

Appendix F

This appendix contains plots of simulated level-2¹ 7-day running average streamflows at 12 locations and water levels at five reservoirs as a function of exceedance quantile. Three plots are presented for each model output location representing simulation results for 20-year periods centered on, and reflecting development characteristics for, 2035, 2055, and 2075. Separate lines are plotted for each simulation based on the indicated combination of Coupled Model Intercomparison Project - Phase 3 (CMIP3) data set and greenhouse-gas emission scenario as described in the following tables. A dashed line is also drawn for results for the simulation based on a historical reference period extending from 1991 to 2010.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 CMIP3 data sets, emission scenarios, and sites.

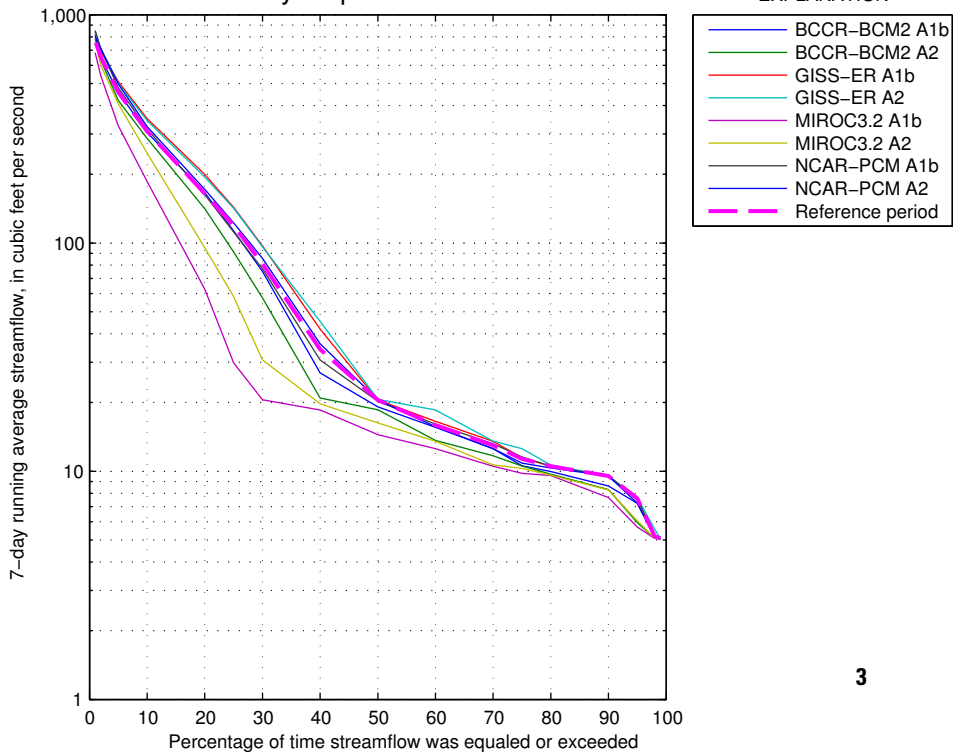
CMIP3 Identifier	Originating group(s)	Country
BCCR-BCM2	Bjerknes Centre for Climate Research	Norway
GISS-ER	NASA / Goddard Institute for Space Studies	USA
MIROC3.2	Center for Climate System Research (The University of Tokyo) National Institute for Environmental Studies and Frontier Research Center for Global Change	Japan
NCAR- PCM	National Center for Atmospheric Research	USA

¹ 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

Special Report on Emissions Scenario Designation	Description
A2	<p>The A2 scenario represents a divided world that is characterized by:</p> <ul style="list-style-type: none"> • A world of independently operating, self-reliant nations. • Continuously increasing population. • Regionally oriented economic development.
A1b	<p>The A1b scenario represents a more integrated world that is characterized by:</p> <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.

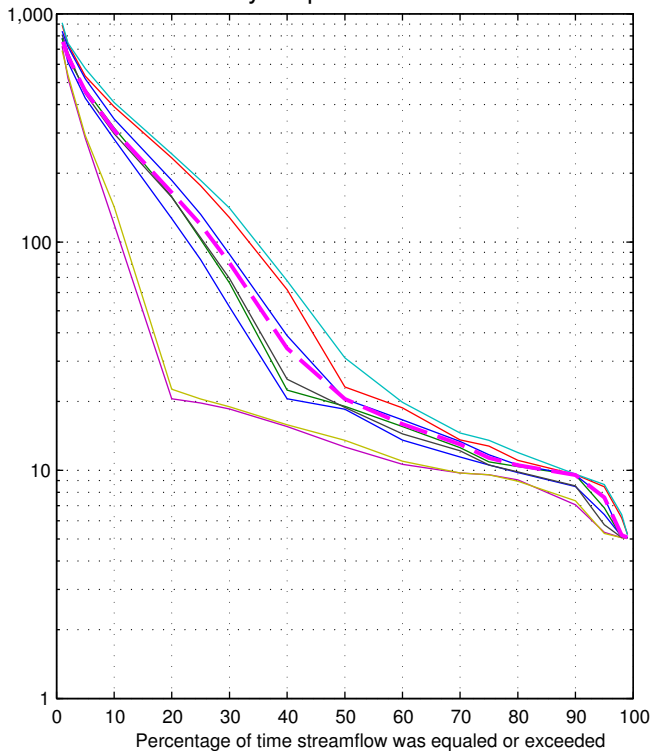
Site ID	Description	Latitude	Longitude
AFRI	Alum Creek at Africa, OH	40° 10' 56"	82° 57' 41"
ALUM	Alum Creek Reservoir, OH	40° 11' 11"	82° 57' 59"
CBUS	Scioto River at Columbus, OH	39° 54' 34"	83° 00' 32"
CCOL	Big Walnut Creek at Central College, OH	40° 06' 12"	82° 53' 02"
CIRC	Scioto River at Circleville, 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 20-year period centered on 2035



AFRI 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

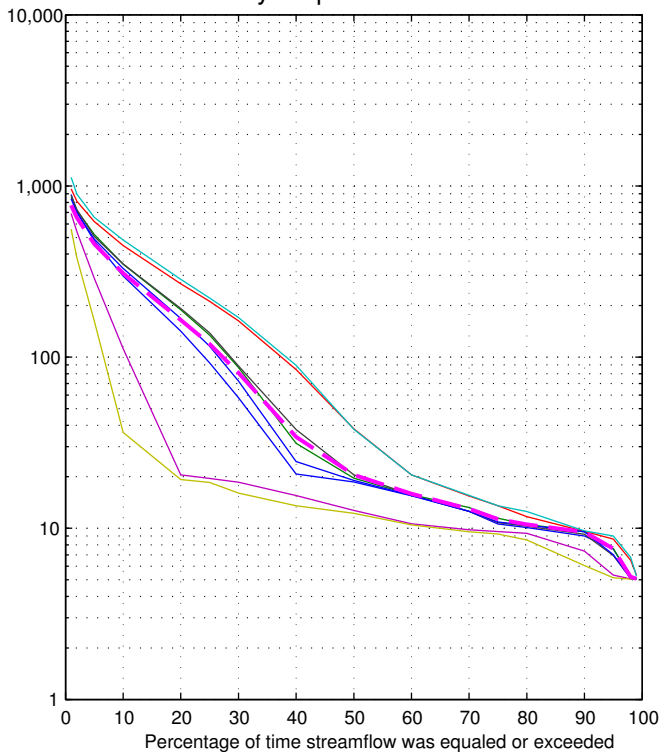


EXPLANATION

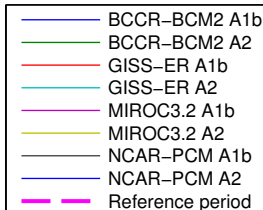
- BCCR-BCM2 A1b
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- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- - - Reference period

AFRI 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

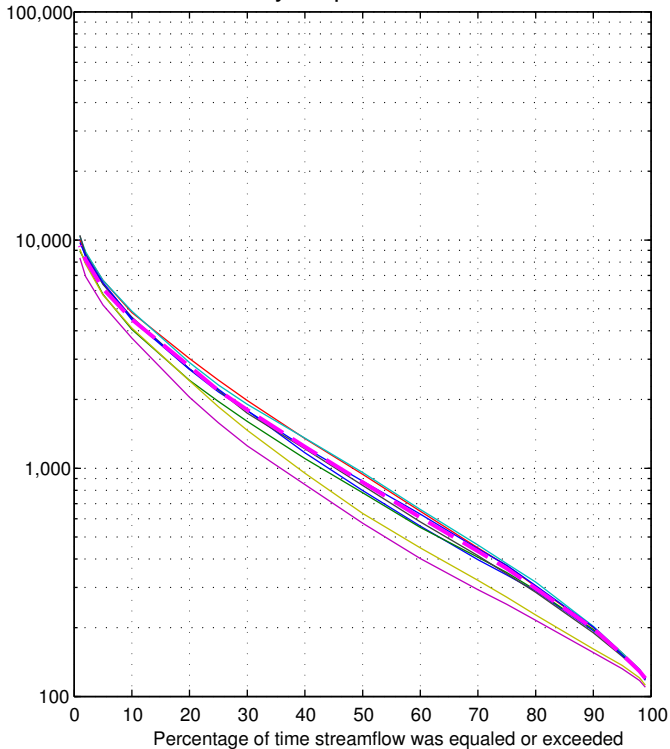


EXPLANATION



CBUS 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

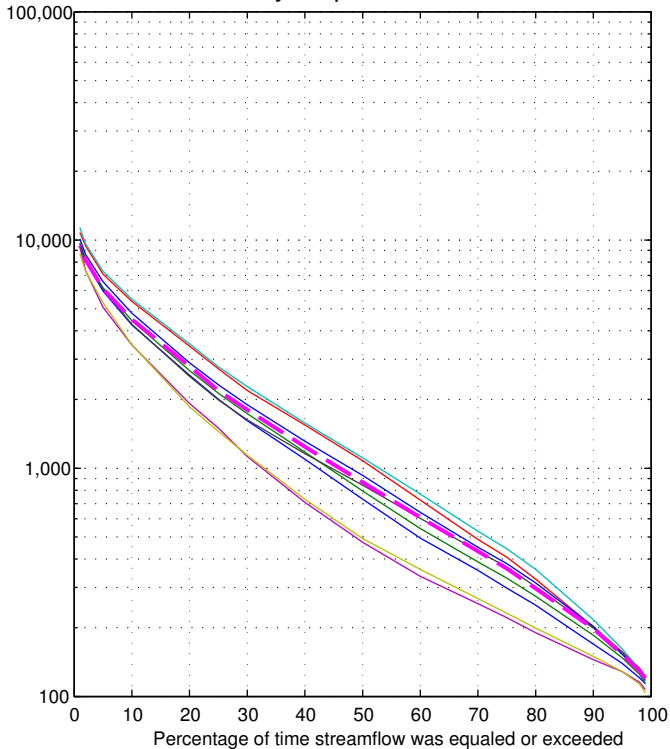


EXPLANATION

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- MIROC3.2 A2
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- - - Reference period

CBUS 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

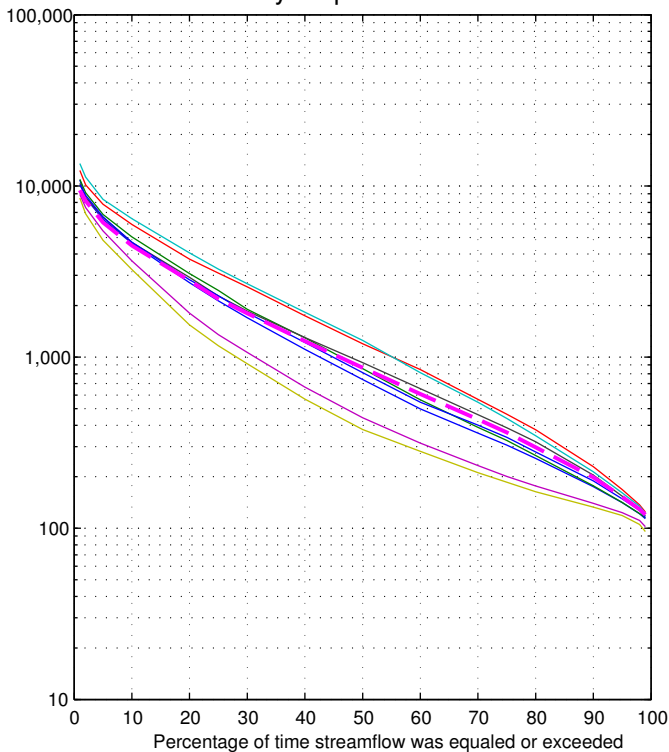


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- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

CBUS 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

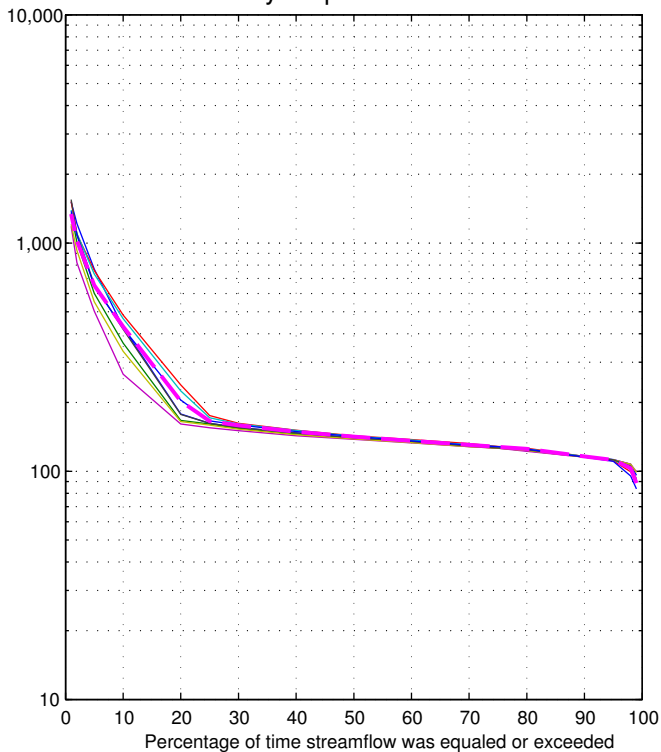


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- Reference period

CCOL 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

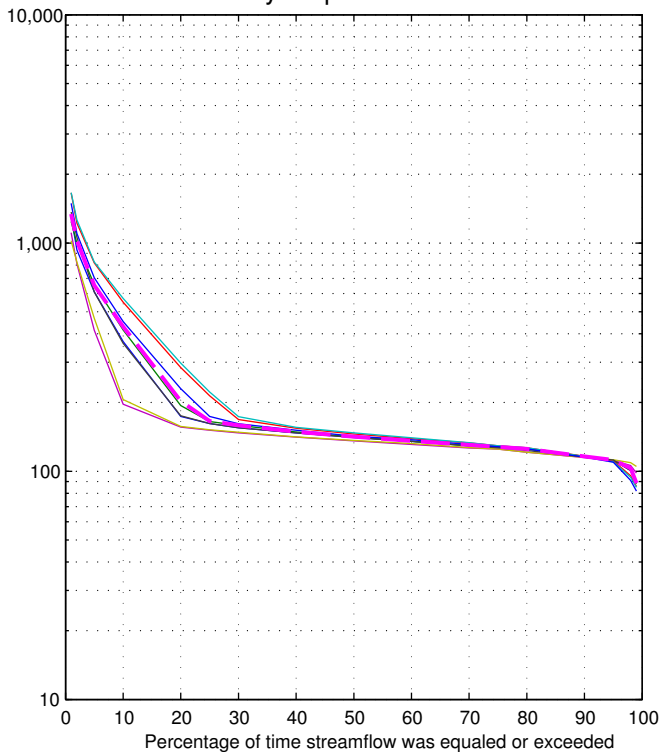


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- Reference period

CCOL 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

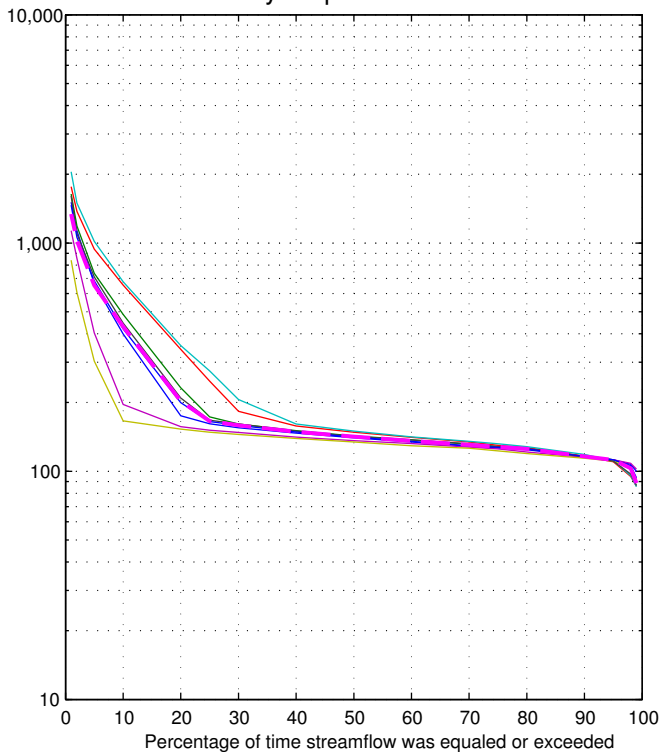


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CCOL 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

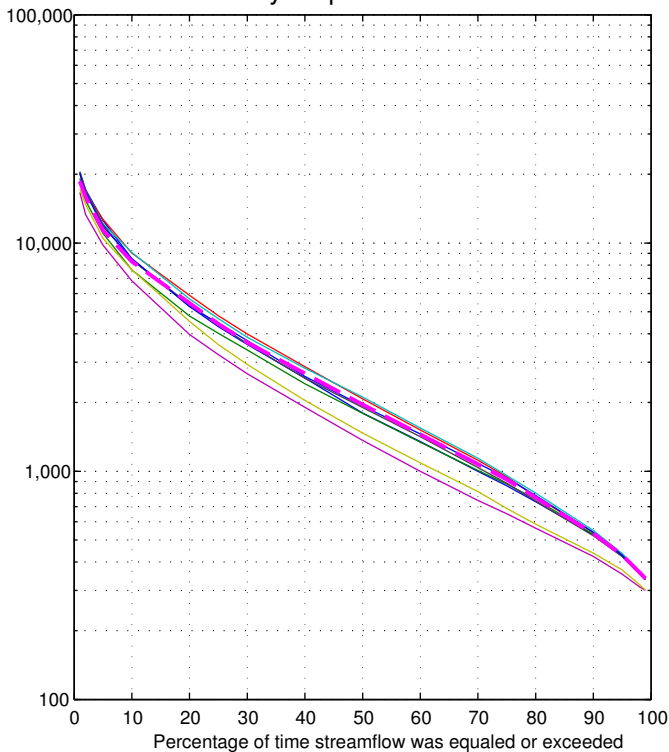


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- Reference period

CIRC 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

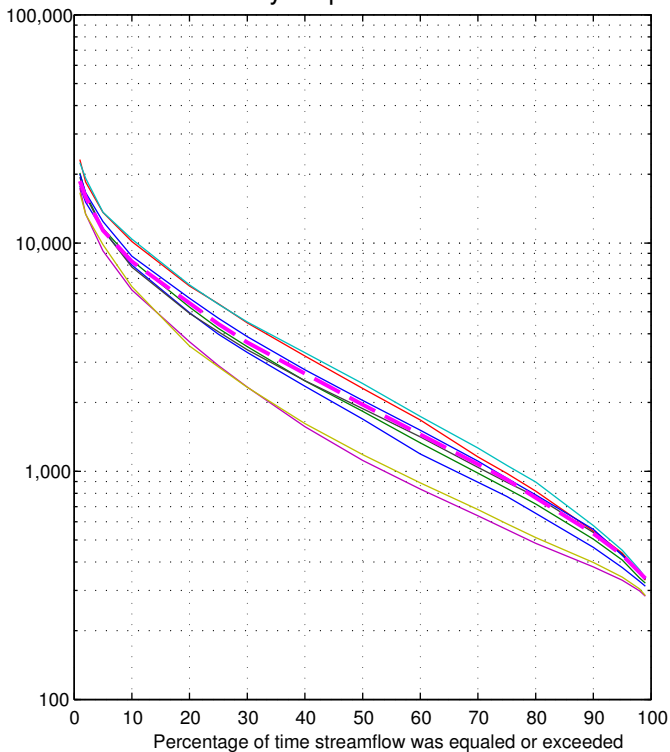


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- Reference period

CIRC 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

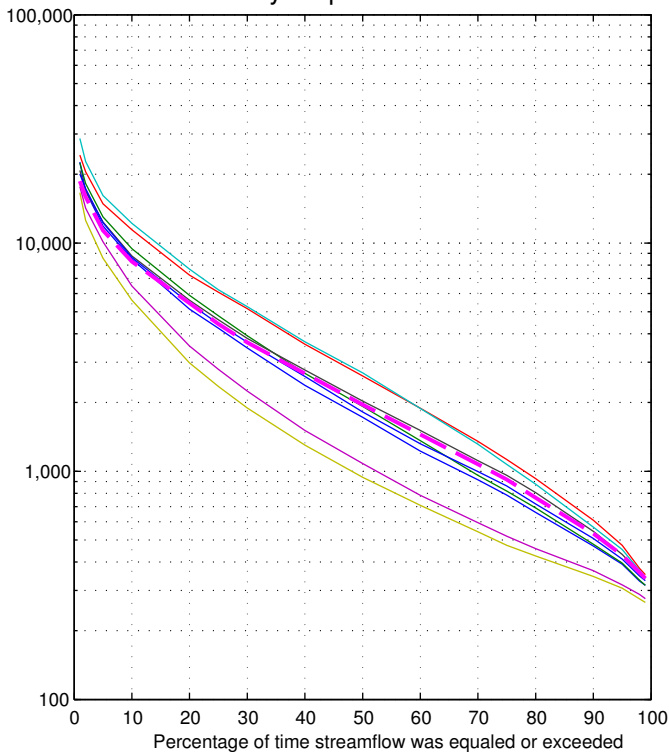


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CIRC 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

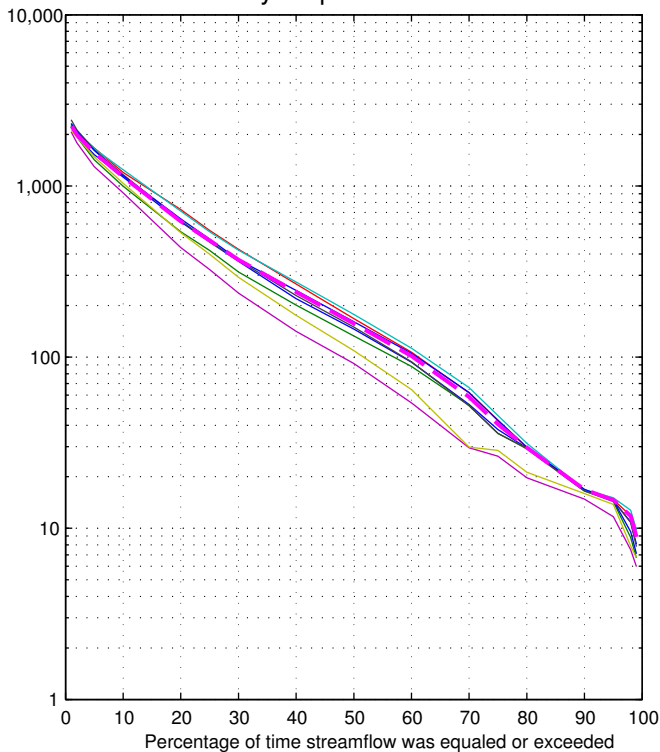


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- MIROC3.2 A2
- NCAR-PCM A1b
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DELA 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

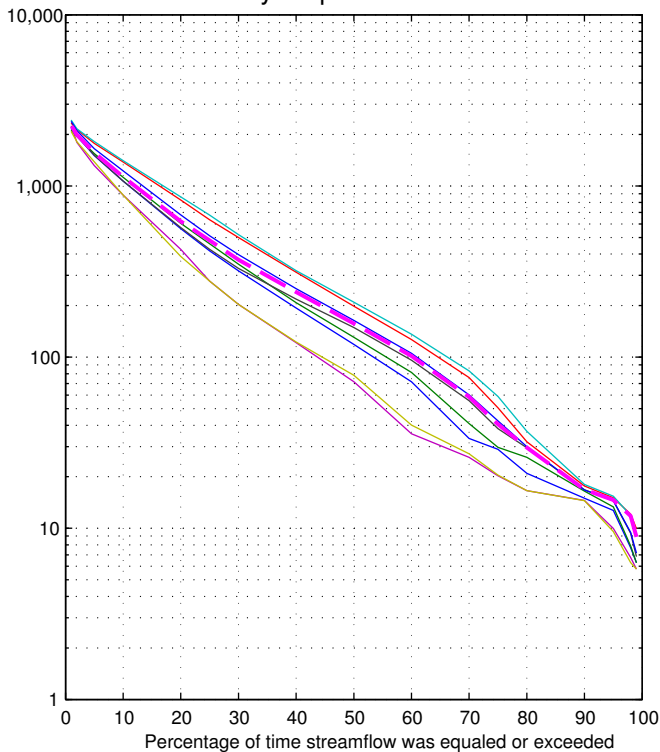


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- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

DELA 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

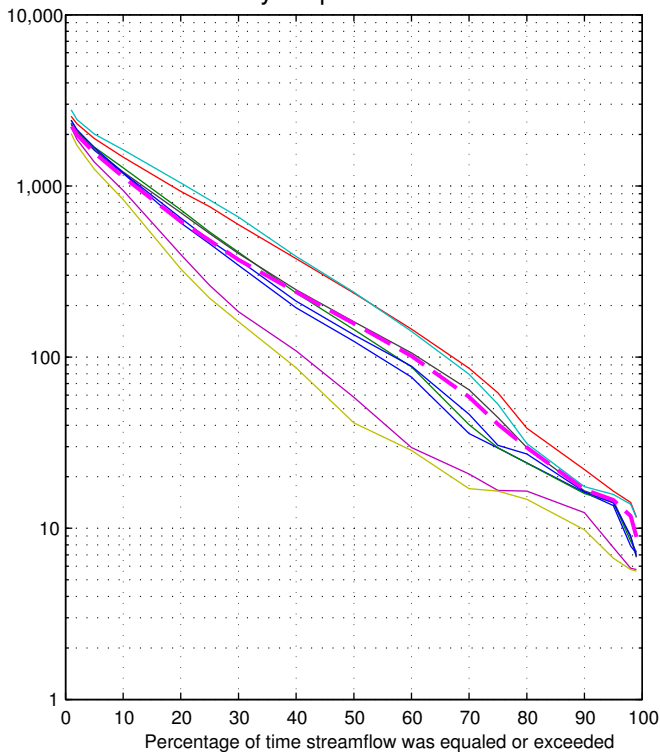


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- MIROC3.2 A1b
- MIROC3.2 A2
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DELA 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

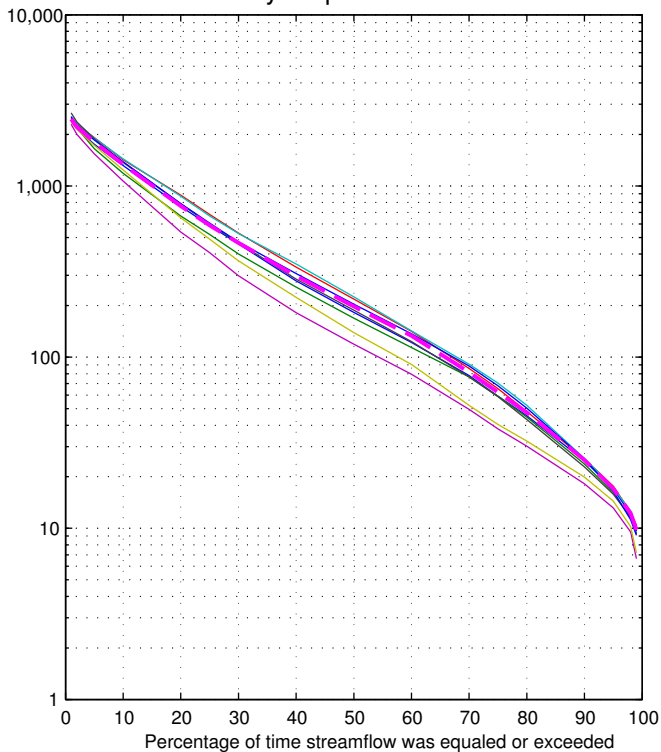


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- NCAR-PCM A1b
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- Reference period

OLOC 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

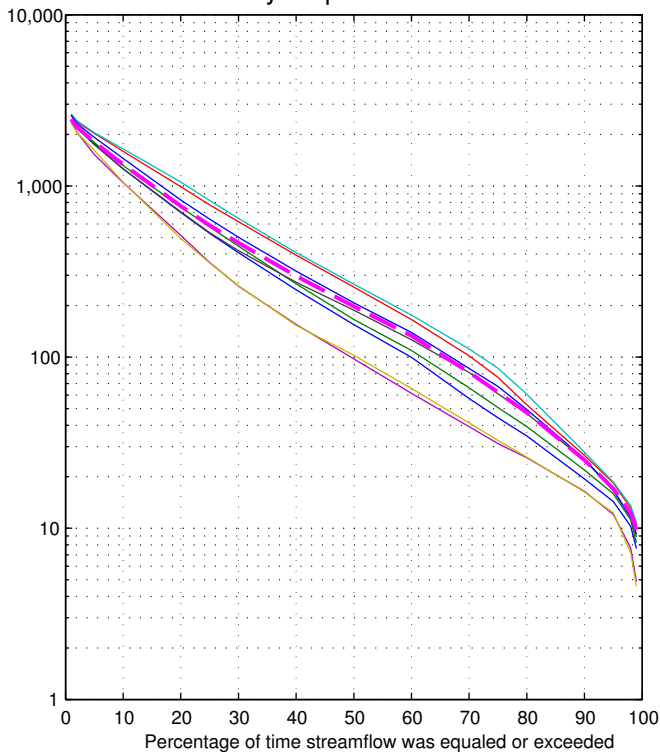


EXPLANATION

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- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

OLOC 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

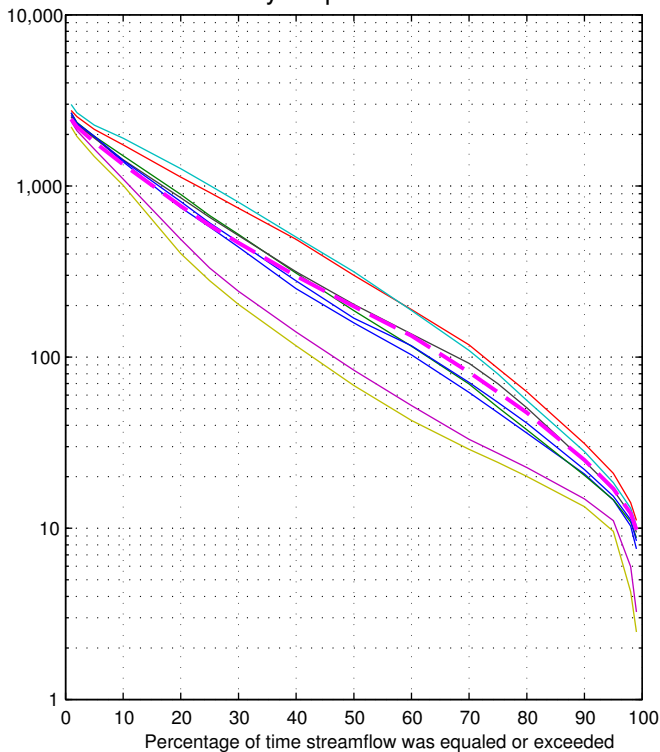


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- MIROC3.2 A1b
- MIROC3.2 A2
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OLOC 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

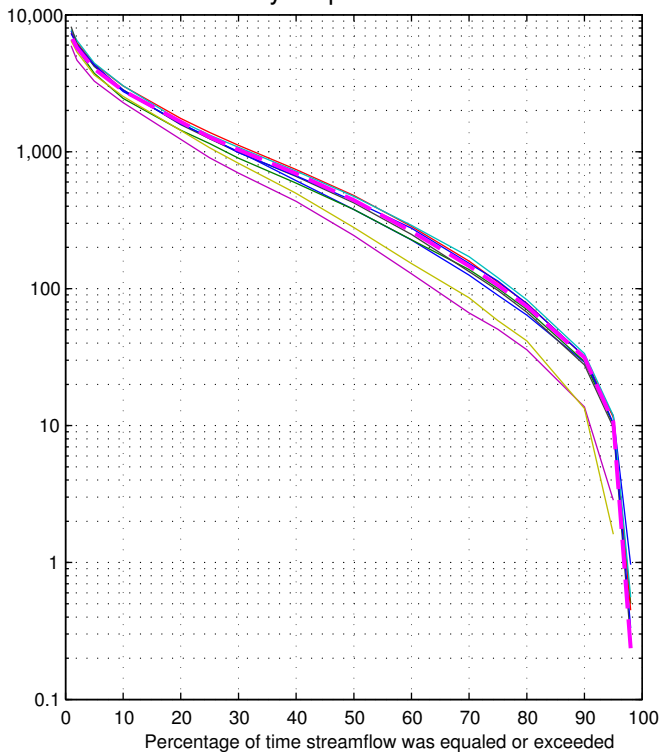


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- MIROC3.2 A2
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- Reference period

SROR 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

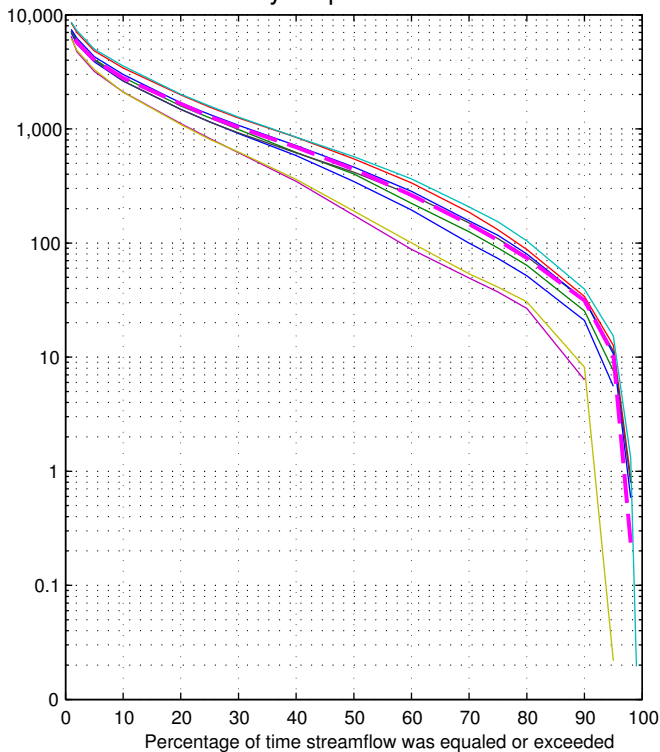


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- BCCR-BCM2 A1b
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- MIROC3.2 A1b
- MIROC3.2 A2
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- - - Reference period

SROR 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

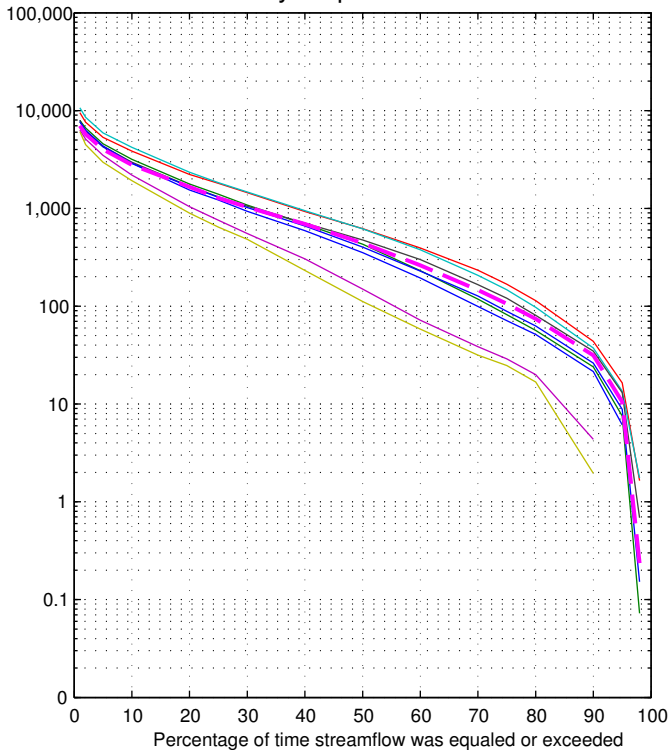


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- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
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- - - Reference period

SROR 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

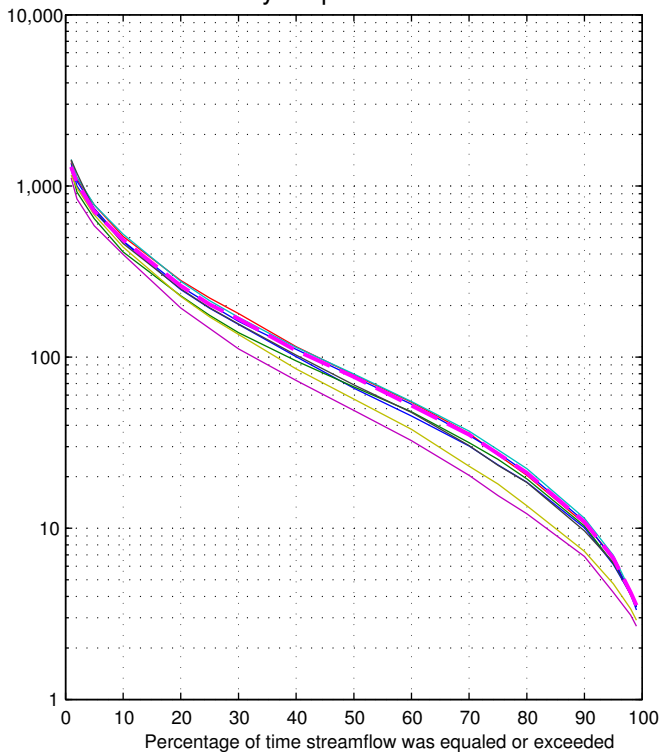


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- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

CLAR 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

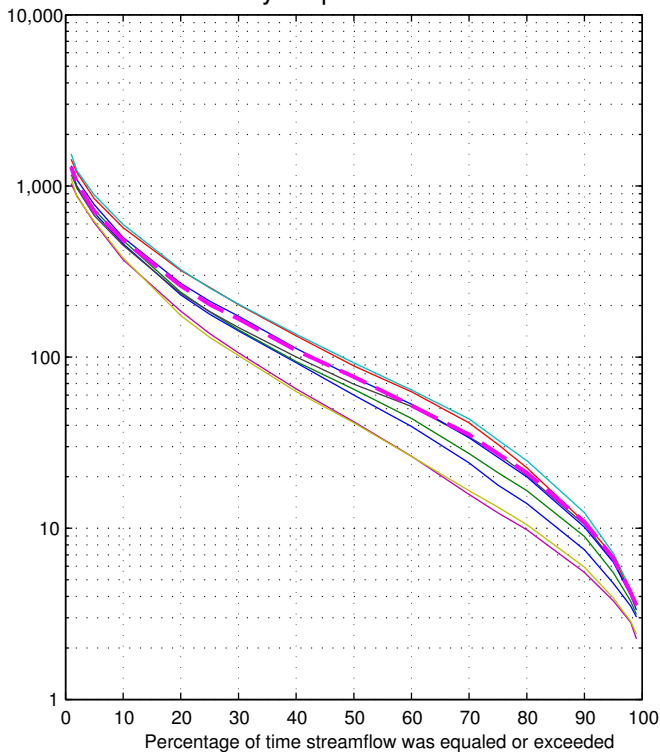


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- MIROC3.2 A1b
- MIROC3.2 A2
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- NCAR-PCM A2
- Reference period

CLAR 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

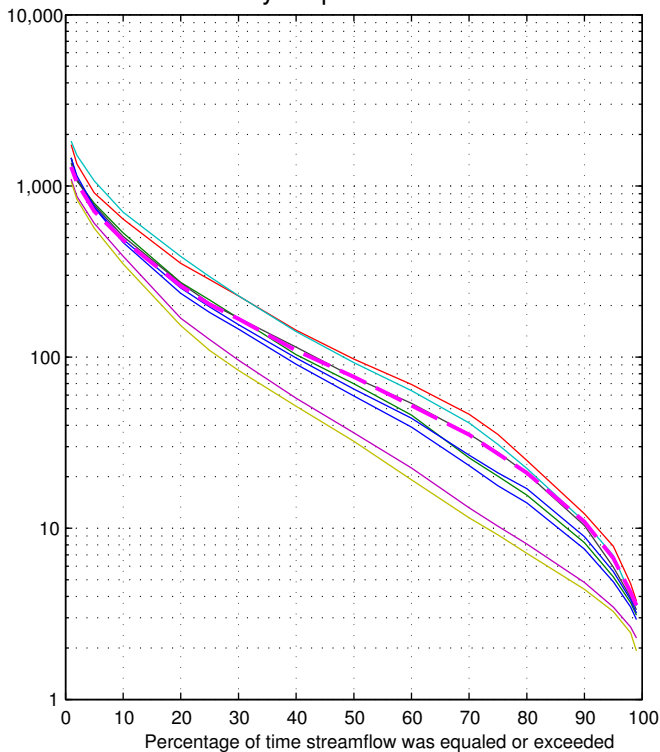


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- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- - - Reference period

CLAR 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

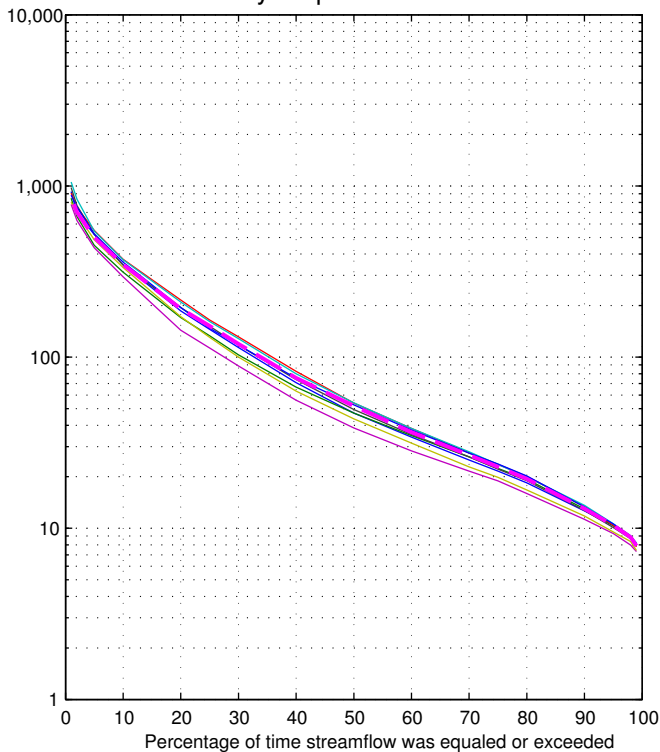


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- MIROC3.2 A2
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- - - Reference period

LSCI 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

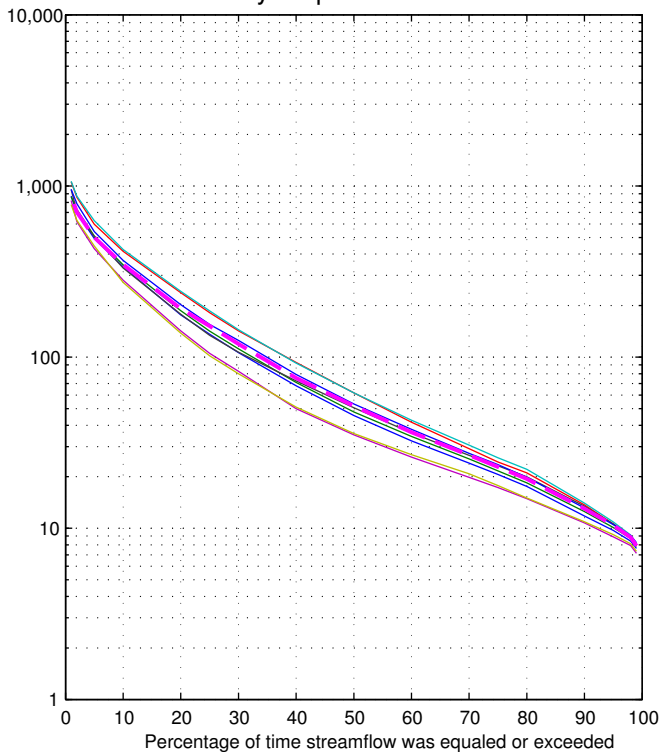


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- - Reference period

LSCI 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

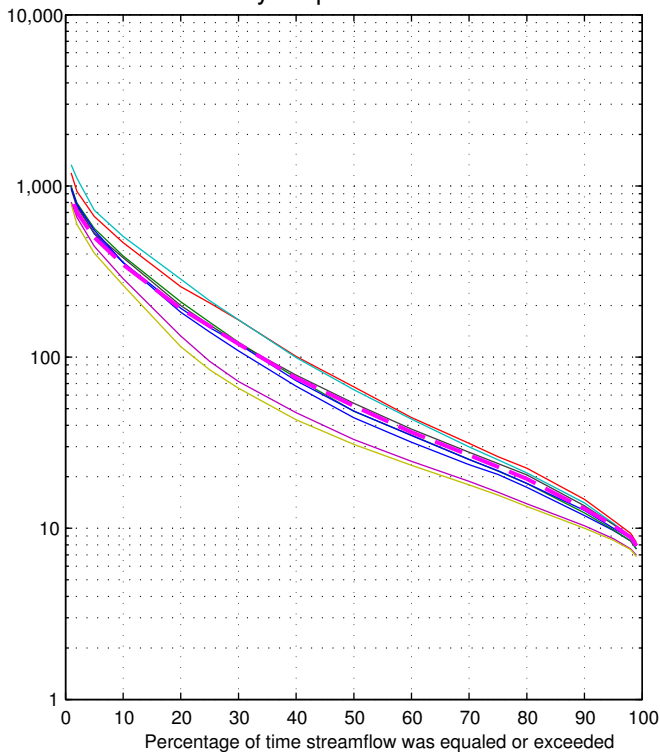


EXPLANATION

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- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

LSCI 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

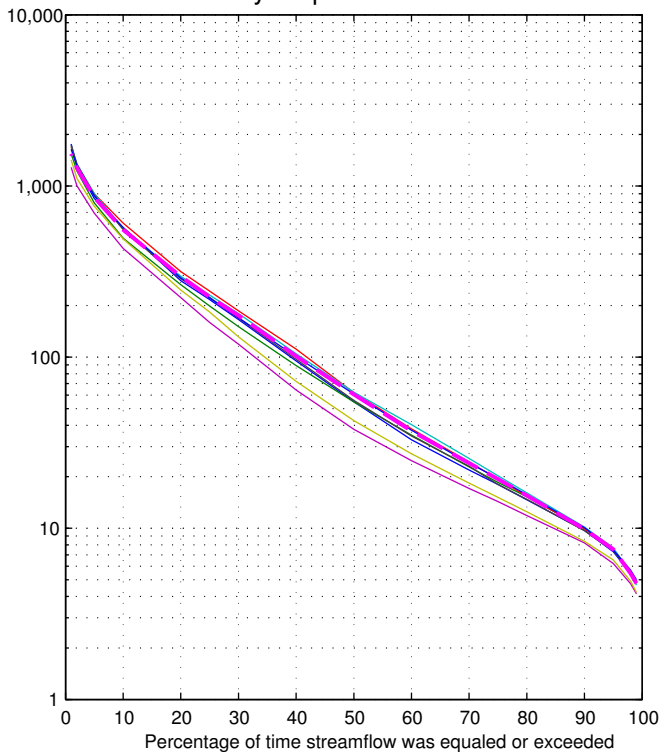


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- Reference period

MILL 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

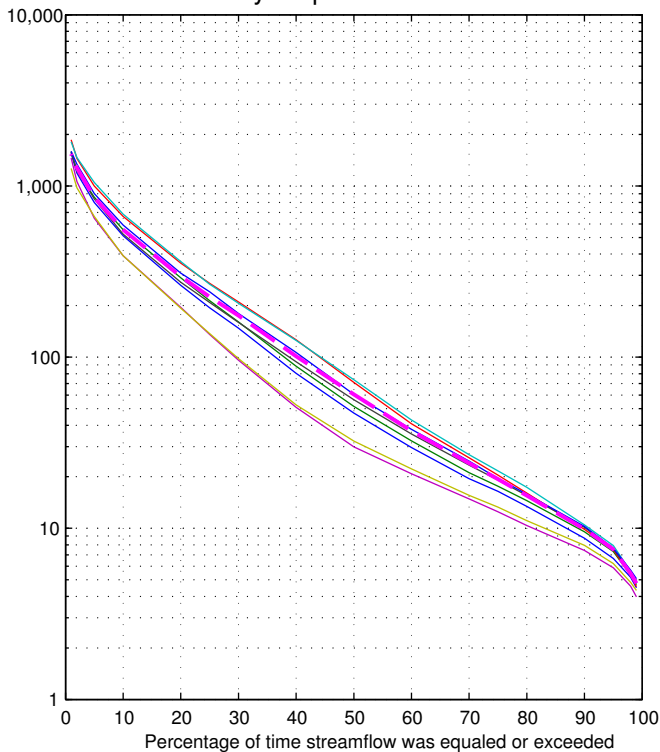


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- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

MILL 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

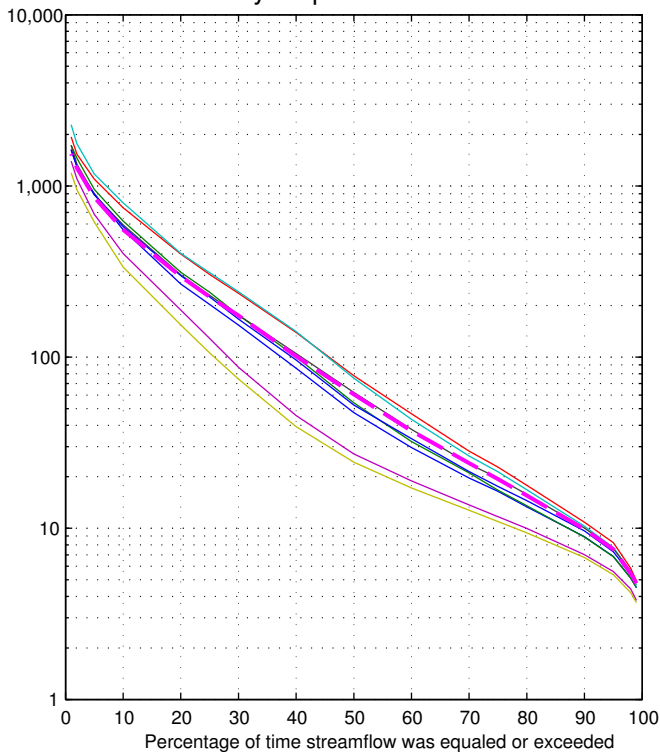


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MILL 20-year period centered on 2075

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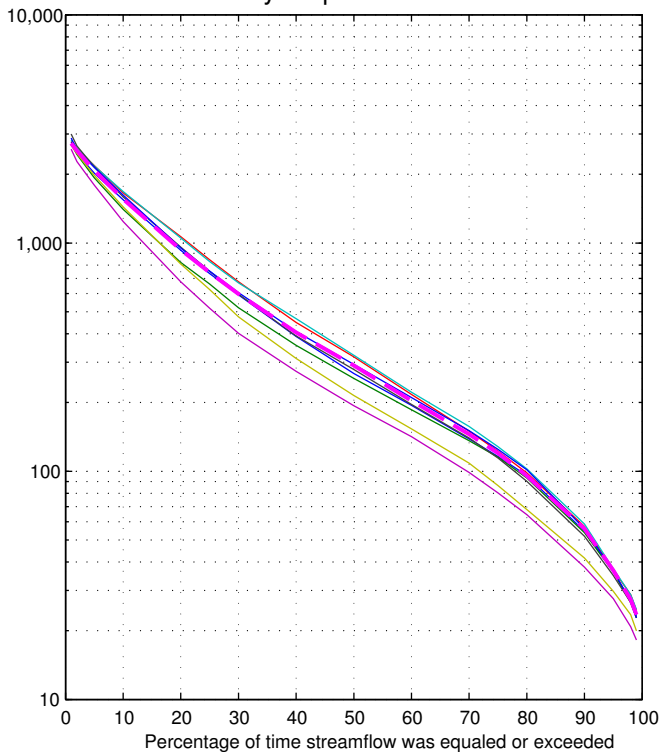


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OLEN 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

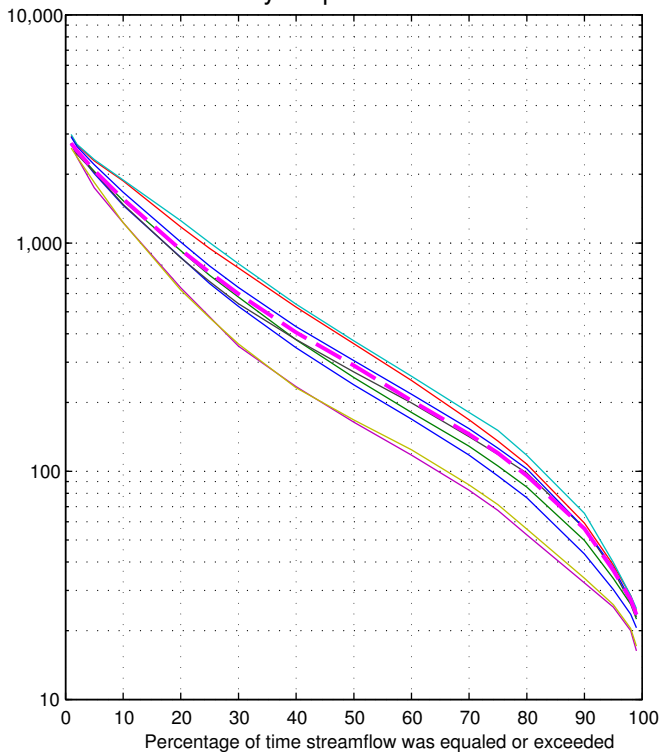


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- MIROC3.2 A2
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- NCAR-PCM A2
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OLEN 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

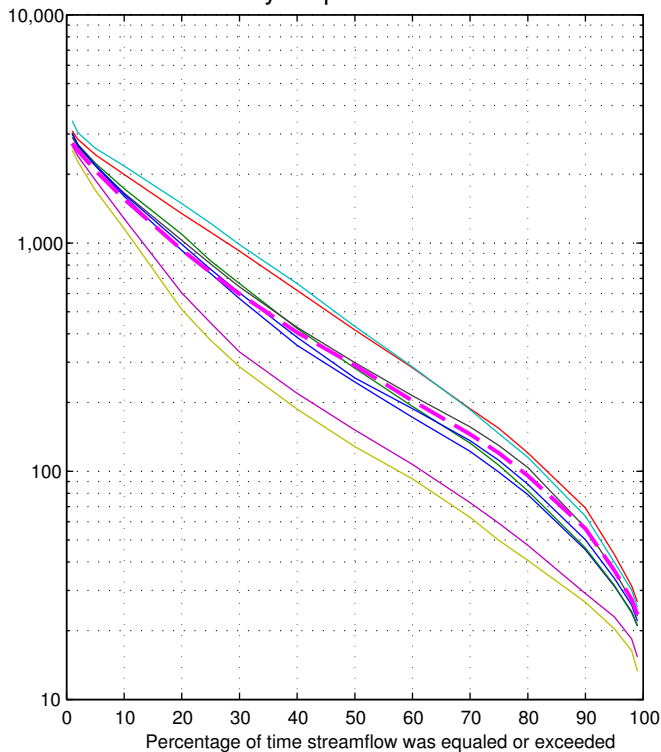


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OLEN 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

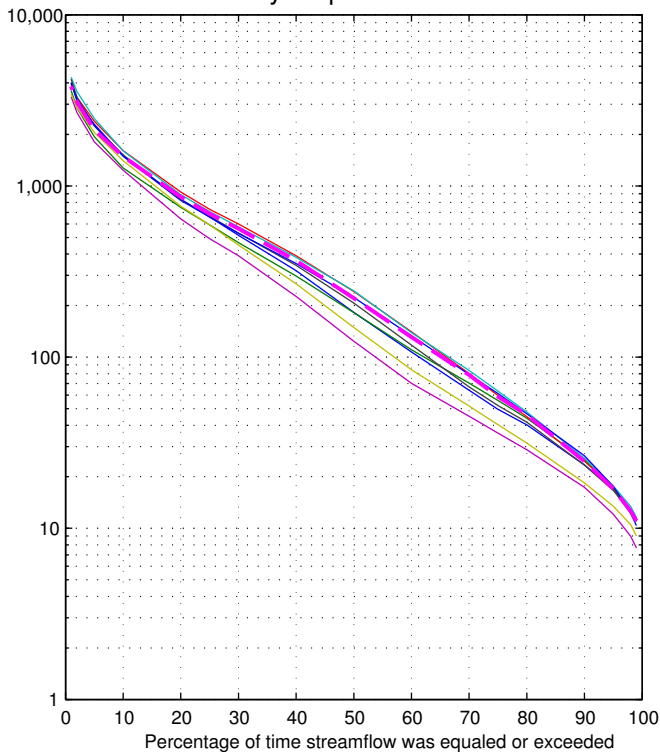


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- MIROC3.2 A2
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PROS 20-year period centered on 2035

7-day running average streamflow, in cubic feet per second

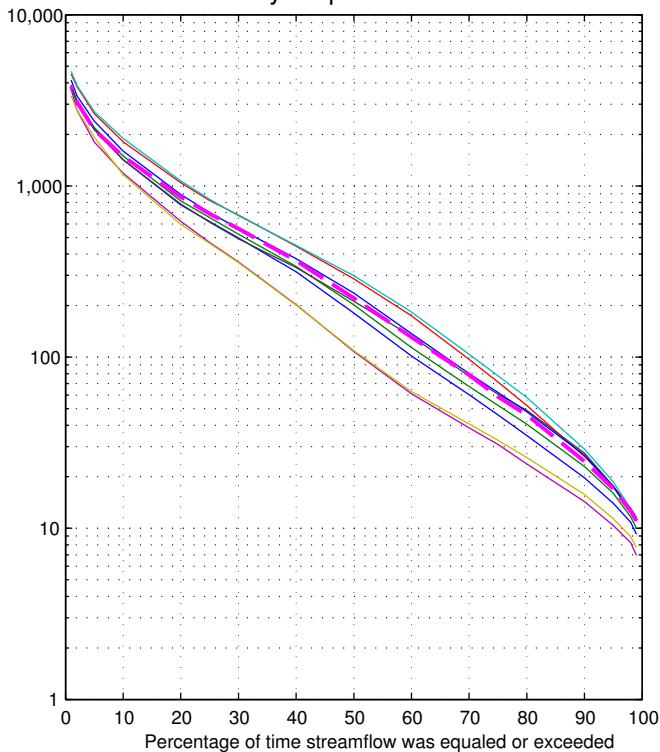


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- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- - Reference period

PROS 20-year period centered on 2055

7-day running average streamflow, in cubic feet per second

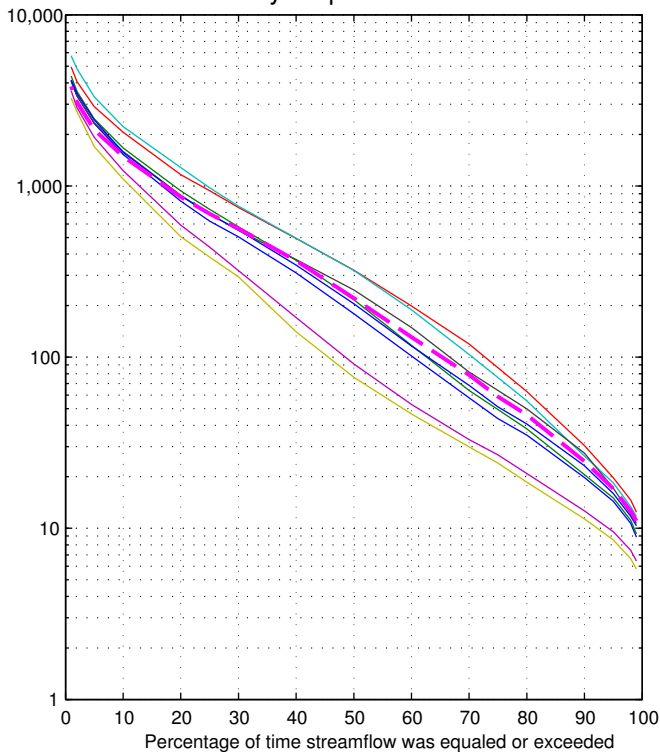


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
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- MIROC3.2 A1b
- MIROC3.2 A2
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PROS 20-year period centered on 2075

7-day running average streamflow, in cubic feet per second

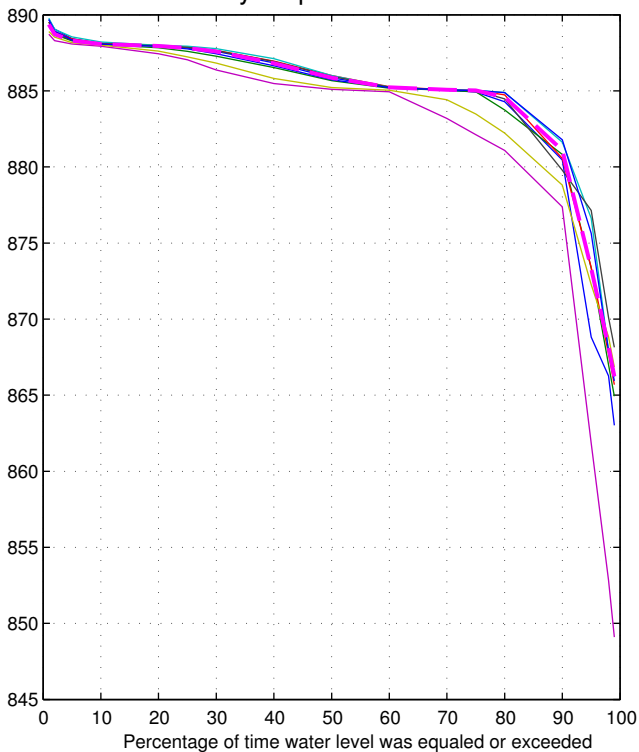


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- - - Reference period

ALUM 20-year period centered on 2035

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

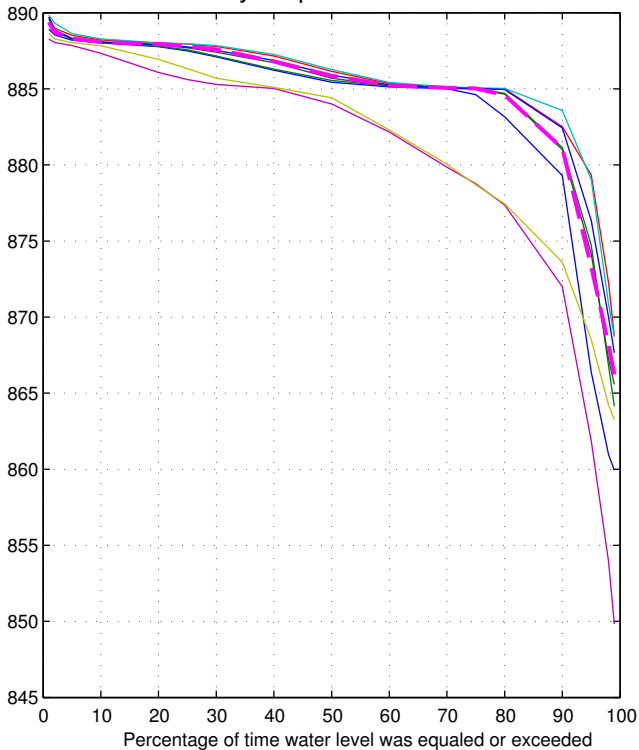


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

ALUM 20-year period centered on 2055

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

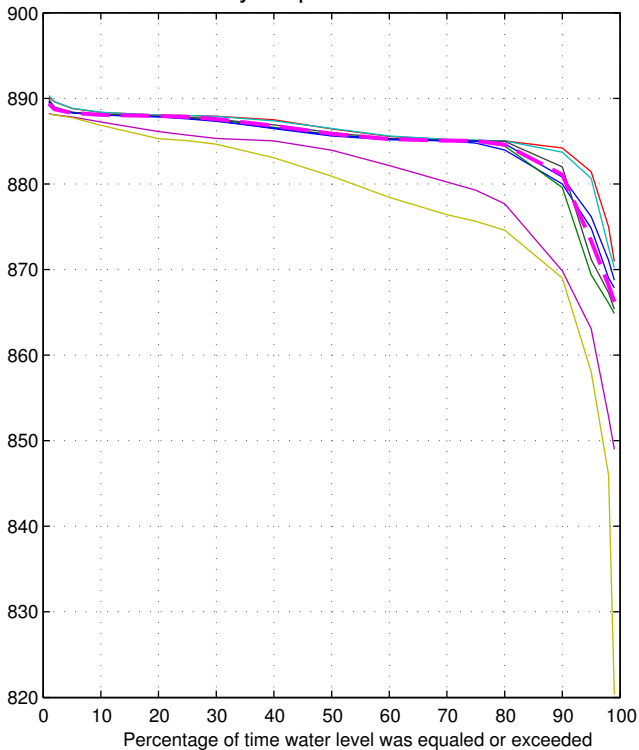


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

ALUM 20-year period centered on 2075

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

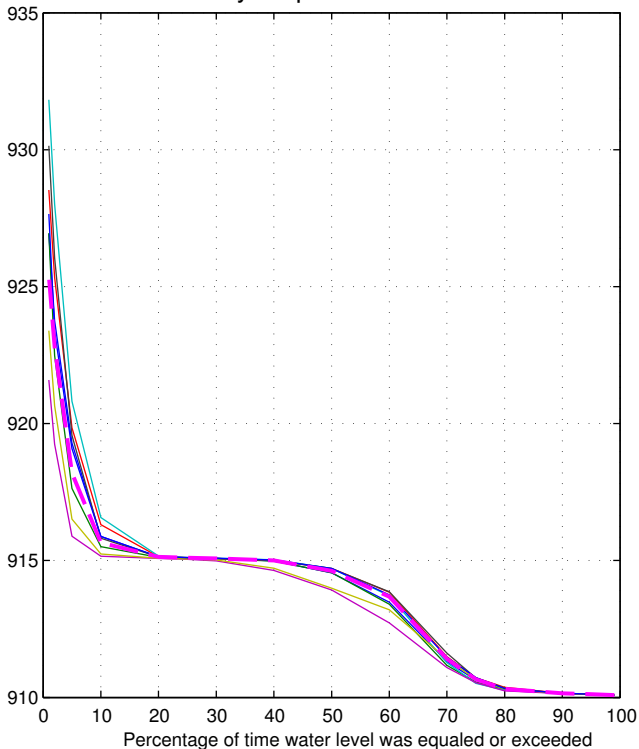


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

DELL 20-year period centered on 2035

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

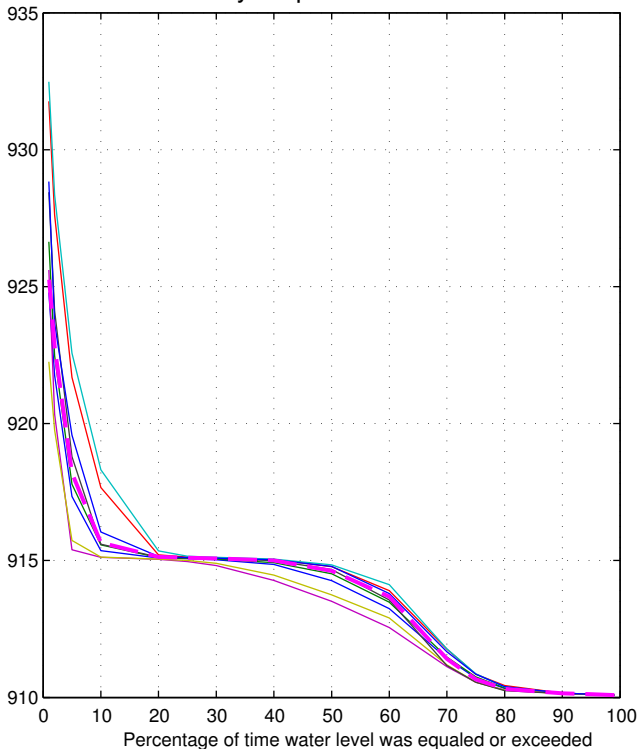


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

DELL 20-year period centered on 2055

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

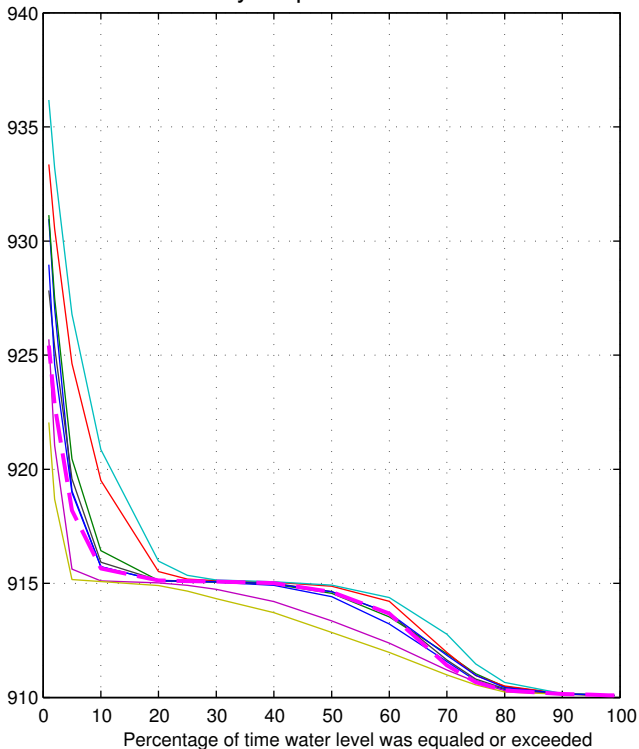


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

DELL 20-year period centered on 2075

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

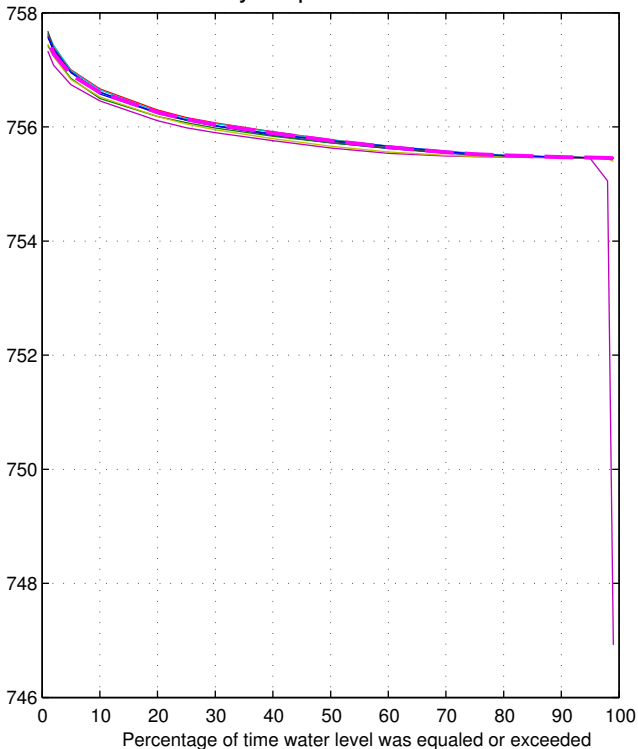


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

GRIG 20-year period centered on 2035

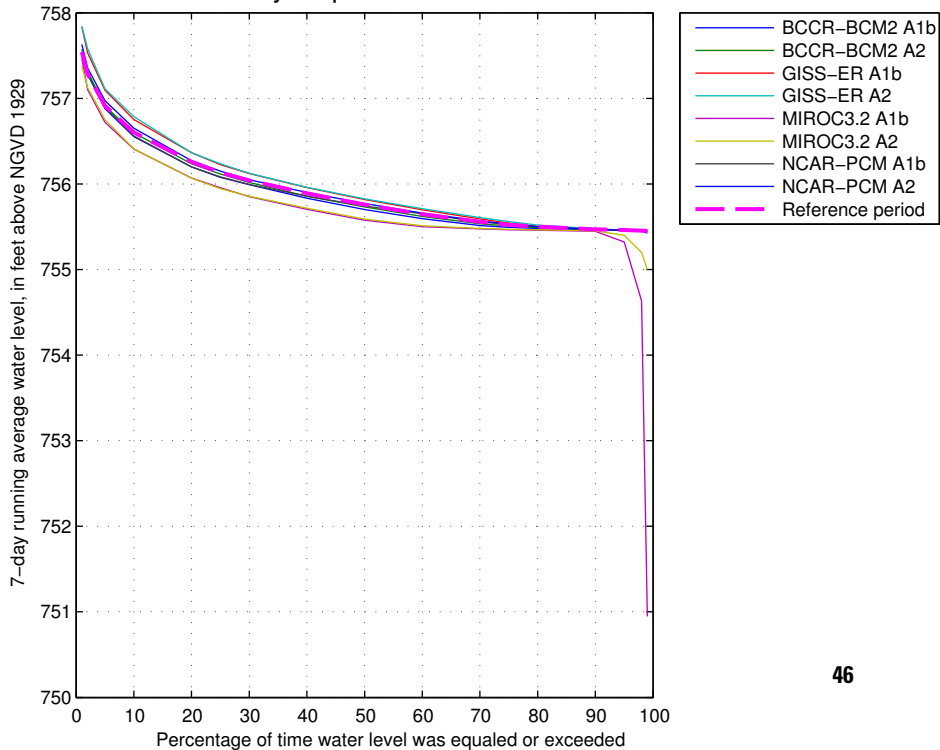
7-day running average water level, in feet above NGVD 1929



EXPLANATION

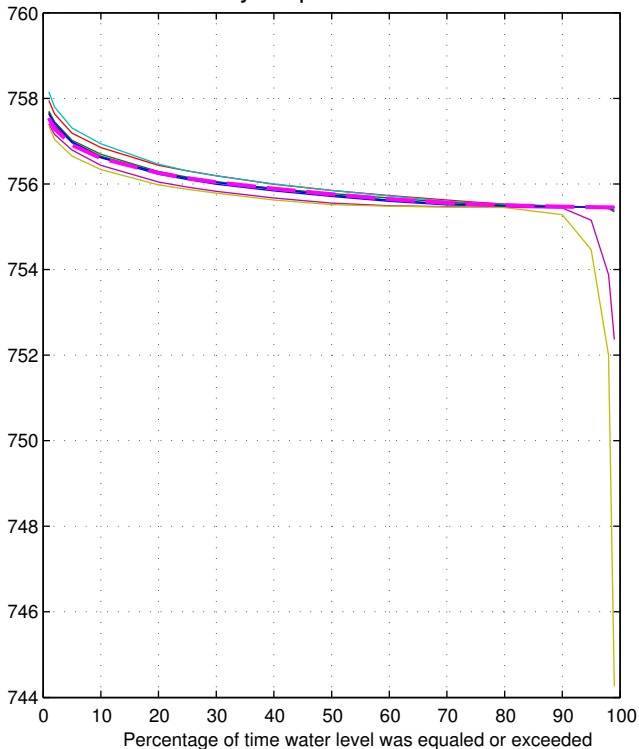
- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

GRIG 20-year period centered on 2055



GRIG 20-year period centered on 2075

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

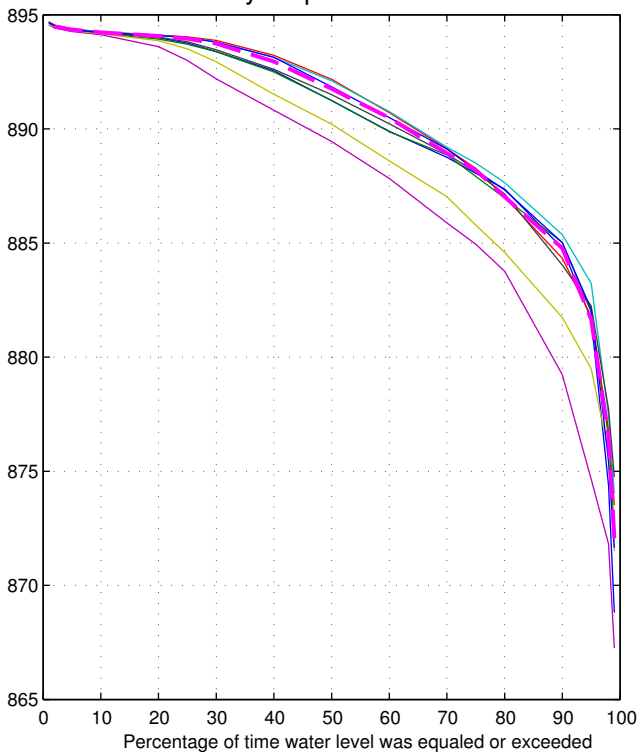


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

HOOV 20-year period centered on 2035

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

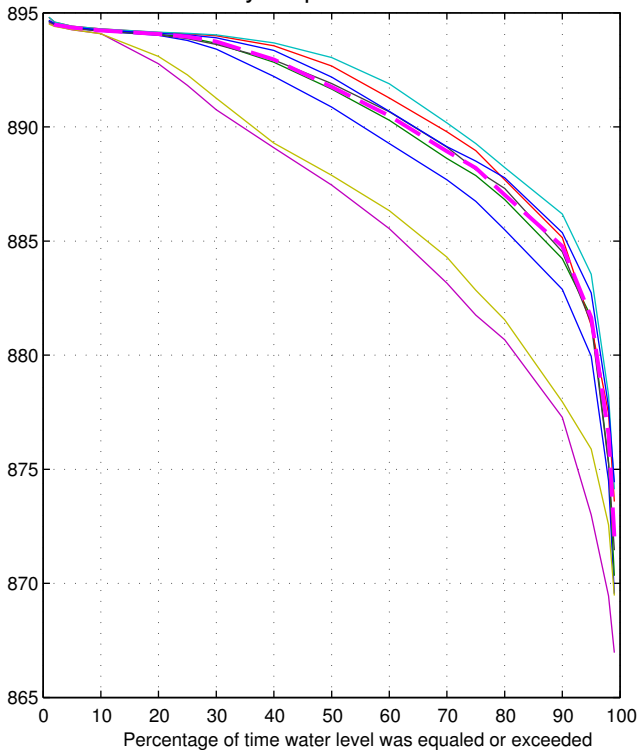


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

HOOV 20-year period centered on 2055

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

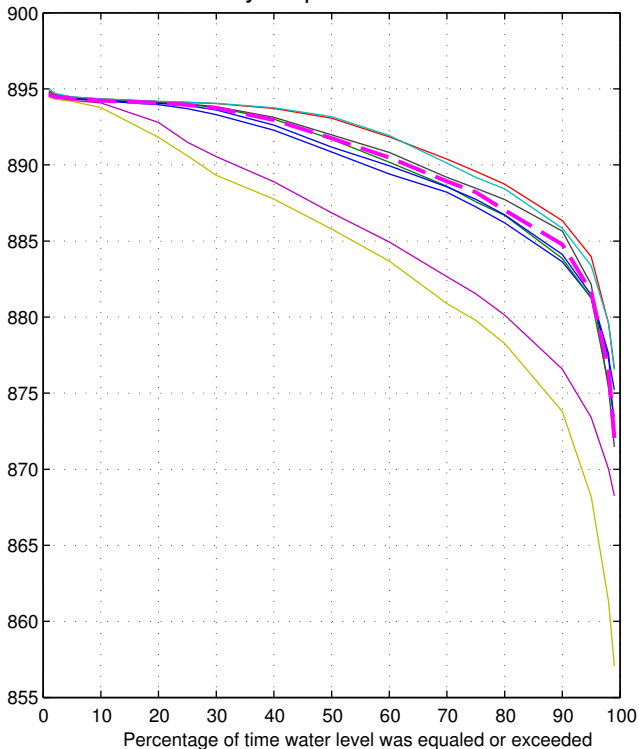


EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period

HOOV 20-year period centered on 2075

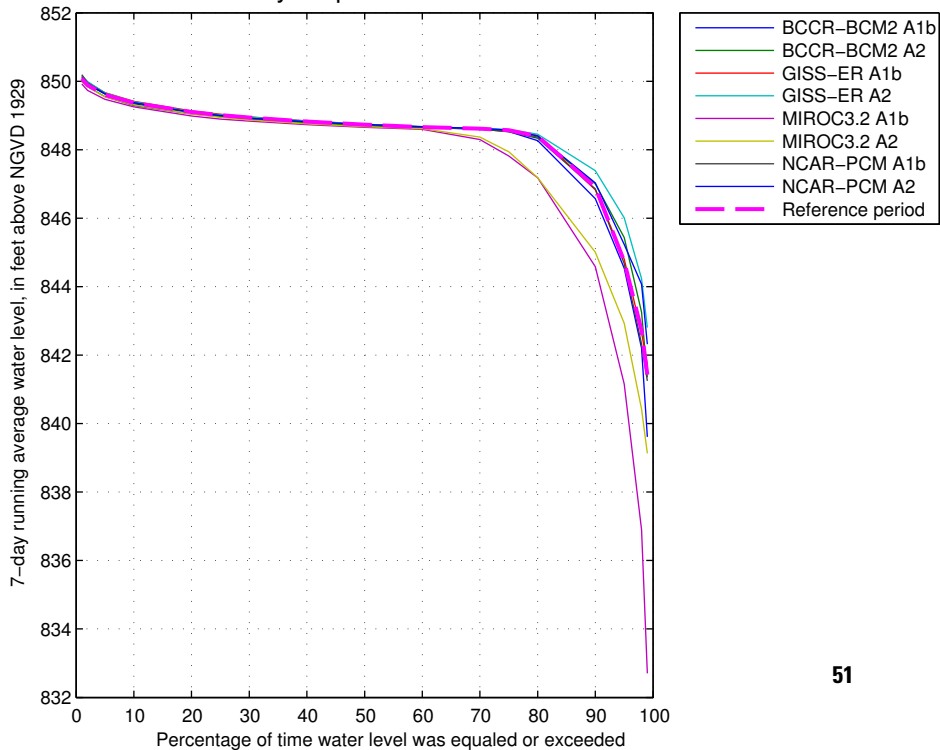
7-day running average water level, in feet above NGVD 1929



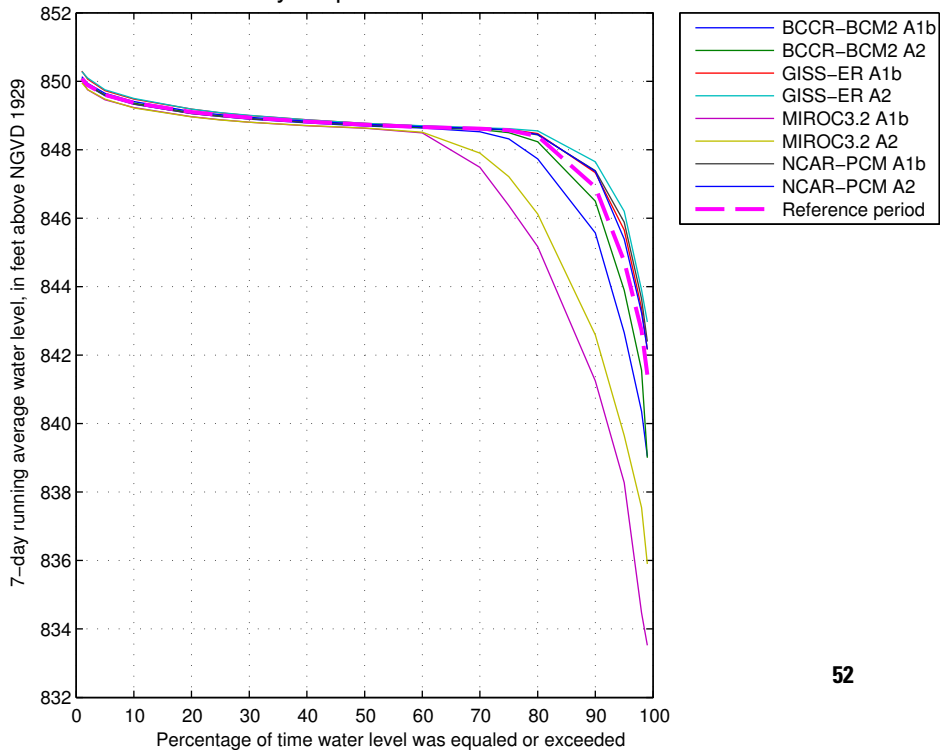
EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- - - Reference period

OSHY 20-year period centered on 2035

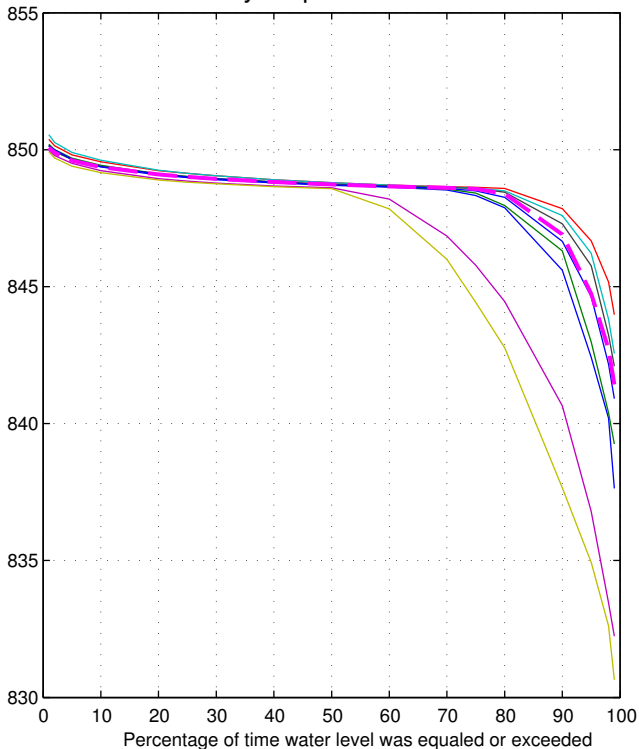


OSHY 20-year period centered on 2055



OSHY 20-year period centered on 2075

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



EXPLANATION

- BCCR-BCM2 A1b
- BCCR-BCM2 A2
- GISS-ER A1b
- GISS-ER A2
- MIROC3.2 A1b
- MIROC3.2 A2
- NCAR-PCM A1b
- NCAR-PCM A2
- Reference period