

Republican River Compact Nebraska Stream-Gaging Data Water Year 2015

Presented to
Republican River Compact Administration
By John Miller, Field Office Chief
Nebraska Water Science Center

August 24, 2016
Burlington, CO



Summary handout – stations published by U.S. Geological Survey (USGS)

Republican River Basin streamflow-gaging stations with records published by USGS for water year (WY) 2015

[DCP, data-collection platform; NDNR, Nebraska Department of Natural Resources; USACE, U.S. Army Corps of Engineers; USBR, U.S. Bureau of Reclamation; USGS, U.S. Geological Survey]

Station number	Station name	Mean discharge (ft ³ /s)		WY 2015 as	WY 2015 as	WYs used	Remarks
		WY 2015	Long-term	percentage of long-term mean	rank/years (1 highest)	for long-term mean	

USGS Compact stations supported by the National Streamflow Information Program (NSIP)

06821500	Arikaree River at Haigler, Nebr	0.2	16.1	1.2%	81/83	1933 - 2015	
06823000	North Fork Republican River at Colo-Nebr State Line	35.9	41.2	87.1%	57/80	1935 - 2015	
06823500	Buffalo Creek near Haigler, Nebr	2.0	5.9	34.4%	73/75	1941 - 2015	
06824000	Rock Creek at Parks, Nebr	13.9	12.3	113.0%	25/75	1941 - 2015	
06827500	South Fork Republican River near Benkelman, Nebr	6.7	34.3	19.4%	68/78	1938 - 2015	
06835500	Frenchman Creek at Culbertson, Nebr	27.6	65.1	42.4%	62/65	1951 - 2015	Since Enders Reservoir
06836500	Driftwood Creek near McCook, Nebr	3.4	8.1	42.0%	57/69	1947 - 2015	
06838000	Red Willow Creek near Red Willow, Nebr	4.8	13.4	36.0%	53/54	1962 - 2015	Since Hugh Butler Lake
06847500	Sappa Creek near Stamford, Nebr (USACE funds DCP)	4.6	37.4	12.3%	52/69	1947 - 2015	
06852500	Courtland Canal at Nebr-Kans State Line (USBR DCP)	63.0	75.6	83.3%	42/61	1955 - 2015	

USGS stations supported by USGS and/or other Federal or State agencies

06828500	Republican River at Stratton, Nebr	60.1	92.3	65.1%	48/65	1951 - 2015	Funded by USACE and NSIP
06837000	Republican River at McCook, Nebr	34.6	121.1	28.6%	56/61	1955 - 2015	Funded by USBR, NDNR, and NSIP
06844500	Republican River near Orleans, Nebr	109.0	225.0	48.4%	57/68	1948 - 2015	Funded by USACE and NSIP

NDNR stations with USGS/USACE support for DCP, Web display, review, and publishing

06834000	Frenchman Creek at Palisade, Nebr	19.4	59.0	32.9%	May-65	1951 - 2015	
06843500	Republican River at Cambridge, Nebr	97.6	206.5	47.3%	60/66	1950 - 2015	Since Harry Strunk Lake

Online Annual Water Data Reports available at or through:

<http://wdr.water.usgs.gov>

<http://ne.water.usgs.gov>

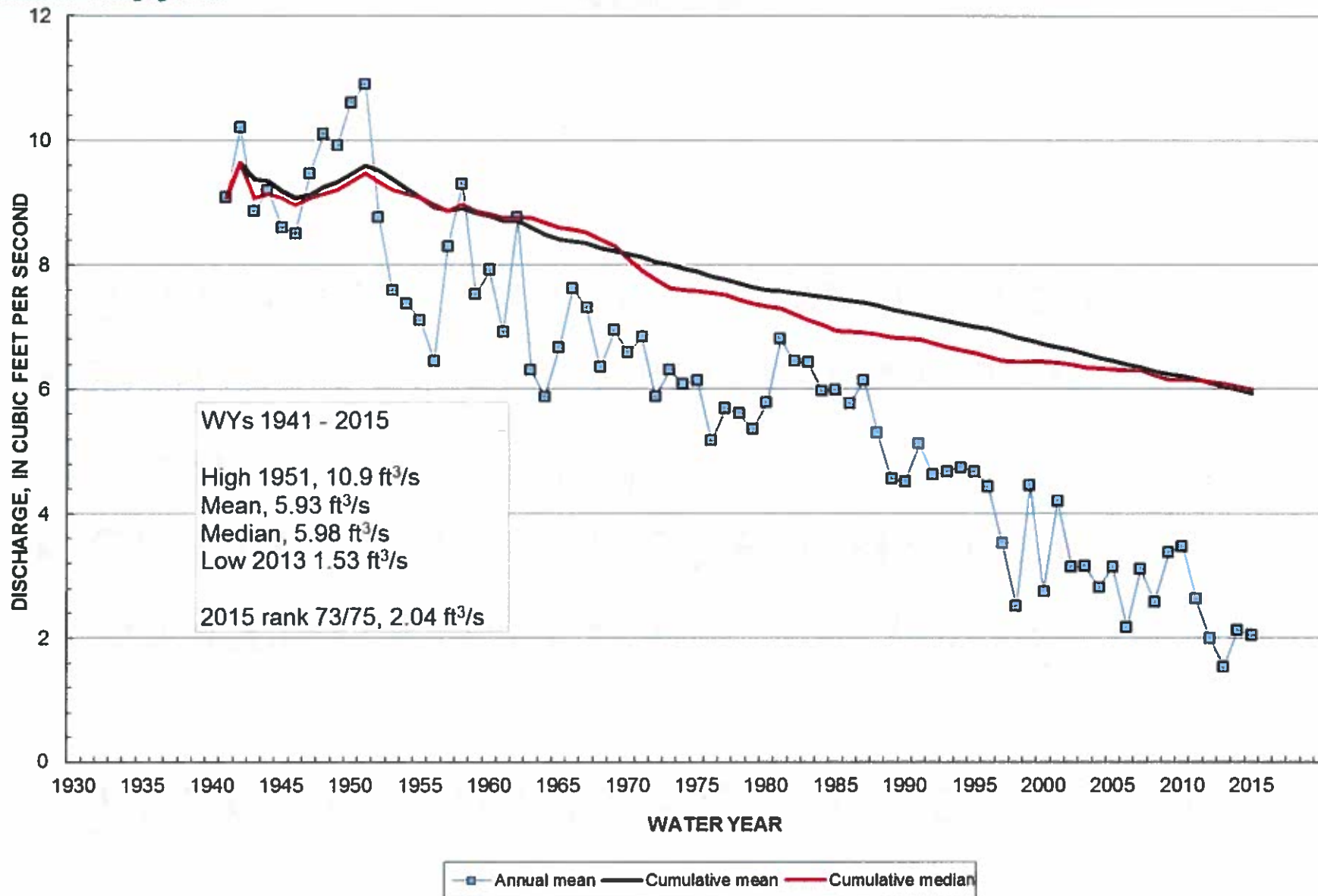


Summary Charts – Compact Stations

- Published data for Water Year (WY) 2015
- Operated by the USGS Nebraska Water Science Center (NE WSC)
- Stations funded by the USGS National Streamflow Information Program (NSIP)

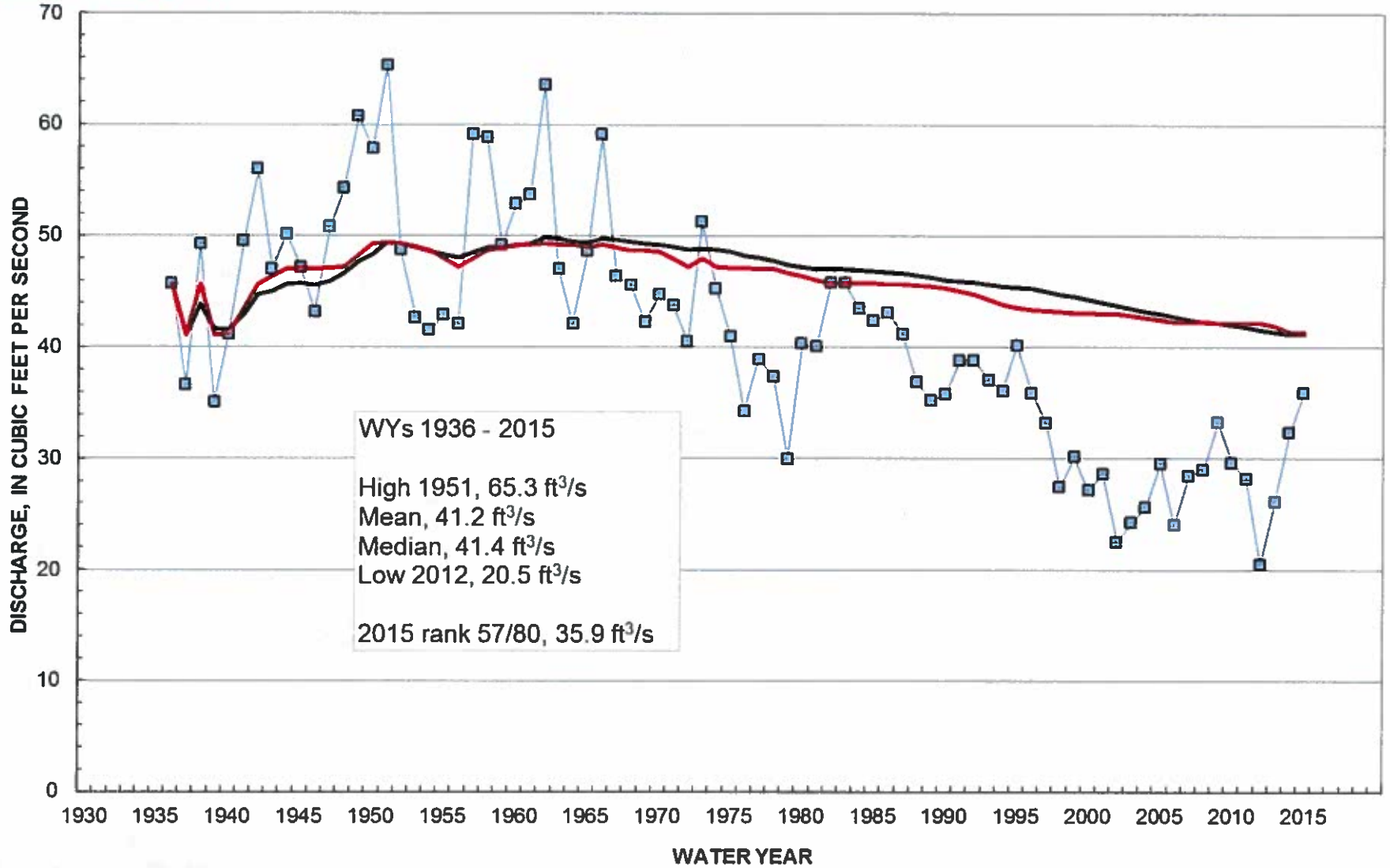


06823500 Buffalo Creek near Haigler, NE





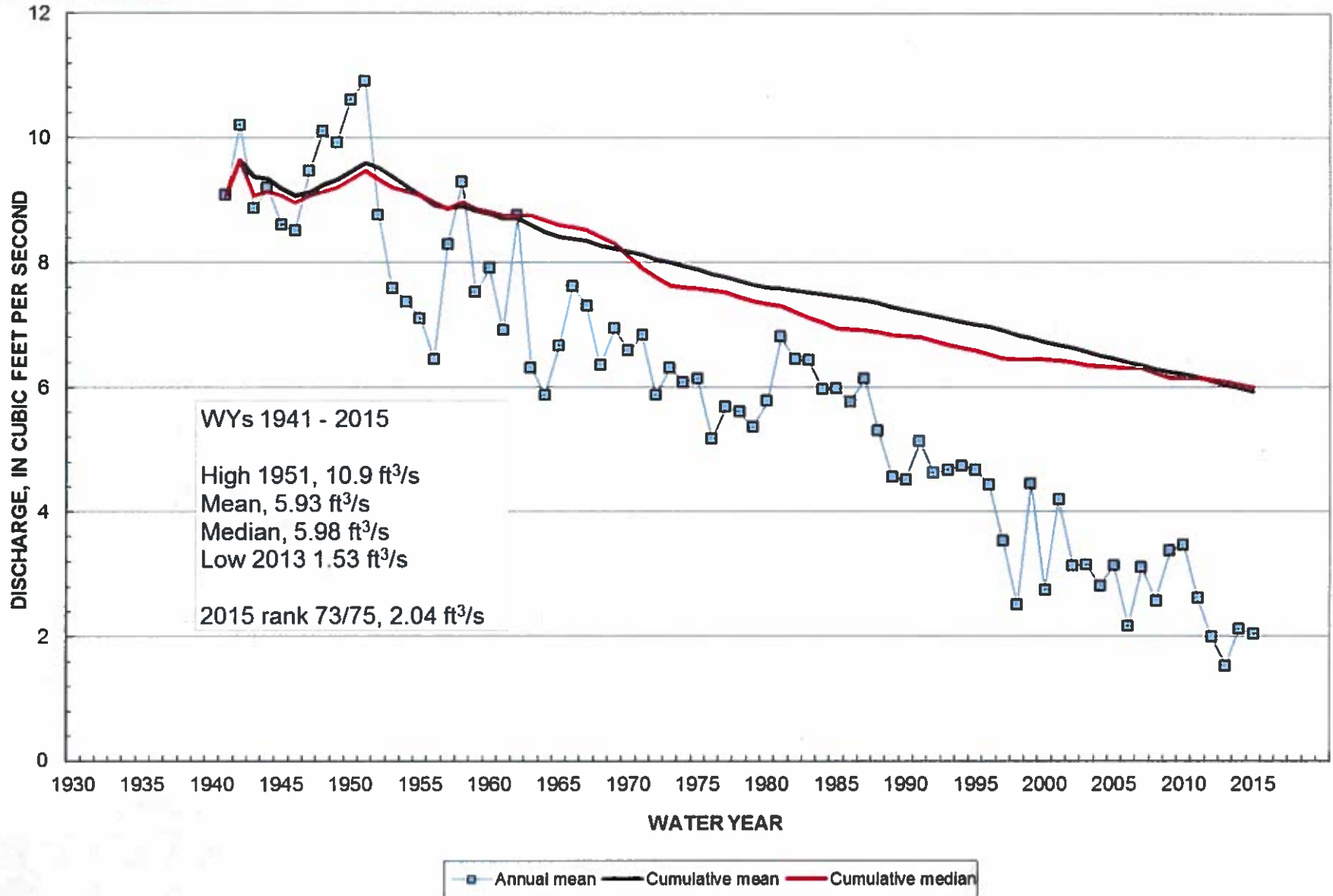
06823000 N Fk Republican River at CO-NE State Line



■ Annual mean — Cumulative mean — Cumulative median

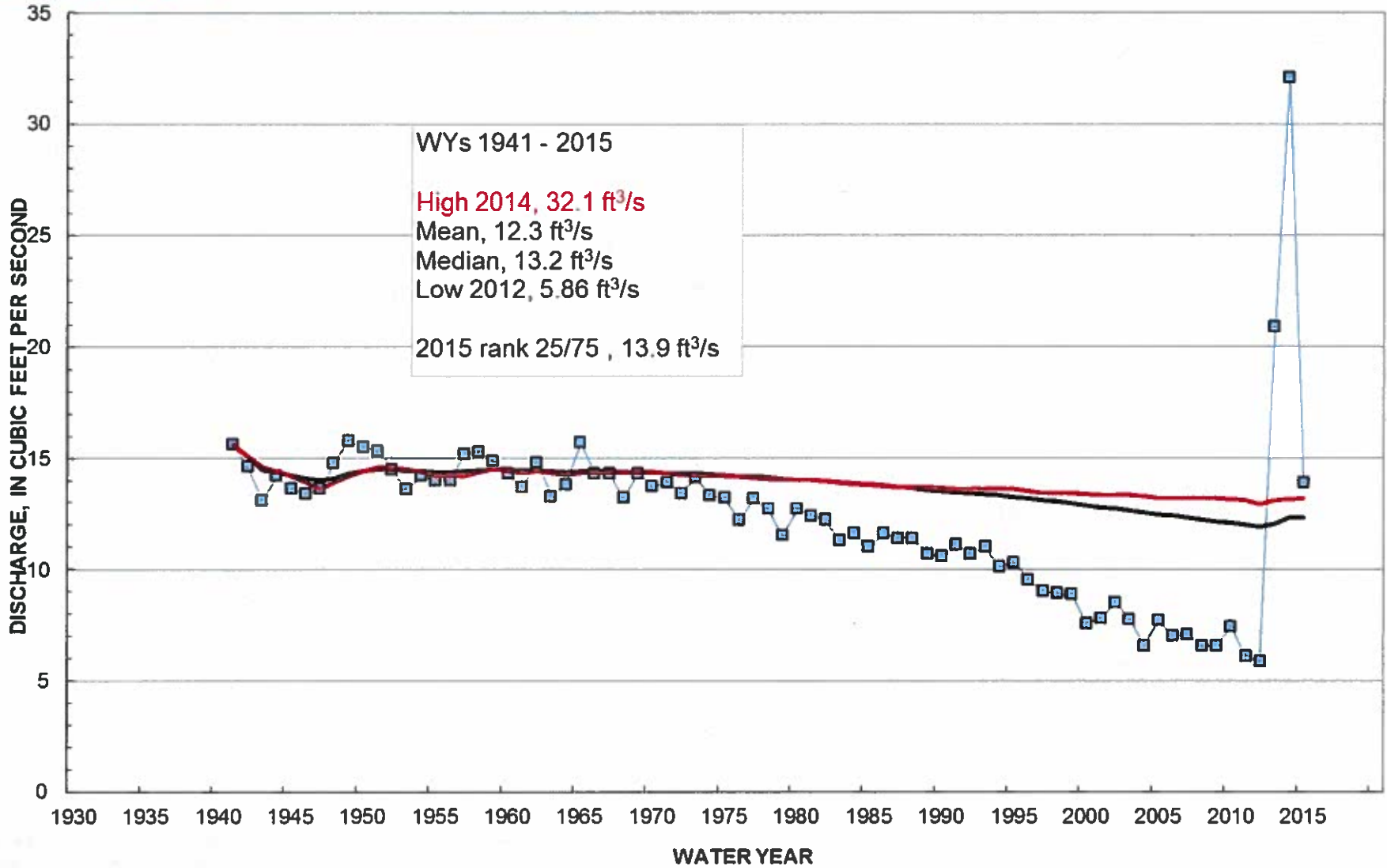


06823500 Buffalo Creek near Haigler, NE





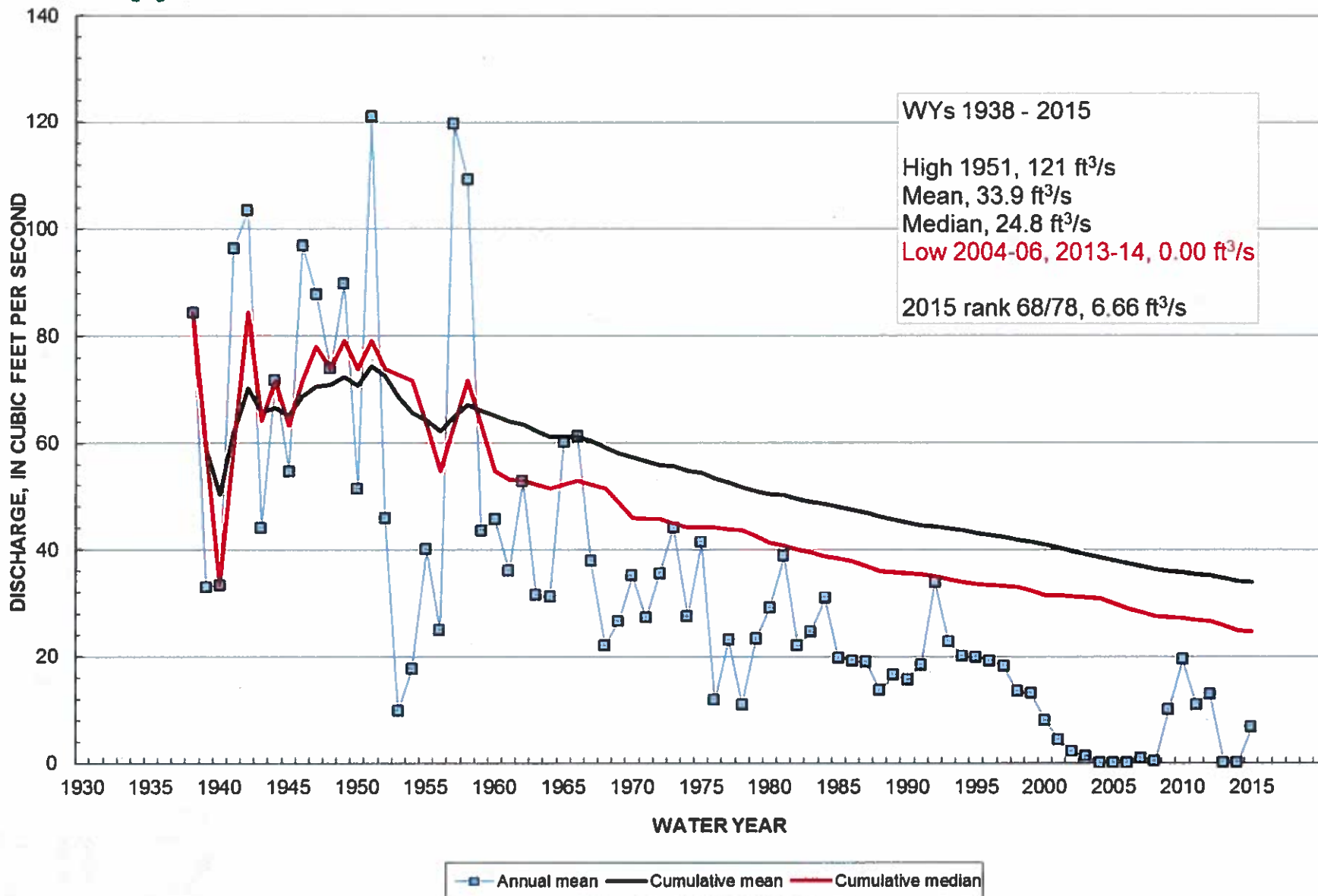
06824000 Rock Creek at Parks, NE



—■— Annual mean — Cumulative mean — Cumulative median

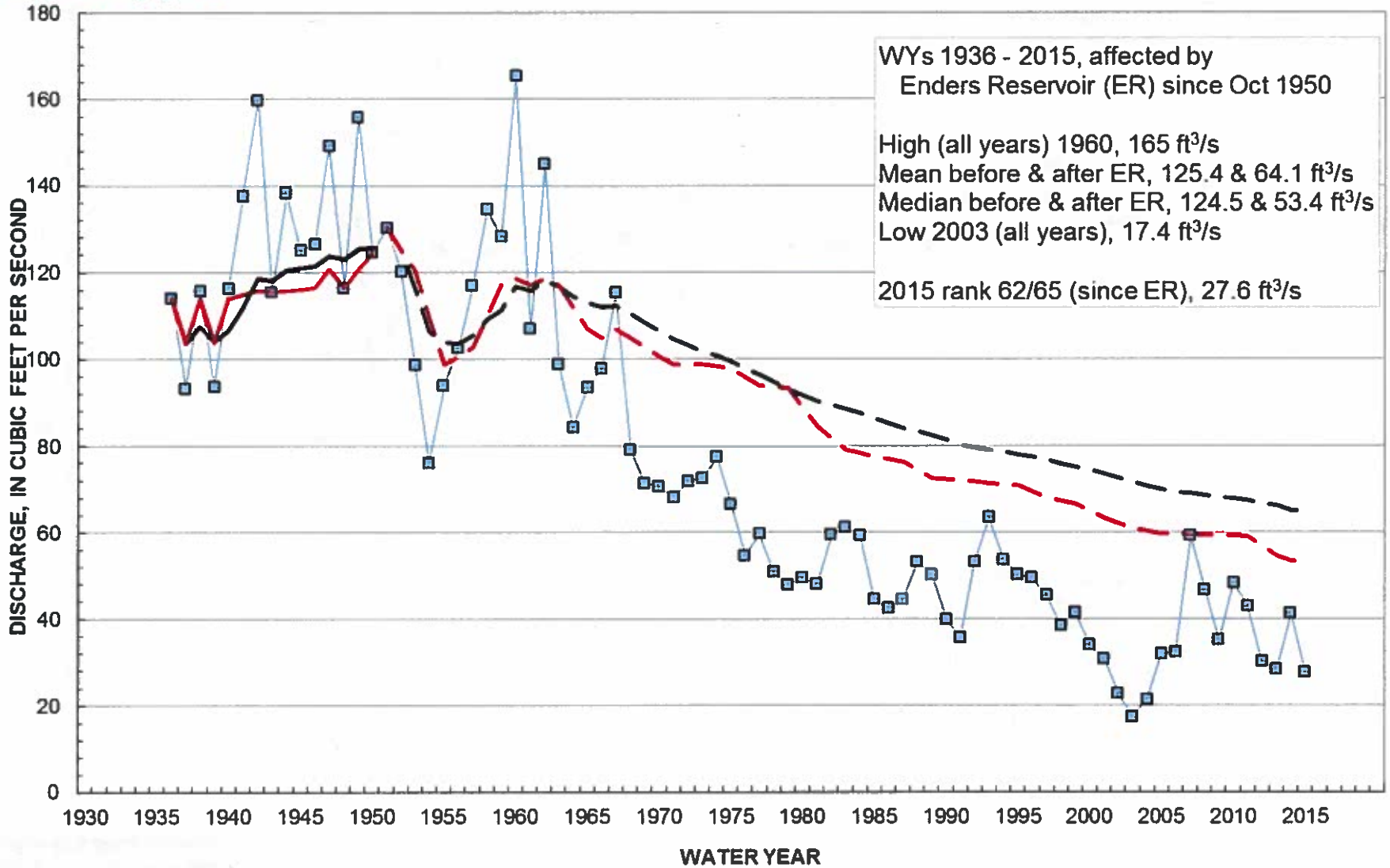


06827500 S Fk Republican River near Benkelman, NE





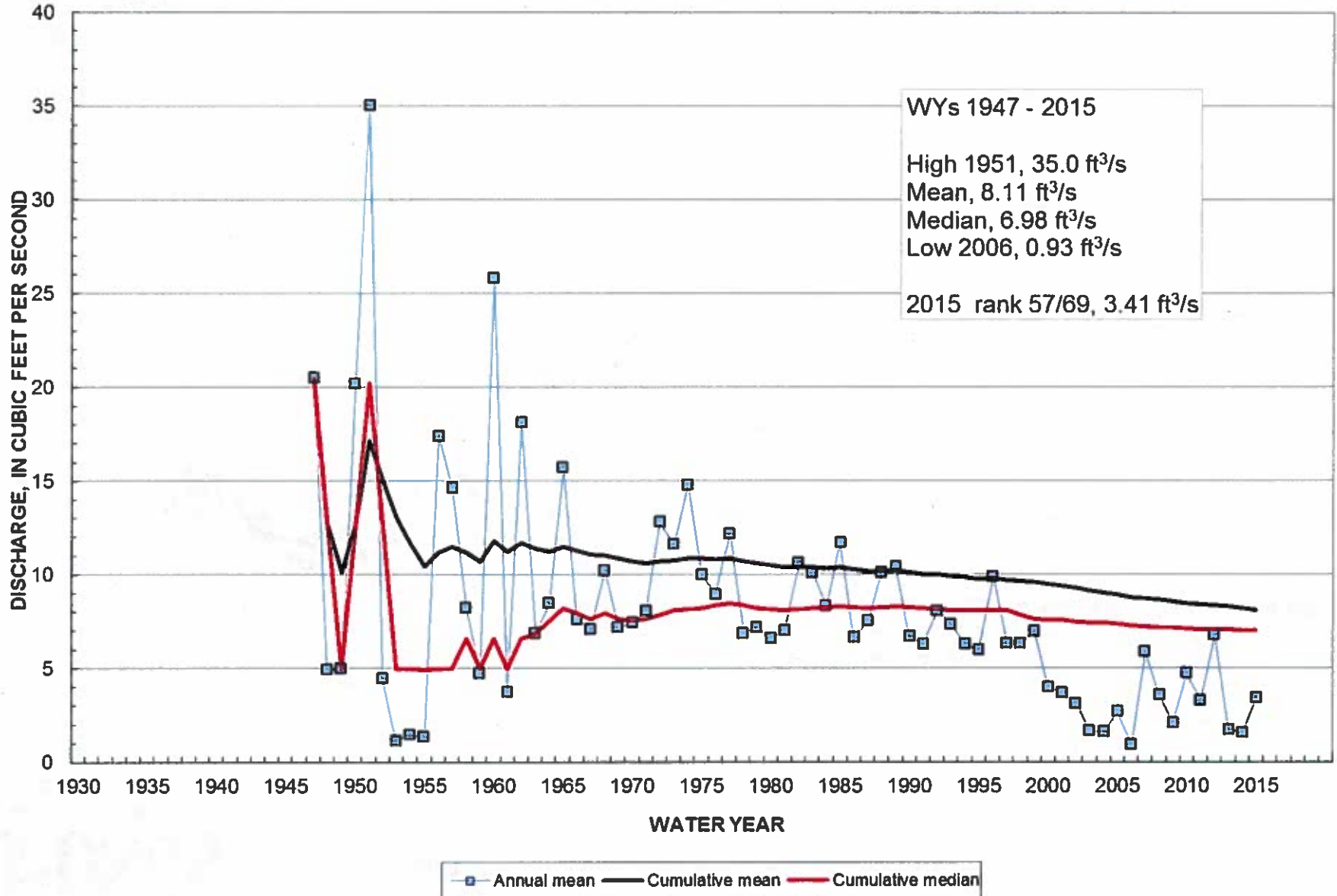
06835500 Frenchman Creek at Culbertson, NE



—■— Annual mean — Cumulative mean - - after ER — Cumulative median - - after ER

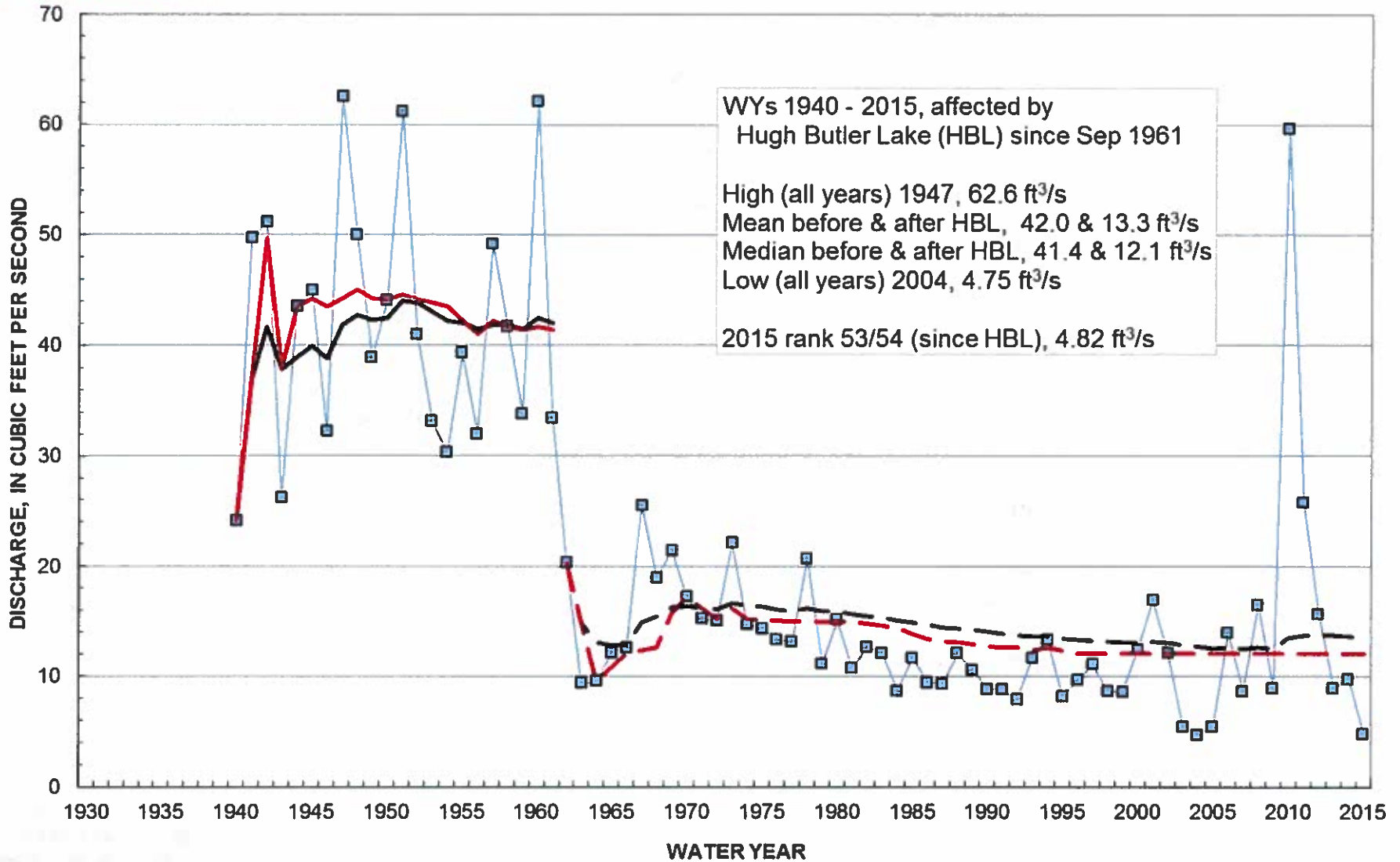


06836500 Driftwood Creek near McCook, NE





06838000 Red Willow Creek near Red Willow, NE



WYs 1940 - 2015, affected by
Hugh Butler Lake (HBL) since Sep 1961

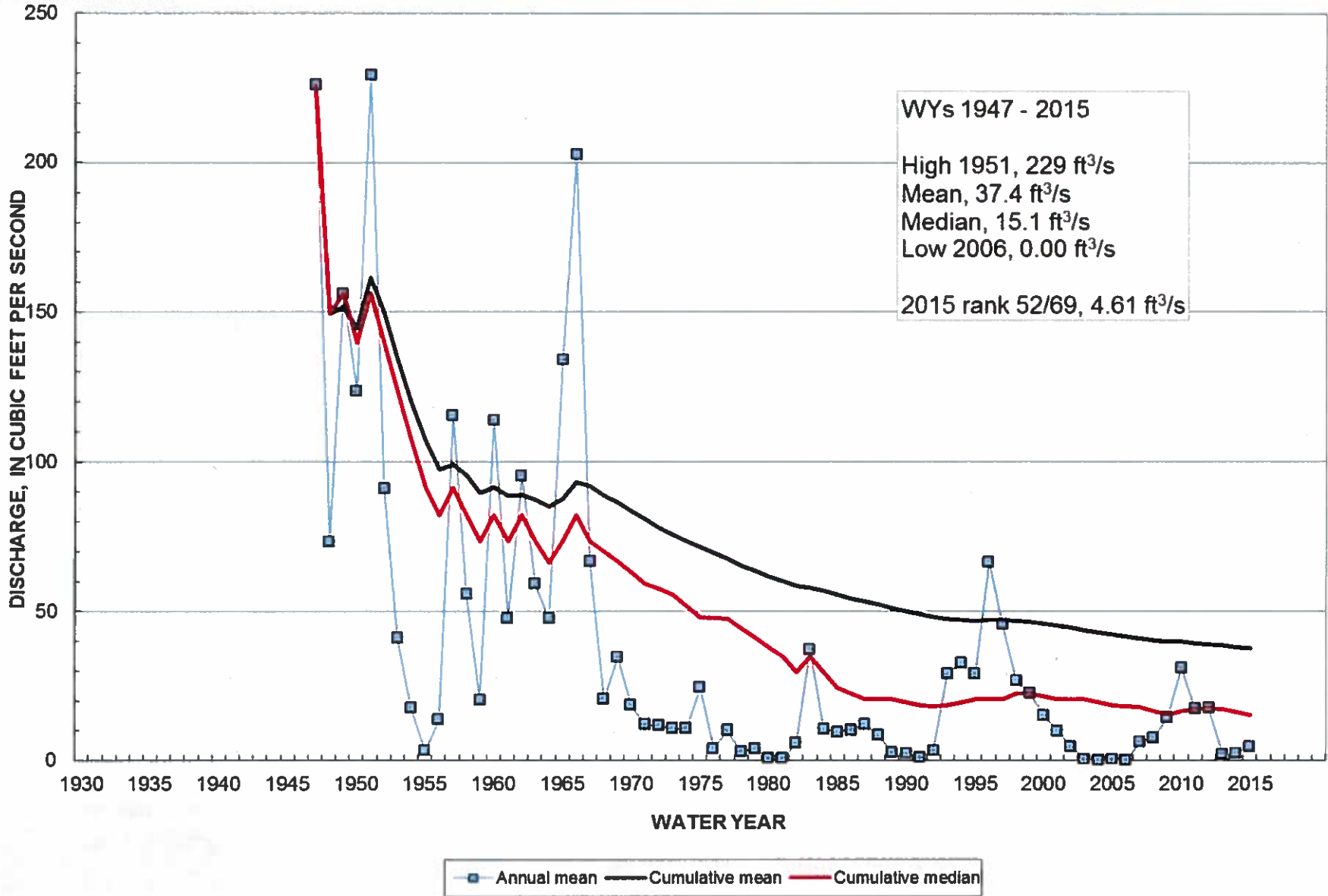
High (all years) 1947, 62.6 ft³/s
Mean before & after HBL, 42.0 & 13.3 ft³/s
Median before & after HBL, 41.4 & 12.1 ft³/s
Low (all years) 2004, 4.75 ft³/s

2015 rank 53/54 (since HBL), 4.82 ft³/s

—■— Annual mean — Cumulative mean - - after HBL — Cumulative median - - after HBL

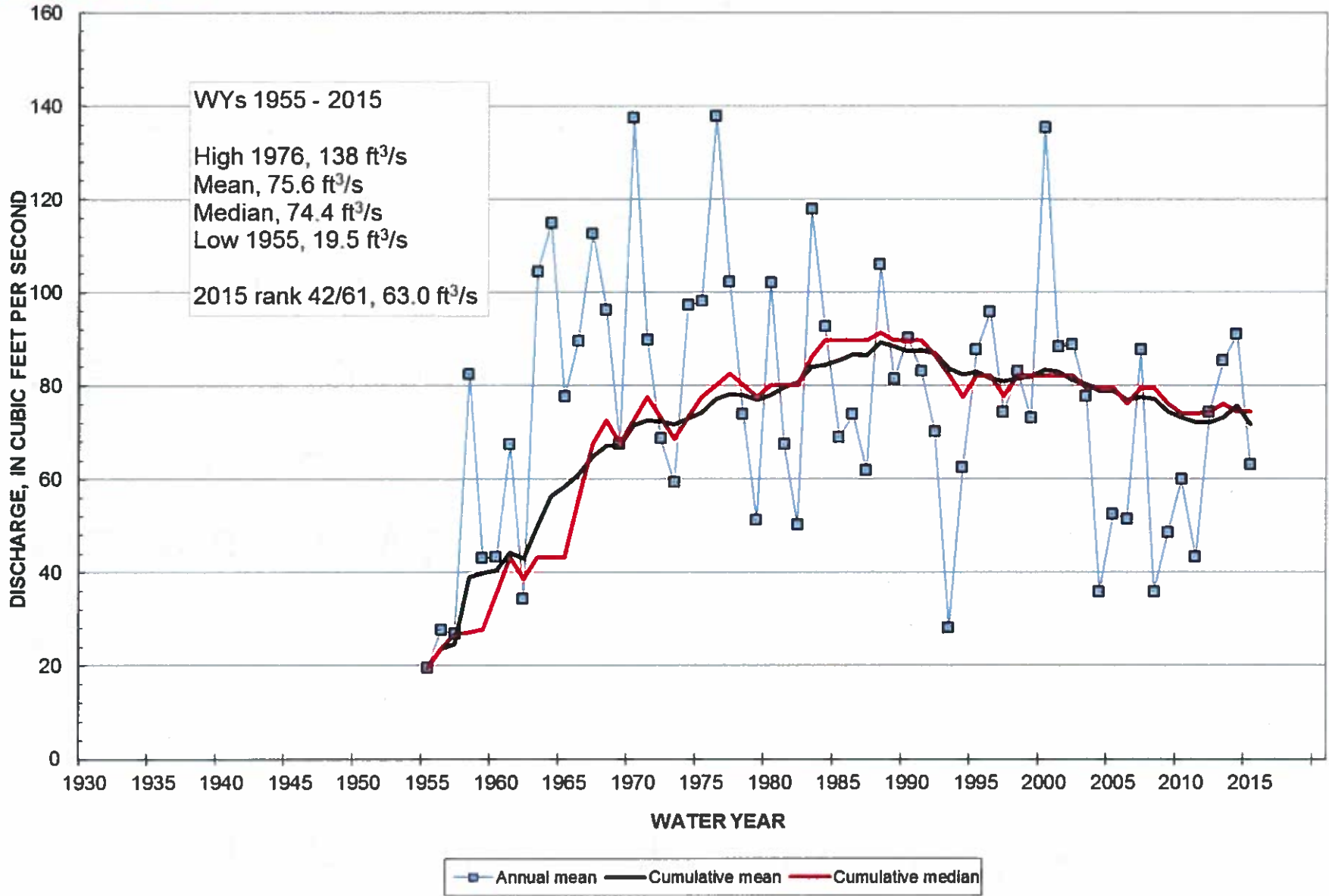


06847500 Sappa Creek near Stamford, NE





06852500 Courtland Canal at NE-KS State Line



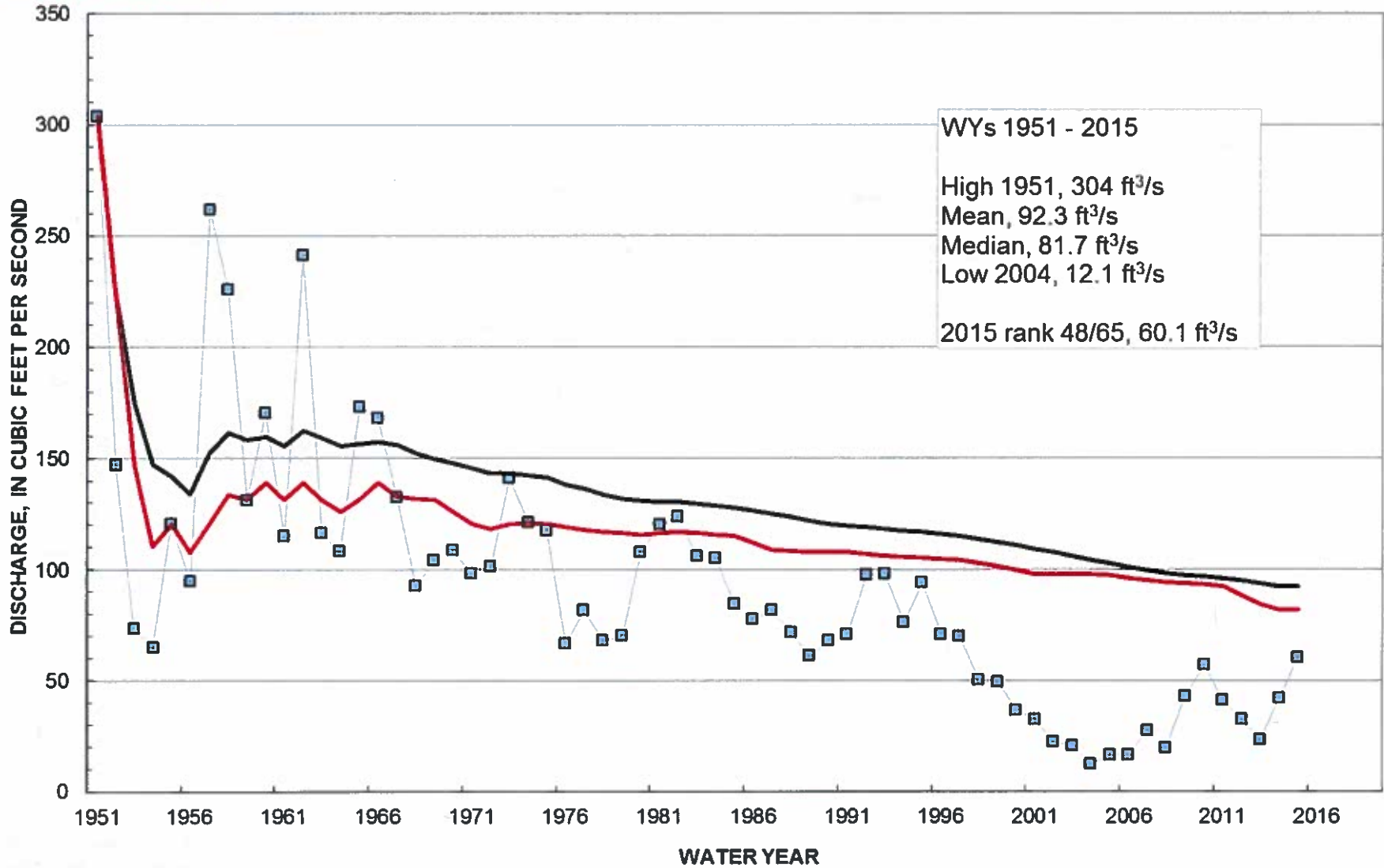
Summary Charts – Other USGS Stations

- Published data for Water Year 2015
- Operated by the USGS Nebraska Water Science Center
- Stations funded by:
 - other Federal agencies
 - State and local agencies with USGS match from the Cooperative Water Program





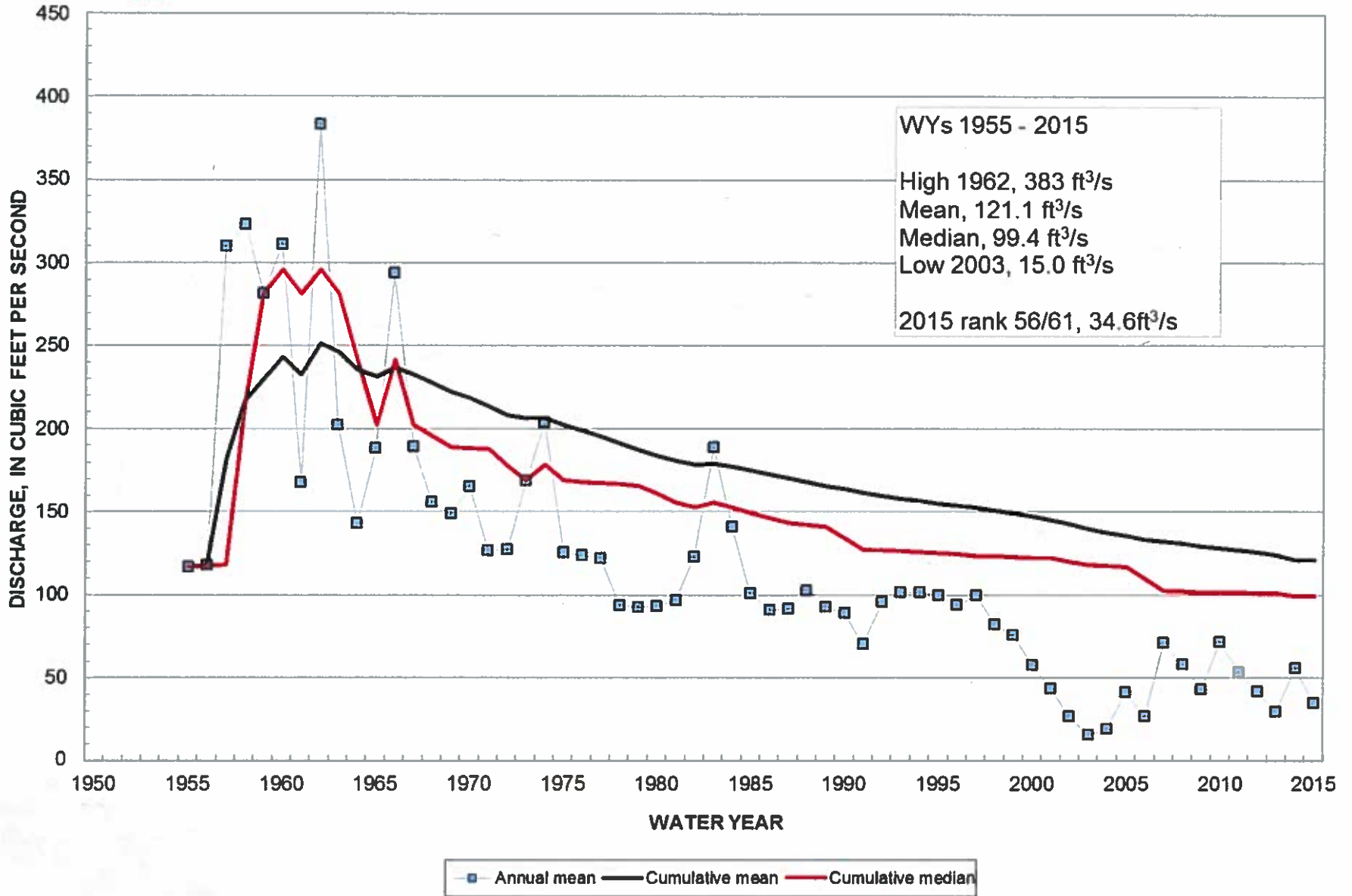
06828500 Republican River at Stratton, NE



■ Annual mean — Cumulative mean — Cumulative median

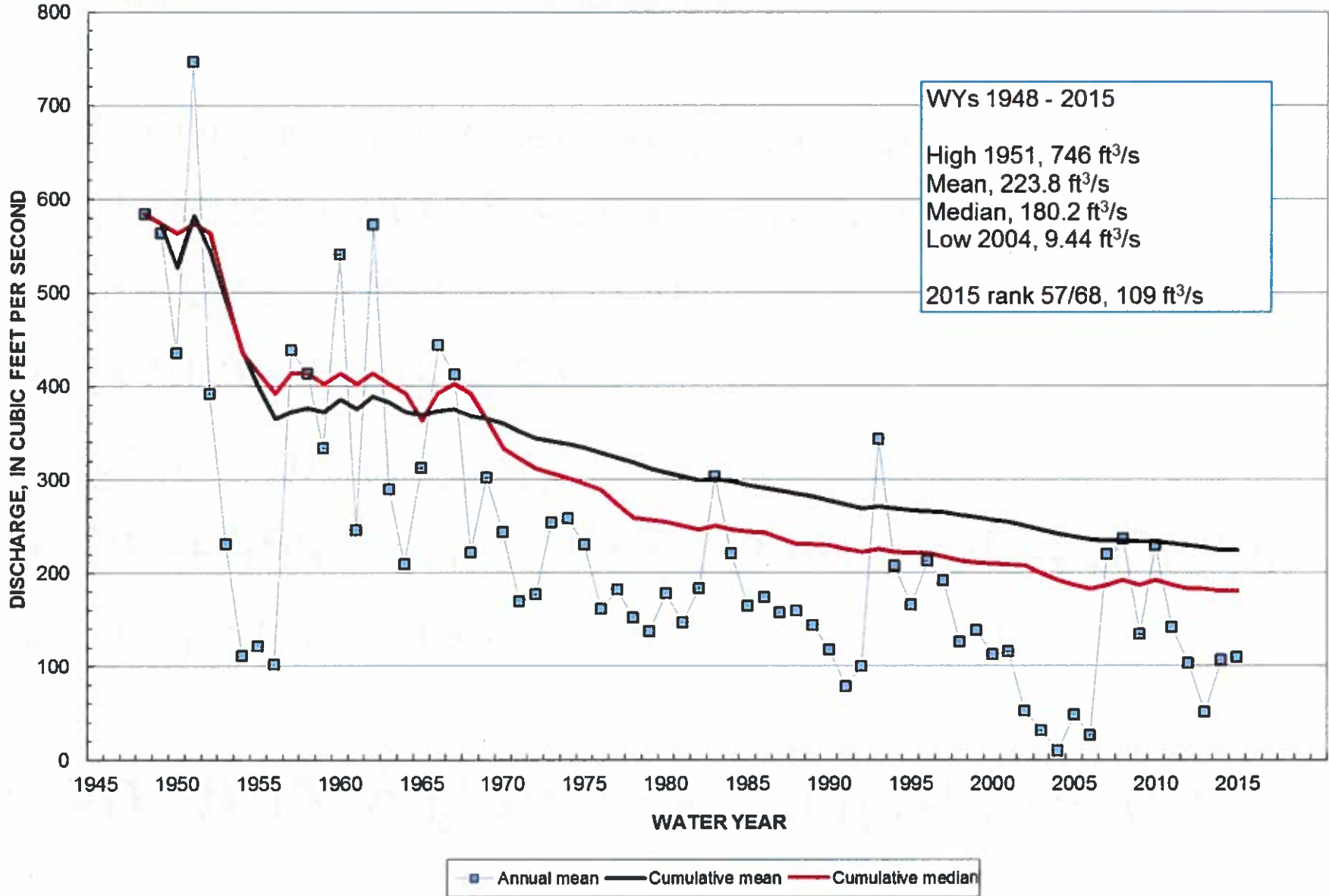


06837000 Republican River at McCook, NE





06844500 Republican River near Orleans, NE



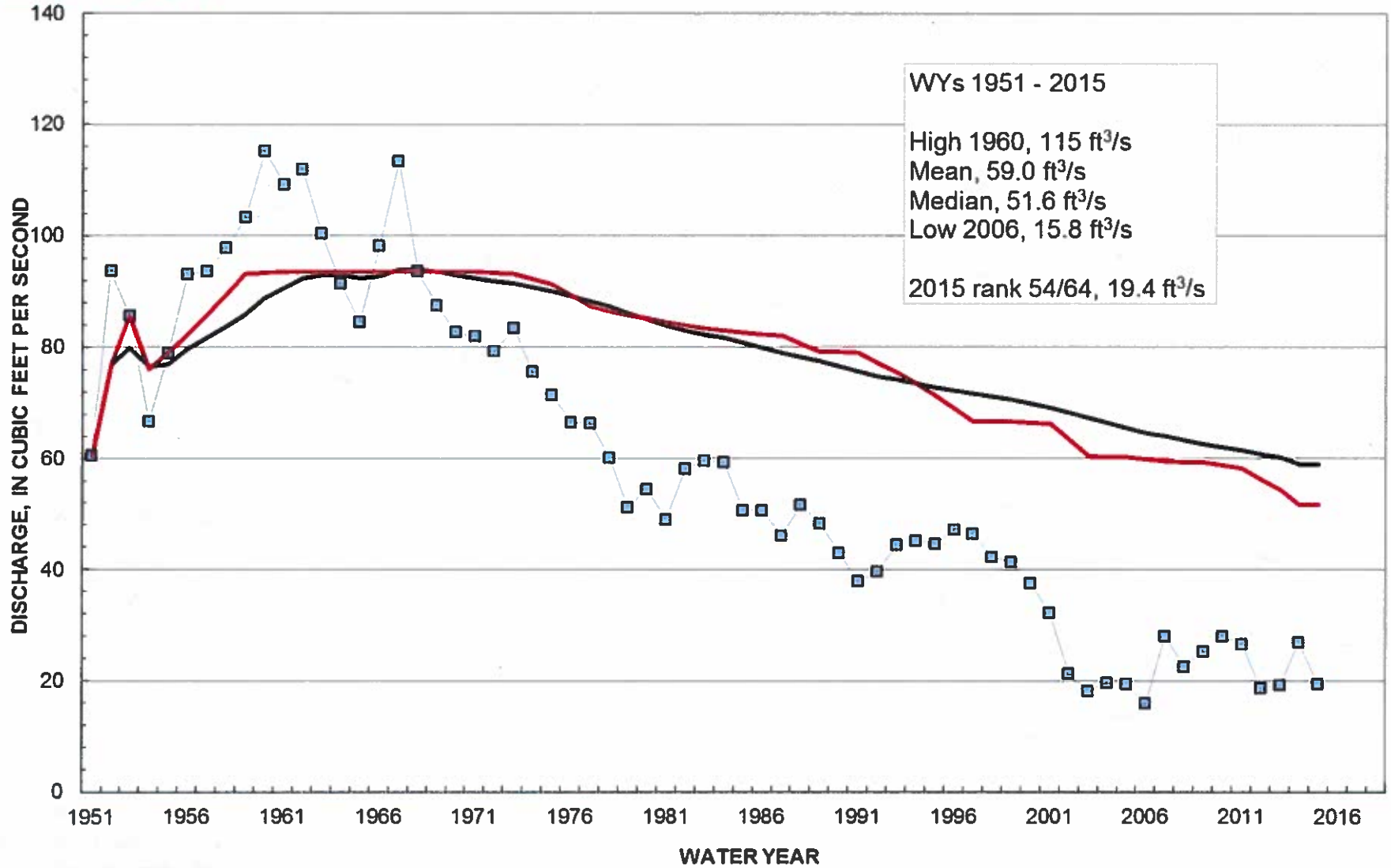
Summary Charts – NDNR Stations

- Published data for Water Year 2015
- Operated by Nebraska Department of Natural Resources (NDNR)
- Stations funded by:
 - NDNR – Field operation
 - USGS, USACE, and NDNR – DCP support, Web display, data review, and publication by USGS





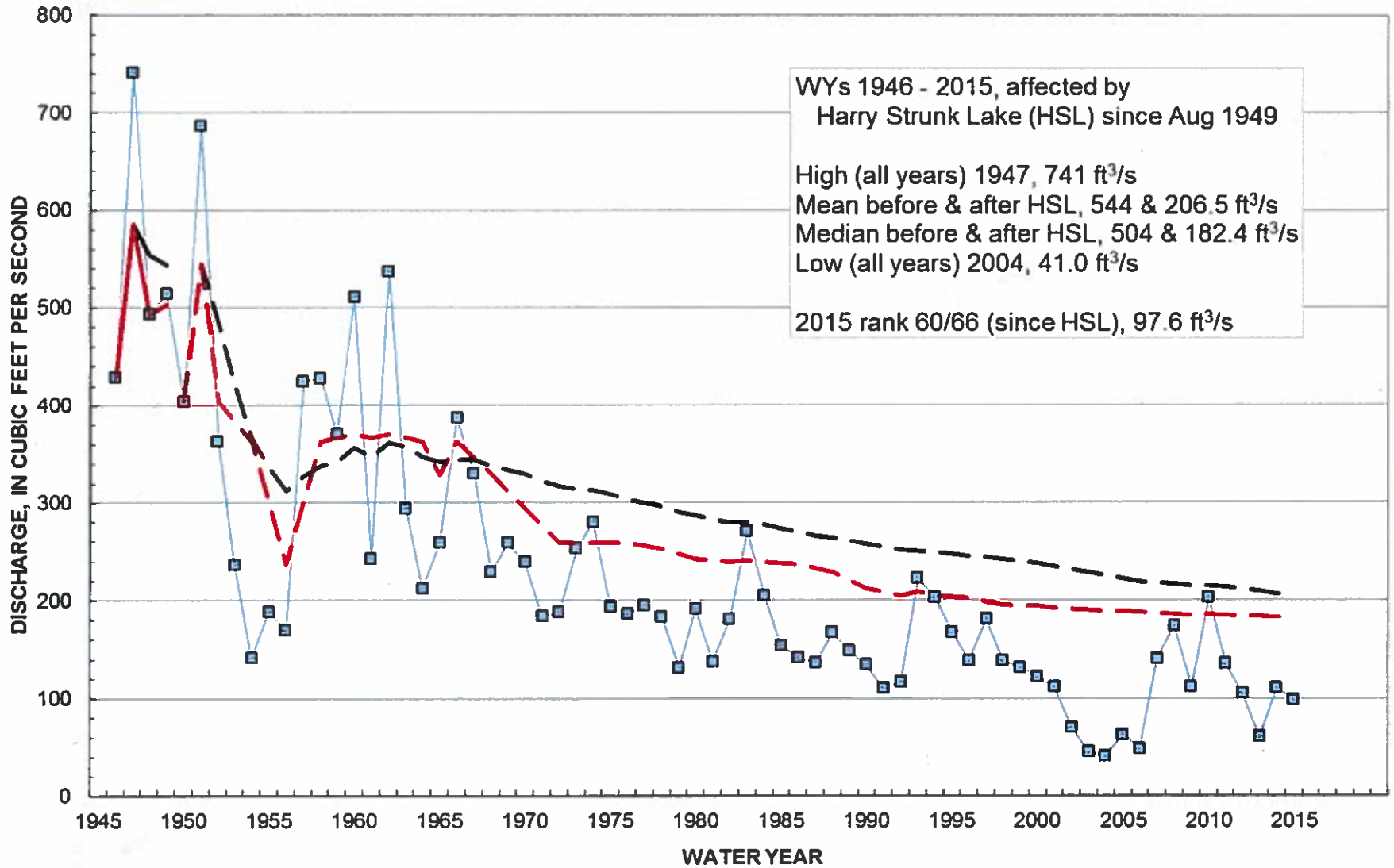
06834000 Frenchman Creek at Palisade, NE



■ Annual mean — Cumulative mean — Cumulative median



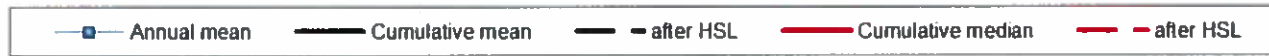
06843500 Republican River at Cambridge, NE



WYs 1946 - 2015, affected by Harry Strunk Lake (HSL) since Aug 1949

High (all years) 1947, 741 ft³/s
Mean before & after HSL, 544 & 206.5 ft³/s
Median before & after HSL, 504 & 182.4 ft³/s
Low (all years) 2004, 41.0 ft³/s

2015 rank 60/66 (since HSL), 97.6 ft³/s



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