MMAS Status Summary

Comparison of Observed Plot & Small Watershed Runoff Events to NWS Simulated Runoff Events

April 2010 Update

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NCRFC

Slide 1 Plot Comparison

	Iowa County DARW3	Manitowoc County WI06C	Lafayette County BUNW3	Kewaunee County KEWW3
% Hit	75%	85%	83%	91%
% Miss	25%	15%	17%	9%
% FA	86%	51%	85%	73%
RUNOFF				
Med OB Hit	0.0994	0.0493	0.0509	0.0827
Med OB Miss	0.0125	0.0033	0.0082	0.0423
Diff	0.0869	0.046	0.0427	0.0404
Mag H > M	7.95	14.94	6.21	1.96
Med Sim Hit	1.0982	0.5011	2.2209	3.1449
Med Sim FA	0.0714	0.0240	0.1599	0.3433
Diff	1.0268	0.4771	2.061	2.8016
Mag H > FA	15.38	20.88	13.89	9.16
DURATION				
Med OB Hit	11:43:00	15:55:00	6:55:00	7:55:00
Med OB Miss	0:26:00	7:30:00	10:49:00	11:11:00
Diff	11:17:00	8:25:00	-3:54:00	-3:16:00
Mag H > M	27.04	2.12	0.64	0.71
Med Sim Hit	60:00:00	30:00:00	48:00:00	36:00:00
Med Sim FA	18:00:00	18:00:00	18:00:00	18:00:00
Diff	42:00:00	12:00:00	30:00:00	18:00:00
Mag H > FA	3.33	1.67	2.67	2.00

Slide 2 Small Watershed Comparison

	Plover River WIRW3			Otter Creek SEBW3			Little Wolf River ROYW3			Jackson Creek CLIW3		
BF %	80%	85%	90%	80%	85%	90%	80%	85%	90%	80%	85%	90%
% Hit	84%	79%	68%	71%	68%	64%	64%	61%	56%	60%	60%	61%
% Miss	16%	21%	32%	29%	32%	36%	36%	39%	44%	40%	40%	39%
% FA	62%	50%	40%	9%	7%	7%	15%	12%	10%	14%	13%	11%
RUNOFF												
Med OB Hit	0.0386	0.0201	0.0257	0.2769	0.2382	0.2265	0.1368	0.1377	0.2077	0.2743	0.4648	0.3091
Med OB Miss	0.0170	0.0106	0.0046	0.0113	0.0127	0.0101	0.0133	0.0126	0.0091	0.0171	0.0111	0.0101
Diff	0.0216	0.0095	0.0211	0.2656	0.2255	0.2164	0.1235	0.1251	0.1986	0.2572	0.4537	0.299
Mag H > M	2.27	1.90	5.59	24.50	18.76	22.43	10.29	10.93	22.82	16.04	41.87	30.60
Med Sim Hit	0.8189	0.9714	0.7765	0.3268	0.3251	0.2081	0.4932	0.4849	0.4786	0.1942	0.1858	0.1809
Med Sim FA	0.0734	0.0564	0.0670	0.0205	0.0208	0.0337	0.1593	0.2600	0.3467	0.0627	0.0672	0.0769
Diff	0.7455	0.915	0.7095	0.3063	0.3043	0.1744	0.3339	0.2249	0.1319	0.1315	0.1186	0.104
Mag H > FA	11.16	17.22	11.59	15.94	15.63	6.18	3.10	1.87	1.38	3.10	2.76	2.35
DURATION												
Med OB Hit	120:00:00	120:00:00	120:00:00	288:00:00	288:00:00	288:00:00	264:00:00	288:00:00	336:00:00	384:00:00	384:00:00	384:00:00
Med OB Miss	72:00:00	72:00:00	72:00:00	96:00:00	120:00:00	120:00:00	120:00:00	96:00:00	96:00:00	144:00:00	168:00:00	168:00:00
Diff	48:00:00	48:00:00	48:00:00	192:00:00	168:00:00	168:00:00	144:00:00	192:00:00	240:00:00	240:00:00	216:00:00	216:00:00
Mag H > M	1.67	1.67	1.67	3.00	2.40	2.40	2.20	3.00	3.50	2.67	2.29	2.29
Med Sim Hit	24:00:00	24:00:00	24:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00
Med Sim FA	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	21:00:00	21:00:00	21:00:00	18:00:00	18:00:00	18:00:00
Diff	6:00:00	6:00:00	6:00:00	0:00:00	0:00:00	0:00:00	-3:00:00	-3:00:00	-3:00:00	0:00:00	0:00:00	0:00:00
Mag H > FA	1.33	1.33	1.33	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00

	Eagle Creek WIDM5			Bower Creek GREW3			Black Earth Creek BLEW3		
BF %	80%	85%	90%	80%	85%	90%	80%	85%	90%
% Hit	53%	65%	65%	48%	48%	48%	74%	75%	60%
% Miss	47%	35%	35%	52%	52%	52%	26%	25%	40%
% FA	89%	53%	53%	65%	65%	64%	82%	78%	75%
RUNOFF									
Med OB Hit	0.0611	0.0406	0.0406	0.4076	0.4076	0.4076	0.0663	0.0709	0.0634
Med OB Miss	0.0199	0.0121	0.0121	0.0017	0.0017	0.0035	0.0247	0.0107	0.0121
Diff	0.0412	0.0285	0.0285	0.4059	0.4059	0.4041	0.0416	0.0602	0.0513
Mag H > M	3.07	3.36	3.36	239.76	239.76	116.46	2.68	6.63	5.24
Med Sim Hit	2.2668	0.1890	0.1890	0.0843	0.0843	0.1047	0.2517	0.3037	0.2921
Med Sim FA	0.1394	0.0721	0.0721	0.0779	0.0779	0.1198	0.1723	0.1145	0.1155
Diff	2.1274	0.1169	0.1169	0.0064	0.0064	-0.0151	0.0794	0.1892	0.1766
Mag H > FA	16.26	2.62	2.62	1.08	1.08	0.87	1.46	2.65	2.53
DURATION									
Med OB Hit	24:00:00	192:00:00	192:00:00	312:00:00	312:00:00	312:00:00	168:00:00	144:00:00	168:00:00
Med OB Miss	0:00:00	96:00:00	96:00:00	144:00:00	144:00:00	168:00:00	96:00:00	72:00:00	72:00:00
Diff	24:00:00	96:00:00	96:00:00	168:00:00	168:00:00	144:00:00	72:00:00	72:00:00	96:00:00
Mag H > M	#DIV/0!	2.00	2.00	2.17	2.17	1.86	1.75	2.00	2.33
Med Sim Hit	36:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	24:00:00	18:00:00	18:00:00
Med Sim FA	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00	18:00:00
Diff	18:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	6:00:00	0:00:00	0:00:00
Mag H > FA	2.00	1.00	1.00	1.00	1.00	1.00	1.33	1.00	1.00

Slide 3 Summary of All Plots and Small Watersheds

Summary of the Two Comparison Methods Used to Evaluate the NWSRFS Simulated Runoff Events					
Combined Small Watersheds				Combined Plots	
BF %	80%	85%	90%		
% Hit	64%	65%	61%	% Hit	84%
% Miss	36%	35%	39%	% Miss	16%
% FA	62%	50%	40%	% FA	79%
RUNOFF				RUNOFF	
Med OB Hit	0.1368	0.1377	0.2077	Med OB Hit	0.0668
Med OB Miss	0.017	0.0111	0.0101	Med OB Miss	0.01035
Diff	0.1198	0.1266	0.1976	Diff	0.05645
Mag H > M	8.05	12.41	20.56	Mag H > M	6.45
Med Sim Hit	0.3268	0.3037	0.2081	Med Sim Hit	1.65955
Med Sim FA	0.0779	0.0721	0.0769	Med Sim FA	0.11565
Diff	0.2489	0.2316	0.1312	Diff	1.5439
Mag H > FA	4.20	4.21	2.71	Mag H > FA	14.35
DURATION				DURATION	
Med OB Hit	264:00:00	288:00:00	288:00:00	Med OB Hit	9:49:00
Med OB Miss	96:00:00	96:00:00	96:00:00	Med OB Miss	9:09:30
Diff	168:00:00	192:00:00	192:00:00	Diff	0:39:30
Mag H > M	2.75	3.00	3.00	Mag H > M	1.07
Med Sim Hit	18:00:00	18:00:00	18:00:00	Med Sim Hit	42:00:00
Med Sim FA	18:00:00	18:00:00	18:00:00	Med Sim FA	18:00:00
Diff	0:00:00	0:00:00	0:00:00	Diff	24:00:00
Mag H > FA	1.00	1.00	1.00	Mag H > FA	2.33

Slide 4 More detailed Plot Summaries

Comparison Between Observed Plot data and OFS simulated interflow with RAIM

Plot:	Iowa County		Basin:	DARW3
	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.1648	0.0281	2.0569	0.4448
Med Runoff	**0.0994**	**0.0125**	**1.0982**	**0.0714**
Max Runoff	0.8724	0.1539	11.2203	3.9483
Min Runoff	0.0008	0.0009	0.0035	0.0003
Avg Duration	14:50:00	3:48:00	75:12	23:27:00
Med Duration	11:43:00	0:26:00	60:00	18:00:00
Max Duration	60:28:00	23:00:00	192:00	78:00:00
Min Duration	0:17:00	0:10:00	24:00	12:00:00
Bias	3.22	POD	0.80	
FAR	0.86	CSI	0.22	
Obs Events	36	Sim Events	104	
Obs Hits	27	Sim Hits	15	
Obs Miss	9	Sim FA	89	
% Hits	75%	% Miss	25%	
% FA	86%			

Plot:	Manitowoc County		Basin:	WI06C
	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.2537	0.0065	0.8659	0.0993
Med Runoff	**0.0493**	**0.0033**	**0.5011**	**0.0240**
Max Runoff	1.3345	0.0243	7.3698	0.6796
Min Runoff	0.0004	0.0001	0.0007	0.0002
Avg Duration	22:40:00	9:35:00	47:28:00	20:30:00
Med Duration	15:55:00	7:30:00	30:00:00	18:00:00
Max Duration	114:15:00	35:45:00	150:00:00	66:00:00
Min Duration	0:13:00	0:14:00	12:00:00	12:00:00
Bias	1.63	POD	0.87	
FAR	0.51	CSI	0.48	
Obs Events	62	Sim Events	94	
Obs Hits	53	Sim Hits	46	
Obs Miss	9	Sim FA	48	
% Hits	85%	% Miss	15%	
% FA	51%			

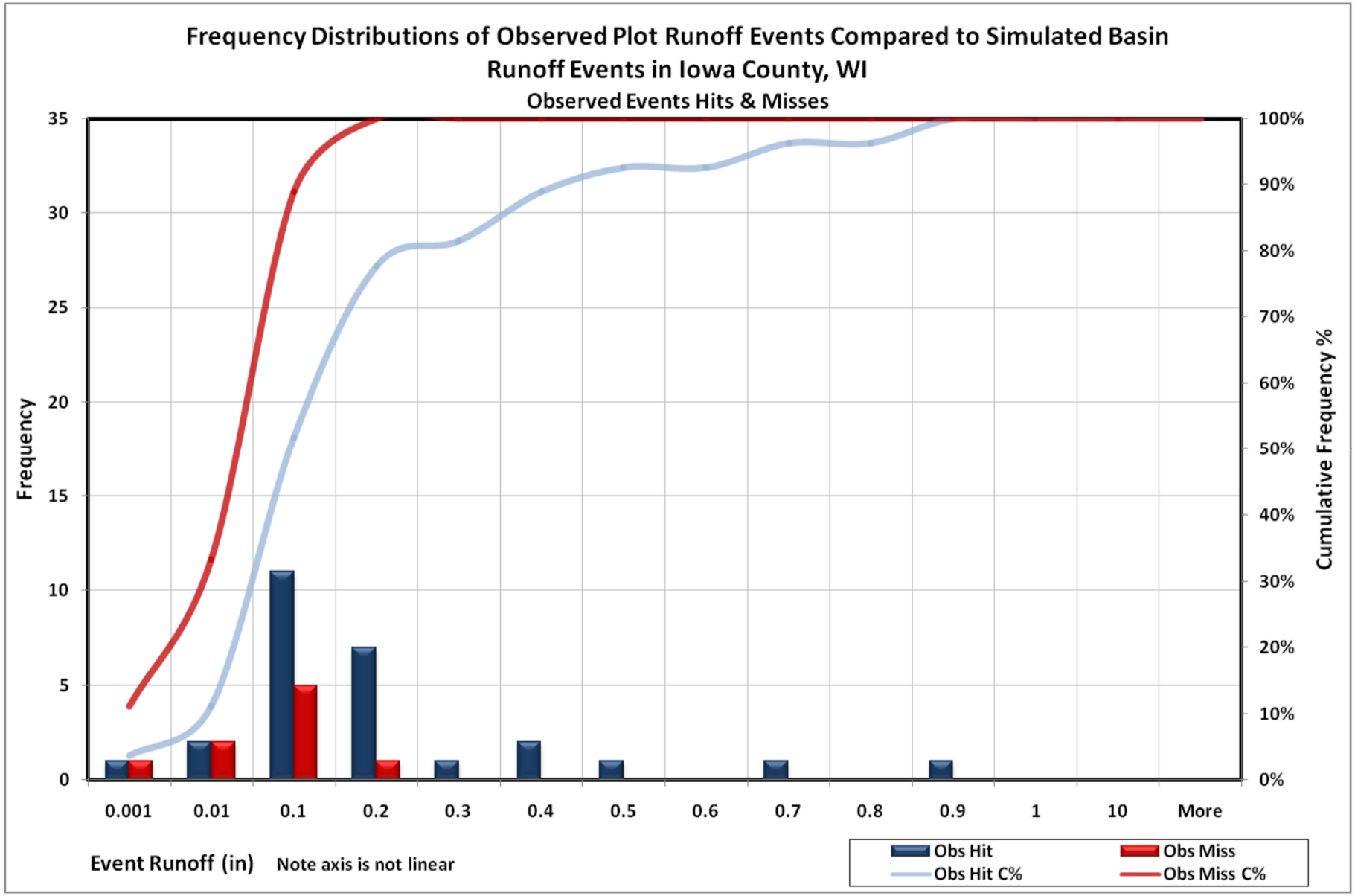
Slide 5 More detailed Plot Summaries

Comparison Between Observed Plot data and OFS simulated interflow with RAIM

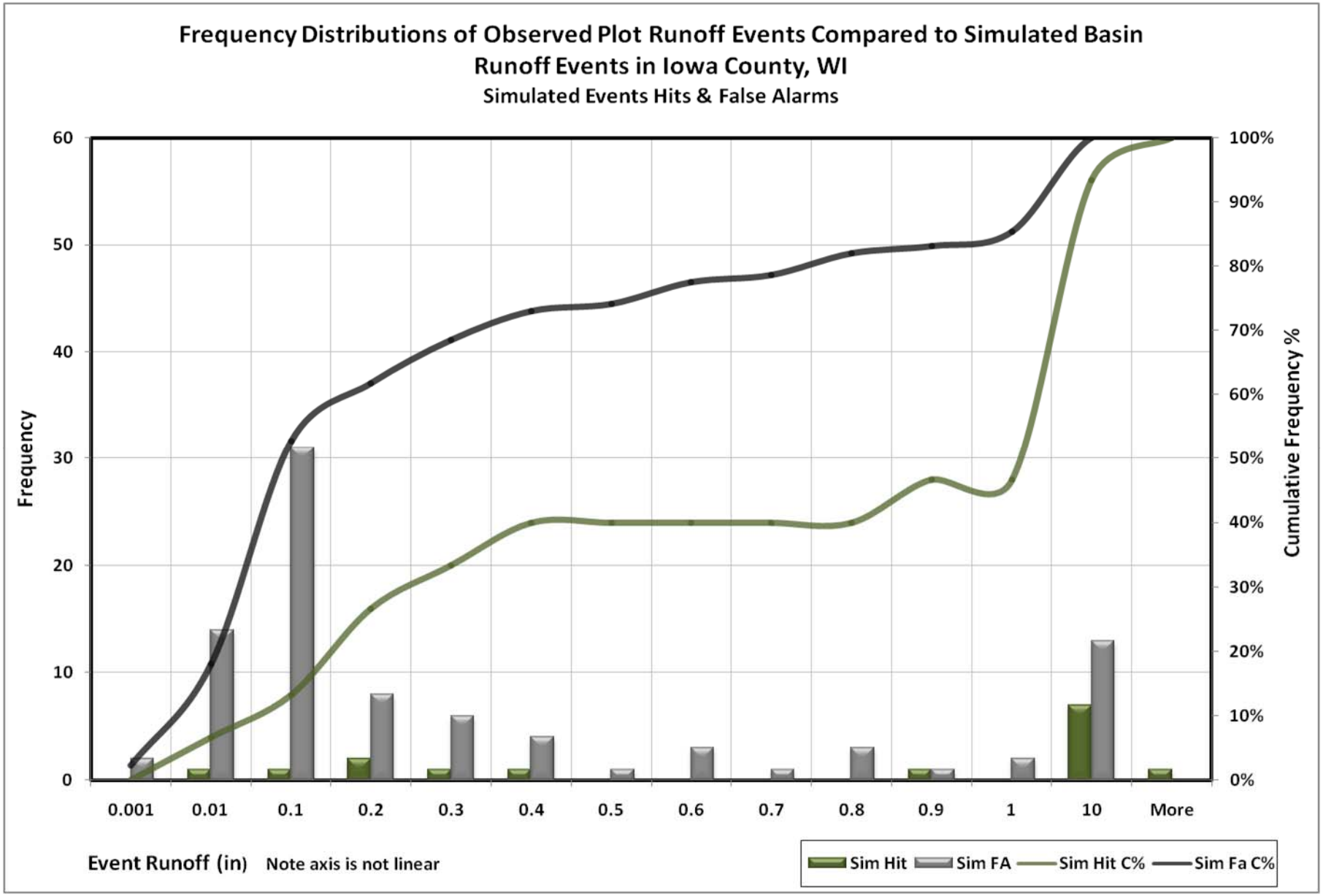
Plot:	Lafayette County		Basin:	BUNW3
	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.0979	0.0196	2.7534	0.4674
Med Runoff	**0.0509**	**0.0082**	**2.2209**	**0.1599**
Max Runoff	1.0427	0.1123	12.8208	8.1810
Min Runoff	0.0001	0.0008	0.0053	0.0006
Avg Duration	12:08:00	9:47:00	50:00:00	20:13:00
Med Duration	6:55:00	10:49:00	48:00:00	18:00:00
Max Duration	117:48:00	19:22:00	204:00:00	222:00:00
Min Duration	0:10:00	0:20:00	12:00:00	12:00:00
Bias	3.48	POD	0.86	
FAR	0.85	CSI	0.23	
Obs Events	65	Sim Events	202	
Obs Hits	54	Sim Hits	30	
Obs Miss	11	Sim FA	172	
% Hits	83%	% Miss	17%	
% FA	85%			

Plot:	Kewaunee County		Basin:	KEWW3
	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.1985	0.0689	6.2443	0.6907
Med Runoff	**0.0827**	**0.0423**	**3.1449**	**0.3433**
Max Runoff	2.1588	0.2097	41.3839	5.3554
Min Runoff	0.0002	0.0023	0.0050	0.0004
Avg Duration	14:15:00	12:33:00	54:07:00	19:35:00
Med Duration	7:55:00	11:11:00	36:00:00	18:00:00
Max Duration	90:01:00	28:13:00	198:00:00	120:00:00
Min Duration	0:09:00	2:06:00	12:00:00	12:00:00
Bias	2.38	POD	0.91	
FAR	0.73	CSI	0.37	
Obs Events	95	Sim Events	191	
Obs Hits	86	Sim Hits	51	
Obs Miss	9	Sim FA	140	
% Hits	91%	% Miss	9%	
% FA	73%			

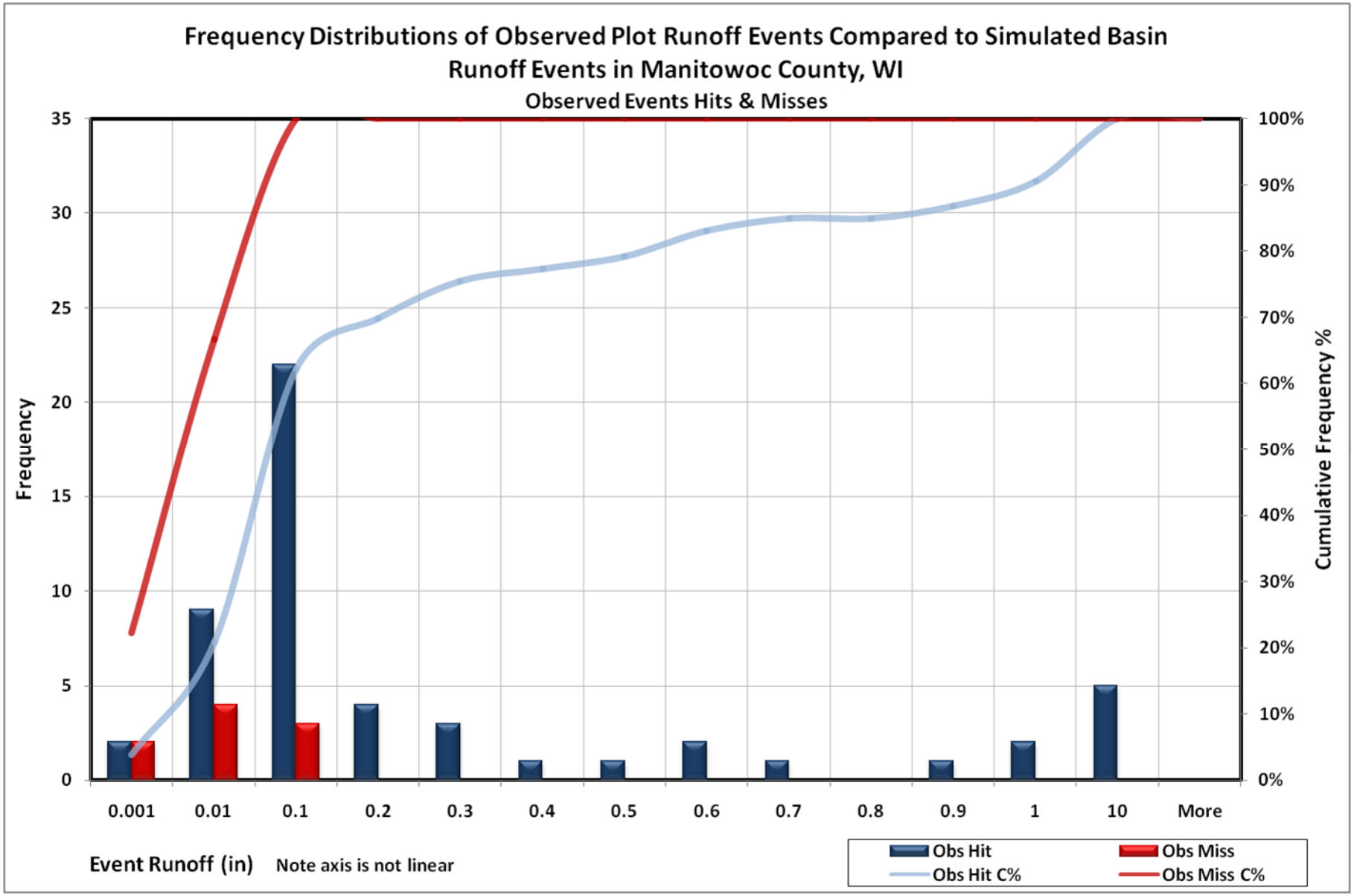
Slide 6


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Iowa County, WI
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

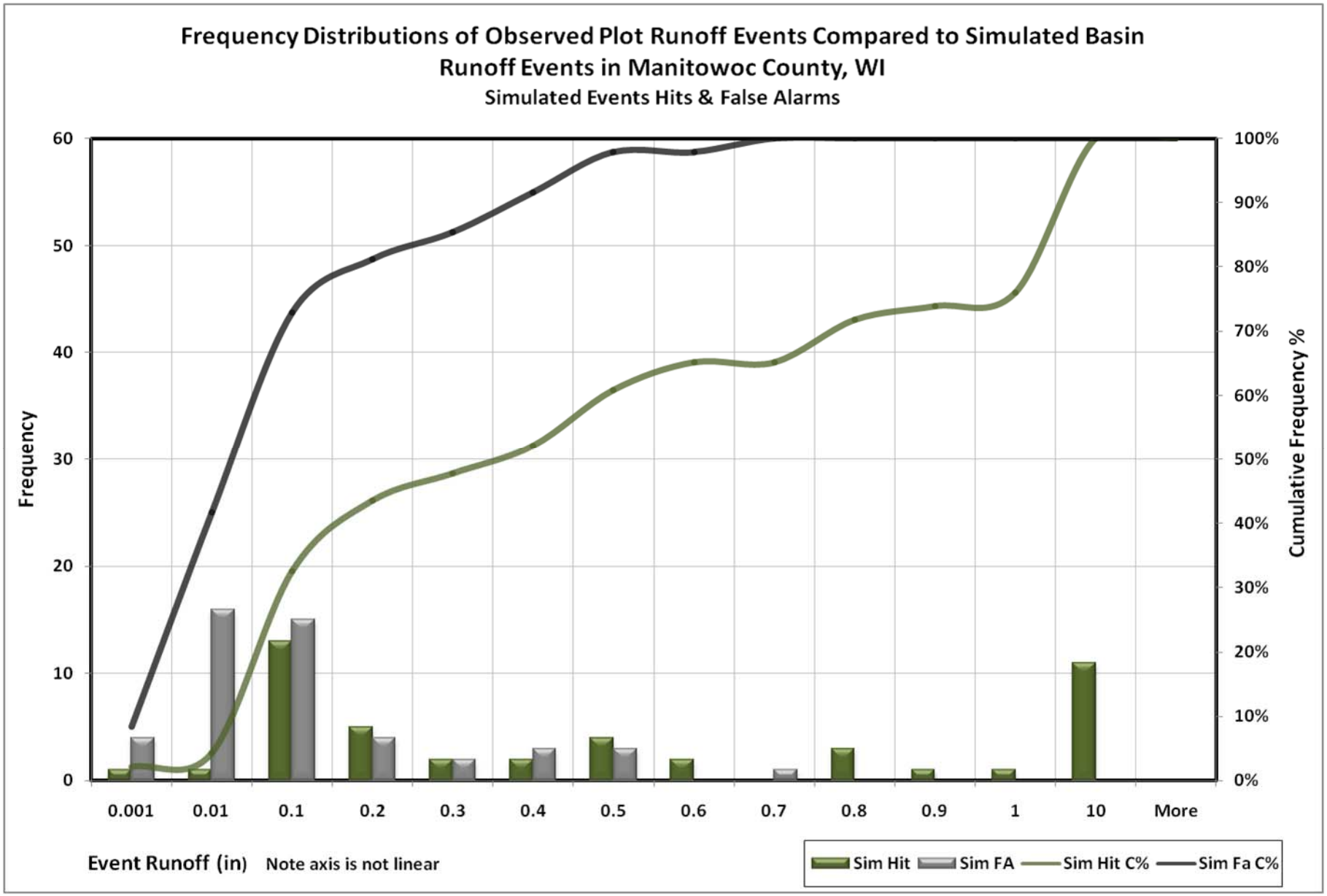
Slide 7


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Iowa County, WI
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

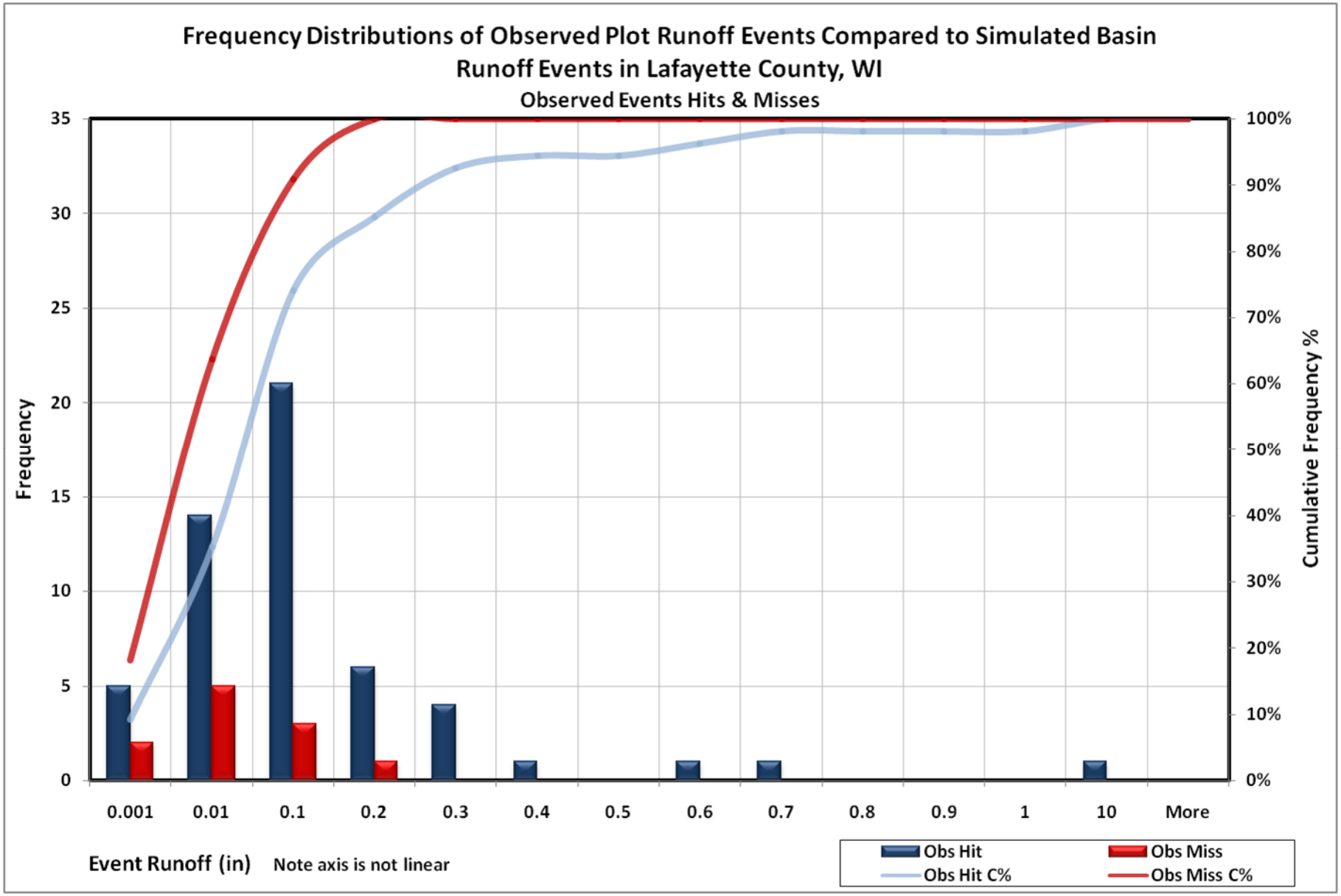
Slide 8


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Manitowoc County, WI
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

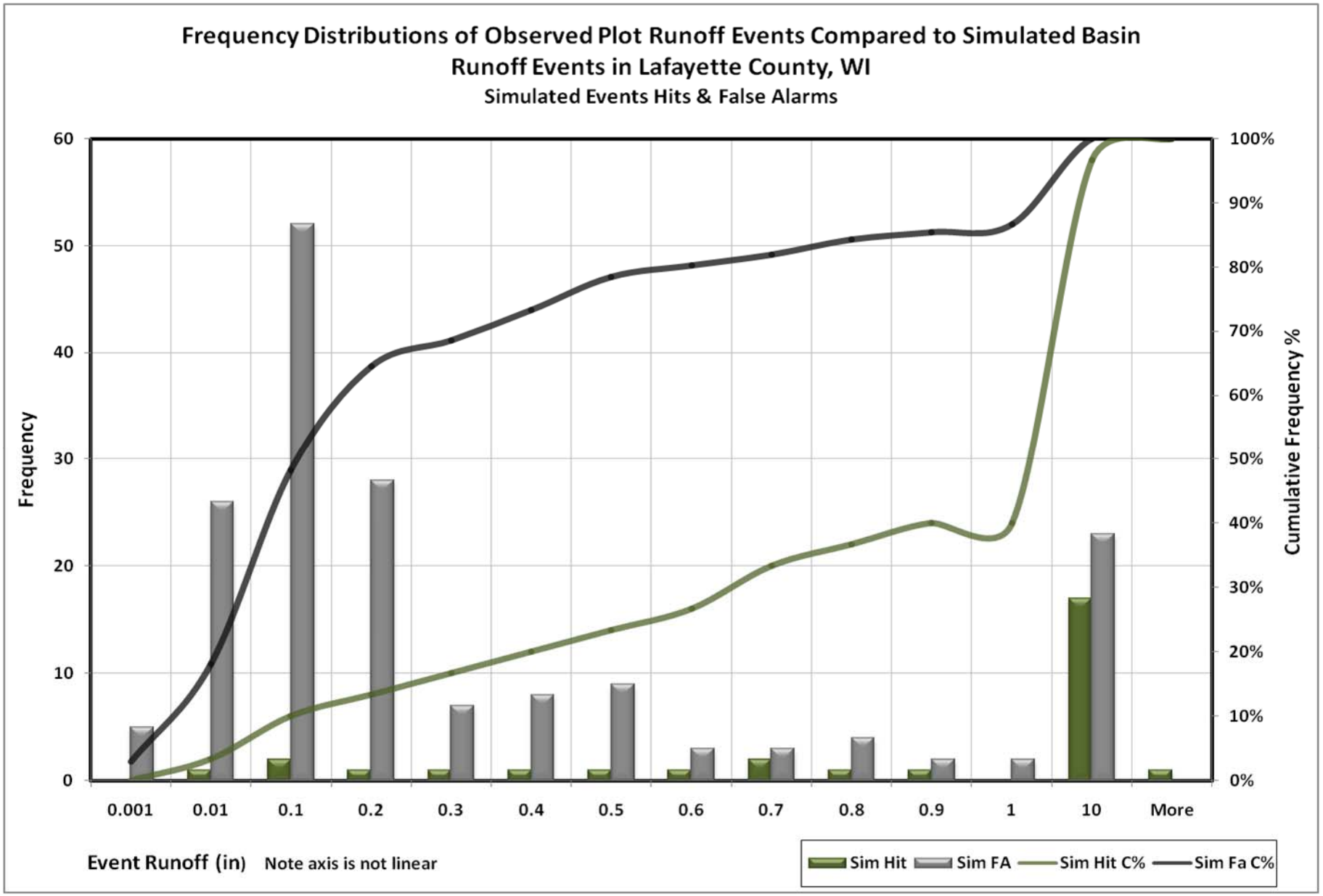
Slide 9


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Manitowoc County, WI
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

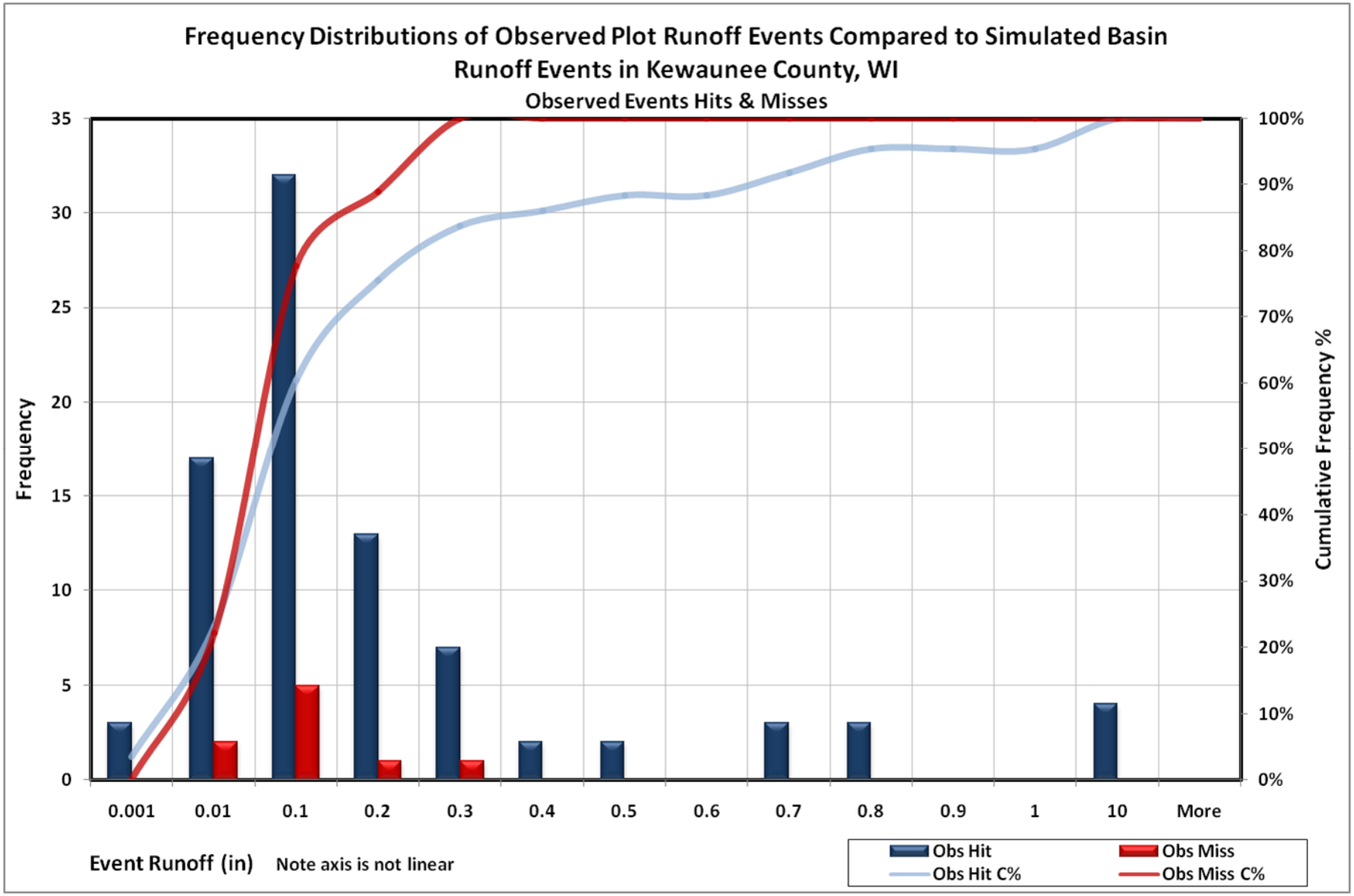
Slide 10


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Lafayette County, WI
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

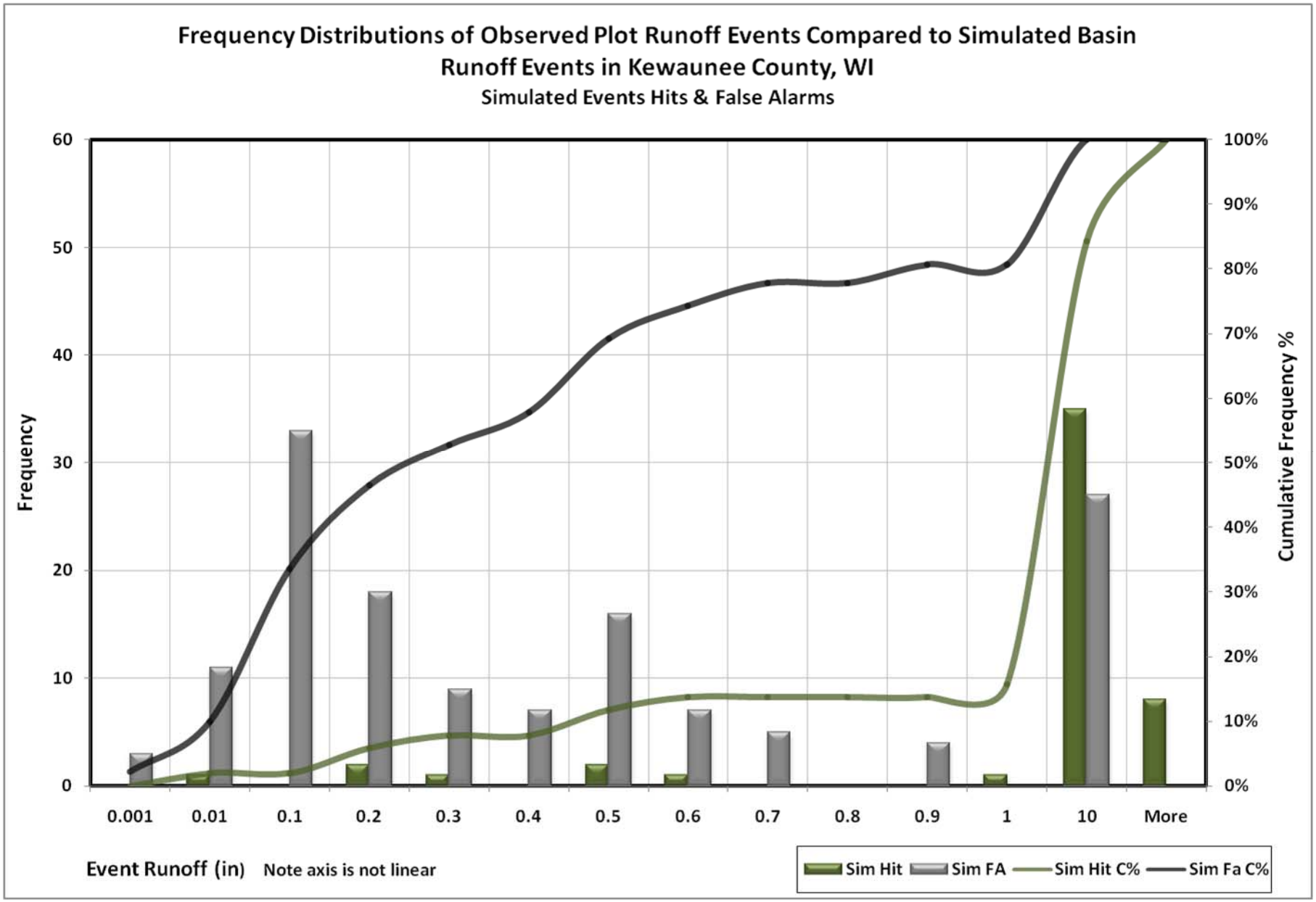
Slide 11


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Lafayette County, WI
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

Slide 12


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Kewaunee County, WI
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

Slide 13


Frequency Distributions of Observed Plot Runoff Events Compared to Simulated Basin Runoff Events in Kewaunee County, WI
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

Slide 14 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot:	Plover River		Basin:	WIRW3							
	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.0599	0.0129	3.4527	0.3624	0.0509	0.0095	2.7993	0.2749	0.0452	0.0068	2.3771	0.2268
Med Runoff	**0.0386**	**0.017**	**0.8189**	**0.0734**	**0.0201**	**0.0106**	**0.9714**	**0.0564**	**0.0257**	**0.0046**	**0.7765**	**0.0670**
Max Runoff	0.4704	0.0522	88.8632	8.2854	0.4704	0.0506	88.8632	8.2854	0.4728	0.0506	88.8632	8.2854
Min Runoff	0.0046	0.0042	0.0003	0.0002	0.0039	0.0028	0.0003	0.0002	0.0021	0.0013	0.0002	0.0002
Avg Duration	145:53:00	79:23:00	48:33:00	25:00:00	153:48:00	83:30:00	43:26:00	24:29:00	163:35:00	87:55:00	40:20:00	24:00:00
Med Duration	120:00:00	72:00:00	24:00:00	18:00:00	120:00:00	72:00:00	24:00:00	18:00:00	120:00:00	72:00:00	24:00:00	18:00:00
Max Duration	528:00:00	192:00:00	522:00:00	348:00:00	528:00:00	192:00:00	522:00:00	348:00:00	600:00:00	288:00:00	522:00:00	348:00:00
Min Duration	72:00:00	48:00:00	12:00:00	12:00:00	48:00:00	48:00:00	12:00:00	12:00:00	24:00:00	24:00:00	12:00:00	12:00:00
	Bias	4.49	POD	0.86	Bias	2.93	POD	0.83	Bias	1.89	POD	0.76
	FAR	0.62	CSI	0.18	FAR	0.50	CSI	0.25	FAR	0.4	CSI	0.31
	Obs Events	166	Sim Events	972	Obs Events	229	Sim Events	975	Obs Events	319	Sim Events	976
	Obs Hits	140	Sim Hits	367	Obs Hits	181	Sim Hits	484	Obs Hits	218	Sim Hits	590
	Obs Miss	26	Sim FA	605	Obs Miss	48	Sim FA	491	Obs Miss	101	Sim FA	386
	% Hits	84%	% Miss	16%	% Hits	79%	% Miss	21%	% Hits	68%	% Miss	32%
	% FA	62%			% FA	50%			% FA	40%		

Slide 15 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot: Otter Creek Basin: SEBW3

	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.3780	0.0191	1.2795	0.2709	0.3655	0.0169	1.2649	0.2498	0.3374	0.0131	1.2525	0.2818
Med Runoff	**0.2769**	**0.0113**	**0.3268**	**0.0205**	**0.2382**	**0.0127**	**0.3251**	**0.0208**	**0.2265**	**0.0101**	**0.2081**	**0.0337**
Max Runoff	4.7843	0.1304	36.9047	5.3836	4.7843	0.1322	36.9047	5.3836	4.7843	0.1311	36.9047	5.3836
Min Runoff	0.0050	0.0033	0.0001	0.0004	0.0026	0.0028	0.0001	0.0004	0.0023	0.0014	0.0001	0.0004
Avg Duration	318:38:00	115:31:00	71:34:00	53:07:00	333:02:00	132:58:00	71:16:00	53:15:00	338:17:00	141:30:00	71:18:00	50:13:00
Med Duration	288:00:00	96:00:00	18:00:00	18:00:00	288:00:00	120:00:00	18:00:00	18:00:00	288:00:00	120:00:00	18:00:00	18:00:00
Max Duration	1248:00:00	288:00:00	2958:00:00	438:00:00	1296:00:00	384:00:00	2958:00:00	438:00:00	2112:00:00	432:00:00	2958:00:00	438:00:00
Min Duration	72:00:00	72:00:00	12:00:00	12:00:00	24:00:00	72:00:00	12:00:00	12:00:00	24:00:00	48:00:00	12:00:00	12:00:00
	Bias	0.95	POD	0.78	Bias	0.85	POD	0.75	Bias	0.77	POD	0.73
	FAR	0.09	CSI	0.58	FAR	0.07	CSI	0.57	FAR	0.07	CSI	0.56
	Obs Events	207	Sim Events	534	Obs Events	228	Sim Events	534	Obs Events	264	Sim Events	534
	Obs Hits	148	Sim Hits	486	Obs Hits	154	Sim Hits	494	Obs Hits	168	Sim Hits	499
	Obs Miss	59	Sim FA	48	Obs Miss	74	Sim FA	40	Obs Miss	96	Sim FA	35
	% Hits	71%	% Miss	29%	% Hits	68%	% Miss	32%	% Hits	64%	% Miss	36%
	% FA	9%			% FA	7%			% FA	7%		

Slide 16 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot: Little Wolf River Basin: ROYW3

	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.2826	0.0225	1.4287	0.7842	0.2871	0.0224	1.3988	0.7159	0.2991	0.0150	1.4100	0.4764
Med Runoff	**0.1368**	**0.0133**	**0.4932**	**0.1593**	**0.1377**	**0.0126**	**0.4849**	**0.2600**	**0.2077**	**0.0091**	**0.4786**	**0.3467**
Max Runoff	2.1851	0.0905	15.4383	7.4525	2.9564	0.0933	15.4383	7.4525	3.0513	0.0933	15.4383	3.0092
Min Runoff	0.0083	0.0038	0.0003	0.0041	0.0076	0.0026	0.0003	0.0105	0.0047	0.0014	0.0003	0.0105
Avg Duration	288:28:00	129:06:00	31:24:00	28:48:00	326:35:00	148:21:00	31:34:00	28:15:00	387:21:00	135:23:00	31:43:00	26:06:00
Med Duration	264:00:00	120:00:00	18:00:00	21:00:00	288:00:00	96:00:00	18:00:00	21:00:00	336:00:00	96:00:00	18:00:00	21:00:00
Max Duration	744:00:00	384:00:00	354:00:00	102:00:00	936:00:00	552:00:00	354:00:00	102:00:00	1392:00:00	600:00:00	354:00:00	66:00:00
Min Duration	72:00:00	72:00:00	12:00:00	12:00:00	72:00:00	72:00:00	12:00:00	12:00:00	72:00:00	24:00:00	12:00:00	12:00:00
	Bias	1.01	POD	0.73	Bias	0.89	POD	0.72	Bias	0.79	POD	0.70
	FAR	0.15	CSI	0.46	FAR	0.12	CSI	0.47	FAR	0.10	CSI	0.46
	Obs Events	80	Sim Events	200	Obs Events	84	Sim Events	204	Obs Events	89	Sim Events	204
	Obs Hits	51	Sim Hits	170	Obs Hits	51	Sim Hits	180	Obs Hits	50	Sim Hits	184
	Obs Miss	29	Sim FA	30	Obs Miss	33	Sim FA	24	Obs Miss	39	Sim FA	20
	% Hits	64%	% Miss	36%	% Hits	61%	% Miss	39%	% Hits	56%	% Miss	44%
	% FA	15%			% FA	12%			% FA	10%		

Slide 17 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot: Jackson Creek Basin: CLIW3

	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.5277	0.0309	0.9099	0.4353	0.5353	0.0361	0.9032	0.4379	0.5088	0.0356	0.8909	0.4748
Med Runoff	**0.2743**	**0.0171**	**0.1942**	**0.0627**	**0.4648**	**0.0111**	**0.1858**	**0.0672**	**0.3091**	**0.0101**	**0.1809**	**0.0769**
Max Runoff	5.2801	0.2689	25.9013	14.0738	5.2801	0.5551	25.9013	14.0738	5.2801	0.5551	25.9013	14.0738
Min Runoff	0.0011	0.0006	0.0001	0.0004	0.0011	0.0004	0.0001	0.0004	0.0007	0.0004	0.0001	0.0004
Avg Duration	424:05:00	186:00:00	26:47:00	23:56:00	456:00:00	202:35:00	26:41:00	24:20:00	451:00:00	212:07:00	26:33:00	25:03:00
Med Duration	384:00:00	144:00:00	18:00:00	18:00:00	384:00:00	168:00:00	18:00:00	18:00:00	384:00:00	168:00:00	18:00:00	18:00:00
Max Duration	2016:00:00	840:00:00	360:00:00	324:00:00	1656:00:00	888:00:00	360:00:00	324:00:00	1488:00:00	888:00:00	360:00:00	324:00:00
Min Duration	72:00:00	24:00:00	12:00:00	12:00:00	72:00:00	24:00:00	12:00:00	12:00:00	48:00:00	24:00:00	12:00:00	12:00:00
	Bias	0.95	POD	0.71	Bias	0.92	POD	0.71	Bias	0.90	POD	0.72
	FAR	0.14	CSI	0.44	FAR	0.13	CSI	0.45	FAR	0.11	CSI	0.48
	Obs Events	279	Sim Events	698	Obs Events	275	Sim Events	698	Obs Events	282	Sim Events	698
	Obs Hits	167	Sim Hits	600	Obs Hits	164	Sim Hits	608	Obs Hits	173	Sim Hits	618
	Obs Miss	112	Sim FA	98	Obs Miss	111	Sim FA	90	Obs Miss	109	Sim FA	80
	% Hits	60%	% Miss	40%	% Hits	60%	% Miss	40%	% Hits	61%	% Miss	39%
	% FA	14%			% FA	13%			% FA	11%		

Slide 18 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot:	Eagle Creek		Basin:	WIDM5								
	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.1351	0.0290	2.2343	0.5767	0.1069	0.0144	0.9446	0.5786	0.1069	0.0144	0.9446	0.5786
Med Runoff	**0.0611**	**0.0199**	**2.2668**	**0.1394**	**0.0406**	**0.0121**	**0.1890**	**0.0721**	**0.0406**	**0.0121**	**0.1890**	**0.0721**
Max Runoff	0.6770	0.4487	30.5062	17.0997	0.6912	0.2387	30.5062	17.0997	0.6912	0.2387	30.5062	17.0997
Min Runoff	0.0035	0.0031	0.0030	0.0001	0.0030	0.0020	0.0003	0.0001	0.0030	0.0020	0.0003	0.0001
Avg Duration	22:48:00	4:16:00	59:37:00	25:49:00	202:26:00	102:27:00	31:04:00	27:54:00	202:26:00	102:27:00	31:04:00	27:54:00
Med Duration	24:00:00	0:00:00	36:00:00	18:00:00	192:00:00	96:00:00	18:00:00	18:00:00	192:00:00	96:00:00	18:00:00	18:00:00
Max Duration	96:00:00	72:00:00	558:00:00	390:00:00	624:00:00	240:00:00	558:00:00	390:00:00	624:00:00	240:00:00	558:00:00	390:00:00
Min Duration	0:00:00	0:00:00	12:00:00	12:00:00	24:00:00	24:00:00	12:00:00	12:00:00	24:00:00	24:00:00	12:00:00	12:00:00
	Bias	5.45	POD	0.68	Bias	3.12	POD	0.74	Bias	3.12	POD	0.74
	FAR	0.89	CSI	0.09	FAR	0.53	CSI	0.19	FAR	0.53	CSI	0.19
	Obs Events	191	Sim Events	1052	Obs Events	225	Sim Events	1054	Obs Events	225	Sim Events	1054
	Obs Hits	101	Sim Hits	112	Obs Hits	147	Sim Hits	499	Obs Hits	147	Sim Hits	499
	Obs Miss	90	Sim FA	940	Obs Miss	78	Sim FA	555	Obs Miss	78	Sim FA	555
	% Hits	53%	% Miss	47%	% Hits	65%	% Miss	35%	% Hits	65%	% Miss	35%
	% FA	89%			% FA	53%			% FA	53%		

Slide 19 More detailed Small Watershed Summary

Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

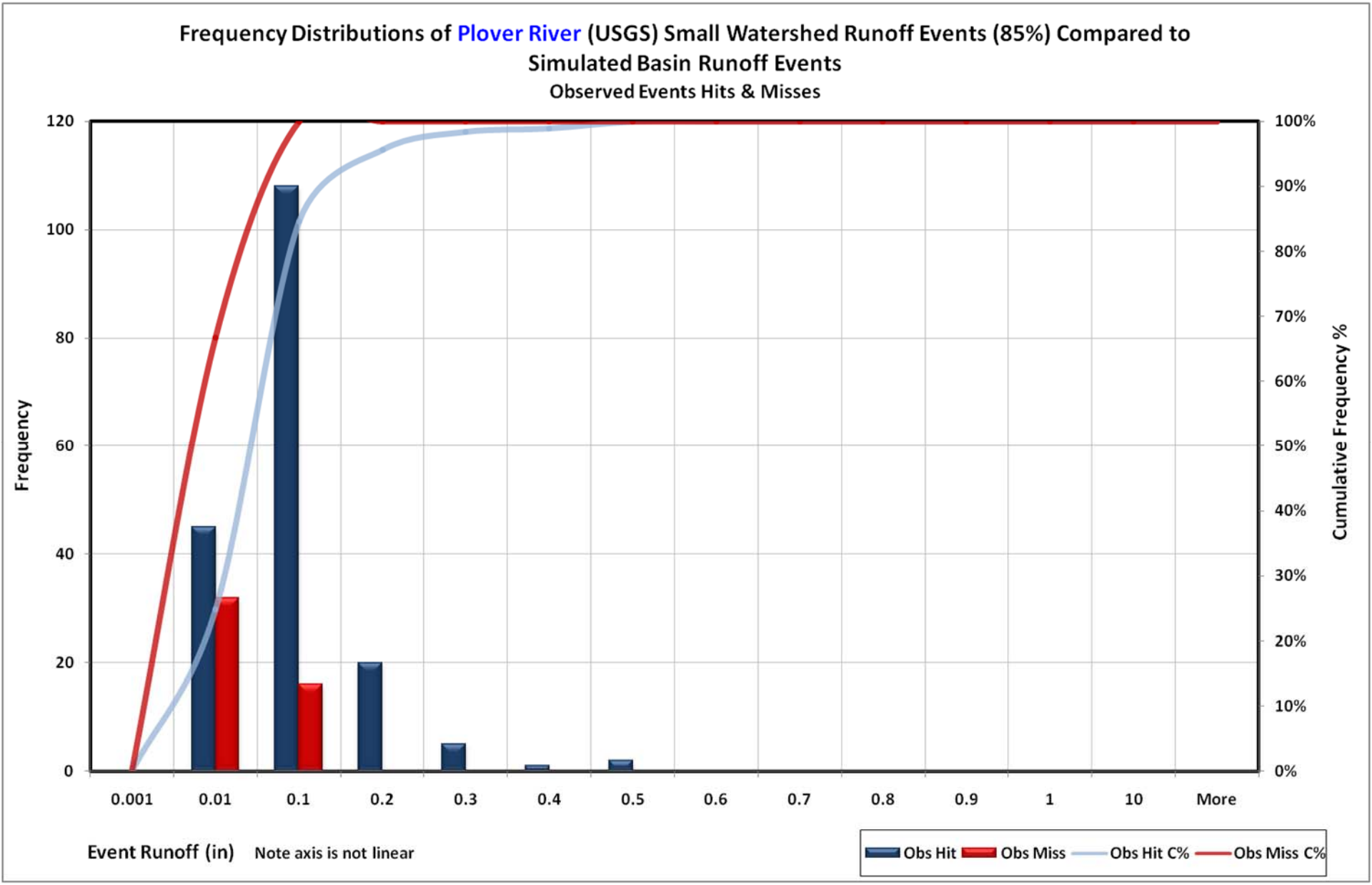
Plot:	Bower Creek		Basin:	GREW3							
	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.7424	0.1113	0.6915	0.3765	0.7424	0.1113	0.6915	0.3765	0.7120	0.1090	0.6668	0.3847
Med Runoff	**0.4076**	**0.0017**	**0.0843**	**0.0779**	**0.4076**	**0.0017**	**0.0843**	**0.0779**	**0.4076**	**0.0035**	**0.1047**	**0.1198**
Max Runoff	3.2034	1.9086	21.0392	9.3299	3.2034	1.9086	21.0392	9.3299	3.2034	1.9086	21.0392	9.3299
Min Runoff	0.0003	0.0000	0.0000	0.0000	0.0003	0.0000	0.0000	0.0000	0.0004	0.0000	0.0000	0.0000
Avg Duration	385:48:00	187:22:00	31:32:00	29:43:00	385:48:00	187:22:00	31:32:00	29:43:00	363:29:00	191:36:00	30:53:00	30:03:00
Med Duration	312:00:00	144:00:00	18:00:00	18:00:00	312:00:00	144:00:00	18:00:00	18:00:00	312:00:00	168:00:00	18:00:00	18:00:00
Max Duration	1200:00:00	936:00:00	396:00:00	360:00:00	1200:00:00	936:00:00	396:00:00	360:00:00	1008:00:00	816:00:00	396:00:00	360:00:00
Min Duration	72:00:00	24:00:00	12:00:00	12:00:00	72:00:00	24:00:00	12:00:00	12:00:00	48:00:00	24:00:00	12:00:00	12:00:00
	Bias	3.07	POD	0.66	Bias	3.07	POD	0.66	Bias	2.91	POD	0.66
	FAR	0.65	CSI	0.13	FAR	0.65	CSI	0.13	FAR	0.64	CSI	0.14
	Obs Events	110	Sim Events	436	Obs Events	110	Sim Events	436	Obs Events	115	Sim Events	436
	Obs Hits	53	Sim Hits	151	Obs Hits	53	Sim Hits	151	Obs Hits	55	Sim Hits	156
	Obs Miss	57	Sim FA	285	Obs Miss	57	Sim FA	285	Obs Miss	60	Sim FA	280
	% Hits	48%	% Miss	52%	% Hits	48%	% Miss	52%	% Hits	48%	% Miss	52%
	% FA	65%			% FA	65%			% FA	64%		

Slide 20 More detailed Small Watershed Summary

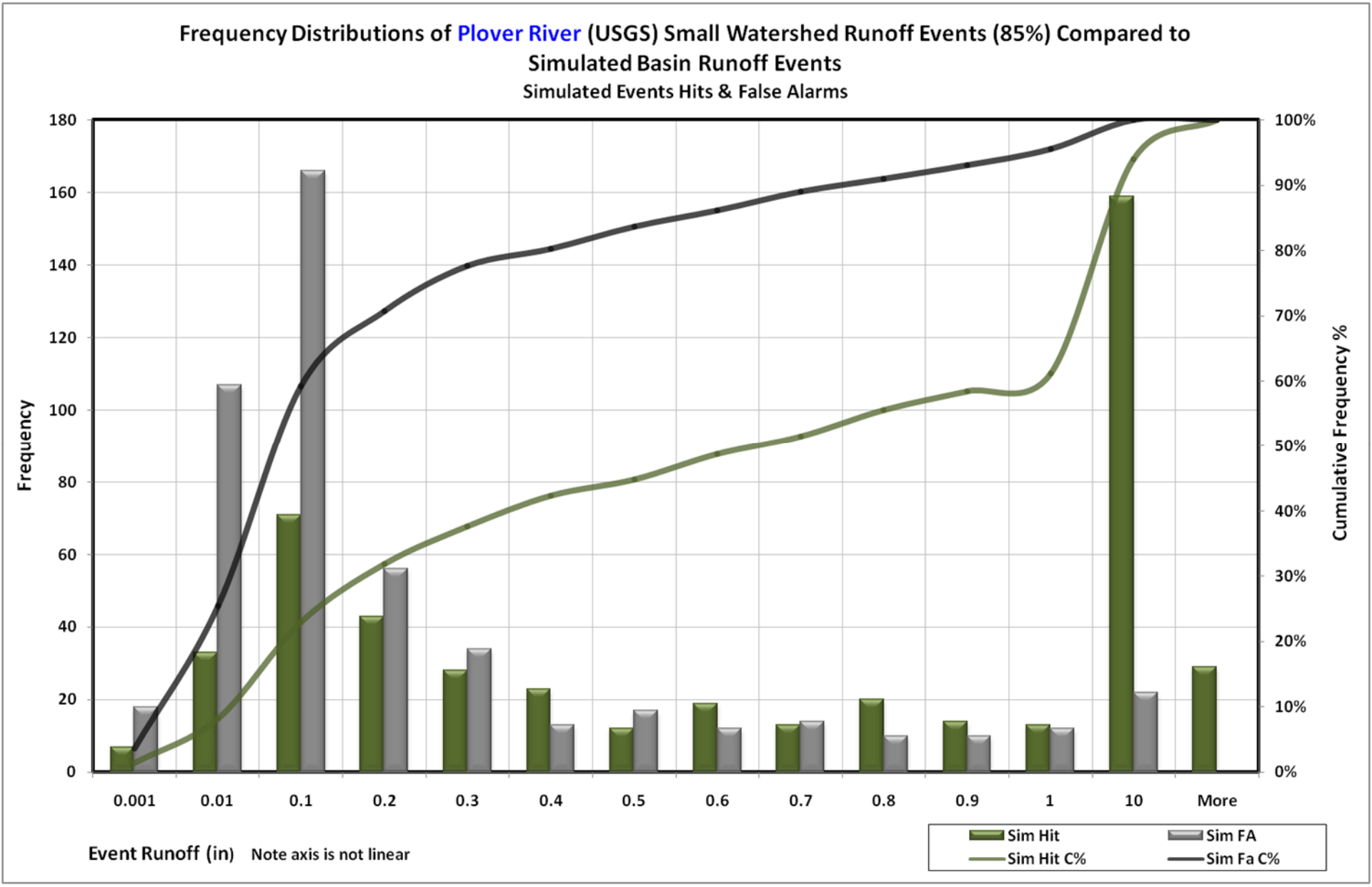
Comparison Between Observed Small USGS Waterhsed Basin data and OFS simulated interflow with RAIM

Plot:	Black Earth Creek		Basin:	BLEW3							
	BF 80%				BF 85%				BF 90%			
	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA	Obs Hit	Obs Miss	Sim Hit	Sim FA
Avg Runoff	0.1614	0.0240	0.9848	0.5402	0.1311	0.0172	0.8723	0.5499	0.1241	0.0137	0.8051	0.5612
Med Runoff	**0.0663**	**0.0247**	**0.2517**	**0.1723**	**0.0709**	**0.0107**	**0.3037**	**0.1145**	**0.0634**	**0.0121**	**0.2921**	**0.1155**
Max Runoff	1.1940	0.0536	16.3843	11.8184	1.1987	0.0536	16.3843	11.8184	1.2012	0.0558	16.3843	11.8184
Min Runoff	0.0084	0.0065	0.0003	0.0000	0.0029	0.0024	0.0003	0.0000	0.0029	0.0023	0.0003	0.0000
Avg Duration	192:33:00	97:36:00	33:53:00	25:49:00	192:51:00	88:25:00	31:28:00	26:06:00	204:00:00	105:00:00	30:45:00	26:09:00
Med Duration	168:00:00	96:00:00	24:00:00	18:00:00	144:00:00	72:00:00	18:00:00	18:00:00	168:00:00	72:00:00	18:00:00	18:00:00
Max Duration	528:00:00	168:00:00	282:00:00	360:00:00	528:00:00	168:00:00	282:00:00	360:00:00	600:00:00	288:00:00	282:00:00	360:00:00
Min Duration	72:00:00	24:00:00	12:00:00	12:00:00	24:00:00	24:00:00	12:00:00	12:00:00	24:00:00	24:00:00	12:00:00	12:00:00
	Bias	9.78	POD	0.79	Bias	7.40	POD	0.80	Bias	5.43	POD	0.71
	FAR	0.82	CSI	0.07	FAR	0.78	CSI	0.10	FAR	0.75	CSI	0.10
	Obs Events	58	Sim Events	641	Obs Events	75	Sim Events	641	Obs Events	100	Sim Events	641
	Obs Hits	43	Sim Hits	117	Obs Hits	56	Sim Hits	142	Obs Hits	60	Sim Hits	158
	Obs Miss	15	Sim FA	524	Obs Miss	19	Sim FA	499	Obs Miss	40	Sim FA	483
	% Hits	74%	% Miss	26%	% Hits	75%	% Miss	25%	% Hits	60%	% Miss	40%
	% FA	82%			% FA	78%			% FA	75%		

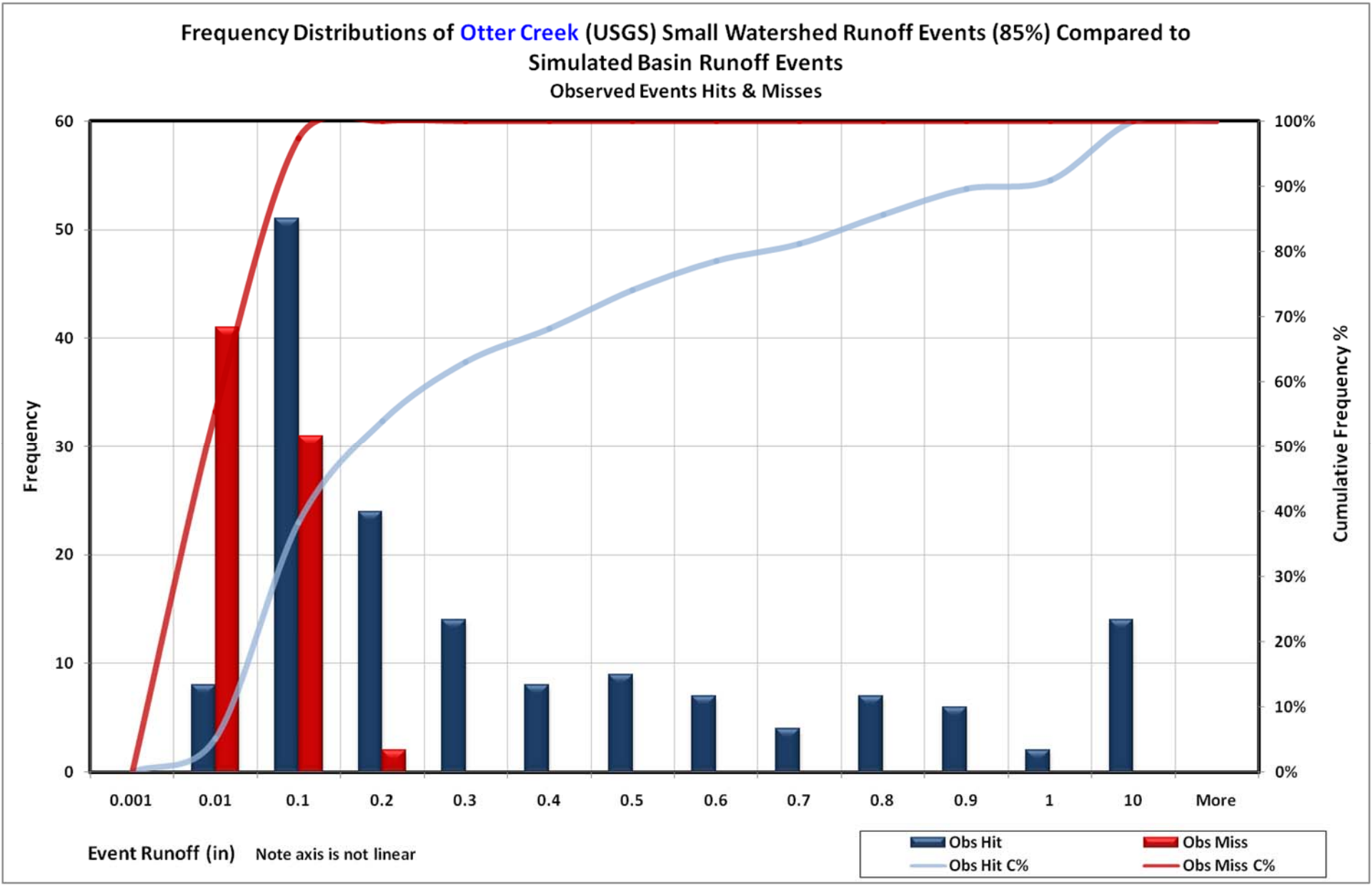
Slide 21


Frequency Distributions of Plover River (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

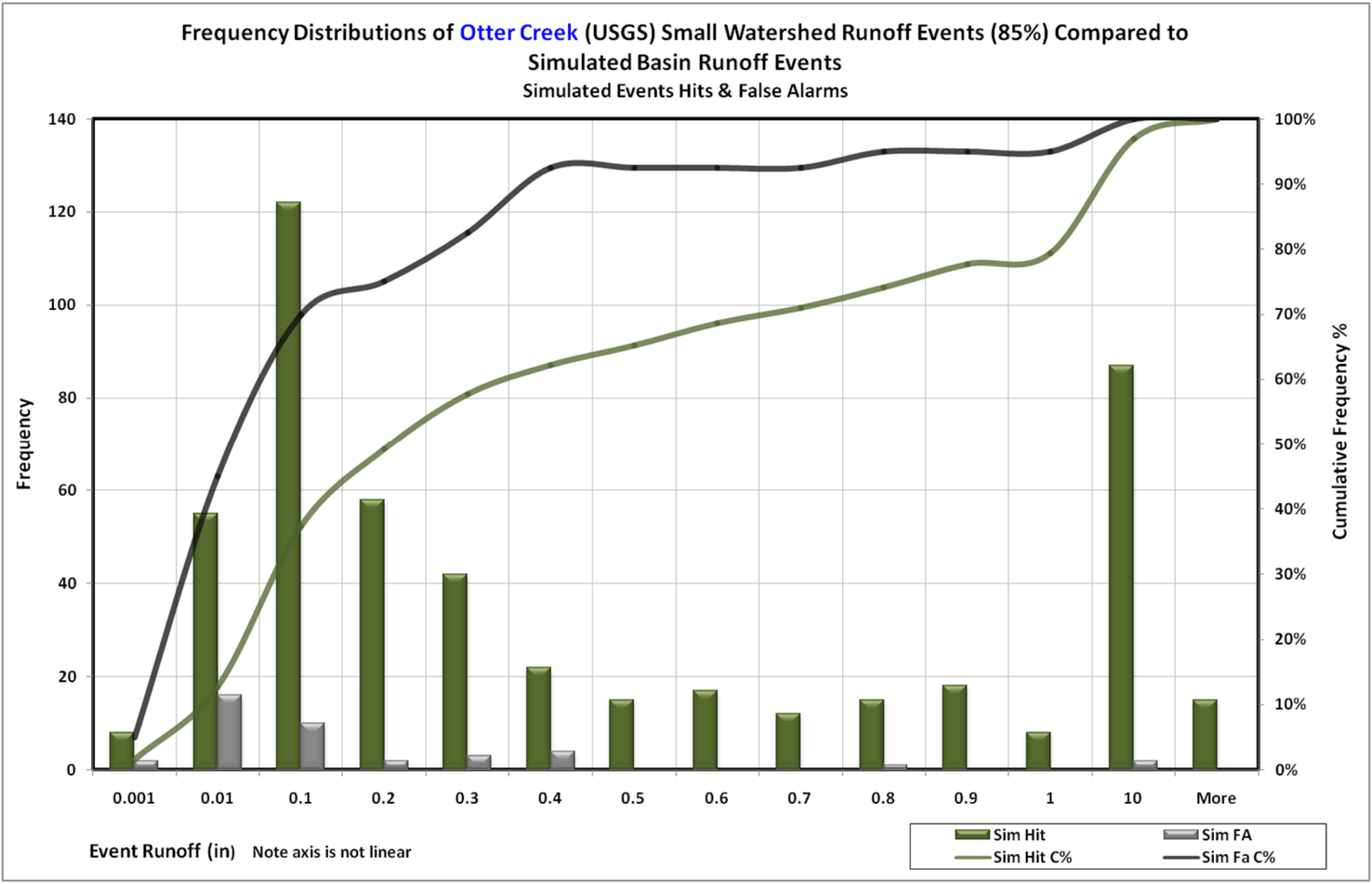
Slide 22


Frequency Distributions of Plover River (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
180
160
140
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

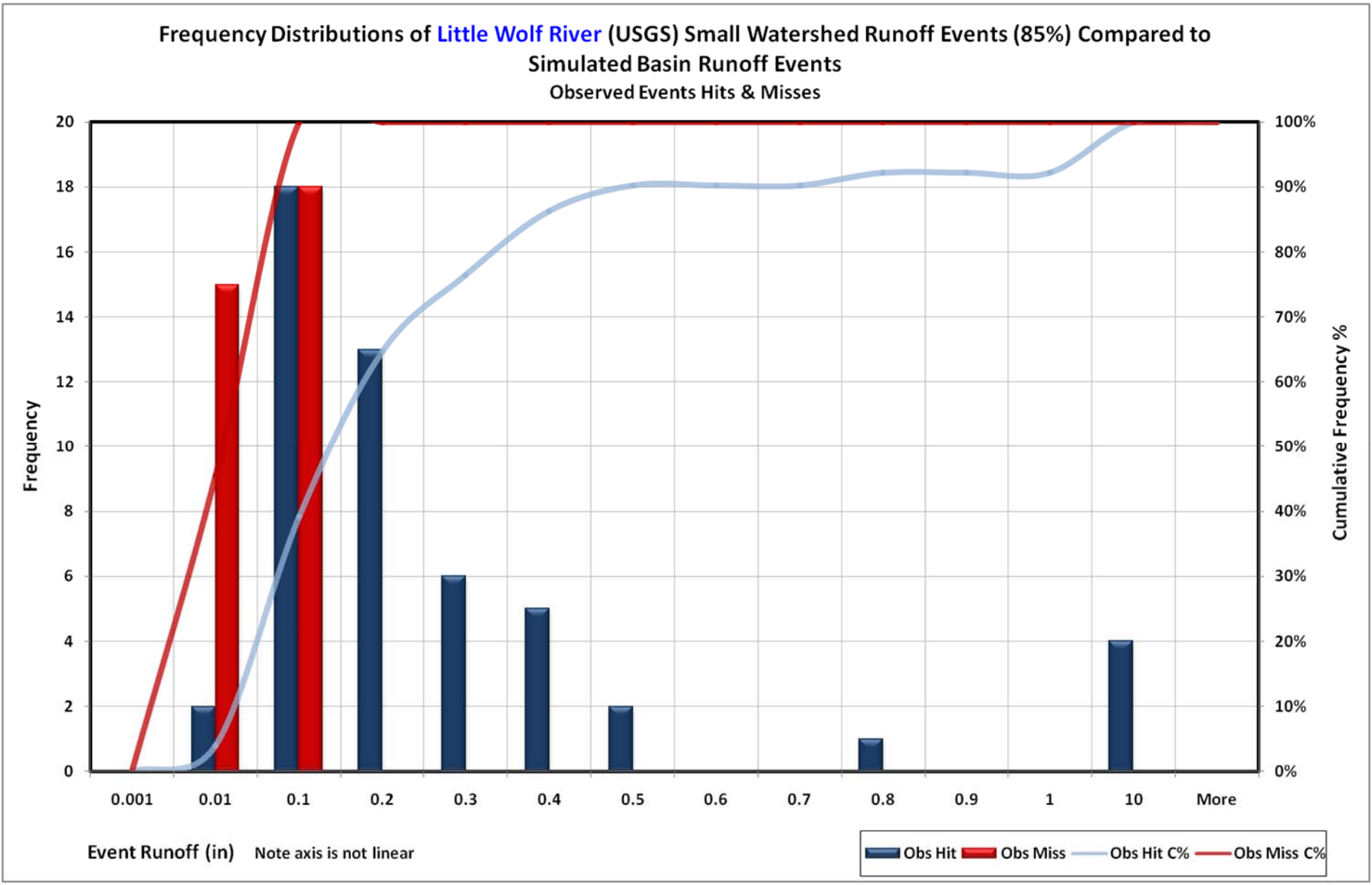
Slide 23


Frequency Distributions of Otter Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

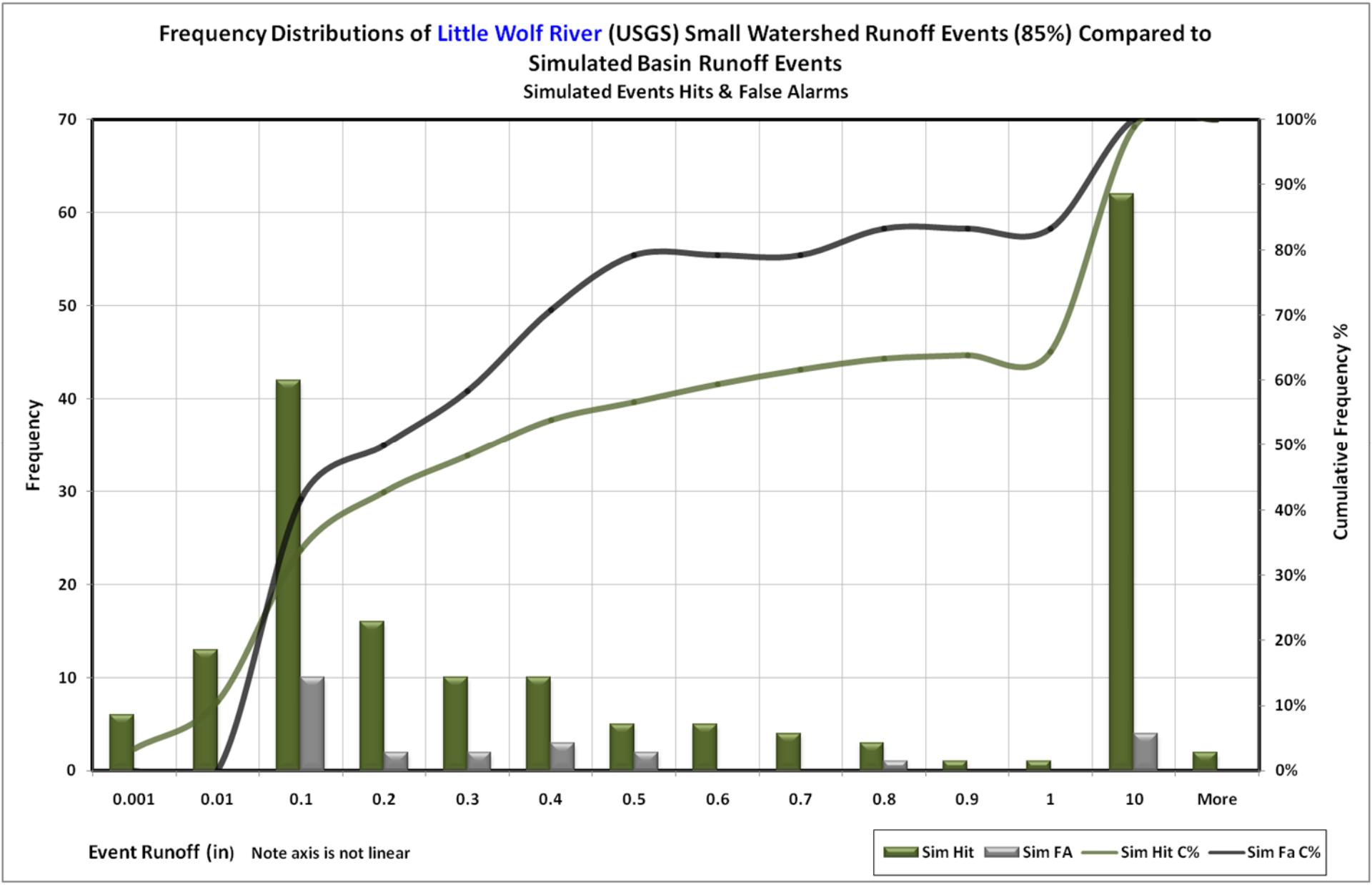
Slide 24


Frequency Distributions of Otter Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
140
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

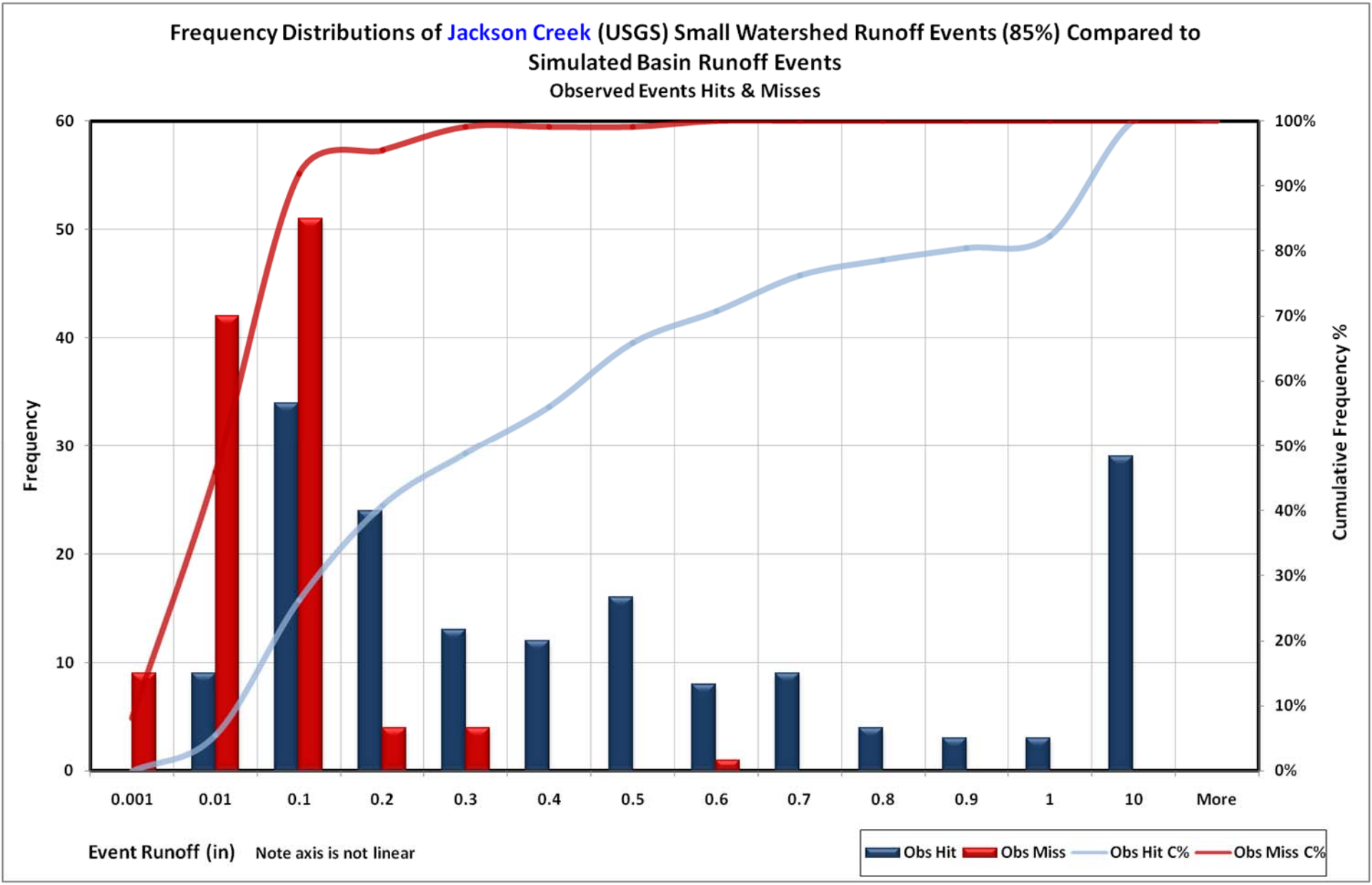
Slide 25


Frequency Distributions of Little Wolf River (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
20
18
16
14
12
10
8
6
4
2
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

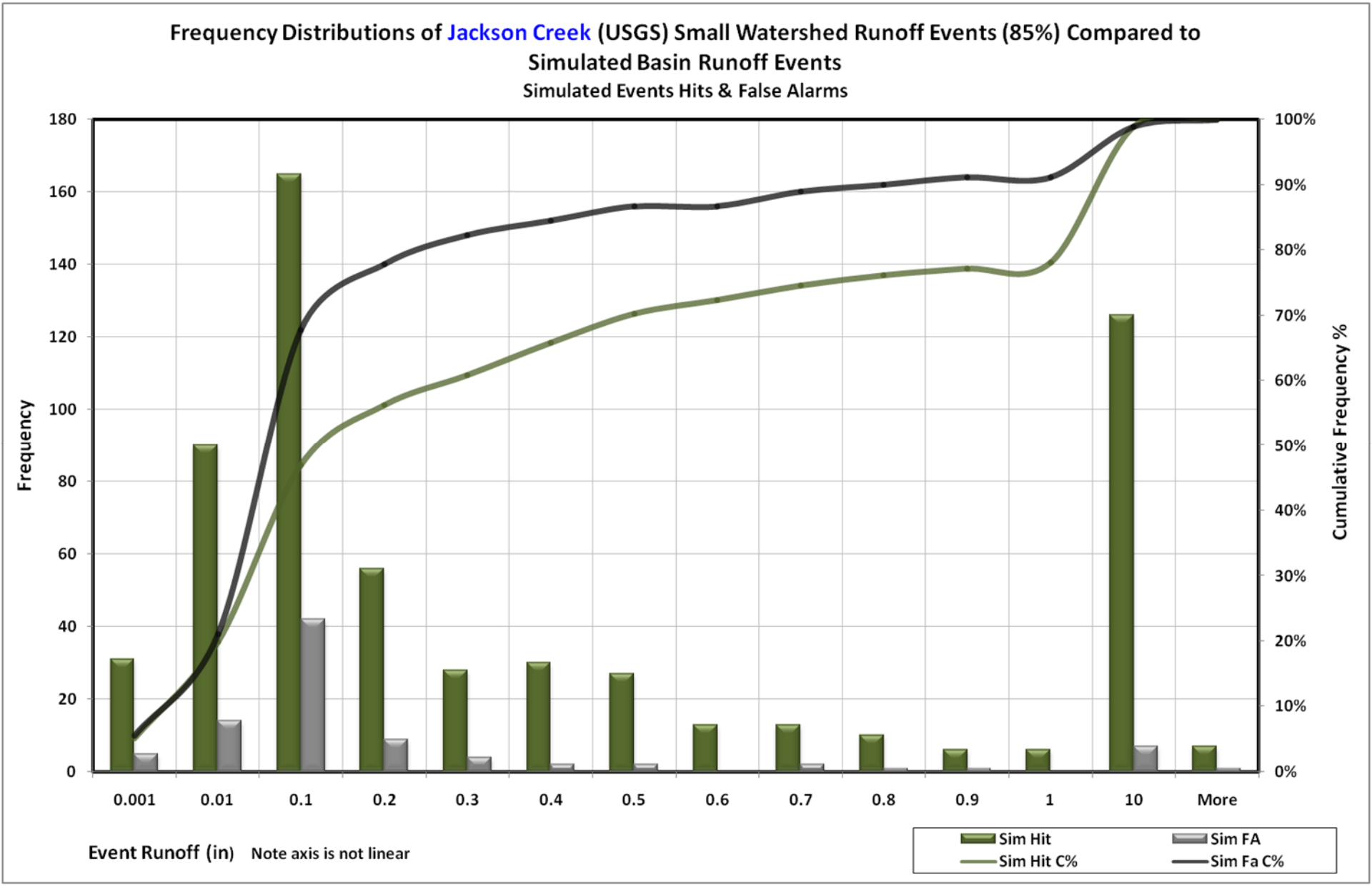
Slide 26


Frequency Distributions of Little Wolf River (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
70
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

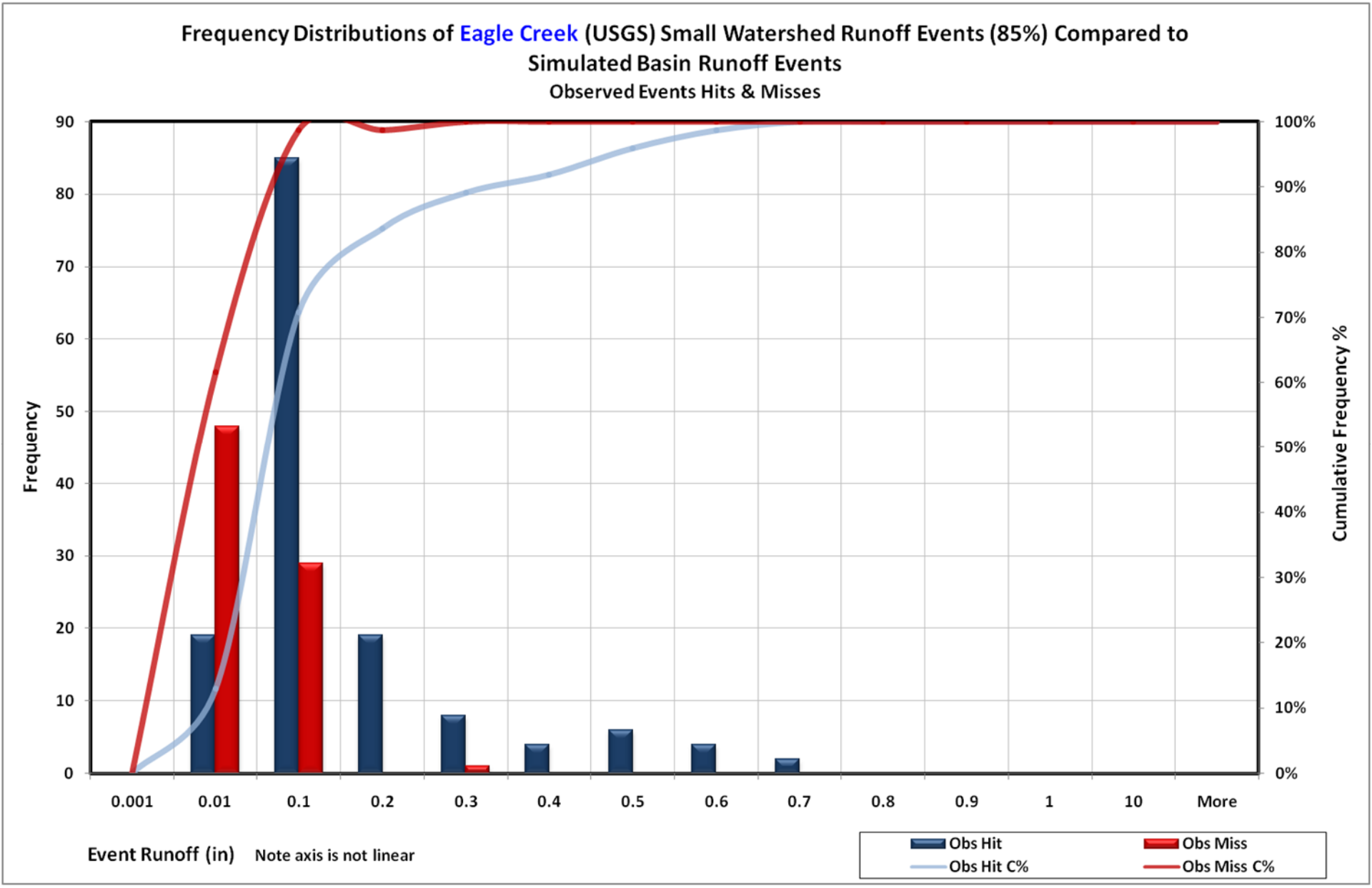
Slide 27


Frequency Distributions of Jackson Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

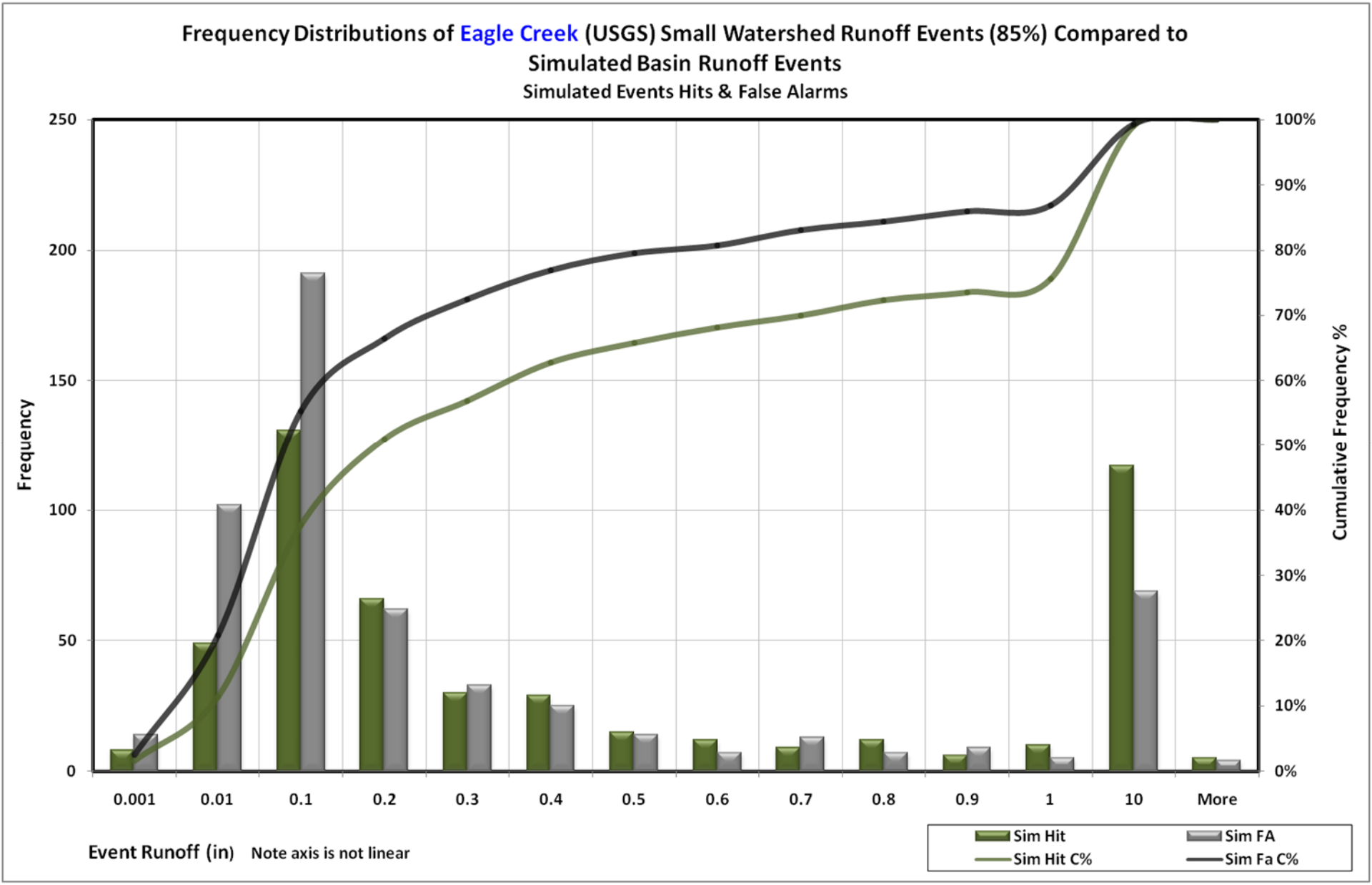
Slide 28


Frequency Distributions of Jackson Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
180
160
140
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

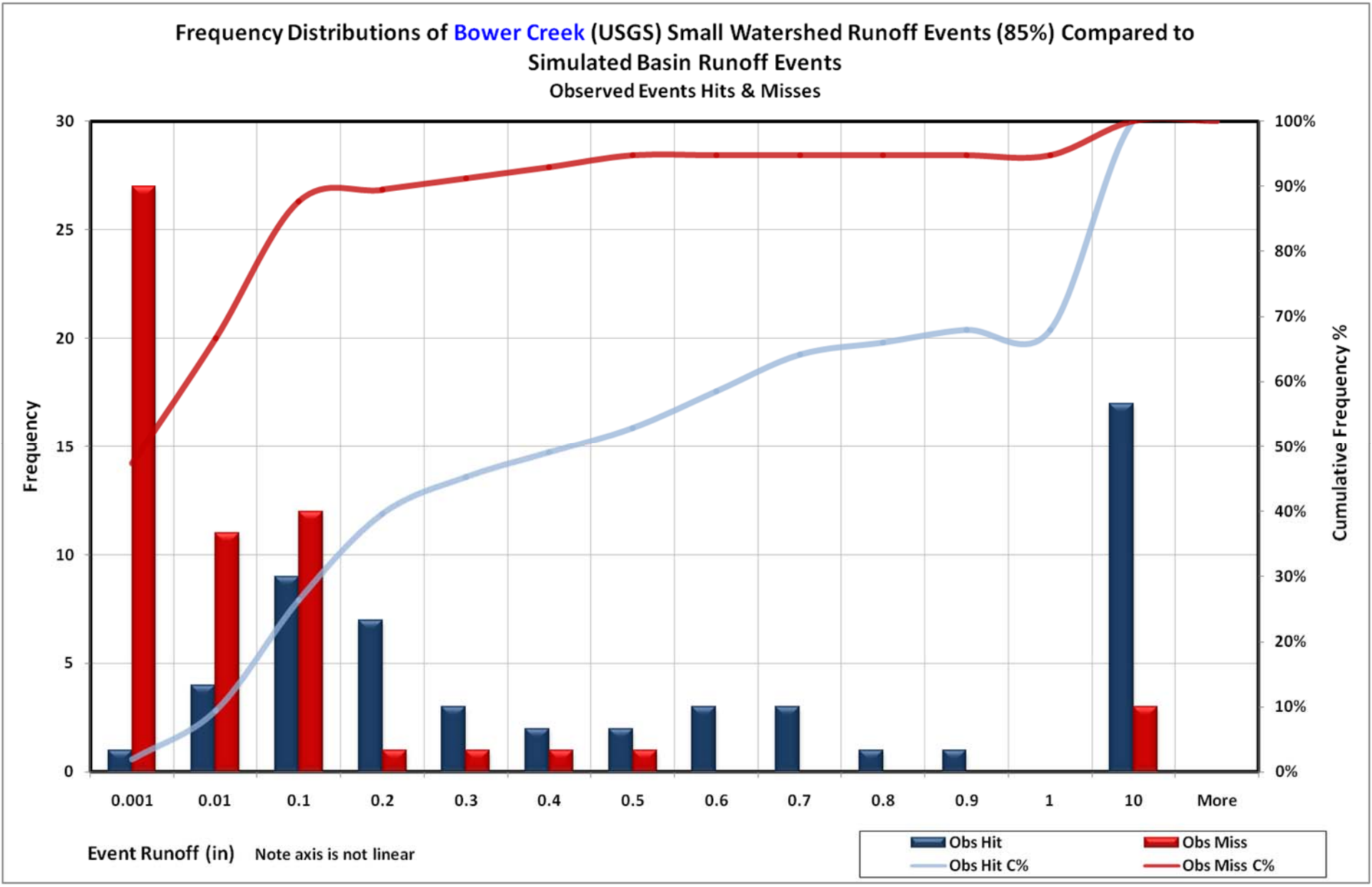
Slide 29


Frequency Distributions of Eagle Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
90
80
70
60
50
40
30
20
10
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

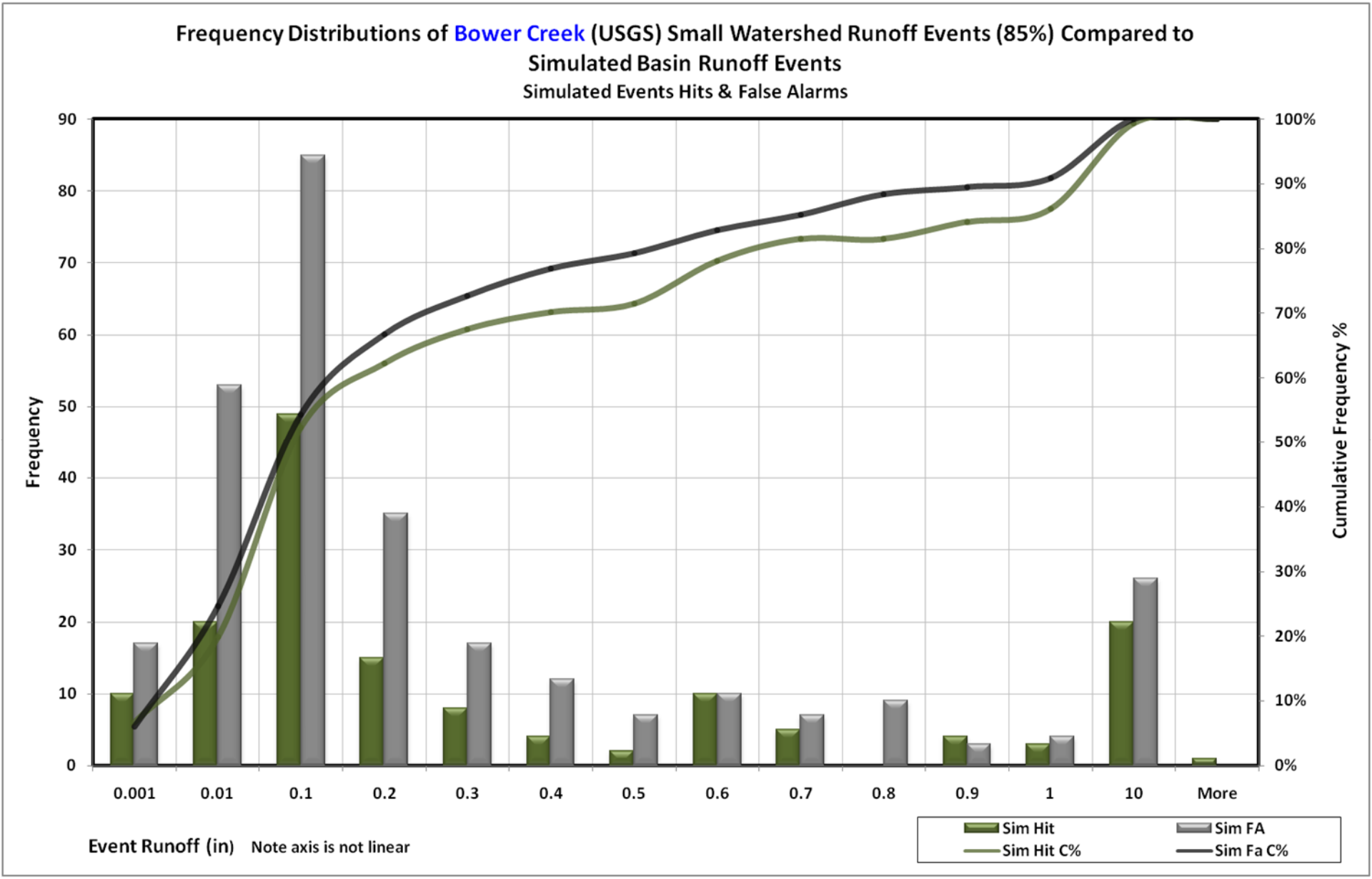
Slide 30


Frequency Distributions of Eagle Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
250
200
150
100
50
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

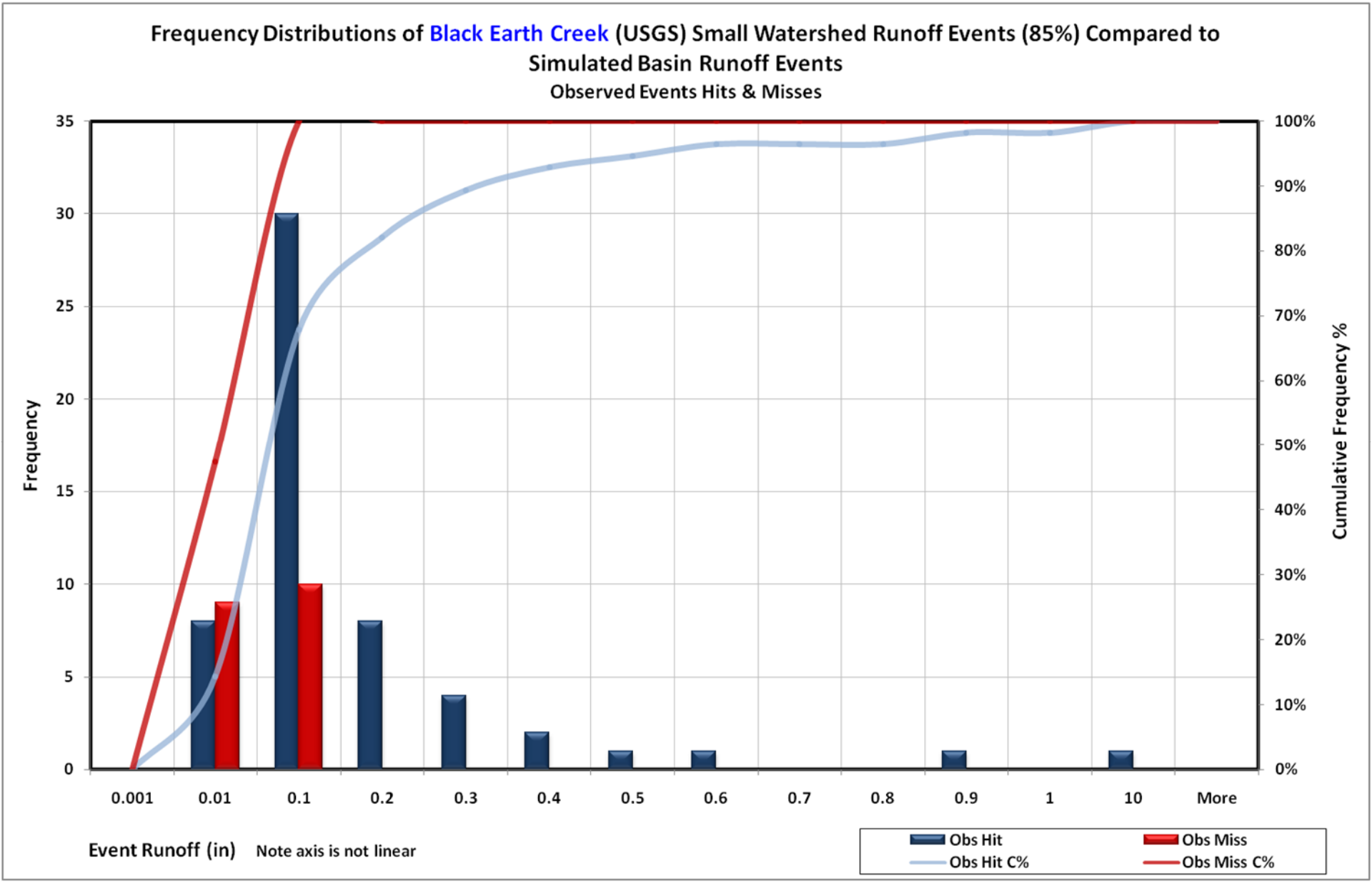
Slide 31


Frequency Distributions of Bower Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

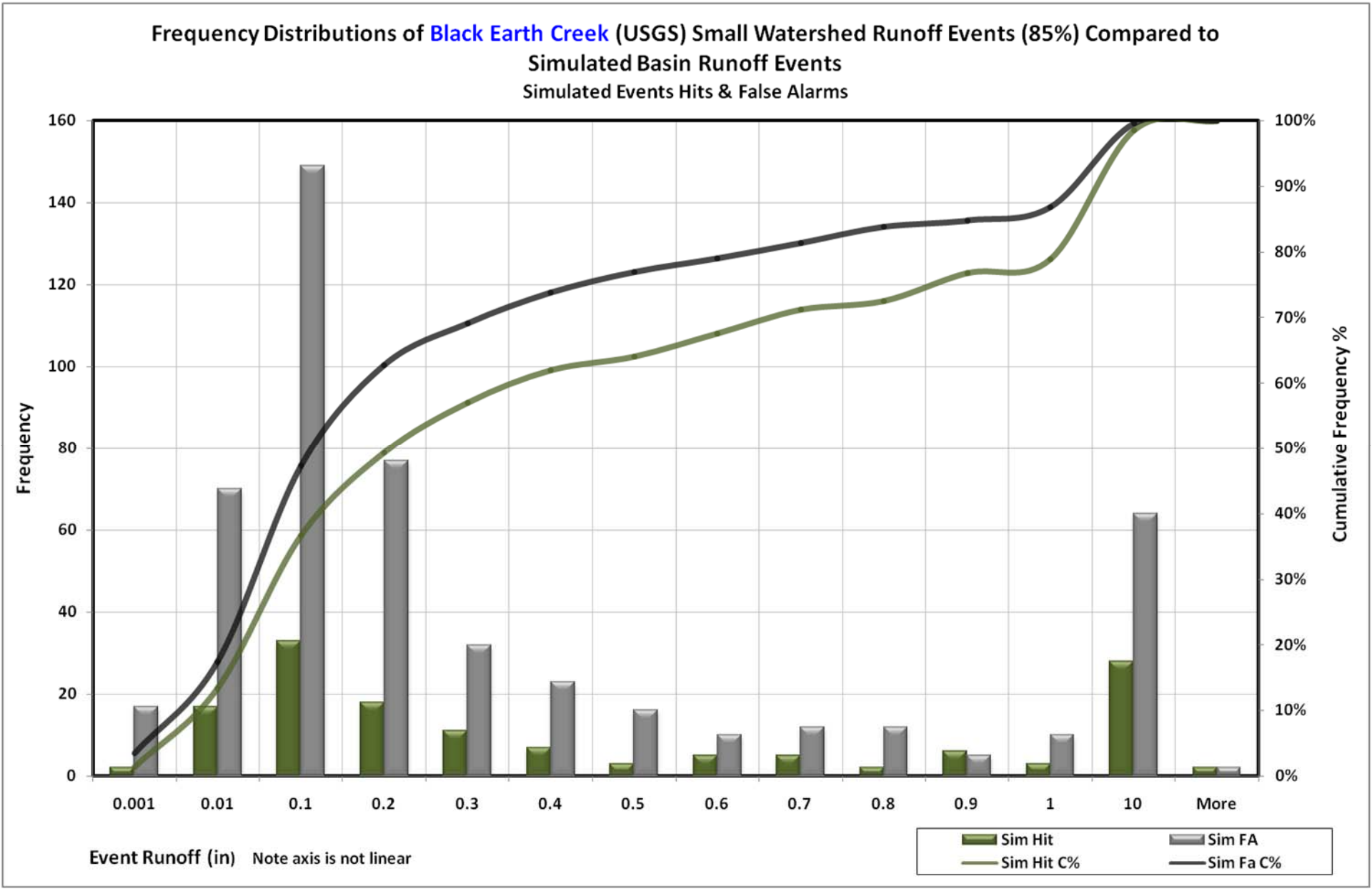
Slide 32


Frequency Distributions of Bower Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
0
10
20
30
40
50
60
70
80
90
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

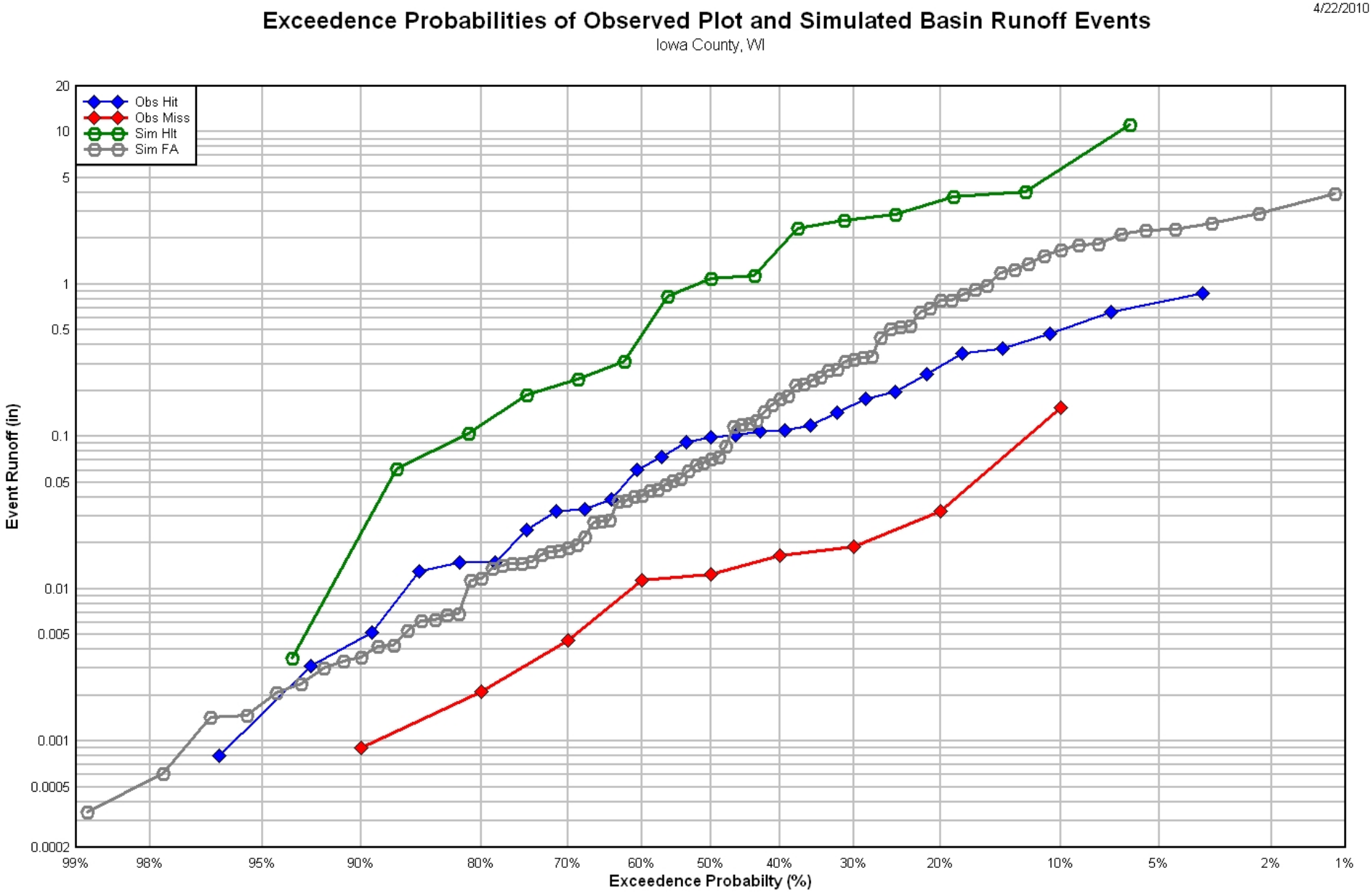
Slide 33


Frequency Distributions of Black Earth Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Observed Events Hits & Misses
Frequency
Cumulative Frequency %
35
30
25
20
15
10
5
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Obs Hit
Obs Miss
Obs Hit C%
Obs Miss C%

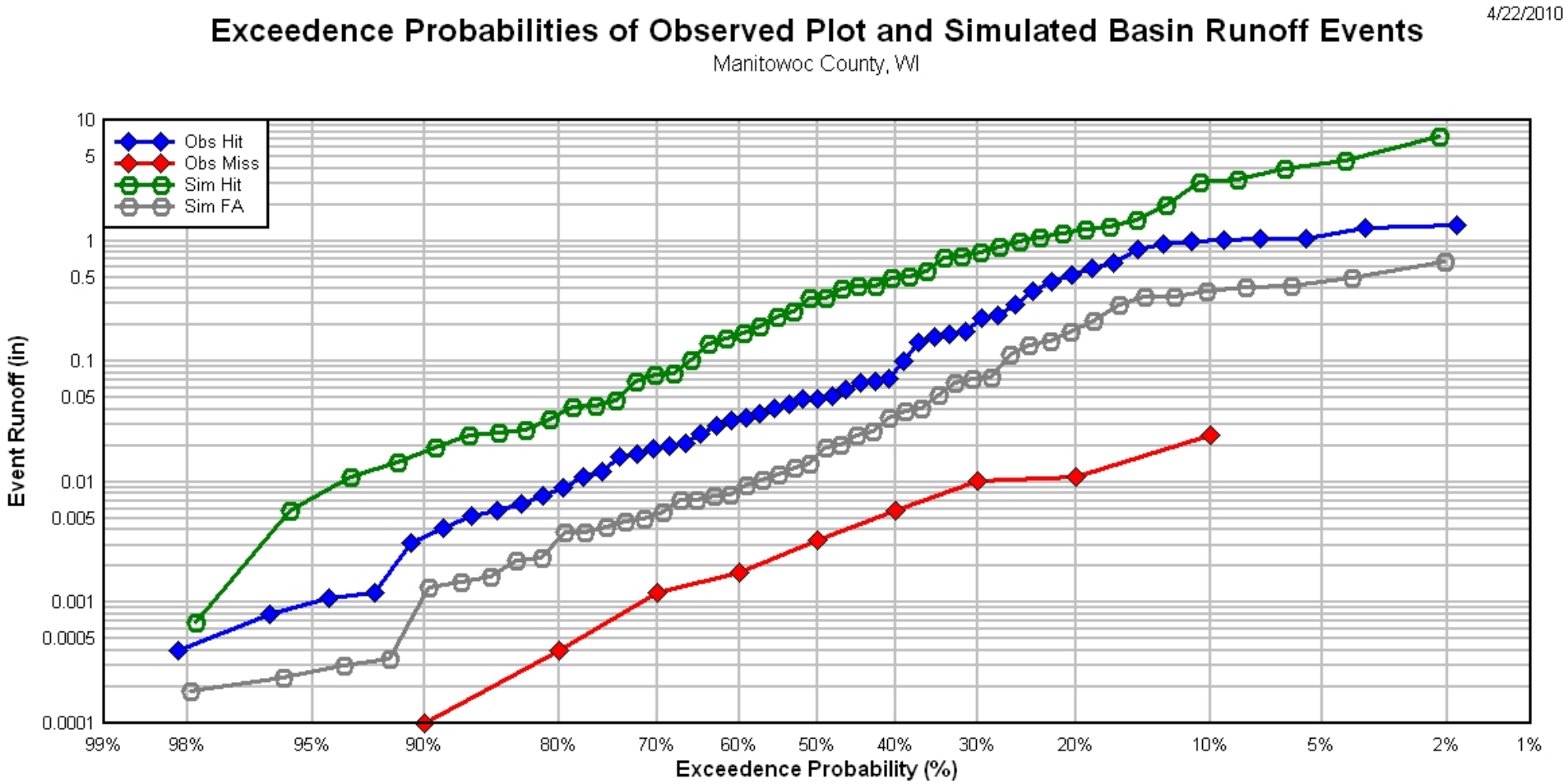
Slide 34


Frequency Distributions of Black Earth Creek (USGS) Small Watershed Runoff Events (85%) Compared to Simulated Basin Runoff Events
Simulated Events Hits & False Alarms
Frequency
Cumulative Frequency %
160
140
120
100
80
60
40
20
0
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.001
0.01
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
10
More
Event Runoff (in)
Note axis is not linear
Sim Hit
Sim FA
Sim Hit C%
Sim Fa C%

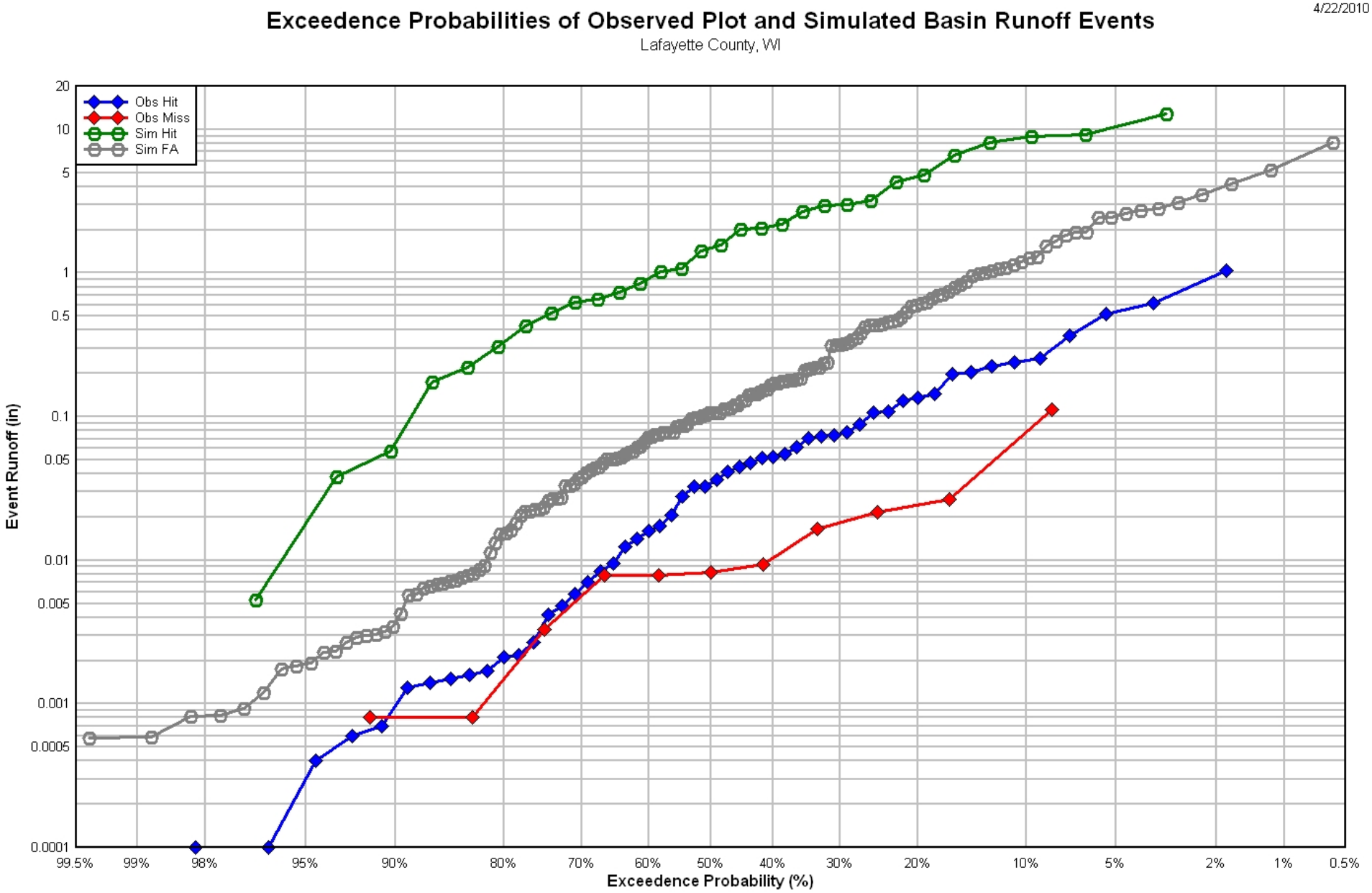
Slide 35


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Iowa County, WI
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
20
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0002
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
Exceedence Probabilty (%)

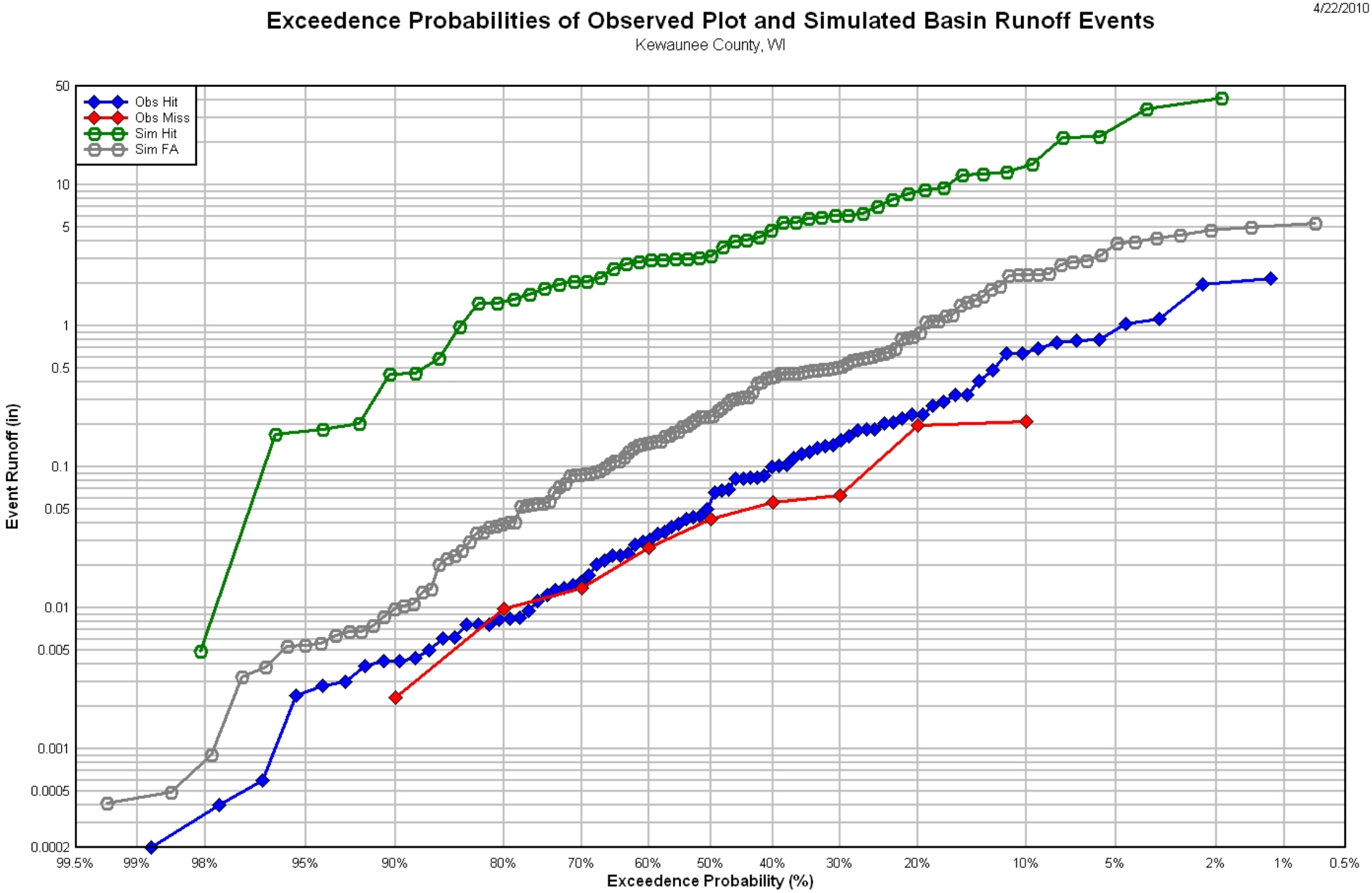
Slide 36


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Manitowoc County, WI
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
Exceedence Probability (%)

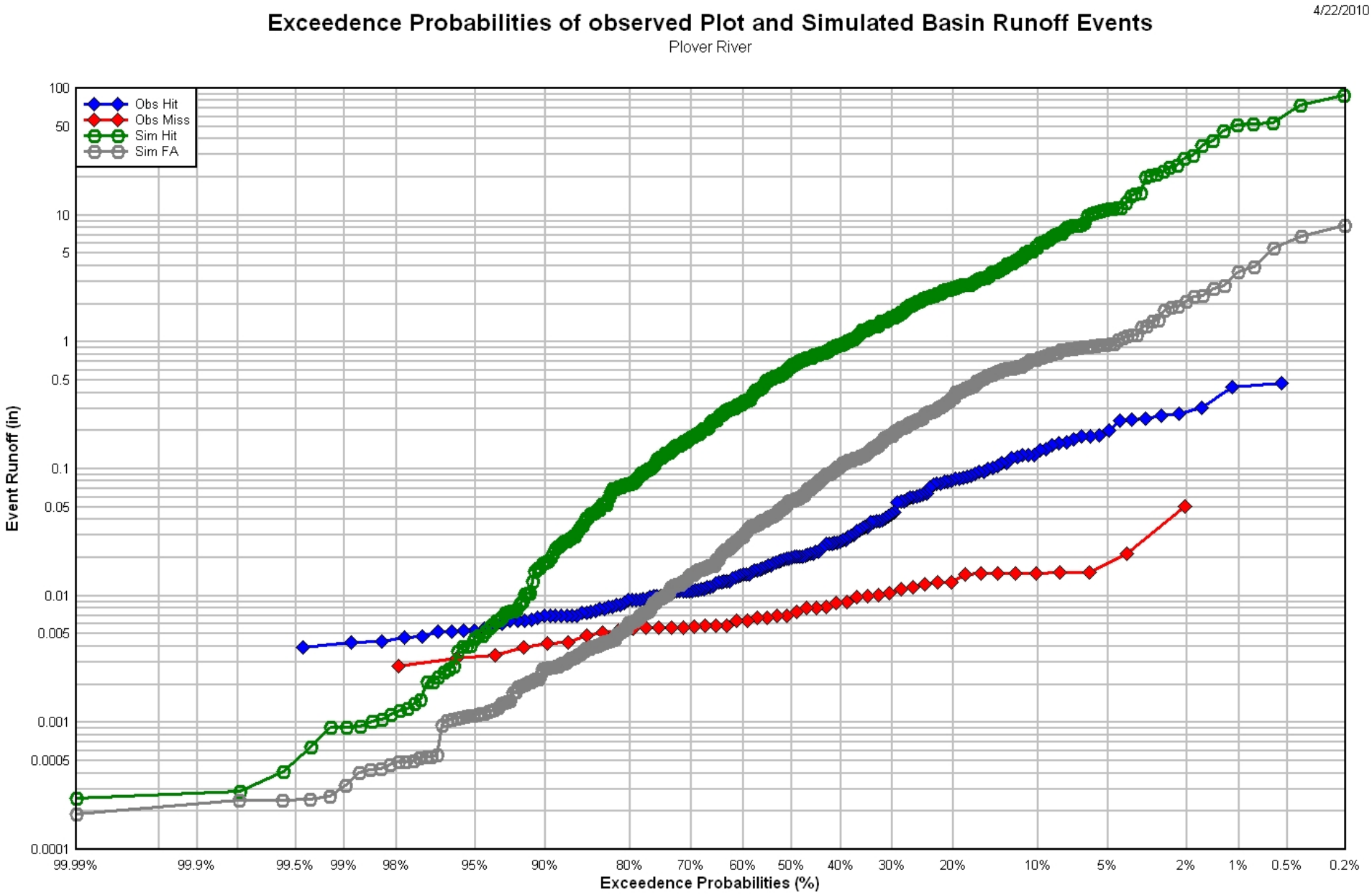
Slide 37


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Lafayette County, WI
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
20
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
Exceedence Probability (%)

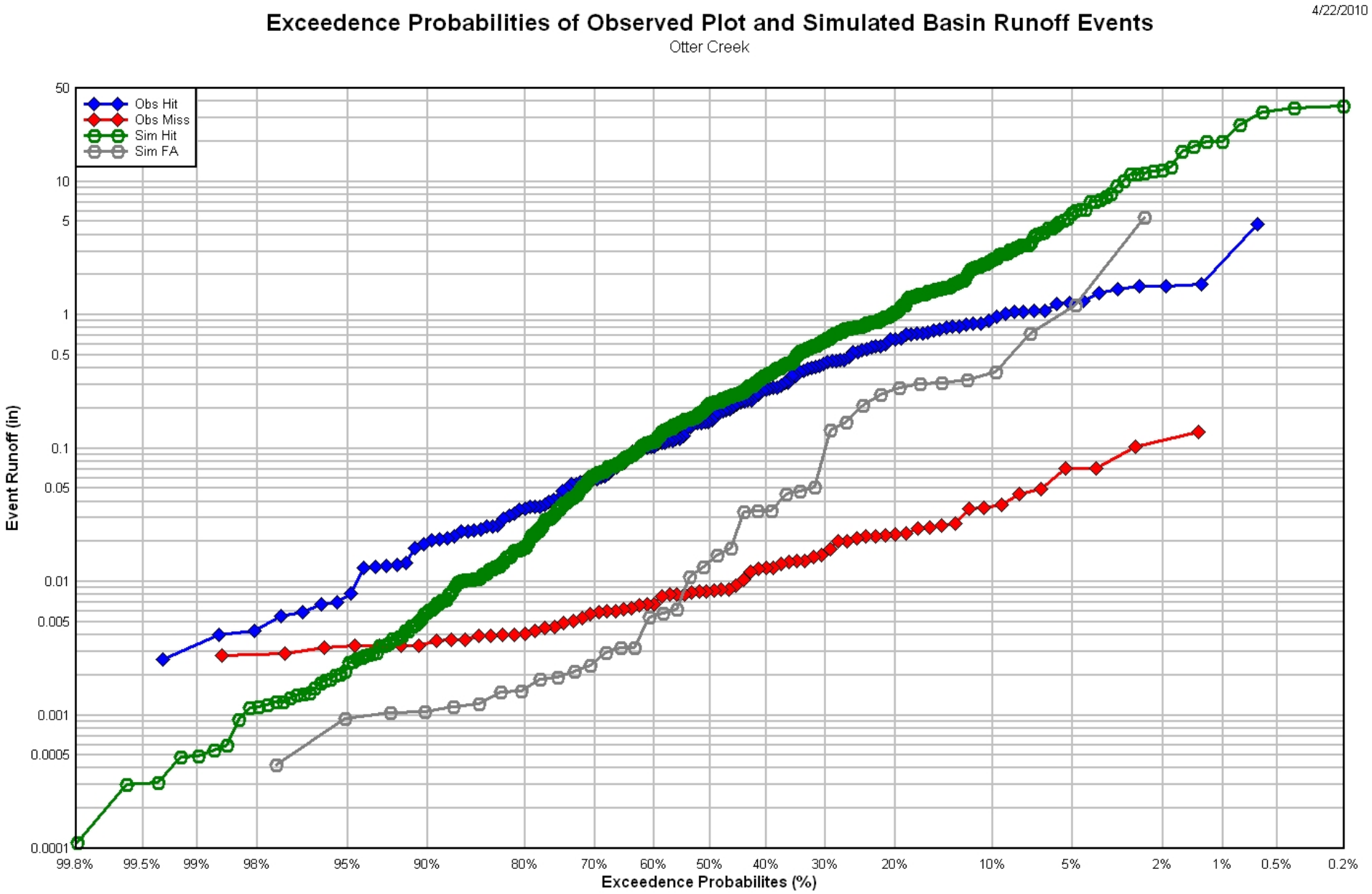
Slide 38


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Kewaunee County, WI
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0002
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
Exceedence Probability (%)

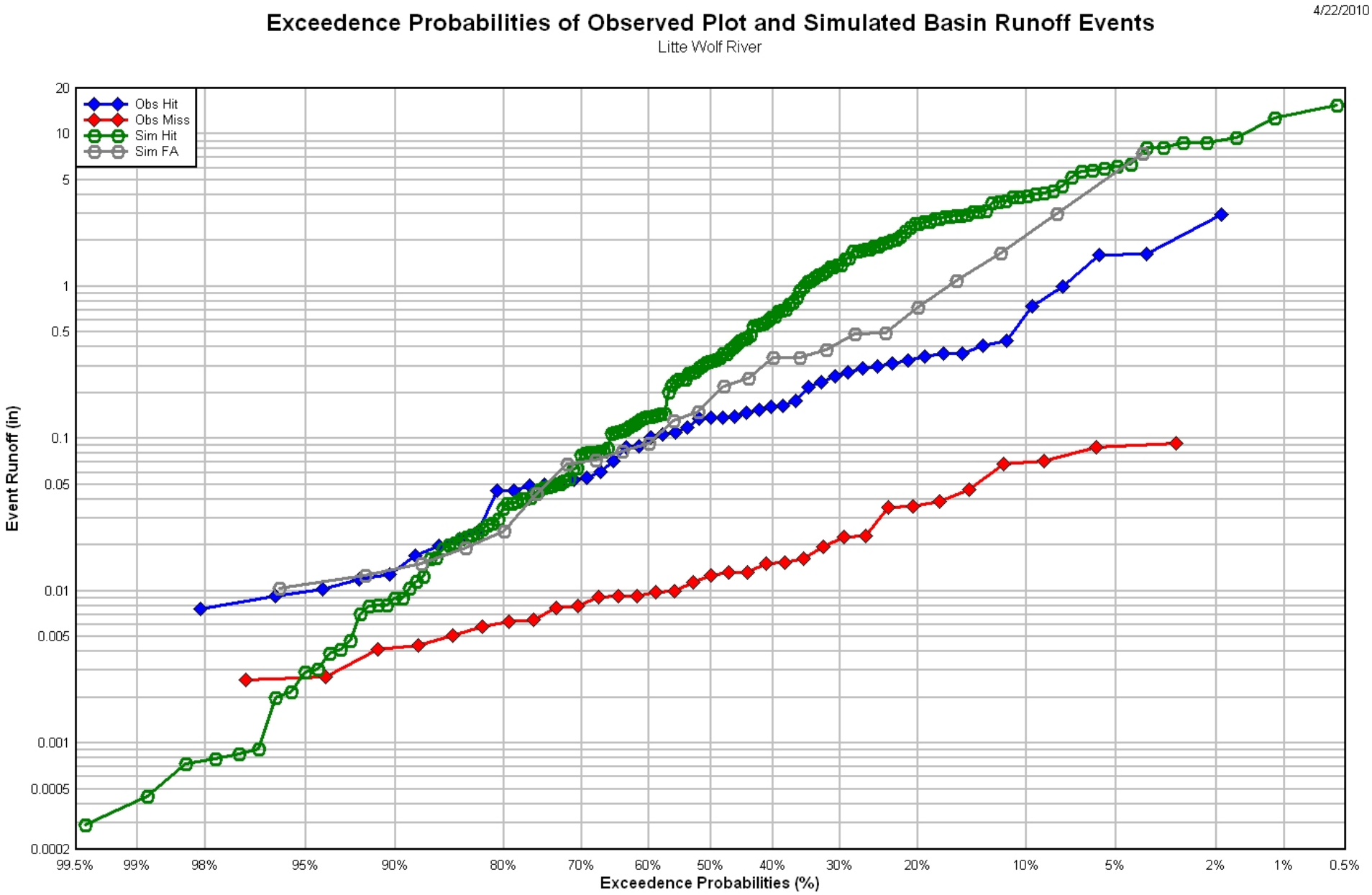
Slide 39


Exceedence Probabilities of observed Plot and Simulated Basin Runoff Events
Plover River
4/22/2010
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
100
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
99.99%
99.9%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
Exceedence Probabilities (%)

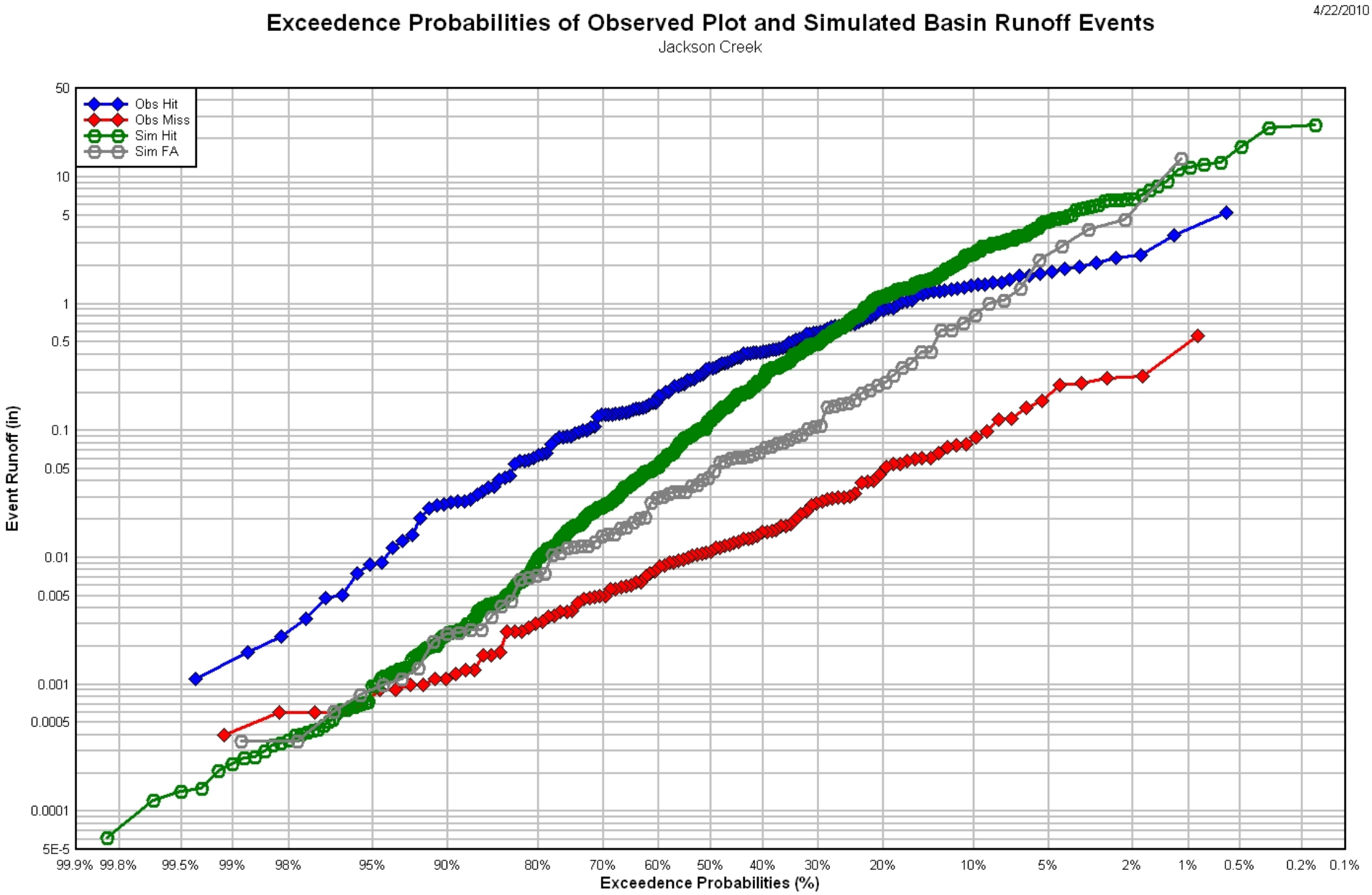
Slide 40


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Otter Creek
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
99.8%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
Exceedence Probabilites (%)

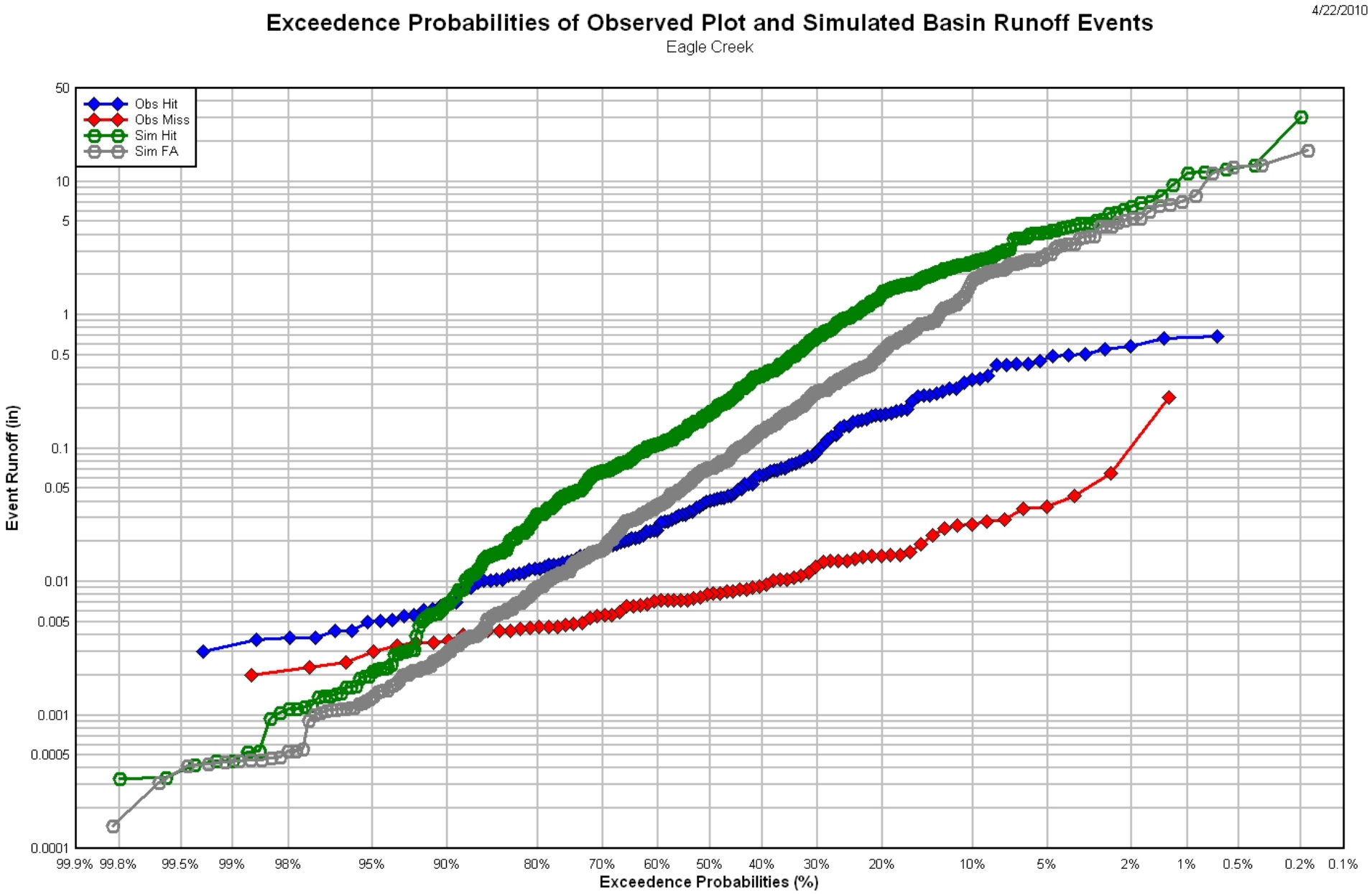
Slide 41


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Litte Wolf River
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
20
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0002
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
Exceedence Probabilities (%)

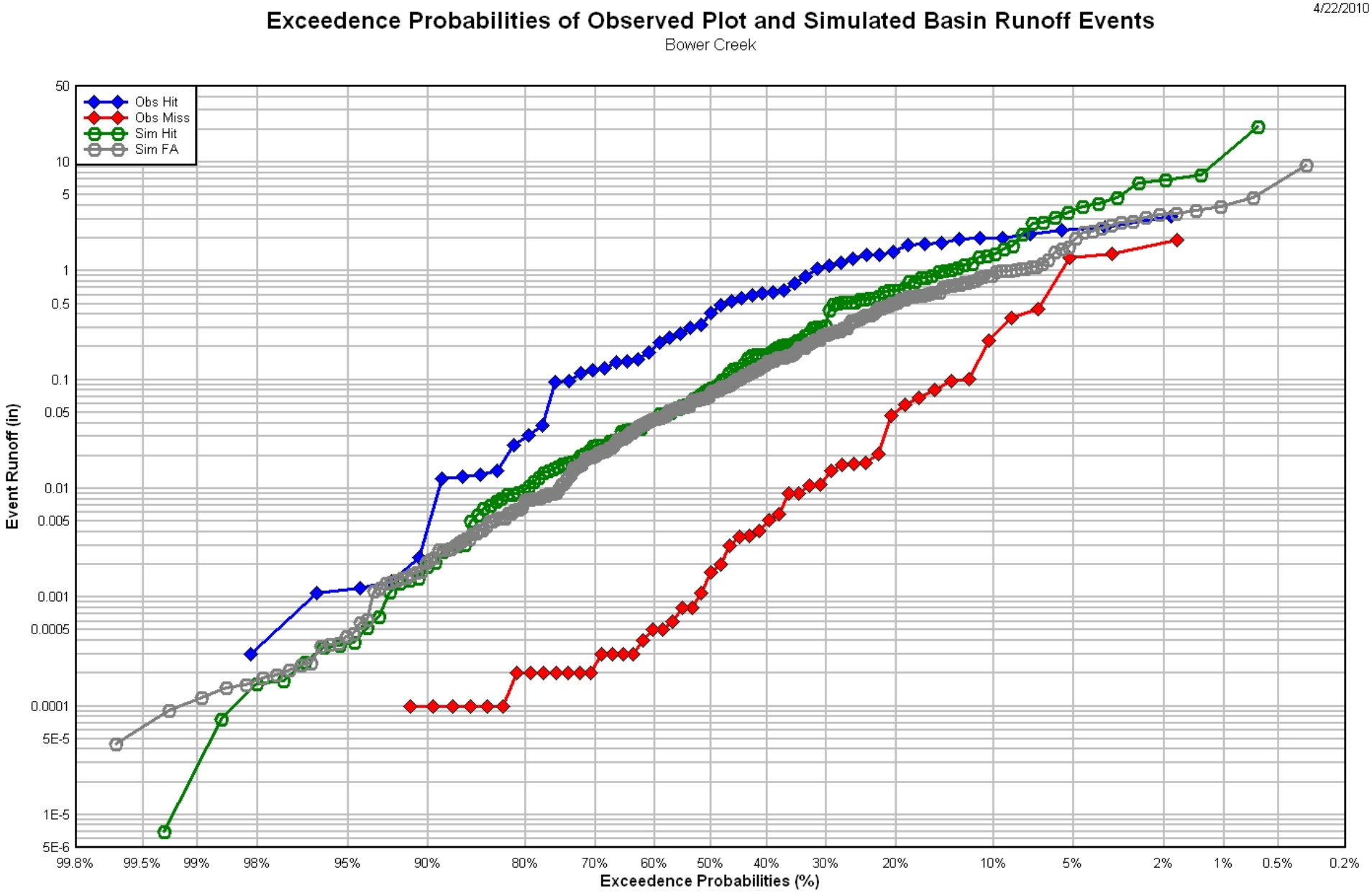
Slide 42


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Jackson Creek
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
5E-5
99.9%
99.8%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
0.1%
Exceedence Probabilities (%)

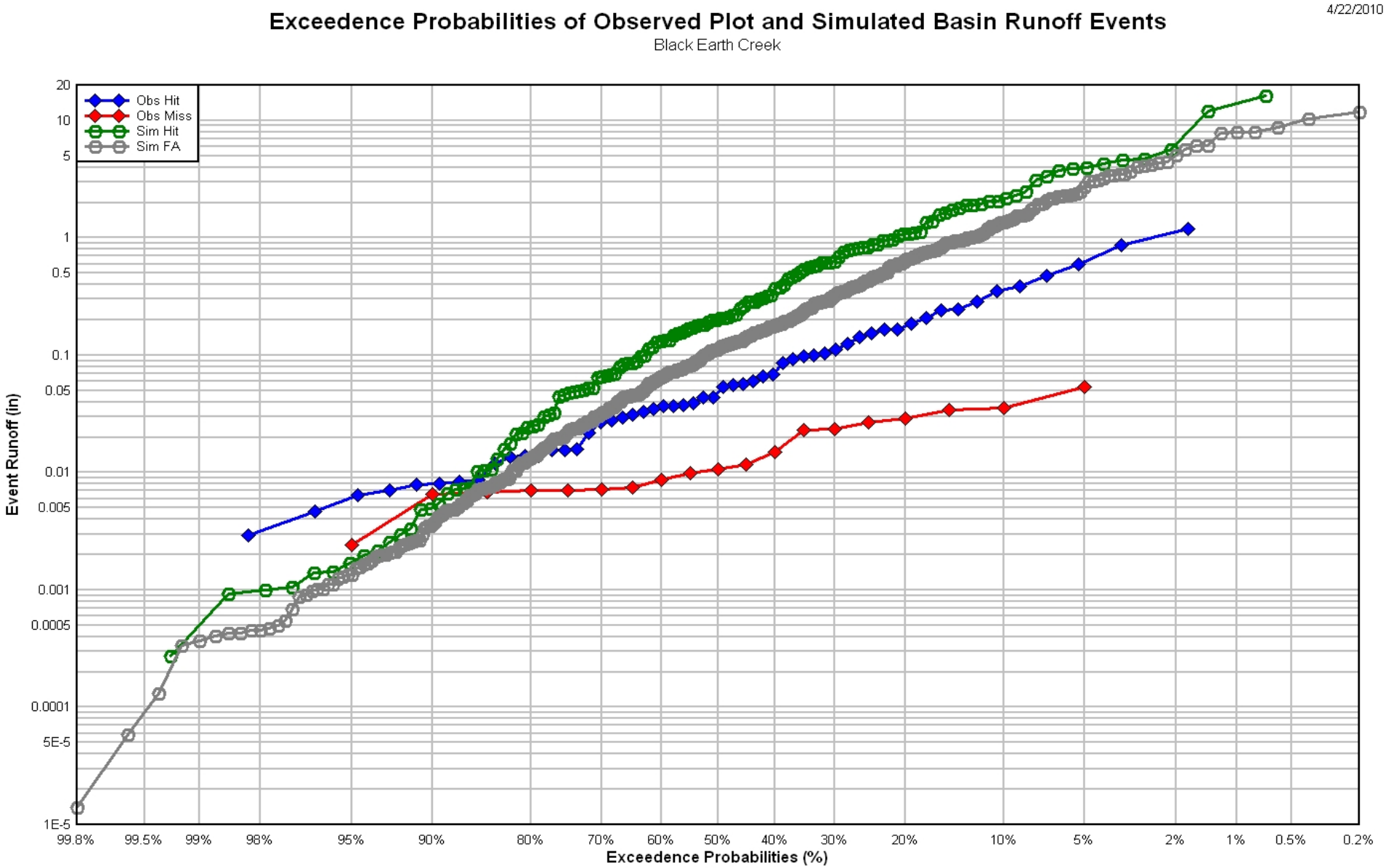
Slide 43


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Eagle Creek
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
99.9%
99.8%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
0.1%
Exceedence Probabilities (%)

Slide 44


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Bower Creek
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
50
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
5E-5
1E-5
5E-6
99.8%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
Exceedence Probabilities (%)

Slide 45


4/22/2010
Exceedence Probabilities of Observed Plot and Simulated Basin Runoff Events
Black Earth Creek
Obs Hit
Obs Miss
Sim Hit
Sim FA
Event Runoff (in)
20
10
5
1
0.5
0.1
0.05
0.01
0.005
0.001
0.0005
0.0001
5E-5
1E-5
99.8%
99.5%
99%
98%
95%
90%
80%
70%
60%
50%
40%
30%
20%
10%
5%
2%
1%
0.5%
0.2%
Exceedence Probabilities (%)