

Lamprey Annual Water Use versus Stream Flow – Calendar Year 2005

Water use was reported by 16 sources, one transfer of water, and one return in the Lamprey Water Management Planning Area. These water uses were included in this assessment. Four sources, Pennichuck Water Works' Great Bay Water Company and three wells for the Leisure Village, were not included in this assessment because they did not meet the definition of an Affected Water User under the rules. The Instream Flow Rules require the user to have a source or withdrawal within 500 feet of a tributary to the Designated River. The combined water use of these four water suppliers represents 3.6 to 4.4% of the monthly water use included in the assessment.

Unassessed Water User Facility (All Source and Discharge > 500 feet from perennial stream)	Unassessed Annual Water Use (gallons)
Leisure Village	8,373,987
Great Bay Water Co – Pennichuck WW	5,081,091
Total	13,455,078

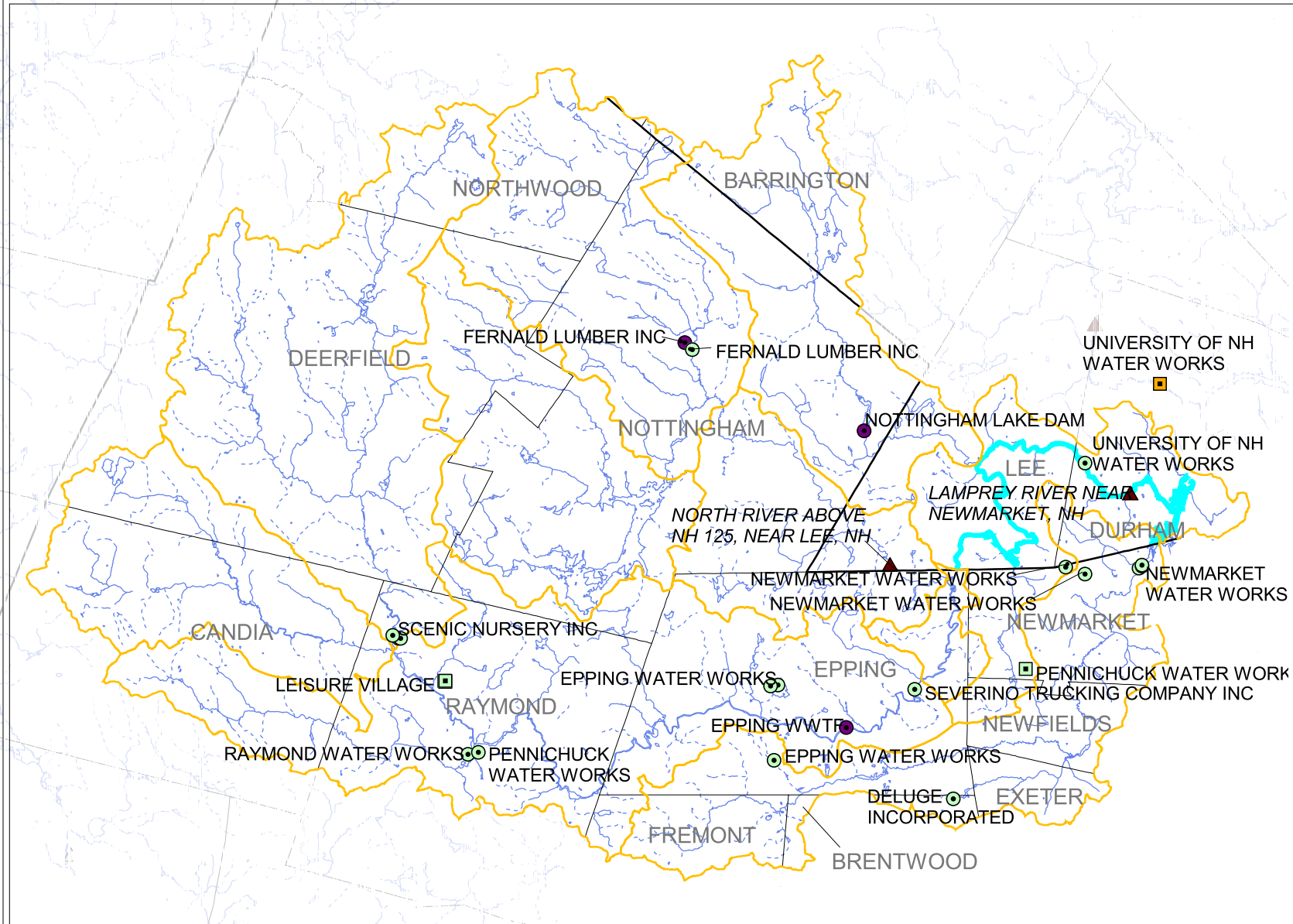
Water use in the Water Management Planning Area is predominately for municipal, community or institutional water supplies including Raymond Water Works, Epping Water Works, Newmarket Water Works, and the University of NH (Durham) Water Works. Pennichuck Water Works' Green Hills Community Water Supply transfers water from the Raymond water system. Scenic Nursery used water seasonally from March through October and Fernald Lumber used water seasonally from April through October. Registered, measured returns are limited to the Epping Waste Water Treatment Facility.

The Lamprey Designated River is about 12 miles long consisting of the main stem of the Lamprey from the Epping-Lee town line to the Durham-Newmarket town line. The Lamprey Water Management Planning Area covers 212 square miles and includes a stream flow gage in Durham (USGS 01073500 LAMPREY RIVER NEAR NEWMARKET, NH) measuring 183 square miles of the WMPA. For this report, the stream flow was transposed areally from this gage to all impact points on the Designated River. The 2005 assessment resulted in two months not in compliance with the General Standard, August and September.

Lamprey Designated River	River Miles not in Compliance with General Standard (0 at the D/S end of the DR)	Length of River Miles not in Compliance with General Standard	Maximum value of Aggregate WU /Stream flow	Previously not in Compliance with the General Standard (2003 to present)
January	--	--	0.30%	
February	--	--	0.57%	2004
March	--	--	0.44%	
April	--	--	0.04%	
May	--	--	0.26%	
June	--	--	0.33%	
July	--	--	0.86%	2003, 2004
August	9.1 to 0.0	9.1	3.34%	2003, 2004

September	12.1 to 0.0	12.1	1.71%	2003
October	--	--	0.09%	
November	--	--	0.11%	
December	--	--	0.11%	

Lamprey River Affected Water User Facilities: Source and Discharge Locations



Legend

Affected Water Users

- Source
- Discharge

Affected Water Users (outside WMPA)

- Source

Water Users (outside 500 feet)

- Source
- Discharge

Stream Gages

- ▲ Active
- ▲ Inactive

Designated Reach

- Rivers/ Streams

- Rivers/ Streams

- - - Rivers/ Streams

- · - · - 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 2007.

Map produced January 16, 2007.

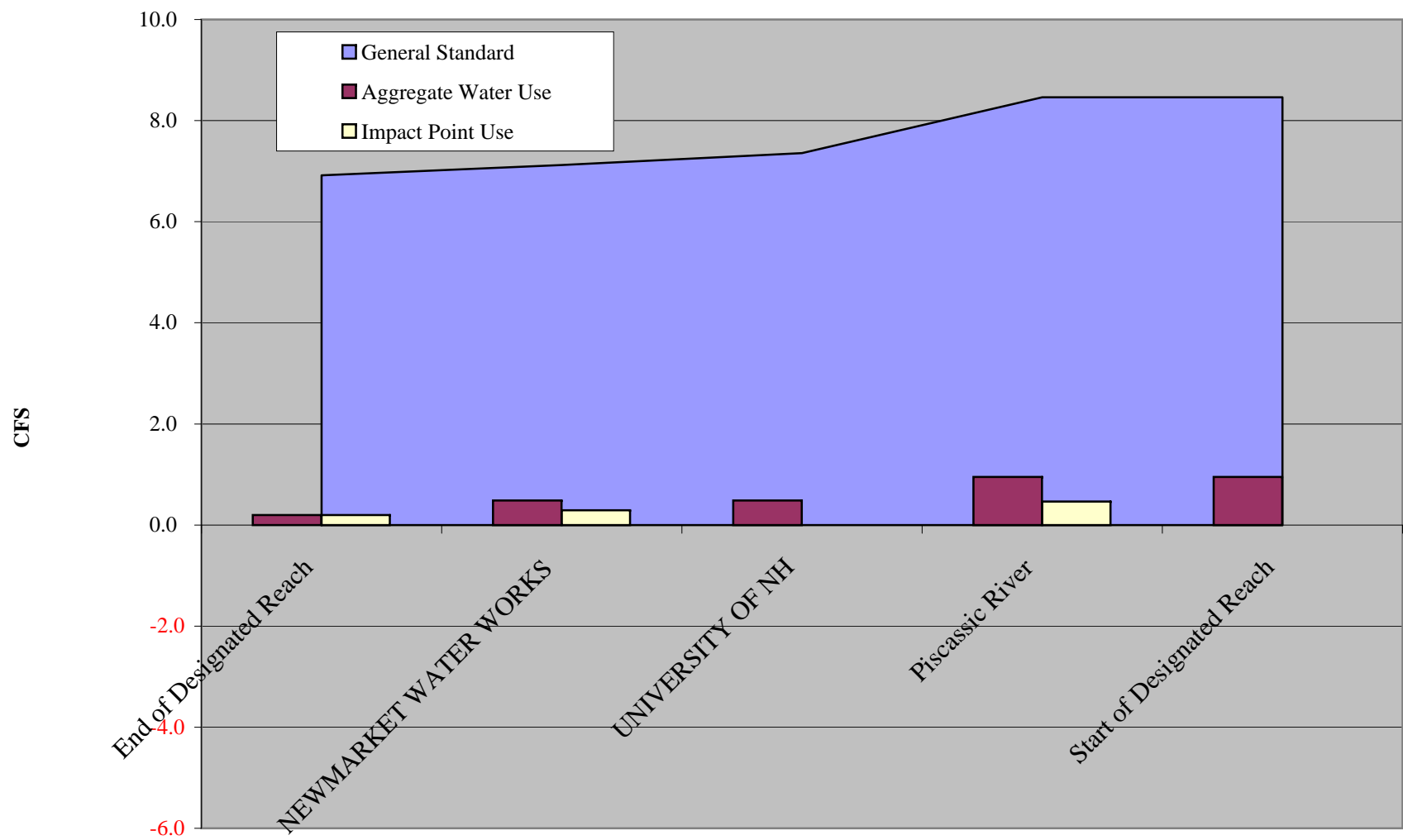
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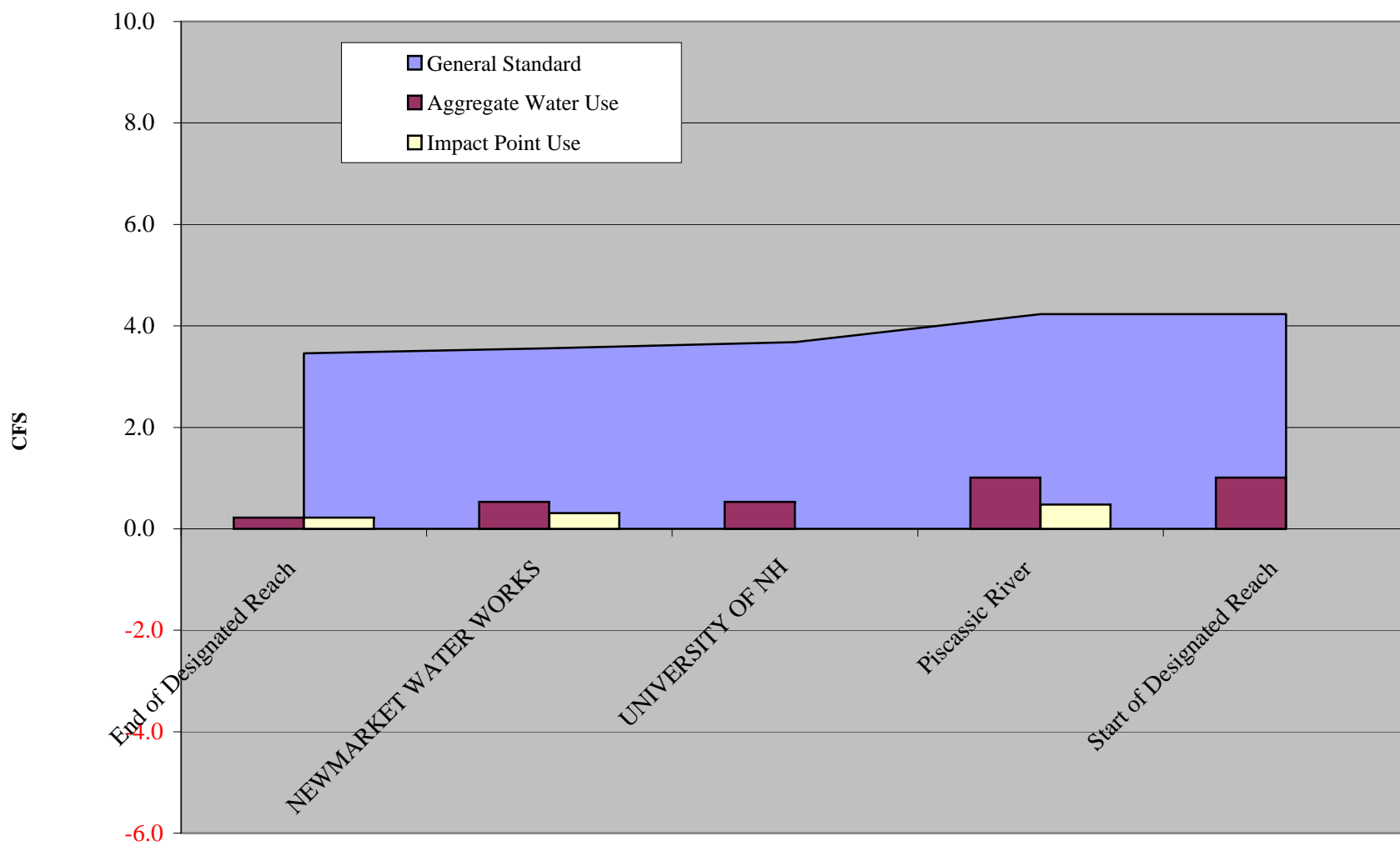
2005 Lamprey Water Use in 1000G/day															
WU_NAME	FACILITY	WUSD_ID	Wshed_SqMi	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC_
SEVERINO TRUCKING COMPANY INC	SEVERINO CONSTRUCTION	20751 20751-S03	152.49				6.000	8.000	12.000	12.000	16.000	8.000	10.000	18.000	2.000
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S03	152.49	0	0	0	0	36.000	144.000	288.000	288.000	144.000	44.000	0	0
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S02	152.49	0	0	0	0	0	0	0	0	0	0	0	0
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S01	152.49	0	0	4.500	9.000	18.000	72.000	144.000	144.000	72.000	22.000	0	0
FERNALD LUMBER INC	SAWMILL	20557 20557-S01	152.49	0	0	0	225.000	465.000	450.000	465.000	465.000	450.000	225.000	0	0
FERNALD LUMBER INC	SAWMILL	20557 20557-D01	152.49												
EPPING WWTF	WASTE WATER TREAT PLANT	20389 20389-D01	152.49	(6227.903)	(4801.455)	(8345.097)	(19256.470)	(8681.751)	(15691.810)	#####	(9337.376)	(7252.371)	(7042.396)	(9197.044)	(9850.348)
PENNICHUCK WATER WORKS	GREEN HILLS COMM WS	20351 20061-S01	152.49	1093.125	1093.125	1093.125	1076.805	1076.805	1076.805	1214.586	1214.586	1214.586	1035.630	1035.630	1035.630
RAYMOND WATER DEPARTMENT	WATER WORKS	20061 20061-S01	152.49	7890.000	6921.000	7543.000	7748.000	7840.000	9247.000	9627.000	9660.000	8690.000	9320.000	8100.000	8650.000
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S04	152.49	1154.933	997.114	1156.355	1086.008	1272.977	1379.398	1128.968	1058.717	1337.995	1358.891	1170.734	1075.343
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S02	152.49	1085.979	891.951	1100.225	1204.930	1269.088	1011.161	1421.389	1505.804	1236.509	1133.590	779.044	940.818
End of Designated Reach			152.49												
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	5834.224	5598.624	5814.112	5871.504	5555.068	5971.444	6260.480	6464.752	5658.816	5626.304	5908.560	6183.900
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	0	0	0	0	0	0	0	0	0	0	0	0
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S01	211.54												
DELUGE INCORPORATED	BRENTWOOD SPRINGS	20679 20679-S01	211.54	1224.960	977.142	1423.232	947.158	1849.216	1535.212	2309.219	2271.432	1988.072	1304.222	1347.806	1204.708
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S05	211.54	0	0	0	0	0	0	0	0	0	0	0	0
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S04	211.54	0	0	0	0	0	0	0	0	0	0	0	0
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S03	211.54	7406.192	7098.416	7237.264	7256.416	7024.480	7746.000	8178.896	8552.048	7590.256	7654.816	7692.800	7590.429
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S01	211.54	0	0	0	0	0	0	0	0	0	0	0	0
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S03	211.54	627.000	596.000	669.000	640.000	762.000	891.000	882.000	1036.000	866.000	28.677	26.866	29.193
Start of Designated Reach			211.54												
				150.28											
2005 Lamprey Water Use in CFS															
WU_NAME	FACILITY	WUSD_ID	DA on DR (SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SEVERINO TRUCKING COMPANY INC	SEVERINO CONSTRUCTION	20751 20751-S03	152.49	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.000
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S03	152.49	0.000	0.000	0.000	0.000	0.002	0.007	0.014	0.014	0.007	0.002	0.000	0.000
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S02	152.49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SCENIC NURSERY INC	SCENIC NURSERY INC	20747 20747-S01	152.49	0.000	0.000	0.000	0.000	0.001	0.004	0.007	0.007	0.004	0.001	0.000	0.000
FERNALD LUMBER INC	SAWMILL	20557 20557-S01	152.49	0.000	0.000	0.000	0.012	0.023	0.023	0.023	0.023	0.023	0.011	0.000	0.000
FERNALD LUMBER INC	SAWMILL	20557 20557-D01	152.49	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	20389 20389-D01	152.49	(0.311)	(0.265)	(0.416)	(0.993)	(0.433)	(0.809)	(0.504)	(0.466)	(0.374)	(0.351)	(0.474)	(0.492)
PENNICHUCK WATER WORKS	GREEN HILLS COMM WS	20351 20061-S01	152.49	0.055	0.060	0.055	0.056	0.054	0.056	0.061	0.061	0.063	0.052	0.053	0.052
RAYMOND WATER DEPARTMENT	WATER WORKS	20061 20061-S01	152.49	0.394	0.382	0.376	0.400	0.391	0.477	0.480	0.482	0.448	0.465	0.418	0.432
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S04	152.49	0.058	0.055	0.058	0.056	0.064	0.071	0.056	0.053	0.069	0.068	0.060	0.054
EPPING WATER WORKS	EPPING WATER WORKS	20045 20045-S02	152.49	0.054	0.049	0.055	0.062	0.063	0.052	0.071	0.075	0.064	0.057	0.040	0.047
End of Designated Reach			152.49												
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	0.291	0.309	0.290	0.303	0.277	0.308	0.312	0.323	0.292	0.281	0.305	0.309
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	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	20045 20045-S01	211.54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DELUGE INCORPORATED	BRENTWOOD SPRINGS	20679 20679-S01	211.54	0.061	0.054	0.071	0.049	0.092	0.079	0.115	0.113	0.103	0.065	0.070	0.060
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S05	211.54	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	20057 20057-S04	211.54	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	20057 20057-S03	211.54	0.370	0.392	0.361	0.374	0.351	0.399	0.408	0.427	0.391	0.382	0.397	0.379
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S01	211.54	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	20045 20045-S03	211.54	0.031	0.033	0.033	0.033	0.038	0.046	0.044	0.052	0.045	0.001	0.001	0.001
Start of Designated Reach			211.54												
				0.95	1.01	0.83	0.30	0.87	0.66	1.03	1.10	1.07	0.98	0.82	0.79
	all sources			1.26	1.21	1.36	1.94	1.38	1.76	1.45	1.41	1.32	1.30	1.42	1.44

2005 Lamprey Water Use in CFS															
WU_NAME	FACILITY	WUSD_ID	DA on DR (SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach	Water use U/S of Designated River		152.49	0.195	0.221	0.073	(0.463)	0.111	(0.174)	0.149	0.190	0.242	0.253	0.045	0.041
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	0.291	0.309	0.290	0.303	0.277	0.308	0.312	0.323	0.292	0.281	0.305	0.309
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Piscassic River	Water use in Piscassic watershed		211.54	0.462	0.479	0.466	0.456	0.481	0.525	0.567	0.592	0.539	0.449	0.468	0.440
Start of Designated Reach			211.54												
2005 Lamprey Aggregate Water Use in CFS															
WU_NAME	FACILITY	WUSD_ID	DA on DR (SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach	Water use U/S of Designated River		152.49	0.195	0.221	0.073	(0.463)	0.111	(0.174)	0.149	0.190	0.242	0.253	0.045	0.041
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	0.486	0.531	0.363	(0.160)	0.388	0.134	0.461	0.512	0.533	0.534	0.350	0.349
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	0.486	0.531	0.363	(0.160)	0.388	0.134	0.461	0.512	0.533	0.534	0.350	0.349
Piscassic River	Water use in Piscassic watershed		211.54	0.948	1.010	0.829	0.296	0.869	0.658	1.029	1.104	1.072	0.982	0.817	0.790
Start of Designated Reach			211.54	0.948	1.010	0.829	0.296	0.869	0.658	1.029	1.104	1.072	0.982	0.817	0.790
2005 Lamprey Estimated Monthly Stream Flow at Each Impact Point in CFS															
			Estimated monthly mean streamflow in CFSM	1.52	0.84	0.88	3.74	1.60	0.95	0.57	0.16	0.30	5.05	3.49	3.51
	USGS 01073500 LAMPREY RIVER NEAR NEWMARKET, NH														
WU_NAME	FACILITY	WUSD_ID	DA on DR (SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach	Water use U/S of Designated River		152.49	231	129	134	571	243	146	87	24	45	770	532	535
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	270	150	157	667	284	170	101	28	53	899	621	624
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	279	155	162	689	294	176	105	29	54	928	641	645
Piscassic River	Water use in Piscassic watershed		211.54	321	179	186	792	338	202	120	33	63	1068	738	742
Start of Designated Reach			211.54	321	179	186	792	338	202	120	33	63	1068	738	742
2005 Lamprey Estimated Monthly General Standard at Each Impact Point in CFS															
			General Standard in cfs	0.04	0.0200	0.02	0.04	0.04	0.02	0.0200	0.0013	0.00	0.16	0.04	0.04
	USGS 01073500 LAMPREY RIVER NEAR NEWMARKET, NH														
WU_NAME	FACILITY	WUSD_ID	DA on DR (SQ MILE)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
End of Designated Reach	Water use U/S of Designated River		152.49	6.10	3.05	3.05	6.10	6.10	3.05	3.05	0.20	0.20	24.40	6.10	6.10
NEWMARKET WATER WORKS	NEWMARKET WATER WORKS	20057 20057-S02	178.03	7.12	3.56	3.56	7.12	7.12	3.56	3.56	0.23	0.23	28.48	7.12	7.12
UNIVERSITY OF NH	WATER WORKS	20066 20066-S02	183.88	7.36	3.68	3.68	7.36	7.36	3.68	3.68	0.24	0.24	29.42	7.36	7.36
Piscassic River	Water use in Piscassic watershed		211.54	8.46	4.23	4.23	8.46	8.46	4.23	4.23	0.28	0.28	33.85	8.46	8.46
Start of Designated Reach			211.54	8.46	4.23	4.23	8.46	8.46	4.23	4.23	0.28	0.28	33.85	8.46	8.46

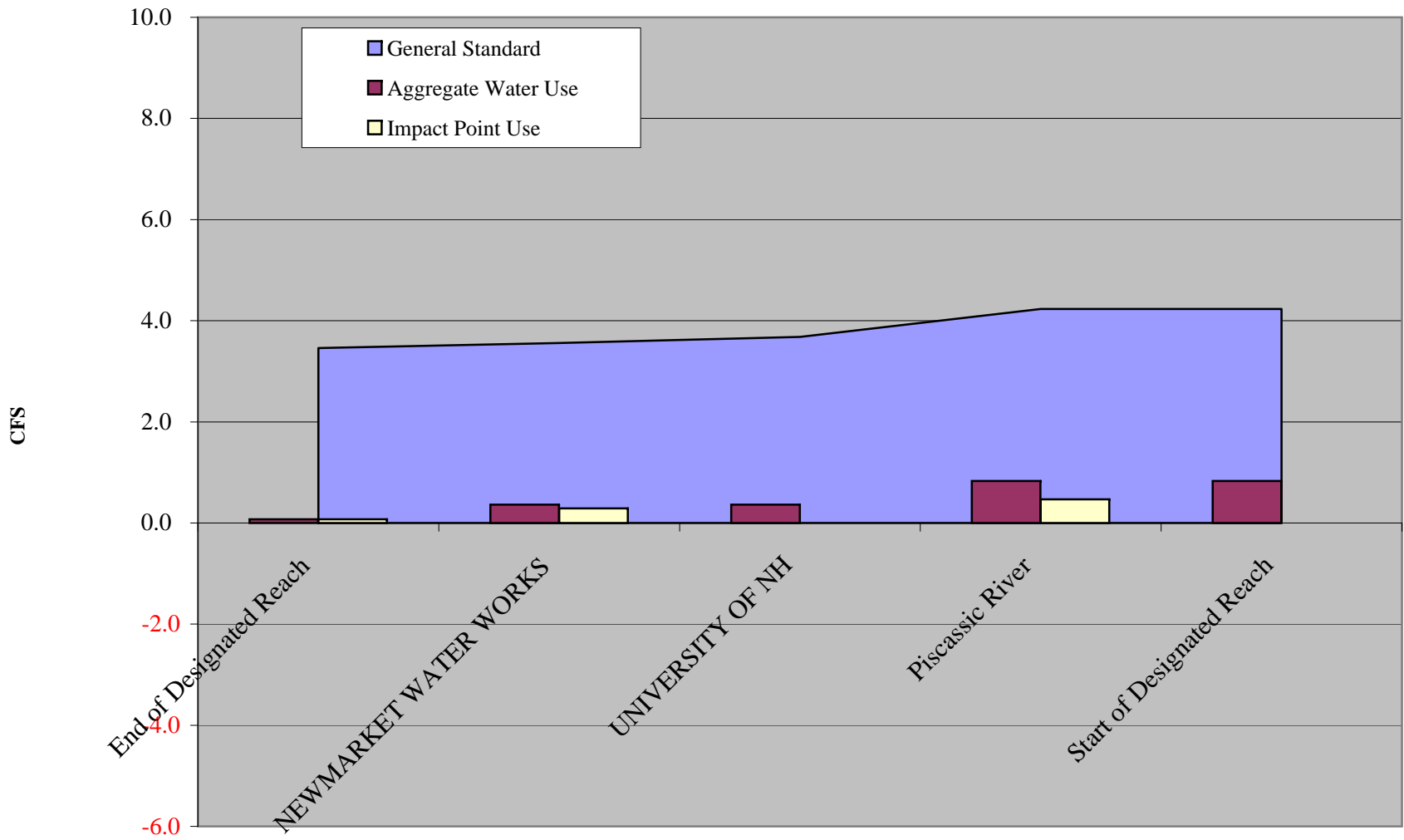
January 2005 Lamprey



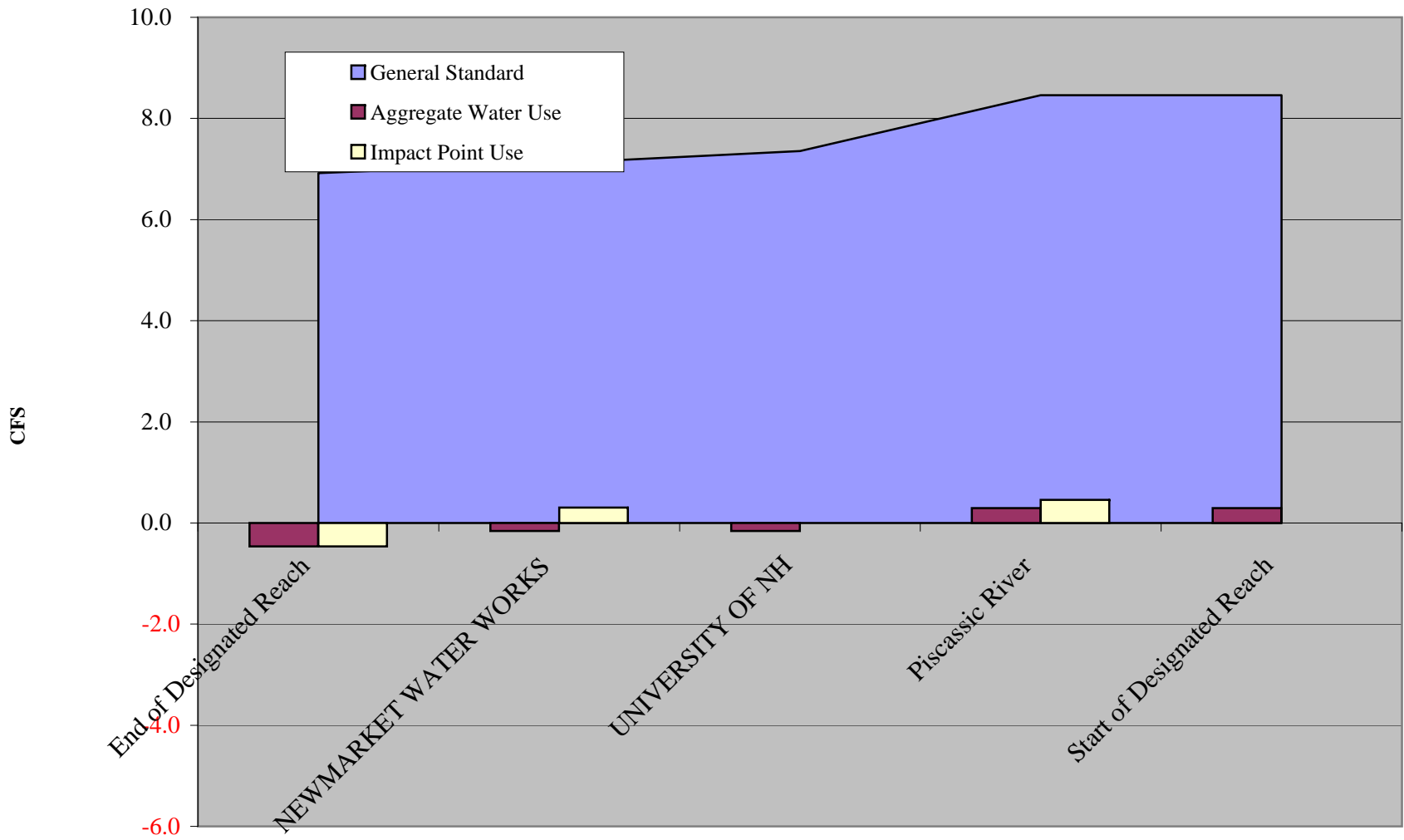
February 2005 Lamprey



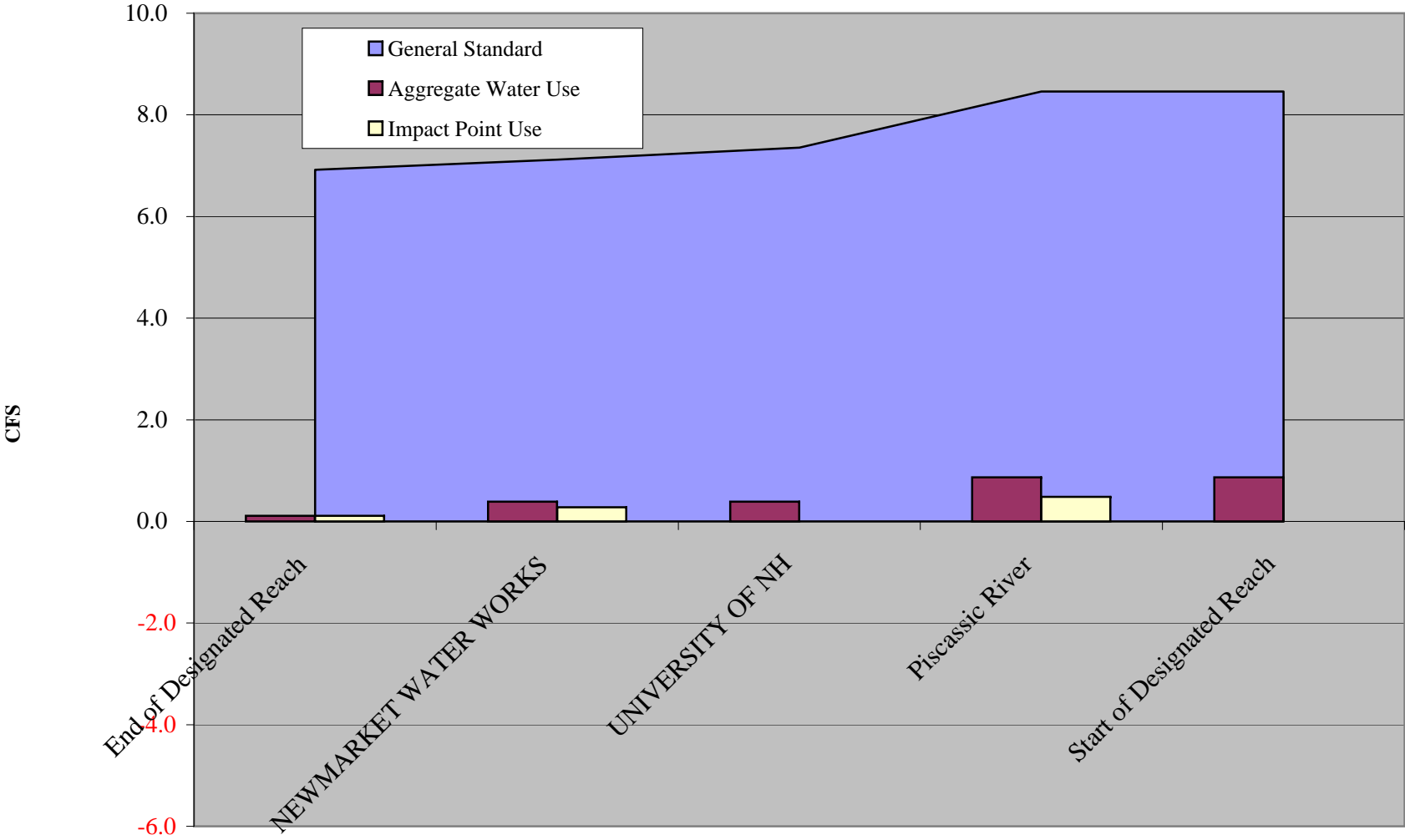
March 2005 Lamprey



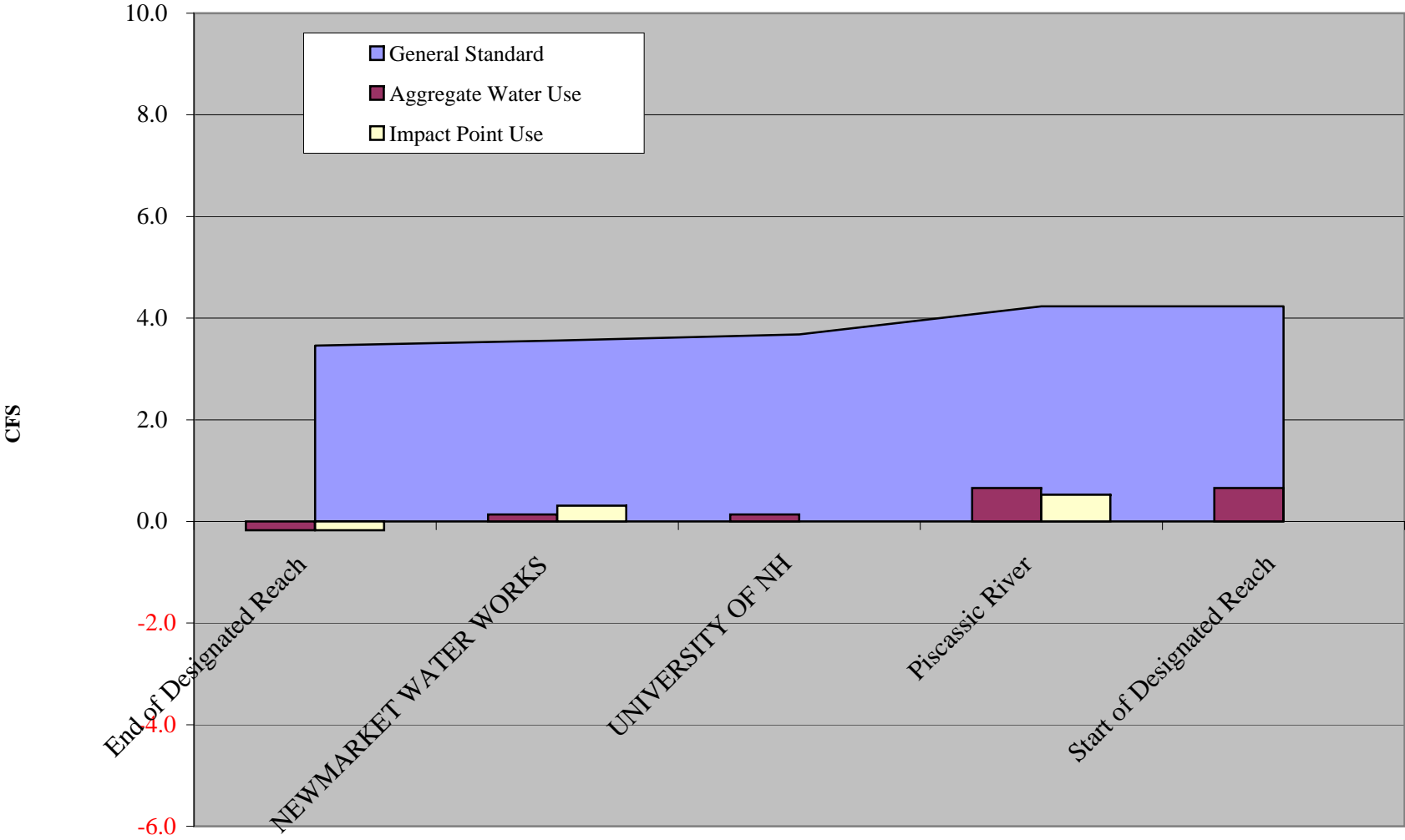
April 2005 Lamprey



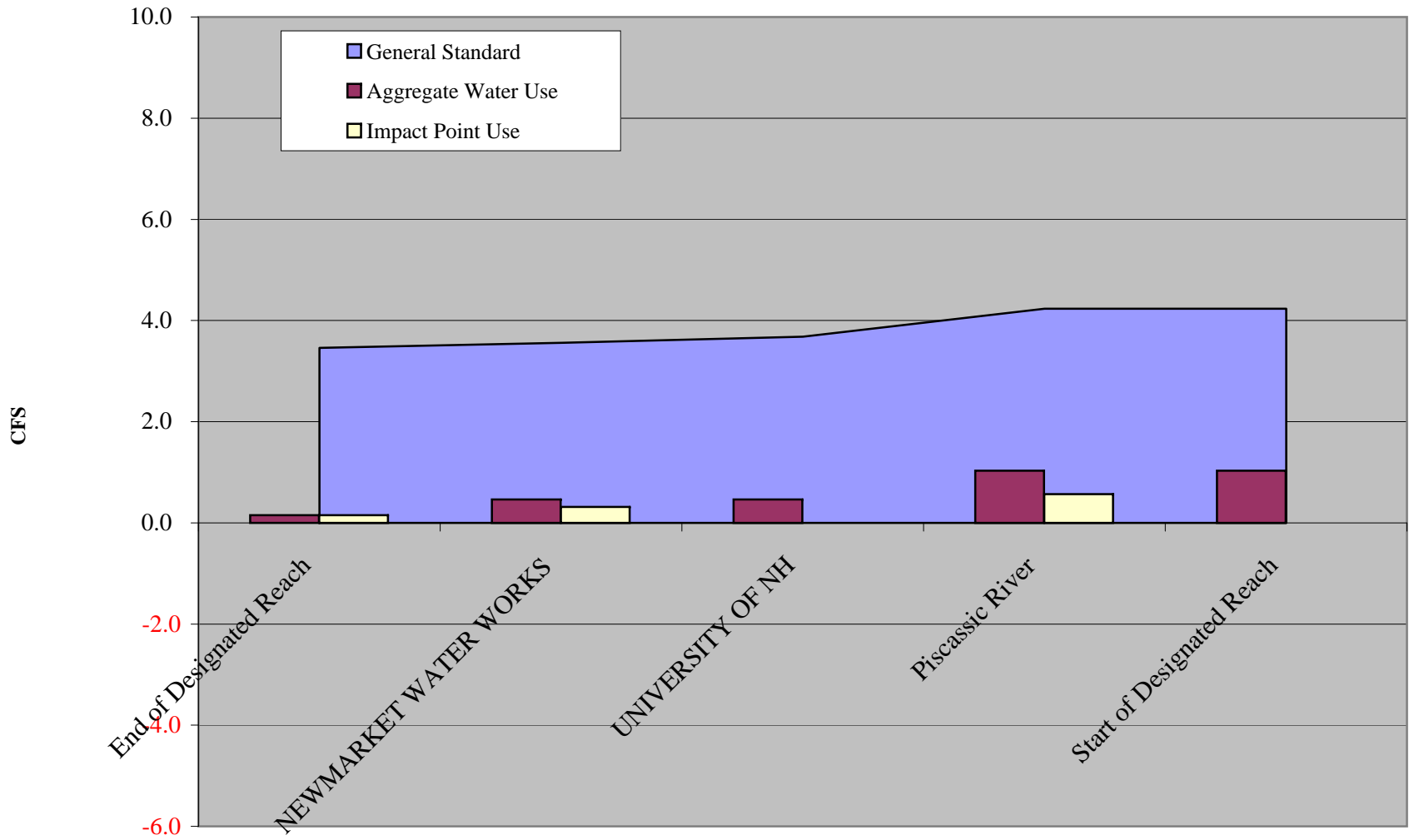
May 2005 Lamprey



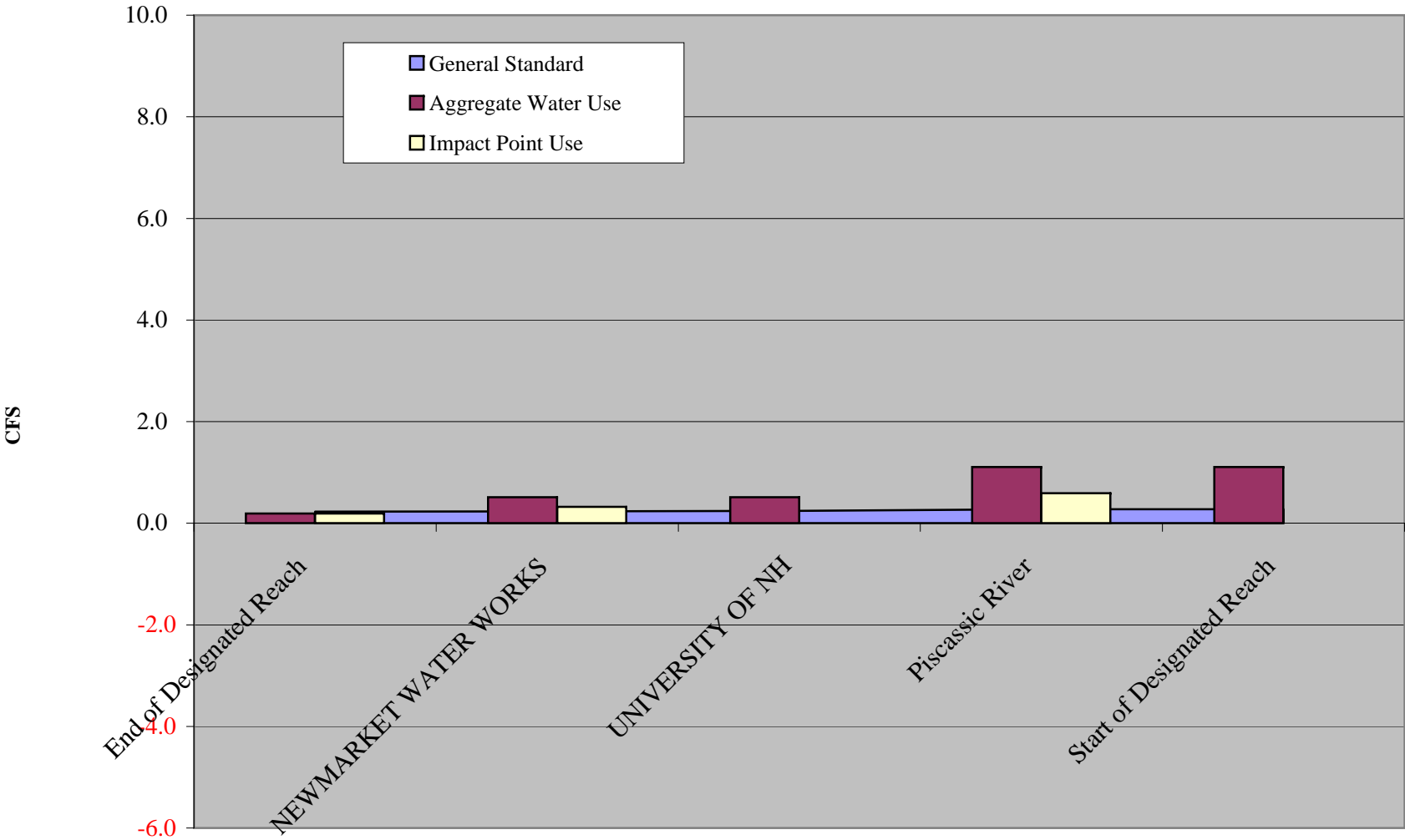
June 2005 Lamprey



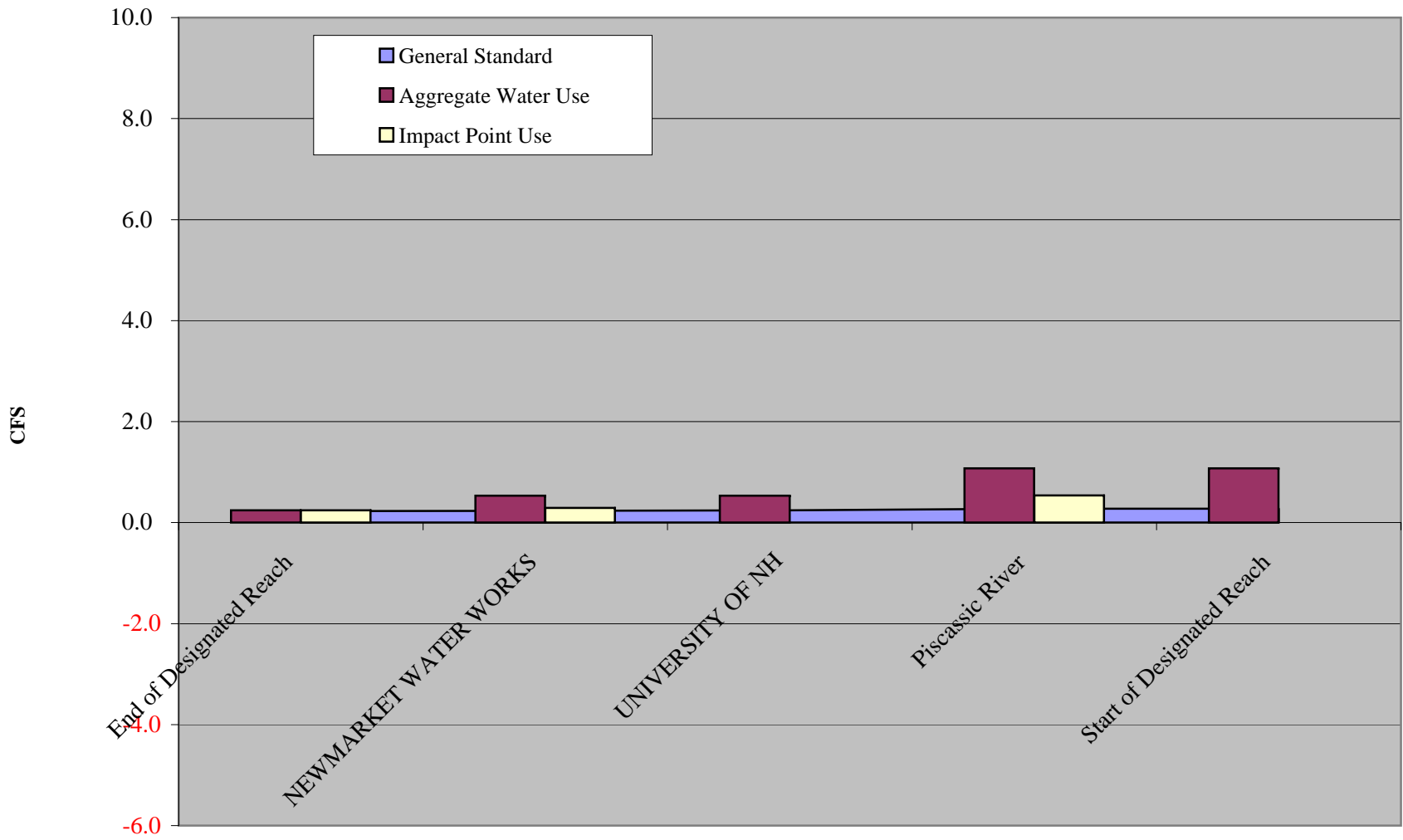
July 2005 Lamprey



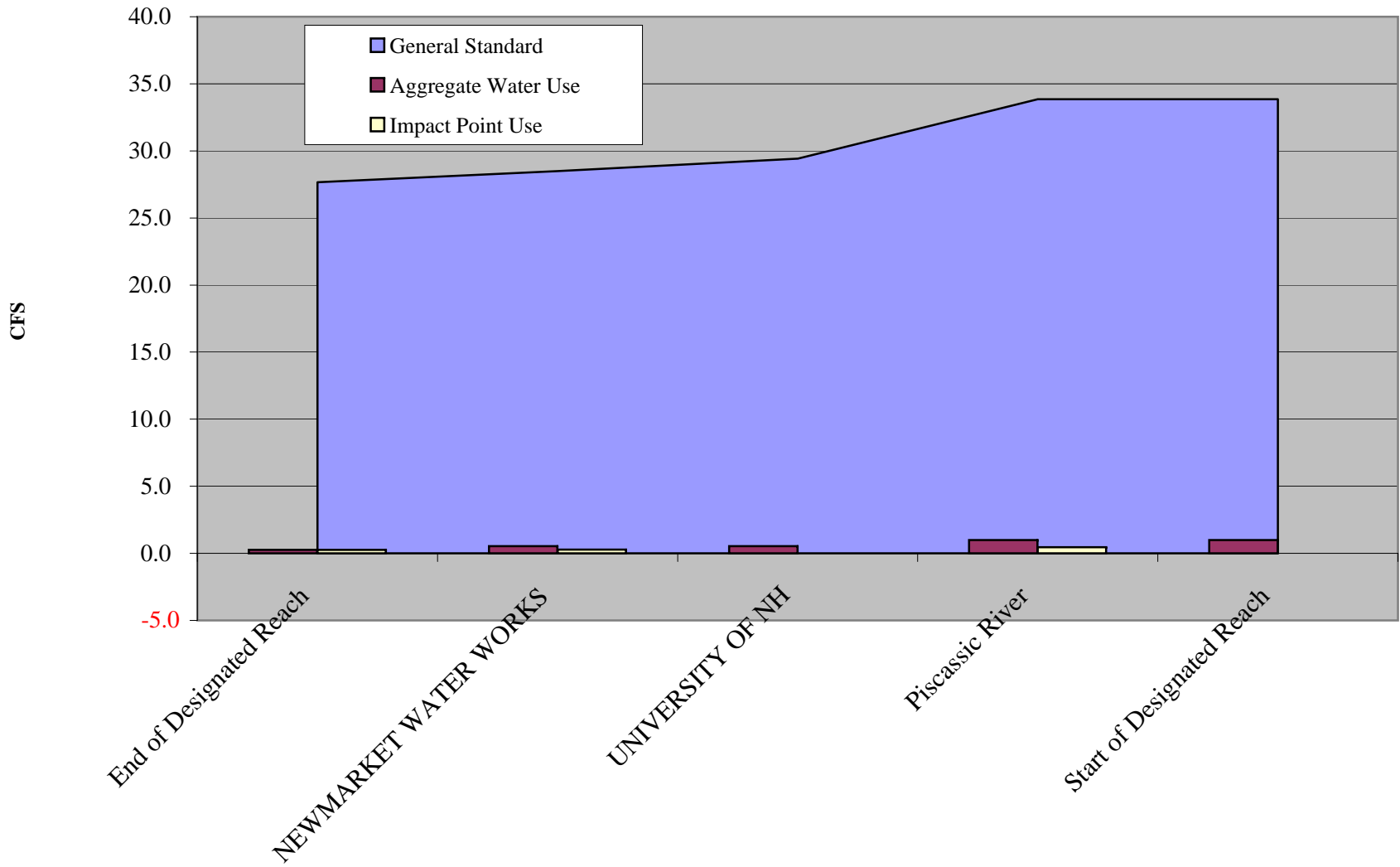
August 2005 Lamprey



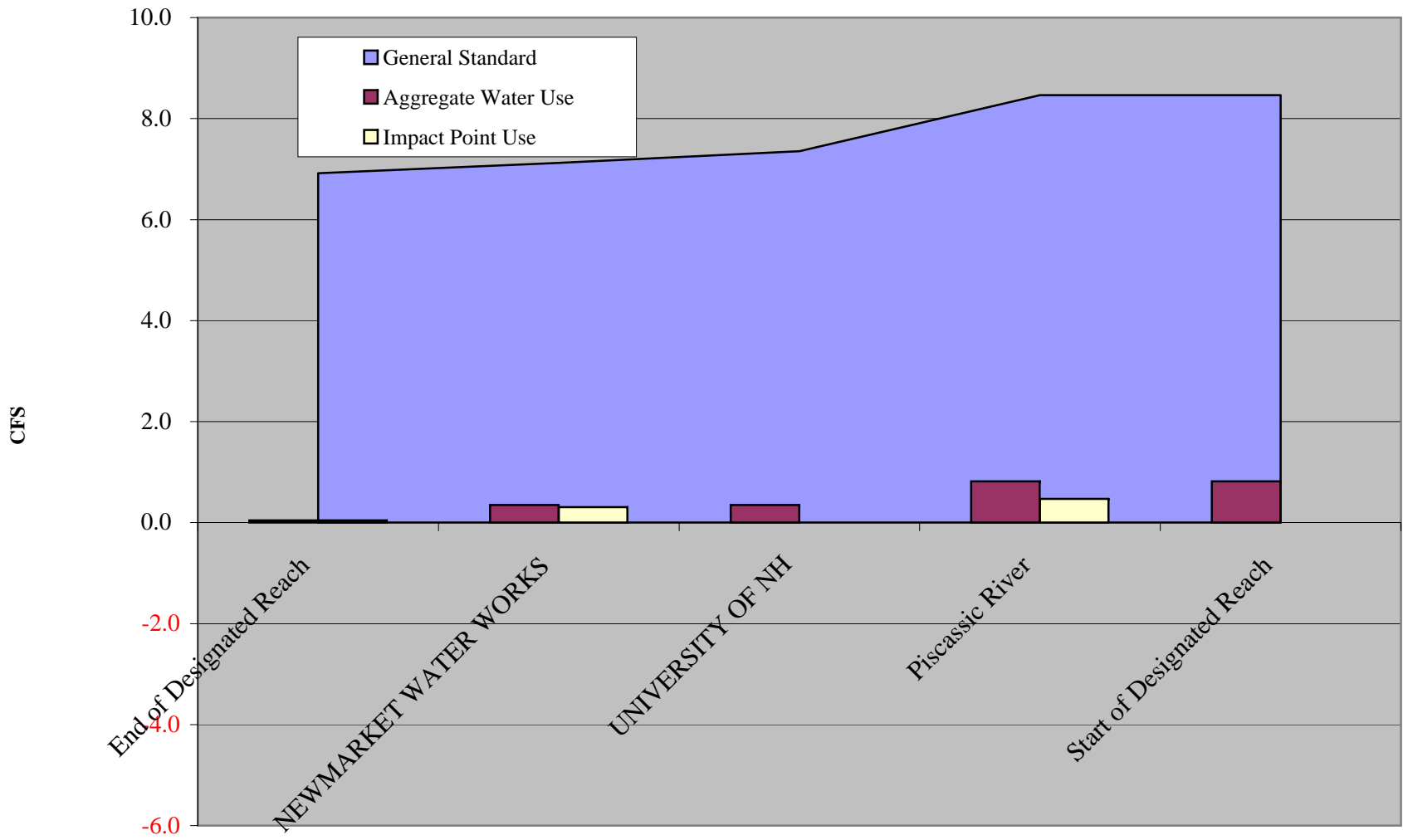
September 2005 Lamprey



October 2005 Lamprey



November 2005 Lamprey



December 2005 Lamprey

