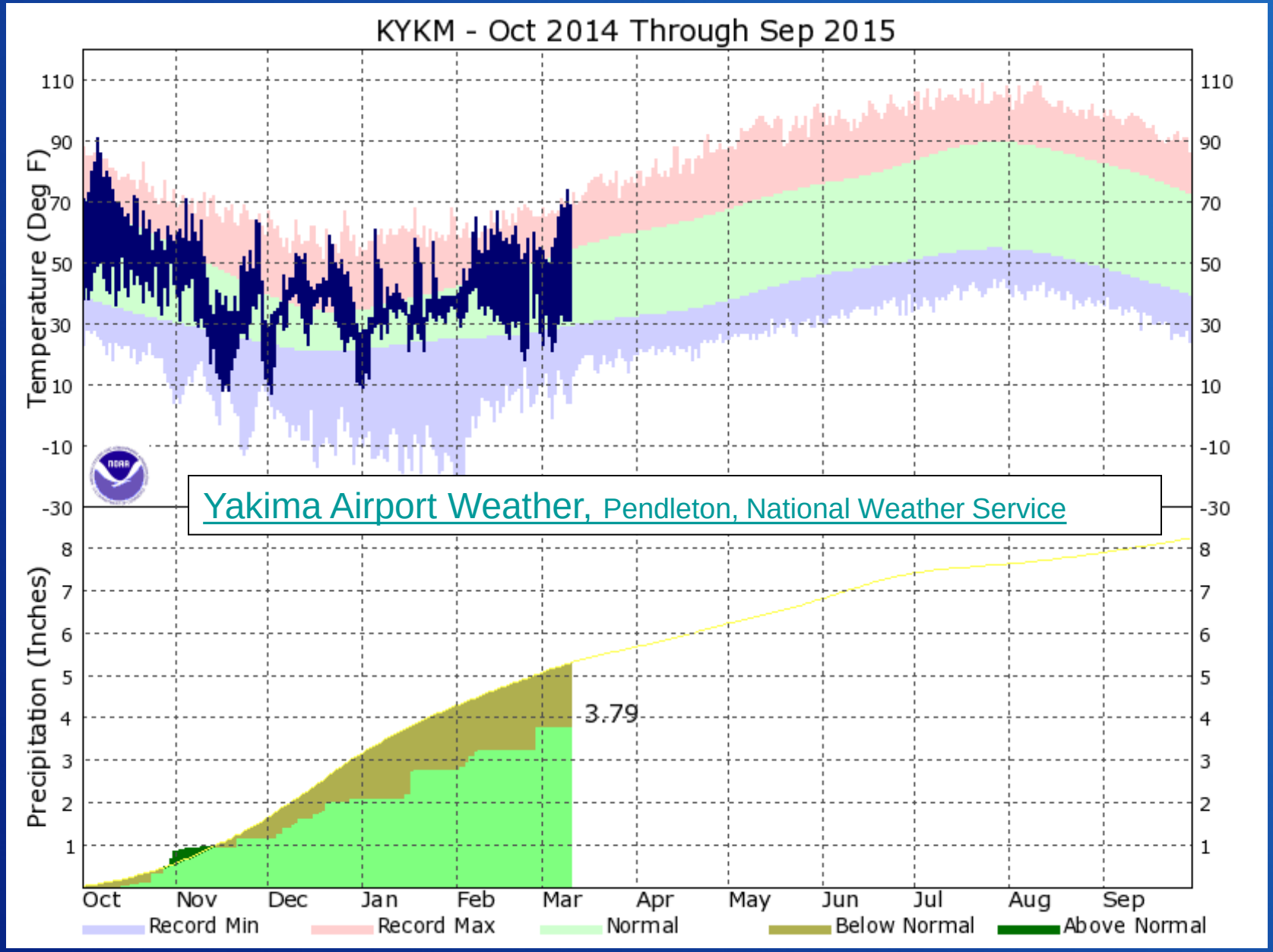
RECLAMATION

Managing Water in the West

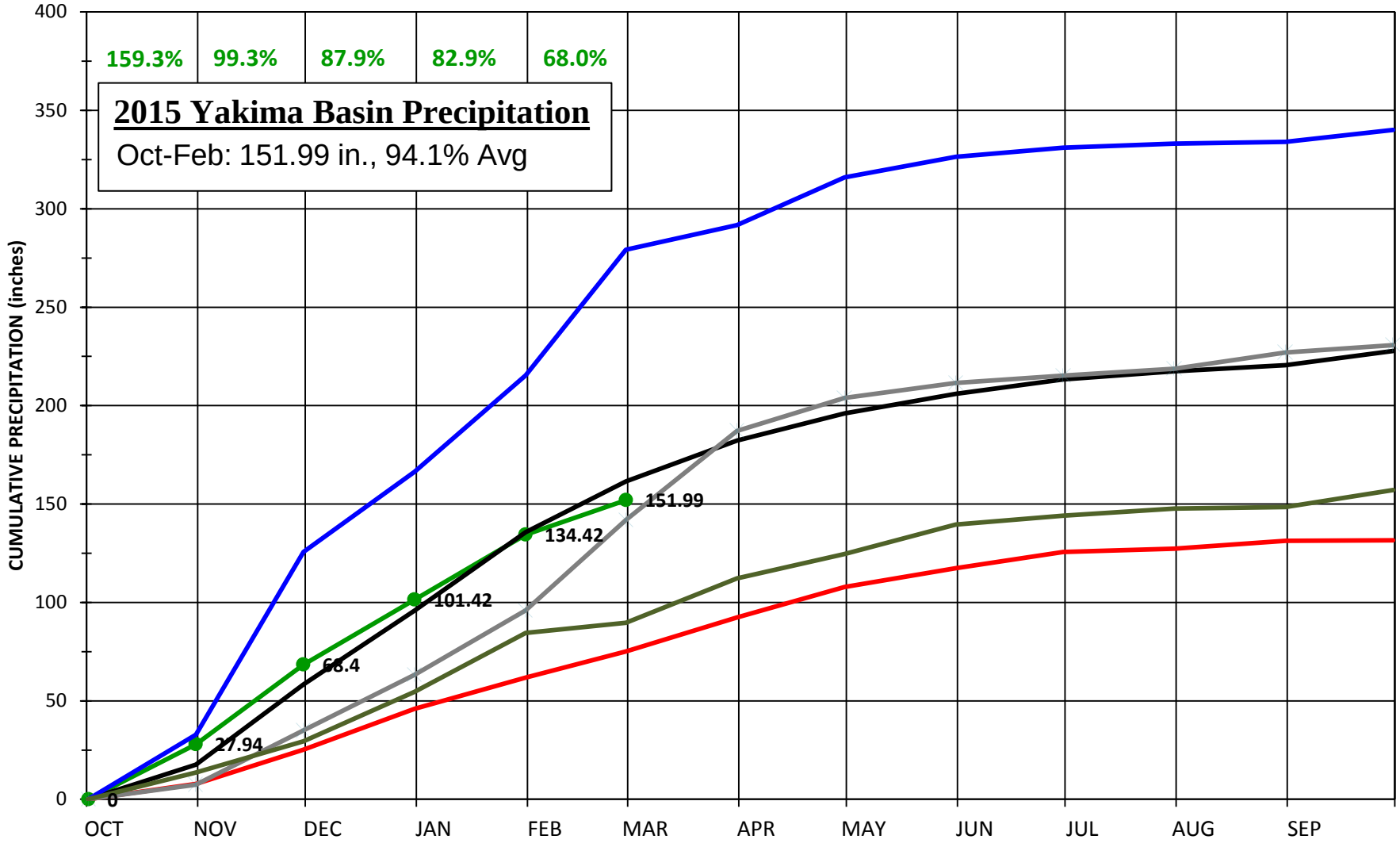
Yakima Basin WY 2015 Water Supply Conditions March 9, 2015

U.S. Department of the Interior
Bureau of Reclamation



Yakima Airport Weather, Pendleton, National Weather Service

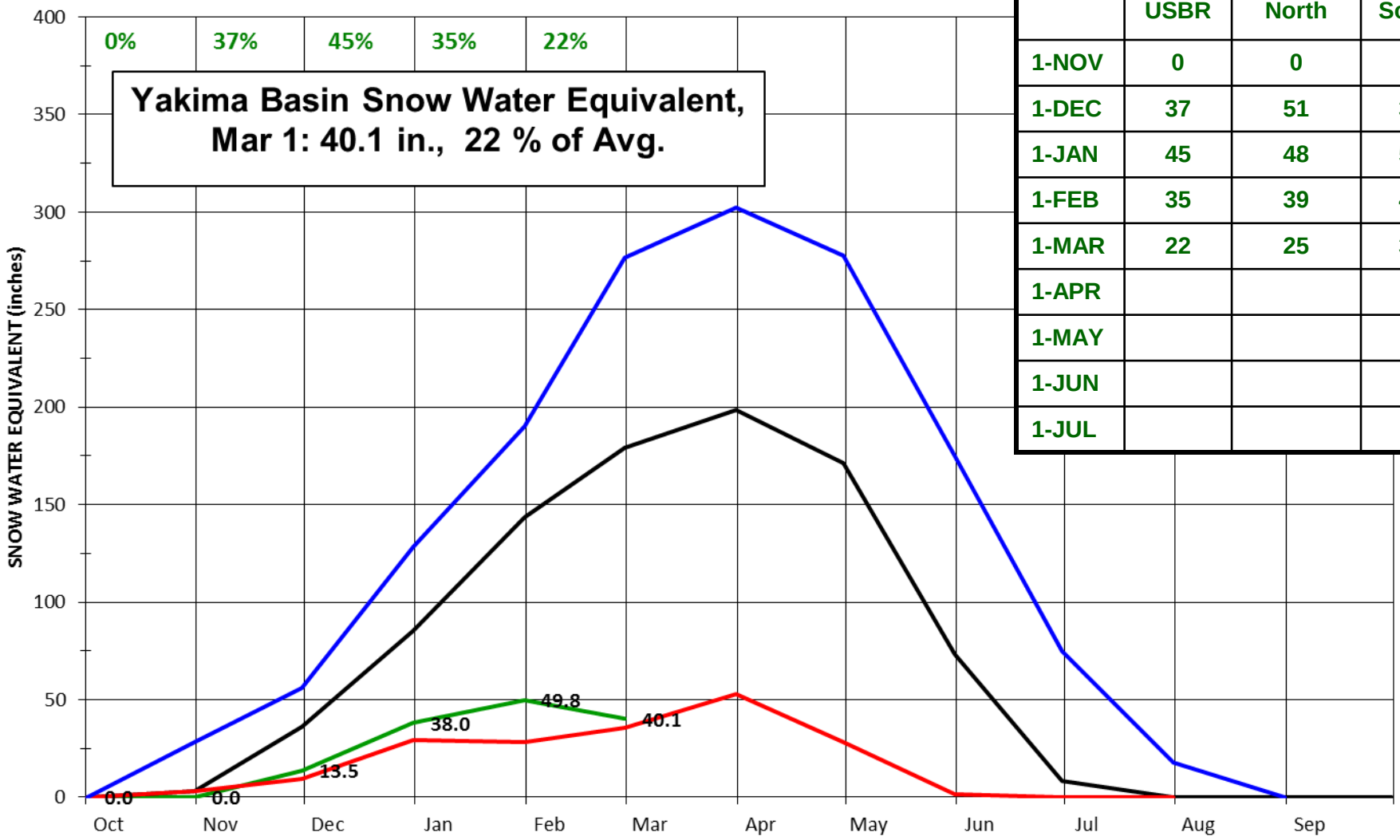
RECLAMATION



Water Year 2015
Average
WY2001
WY1996
WY2014
WY2005

YAKIMA BASIN
Combined Cumulative Precipitation
5 Reservoir Sites
WATER YEARS 1981-2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901



NRCS SWE % AVG			
	USBR	North	South
1-NOV	0	0	0
1-DEC	37	51	39
1-JAN	45	48	55
1-FEB	35	39	44
1-MAR	22	25	37
1-APR			
1-MAY			
1-JUN			
1-JUL			

Water Year 2015
Average
Low Year (2005)
High Year (1999)

YAKIMA BASIN WATER YEAR
SNOW WATER EQUIVALENT
Average based on greater of 1971-2000 or POR-1995
Totals derived from 7 Yakima forecast sites
Corral, Stampede, Olallie, Fish, Bumping, Domerie, & Tunnel Avenue

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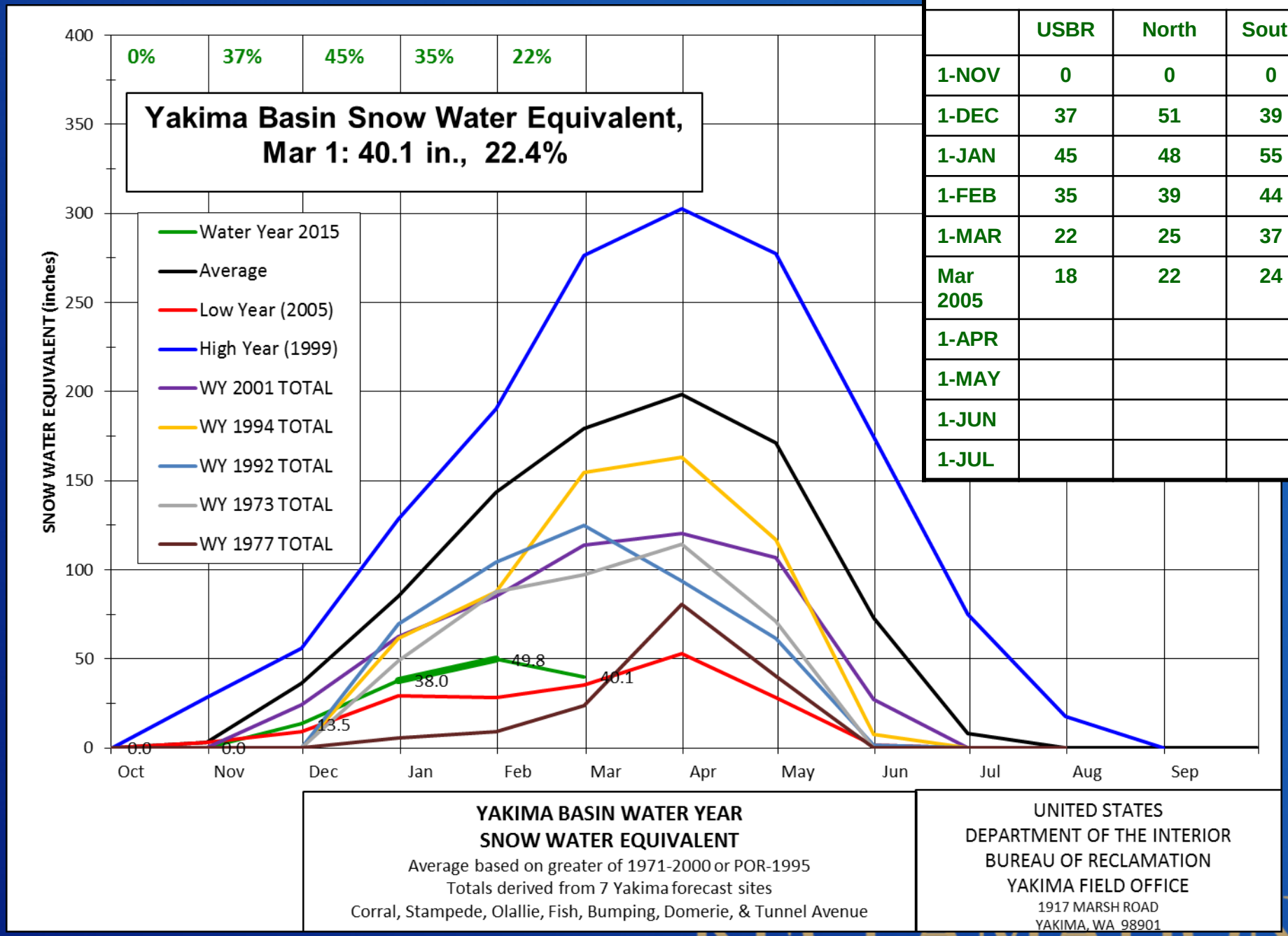
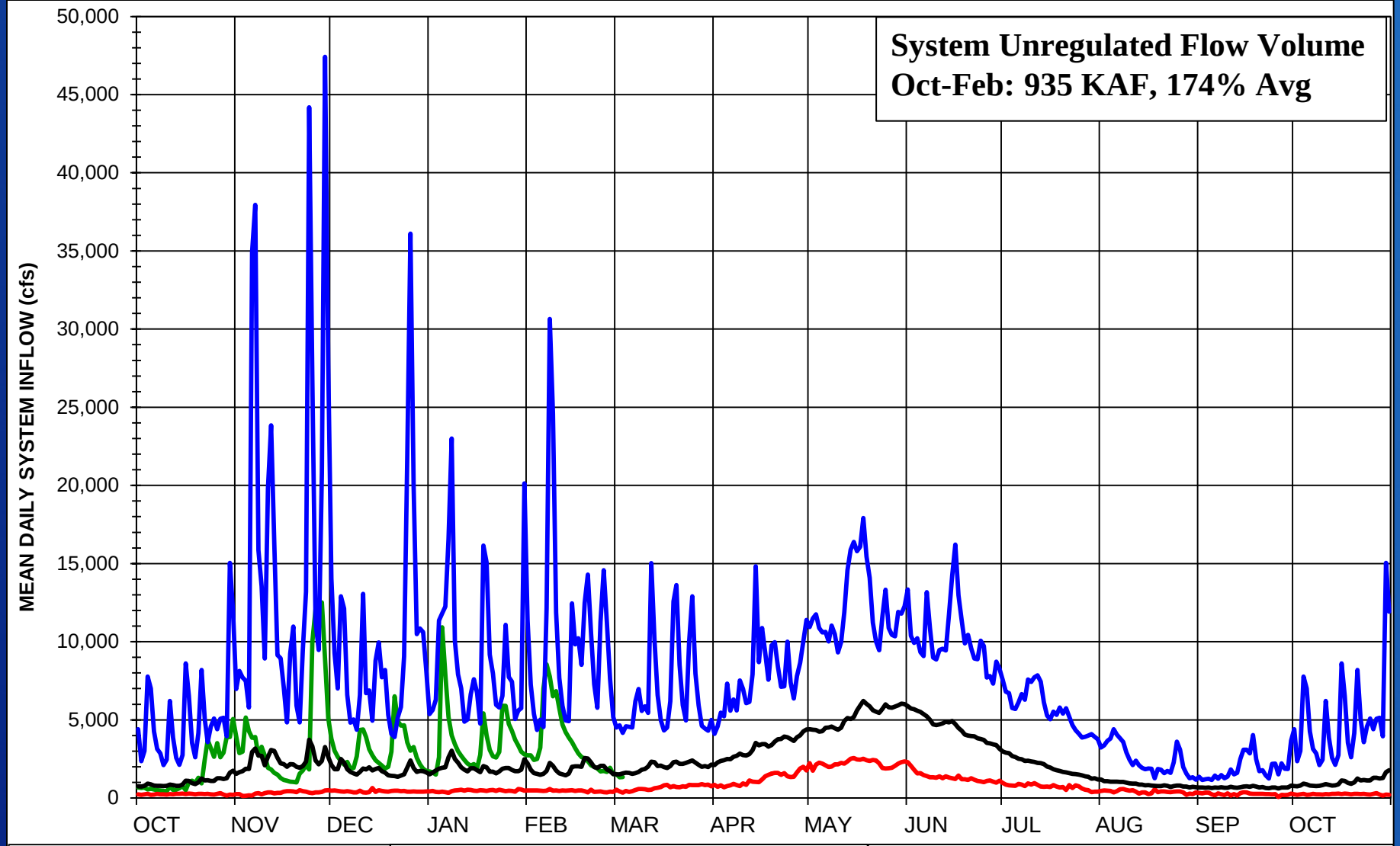


NRCS SWE % AVG			
	USBR	North	South
1-NOV	0	0	0
1-DEC	37	51	39
1-JAN	45	48	55
1-FEB	35	39	44
1-MAR	22	25	37
Mar 2005	18	22	24
1-APR			
1-MAY			
1-JUN			
1-JUL			



Water Year 2015
Minimum
Average
Maximum

SYSTEM RESERVOIRS
SUM OF INFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1981-2010

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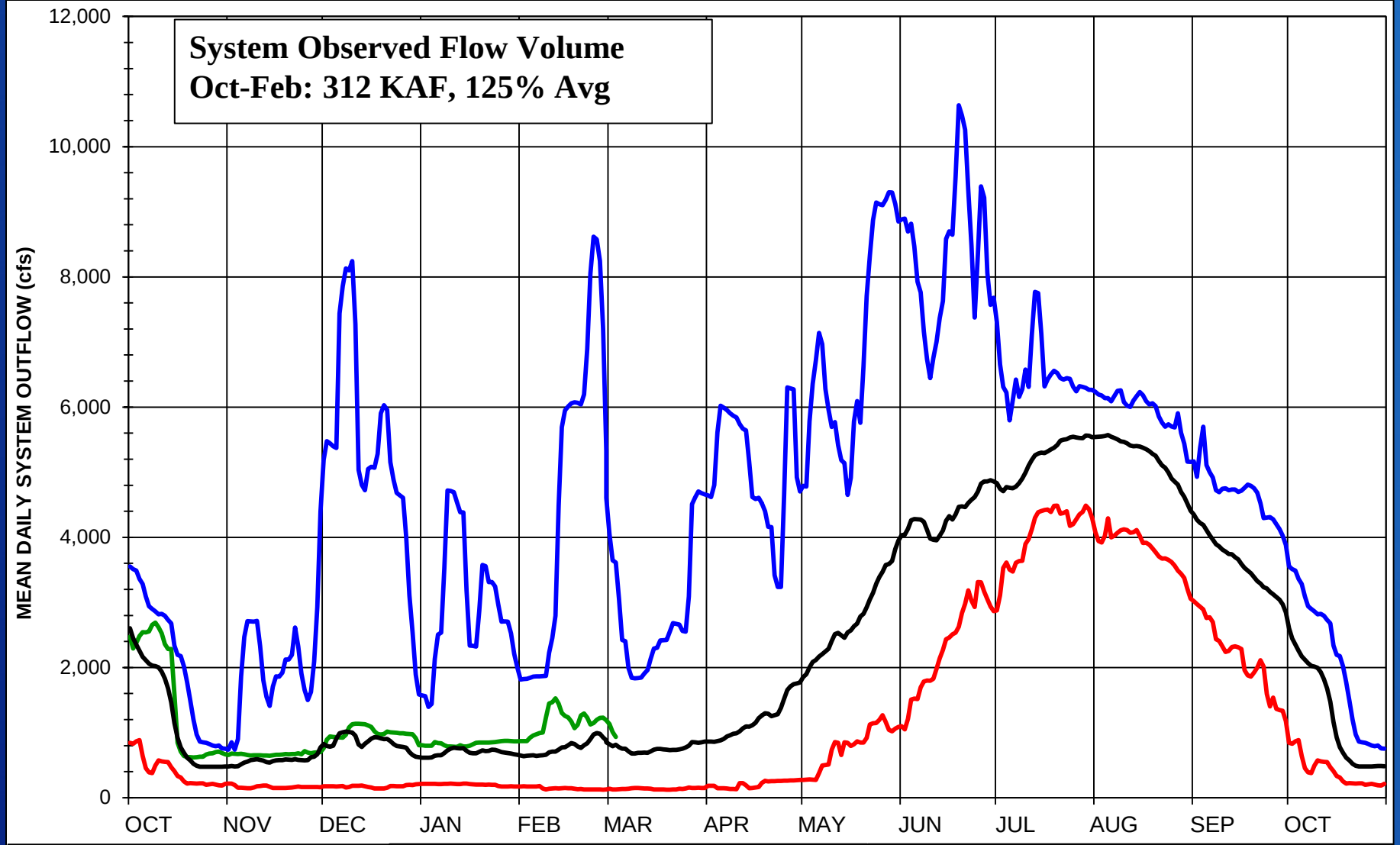
RECLAMATION



Water Year 2015
Minimum
Average
Maximum

SYSTEM RESERVOIRS
SUM OF OUTFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1981-2010

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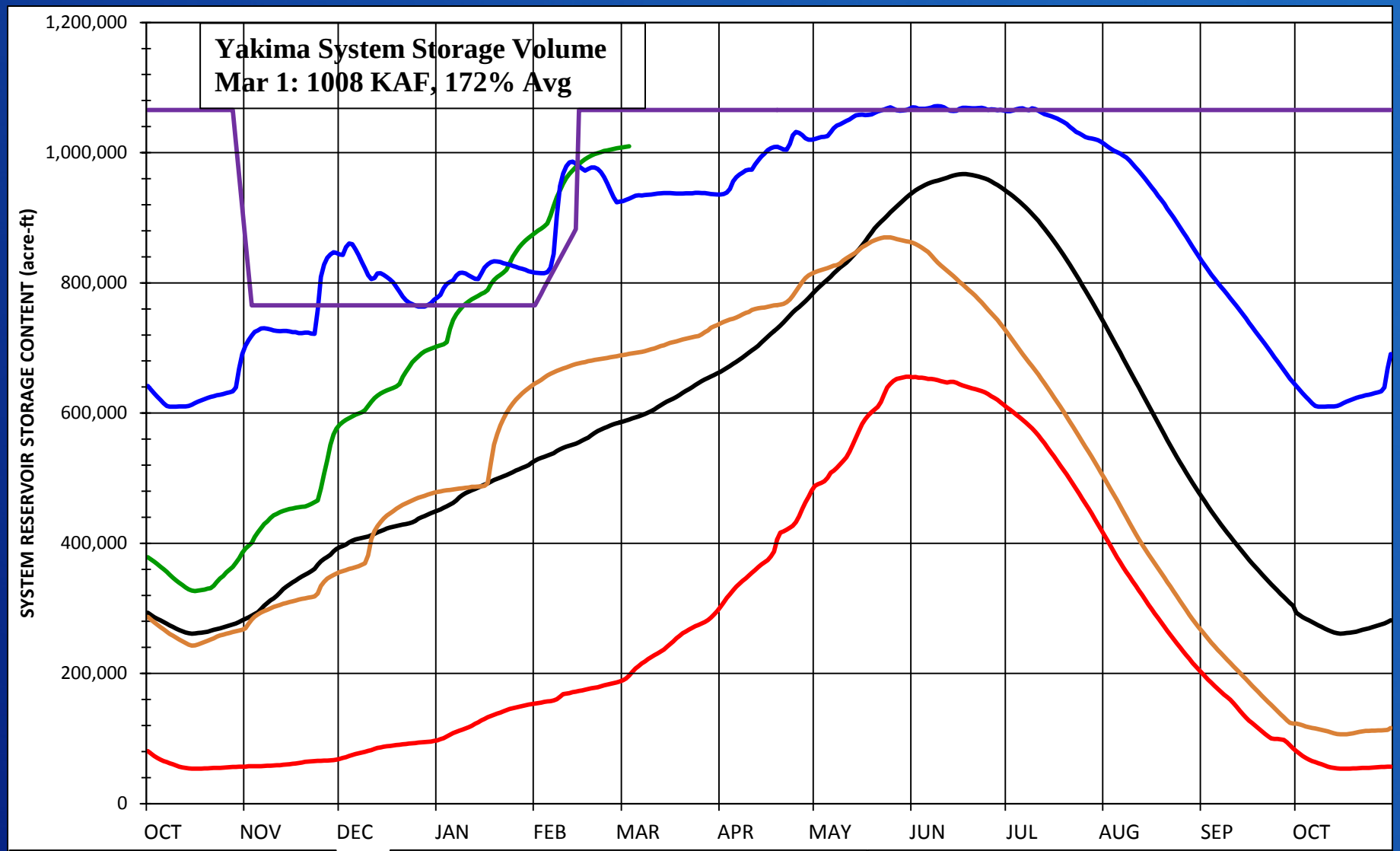

Water Year 2015
Minimum
Average
Maximum
Flood Control Guide, provisional
2005

RESERVOIR SYSTEM STORAGE
MEAN DAILY RESERVOIR VOLUME
SUMMARY HYDROGRAPH
WATER YEARS 1981-2010

UNITED STATES
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YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901

March's April 1, 2015 TWSA ESTIMATE
April 1 - September 30

Parameter*	+/-/=	80%	100%	150%
Apr 1-Sep 30 Natural Flow at Parker est.	+	733	924	1379
Return Flow Estimate	+	320	340	350
April 1, Reservoir Content	+	1020	1030	1040
TWSA	=	**2073**	**2294**	**2769**
SEP 30 EST RESERVOIR CONTENT	-	110	110	160
FLOW OVER SUNNYSIDE DAM	-	170	205	350
TWSA FOR IRRIGATION	=	1793	1979	2259
NONPRORATABLE ENTITLEMENT	-	1070	1070	1070
REMAINING TWSA	=	723	909	1189
PRORATABLE ENTITLEMENT		1239	1239	1239
% RATIO= REMAINING TWSA/PRORATABLE ENTITLEMENT		**58%**	**73%**	**96%**
TITLE 12 FLOW REQUIREMENTS, cfs	**April**	**300**	**300**	**400**
Flow added to Title 12, cfs *#*		102	106	112
Storable portion of added flow, cfs		78	78	78

*Values are in 1,000 ac-ft unless otherwise specified.

State & YRBWEP Trust, Acquisition, & Conservation additions to Title XII flow will range from 102 to 142 cfs.

RECLAMATION

March's April 1, 2015 TWSA Comparison
April 1 - September 30

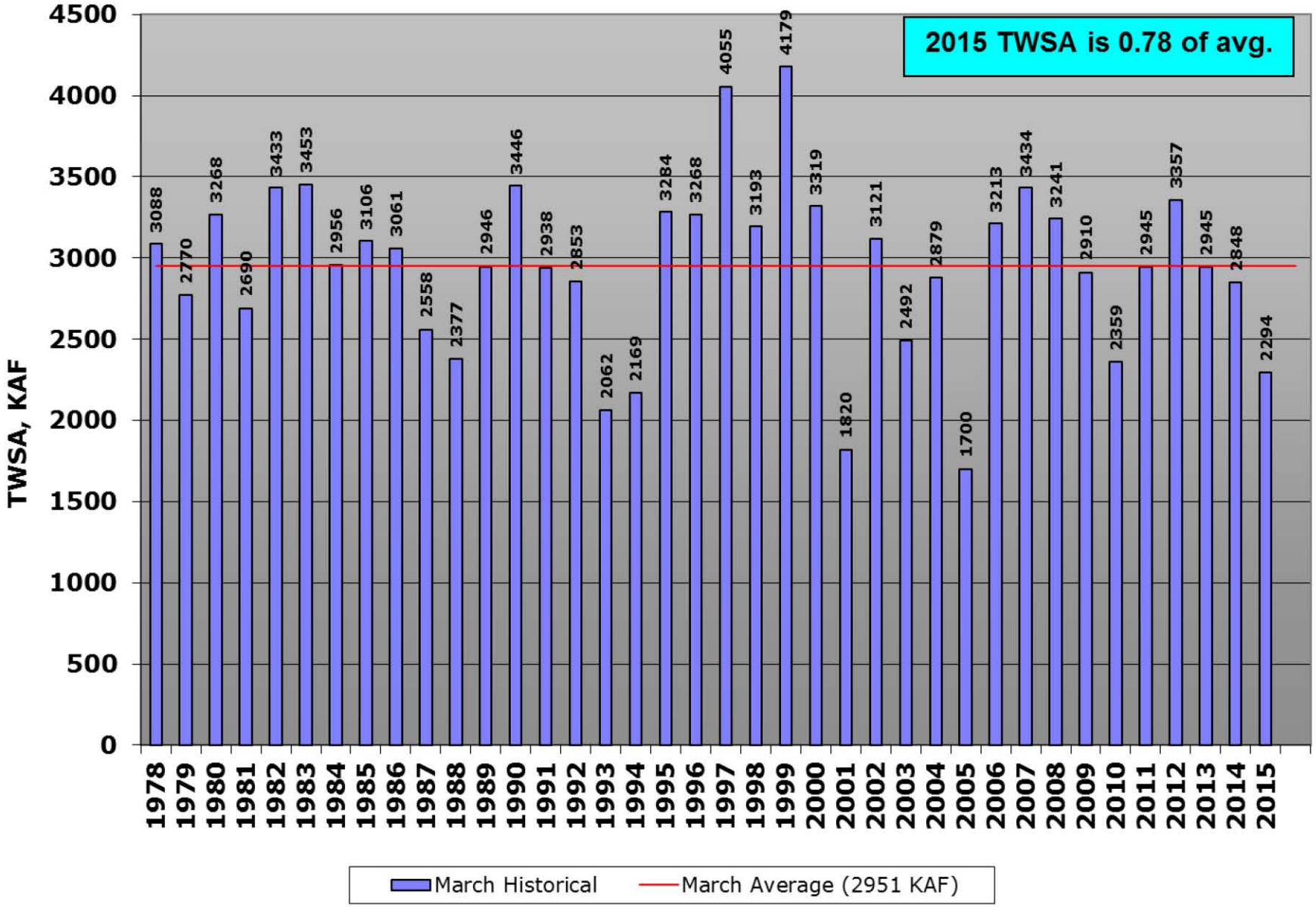
Parameter	"+/-/="	March 2010	**March 2015**	March 2005
Apr 1-Sep 30 Natural Flow at Parker est.	+	1442	924	690
Return Flow Estimate	+	345	340	280
April 1, Reservoir Content	+	572	1030	730
TWSA	=	2359	2294	1700
SEP 30 EST RESERVOIR CONTENT*	-	76	110	76
FLOW OVER SUNNYSIDE DAM	-	254	205	135
TWSA FOR IRRIGATION	=	2029	1979	1491
NONPRORATABLE ENTITLEMENT	-	1070	1070	1070
REMAINING TWSA	=	959	909	421
PRORATABLE ENTITLEMENT		1239	1239	1239
% RATIO= REMAINING TWSA/PRORATABLE ENTITLEMENT		77%	73%	34%
TITLE XII FLOW REQUIREMENTS, cfs	**April**	300	300	300
TOTAL FLOW REQUIREMENT AT PARKER, cfs *#*		334	406	302

*Values are in 1,000 ac-ft unless otherwise specified.

State & YRBWEP Trust, Acquisition, & Conservation additions to Title XII flow range from 106 to 142 cfs.

RECLAMATION

Yakima Basin Historical TWSA's



1980	N/A	1-Jul	183							N/A
1981	N/A	15-Apr	105							N/A
1982	N/A	10-Jul	191							N/A
1983	N/A	20-Jun	171							N/A
1984	N/A	10-Jul	192							N/A
1985	N/A	20-Jun	171							N/A
1986	under avg use	26-Apr	116	Hold	under	average	use	for	season	end of sea
1987	1-Jun	20-May	140			73%	70%	68%	68%	16-Oct
1988	1-Jul	24-Jun	176				82%	90%	90%	end of sea
1989	N/A	18-Jun	169							N/A
1990	N/A	4-Jul	185							N/A
1991	N/A	8-Jul	189							N/A
1992	17-May	17-May	138		58%	58%	58%	58%	58%	end of season
1993	1-Jun	13-Jun	164	NRP* 85,8	NRP* 72,8	56%	64%	67%	71-67%	30-Sep
1994	1-May	1-Jun	152	NRP*	47-35%	34%	39%	39%	37%	30-Sep
1995	N/A	1-Jul	182							N/A
1996	N/A	26-Jun	178							N/A
1997	N/A	21-Jul	202							N/A
1998	N/A	26-Jun	177							N/A
1999	N/A	29-Jul	210							N/A
2000	N/A	1-Jul	183							N/A
2001	1-May	1-Jun	152	NRP*	29%	30%	34%	37%	37%	30-Sep
2002	N/A	3-Jul	184							N/A
2003	1-Aug	20-Jun	171			"(97%)	"(97%)	86%	92%	30-Sep
2004	16-Jun	16-Jun	168			82%	82%	90%	92%	30-Sep
2005	6-Apr	25-May	145	34%	38%	40%	41%	42%	42%	30-Sep
2006	N/A	1-Jul	182							N/A
2007	N/A	20-Jun	171							N/A
2008	N/A	8-Jul	190							N/A
2009	N/A	25-Jun	176							N/A
2010	Averted by cool & rain	3-Jul	184	71%	78%	90%	100%	100%	100%	N/A
2011	N/A	23-Jul	204							N/A
2012	N/A	15-Jul	197							N/A
2013		22-Jun	173							N/A
2014		18-Jun	169							N/A
Year	(1) Start of Proration Period	(2) Storage Control Date	(3) S.C. Julian	Apr.	May	Jun	Jul	Aug	Sep	(4) End of Proration Period

Yakima Basin Summary

- Prorationing is 73% of average.
- Mar 1, Storage is 174% of average and 95% full.
- Snow pack is 22% to 35% of average.
- Title XII flow is 300 cfs.
- Must add 28 cfs and can add 78 cfs in April.

RECLAMATION