

HEFR outputs using BrightLine HydroSep

Sept 15, 2011

NRL and FRC only

Thoughts

- Compare to outputs from
 - Nueces BBEST Preliminary HEFR Outputs 20110809.pp
- Be careful to compare equal frequencies in HFPs (e.g., 1 per year from each file) – the runs don't have the exact same selections.
- Using BrightLine, none of the NRL or FRC simulations had a 3/sea event, therefore none would have a 4/sea event, so that row isn't shown.

Overbank Events	Qp: 15,600 cfs with Average Frequency 1 per 5 years Regressed Volume is 40,582 to 267,011 (104,096) Regressed Duration is 12 to 119 (38)											
	Qp: 4,750 cfs with Average Frequency 1 per 2 years Regressed Volume is 13,059 to 85,358 (33,387) Regressed Duration is 7 to 67 (22)											
High Flow Pulses	Qp: 2,220 cfs with Average Frequency 1 per year Regressed Volume is 6,318 to 41,189 (16,132) Regressed Duration is 5 to 46 (15)											
	Qp: 393 cfs with Average Frequency 1 per season Regressed Volume is 1,263 to 6,216 (2,802) Regressed Duration is 2 to 16 (6)						Qp: 170 cfs with Average Frequency 1 per season Regressed Volume is 475 to 2,968 (1,188) Regressed Duration is 1 to 12 (4)					
Base Flows (cfs)	93 (43.1%)			92 (43.1%)			81 (39.6%)			117 (41.7%)		
	69 (61.2%)			67 (61.6%)			52 (53.9%)			73 (58.0%)		
	51 (78.9%)			48 (79.1%)			35 (68.5%)			46 (74.3%)		
Subsistence Flows (cfs)	14 (98.1%)			20 (98.6%)			17 (91.3%)			13 (95.7%)		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Winter				Spring				Summer			Fall	

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1924 to 12/31/2009.

Overbank Events	Qp: 15,600 cfs with Average Frequency 1 per 5 years Regressed Volume is 32,259 to 207,922 (81,899) Regressed Duration is 8 to 78 (25)																																		
	Qp: 4,450 cfs with Average Frequency 1 per 2 years Regressed Volume is 10,211 to 64,928 (25,748) Regressed Duration is 5 to 46 (15)																																		
High Flow Pulses	Qp: 1,910 cfs with Average Frequency 1 per year Regressed Volume is 4,692 to 29,676 (11,800) Regressed Duration is 4 to 33 (11)																																		
	Qp: 358 cfs with Average Frequency 1 per season Regressed Volume is 1,002 to 4,830 (2,200) Regressed Duration is 2 to 12 (5)						Qp: 145 cfs with Average Frequency 1 per season Regressed Volume is 356 to 2,018 (848) Regressed Duration is 1 to 10 (3)																												
	86 (36.5%)			86 (38.3%)			69 (35.4%)			115 (36.4%)																									
	62 (55.9%)			62 (58.5%)			43 (51.6%)			62 (53.2%)																									
41 (75.5%)			39 (78.4%)			27 (68.5%)			37 (69.9%)																										
Base Flows (cfs)	10 (97.3%)																																		
	16 (99.0%)																																		
Subsistence Flows (cfs)	14 (92.0%)																																		
	8.9 (94.1%)																																		
Dec			Jan			Feb			Mar			Apr			May			Jun			Jul			Aug			Sep			Oct			Nov		
Winter						Spring						Summer						Fall																	

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1924 to 12/31/1969.

Overbank Events	Qp: 16,800 cfs with Average Frequency 1 per 5 years Regressed Volume is 53,249 to 358,742 (138,212) Regressed Duration is 18 to 180 (58)											
High Flow Pulses	Qp: 5,650 cfs with Average Frequency 1 per 2 years Regressed Volume is 18,445 to 122,717 (47,577) Regressed Duration is 10 to 99 (32)											
	Qp: 2,730 cfs with Average Frequency 1 per year Regressed Volume is 9,077 to 60,059 (23,348) Regressed Duration is 7 to 66 (21)											
	Qp: 404 cfs with Average Frequency 1 per season Regressed Volume is 1,574 to 7,645 (3,468) Regressed Duration is 3 to 20 (7)						Qp: 311 cfs with Average Frequency 1 per season Regressed Volume is 943 to 6,489 (2,473) Regressed Duration is 2 to 17 (6)					
Base Flows (cfs)	99 (52.0%)			97 (50.4%)			93 (44.4%)			119 (48.1%)		
	77 (68.0%)			72 (65.5%)			66 (56.5%)			82 (63.9%)		
	62 (84.7%)			56 (81.0%)			47 (68.0%)			57 (79.4%)		
Subsistence Flows (cfs)	1 (100.0%)			29 (98.5%)			22 (90.5%)			29 (97.8%)		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	Winter			Spring			Summer			Fall		

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1970 to 12/31/2009.

Overbank Events	Qp: 8,860 cfs with Average Frequency 1 per 5 years Regressed Volume is 23,222 to 182,790 (65,152) Regressed Duration is 10 to 114 (34)											
	Qp: 4,870 cfs with Average Frequency 1 per 2 years Regressed Volume is 12,565 to 98,506 (35,181) Regressed Duration is 7 to 82 (24)											
High Flow Pulses	Qp: 1,780 cfs with Average Frequency 1 per year Regressed Volume is 4,468 to 34,863 (12,480) Regressed Duration is 4 to 47 (14)											
	Qp: 112 cfs with Average Frequency 1 per season Regressed Volume is 296 to 3,870 (1,071) Regressed Duration is 1 to 18 (5)			Qp: 296 cfs with Average Frequency 1 per season Regressed Volume is 676 to 3,535 (1,546) Regressed Duration is 1 to 11 (4)			Qp: 237 cfs with Average Frequency 1 per season Regressed Volume is 560 to 3,159 (1,331) Regressed Duration is 1 to 11 (4)					
				Qp: 120 cfs with Average Frequency 2 per season Regressed Volume is 242 to 1,272 (555) Regressed Duration is 1 to 6 (2)								
Base Flows (cfs)	83 (43.5%)			84 (43.0%)			75 (40.4%)			98 (41.9%)		
	64 (61.2%)			60 (61.6%)			50 (54.5%)			65 (57.8%)		
	47 (79.2%)			42 (78.5%)			33 (69.3%)			44 (74.2%)		
Subsistence Flows (cfs)	11 (98.5%)			9.5 (98.0%)			10 (91.8%)			11 (95.4%)		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	Winter			Spring			Summer			Fall		

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1931 to 12/31/2009.

Overbank Events	Qp: 8,050 cfs with Average Frequency 1 per 5 years Regressed Volume is 18,117 to 134,590 (49,379) Regressed Duration is 8 to 83 (25)											
	Qp: 3,510 cfs with Average Frequency 1 per 2 years Regressed Volume is 7,754 to 56,917 (21,009) Regressed Duration is 5 to 53 (16)											
	Qp: 1,010 cfs with Average Frequency 1 per year Regressed Volume is 2,162 to 15,701 (5,827) Regressed Duration is 3 to 27 (8)											
	Qp: 112 cfs with Average Frequency 1 per season Regressed Volume is 236 to 3,327 (886) Regressed Duration is 1 to 16 (4)			Qp: 260 cfs with Average Frequency 1 per season Regressed Volume is 524 to 2,075 (1,042) Regressed Duration is 1 to 7 (3)			Qp: 237 cfs with Average Frequency 1 per season Regressed Volume is 514 to 2,812 (1,202) Regressed Duration is 1 to 10 (3)					
High Flow Pulses												
Base Flows (cfs)	71 (38.6%)			80 (35.8%)			60 (34.3%)			77 (37.8%)		
	52 (58.6%)			58 (55.8%)			38 (50.6%)			48 (55.8%)		
	35 (77.2%)			38 (74.7%)			22 (67.2%)			26 (73.0%)		
Subsistence Flows (cfs)	8.4 (98.3%)			8.2 (97.1%)			7.3 (91.5%)			6 (94.6%)		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Winter				Spring			Summer			Fall		

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1931 to 12/31/1969.

Overbank Events	Qp: 9,270 cfs with Average Frequency 1 per 5 years Regressed Volume is 26,399 to 215,843 (75,485) Regressed Duration is 12 to 135 (40)											
	Qp: 6,070 cfs with Average Frequency 1 per 2 years Regressed Volume is 17,266 to 140,458 (49,246) Regressed Duration is 10 to 107 (32)											
High Flow Pulses	Qp: 2,640 cfs with Average Frequency 1 per year Regressed Volume is 7,483 to 60,417 (21,263) Regressed Duration is 6 to 68 (21)											
	Qp: 116 cfs with Average Frequency 1 per season Regressed Volume is 381 to 5,095 (1,393) Regressed Duration is 2 to 22 (6)			Qp: 368 cfs with Average Frequency 1 per season Regressed Volume is 1,034 to 6,142 (2,520) Regressed Duration is 2 to 17 (6)			Qp: 239 cfs with Average Frequency 1 per season Regressed Volume is 595 to 3,597 (1,462) Regressed Duration is 1 to 14 (4)					
				Qp: 120 cfs with Average Frequency 2 per season Regressed Volume is 298 to 1,791 (731) Regressed Duration is 1 to 9 (3)								
Base Flows (cfs)	89 (48.9%)			90 (49.6%)			83 (45.3%)			108 (45.6%)		
	73 (65.8%)			67 (64.7%)			63 (58.0%)			80 (61.7%)		
	59 (82.7%)			49 (79.6%)			48 (71.0%)			56 (78.1%)		
Subsistence Flows (cfs)	28 (99.7%)			26 (97.3%)			19 (91.7%)			28 (97.1%)		
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	Winter			Spring			Summer			Fall		

Flow Levels	High (75th %ile)
	Medium (50th %ile)
	Low (25th %ile)
	Subsistence

Notes:

1. Period of Record used : 1/1/1970 to 12/31/2009.