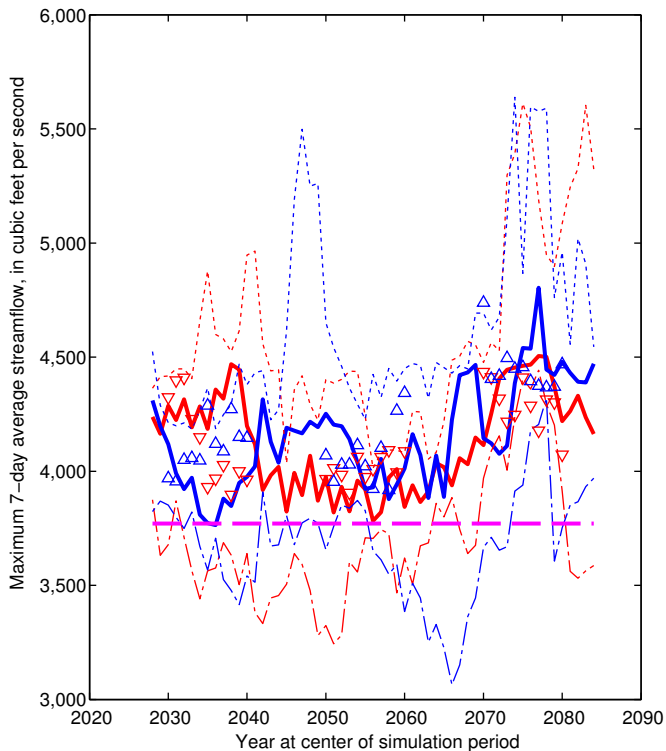
OLEN

EXPLANATION



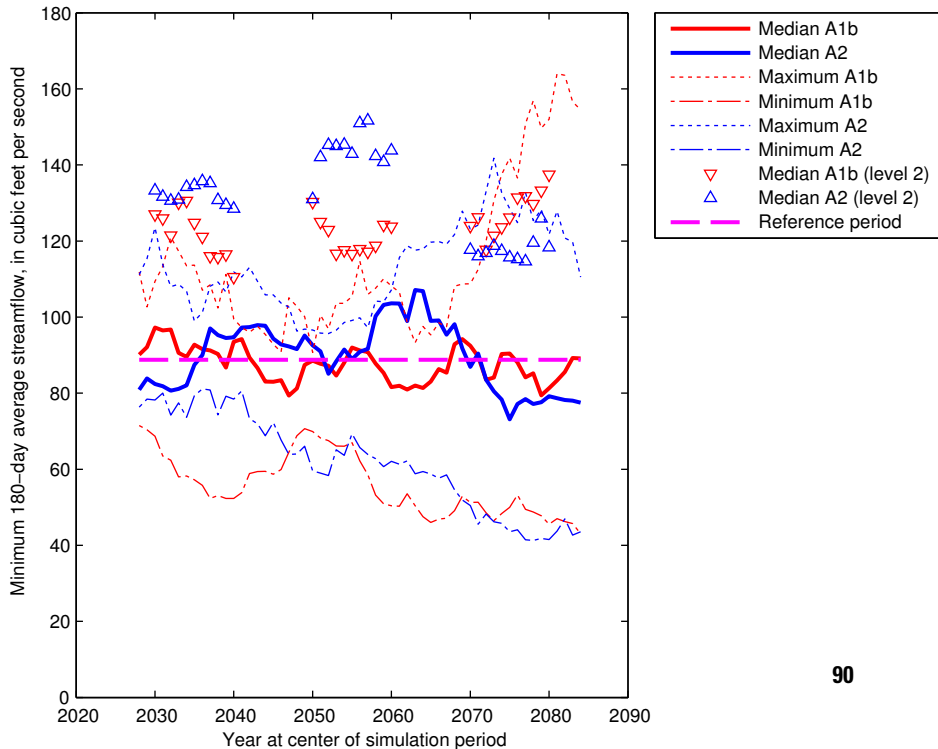
OLEN

EXPLANATION

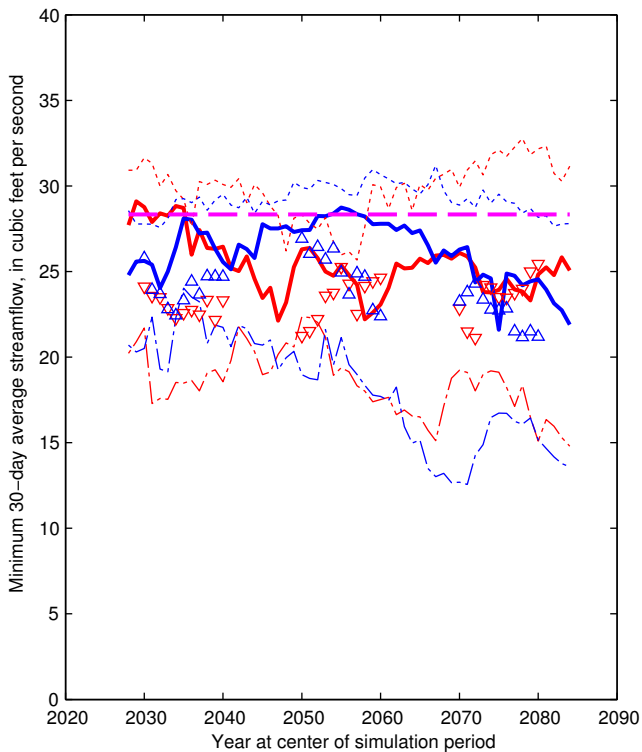


OLEN

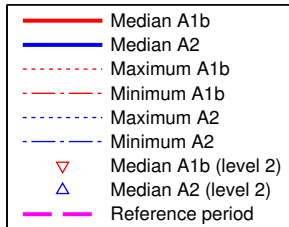
EXPLANATION



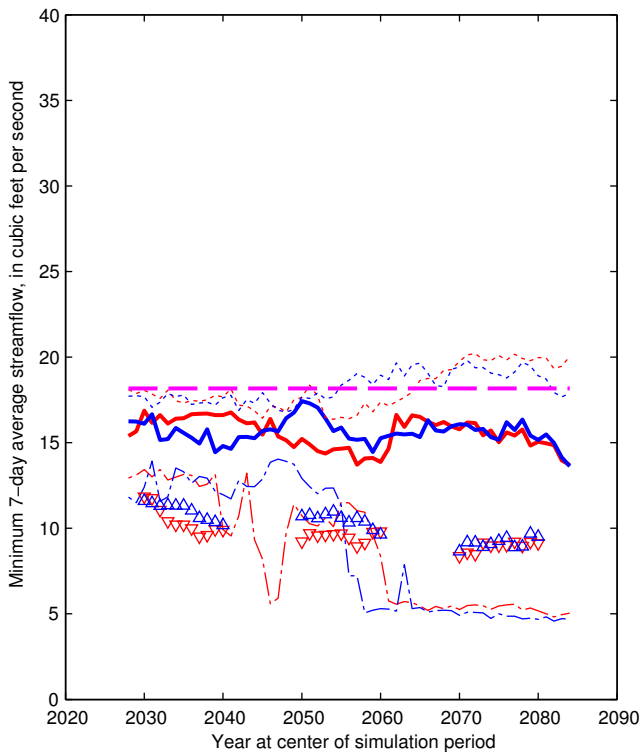
OLEN



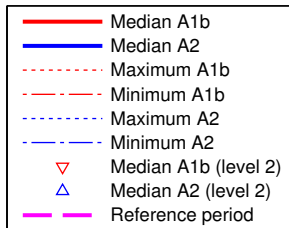
EXPLANATION



OLEN



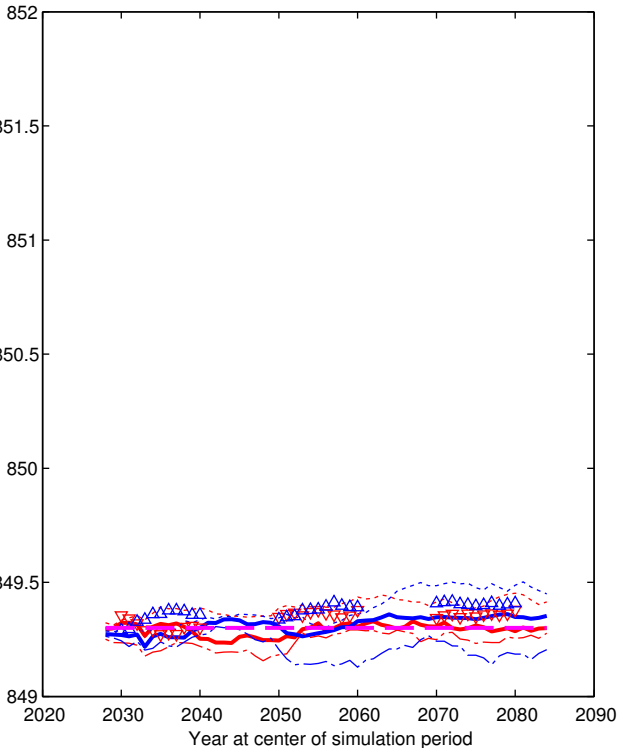
EXPLANATION



OSHY

EXPLANATION

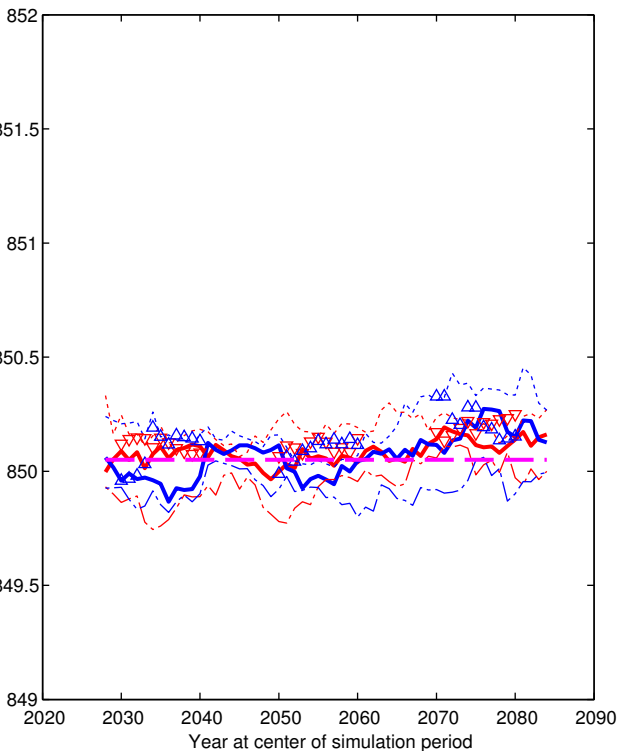
Maximum 180-day average water level, in feet above NGVD 1929



OSHY

EXPLANATION

Maximum 30-day average water level, in feet above NGVD 1929

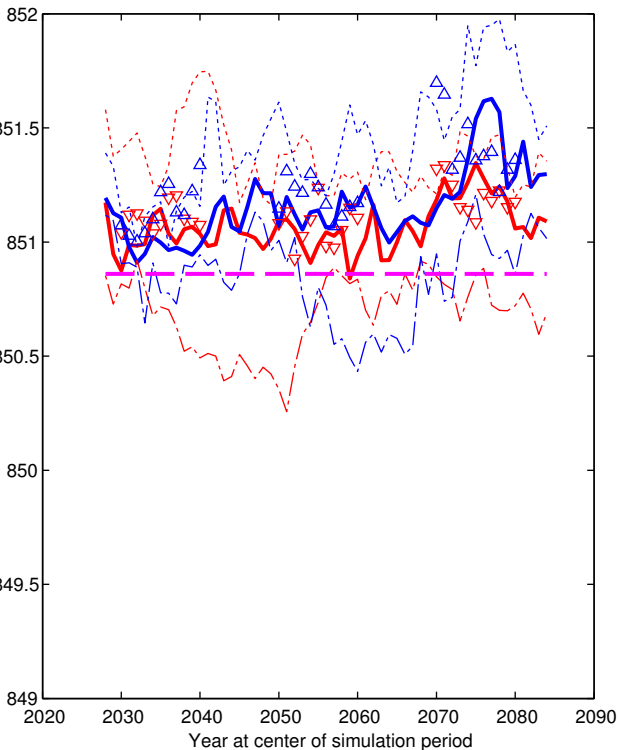


- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period

OSHY

EXPLANATION

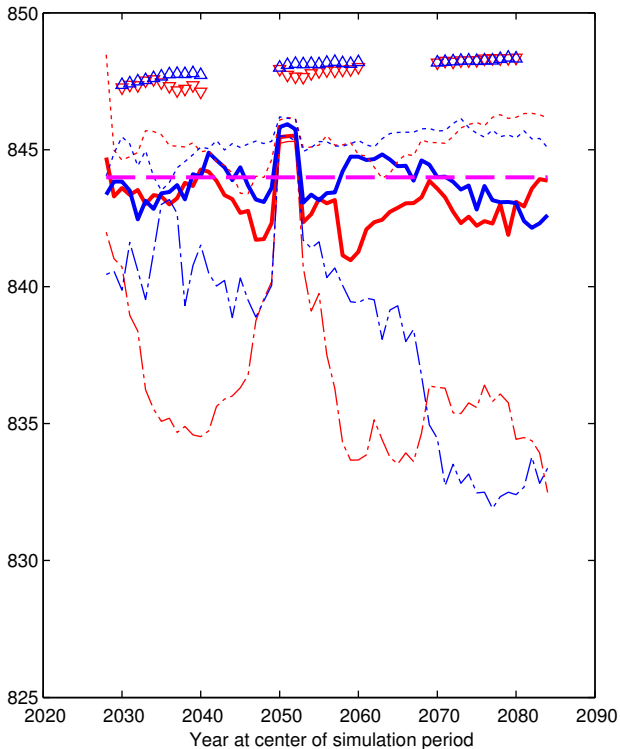
Maximum 7-day average water level, in feet above NGVD 1929



OSHY

EXPLANATION

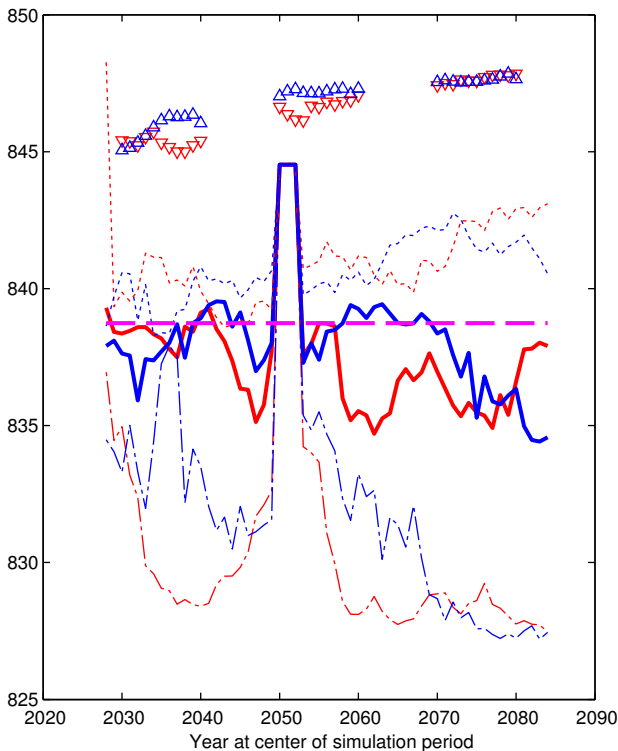
Minimum 180-day average water level, in feet above NGVD 1929



OSHY

EXPLANATION

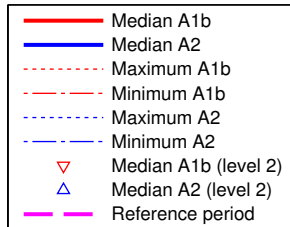
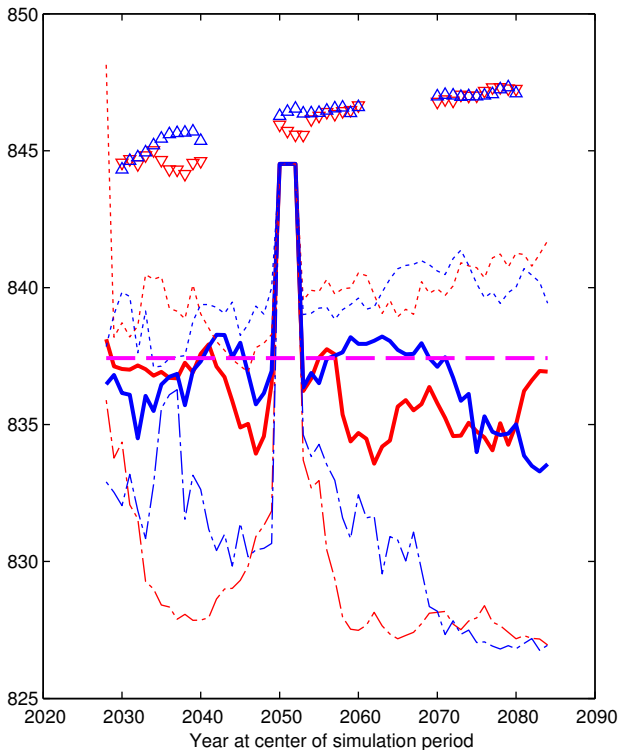
Minimum 30-day average water level, in feet above NGVD 1929



OSHY

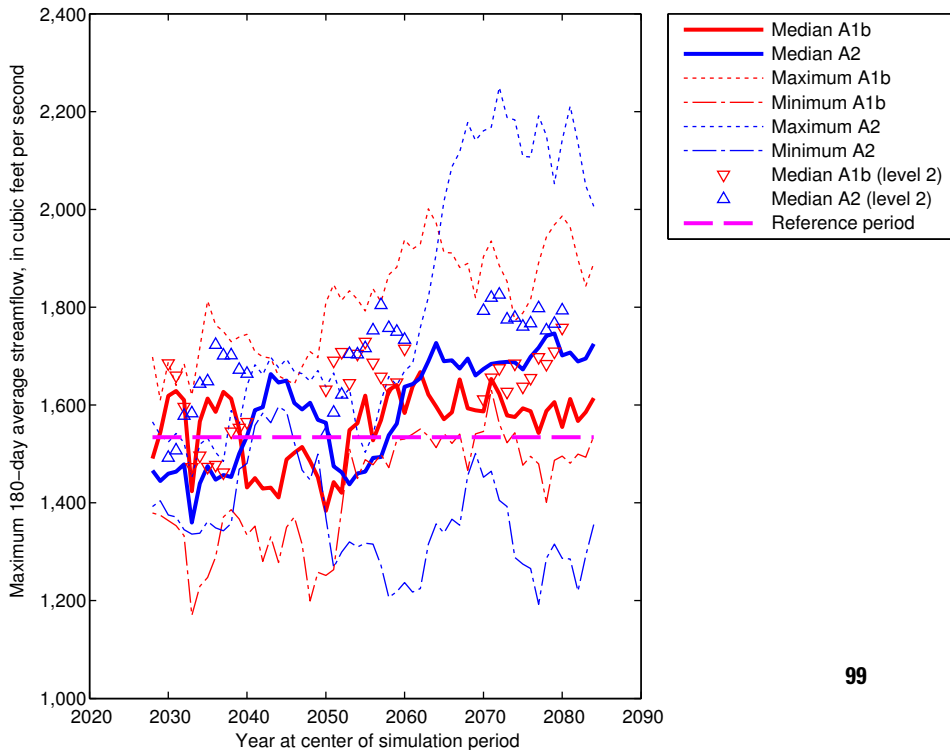
EXPLANATION

Minimum 7-day average water level, in feet above NGVD 1929



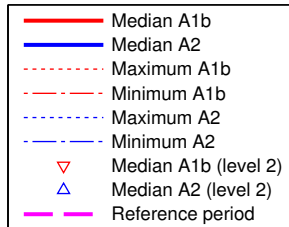
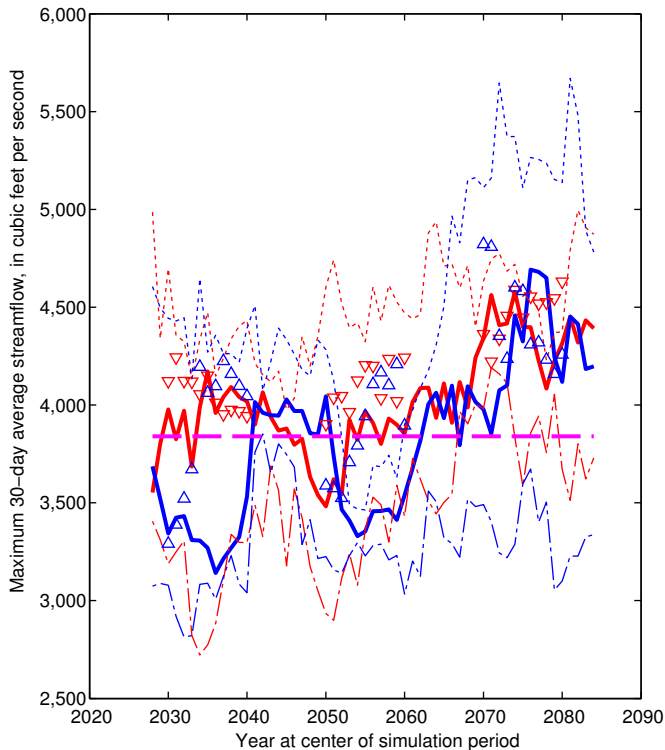
PROS

EXPLANATION



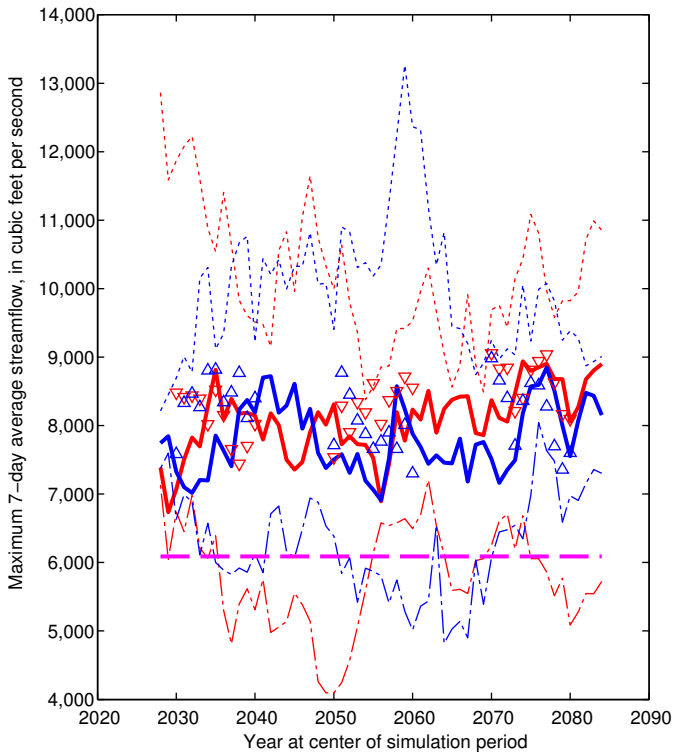
PROS

EXPLANATION



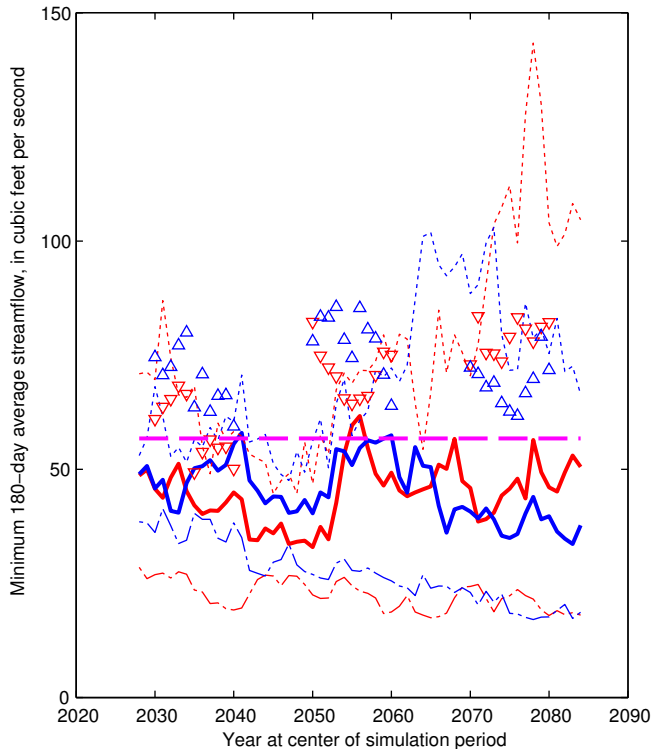
PROS

EXPLANATION



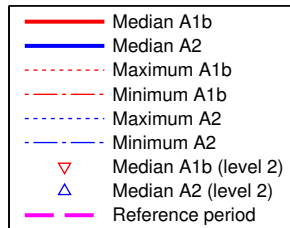
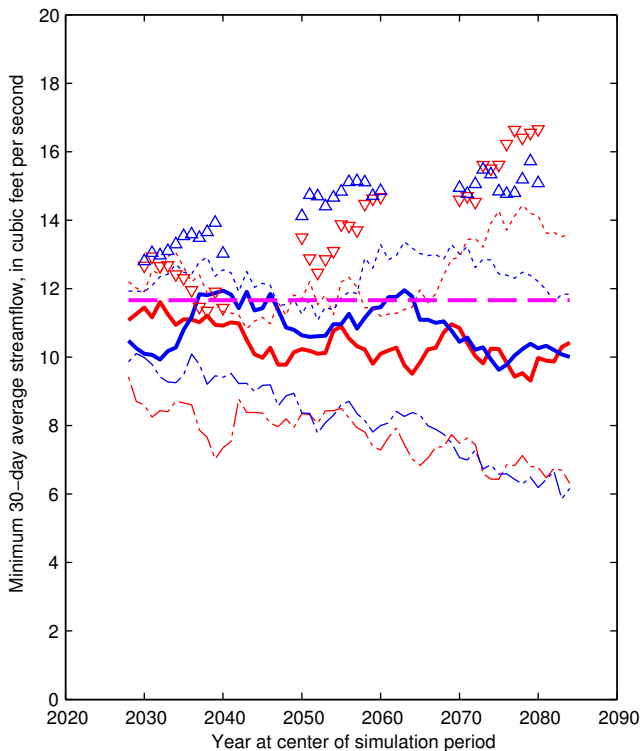
PROS

EXPLANATION

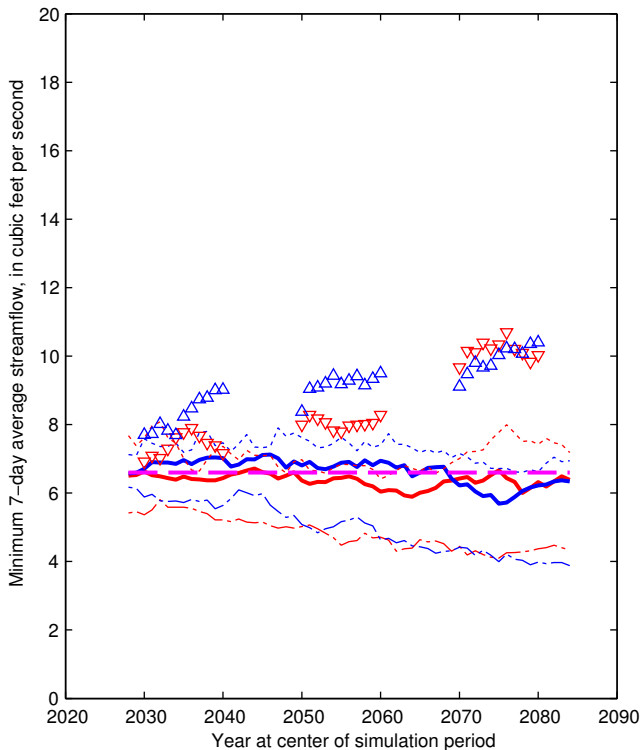


PROS

EXPLANATION



PROS



EXPLANATION

- Median A1b
- Median A2
- Maximum A1b
- Minimum A1b
- Maximum A2
- Minimum A2
- Median A1b (level 2)
- Median A2 (level 2)
- Reference period