

Lamprey Annual Water Use versus Stream Flow – Calendar Year 2003

The Lamprey Water Management Planning Area covers 212 square miles and includes a streamflow gage in Durham (USGS 01073500 LAMPREY RIVER NEAR NEWMARKET, NH) measuring 183 square miles of the WMPA. For this report, the streamflow was transposed areal from the gage to all impact points on the Designated River. There are 15 registered sources and one registered, measured discharge in the Water Management Planning Area.

The entire Lamprey Designated Reach was not in compliance with the General Standard in 2003 for the months of July, August and September. Water use in the Water Management Planning Area is predominately for municipal, community or institutional water supplies including Raymond Water Works, Epping Water Works, Newmarket Water Works, University of NH Water Works (Durham). Green Hills Community Water Supply transfers water from the Raymond water system. Some of these sources were not active in 2003. There is some use by a nursery and a lumber company beginning in April and continuing until October. Peak use by these facilities is in June, July and August. Registered, measured returns are limited to the Epping Waste Water Treatment Facility.

Lamprey River Affected Water User Facilities: Source and Discharge Locations

Legend

Affected Water Users

- ⊙ Source
- Discharge

- ### Stream Gages
- ▲ Active
 - △ Inactive

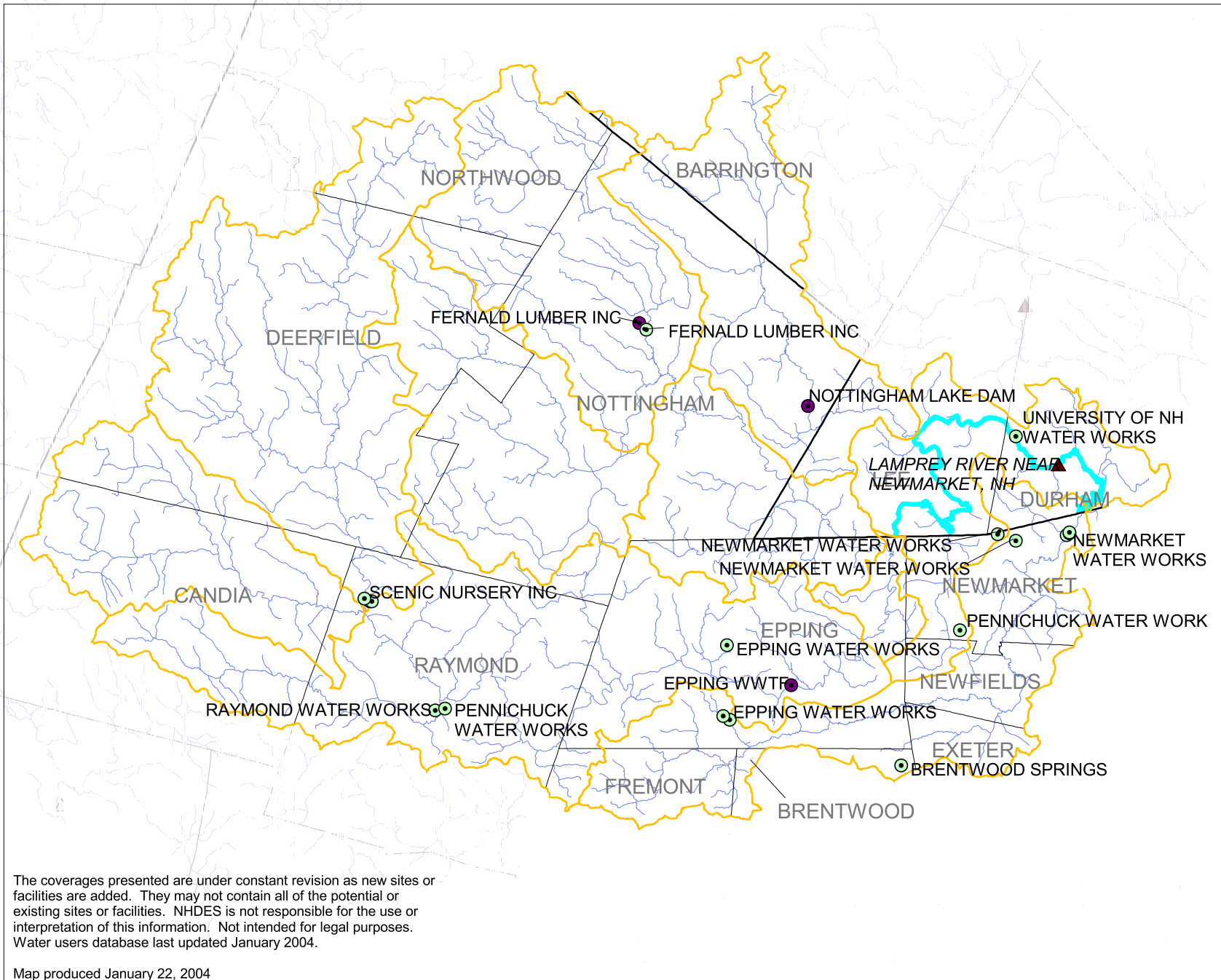
▬ Designated Reach

▬ Hydrology

▬ State boundary

▬ Town boundary

▭ WMPA



The coverages presented are under constant revision as new sites or facilities are added. They may not contain all of the potential or existing sites or facilities. NHDES is not responsible for the use or interpretation of this information. Not intended for legal purposes. Water users database last updated January 2004.

Map produced January 22, 2004

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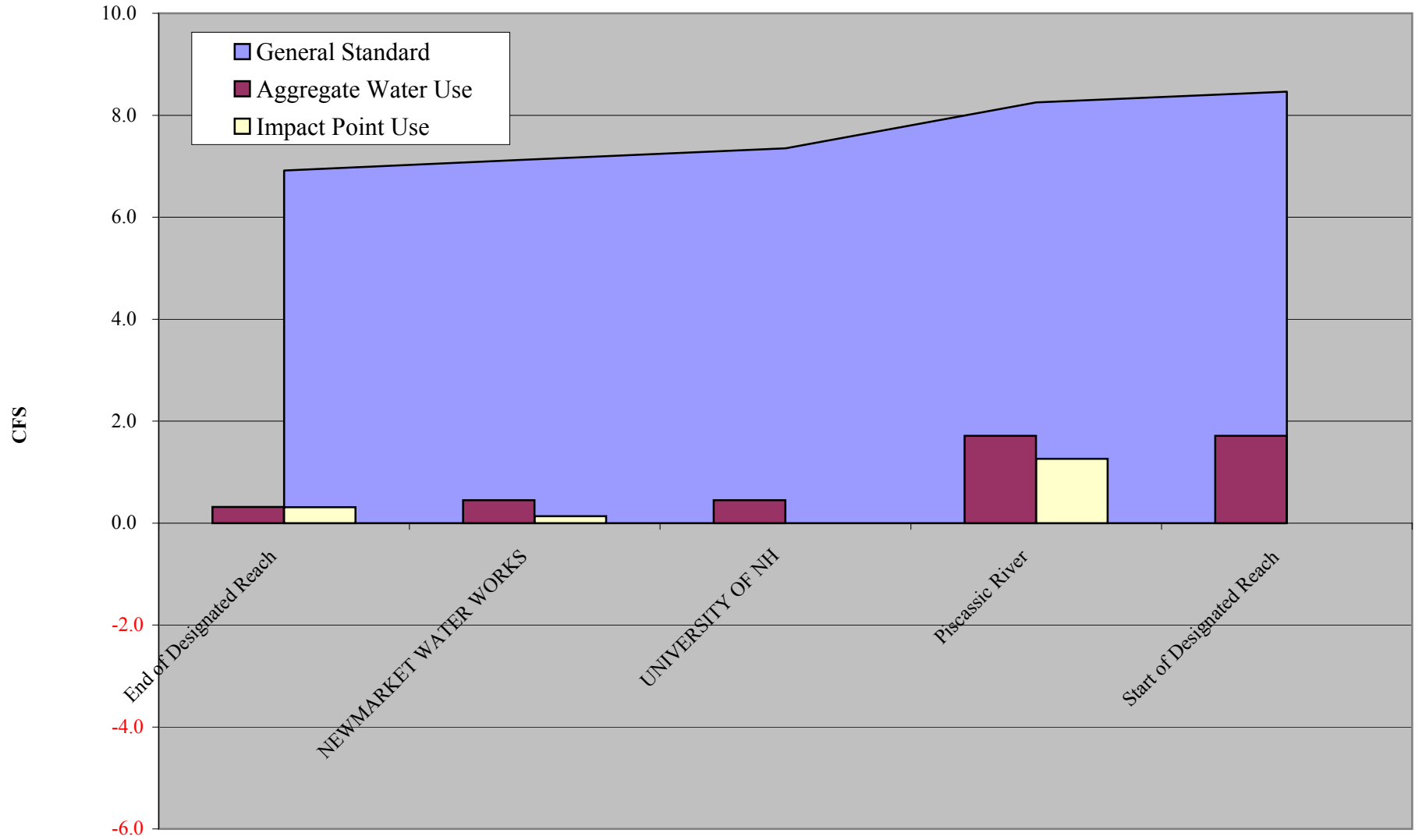
2003 Lamprey Water Use in CFS															
USERNAME	FACILITY	DA on DR (SQ MILE)	WUSD_ID	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SCENIC NURSERY INC		172.95	20747 20747-S03	0.000	0.000	0.000	0.000	0.000	0.012	0.012	0.012	0.000	0.000	0.000	0.000
SCENIC NURSERY INC		172.95	20747 20747-S02	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000
SCENIC NURSERY INC		172.95	20747 20747-S01	0.000	0.000	0.000	0.001	0.001	0.005	0.006	0.006	0.004	0.001	0.000	0.000
FERNALD LUMBER INC	SAWMILL	172.95	20557 20557-S01	0.000	0.000	0.000	0.000	0.023	0.023	0.023	0.023	0.023	0.017	0.000	0.000
FERNALD LUMBER INC	SAWMILL	172.95	20557 20557-D01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EPPING WWTF	WASTE WATER TREAT PLANT	172.95	20389 20389-D01	(0.227)	(0.262)	(0.289)	(0.604)	(0.627)	(0.398)	(0.259)	(0.255)	(0.181)	(0.184)	(0.297)	(0.373)
RAYMOND WATER DEPARTMENT	WATER WORKS	172.95	20061 20061-S01	0.449	0.470	0.517	0.455	0.454	0.510	0.583	0.499	0.439	0.433	0.413	0.397
PENNICHUCK WATER WORKS	GREEN HILLS COMM WS	172.95	20351 20061-S01	0.121	0.121	0.121	0.068	0.068	0.068	0.778	0.778	0.804	0.000	0.000	0.000
EPPING WATER WORKS	EPPING WATER WORKS	172.95	20045 20045-S02	0.090	0.081	0.082	0.079	0.085	0.104	0.103	0.079	0.085	0.081	0.087	0.075
End of Designated Reach		172.95													
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	178.38	20057 20057-S02	0.134	0.009	0.095	0.096	0.101	0.215	0.359	0.335	0.336	0.350	0.266	0.395
UNIVERSITY OF NH	WATER WORKS	183.73	20066 20066-S02	0.000	0.000	0.000	0.000	0.835	0.751	0.886	0.889	0.918	1.072	0.738	0.005
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	206.25	20057 20057-S05	1.014	1.006	1.079	0.771	1.135	0.426	0.000	0.000	0.000	0.000	0.000	0.000
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	206.25	20057 20057-S04	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	206.25	20057 20057-S03	0.188	0.012	0.133	0.121	0.173	0.302	0.479	0.395	0.402	0.469	0.353	0.301
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	206.25	20057 20057-S01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EPPING WATER WORKS	EPPING WATER WORKS	206.25	20045 20045-S03	0.059	0.053	0.055	0.051	0.056	0.051	0.062	0.058	0.054	0.052	0.055	0.056
EPPING WATER WORKS	EPPING WATER WORKS	206.25	20045 20045-S01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

4. Table of Estimated Monthly Stream Flows and General Standard Values

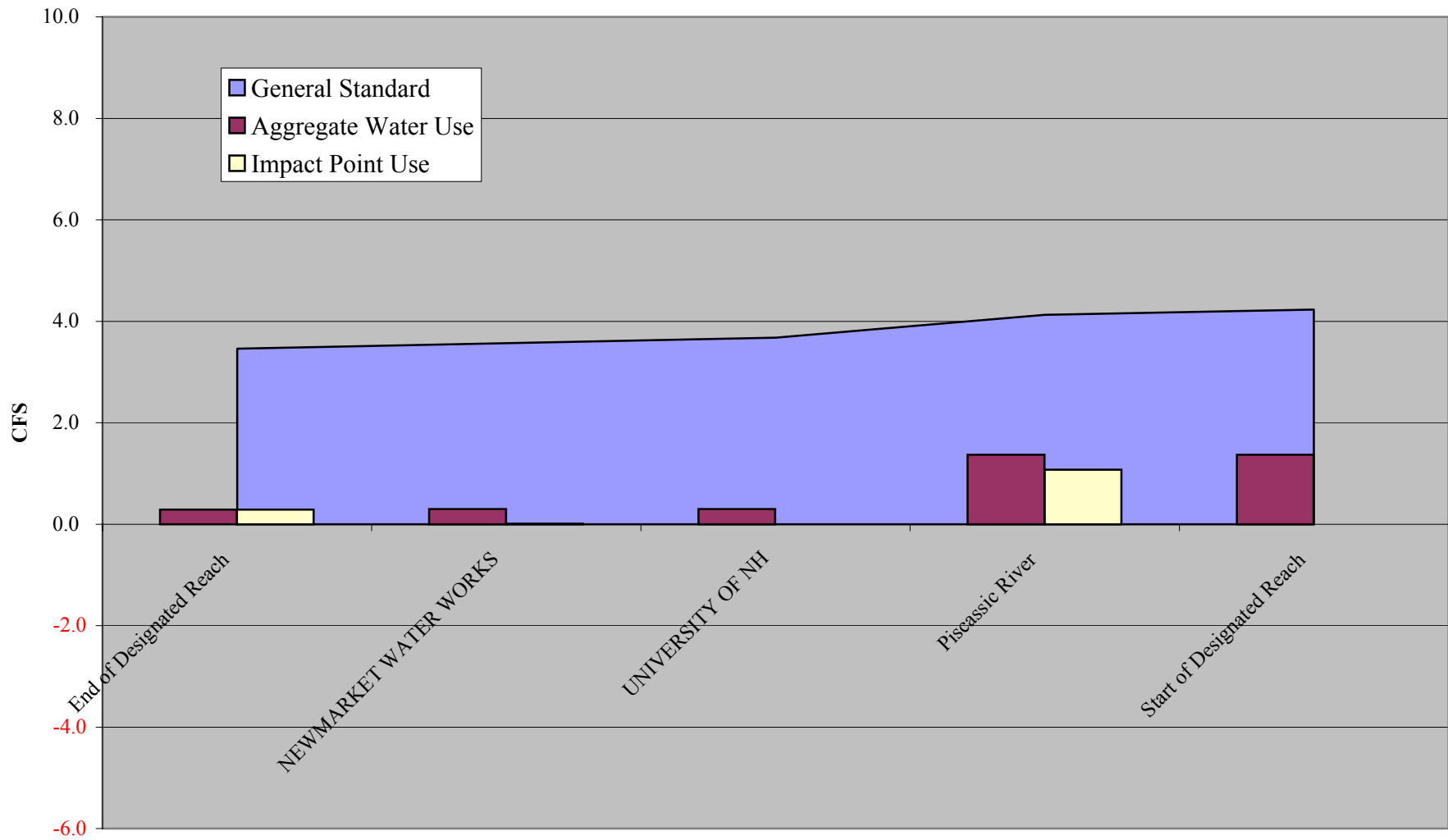
USGS 01073500 LAMPREY RIVER NEAR NEWMARKET, NH						
DA(mi^2)	183					
7Q10 (cfs)	4.8					
	Mean of daily streamflows (2003) in cfs	Mean of monthly streamflows (POR= 68 years) in cfs	Median of monthly means (cfs)	Estimated 2003 monthly mean streamflow in CFSM	General Standard in cfsm	
Jan-03	198	283	261.5	1.08	0.04	
Feb-03	161	305	262	0.88	0.02	
Mar-03	799	608	545.5	4.37	0.16	
Apr-03	712	687	617	3.89	0.04	
May-03	337	348	299	1.84	0.04	
Jun-03	220	192	146	1.20	0.04	
Jul-03	32	92.9	70.5	0.17	0.0013	
Aug-03	80	70.1	45	0.44	0.0013	
Sep-03	53	70	46.4	0.29	0.0013	
Oct-03	206	128	91.3	1.13	0.04	
Nov-03	338	259	196	1.84	0.04	
Dec-03	498	328	272	2.72	0.04	
2003 daily data availability						
98.9%	= number of days with data in 2003 / 365 days					
		Using POR average streamflow for this month				
		Using POR average daily streamflows for part of this month				

2003 Lamprey Estimated Monthly General Standard at Each Impact Point in CFS			General Standard in cfsm												
USERNAME	FACILITY	DA on DR (SQ MILE)		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach		172.95		6.9	3.5	28	6.9	6.9	6.9	0.23	0.23	0.23	6.9	6.9	6.9
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	178.38	20057 20057-S02	7.1	3.6	29	7.1	7.1	7.1	0.23	0.23	0.23	7.1	7.1	7.1
UNIVERSITY OF NH	WATER WORKS	183.73	20066 20066-S02	7.3	3.7	29	7.3	7.3	7.3	0.24	0.24	0.24	7.3	7.3	7.3
Piscassic River		206.25		8.2	4.1	33	8.2	8.2	8.2	0.27	0.27	0.27	8.2	8.2	8.2
Start of Designated Reach		211.59		8.5	4.2	34	8.5	8.5	8.5	0.28	0.28	0.28	8.5	8.5	8.5

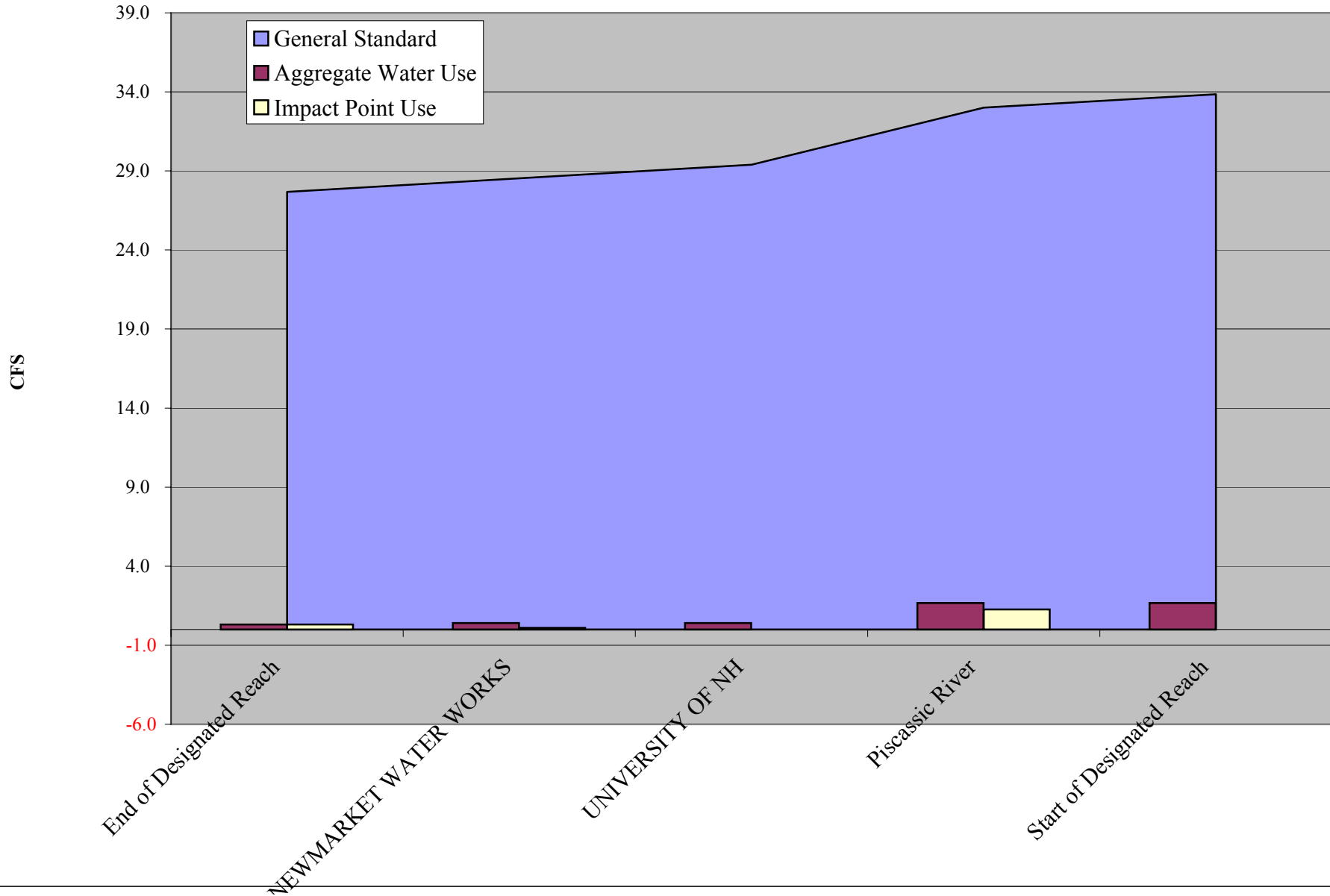
January 2003 Lamprey



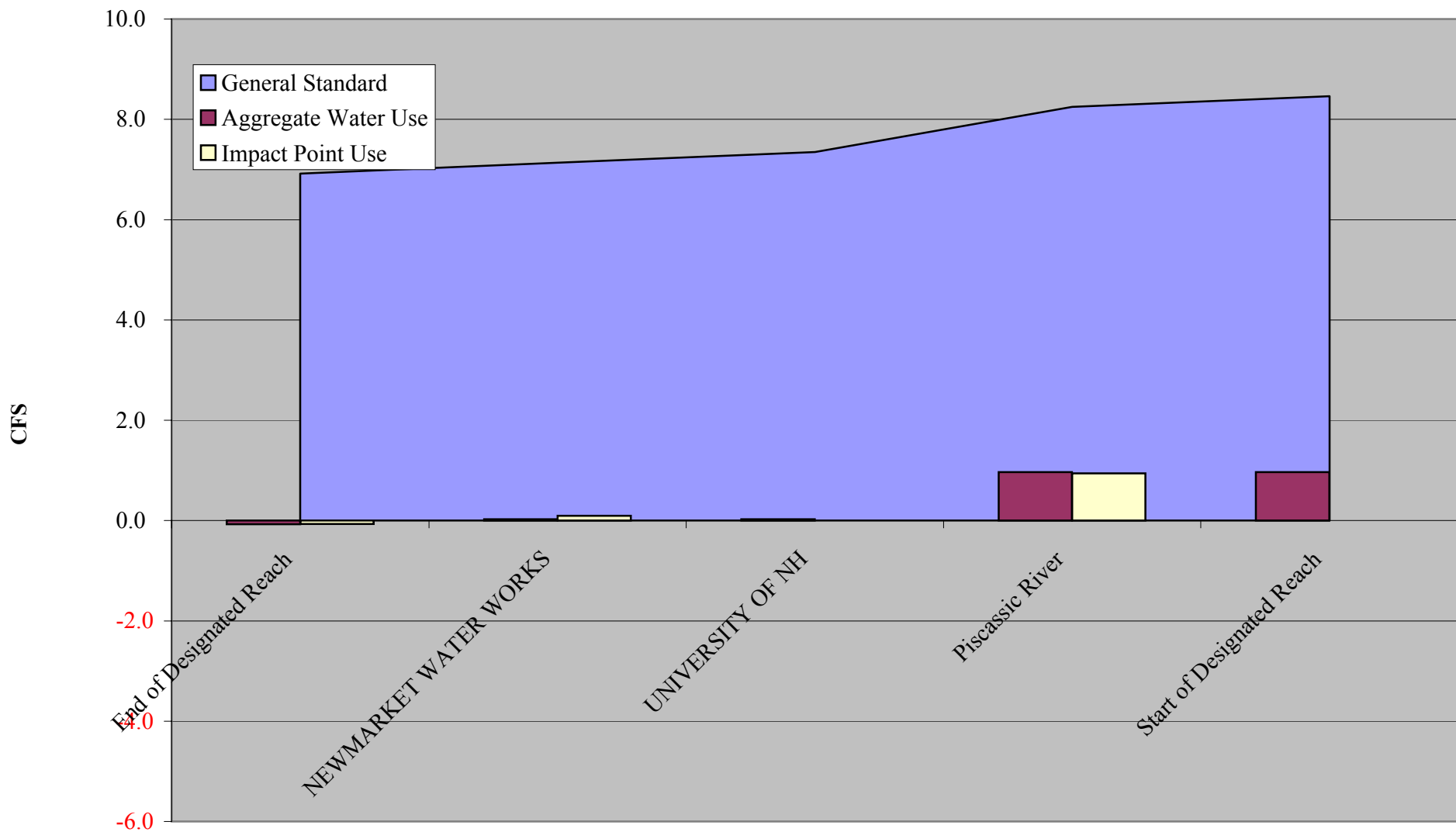
February 2003 Lamprey



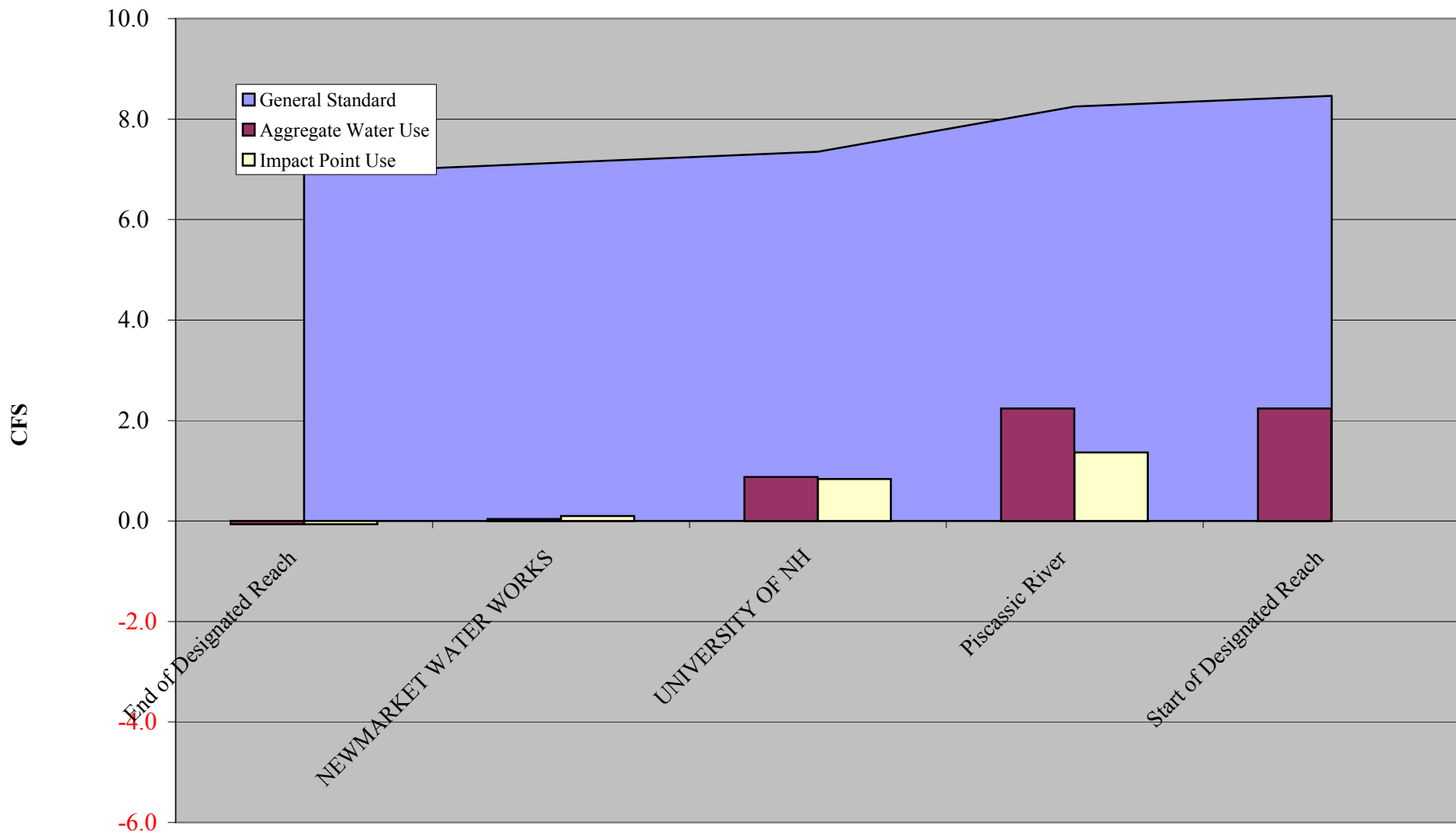
March 2003 Lamprey



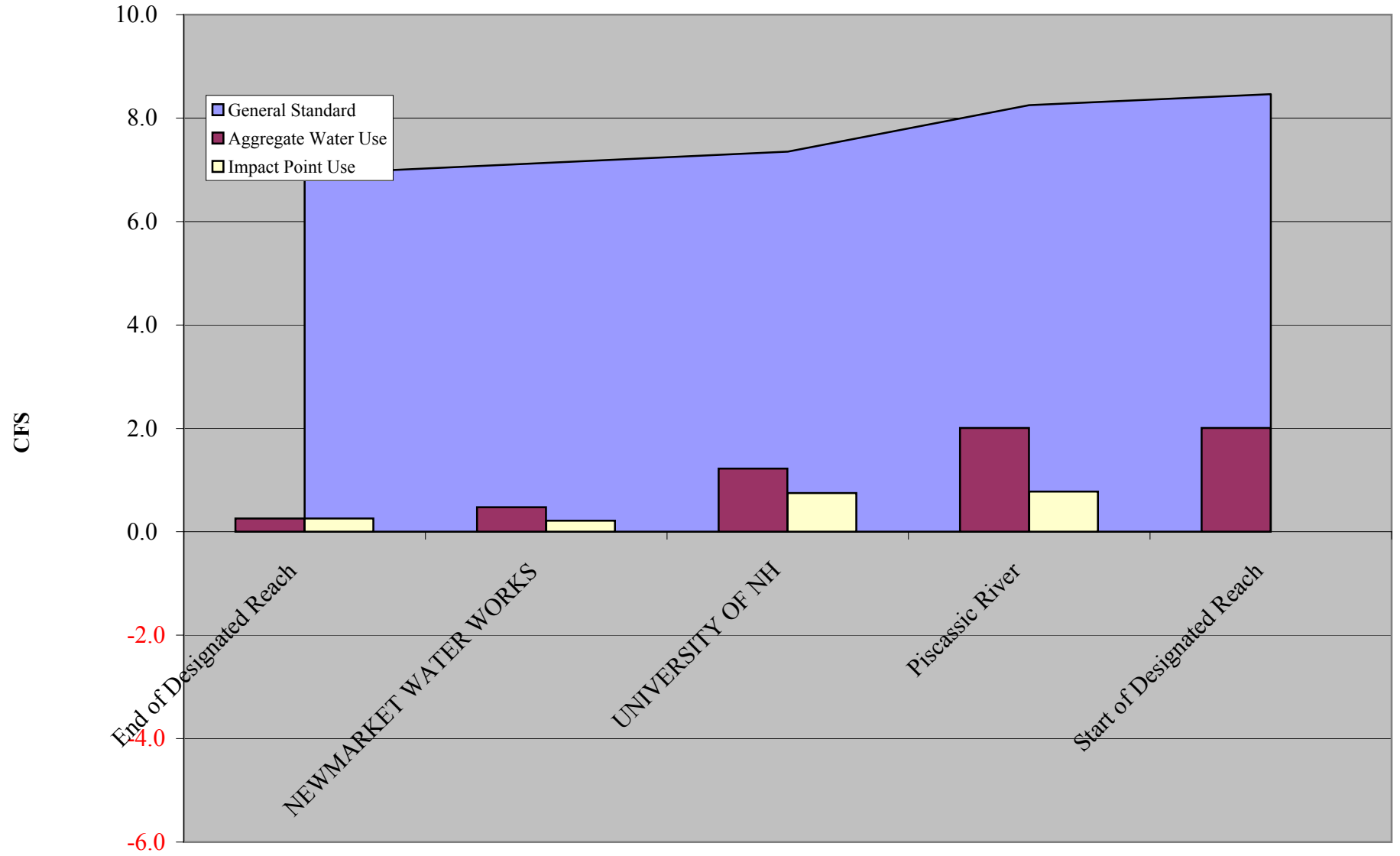
April 2003 Lamprey



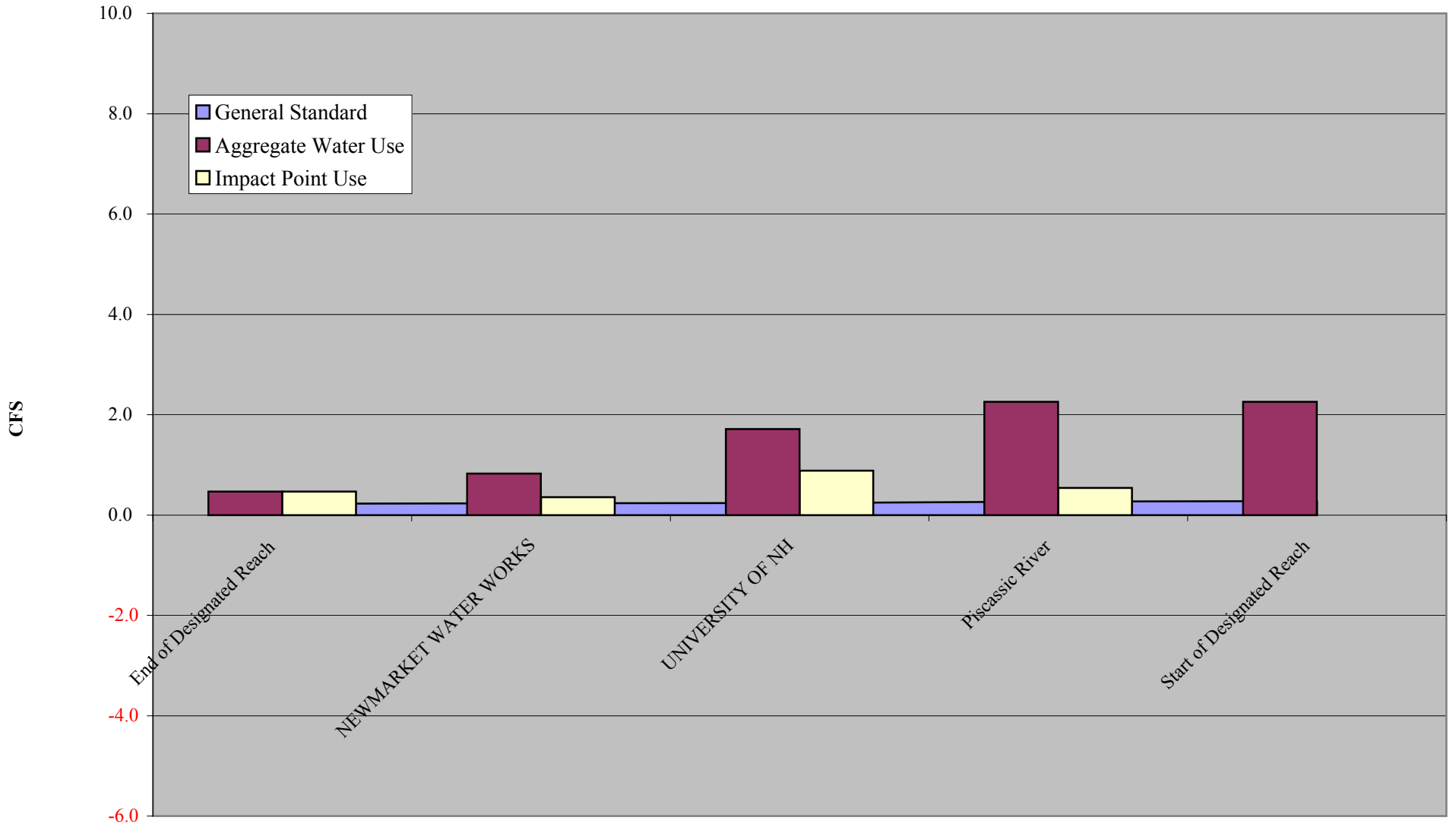
May 2003 Lamprey



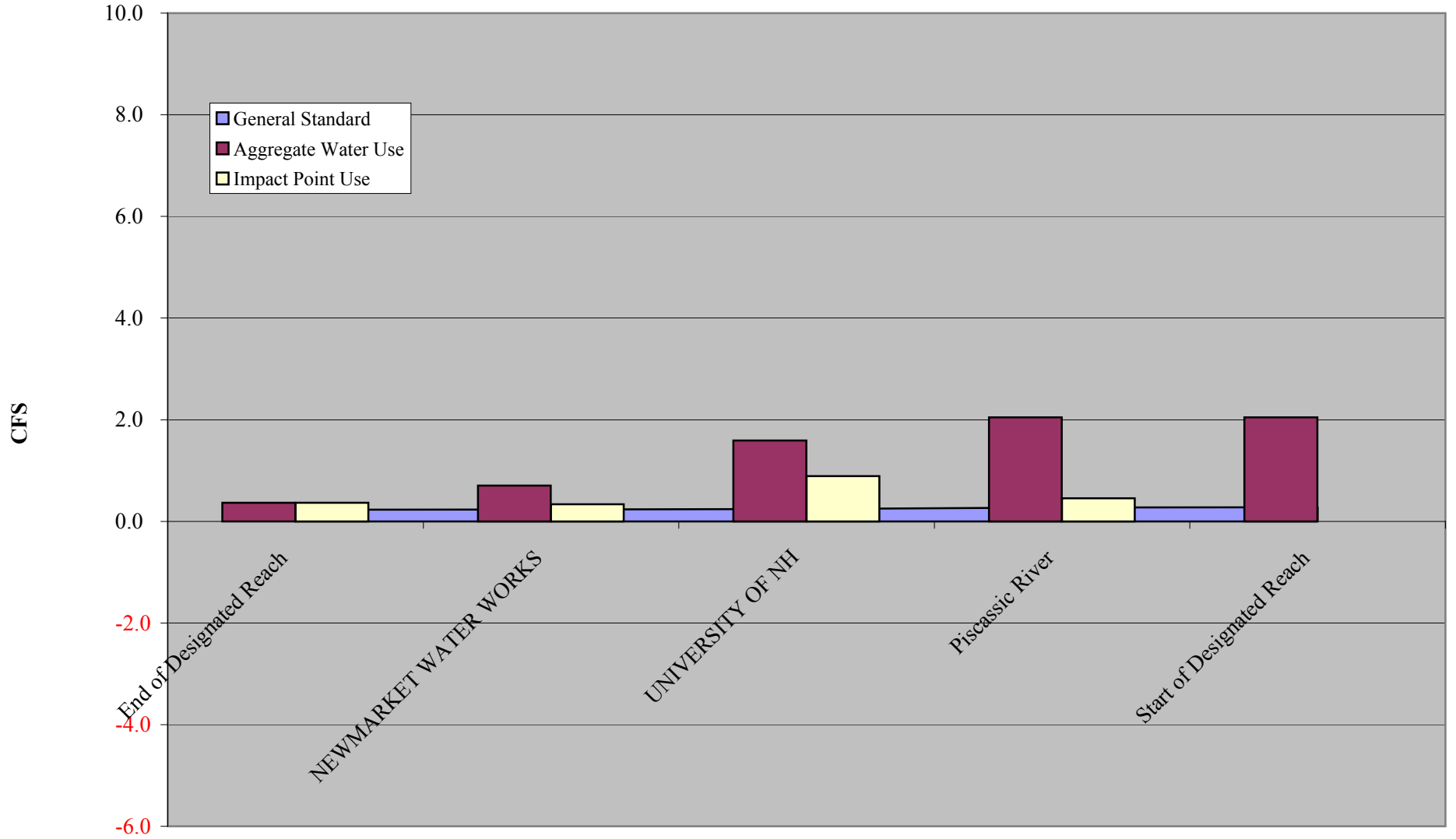
June 2003 Lamprey



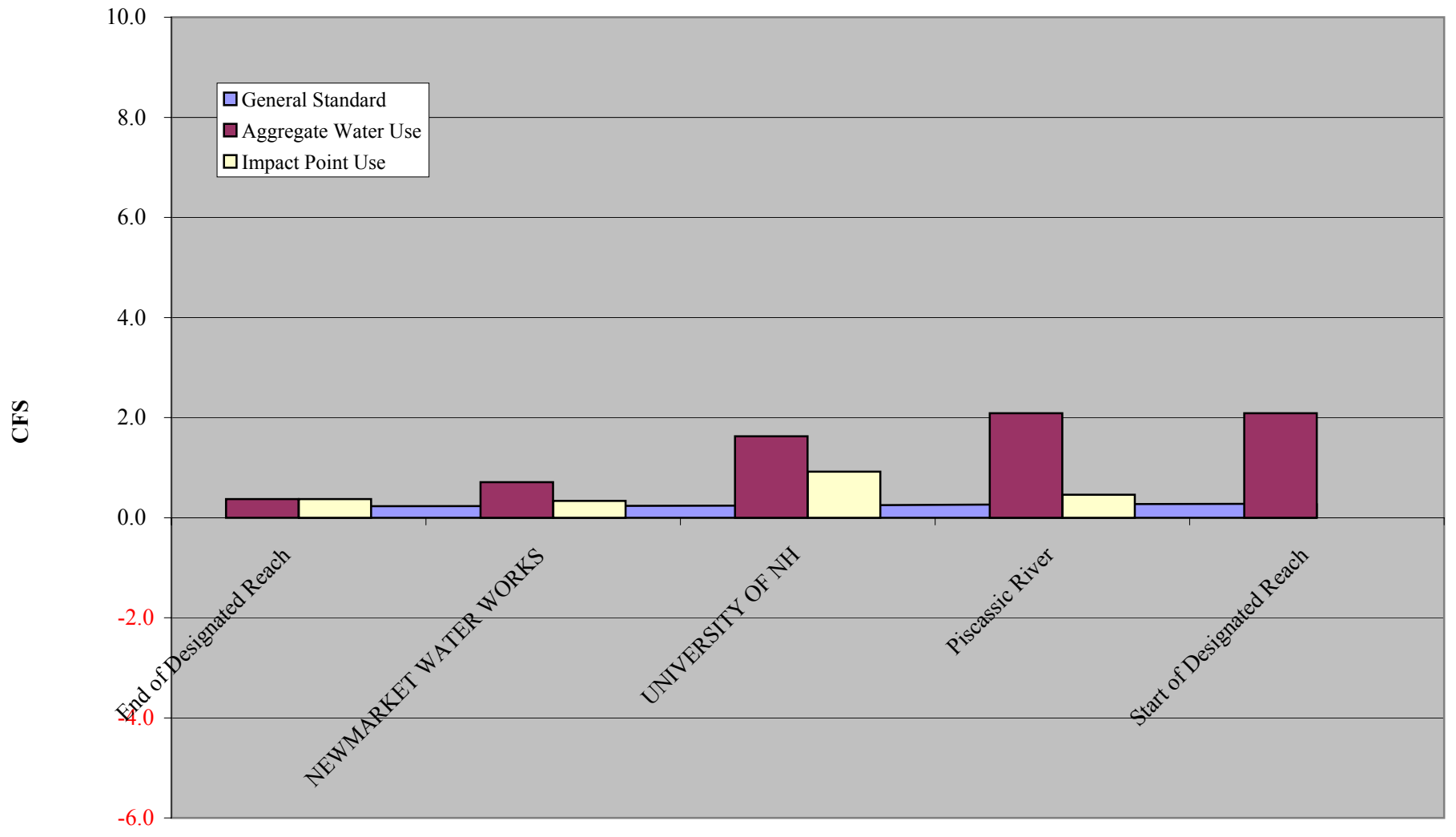
July 2003 Lamprey



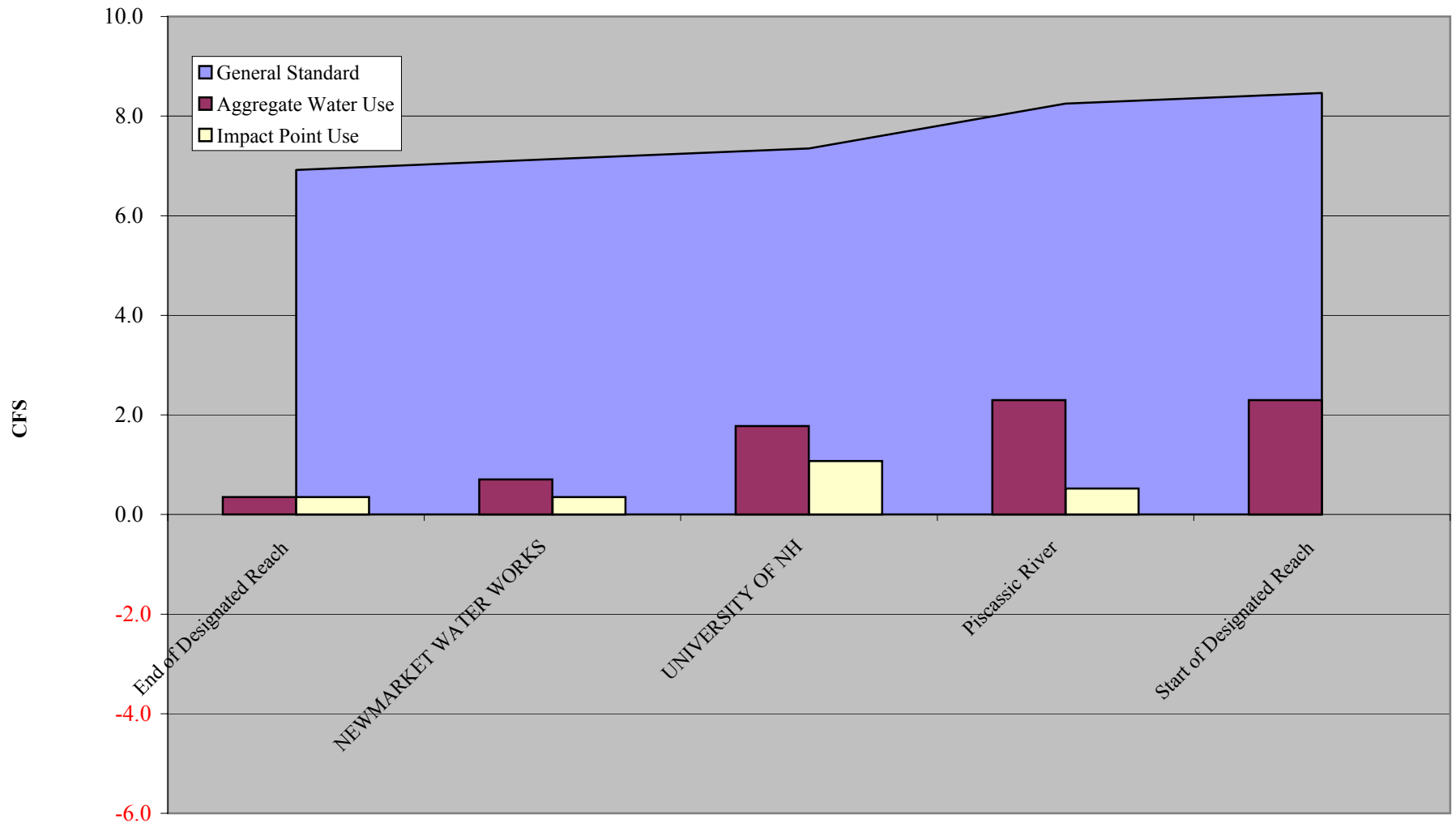
August 2003 Lamprey



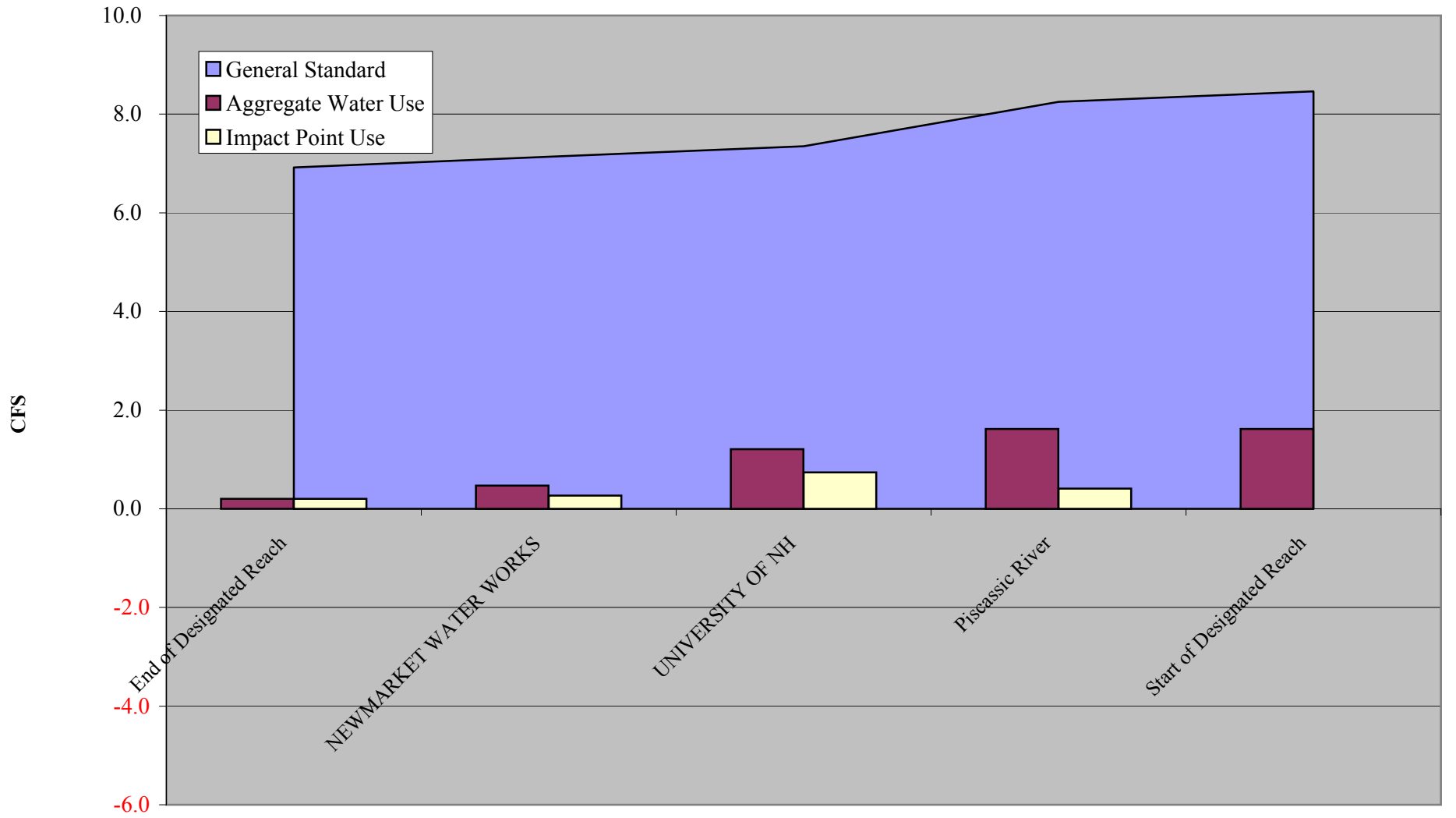
September 2003 Lamprey



October 2003 Lamprey



November 2003 Lamprey



December 2003 Lamprey

