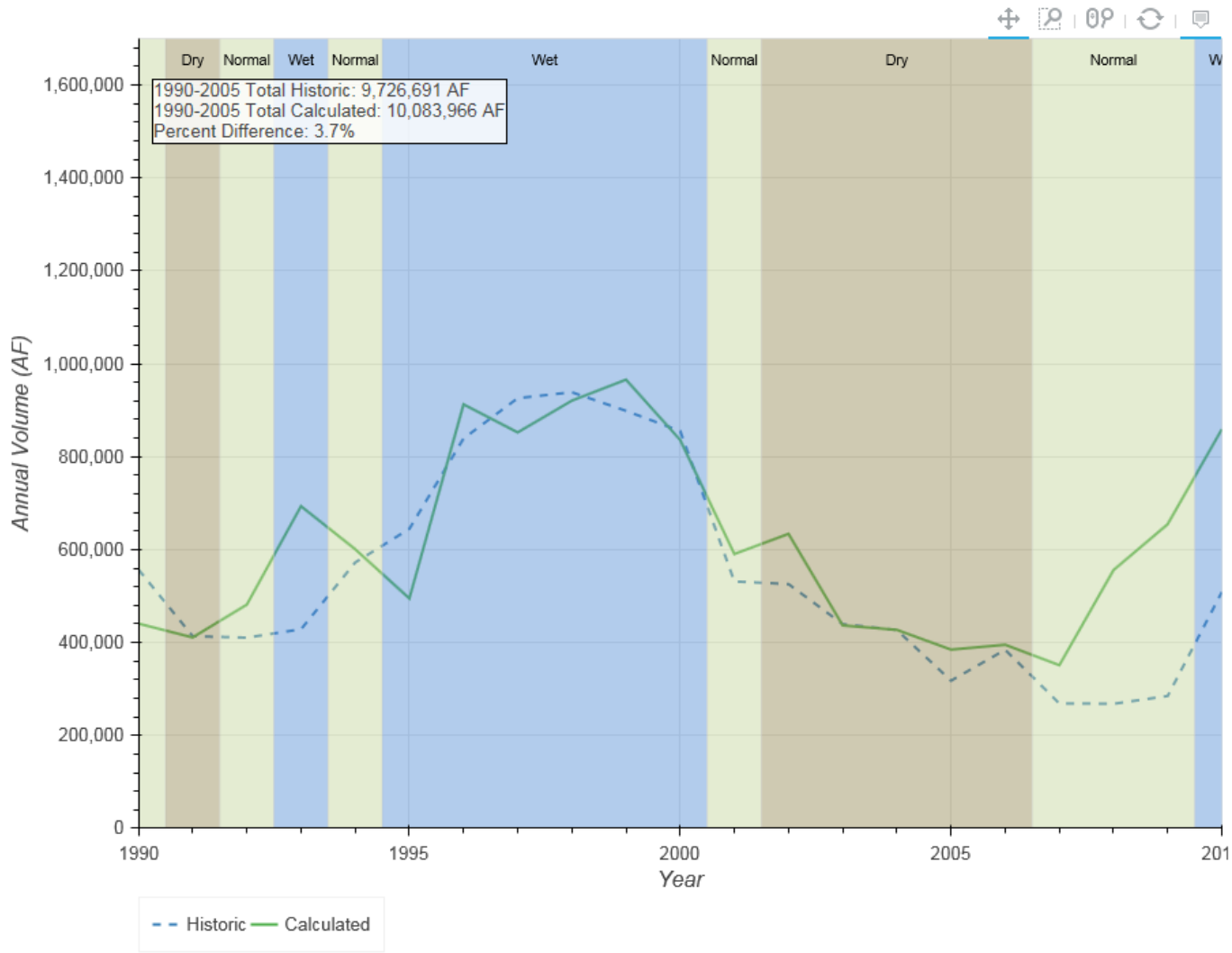


Surface Water Model Calibration Results – Canal Diversions and Returns

Appendix 6-J contains calibration results for the canal diversions and returns. Figures include annual and daily simulated and historic flows plotted for each canal diversion and return for the period 1990-2005. Daily plots include the cumulative differences between historic and modeled daily flow for each diversion and gaged return as well (simulated – historic; positive cumulative difference represents an over prediction by the model). The shaded background in the figures represents the annual wet/dry/normal hydrologic classification of the Platte River basin as determined by US F&WS and is included to assess model performance over varying hydrologic conditions. For select canal diversions, daily plots in four-year intervals are provided for more detailed inspection of model performance. A location map is provided on the plots to identify the diversion/return spatially in the model domain. Finally, a summary table displays the total historic diversion, total calculated (modeled) diversion, and percent difference for the period 1990-2005. Diversion and return locations include the following:

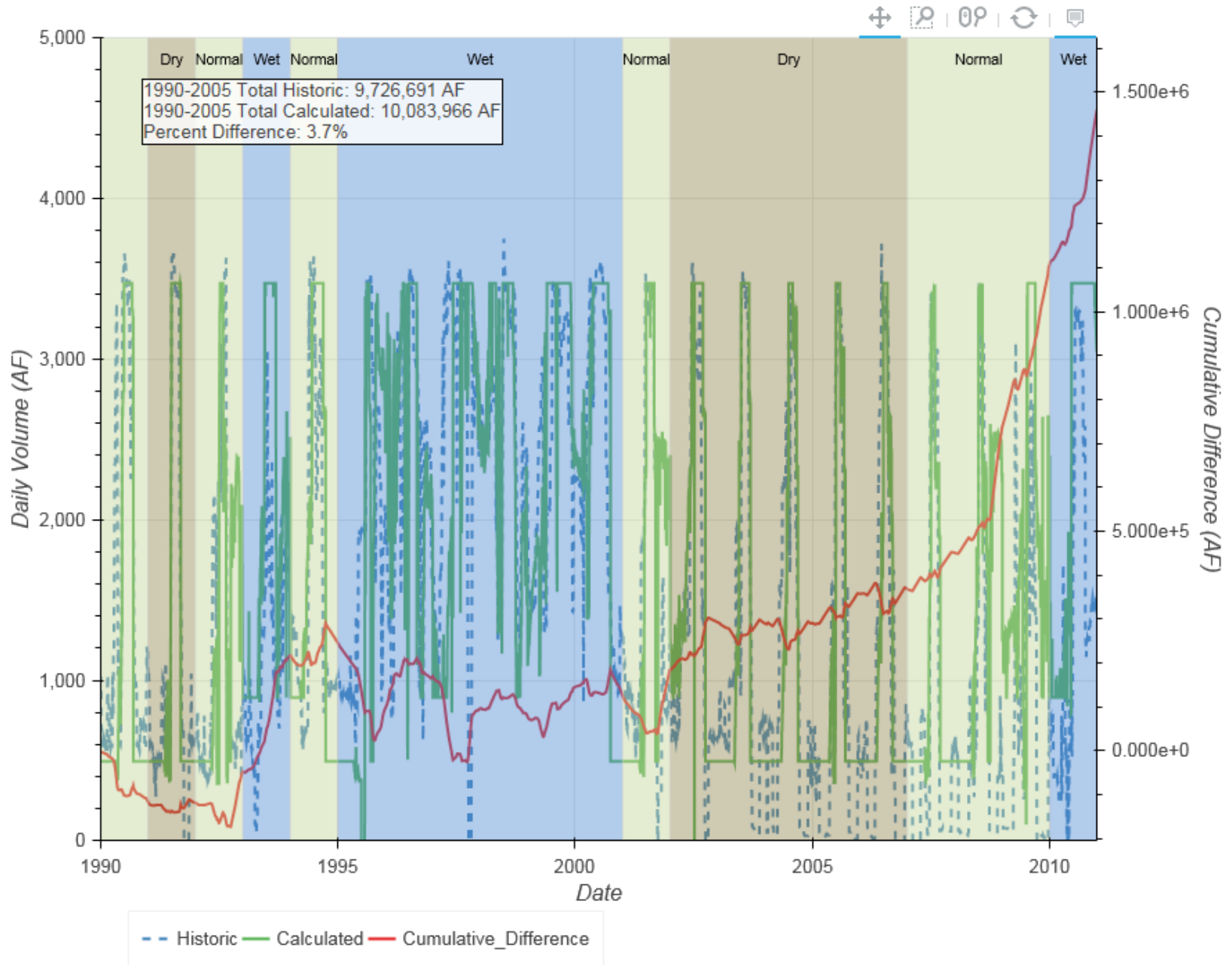
- Keystone Diversion
- North Platte Canals (Total)
- Keith Lincoln Diversion
- North Platte Diversion
- Paxton Hershey Diversion
- Suburban Diversion
- Cody Dillon Diversion
- Birdwood Diversion
- Western Diversion
- Korty Diversion
- Tri County Diversion
- Gothenburg Diversion
- Thirty Mile Diversion
- Six Mile Diversion
- Cozad Diversion
- Dawson Diversion
- Orchard Alfalfa Diversion
- Kearney Diversion
- E-65 Diversion
- E-67 Diversion
- Phelps Diversion
- Jeffrey Return
- Johnson Return
- Sutherland Return

Keystone Diversion



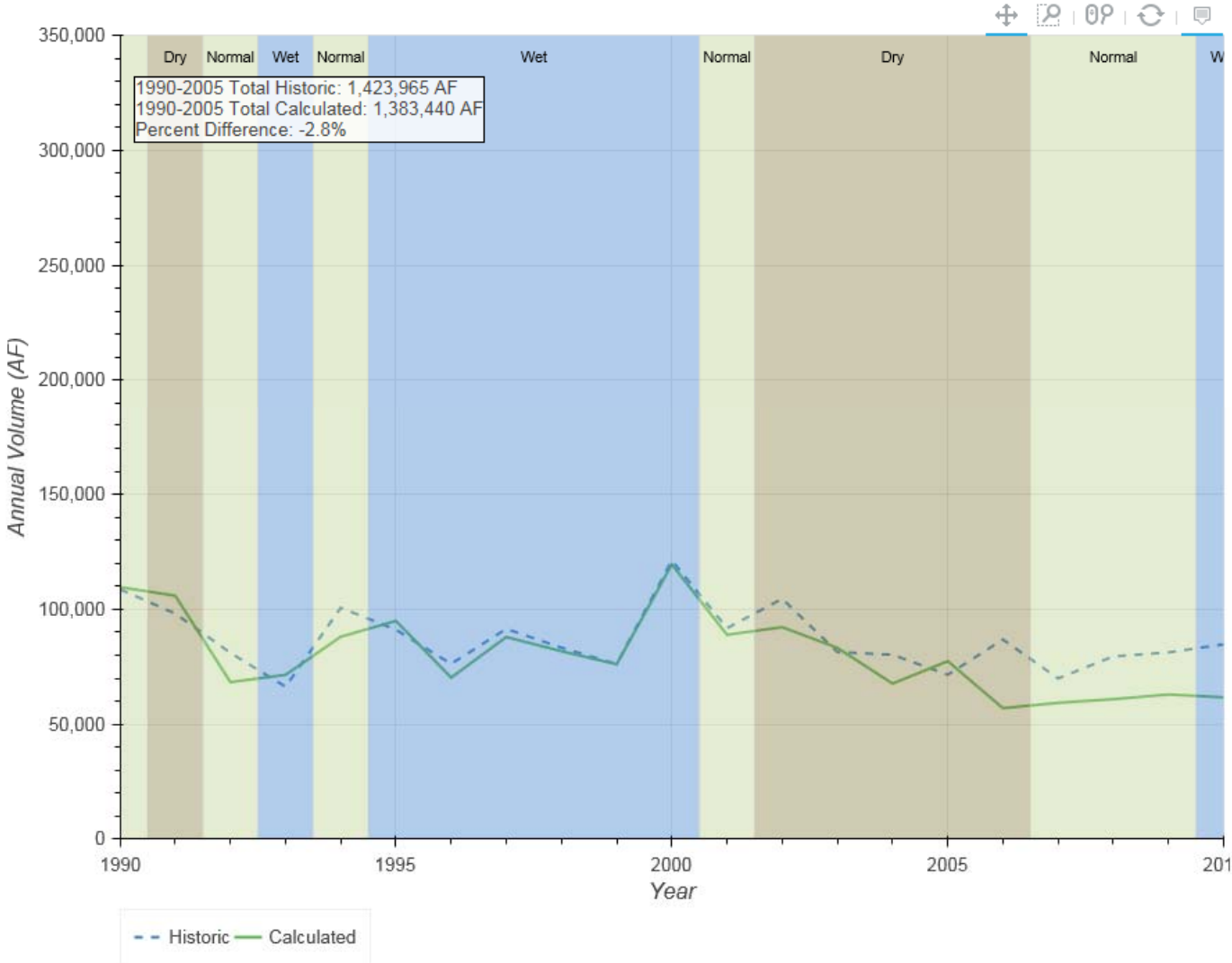
Year	Historic	Calculated
1990	557,046	440,854
1991	413,726	410,994
1992	410,580	481,716
1993	428,537	693,493
1994	572,279	600,878
1995	644,727	494,959
1996	839,111	912,676
1997	926,045	852,268
1998	938,771	920,705
1999	898,766	965,886
2000	855,219	835,931
2001	531,576	590,612
2002	525,842	634,030
2003	439,571	436,854
2004	427,043	427,319
2005	317,851	384,794
2006	384,522	395,325
2007	268,869	351,309
2008	268,164	556,105
2009	284,977	654,843
2010	508,667	859,263
Total	11,441,892	12,900,811

Keystone Diversion



North Platte Canals (Total)

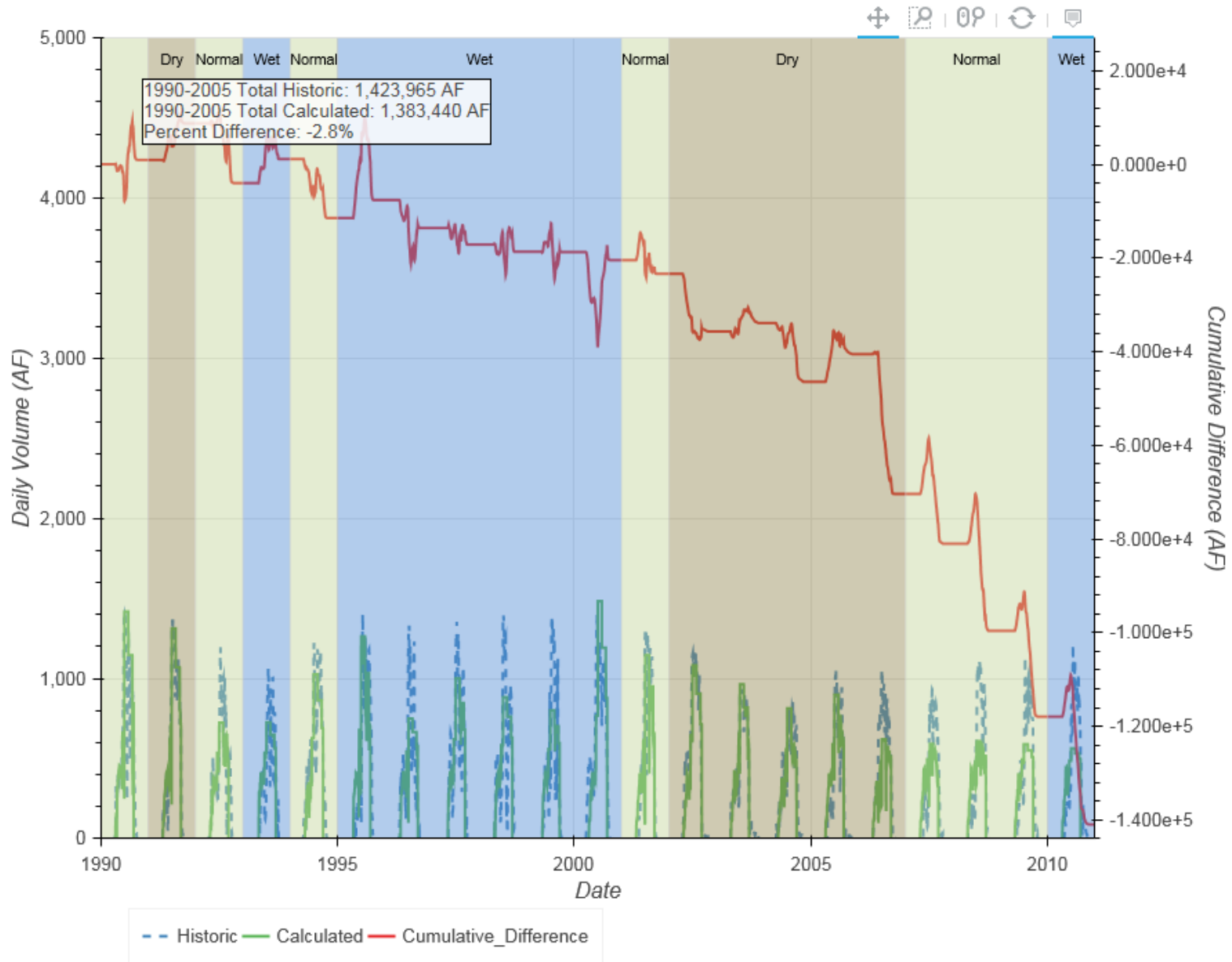
Keith Lincoln, North Platte, Paxton Hershey, Suburban, Cody Dillon



Year	Historic	Calculated
1990	108,672	109,626
1991	98,160	105,923
1992	81,055	68,314
1993	66,328	71,489
1994	100,666	88,059
1995	91,110	94,942
1996	76,258	70,290
1997	91,488	87,938
1998	83,288	81,776
1999	76,161	76,085
2000	121,220	119,499
2001	91,814	88,910
2002	104,557	92,229
2003	81,427	83,212
2004	80,209	67,693
2005	71,552	77,456
2006	86,855	56,998
2007	69,945	59,313
2008	79,505	60,916
2009	81,271	62,940
2010	84,728	61,700
Total	1,826,269	1,685,308

North Platte Canals (Total)

Keith Lincoln, North Platte, Paxton Hershey, Suburban, Cody Dillon

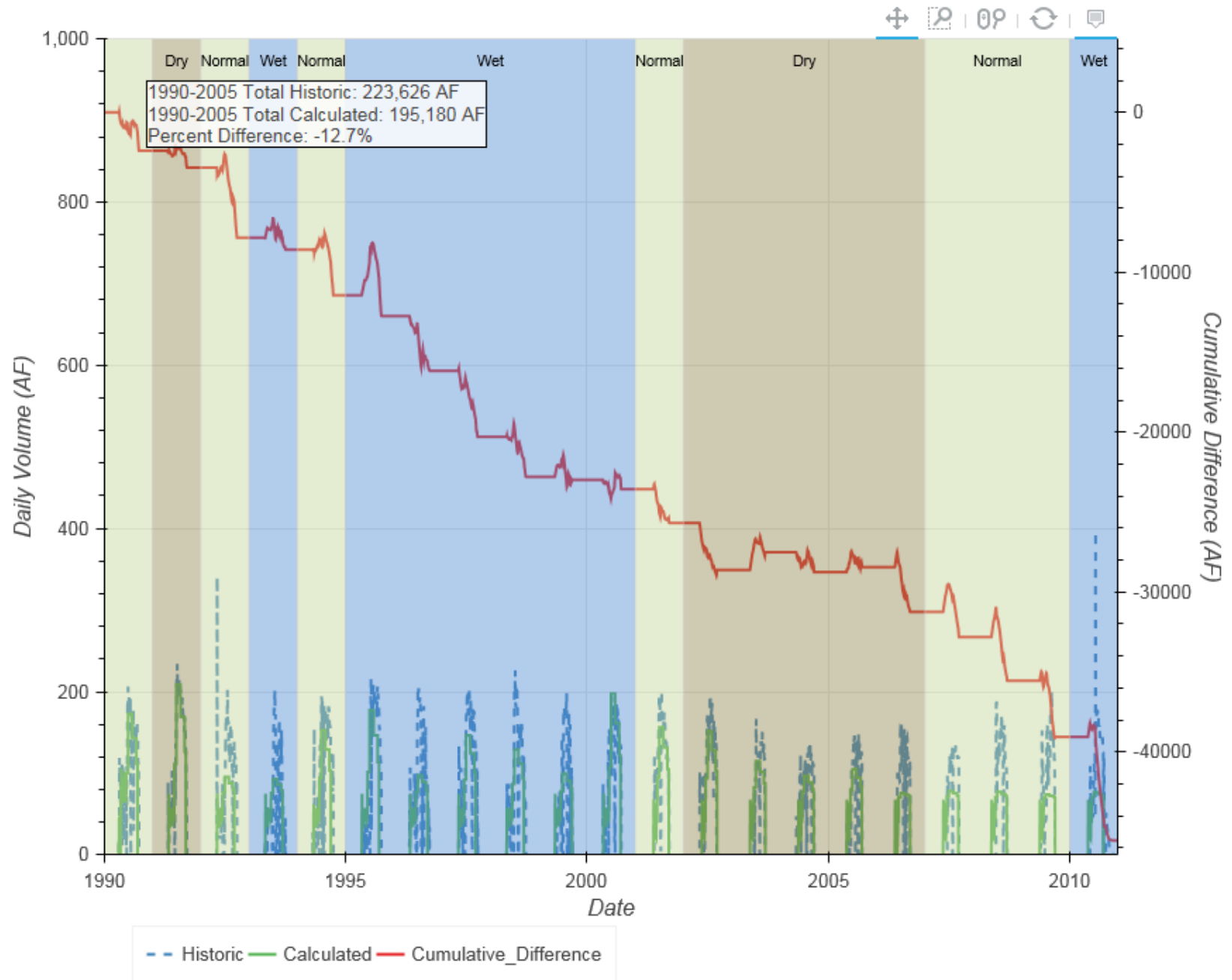


Keith Lincoln Diversion

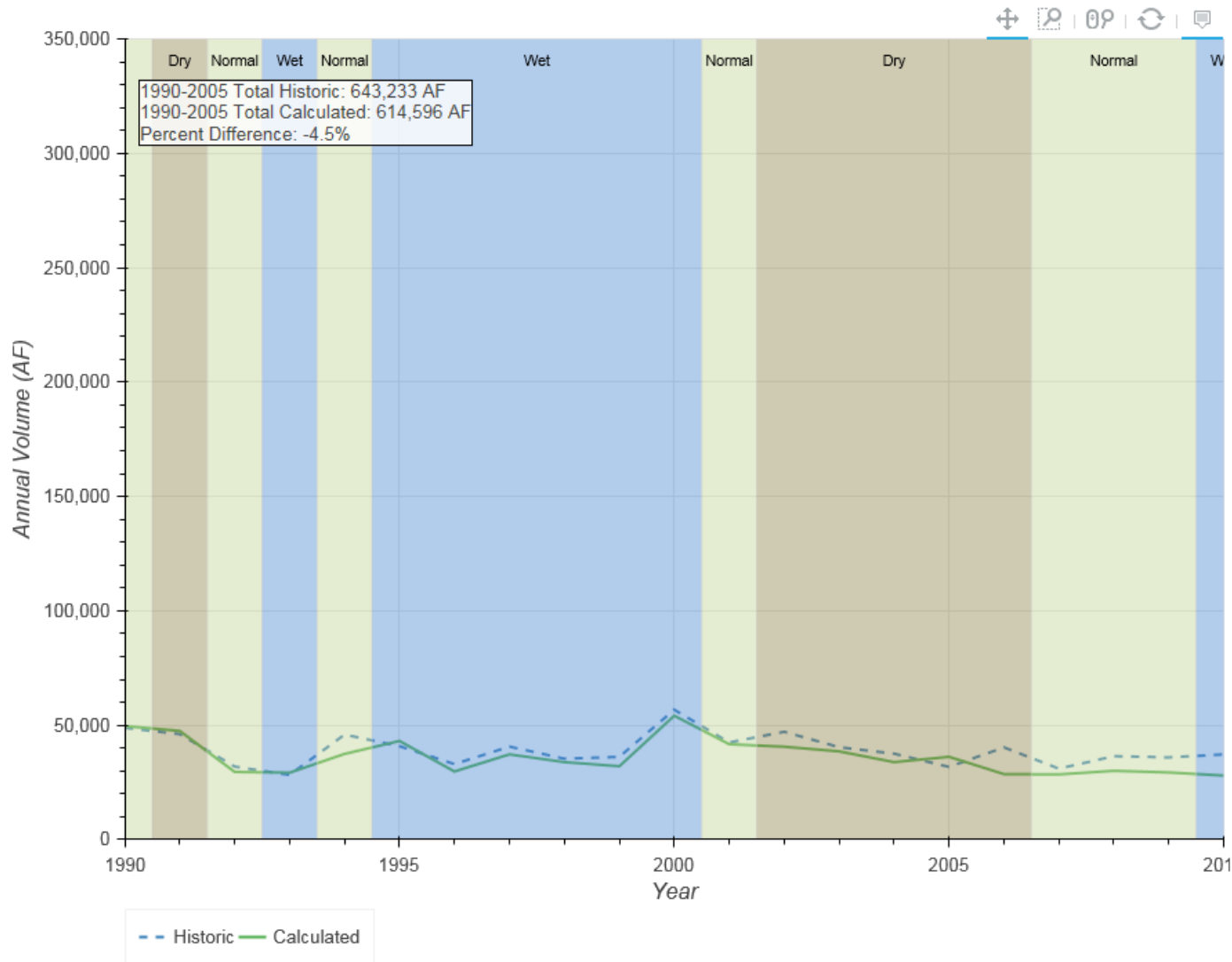


Year	Historic	Calculated
1990	18,726	16,323
1991	17,766	16,717
1992	14,091	9,699
1993	10,284	9,537
1994	16,076	13,227
1995	16,070	14,765
1996	13,249	9,825
1997	16,974	12,848
1998	14,255	11,757
1999	10,133	9,939
2000	16,606	16,024
2001	14,959	12,848
2002	15,485	12,543
2003	9,170	10,280
2004	10,445	9,197
2005	9,339	9,652
2006	10,539	7,738
2007	9,576	8,001
2008	10,703	7,972
2009	11,240	7,728
2010	14,383	7,910
Total	280,068	234,530

Keith Lincoln Diversion

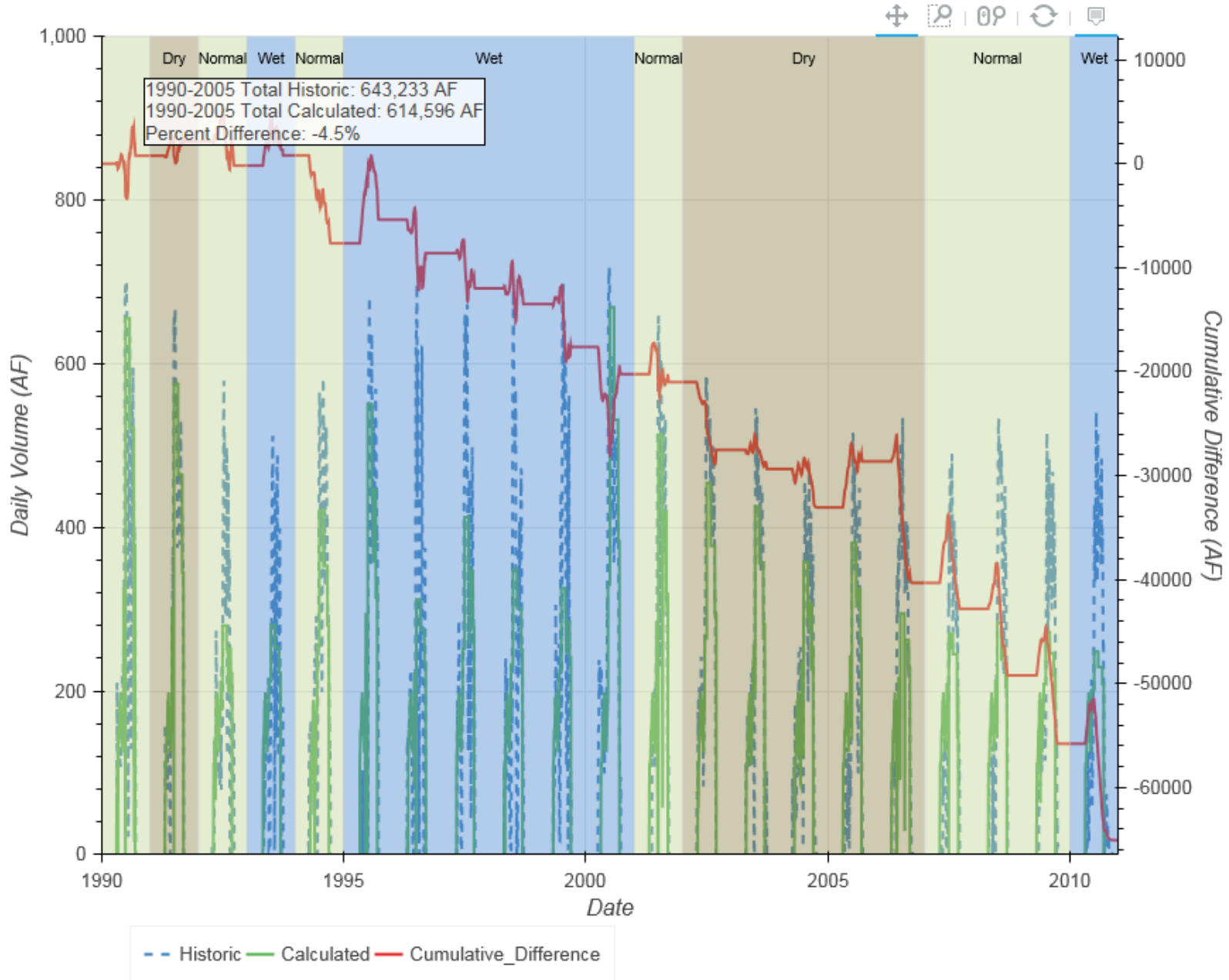


North Platte Diversion

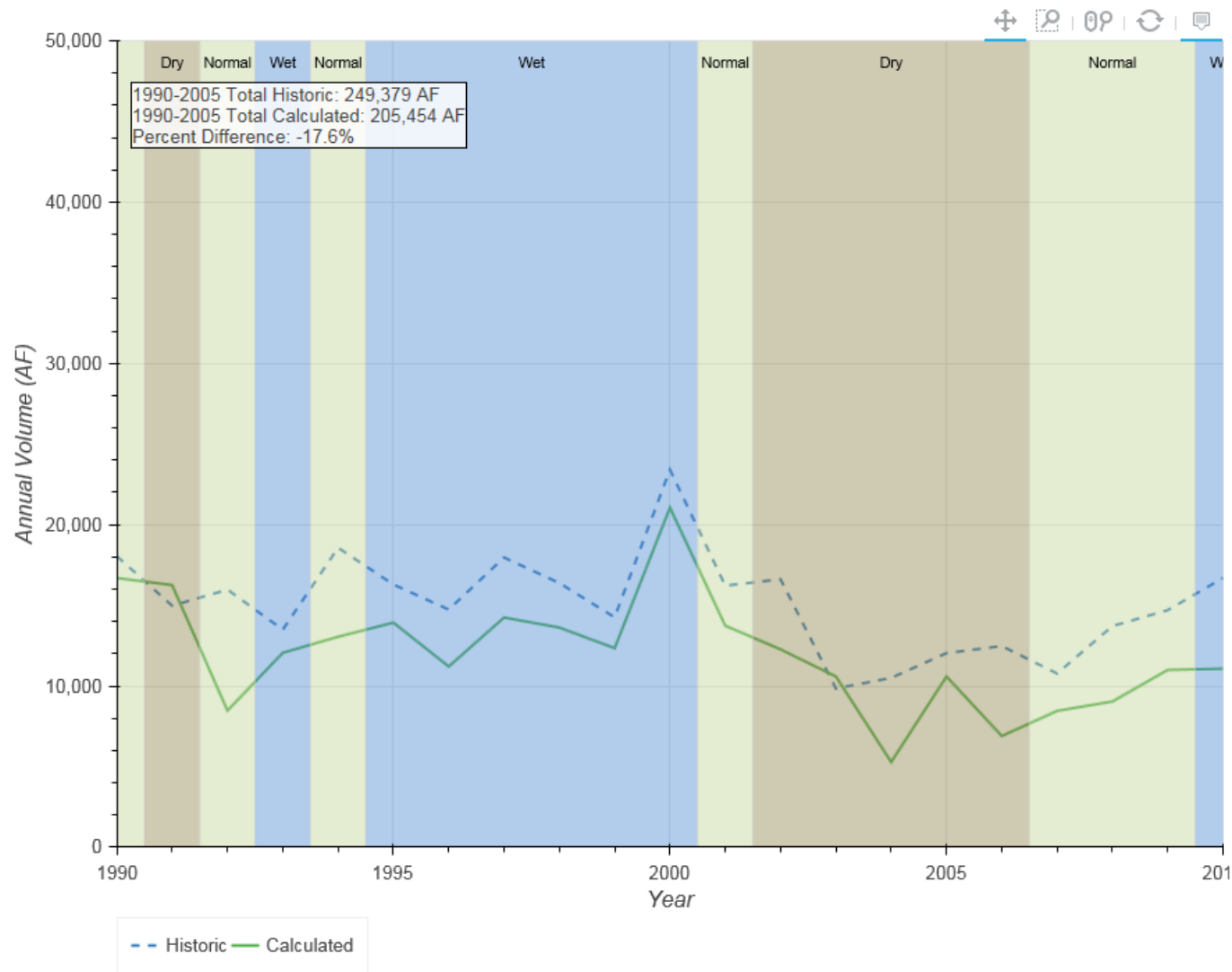


Year	Historic	Calculated
1990	48,859	49,615
1991	46,124	47,508
1992	31,912	29,582
1993	28,272	29,261
1994	45,916	37,466
1995	40,836	43,107
1996	33,009	29,787
1997	40,653	37,263
1998	35,377	33,864
1999	36,169	32,055
2000	56,776	54,151
2001	42,467	41,709
2002	47,125	40,600
2003	40,399	38,565
2004	37,565	33,863
2005	31,774	36,200
2006	40,322	28,640
2007	31,008	28,504
2008	36,461	30,071
2009	35,932	29,347
2010	37,241	27,977
Total	824,198	759,135

North Platte Diversion

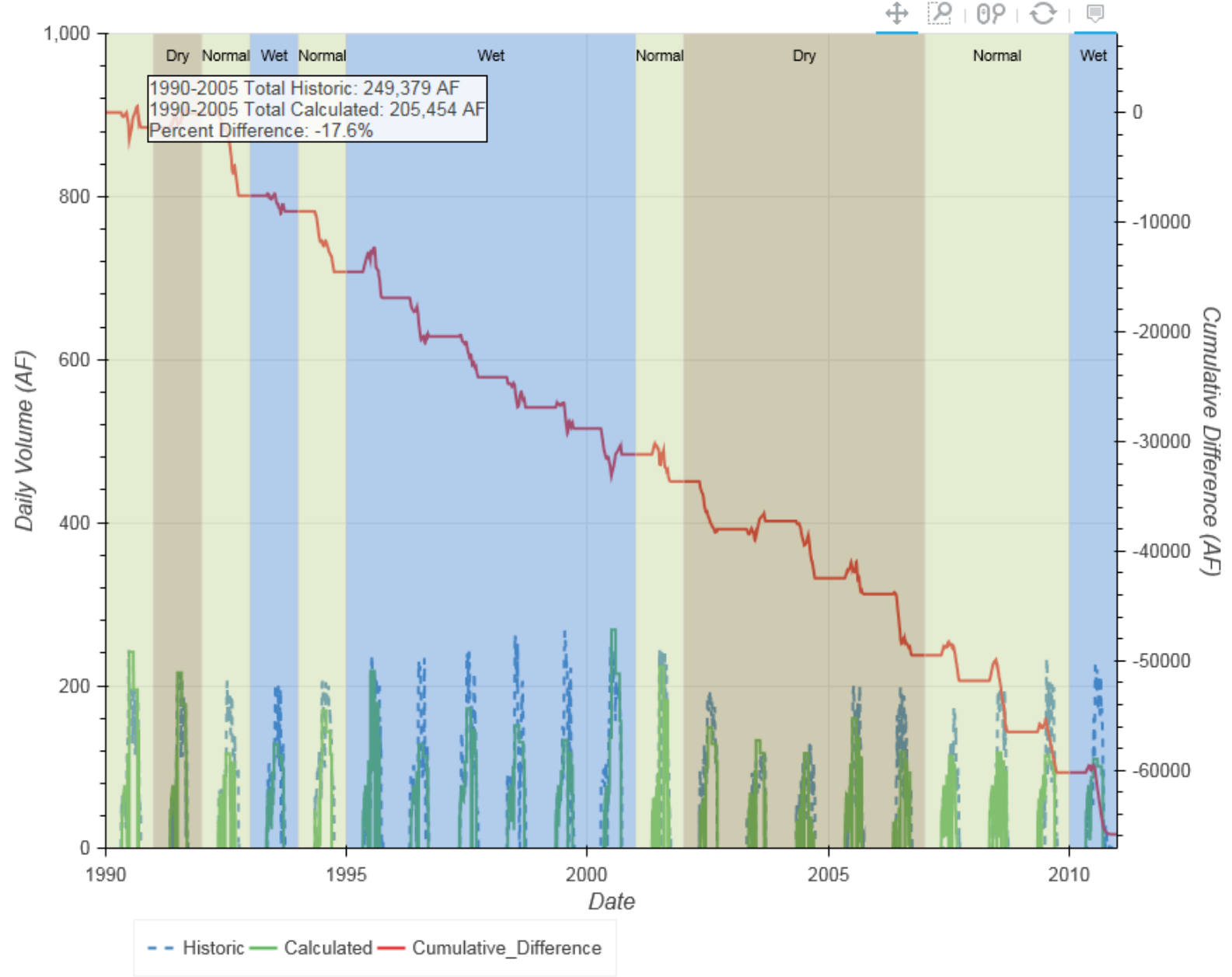


Paxton-Hershey Diversion

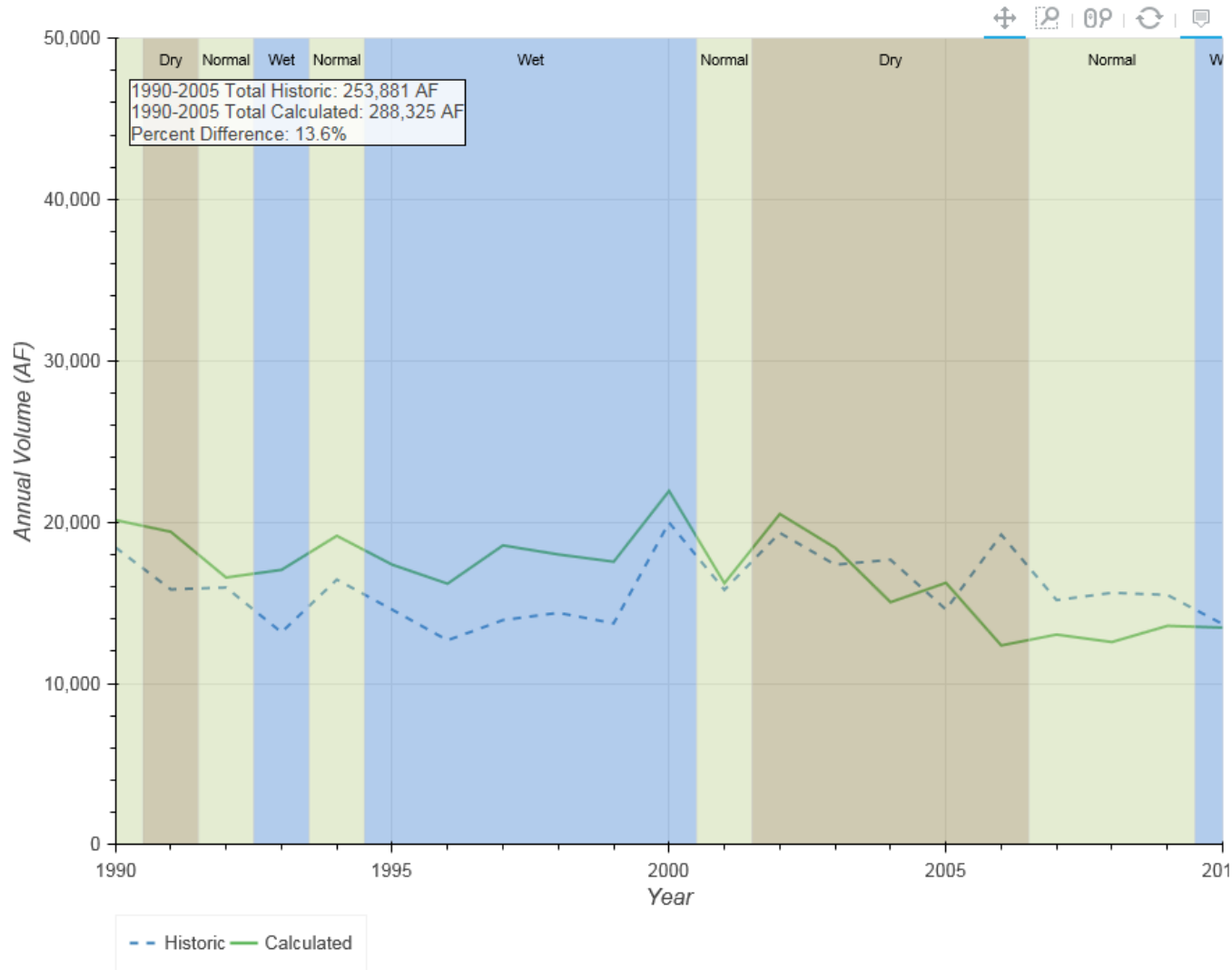


Year	Historic	Calculated
1990	18,050	16,694
1991	14,981	16,257
1992	15,978	8,477
1993	13,496	12,060
1994	18,576	13,059
1995	16,294	13,930
1996	14,739	11,212
1997	17,969	14,249
1998	16,385	13,625
1999	14,262	12,346
2000	23,412	21,057
2001	16,223	13,741
2002	16,618	12,272
2003	9,849	10,593
2004	10,504	5,292
2005	12,043	10,590
2006	12,477	6,901
2007	10,779	8,460
2008	13,718	9,042
2009	14,705	10,999
2010	16,700	11,074
Total	317,759	251,931

Paxton-Hershey Diversion

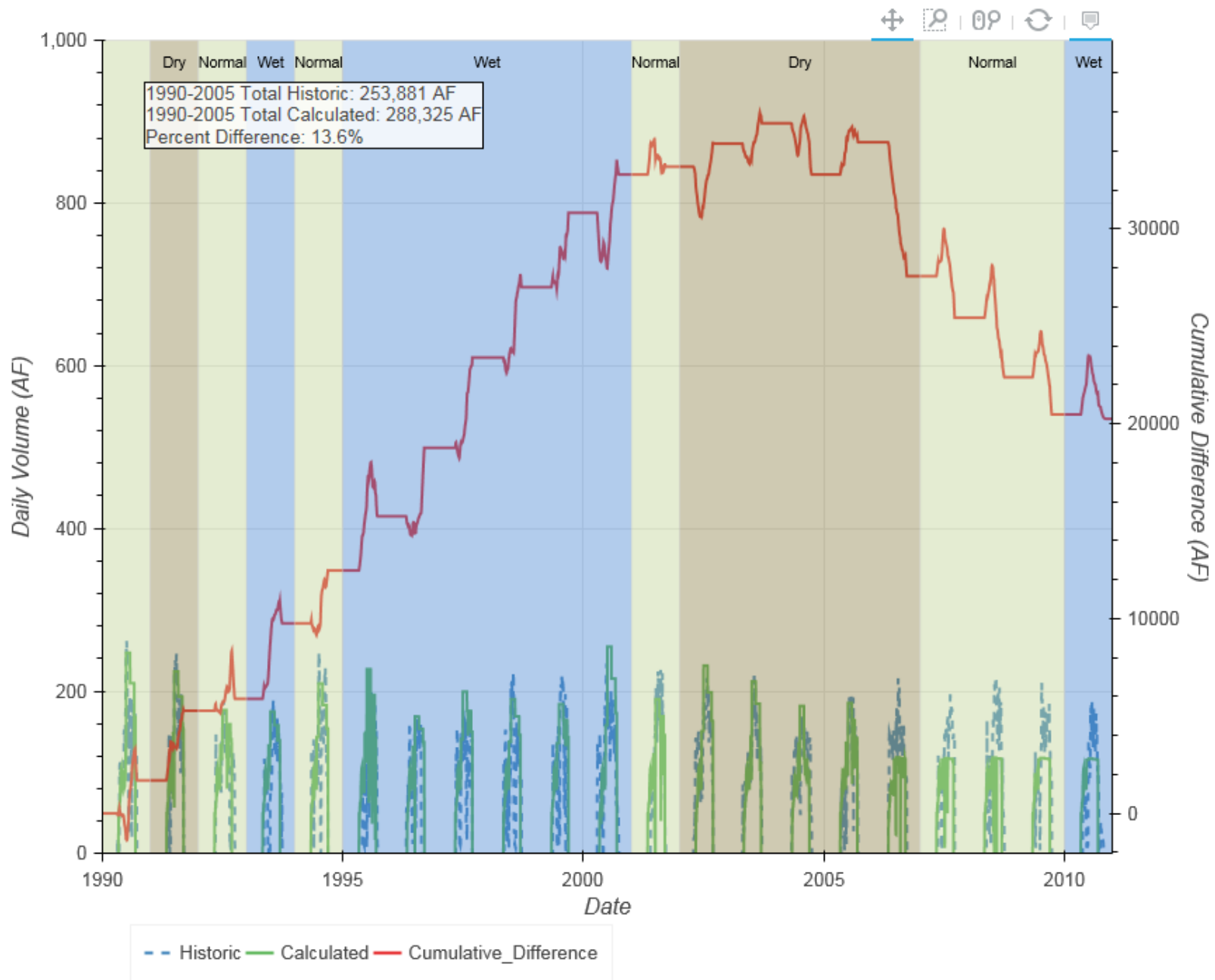


Suburban Diversion



Year	Historic	Calculated
1990	18,438	20,134
1991	15,831	19,403
1992	15,952	16,569
1993	13,176	17,045
1994	16,442	19,155
1995	14,578	17,366
1996	12,680	16,187
1997	13,932	18,560
1998	14,383	18,000
1999	13,732	17,550
2000	19,975	21,938
2001	15,806	16,214
2002	19,335	20,509
2003	17,365	18,411
2004	17,671	15,040
2005	14,587	16,243
2006	19,226	12,360
2007	15,171	13,035
2008	15,625	12,570
2009	15,490	13,576
2010	13,681	13,462
Total	333,074	353,328

Suburban Diversion

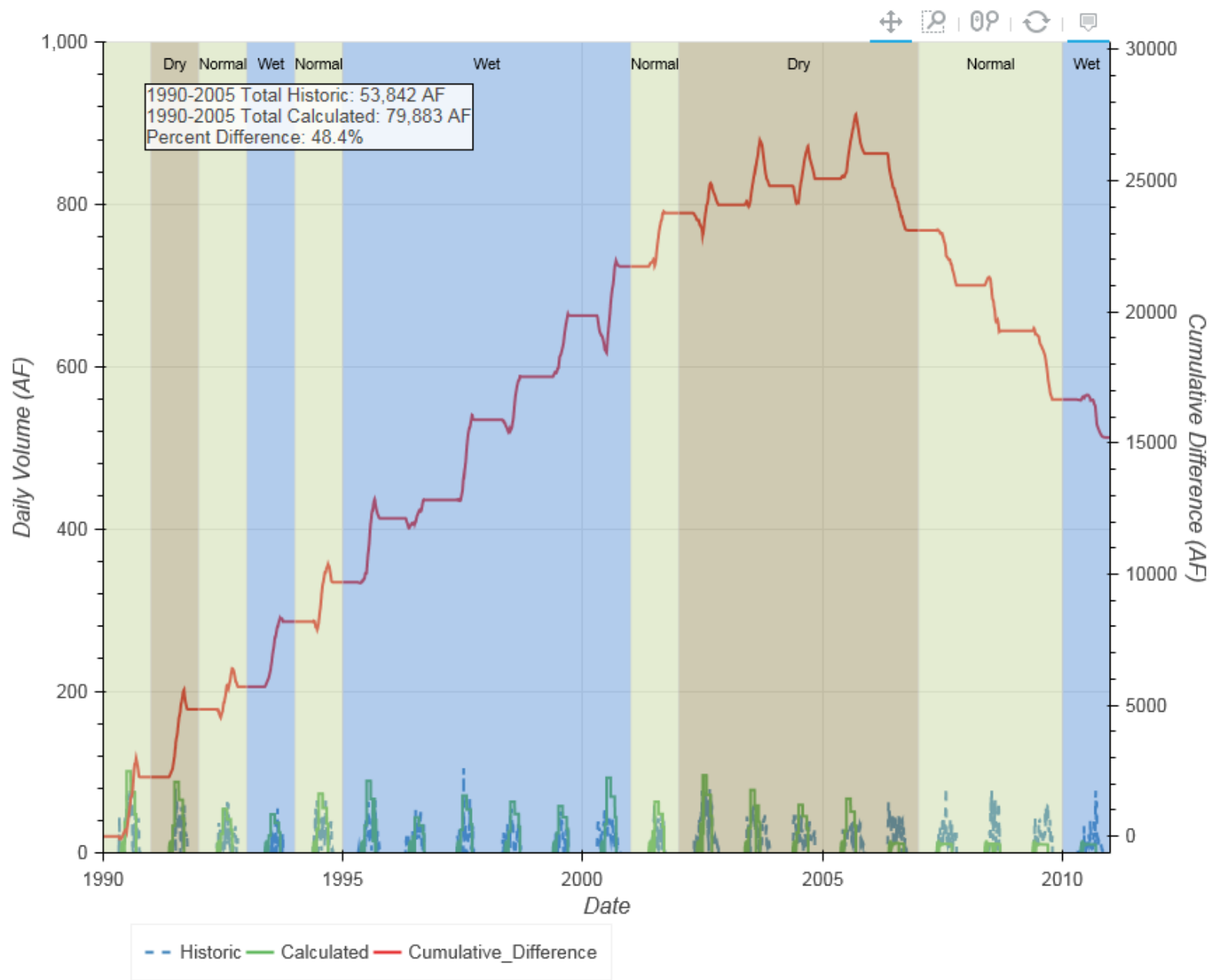


Cody Dillon Diversion



Year	Historic	Calculated
1990	4,600	6,860
1991	3,457	6,038
1992	3,122	3,987
1993	1,100	3,586
1994	3,656	5,152
1995	3,332	5,774
1996	2,580	3,279
1997	1,960	5,018
1998	2,888	4,530
1999	1,865	4,195
2000	4,451	6,328
2001	2,359	4,396
2002	5,995	6,305
2003	4,643	5,363
2004	4,024	4,302
2005	3,810	4,772
2006	4,291	1,359
2007	3,411	1,313
2008	2,998	1,261
2009	3,904	1,290
2010	2,723	1,277
Total	71,169	86,383

Cody Dillon Diversion

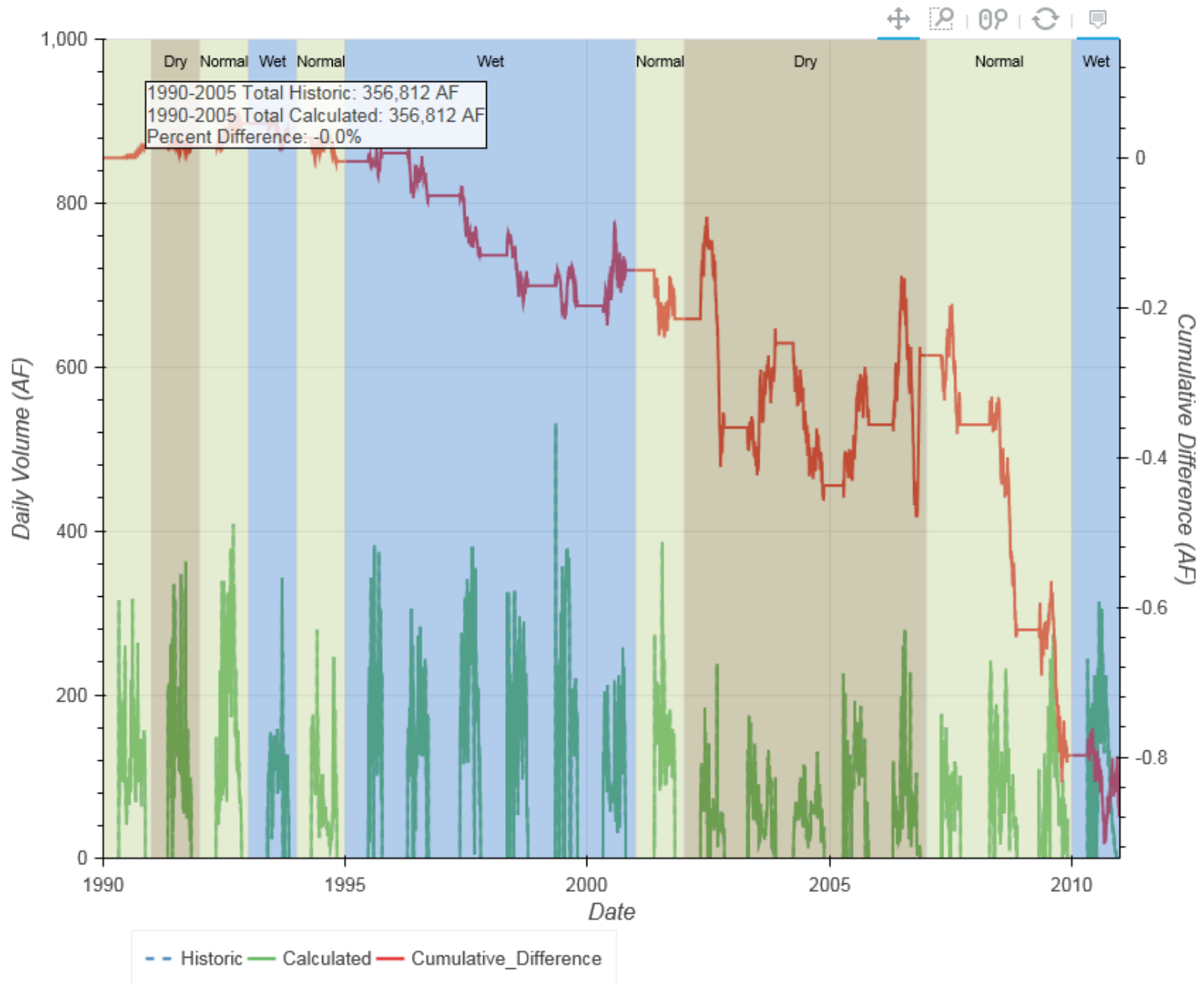


Western Diversion

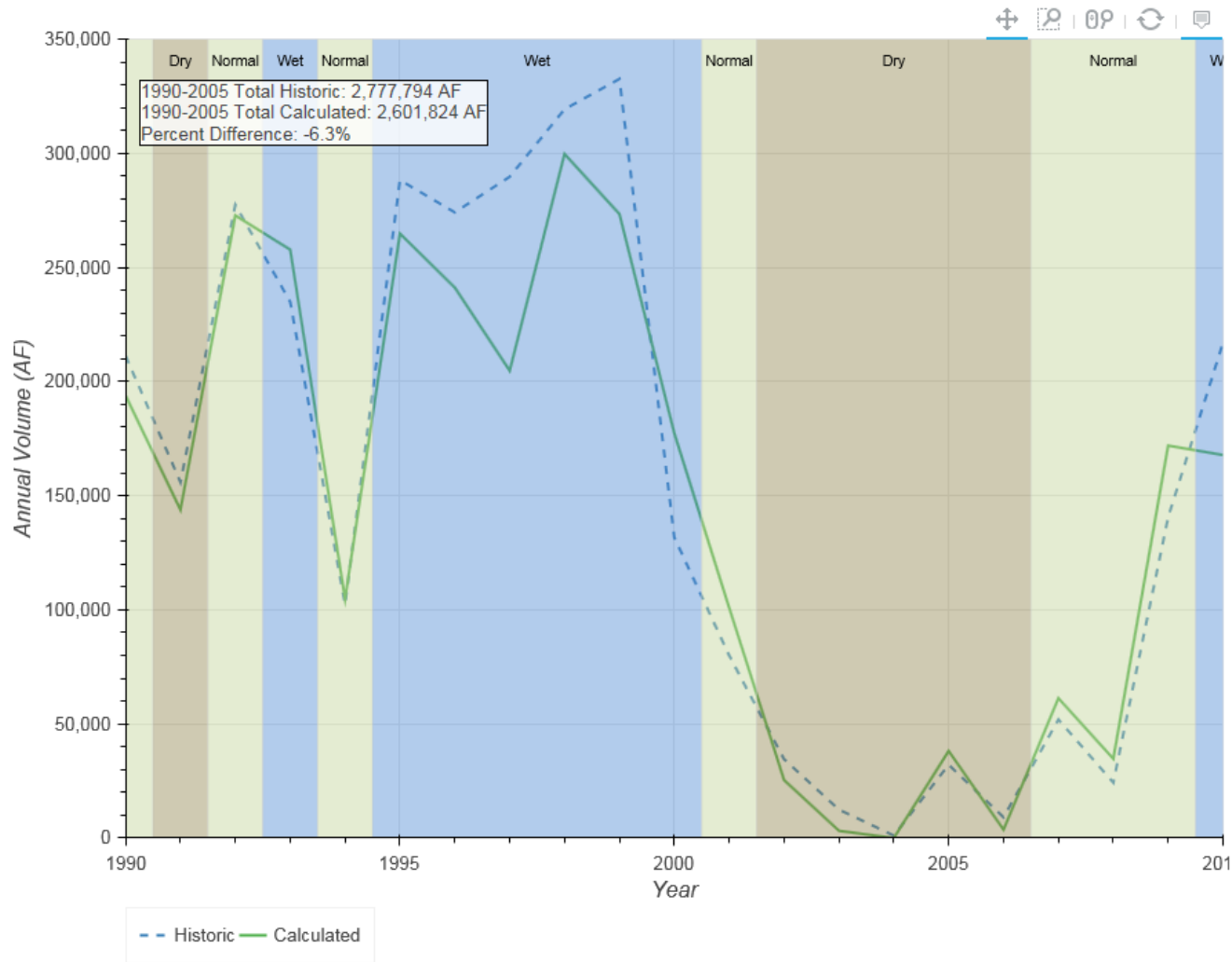


Year	Historic	Calculated
1990	26,634	26,634
1991	25,172	25,172
1992	34,680	34,680
1993	16,598	16,598
1994	15,394	15,394
1995	21,219	21,219
1996	23,728	23,728
1997	33,635	33,635
1998	27,278	27,278
1999	31,780	31,780
2000	20,864	20,864
2001	23,095	23,095
2002	10,331	10,331
2003	14,440	14,440
2004	13,804	13,804
2005	18,160	18,160
2006	14,812	14,812
2007	11,523	11,523
2008	19,526	19,526
2009	17,527	17,527
2010	27,696	27,695
Total	447,896	447,895

Western Diversion

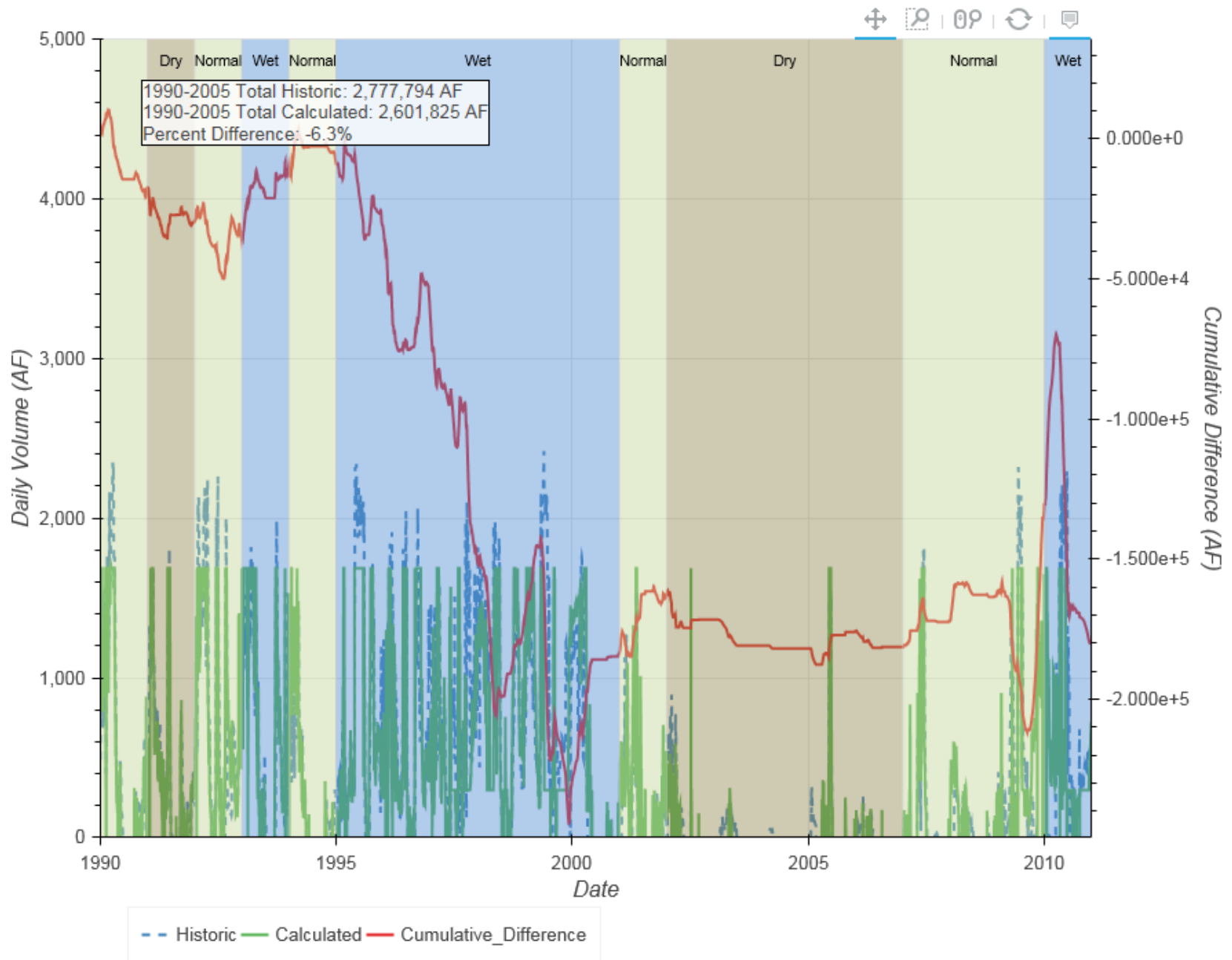


Korty Diversion

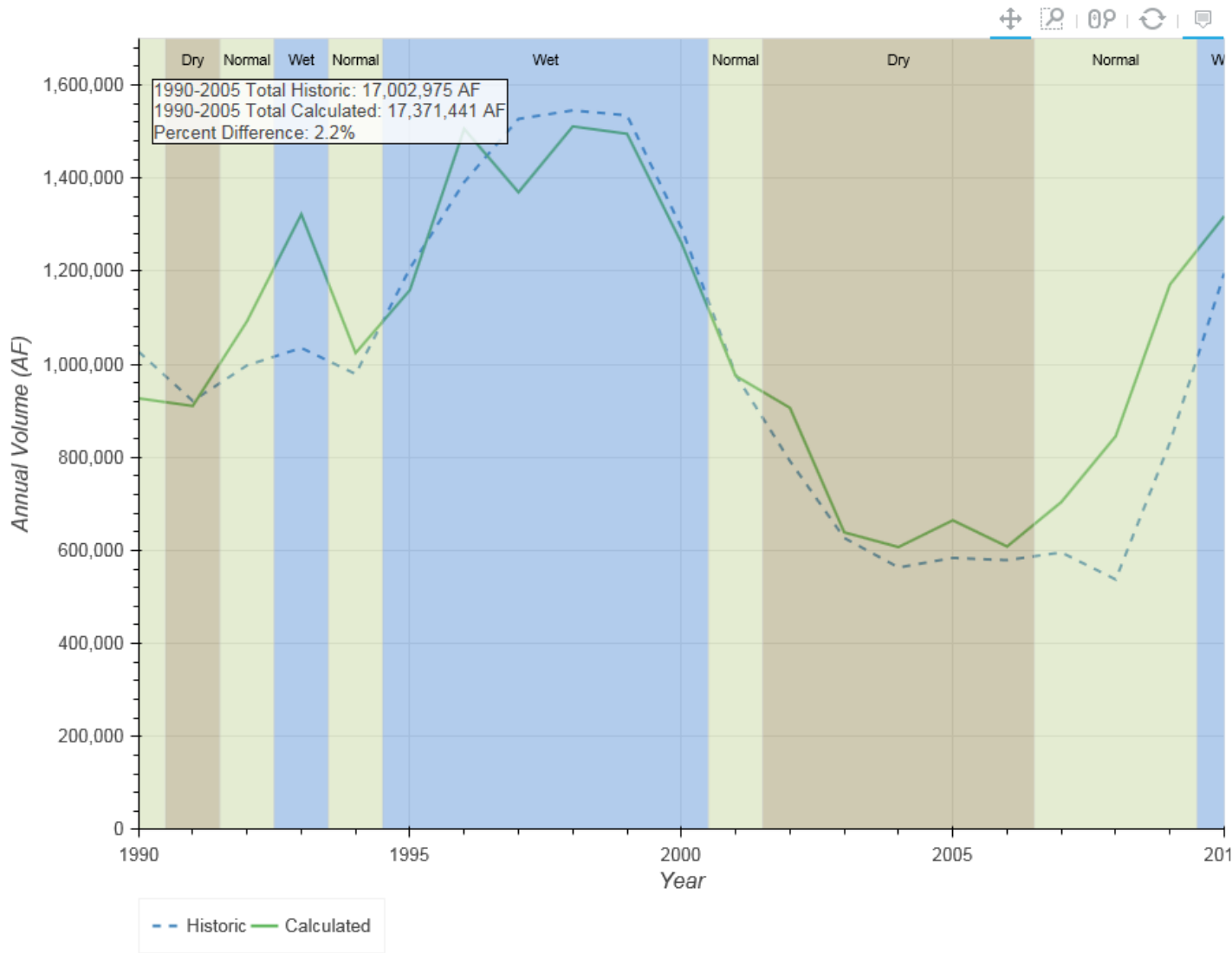


Year	Historic	Calculated
1990	211,309	193,869
1991	155,924	143,805
1992	277,408	272,773
1993	234,918	257,764
1994	102,319	104,750
1995	288,266	264,838
1996	274,122	241,174
1997	289,710	204,741
1998	319,307	299,692
1999	332,569	273,387
2000	131,704	177,352
2001	79,987	100,909
2002	34,570	25,415
2003	12,469	3,203
2004	1,093	0
2005	32,118	38,153
2006	9,119	3,679
2007	51,938	61,274
2008	24,312	34,739
2009	140,581	171,933
2010	217,052	167,805
Total	3,220,797	3,041,255

Korty Diversion

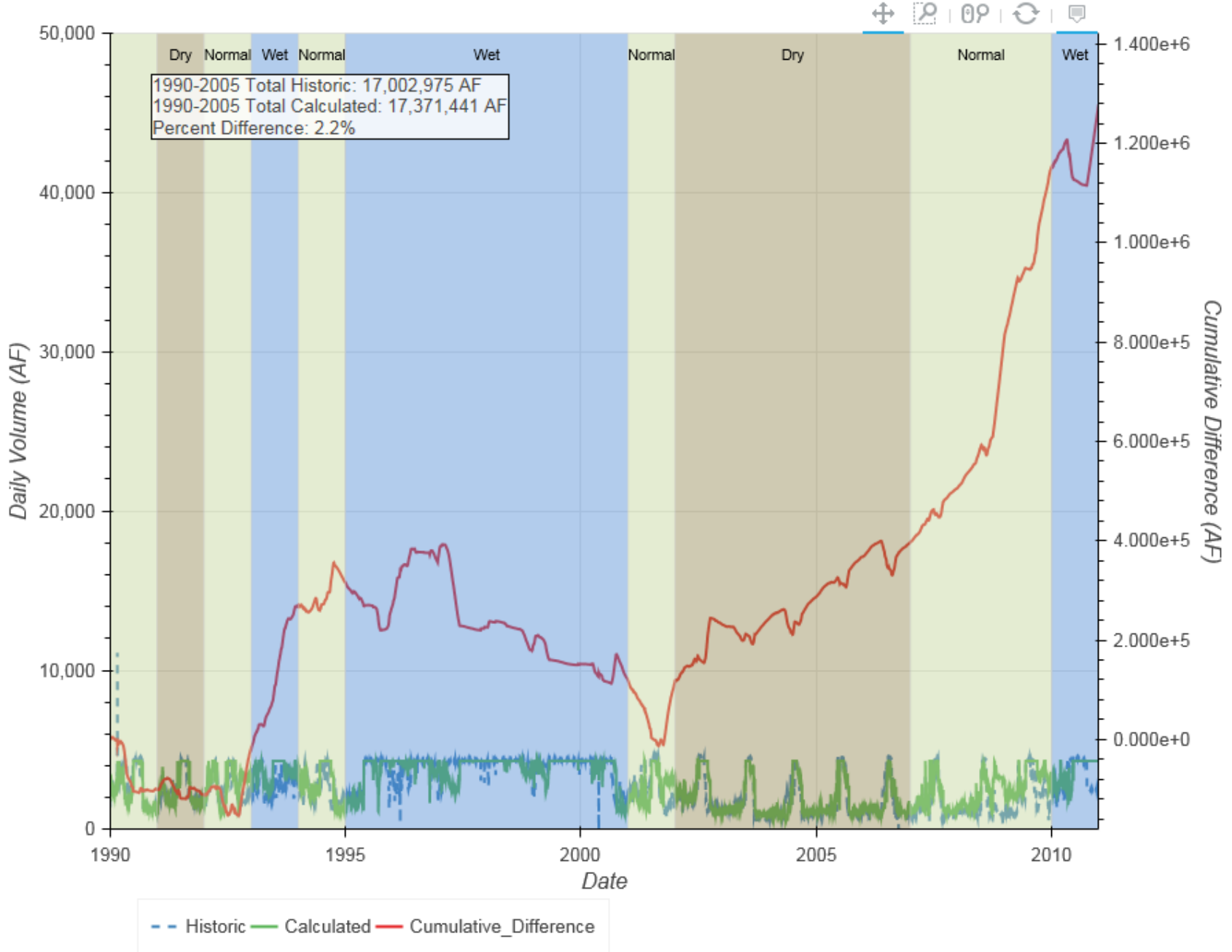


Tri County Diversion

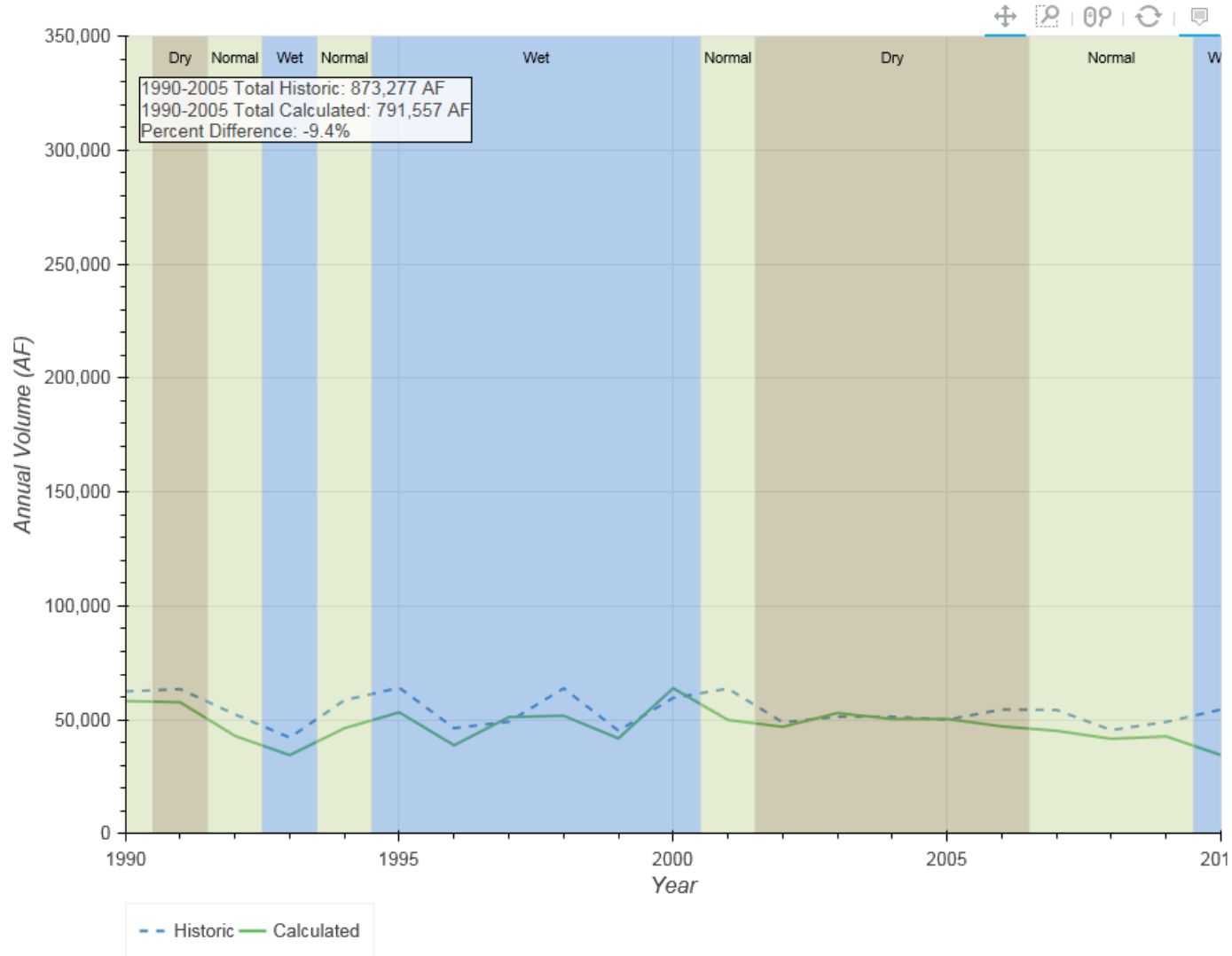


Year	Historic	Calculated
1990	1,027,420	926,863
1991	921,317	910,418
1992	997,678	1,092,498
1993	1,035,191	1,322,524
1994	979,095	1,024,294
1995	1,205,982	1,159,534
1996	1,391,439	1,505,794
1997	1,527,253	1,369,604
1998	1,545,680	1,511,136
1999	1,534,850	1,495,298
2000	1,293,658	1,261,163
2001	977,244	975,167
2002	792,061	906,365
2003	626,926	638,797
2004	563,316	607,205
2005	583,867	664,784
2006	579,172	608,440
2007	595,706	704,112
2008	537,644	845,536
2009	832,306	1,171,589
2010	1,195,433	1,318,384
Total	20,743,237	22,019,502

Tri County Diversion

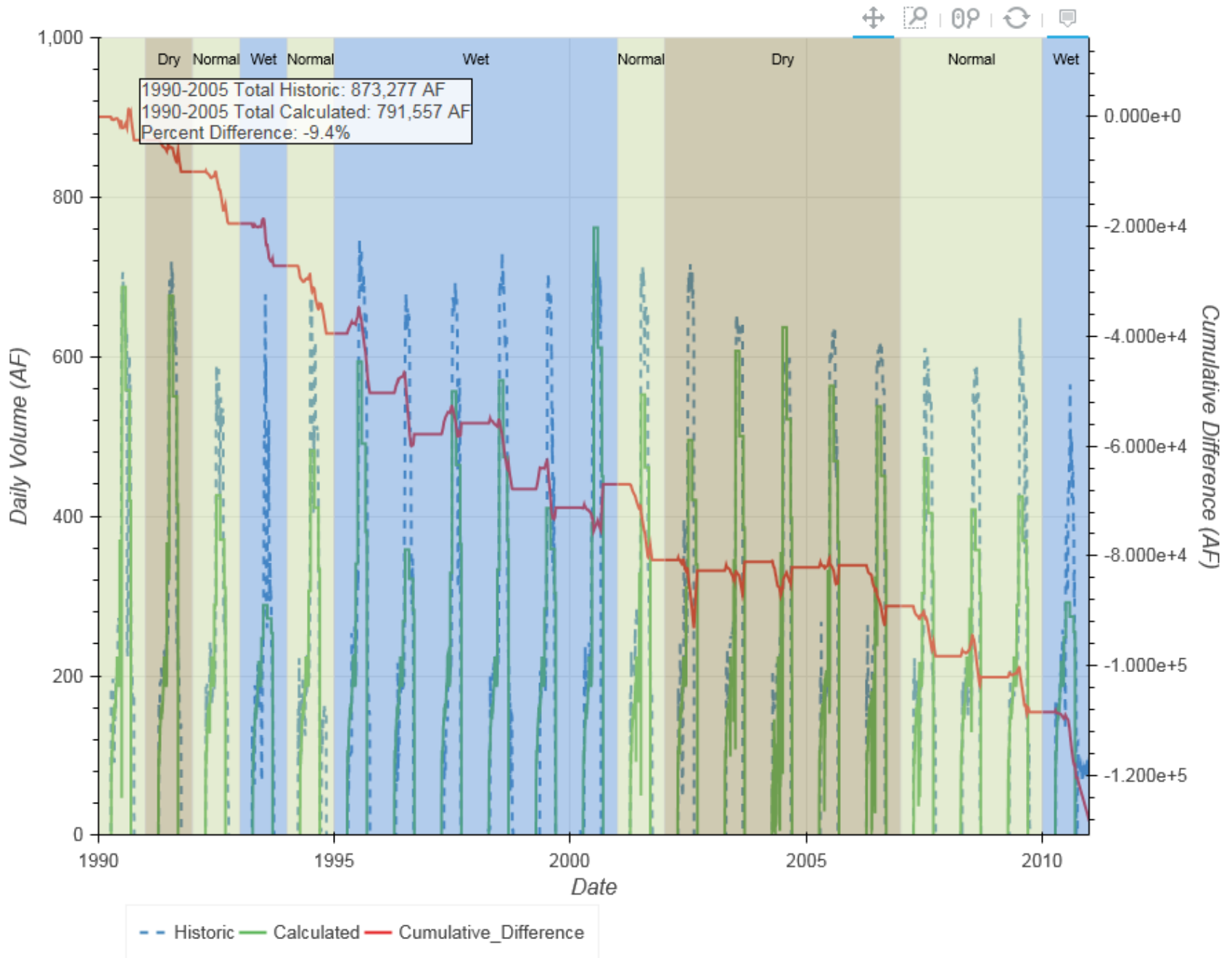


Gothenburg Diversion



Year	Historic	Calculated
1990	62,523	58,280
1991	63,488	57,724
1992	52,439	42,992
1993	42,258	34,541
1994	58,661	46,348
1995	64,124	53,302
1996	46,382	38,868
1997	49,206	51,220
1998	63,842	51,814
1999	45,261	41,883
2000	59,635	63,894
2001	63,749	49,957
2002	48,913	46,967
2003	51,378	53,001
2004	51,380	50,366
2005	50,039	50,400
2006	54,574	47,151
2007	54,328	45,205
2008	45,503	41,685
2009	49,105	42,753
2010	54,511	34,544
Total	1,131,298	1,002,895

Gothenburg Diversion

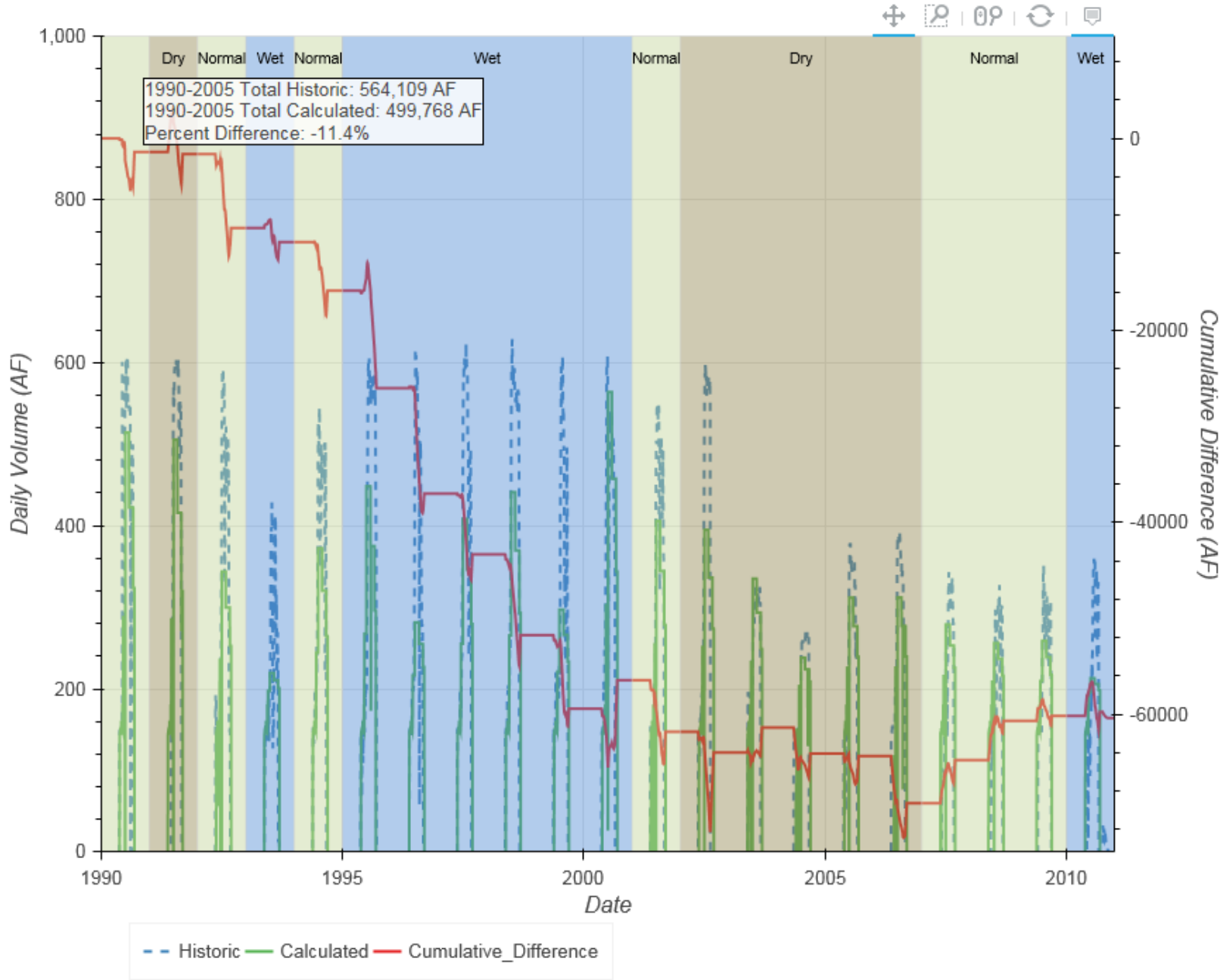


Thirty Mile Diversion



Year	Historic	Calculated
1990	40,685	39,280
1991	38,850	38,624
1992	36,686	28,985
1993	23,802	22,335
1994	36,692	31,638
1995	46,229	36,070
1996	37,164	26,176
1997	40,365	34,038
1998	44,314	35,902
1999	34,650	26,974
2000	39,810	42,775
2001	36,502	31,134
2002	34,802	32,639
2003	25,004	27,611
2004	22,005	19,286
2005	26,551	26,302
2006	28,618	23,688
2007	20,640	25,142
2008	20,134	24,229
2009	24,272	24,784
2010	21,992	21,762
Total	679,765	619,373

Thirty Mile Diversion

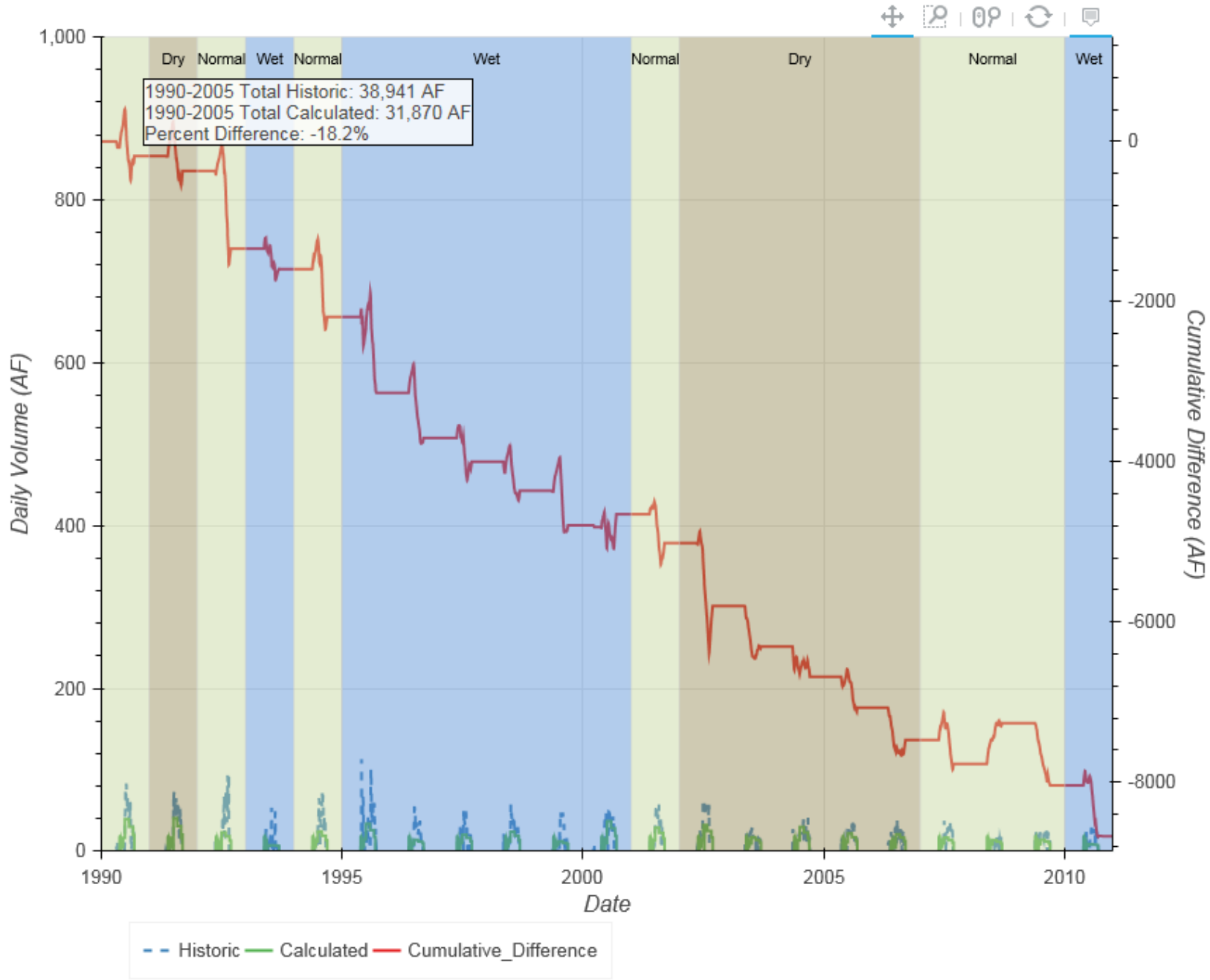


Six Mile Diversion



Year	Historic	Calculated
1990	3,046	2,864
1991	3,025	2,839
1992	2,815	1,845
1993	1,147	892
1994	2,526	1,929
1995	3,467	2,519
1996	1,872	1,308
1997	1,988	1,692
1998	2,281	1,918
1999	1,618	1,184
2000	2,559	2,698
2001	2,594	2,235
2002	3,182	2,396
2003	2,007	1,501
2004	2,646	2,269
2005	2,169	1,782
2006	2,071	1,667
2007	1,778	1,478
2008	786	1,295
2009	2,092	1,314
2010	1,605	969
Total	47,272	38,594

Six Mile Diversion

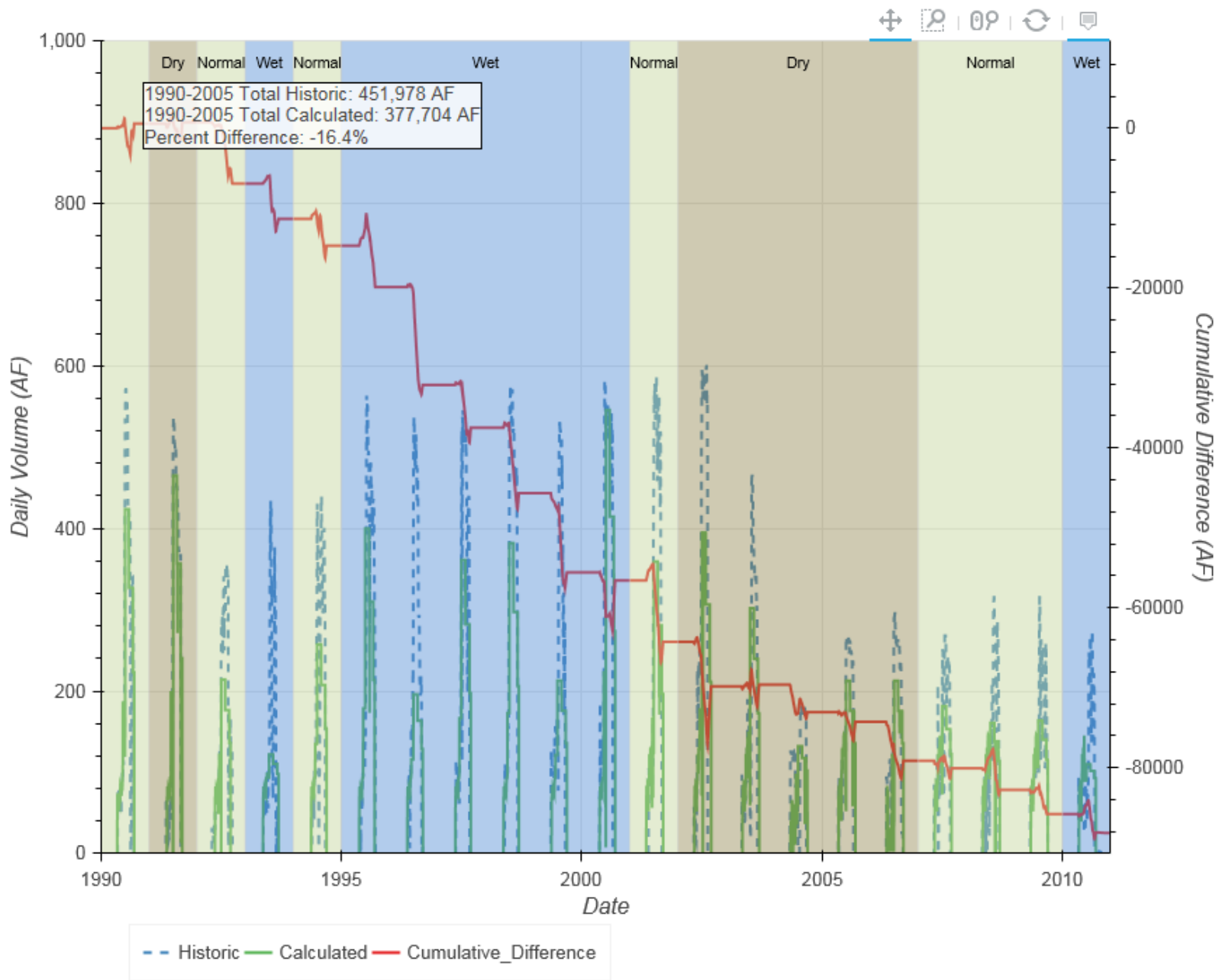


Cozad Diversion

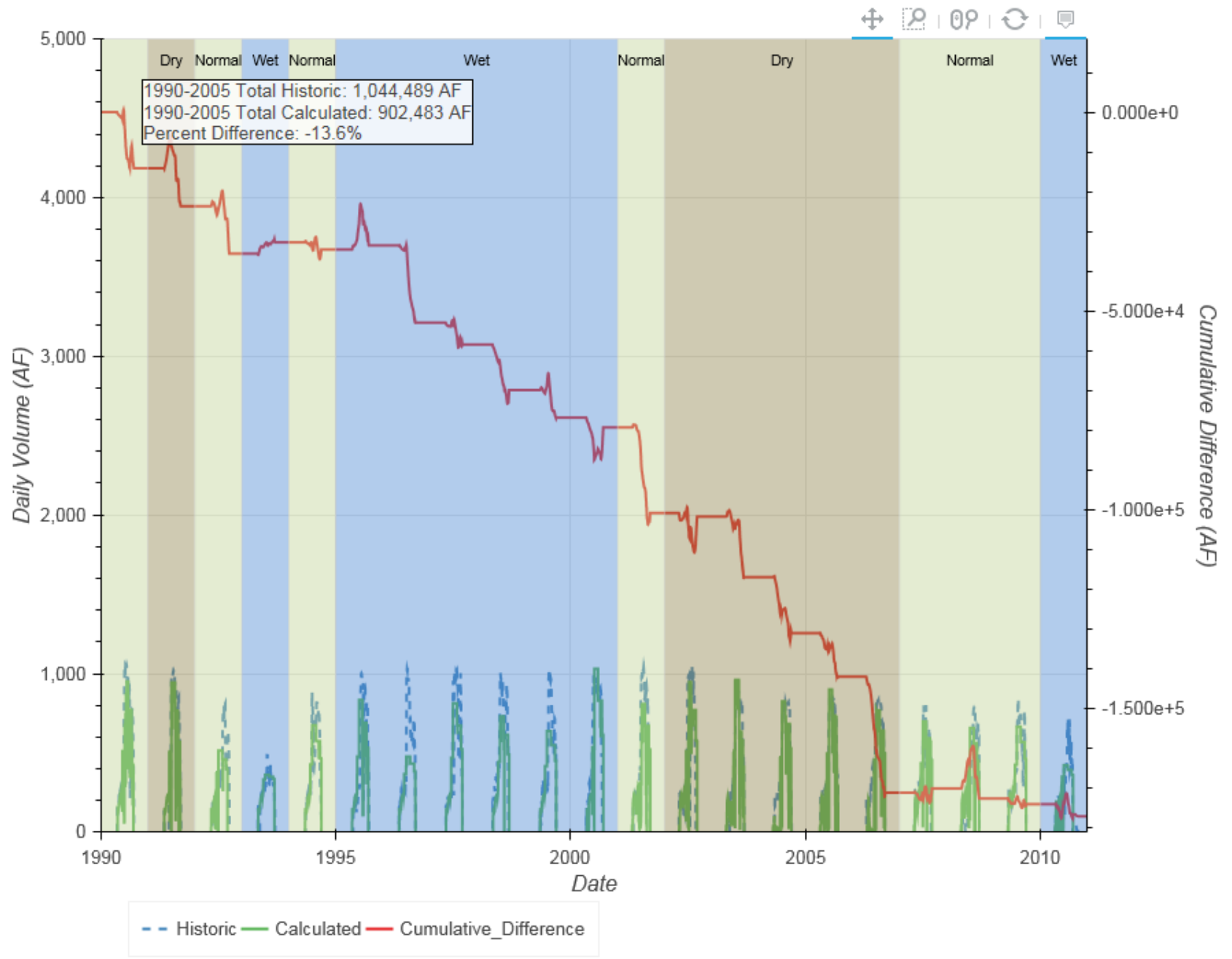


Year	Historic	Calculated
1990	30,189	30,765
1991	31,121	31,285
1992	25,037	17,362
1993	16,446	12,043
1994	23,699	20,332
1995	34,152	28,978
1996	28,858	16,621
1997	32,231	26,873
1998	36,246	28,065
1999	27,493	17,575
2000	38,312	37,286
2001	34,693	27,025
2002	35,163	29,585
2003	23,640	23,853
2004	14,888	11,460
2005	19,809	18,595
2006	20,705	15,835
2007	17,987	17,035
2008	17,832	15,130
2009	19,206	16,191
2010	15,063	12,696
Total	542,771	454,593

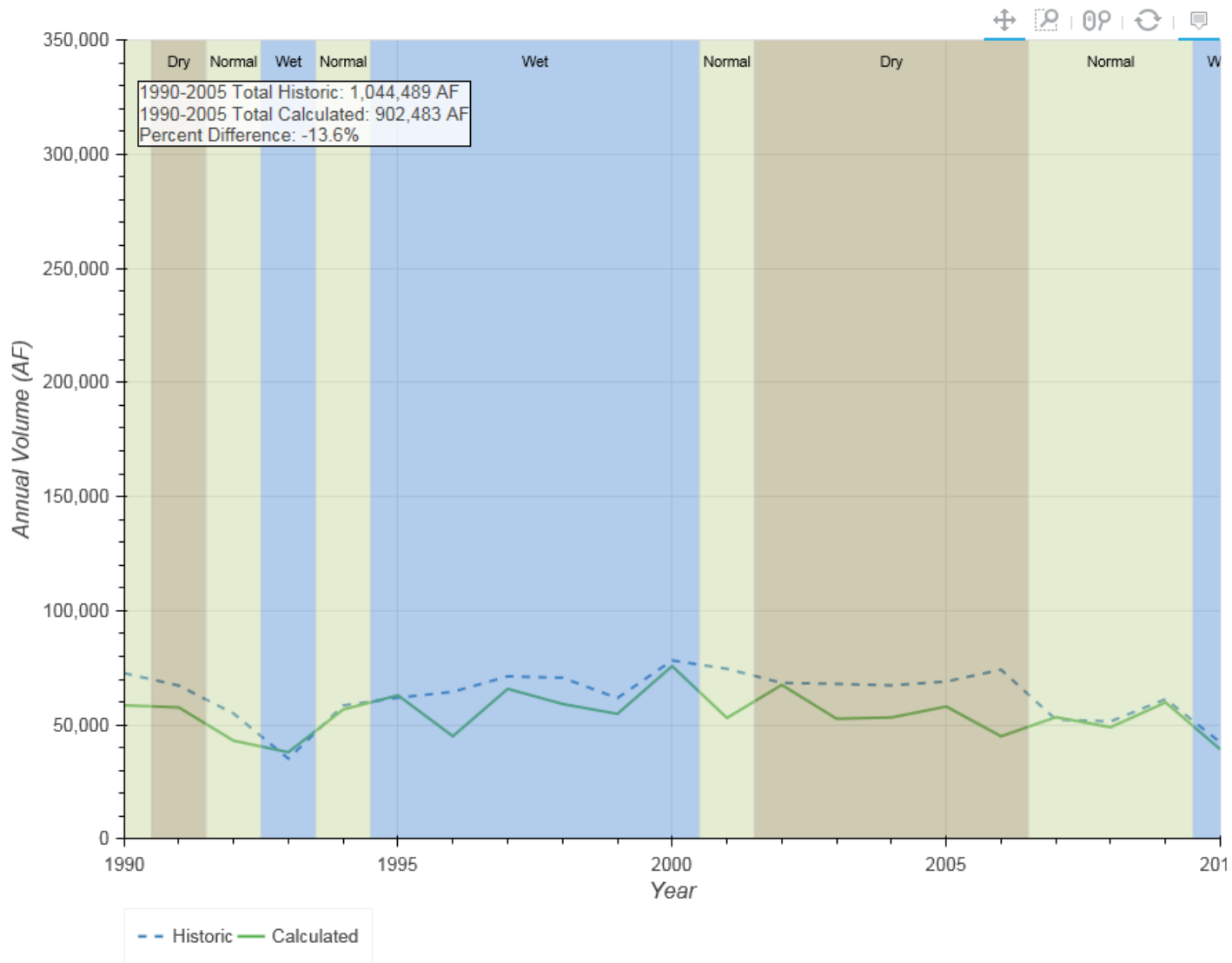
Cozad Diversion



Dawson Diversion

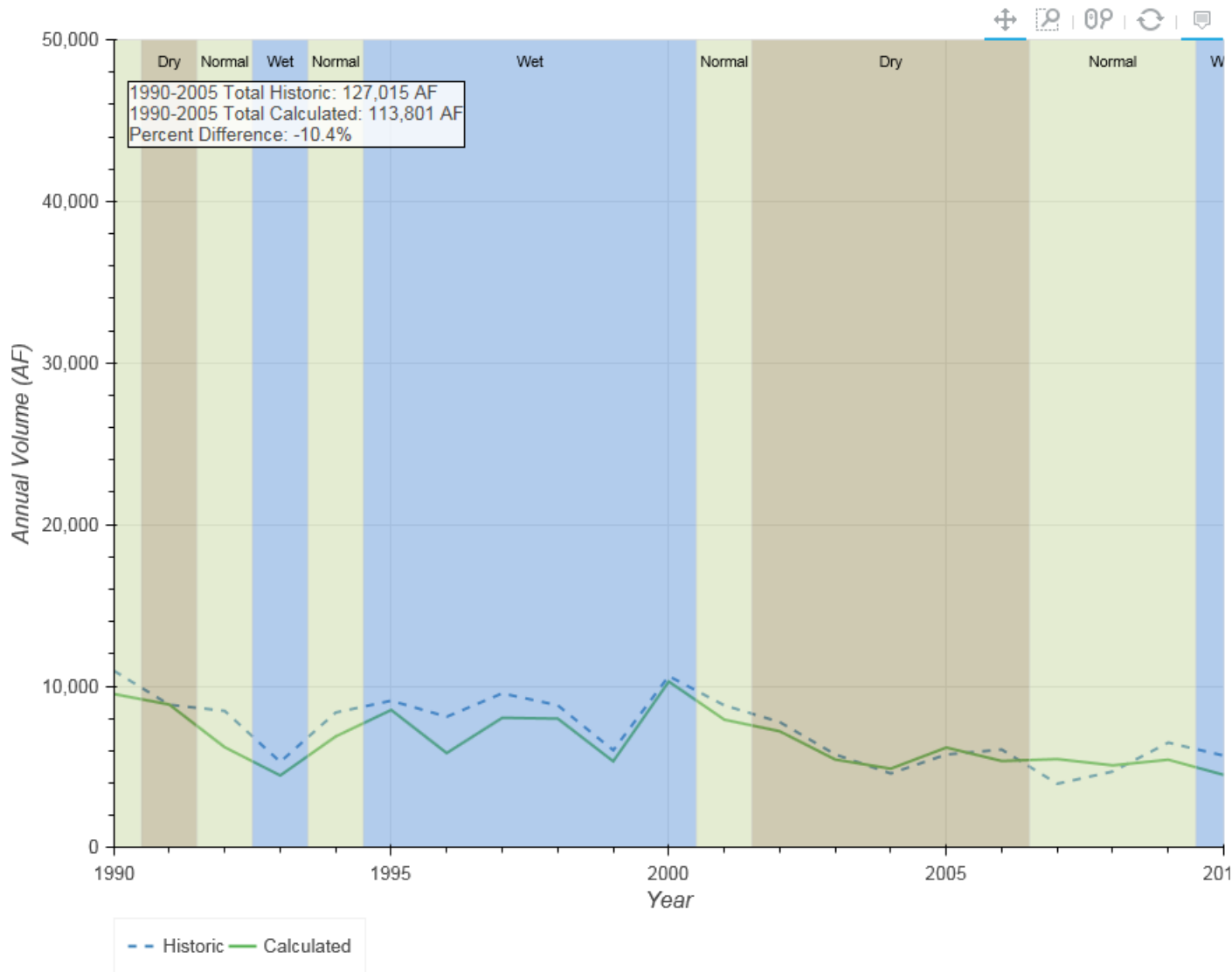


Dawson Diversion



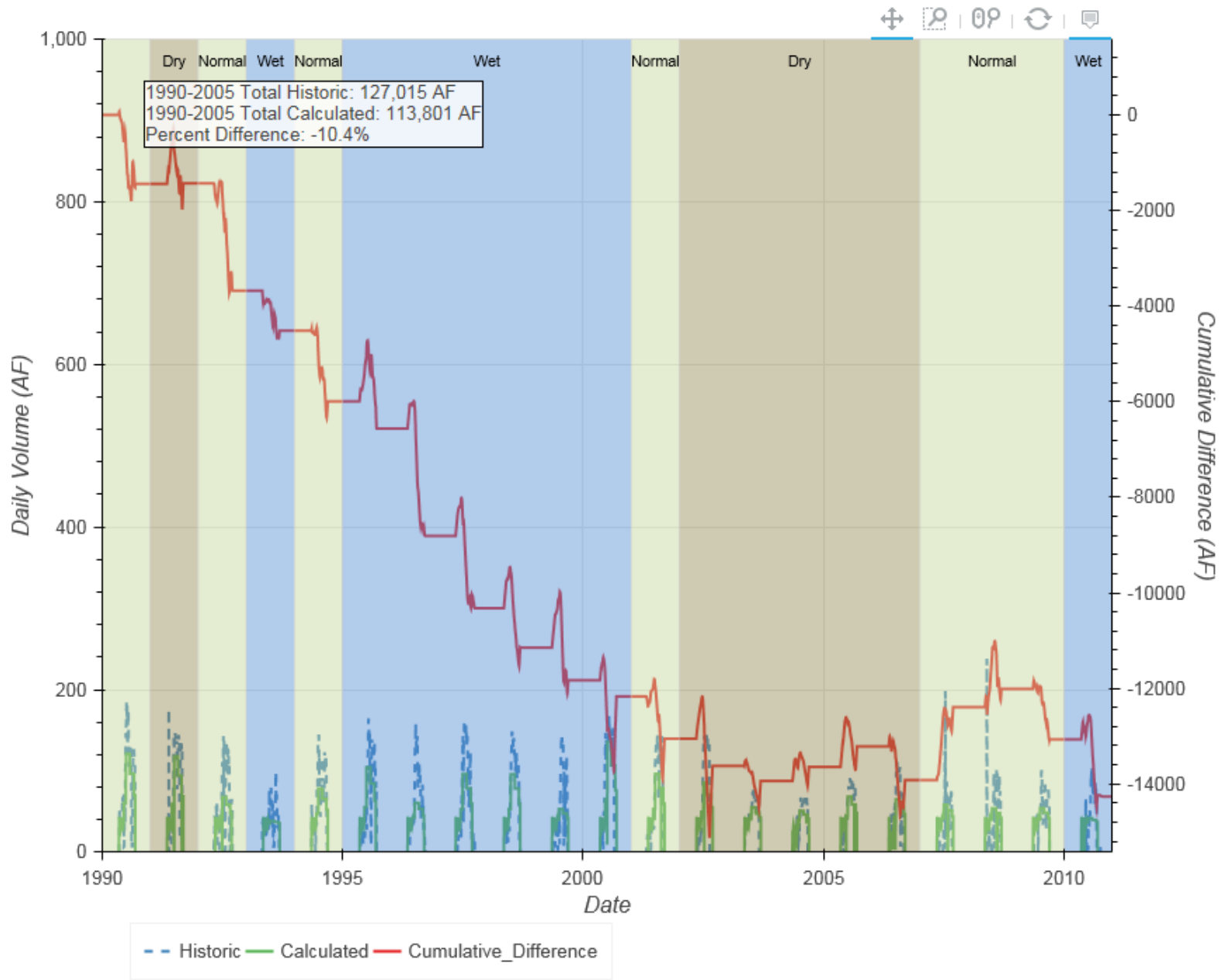
Year	Historic	Calculated
1990	72,702	58,607
1991	67,246	57,679
1992	55,010	43,089
1993	35,244	38,059
1994	58,546	56,771
1995	61,922	62,956
1996	64,510	45,060
1997	71,278	65,799
1998	70,677	59,186
1999	61,745	54,849
2000	78,270	75,779
2001	74,580	53,055
2002	68,419	67,544
2003	67,978	52,708
2004	67,342	53,280
2005	69,019	58,063
2006	74,194	45,026
2007	52,346	53,399
2008	51,534	48,992
2009	61,296	59,869
2010	42,342	39,291
Total	1,326,201	1,149,061

Orchard Alfalfa Diversion

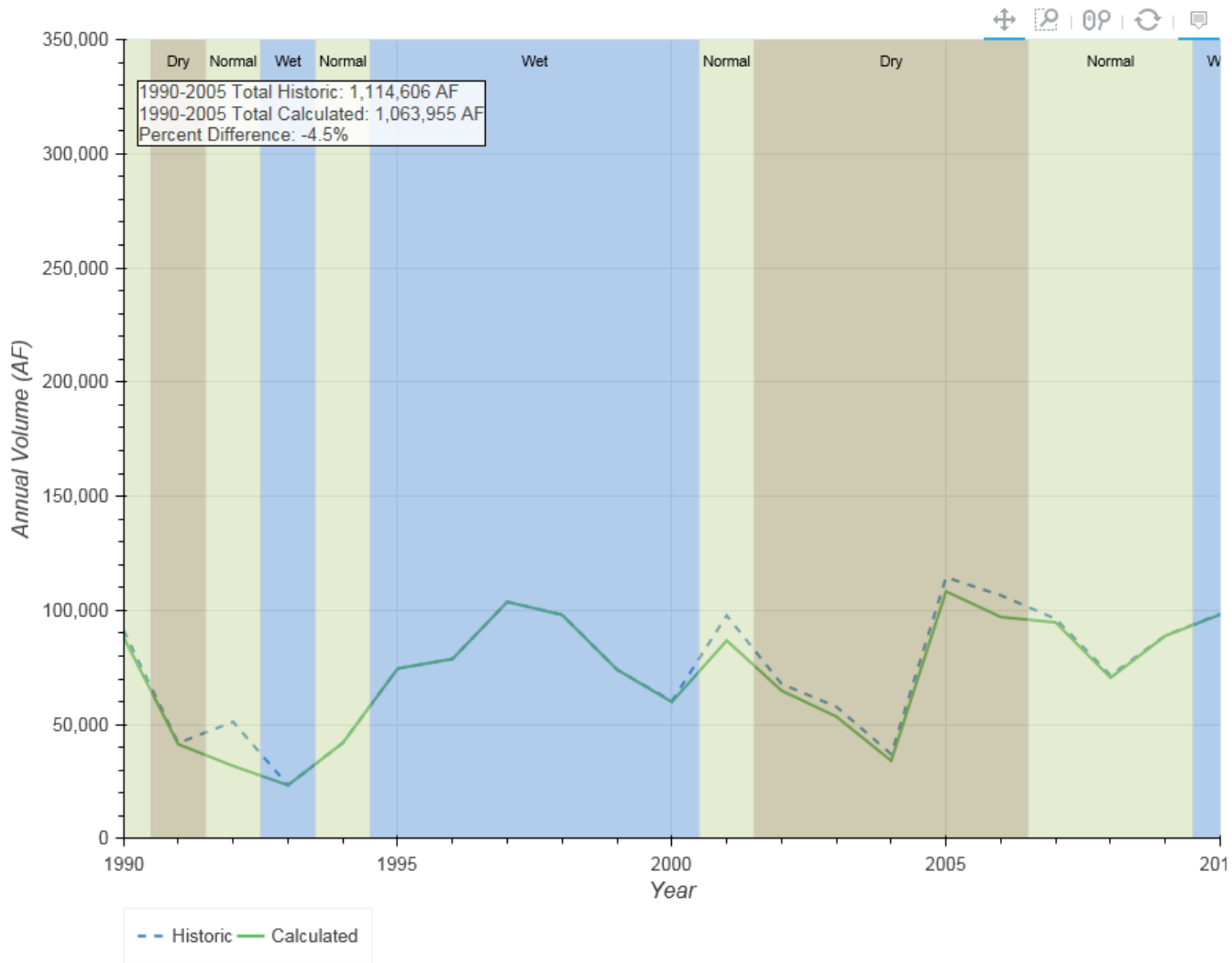


Year	Historic	Calculated
1990	10,963	9,521
1991	8,857	8,870
1992	8,474	6,227
1993	5,317	4,480
1994	8,374	6,895
1995	9,105	8,533
1996	8,113	5,865
1997	9,561	8,049
1998	8,823	7,998
1999	6,038	5,356
2000	10,629	10,290
2001	8,818	7,935
2002	7,783	7,213
2003	5,779	5,463
2004	4,604	4,899
2005	5,778	6,207
2006	6,080	5,374
2007	3,967	5,494
2008	4,725	5,106
2009	6,514	5,455
2010	5,707	4,514
Total	154,008	139,745

Orchard Alfalfa Diversion

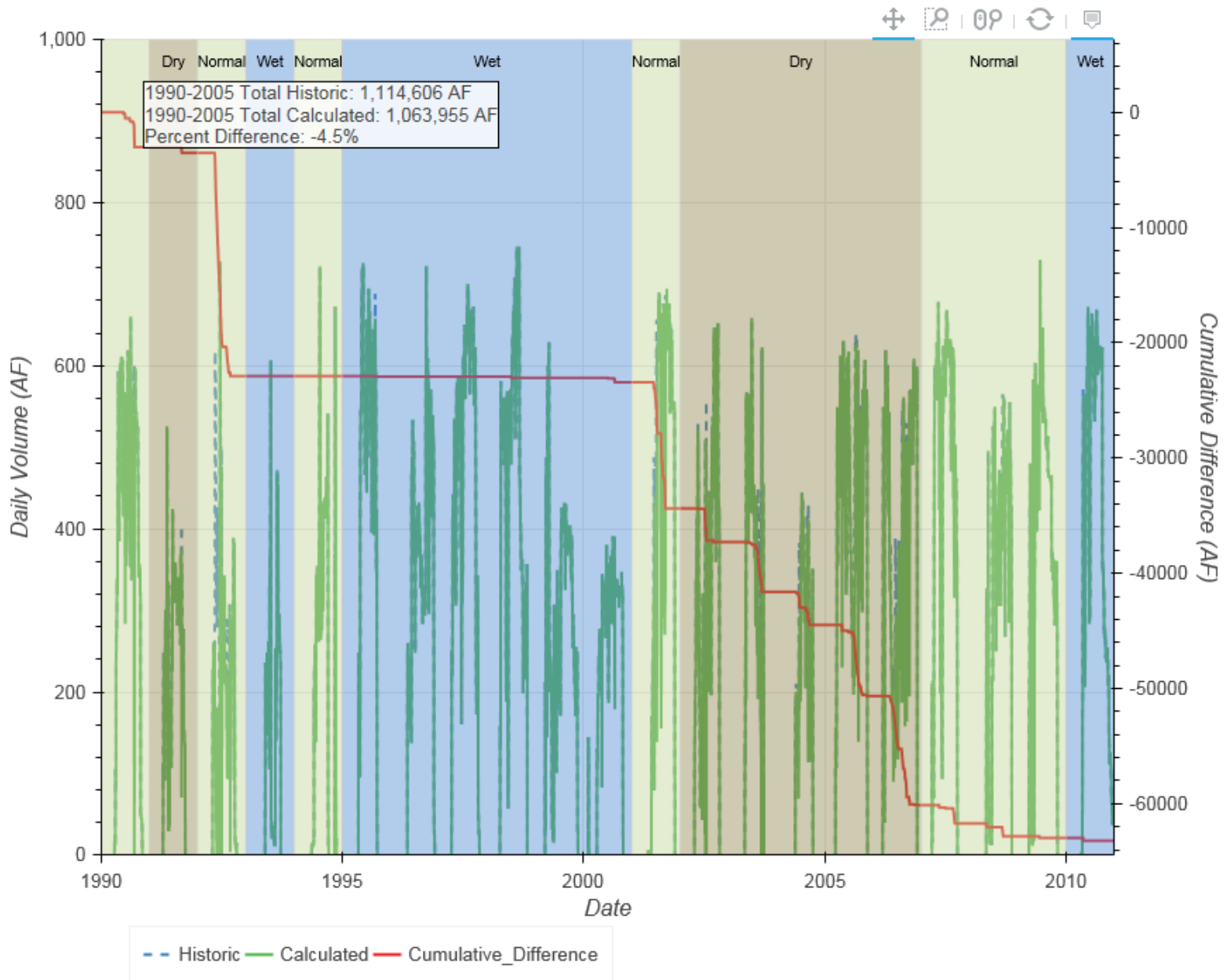


Kearney Diversion

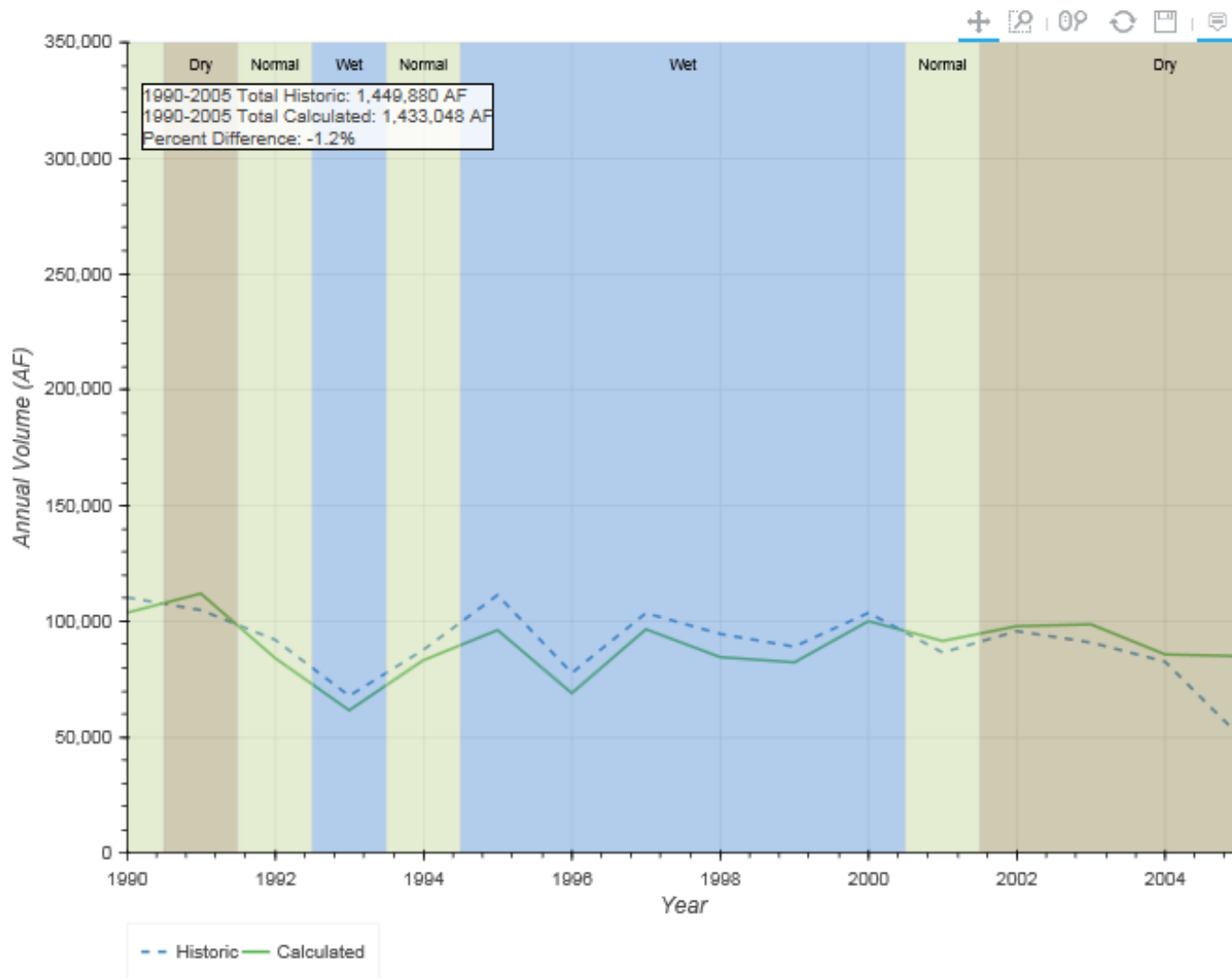


Year	Historic	Calculated
1990	91,451	88,425
1991	41,905	41,395
1992	51,235	31,870
1993	23,452	23,452
1994	42,001	42,001
1995	74,569	74,526
1996	78,762	78,762
1997	103,759	103,759
1998	98,120	98,010
1999	74,098	74,098
2000	60,280	59,909
2001	97,782	86,833
2002	67,819	64,899
2003	57,828	53,511
2004	37,051	34,177
2005	114,498	108,331
2006	106,595	97,116
2007	96,315	94,726
2008	71,607	70,496
2009	89,040	88,897
2010	98,489	98,217
Total	1,576,653	1,513,409

Kearney Diversion

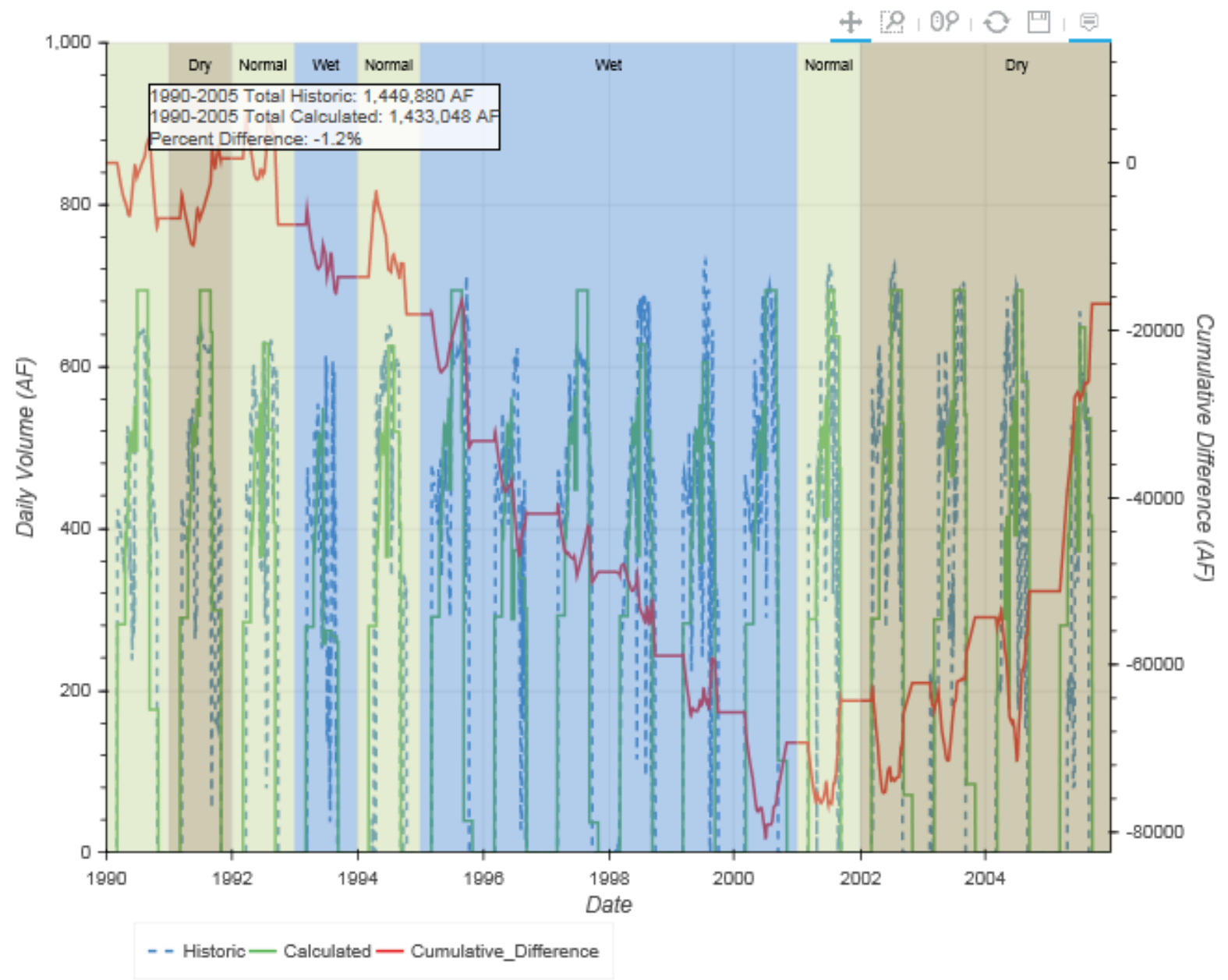


E65 Diversion

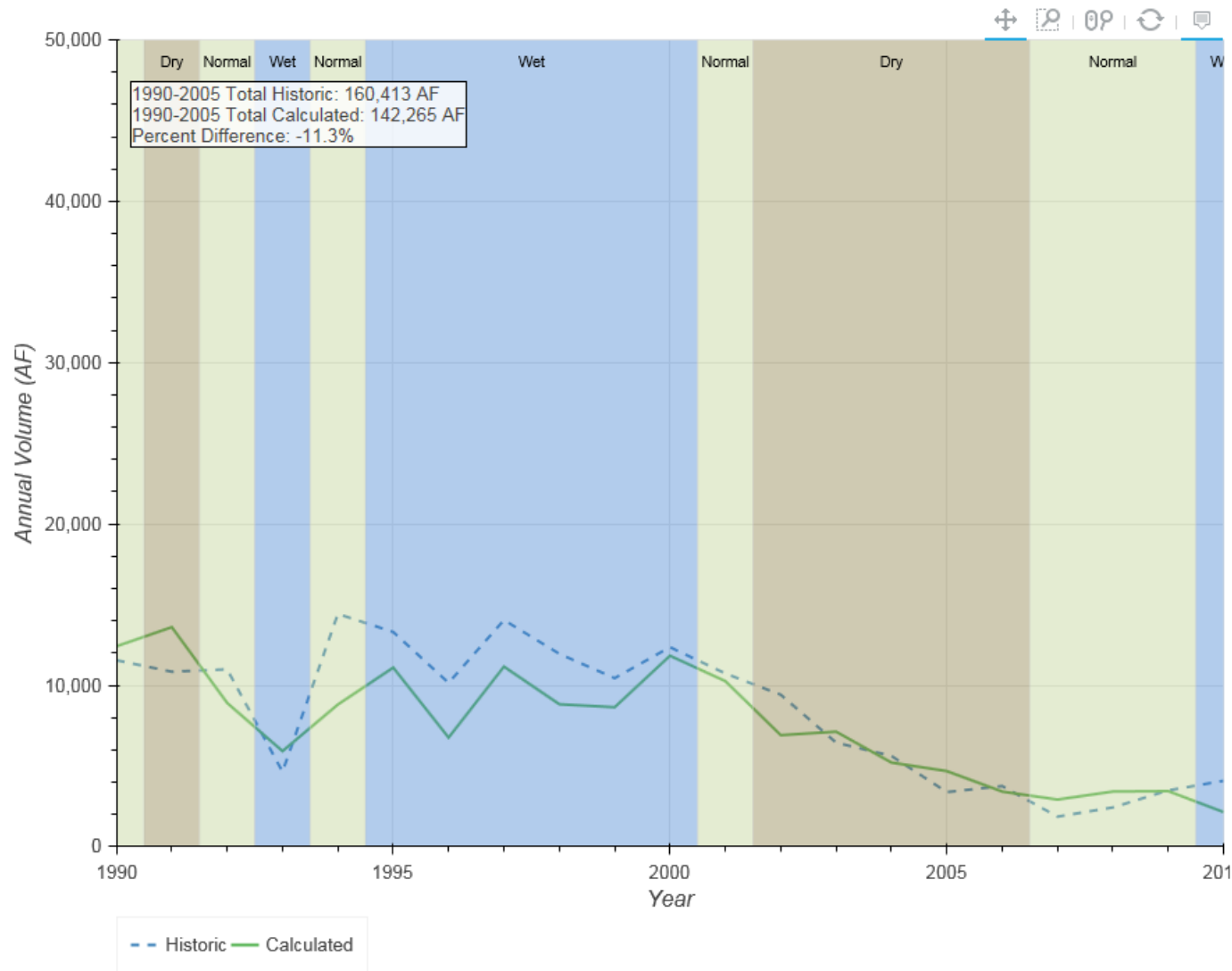


Year	Historic	Calculated
1990	110,395	103,771
1991	104,892	112,046
1992	92,106	84,200
1993	67,870	61,630
1994	87,748	83,275
1995	111,411	96,282
1996	77,748	69,067
1997	103,597	96,646
1998	94,631	84,604
1999	89,093	82,319
2000	103,738	100,136
2001	86,582	91,579
2002	95,816	97,930
2003	90,917	98,768
2004	82,649	85,776
2005	50,687	85,021
Total	1,449,881	1,433,049

E65 Diversion

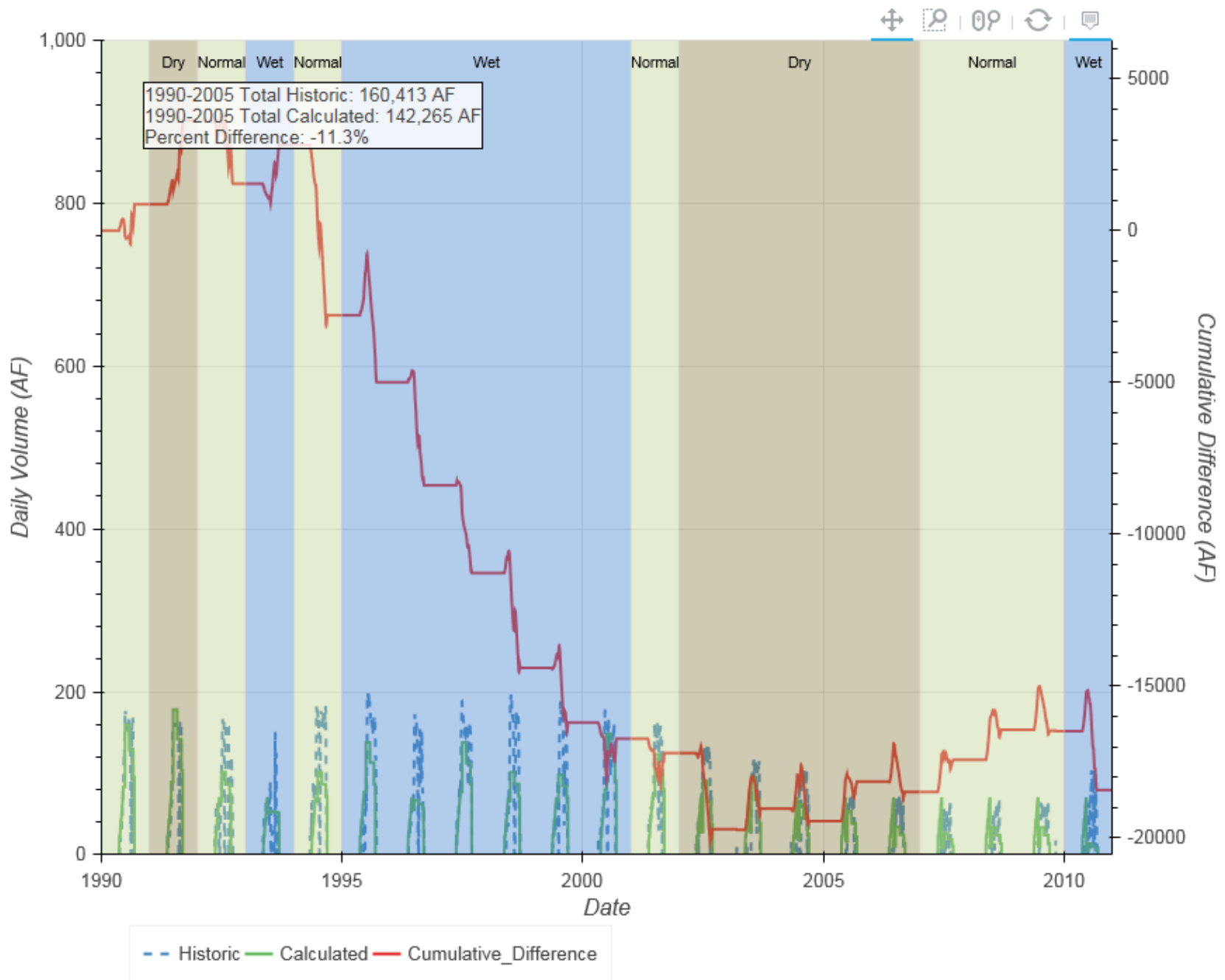


E67 Diversion

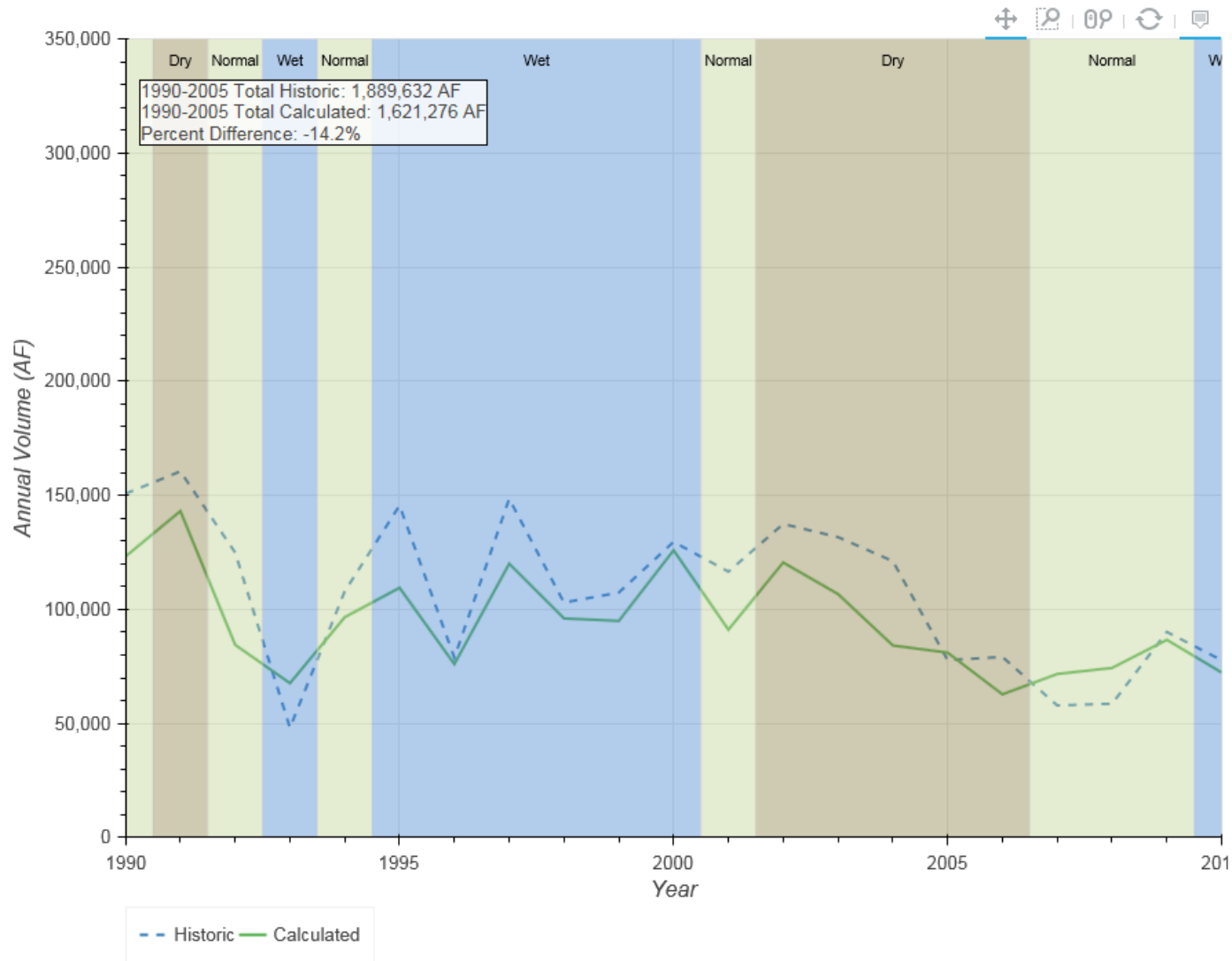


Year	Historic	Calculated
1990	11,558	12,424
1991	10,848	13,610
1992	10,996	8,913
1993	4,649	5,927
1994	14,428	8,815
1995	13,311	11,106
1996	10,159	6,764
1997	14,051	11,163
1998	11,958	8,834
1999	10,449	8,646
2000	12,371	11,840
2001	10,738	10,264
2002	9,424	6,919
2003	6,456	7,131
2004	5,629	5,220
2005	3,388	4,689
2006	3,762	3,420
2007	1,867	2,927
2008	2,435	3,423
2009	3,493	3,449
2010	4,089	2,149
Total	176,059	157,634

E67 Diversion

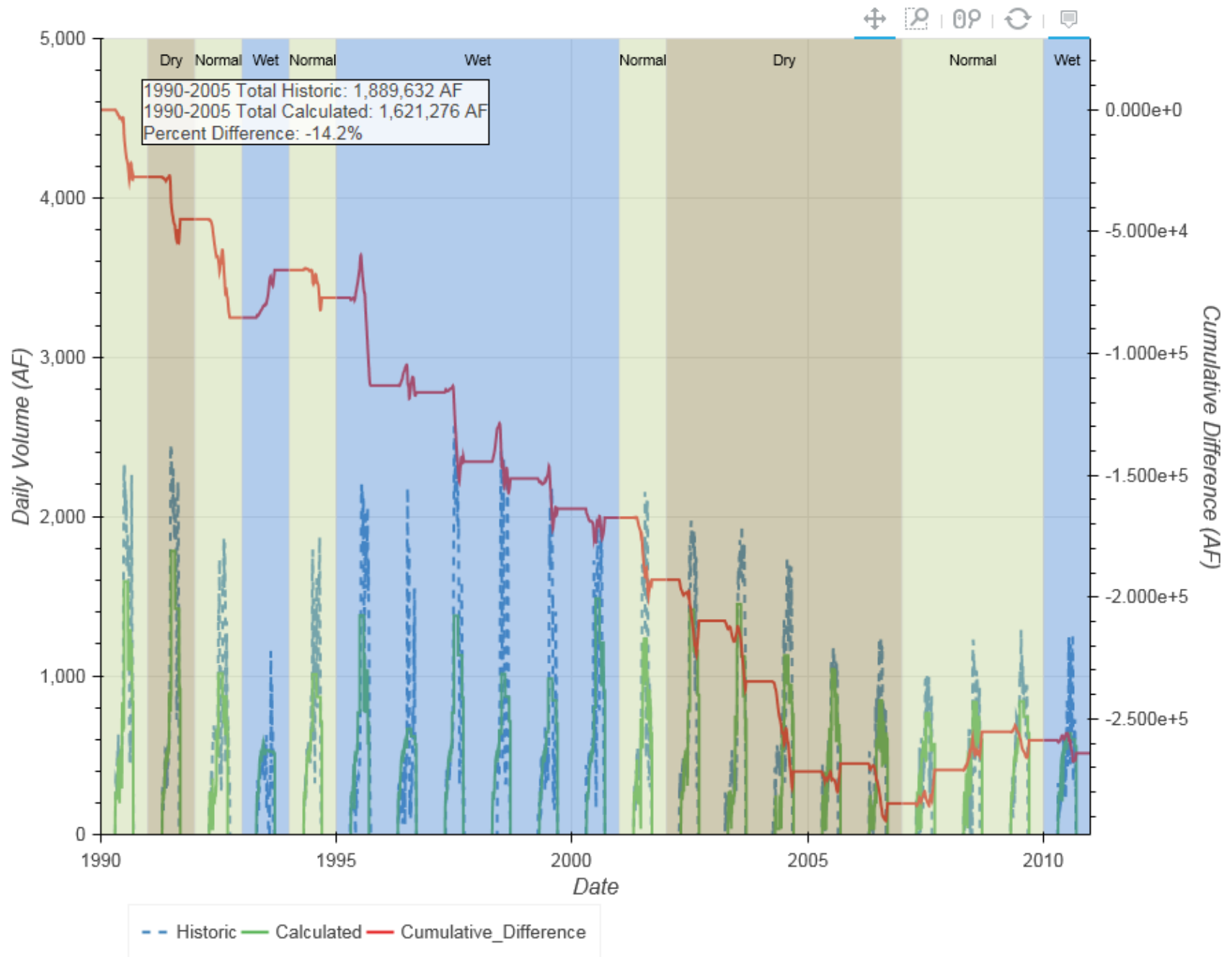


Phelps Diversion

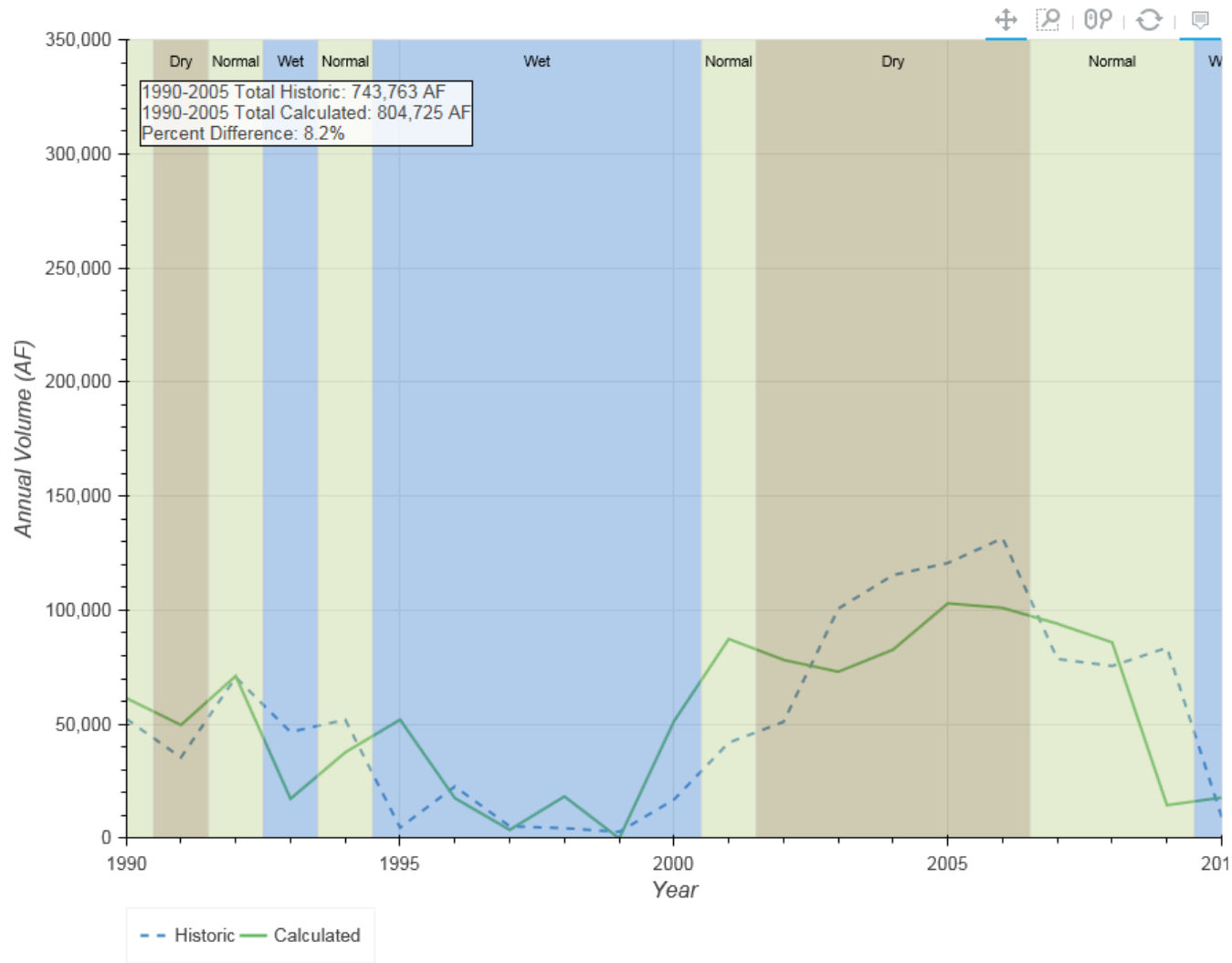


Year	Historic	Calculated
1990	150,706	123,208
1991	160,483	143,091
1992	124,909	84,521
1993	48,123	67,667
1994	107,966	96,604
1995	145,527	109,479
1996	78,847	76,038
1997	148,451	120,029
1998	102,998	96,075
1999	107,379	94,951
2000	129,594	125,913
2001	116,559	91,123
2002	137,451	120,568
2003	131,673	106,741
2004	121,156	84,214
2005	77,811	81,056
2006	79,162	62,784
2007	57,928	71,704
2008	58,661	74,348
2009	90,127	86,674
2010	77,724	72,345
Total	2,253,235	1,989,132

Phelps Diversion

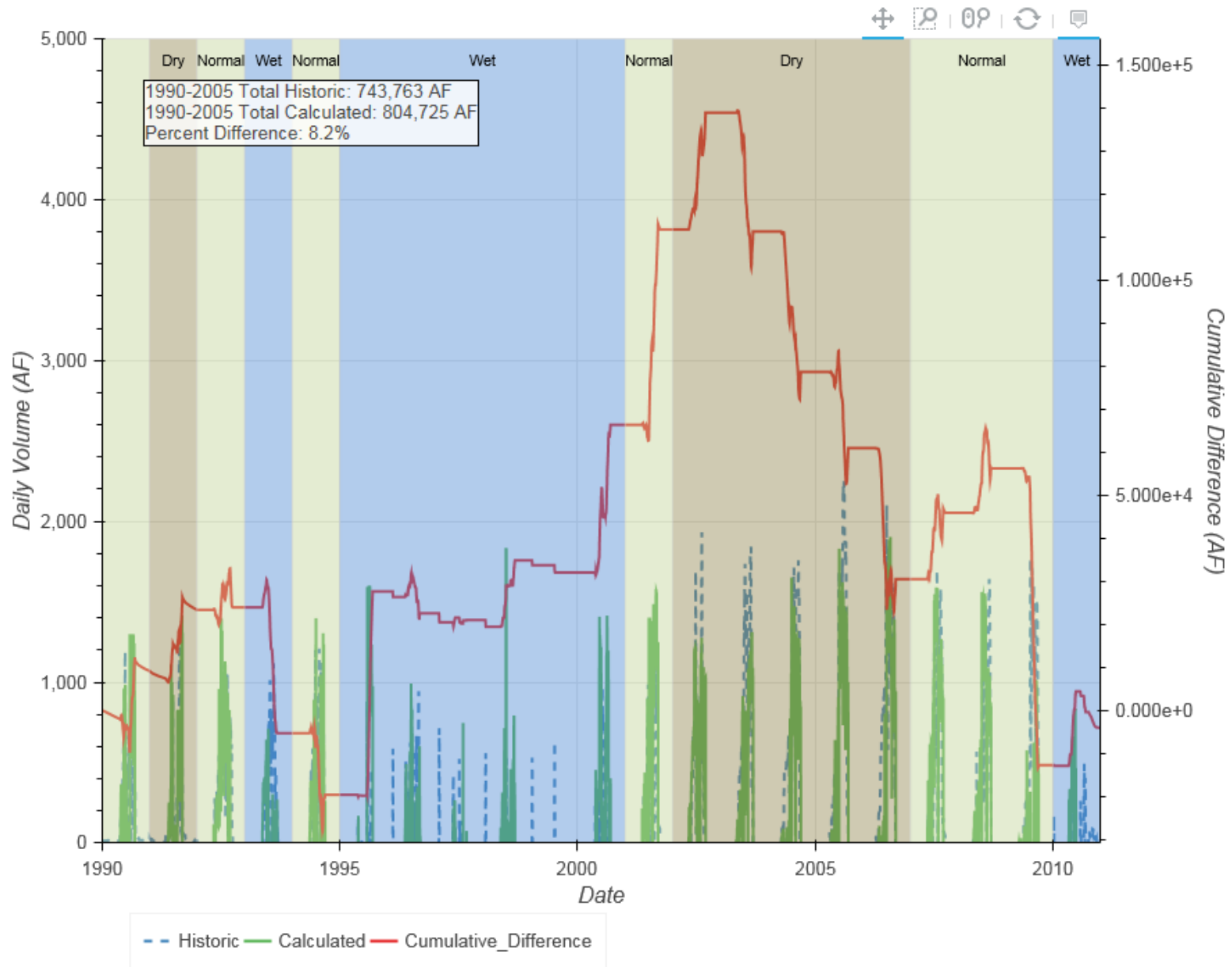


Jeffrey Return

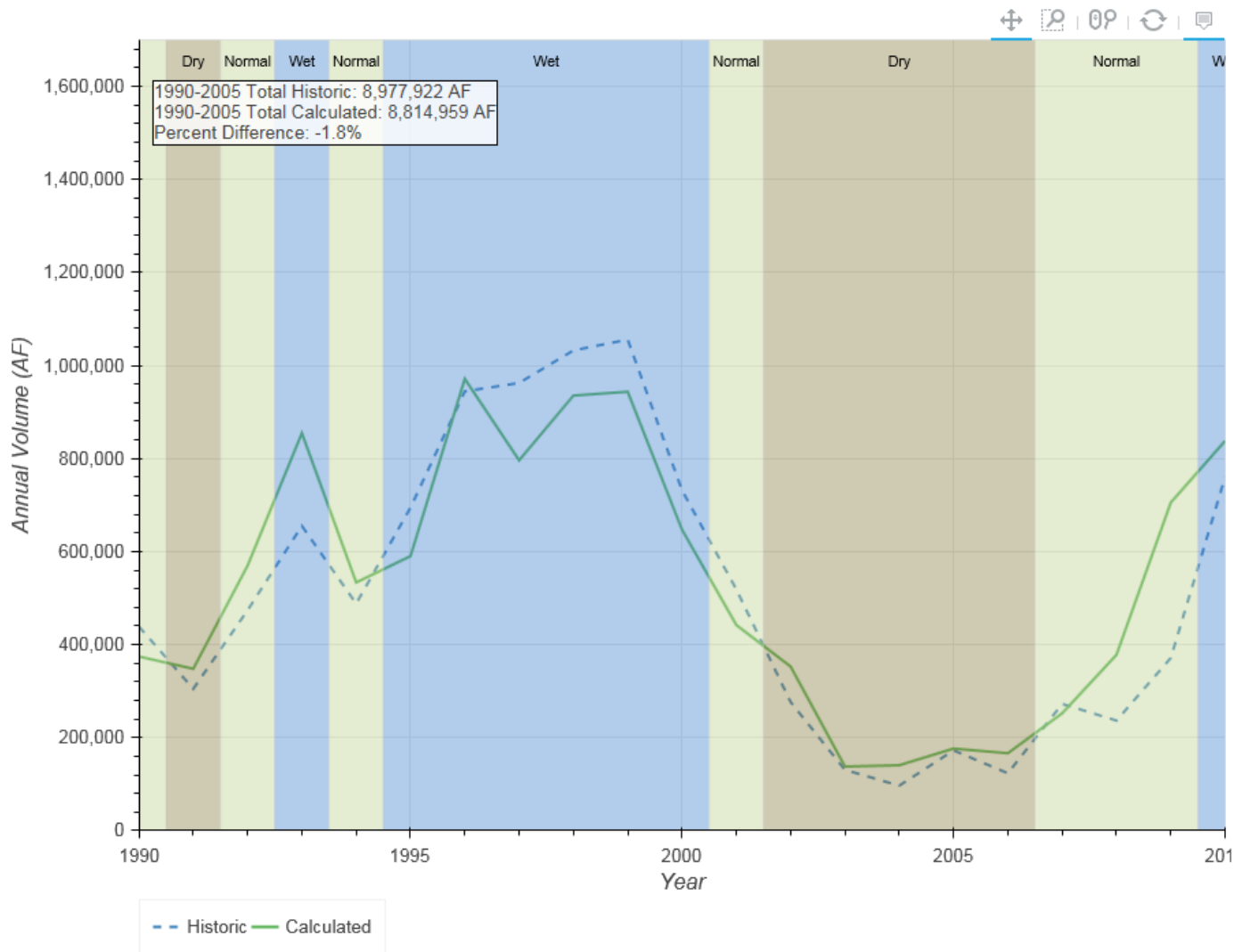


Year	Historic	Calculated
1990	52,370	61,511
1991	35,464	49,663
1992	70,619	71,158
1993	46,600	17,338
1994	51,993	37,670
1995	4,701	52,019
1996	22,733	17,659
1997	5,300	3,711
1998	4,467	18,368
1999	2,828	0
2000	16,969	51,304
2001	41,942	87,377
2002	51,060	78,234
2003	100,655	73,018
2004	115,373	82,705
2005	120,688	102,990
2006	131,510	101,000
2007	78,615	94,072
2008	75,550	85,867
2009	83,552	14,532
2010	9,246	17,858
Total	1,122,236	1,118,055

Jeffrey Return

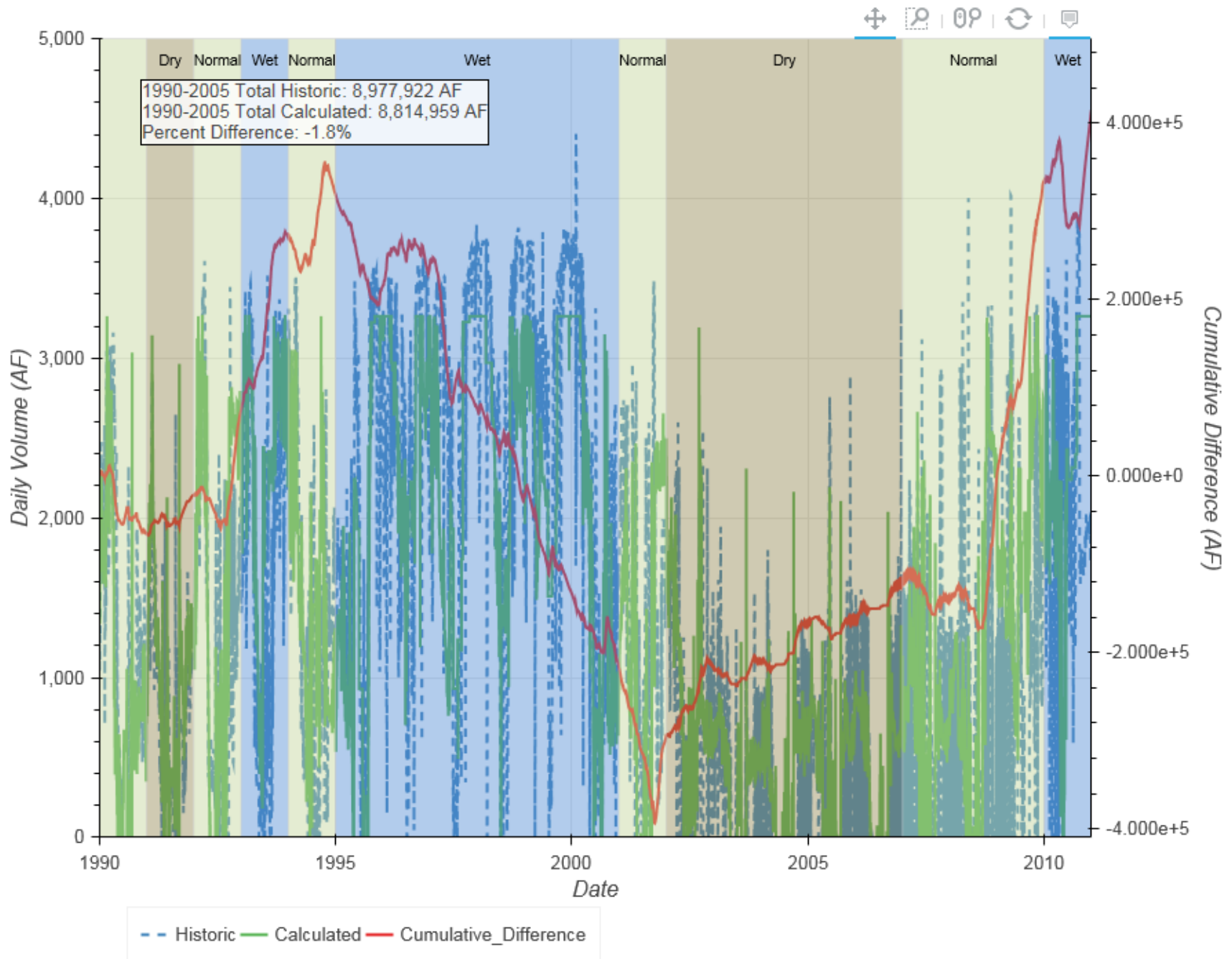


J2 Return

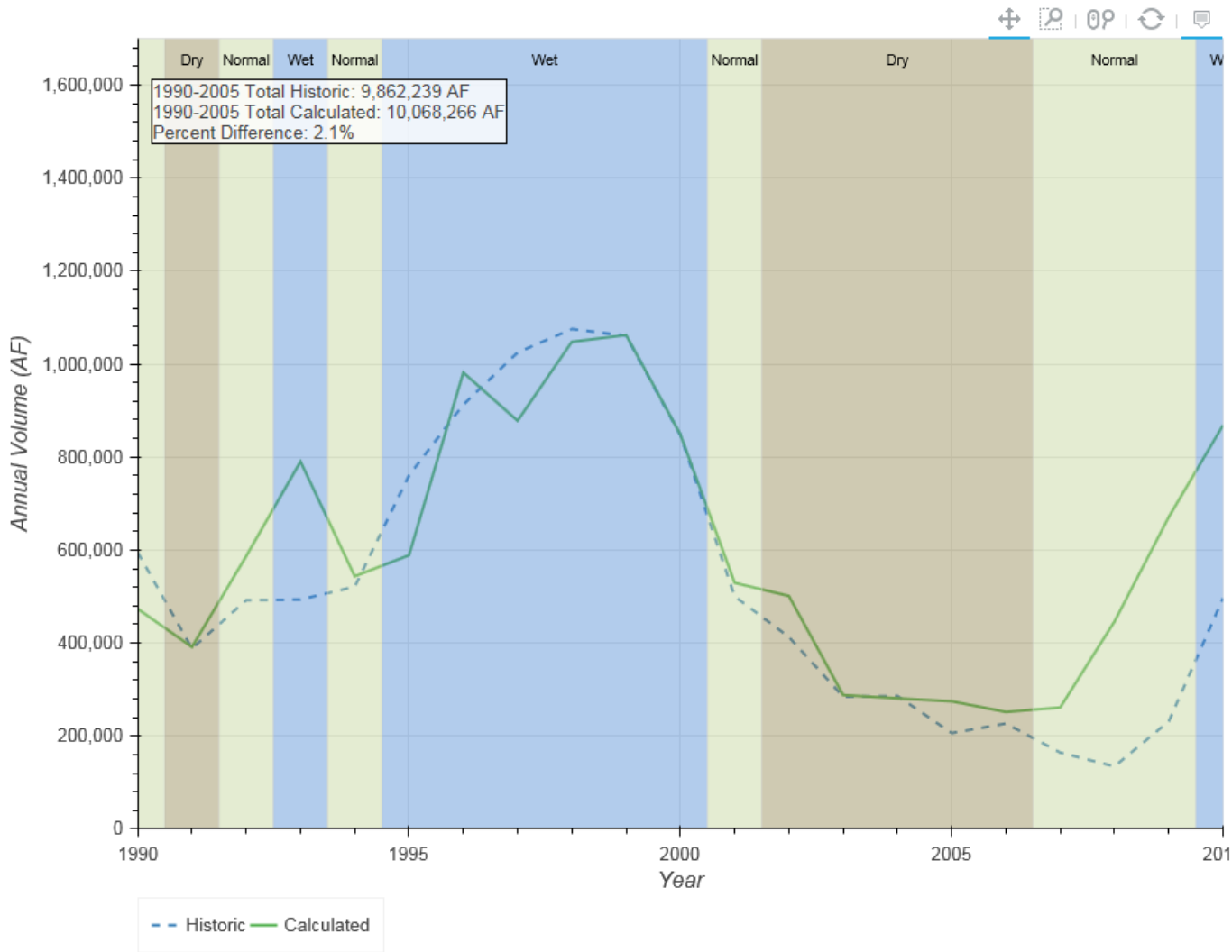


Year	Historic	Calculated
1990	438,825	374,501
1991	304,949	348,036
1992	473,833	569,698
1993	655,263	854,844
1994	488,049	533,664
1995	694,544	590,255
1996	944,543	971,369
1997	962,565	796,304
1998	1,032,520	935,447
1999	1,055,685	943,700
2000	731,697	646,950
2001	518,763	442,213
2002	276,526	352,802
2003	130,770	138,012
2004	96,785	140,606
2005	172,606	176,558
2006	123,435	166,512
2007	272,592	252,389
2008	236,771	378,232
2009	371,451	705,381
2010	760,124	838,026
Total	10,742,296	11,155,499

J2 Return



Sutherland Return



Year	Historic	Calculated
1990	594,992	473,485
1991	388,274	391,459
1992	492,151	586,984
1993	493,478	790,310
1994	521,187	543,551
1995	760,689	588,942
1996	912,724	981,820
1997	1,024,861	878,137
1998	1,075,299	1,047,863
1999	1,060,901	1,062,426
2000	847,410	848,692
2001	500,366	529,593
2002	412,979	501,240
2003	284,473	288,077
2004	286,110	281,024
2005	206,346	274,664
2006	226,830	251,659
2007	164,380	261,479
2008	134,634	446,341
2009	231,665	671,039
2010	496,451	868,590
Total	11,116,200	12,567,375

Sutherland Return

