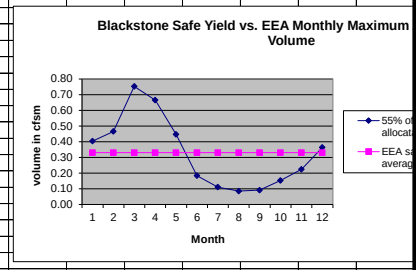
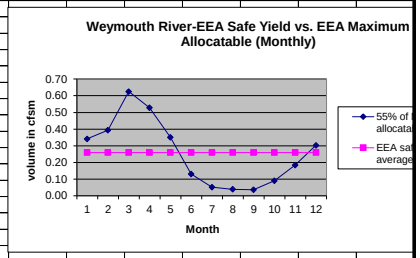
ANALYSIS OF SIMULATED STREAMFLOW DATA FROM THE MASS. DEPARTMENT OF CONSERVATION AND RECREATION; ANALYSIS BY KERRY MACKIN — SEE GRAPHS-SCROLL TO RIGHT

All Units are cfsm unless ratios

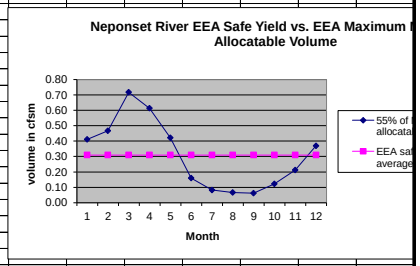
Basin Name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg cfsm (exc ratio)*	DA SQMI	Reservoir Credit	SY-mgd w/o reservoir credit	SY with reservoir credit
Blackstone - State Line														**357.77**			
MQ50	1.80	2.01	2.74	2.57	1.73	0.85	0.37	0.31	0.32	0.75	1.24	1.70	***1.37***				
MQ90	0.73	0.85	1.37	1.21	0.81	0.33	0.20	0.16	0.17	0.28	0.41	0.66	***0.60***				
MQ95	0.60	0.66	1.12	0.98	0.64	0.29	0.17	0.14	0.14	0.22	0.29	0.46	***0.48***				
MQ98	0.37	0.54	0.95	0.73	0.50	0.25	0.15	0.08	0.10	0.15	0.23	0.28	***0.36***				
MQ99	0.33	0.46	0.82	0.66	0.45	0.23	0.14	0.08	0.09	0.10	0.21	0.24	***0.32***				
MQ99.9+ (lowest flow)	0.31	0.32	0.45	0.60	0.38	0.16	0.09	0.07	0.07	0.08	0.12	0.22	***0.24***				
25% of MQ50	0.45	0.50	0.69	0.64	0.43	0.21	0.09	0.08	0.08	0.19	0.31	0.43	***0.34***				
Ratio 25% MQ50 / MQ90	61%	59%	50%	53%	53%	64%	45%	50%	48%	67%	76%	64%	57%	EEA-58%			
55% of MQ90 (maximum allocatable)	0.40	0.47	0.75	0.66	0.45	0.18	0.11	0.09	0.09	0.15	0.22	0.36	***0.33***			74.6	EEA Safe Yield
EEA safe yield: annual average	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33				
10%/10%/25%/15% of MQ50	0.18			0.26				0.08		0.11			***0.16***	2.1	X	36.25	SY based on streamflow criteria thresholds
10%/10%/25%/15% of MQ90	0.07			0.12				0.04		0.04			***0.07***	4.8	X	15.89	SY based on streamflow criteria thresholds/drought
25% depletion of AugQ50													***0.08***	4.2	X	17.93	SY based on 25% depletion of August median
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.29	0.27	0.29	0.31	0.37	0.40	0.40	0.38	0.34	0.31	0.28	0.29	0.33				
% flows lower than EEA safe yield (constant value)	1%	<1%	0%	0%	0%	10%	44%	54%	52%	18%	6%	2%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	18%	56%	63%	54%	14%	5%	2%					



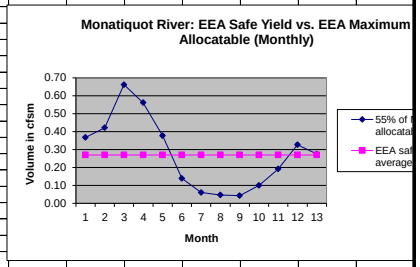
BH Weymouth Back	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	*106.61*	*(Weymouth & Weir?)*	SY-mgd
MQ50	1.60	1.87	2.61	2.17	1.42	0.61	0.25	0.24	0.24	0.46	1.11	1.52	***1.18***			
MQ90	0.62	0.72	1.14	0.96	0.64	0.24	0.09	0.07	0.07	0.16	0.33	0.55	***0.47***			
MQ95	0.48	0.58	0.93	0.81	0.52	0.18	0.07	0.06	0.03	0.12	0.26	0.47	***0.38***			
MQ98	0.38	0.40	0.80	0.68	0.44	0.12	0.06	0.04	0.02	0.10	0.19	0.37	***0.30***			
MQ99	0.34	0.37	0.66	0.63	0.41	0.10	0.06	0.02	0.01	0.04	0.19	0.32	***0.26***			
MQ99.9+ (lowest flow)	0.30	0.34	0.48	0.48	0.36	0.08	0.03	0.01	0.01	0.02	0.17	0.21	***0.21***			
25% of MQ50	0.40	0.47	0.65	0.54	0.36	0.15	0.06	0.06	0.06	0.12	0.28	0.38	***0.29***			20.25
Ratio: 25% MQ50/MQ90	65%	65%	57%	56%	56%	64%	68%	84%	91%	70%	83%	69%	63%	EEA says 69%	(avgB:M)	
55% of MQ90 (maximum allocatable)	**0.34**	**0.39**	**0.63**	**0.53**	**0.35**	**0.13**	**0.05**	**0.04**	**0.04**	**0.09**	**0.18**	**0.30**	***0.26***			**18.6**
EEA safe yield: annual average	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	**0.26**	***0.26***			
10%/10%/25%/15% of MQ50	0.16			0.22				0.06		0.07			***0.13***	2.0	X	8.72
10%/10%/25%/15% of MQ90	0.06			0.10				0.02		0.02			***0.05***	5.1	X	3.46
25% depletion of AugQ50													***0.06***	4.3	X	4.14
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.23	0.21	0.23	0.24	0.29	0.32	0.31	0.30	0.27	0.24	0.22	0.22	0.26			
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	14%	52%	53%	55%	23%	5%	<1%				
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	20%	57%	58%	56%	21%	4%	<1%				



BH Neponset	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	*108.93*		SY-mgd
MQ50	1.78	2.05	2.67	2.31	1.60	0.74	0.31	0.29	0.29	0.56	1.28	1.70	***1.30***			
MQ90	0.75	0.85	1.30	1.12	0.77	0.29	0.15	0.12	0.11	0.22	0.39	0.67	***0.56***			
MQ95	0.59	0.70	1.09	0.95	0.64	0.24	0.12	0.11	0.07	0.18	0.31	0.58	***0.47***			
MQ98	0.45	0.47	0.94	0.81	0.53	0.18	0.11	0.07	0.05	0.15	0.25	0.43	***0.37***			
MQ99	0.40	0.43	0.79	0.75	0.49	0.16	0.10	0.05	0.04	0.09	0.24	0.37	***0.33***			
MQ99.9+ (lowest flow)	0.35	0.39	0.59	0.59	0.42	0.13	0.06	0.04	0.04	0.04	0.23	0.27	***0.26***			
25% of MQ50	0.45	0.51	0.67	0.58	0.40	0.18	0.08	0.07	0.07	0.14	0.32	0.43	***0.32***			22.86
Ratio 25% MQ50 / MQ90	60%	60%	51%	52%	52%	63%	51%	61%	65%	63%	83%	63%	***60%***			
55% of MQ90 (maximum allocatable)	**0.41**	**0.47**	**0.72**	**0.61**	**0.42**	**0.16**	**0.08**	**0.07**	**0.06**	**0.12**	**0.21**	**0.37**	***0.31***			**21.7**
EEA safe yield: annual average	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	**0.31**	***0.31***			
10%/10%/25%/15% of MQ50	0.18			0.23				0.07		0.08			***0.14***	2.2	X	9.99
10%/10%/25%/15% of MQ90	0.07			0.11				0.03		0.03			***0.06***	4.9	X	4.39
25% depletion of AugQ50													***0.07***	4.2	X	5.17
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.28	0.25	0.28	0.29	0.34	0.38	0.38	0.36	0.32	0.29	0.26	0.27	0.31			
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	13%	51%	54%	56%	24%	6%	<1%				
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	21%	59%	59%	56%	20%	3%	<1%				

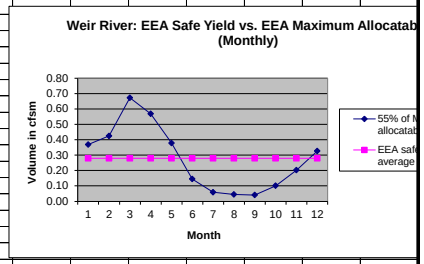


BH Monatiquot	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	Need Drainage Area
MQ50	1.68	1.94	2.65	2.23	1.49	0.66	0.27	0.26	0.25	0.50	1.18	1.59	***1.23***	
MQ90	0.67	0.77	1.20	1.02	0.69	0.25	0.11	0.09	0.08	0.18	0.35	0.59	***0.50***	
MQ95	0.52	0.62	0.99	0.87	0.57	0.20	0.09	0.07	0.04	0.14	0.27	0.51	***0.41***	
MQ98	0.40	0.42	0.85	0.73	0.47	0.14	0.07	0.05	0.02	0.11	0.21	0.39	***0.32***	
MQ99	0.36	0.39	0.71	0.67	0.44	0.12	0.07	0.03	0.02	0.06	0.20	0.33	***0.28***	
MQ99.9+ (lowest flow)	0.32	0.35	0.52	0.52	0.38	0.09	0.03	0.02	0.02	0.02	0.19	0.23	***0.22***	
25% of MQ50	0.42	0.49	0.66	0.56	0.37	0.16	0.07	0.06	0.06	0.12	0.29	0.40	***0.31***	
Ratio 25% MQ50 / MQ90	63%	63%	55%	55%	54%	65%	61%	75%	81%	68%	84%	67%	***66%***	
55% of MQ90 (maximum allocatable)	**0.37**	**0.42**	**0.66**	**0.56**	**0.38**	**0.14**	**0.06**	**0.05**	**0.04**	**0.10**	**0.19**	**0.33**	***0.27***	
EEA safe yield: annual average	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	**0.27**	***0.27***	
10%/10%/25%/15% of MQ50	0.17			0.22				0.06		0.07			***0.13***	2.1 X
10%/10%/25%/15% of MQ90	0.07			0.10				0.02		0.03			***0.05***	5.1 X
25% depletion of AugQ50													***0.06***	4.3 X
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%	
Adjusted monthly demand * EEA safe yield (cfsm)	0.25	0.23	0.25	0.26	0.31	0.34	0.34	0.32	0.29	0.26	0.23	0.24		
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	13%	51%	53%	54%	22%	5%	<1%		
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	21%	59%	58%	57%	21%	3%	<1%		

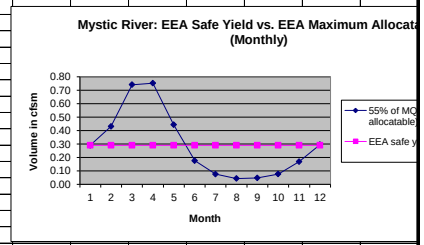


BH Weir	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	Need Drainage Area

MQ50	1.72	2.00	2.67	2.28	1.52	0.66	0.28	0.27	0.27	0.50	1.20	1.63	***1.25***				
MQ90	0.67	0.77	1.22	1.03	0.69	0.26	0.11	0.08	0.08	0.18	0.37	0.59	***0.51***				
MQ95	0.52	0.62	1.00	0.88	0.56	0.20	0.08	0.07	0.04	0.14	0.29	0.51	***0.41***				
MQ98	0.42	0.43	0.86	0.74	0.48	0.14	0.07	0.04	0.02	0.11	0.22	0.41	***0.33***				
MQ99	0.38	0.40	0.72	0.68	0.45	0.12	0.07	0.02	0.02	0.05	0.21	0.35	***0.29***				
MQ99.9+ (lowest flow)	0.34	0.37	0.52	0.52	0.39	0.09	0.03	0.02	0.01	0.02	0.19	0.24	***0.23***				
25% of MQ50	0.43	0.50	0.67	0.57	0.38	0.16	0.07	0.07	0.07	0.13	0.30	0.41	***0.31***				
Ratio 25% MQ50 / MQ90	64%	65%	55%	55%	55%	62%	66%	82%	88%	68%	81%	69%	***67%***				
55% of MQ90 (maximum allocatable)	**0.37**	**0.42**	**0.67**	**0.57**	**0.38**	**0.15**	**0.06**	**0.04**	**0.04**	**0.10**	**0.20**	**0.33**	***0.28***				
EEA safe yield: annual average	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**	**0.28**					
10%/10%/25%/15% of MQ50	0.17			0.23				0.07		0.08			***0.14***	2.0	X		
10%/10%/25%/15% of MQ90	0.07			0.10				0.02		0.03			***0.05***	5.1	X		
25% depletion of AugQ50													***0.07***	4.2	X		
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Safe yield using adjusted demand curve	0.25	0.23	0.25	0.26	0.31	0.34	0.34	0.32	0.29	0.26	0.24	0.24					
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	12%	50%	52%	54%	22%	5%	<1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	18%	56%	57%	55%	20%	3%	<1%					



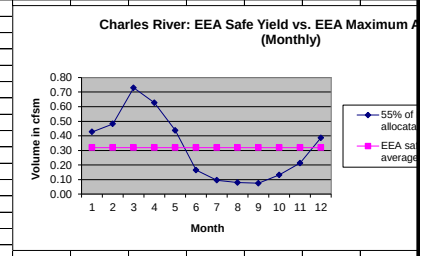
BH Mystic	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	***Ann Avg***	**76.08**		**SY-mgd**	SY+res
MQ50	1.32	1.70	3.03	2.92	1.67	0.80	0.34	0.25	0.24	0.45	1.09	1.41	***1.27***				
MQ90	0.53	0.78	1.35	1.37	0.81	0.32	0.14	0.08	0.09	0.14	0.31	0.54	***0.54***				
MQ95	0.39	0.56	1.11	1.13	0.66	0.26	0.11	0.05	0.07	0.11	0.18	0.39	***0.42***				
MQ98	0.33	0.47	0.73	0.98	0.55	0.18	0.09	0.03	0.03	0.1	0.14	0.25	***0.32***				
MQ99	0.27	0.35	0.56	0.85	0.45	0.14	0.08	0.03	0.02	0.09	0.13	0.21	***0.27***				
MQ99.9+ (lowest flow)	0.21	0.29	0.31	0.46	0.30	0.05	0.03	0.02	0.02	0.08	0.08	0.18	***0.17***				
25% of MQ50	0.33	0.42	0.76	0.73	0.42	0.20	0.08	0.06	0.06	0.11	0.27	0.35	***0.32***			15.58	
Ratio 25% MQ50 / MQ90	63%	54%	56%	53%	52%	63%	61%	77%	68%	79%	89%	65%	***65%***				
55% of MQ90 (maximum allocatable)	**0.29**	**0.43**	**0.74**	**0.75**	**0.44**	**0.18**	**0.08**	**0.04**	**0.05**	**0.08**	**0.17**	**0.30**	***0.29***			14.2	14.8
EEA safe yield: annual average	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	**0.29**	***0.29***				
10%/10%/25%/15% of MQ50	0.13			0.29				0.06		0.07			***0.14***	2.1	X	6.79	7.39
10%/10%/25%/15% of MQ90	0.05			0.14				0.02		0.02			***0.06***	5.1	X	2.83	3.43
25% depletion of AugQ50													***0.06***	4.8	X	3.01	3.61
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.26	0.24	0.26	0.28	0.33	0.36	0.36	0.34	0.31	0.28	0.25	0.26	0.29				
% flows lower than EEA safe yield (constant value)	1%	<1%	0%	0%	0%	8%	43%	59%	61%	36%	9%	3%					
% flows lower than EEA safe yield using adjusted demand	<1%	0%	0%	0%	<1%	14%	53%	64%	65%	36%	8%	2%					



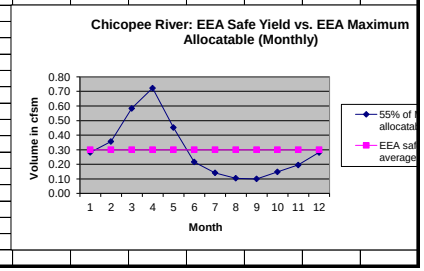
Buzzards Bay

Cape Cod

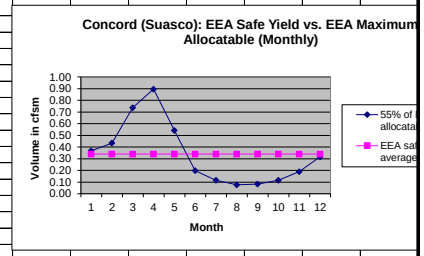
Charles	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	***Ann Avg***	**310.84**		**SY-mgd**	SY+res
MQ50	1.79	2.04	2.60	2.28	1.61	0.77	0.31	0.30	0.30	0.59	1.30	1.71	***1.30***				
MQ90	0.78	0.88	1.32	1.14	0.79	0.30	0.17	0.14	0.14	0.24	0.39	0.70	***0.58***				
MQ95	0.62	0.73	1.11	0.98	0.67	0.25	0.15	0.13	0.09	0.20	0.32	0.60	***0.49***				
MQ98	0.46	0.48	0.97	0.84	0.55	0.21	0.13	0.10	0.07	0.18	0.26	0.44	***0.39***				
MQ99	0.40	0.44	0.82	0.78	0.50	0.19	0.13	0.08	0.06	0.11	0.26	0.37	***0.35***				
MQ99.9+ (lowest flow)	0.35	0.39	0.62	0.62	0.42	0.15	0.08	0.06	0.06	0.07	0.24	0.28	***0.28***				
25% of MQ50	0.45	0.51	0.65	0.57	0.40	0.19	0.08	0.08	0.08	0.15	0.33	0.43	***0.32***			65.29	
Ratio 25% MQ50 / MQ90	57%	58%	49%	50%	51%	64%	45%	52%	55%	61%	84%	61%	***57%***				
55% of MQ90 (maximum allocatable)	0.43	0.48	0.73	0.63	0.44	0.16	0.10	0.08	0.07	0.13	0.21	0.39	***0.32***			64.3	64.8
EEA safe yield: annual average	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	***0.32***				
10%/10%/25%/15% of MQ50	0.18			0.23				0.08		0.09			***0.14***	2.3	X	28.63	29.13
10%/10%/25%/15% of MQ90	0.08			0.11				0.04		0.04			***0.07***	4.9	X	13.24	13.74
25% depletion of AugQ50													***0.08***	4.2	X	15.16	15.66
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.29	0.26	0.29	0.31	0.36	0.39	0.39	0.37	0.34	0.30	0.27	0.28	0.32				
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	14%	52%	54%	55%	23%	6%	<1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	22%	60%	60%	59%	21%	3%	<1%					



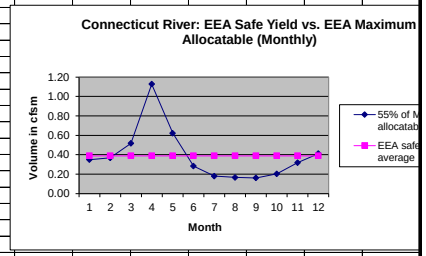
Chicopee[1]	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	***Ann Avg***	**722.25**		**SY-mgd**	SY+res		
MQ50	1.24	1.39	2.61	2.84	1.75	0.87	0.45	0.36	0.35	0.53	1.17	1.37	***1.2434***						
MQ90	0.51	0.65	1.06	1.31	0.82	0.39	0.26	0.19	0.18	0.27	0.35	0.51	***0.54***						
MQ95	0.41	0.52	0.90	1.11	0.68	0.32	0.21	0.18	0.15	0.24	0.30	0.44	***0.46***						
MQ98	0.33	0.44	0.67	0.94	0.58	0.27	0.18	0.13	0.12	0.20	0.26	0.35	***0.37***						
MQ99	0.31	0.40	0.60	0.85	0.50	0.24	0.16	0.11	0.11	0.17	0.26	0.33	***0.34***						
MQ99.9+ (lowest flow)	0.29	0.29	0.52	0.62	0.35	0.18	0.13	0.10	0.10	0.10	0.24	0.26	***0.27***						
25% of MQ50	0.31	0.35	0.65	0.71	0.44	0.22	0.11	0.09	0.09	0.13	0.29	0.34	***0.31***			145.13			
Ratio 25% MQ50 / MQ90	60%	54%	61%	54%	53%	55%	43%	47%	48%	49%	83%	67%	***56%***						
55% of MQ90 (maximum allocatable)	**0.28**	**0.36**	**0.58**	**0.72**	**0.45**	**0.22**	**0.14**	**0.10**	**0.10**	**0.15**	**0.20**	**0.28**	***0.30***			139.20	353.20		
EEA safe yield: annual average	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	**0.30**	***0.30***					35.92256	Quabbin%SY
10%/10%/25%/15% of MQ50	0.12			0.28				0.09		0.08			***0.14***	2.1	X	67.37	281.37		
10%/10%/25%/15% of MQ90	0.05			0.13				0.05		0.04			***0.07***	4.4	X	31.61	245.61		
25% depletion of AugQ50													***0.09***	3.3	X	41.85	255.85		
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%						
Adjusted monthly demand * EEA safe yield (cfsm)	0.27	0.25	0.27	0.28	0.33	0.37	0.37	0.35	0.31	0.28	0.26	0.26	0.30						
% flows lower than EEA safe yield (constant value)	<1%	<1%	0%	0%	0%	4%	24%	39%	31%	19%	6%	<1%							
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	9%	38%	49%	38%	14%	2%	<1%							



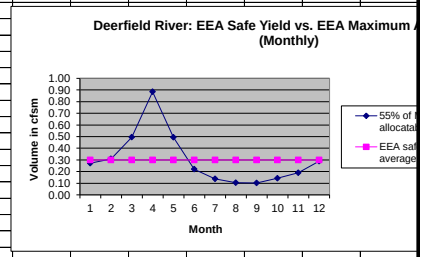
Concord (SuAsCo)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	399.60		SY-mgd
MQ50	1.36	1.61	2.88	3.11	1.87	0.91	0.39	0.29	0.28	0.54	1.28	1.58	***1.34***			
MQ90	0.67	0.79	1.34	1.63	0.99	0.36	0.21	0.14	0.15	0.21	0.34	0.57	***0.62***			
MQ95	0.48	0.56	1.09	1.44	0.82	0.31	0.17	0.12	0.13	0.17	0.26	0.41	***0.50***			
MQ98	0.33	0.48	0.84	1.29	0.70	0.25	0.14	0.08	0.09	0.14	0.21	0.31	***0.41***			
MQ99	0.32	0.44	0.74	1.23	0.63	0.21	0.13	0.07	0.07	0.13	0.20	0.24	***0.37***			
MQ99.9+ (lowest flow)	0.26	0.31	0.34	0.91	0.39	0.16	0.08	0.07	0.06	0.08	0.15	0.17	***0.25***			
25% of MQ50	0.34	0.40	0.72	0.78	0.47	0.23	0.10	0.07	0.07	0.13	0.32	0.39	***0.34***			86.55
Ratio 25% MQ50 / MQ90	51%	51%	54%	48%	47%	63%	46%	51%	46%	64%	93%	69%	***57%***			
55% of MQ90 (maximum allocatable)	0.37	0.43	0.74	0.90	0.54	0.20	0.11	0.08	0.08	0.12	0.19	0.32	***0.34***			**87.4**
EEA safe yield: annual average	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34				
10%/10%/25%/15% of MQ50	0.14			0.31				0.07		0.08			***0.15***	2.3	X	38.67
10%/10%/25%/15% of MQ90	0.07			0.16				0.03		0.03			***0.07***	4.6	X	19.10
25% depletion of AugQ50													***0.07***	4.8	X	18.43
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.30	0.28	0.30	0.32	0.38	0.42	0.41	0.39	0.35	0.32	0.29	0.30	0.34			
% flows lower than EEA safe yield (constant value)	2%	<1%	<1%	0%	0%	8%	43%	61%	65%	32%	10%	3%				
% flows lower than EEA safe yield using adjusted demand	<1%	0%	0%	0%	0%	14%	52%	66%	66%	29%	8%	2%				



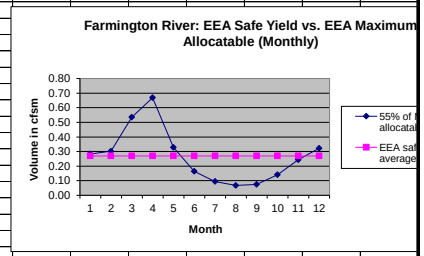
Connecticut (Actual)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	7,369		SY-mgd
MQ50	1.15	1.16	2.00	4.00	2.26	1.20	0.67	0.60	0.59	0.85	1.40	1.43	***1.44***			
MQ90	0.64	0.67	0.94	2.05	1.13	0.52	0.33	0.30	0.30	0.37	0.58	0.75	***0.71***			
MQ95	0.55	0.55	0.75	1.75	0.93	0.42	0.26	0.25	0.24	0.28	0.44	0.63	***0.59***			
MQ98	0.47	0.47	0.62	1.44	0.70	0.34	0.19	0.19	0.17	0.20	0.34	0.47	***0.47***			
MQ99	0.43	0.43	0.56	1.23	0.61	0.27	0.15	0.16	0.14	0.16	0.30	0.40	***0.40***			
MQ99.9+ (lowest flow)	0.31	0.32	0.42	0.53	0.19	0.17	0.10	0.10	0.10	0.10	0.13	0.29	***0.23***			
25% of MQ50	0.29	0.29	0.50	1.00	0.56	0.30	0.17	0.15	0.15	0.21	0.35	0.36	***0.36***			1,715.60
Ratio 25% MQ50 / MQ90	45%	43%	53%	49%	50%	58%	51%	49%	50%	57%	60%	48%	***51%***			
55% of MQ90 (maximum allocatable)	0.35	0.37	0.52	1.13	0.62	0.28	0.18	0.17	0.16	0.20	0.32	0.41	***0.39***			1,866.4
EEA safe yield: annual average	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39				
10%/10%/25%/15% of MQ50	0.11			0.40				0.15		0.13			***0.20***	2.0	X	942.52
10%/10%/25%/15% of MQ90	0.06			0.20				0.08		0.06			***0.10***	3.9	X	476.25
25% depletion of AugQ50													***0.15***	2.6	X	713.73
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.35	0.32	0.35	0.37	0.44	0.48	0.48	0.45	0.41	0.37	0.34	0.34	0.39			
% flows lower than EEA safe yield (constant value)	<1%	<1%	0%	0%	<1%	4%	16%	25%	24%	13%	3%	<1%				
% flows lower than EEA safe yield using adjusted demand	<1%	<1%	0%	0%	<1%	8%	27%	33%	27%	10%	2%	<1%				



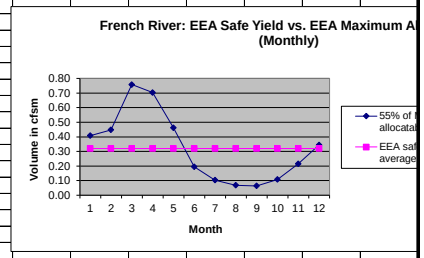
Deerfield	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	663.52		SY-mgd
MQ50	1.19	1.22	2.40	3.44	1.96	0.93	0.44	0.35	0.35	0.52	1.22	1.39	***1.28***			
MQ90	0.50	0.56	0.90	1.61	0.90	0.40	0.25	0.19	0.19	0.26	0.35	0.53	***0.55***			
MQ95	0.42	0.46	0.68	1.31	0.75	0.34	0.22	0.17	0.15	0.20	0.30	0.44	***0.45***			
MQ98	0.31	0.38	0.57	1.10	0.62	0.29	0.19	0.15	0.11	0.16	0.25	0.35	***0.37***			
MQ99	0.30	0.36	0.54	1.02	0.52	0.26	0.18	0.11	0.11	0.13	0.18	0.30	***0.33***			
MQ99.9+ (lowest flow)	0.27	0.19	0.44	0.74	0.42	0.18	0.12	0.10	0.10	0.10	0.14	0.25	***0.25***			
25% of MQ50	0.30	0.31	0.60	0.86	0.49	0.23	0.11	0.09	0.09	0.13	0.31	0.35	***0.32***			137.75
Ratio 25% MQ50 / MQ90	60%	54%	67%	53%	55%	58%	44%	46%	47%	50%	88%	66%	***57%***			
55% of MQ90 (maximum allocatable)	0.27	0.31	0.50	0.88	0.49	0.22	0.14	0.10	0.10	0.14	0.19	0.29	***0.30***			130.0
EEA safe yield: annual average	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30				
10%/10%/25%/15% of MQ50	0.12			0.34				0.09		0.08			***0.16***	1.9	X	67.35
10%/10%/25%/15% of MQ90	0.05			0.16				0.05		0.04			***0.07***	4.1	X	31.85
25% depletion of AugQ50													***0.09***	3.5	X	37.29
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.27	0.25	0.27	0.29	0.34	0.37	0.37	0.35	0.32	0.28	0.26	0.27	0.30			
% flows lower than EEA safe yield (constant value)	2%	<1%	0%	0%	0%	2%	22%	41%	41%	19%	5%	<1%				
% flows lower than EEA safe yield using adjusted demand	<1%	<1%	0%	0%	0%	8%	37%	51%	46%	15%	3%	<1%				



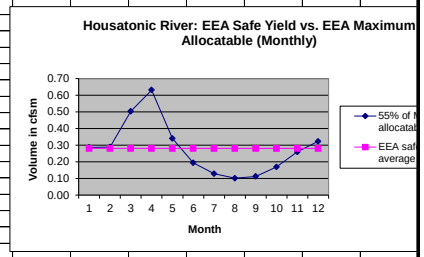
Farmington - State Line	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	151.89		SY-mgd
MQ50	1.15	1.21	2.53	2.92	1.55	0.62	0.38	0.29	0.33	0.57	1.36	1.48	***1.20***			
MQ90	0.52	0.55	0.97	1.22	0.60	0.30	0.17	0.12	0.14	0.26	0.44	0.59	***0.49***			
MQ95	0.46	0.48	0.76	1.00	0.49	0.24	0.14	0.10	0.12	0.21	0.37	0.48	***0.40***			
MQ98	0.32	0.43	0.62	0.82	0.41	0.20	0.11	0.07	0.05	0.17	0.29	0.41	***0.33***			
MQ99	0.30	0.38	0.51	0.75	0.36	0.19	0.08	0.06	0.05	0.13	0.26	0.35	***0.29***			
MQ99.9+ (lowest flow)	0.25	0.28	0.33	0.65	0.26	0.16	0.04	0.05	0.04	0.12	0.20	0.24	***0.22***			
25% of MQ50	0.29	0.30	0.63	0.73	0.39	0.15	0.10	0.07	0.08	0.14	0.34	0.37	***0.30***			29.43
Ratio 25% MQ50 / MQ90	56%	55%	65%	60%	65%	52%	56%	58%	61%	55%	77%	63%	***60%***			
55% of MQ90 (maximum allocatable)	0.28	0.30	0.54	0.67	0.33	0.16	0.09	0.07	0.07	0.14	0.24	0.32	***0.27***			25.30
EEA safe yield: annual average	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27				
10%/10%/25%/15% of MQ50	0.12			0.29				0.07		0.08			***0.14***	1.9	X	13.84
10%/10%/25%/15% of MQ90	0.05			0.12				0.03		0.04			***0.06***	4.4	X	5.94
25% depletion of AugQ50													***0.07***	3.8	X	7.01
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.24	0.22	0.24	0.26	0.30	0.33	0.33	0.31	0.28	0.25	0.23	0.24	0.27			
% flows lower than EEA safe yield (constant value)	<1%	0%	0%	0%	<1%	7%	33%	47%	40%	13%	1%	<1%				
% flows lower than EEA safe yield using adjusted demand	<1%	0%	0%	0%	1%	14%	43%	55%	42%	10%	<1%	<1%				



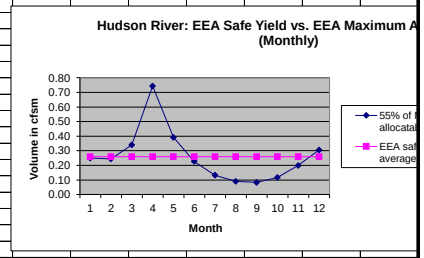
French - State Line	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	94.68		SY-mgd	
MQ50	1.63	1.90	2.91	2.70	1.65	0.80	0.38	0.29	0.28	0.47	0.99	1.54	***1.30***				
MQ90	0.74	0.81	1.38	1.28	0.84	0.35	0.19	0.12	0.12	0.20	0.39	0.63	***0.59***				
MQ95	0.61	0.69	1.17	1.14	0.69	0.30	0.15	0.11	0.07	0.15	0.27	0.52	***0.49***				
MQ98	0.53	0.59	0.93	1.00	0.59	0.25	0.12	0.06	0.05	0.12	0.20	0.40	***0.40***				
MQ99	0.50	0.55	0.72	0.95	0.50	0.22	0.11	0.05	0.04	0.11	0.16	0.32	***0.35***				
MQ99.9+ (lowest flow)	0.34	0.53	0.46	0.84	0.41	0.17	0.05	0.04	0.04	0.06	0.12	0.23	***0.27***				
25% of MQ50	0.41	0.48	0.73	0.67	0.41	0.20	0.10	0.07	0.07	0.12	0.25	0.39	***0.32***			19.83	
Ratio 25% MQ50 / MQ90	55%	58%	53%	53%	49%	57%	51%	59%	61%	60%	64%	62%	***57%***				
55% of MQ90 (maximum allocatable)	0.41	0.45	0.76	0.70	0.46	0.19	0.10	0.07	0.06	0.11	0.21	0.34	***0.32***			19.7	
EEA safe yield: annual average	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32					
10%/10%/25%/15% of MQ50	0.16			0.27				0.07		0.07			***0.14***	2.2	X	8.81	
10%/10%/25%/15% of MQ90	0.07			0.13				0.03		0.03			***0.07***	4.9	X	4.01	
25% depletion of AugQ50													***0.07***	4.5	X	4.43	
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.29	0.27	0.29	0.31	0.36	0.40	0.39	0.37	0.34	0.30	0.28	0.28	0.32				
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	7%	41%	55%	57%	27%	7%	1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	13%	52%	62%	60%	24%	5%	<1%					



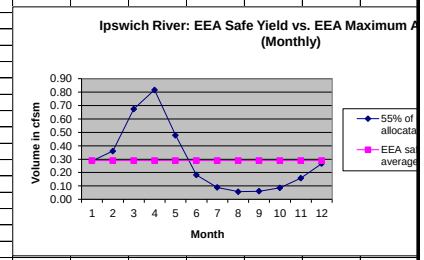
Housatonic	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	500.24		SY-mgd	SY+res
MQ50	1.12	1.17	2.22	2.46	1.49	0.65	0.46	0.37	0.39	0.57	1.26	1.40	***1.13***				
MQ90	0.52	0.53	0.91	1.15	0.62	0.35	0.23	0.19	0.20	0.31	0.47	0.59	***0.51***				
MQ95	0.47	0.50	0.73	0.99	0.50	0.31	0.20	0.15	0.18	0.27	0.40	0.49					
MQ98	0.36	0.47	0.56	0.85	0.46	0.28	0.19	0.12	0.11	0.24	0.29	0.40					
MQ99	0.35	0.41	0.52	0.76	0.41	0.26	0.17	0.11	0.10	0.21	0.22	0.33					
MQ99.9+ (lowest flow)	0.30	0.29	0.38	0.62	0.34	0.22	0.10	0.10	0.10	0.18	0.21	0.26					
25% of MQ50	0.28	0.29	0.56	0.61	0.37	0.16	0.11	0.09	0.10	0.14	0.32	0.35	***0.28***			91.40	
Ratio 25% MQ50 / MQ90	54%	56%	61%	54%	60%	46%	49%	51%	47%	46%	67%	60%	***54%***				
55% of MQ90 (maximum allocatable)	0.29	0.29	0.50	0.63	0.34	0.19	0.13	0.10	0.11	0.17	0.26	0.32	***0.28***			87.58	87.7
EEA safe yield: annual average	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28					
10%/10%/25%/15% of MQ50	0.11			0.25				0.09		0.09			***0.13***	2.1	X	43.44	43.56
10%/10%/25%/15% of MQ90	0.05			0.11				0.05		0.05			***0.06***	4.3	X	20.97	21.09
25% depletion of AugQ50													***0.09***	3.0	X	30.31	30.43
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.25	0.23	0.25	0.27	0.31	0.34	0.34	0.32	0.29	0.26	0.24	0.24	0.28				
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	3%	21%	29%	26%	7%	2%	<1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	8%	34%	39%	28%	4%	2%	0%					



Hudson - State Line	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	219.86		SY-mgd	
MQ50	0.92	0.96	2.07	2.92	1.68	0.81	0.43	0.34	0.34	0.49	1.13	1.31	***1.12***				
MQ90	0.45	0.44	0.62	1.35	0.71	0.41	0.24	0.16	0.15	0.21	0.36	0.55	***0.47***				
MQ95	0.39	0.41	0.48	1.16	0.57	0.35	0.20	0.14	0.13	0.16	0.26	0.46	***0.39***				
MQ98	0.27	0.30	0.45	0.99	0.47	0.29	0.17	0.09	0.07	0.13	0.19	0.38	***0.32***				
MQ99	0.24	0.30	0.42	0.81	0.45	0.28	0.16	0.08	0.06	0.11	0.14	0.21	***0.27***				
MQ99.9+ (lowest flow)	0.22	0.20	0.24	0.48	0.40	0.22	0.10	0.06	0.06	0.07	0.07	0.12	***0.19***				
25% of MQ50	0.23	0.24	0.52	0.73	0.42	0.20	0.11	0.08	0.08	0.12	0.28	0.33	***0.28***			39.66	
Ratio 25% MQ50 / MQ90	51%	54%	84%	54%	59%	49%	45%	52%	56%	57%	78%	59%	***58%***				
55% of MQ90 (maximum allocatable)	0.25	0.24	0.34	0.74	0.39	0.23	0.13	0.09	0.08	0.12	0.20	0.31	***0.26***			37.00	
EEA safe yield: annual average	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	***0.26***				
10%/10%/25%/15% of MQ50	0.09			0.29				0.08		0.07			***0.14***	1.9	X	19.25	
10%/10%/25%/15% of MQ90	0.05			0.14				0.04		0.03			***0.06***	4.1	X	9.01	
25% depletion of AugQ50													***0.08***	3.1	X	12.08	
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.23	0.21	0.23	0.25	0.29	0.32	0.32	0.30	0.27	0.24	0.22	0.23	0.26				
% flows lower than EEA safe yield (constant value)	2%	<1%	<1%	0%	0%	<1%	14%	32%	38%	19%	5%	1%					
% flows lower than EEA safe yield using adjusted demand	<1%	<1%	0%	0%	0%	4%	27%	42%	40%	16%	4%	1%					

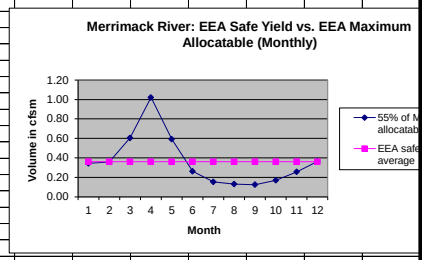


Ipswich[1]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	155.31		SY-mgd	
MQ50	1.32	1.53	2.81	3.09	1.85	0.90	0.40	0.26	0.22	0.43	1.22	1.43	***1.29***				
MQ90	0.52	0.65	1.22	1.48	0.87	0.33	0.16	0.10	0.11	0.16	0.29	0.49	***0.53***				
MQ95	0.33	0.52	0.97	1.27	0.75	0.26	0.13	0.09	0.09	0.12	0.22	0.37	***0.43***				
MQ98	0.27	0.43	0.85	1.01	0.63	0.21	0.10	0.06	0.05	0.10	0.16	0.25	***0.34***				
MQ99	0.24	0.35	0.65	0.91	0.58	0.17	0.05	0.06	0.04	0.05	0.16	0.21	***0.29***				
MQ99.9+ (lowest flow)	0.21	0.22	0.43	0.60	0.44	0.11	0.04	0.05	0.04	0.04	0.15	0.17	***0.21***				
25% of MQ50	0.33	0.38	0.70	0.77	0.46	0.23	0.10	0.06	0.05	0.11	0.30	0.36	***0.32***			32.33	
Ratio 25% MQ50 / MQ90	63%	58%	57%	52%	53%	68%	61%	61%	49%	68%	106%	74%	***64%***				
55% of MQ90 (maximum allocatable)	0.29	0.36	0.67	0.82	0.48	0.18	0.09	0.06	0.06	0.09	0.16	0.27	***0.29***			29.44	
EEA safe yield: annual average	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	***0.29***				
10%/10%/25%/15% of MQ50	0.13			0.31				0.06		0.06			***0.14***	2.1	X	14.29	
10%/10%/25%/15% of MQ90	0.05			0.15				0.03		0.02			***0.06***	4.7	X	6.28	
25% depletion of AugQ50													***0.06***	4.6	X	6.42	
90%/90%/75%/85% of MQ50 retention in stream	1.19			2.78				0.19		0.36			***1.13***				
90%/90%/75%/85% of MQ90 retention instream	0.47			1.33				0.08		0.13			***0.50***				
20% depletion of Q90 drought figures	0.10	0.13	0.24	0.30	0.17	0.07	0.03	0.02	0.02	0.03	0.06	0.10	***0.11***				
Monthly demand curve (USGS)	89.2	82.3	89.5	95.3	111.5	123.1	122.2	115.5	104.6	93.7	85.4	87.7	100				
monthly % demand * sy	26.15	24.13	26.24	27.94	32.69	36.09	35.83	33.86	30.67	27.47	25.04	25.71	29.32				
% flows lower than EEA safe yield (constant value)	3%	<1%	0%	0%	0%	7%	36%	57%	65%	35%	10%	3%					
% flows lower than EEA safe yield using adjusted demand	2%	<1%	0%	0%	0%	12%	45%	64%	67%	32%	7%	2%					

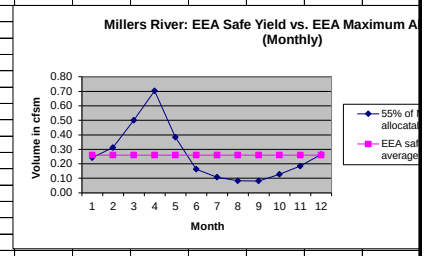


Islands

Merrimack (Actual)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	3,902		SY-mgd	
MQ50	1.27	1.38	2.20	3.88	2.24	1.10	0.56	0.46	0.44	0.68	1.27	1.44	***1.41***				
MQ90	0.62	0.65	1.10	1.86	1.07	0.47	0.28	0.24	0.23	0.31	0.47	0.66	***0.66***				
MQ95	0.48	0.53	0.87	1.59	0.90	0.37	0.22	0.19	0.18	0.25	0.37	0.53					
MQ98	0.40	0.45	0.67	1.34	0.77	0.29	0.16	0.12	0.11	0.18	0.30	0.43					
MQ99	0.65	0.38	0.53	1.12	0.68	0.25	0.11	0.08	0.10	0.13	0.19	0.34					
MQ99.9+ (lowest flow)	0.26	0.18	0.34	0.54	0.39	0.14	0.05	0.05	0.05	0.05	0.09	0.14					
25% of MQ50	0.32	0.34	0.55	0.97	0.56	0.27	0.14	0.11	0.11	0.17	0.32	0.36	***0.35***			888.61	
Ratio 25% MQ50 / MQ90	51%	53%	50%	52%	52%	58%	50%	48%	49%	55%	68%	54%	***53%***				
55% of MQ90 (maximum allocatable)	0.34	0.36	0.60	1.02	0.59	0.26	0.15	0.13	0.12	0.17	0.26	0.36	***0.36***			917.1	
EEA safe yield: annual average	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36					
10%/10%/25%/15% of MQ50	0.13			0.39				0.11		0.10			***0.18***	2.0	X	460.59	
10%/10%/25%/15% of MQ90	0.06			0.19				0.06		0.05			***0.09***	4.1	X	222.37	
25% depletion of AugQ50													***0.11***	3.2	X	287.06	
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.32	0.30	0.33	0.35	0.41	0.45	0.44	0.42	0.38	0.34	0.31	0.32	0.36				
% flows lower than EEA safe yield (constant value)	1%	<1%	<1%	0%	0%	5%	27%	36%	37%	16%	5%	1%					
% flows lower than EEA safe yield using adjusted demand	<1%	<1%	0%	0%	<1%	9%	39%	45%	41%	13%	3%	<1%					

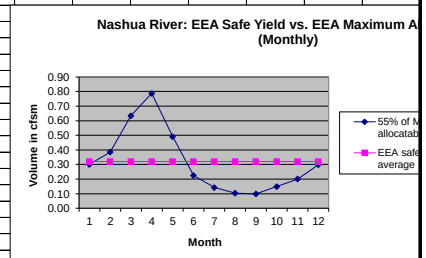


Millers	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	389.13		SY-mgd	
MQ50	1.11	1.23	2.24	2.95	1.63	0.84	0.39	0.33	0.33	0.53	1.11	1.29	***1.16***				
MQ90	0.44	0.57	0.91	1.28	0.70	0.30	0.20	0.15	0.15	0.23	0.34	0.48	***0.48***				
MQ95	0.34	0.43	0.74	1.05	0.54	0.25	0.16	0.14	0.12	0.20	0.26	0.40	***0.39***				
MQ98	0.24	0.34	0.56	0.92	0.44	0.21	0.14	0.09	0.08	0.16	0.22	0.27	***0.31***				
MQ99	0.22	0.32	0.46	0.80	0.40	0.19	0.13	0.08	0.07	0.16	0.21	0.23	***0.27***				
MQ99.9+ (lowest flow)	0.19	0.22	0.41	0.58	0.32	0.16	0.08	0.07	0.07	0.09	0.15	0.22	***0.21***				
25% of MQ50	0.28	0.31	0.56	0.74	0.41	0.21	0.10	0.08	0.08	0.13	0.28	0.32	***0.29***			73.17	
Ratio 25% MQ50 / MQ90	63%	54%	61%	58%	59%	71%	49%	54%	55%	56%	83%	67%	***61%***				
55% of MQ90 (maximum allocatable)	0.24	0.31	0.50	0.70	0.38	0.16	0.11	0.08	0.08	0.13	0.18	0.26	***0.26***			66.1	
EEA safe yield: annual average	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	***0.26***				
10%/10%/25%/15% of MQ50	0.11			0.29				0.08		0.08			***0.14***	1.9	X	35.56	
10%/10%/25%/15% of MQ90	0.04			0.13				0.04		0.03			***0.06***	4.2	X	15.41	
25% depletion of AugQ50													***0.08***	1.7	X	20.48	
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.23	0.22	0.24	0.25	0.29	0.32	0.32	0.30	0.28	0.25	0.22	0.23	0.26				
% flows lower than EEA safe yield (constant value)	3%	<1%	0%	0%	0%	7%	25%	38%	35%	14%	5%	2%					
% flows lower than EEA safe yield using adjusted demand	2%	<1%	0%	0%	0%	12%	40%	46%	40%	13%	2%	1%					



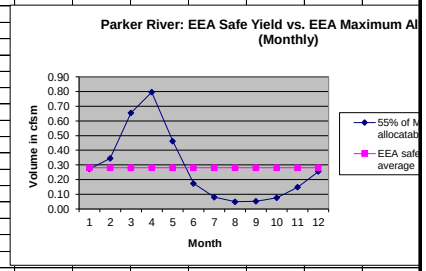
Narr-Mt. Hope Bay														111.85	12.60		
Nashua - State line[1]	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	507.84		SY-mgd	SY+res
MQ50	1.35	1.51	2.87	3.12	1.91	0.94	0.47	0.37	0.36	0.57	1.27	1.49	***1.35***				
MQ90	0.55	0.70	1.15	1.43	0.89	0.41	0.26	0.19	0.18	0.27	0.37	0.54	***0.58***				
MQ95	0.43	0.56	0.97	1.21	0.73	0.33	0.21	0.17	0.14	0.24	0.30	0.46	***0.48***				
MQ98	0.34	0.46	0.72	1.02	0.62	0.27	0.18	0.12	0.11	0.20	0.27	0.36	***0.39***				
MQ99	0.32	0.42	0.65	0.92	0.53	0.24	0.16	0.10	0.11	0.16	0.26	0.34	***0.35***				
MQ99.9+ (lowest flow)	0.30	0.30	0.55	0.67	0.36	0.17	0.12	0.09	0.09	0.09	0.24	0.26	***0.27***				
25% of MQ50	0.34	0.38	0.72	0.78	0.48	0.24	0.12	0.09	0.09	0.14	0.32	0.37	***0.34***			110.98	
Ratio 25% MQ50 / MQ90	62%	54%	62%	54%	54%	58%	45%	49%	51%	52%	87%	69%	***58%***				
55% of MQ90 (maximum allocatable)	0.30	0.38	0.63	0.79	0.49	0.22	0.14	0.10	0.10	0.15	0.20	0.30	***0.3177***			116.8	255.60
EEA safe yield: annual average	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32					
10%/10%/25%/15% of MQ50	0.14			0.31				0.09		0.09			***0.16***	2.0	X	51.24	190.04
10%/10%/25%/15% of MQ90	0.05			0.14				0.05		0.04			***0.07***	4.5	X	23.41	162.21
25% depletion of AugQ50													***0.09***	3.4	X	30.33	169.13
USGS monthly demand % of total annual demand	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.28	0.26	0.28	0.30	0.35	0.39	0.39	0.37	0.33	0.30	0.27	0.28	0.32				
% flows lower than EEA safe yield (constant value)	2%	<1%	0%	0%	0%	4%	26%	42%	43%	22%	7%	<1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	0%	9%	40%	51%	45%	18%	2%	<1%					

Check Annualization	
115.73	
0.3171	cfsm
104.08	mgd
242.88	mgd w/reserv cr.
21.97596	Wachusett

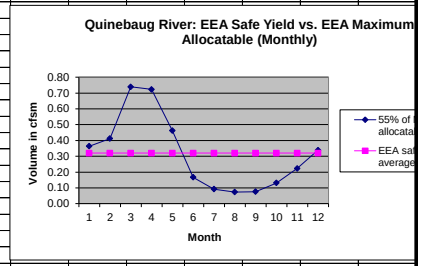


North Coastal																	
Parker	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	81.79		SY-mgd	
MQ50	1.29	1.49	2.80	3.09	1.82	0.87	0.38	0.24	0.20	0.41	1.18	1.40	***1.26***	should be 62.93 sq.mi.			
MQ90	0.50	0.63	1.19	1.45	0.84	0.32	0.14	0.09	0.10	0.14	0.27	0.46	***0.51***				
MQ95	0.32	0.49	0.94	1.24	0.72	0.24	0.11	0.08	0.08	0.10	0.20	0.35	***0.41***				
MQ98	0.25	0.41	0.82	0.98	0.60	0.20	0.08	0.05	0.04	0.08	0.14	0.24	***0.32***				
MQ99	0.23	0.32	0.62	0.88	0.55	0.15	0.04	0.04	0.03	0.04	0.14	0.19	***0.27***				
MQ99.9+ (lowest flow)	0.19	0.21	0.41	0.57	0.42	0.09	0.03	0.03	0.03	0.03	0.13	0.15	***0.19***				
25% of MQ50	0.32	0.37	0.70	0.77	0.46	0.22	0.09	0.06	0.05	0.10	0.30	0.35	***0.32***			16.71	
Ratio 25% MQ50 / MQ90 (%_	65%	60%	59%	53%	54%	69%	65%	67%	53%	73%	110%	75%	***67%***				
55% of MQ90 (maximum allocatable)	0.27	0.34	0.65	0.80	0.46	0.17	0.08	0.05	0.05	0.08	0.15	0.26	***0.28***			14.8	
EEA safe yield: annual average	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28				
10%/10%/25%/15% of MQ50	0.13			0.31				0.06		0.06			***0.14***	2.0	X	7.38	
10%/10%/25%/15% of MQ90	0.05			0.14				0.02		0.02			***0.06***	4.7	X	3.14	
25% depletion of AugQ50													***0.06***	4.7	X	3.15	
USGS Monthly Demand (% of avg ann demand)	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
monthly demand curve * sy	0.25	0.23	0.25	0.27	0.31	0.34	0.34	0.32	0.29	0.26	0.24	0.25	0.28			0.82	at Byfield
% flows lower than EEA safe yield (constant value)	3%	<1%	0%	0%	0%	8%	63%	59%	67%	37%	11%	3%				2.42	excluding salt marsh/estuary/barrier beach
% flows lower than EEA safe yield using adjusted demand	2%	<1%	0%	0%	0%	12%	66%	64%	67%	33%	8%	2%					

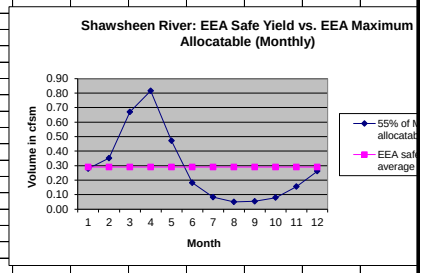
0.180995	
14.80362	
3.855204	



Quinebaug - State Line	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	153.83		SY-mgd	SY+res
MQ50	1.63	1.81	2.81	2.58	1.70	0.80	0.37	0.30	0.32	0.60	1.08	1.57	***1.30***				
MQ90	0.66	0.75	1.34	1.31	0.84	0.30	0.17	0.13	0.14	0.24	0.40	0.62	***0.58***				
MQ95	0.55	0.61	1.15	1.17	0.65	0.26	0.14	0.12	0.10	0.19	0.28	0.49	***0.48***				
MQ98	0.43	0.51	0.89	1.05	0.52	0.21	0.12	0.07	0.06	0.15	0.18	0.37	***0.38***				
MQ99	0.35	0.46	0.75	0.92	0.46	0.19	0.09	0.06	0.05	0.13	0.13	0.32	***0.33***				
MQ99.9+ (lowest flow)	0.33	0.33	0.52	0.80	0.34	0.13	0.06	0.05	0.05	0.08	0.10	0.18	***0.25***				
25% of MQ50	0.41	0.45	0.70	0.64	0.43	0.20	0.09	0.07	0.08	0.15	0.27	0.39	***0.32***			32.20	
Ratio 25% MQ50 / MQ90	62%	60%	52%	49%	51%	66%	54%	55%	57%	62%	66%	64%	***58%***				
55% of MQ90 (maximum allocatable)	0.36	0.41	0.74	0.72	0.46	0.17	0.09	0.07	0.08	0.13	0.22	0.34	***0.32***			31.5	31.9
EEA safe yield: annual average	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32					
10%/10%/25%/15% of MQ50	0.16			0.26				0.07		0.09			***0.15***	2.2	X	14.54	14.94
10%/10%/25%/15% of MQ90	0.07			0.13				0.03		0.04			***0.07***	4.7	X	6.64	7.04
25% depletion of AugQ50													***0.07***	4.3	X	7.36	7.76
USGS Monthly Demand (% of avg ann demand)	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%				
Adjusted monthly demand * EEA safe yield (cfsm)	0.28	0.26	0.28	0.30	0.35	0.39	0.39	0.37	0.33	0.30	0.27	0.28	0.32				
% flows lower than EEA safe yield (constant value)	0%	0%	0%	0%	0%	12%	42%	55%	51%	21%	7%	1%					
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	<1%	18%	55%	62%	53%	18%	5%	<1%					

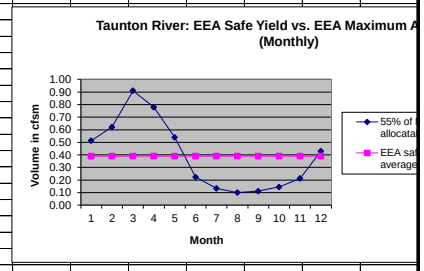


Shawsheen	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	78.08		SY-mgd
MQ50	1.32	1.53	2.77	3.05	1.87	0.89	0.39	0.25	0.21	0.42	1.21	1.43	***1.28***			
MQ90	0.51	0.64	1.22	1.48	0.86	0.33	0.15	0.09	0.10	0.14	0.28	0.48	***0.52***			
MQ95	0.33	0.51	0.96	1.26	0.74	0.26	0.11	0.08	0.08	0.10	0.21	0.37	***0.42***			
MQ98	0.26	0.42	0.84	1.00	0.61	0.21	0.08	0.05	0.04	0.09	0.14	0.25	***0.33***			
MQ99	0.24	0.33	0.63	0.90	0.56	0.16	0.04	0.04	0.03	0.04	0.14	0.20	***0.28***			
MQ99.9+ (lowest flow)	0.20	0.22	0.43	0.58	0.44	0.10	0.03	0.03	0.03	0.03	0.14	0.15	***0.20***			
25% of MQ50	0.33	0.38	0.69	0.76	0.47	0.22	0.10	0.06	0.05	0.11	0.30	0.36	***0.32***			16.13
Ratio 25% MQ50 / MQ90	65%	60%	57%	51%	54%	67%	65%	68%	53%	73%	107%	75%	***66%***			
55% of MQ90 (maximum allocatable)	0.28	0.35	0.67	0.82	0.47	0.18	0.08	0.05	0.05	0.08	0.16	0.26	***0.29***			14.5
EEA safe yield: annual average	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29				
10%/10%/25%/15% of MQ50	0.13			0.31				0.06		0.06			***0.14***	2.0	X	7.10
10%/10%/25%/15% of MQ90	0.05			0.15				0.02		0.02			***0.06***	4.7	X	3.08
25% depletion of AugQ50													***0.06***	4.6	X	3.16
USGS Monthly Demand (% of avg ann demand)	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.26	0.24	0.26	0.27	0.32	0.35	0.35	0.33	0.30	0.27	0.25	0.25	0.29			
% flows lower than EEA safe yield (constant value)*	3%	<1%	0%	0%	0%	7%	37%	58%	65%	36%	10%	3%				
% flows lower than EEA safe yield using adjusted demand	2%	<1%	0%	0%	0%	11%	45%	64%	66%	32%	8%	2%				

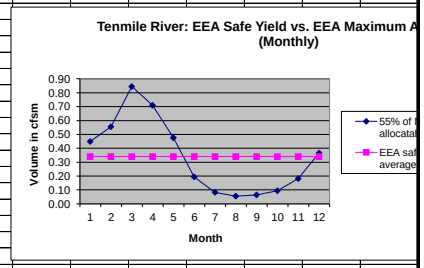


South Coastal

Taunton	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	529.76		SY-mgd
MQ50	1.94	2.27	2.90	2.73	1.84	0.98	0.43	0.39	0.36	0.56	1.24	1.84	***1.46***			
MQ90	0.93	1.13	1.66	1.42	0.98	0.41	0.24	0.18	0.20	0.26	0.39	0.78	***0.72***			
MQ95	0.61	0.84	1.36	1.18	0.81	0.31	0.20	0.15	0.18	0.23	0.32	0.50	***0.56***			
MQ98	0.44	0.67	1.20	0.96	0.72	0.26	0.18	0.12	0.11	0.19	0.29	0.39	***0.46***			
MQ99	0.42	0.54	1.08	0.89	0.60	0.22	0.16	0.11	0.10	0.17	0.26	0.34	***0.41***			
MQ99.9+ (lowest flow)	0.38	0.38	0.70	0.67	0.41	0.12	0.13	0.10	0.09	0.13	0.17	0.27	***0.30***			
25% of MQ50	0.48	0.57	0.72	0.68	0.46	0.25	0.11	0.10	0.09	0.14	0.31	0.46	***0.36***			124.72
Ratio 25% MQ50 / MQ90	52%	50%	44%	48%	47%	61%	44%	54%	45%	53%	80%	59%	***53%***			
55% of MQ90 (maximum allocatable)	0.51	0.62	0.91	0.78	0.54	0.22	0.13	0.10	0.11	0.14	0.21	0.43	***0.39***			134.3
EEA safe yield: annual average	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39				
10%/10%/25%/15% of MQ50	0.19			0.27				0.10		0.08			***0.16***	2.4	X	55.55
10%/10%/25%/15% of MQ90	0.09			0.14				0.05		0.04			***0.08***	4.9	X	27.40
25% depletion of AugQ50													***0.10***	4.0	X	33.69
USGS Monthly Demand (% of avg ann demand)	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.35	0.32	0.35	0.37	0.44	0.48	0.48	0.45	0.41	0.37	0.34	0.35	0.39			
% flows lower than EEA safe yield (constant value)*	<1%	<1%	0%	0%	0%	9%	44%	50%	56%	34%	10%	2%				
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	<1%	15%	55%	57%	59%	31%	7%	1%				



Tenmile - State line	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	*Ann Avg*	48.62		SY-mgd
MQ50	1.83	2.20	2.95	2.76	1.73	0.87	0.38	0.34	0.30	0.48	1.12	1.73	***1.39***			
MQ90	0.81	1.01	1.54	1.29	0.86	0.35	0.15	0.10	0.12	0.17	0.33	0.66	***0.62***			
MQ95	0.52	0.72	1.23	1.06	0.69	0.23	0.12	0.07	0.09	0.14	0.24	0.44	***0.46***			
MQ98	0.39	0.57	1.07	0.84	0.60	0.17	0.10	0.04	0.04	0.10	0.20	0.33	***0.37***			
MQ99	0.37	0.47	0.96	0.77	0.51	0.13	0.08	0.04	0.03	0.09	0.07	0.27	***0.32***			
MQ99.9+ (lowest flow)	0.31	0.33	0.59	0.56	0.36	0.04	0.05	0.03	0.03	0.05	0.09	0.18	***0.22***			
25% of MQ50	0.46	0.55	0.74	0.69	0.43	0.22	0.09	0.08	0.08	0.12	0.28	0.43	***0.35***			10.93
Ratio 25% MQ50 / MQ90	56%	54%	48%	54%	50%	62%	63%	84%	65%	71%	85%	65%	***63%***			
55% of MQ90 (maximum allocatable)	0.45	0.56	0.84	0.71	0.48	0.19	0.08	0.06	0.06	0.09	0.18	0.37	***0.34***			10.65
EEA safe yield: annual average	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34				
10%/10%/25%/15% of MQ50	0.18			0.28				0.08		0.07			***0.15***	2.2	X	4.84
10%/10%/25%/15% of MQ90	0.08			0.13				0.03		0.03			***0.07***	5.2	X	2.05
25% depletion of AugQ50													***0.08***	4.0	X	2.64
USGS Monthly Demand (% of avg ann demand)	89%	82%	90%	95%	112%	123%	122%	116%	105%	94%	85%	88%	100%			
Adjusted monthly demand * EEA safe yield (cfsm)	0.30	0.28	0.30	0.32	0.38	0.42	0.41	0.39	0.35	0.32	0.29	0.30	0.34			
% flows lower than EEA safe yield (constant value)*	<1%	<1%	0%	0%	0%	10%	47%	51%	57%	35%	11%	2%				
% flows lower than EEA safe yield using adjusted demand	0%	0%	0%	0%	<1%	15%	54%	56%	58%	32%	7%	2%				



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