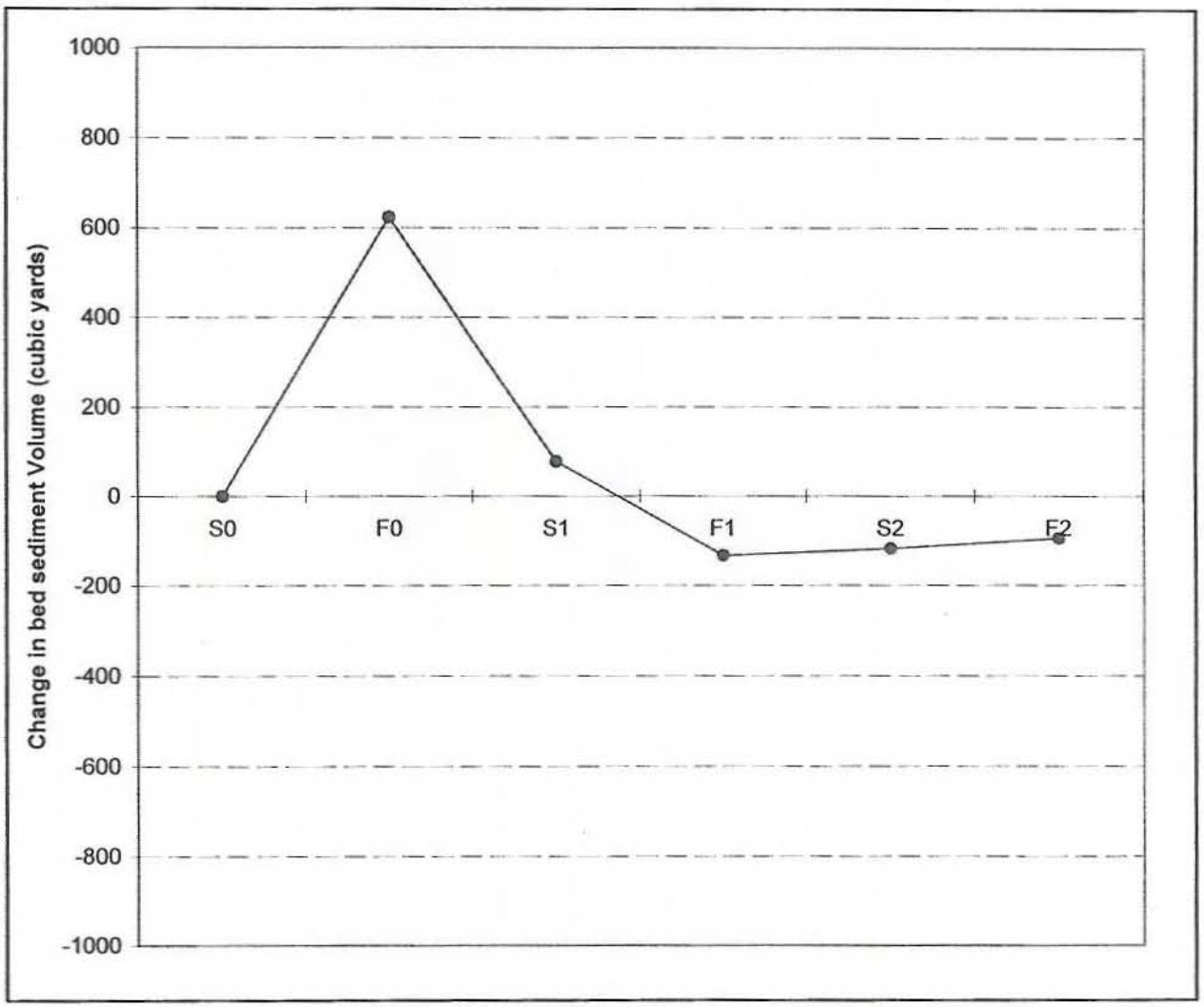
SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

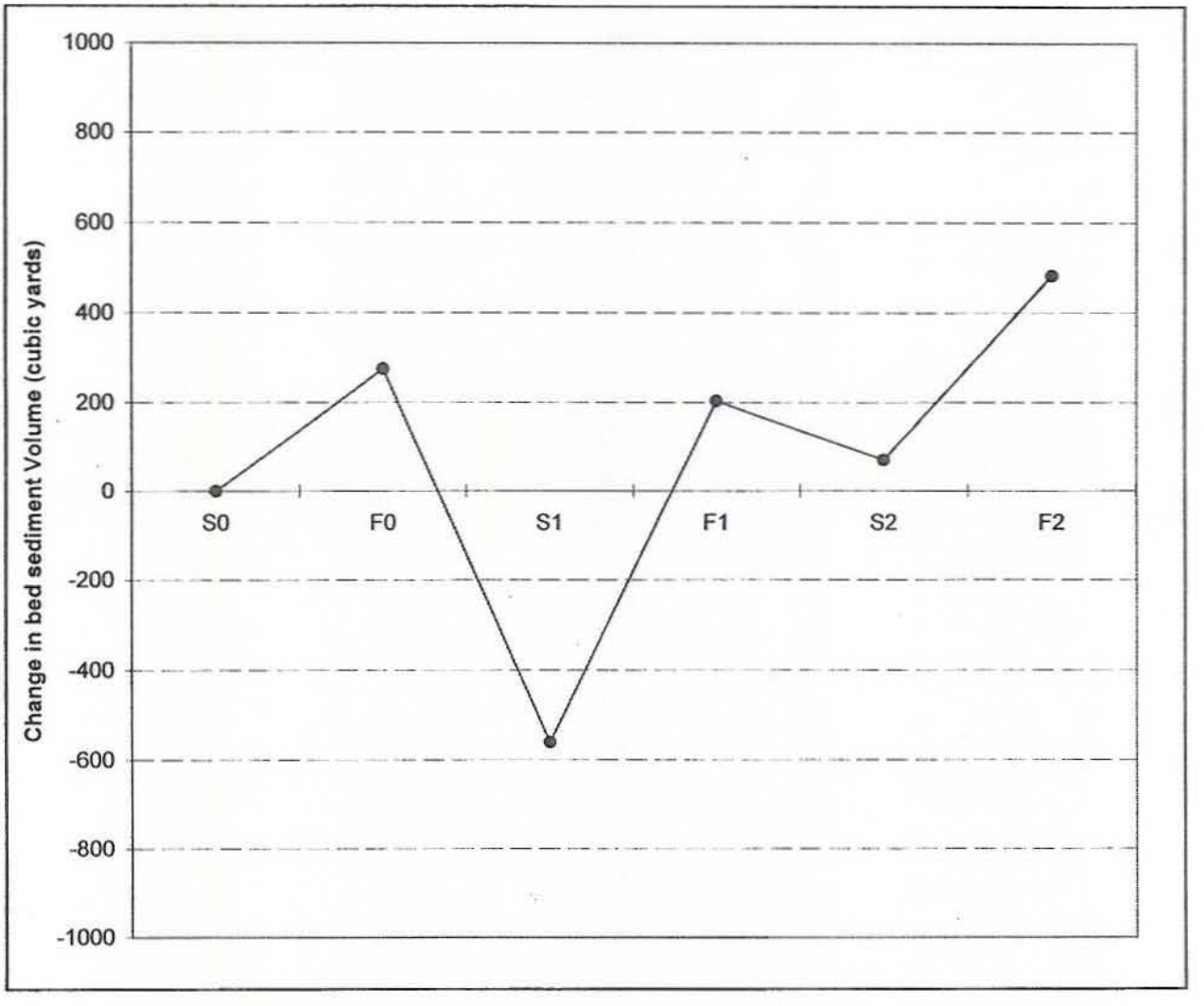
Monitoring Site OR1



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR1	Fall 2000 minus Spring 2000	624	0.8	20,000
	Spring 2001 minus Fall 2000	-547	-0.7	
	Fall 2001 minus Spring 2001	-211	-0.3	
	Spring 2002 minus Fall 2001	16	0.0	
	Fall 2002 minus Spring 2002	23	0.0	
	Fall 2002 minus Spring 2000	-95	-0.1	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

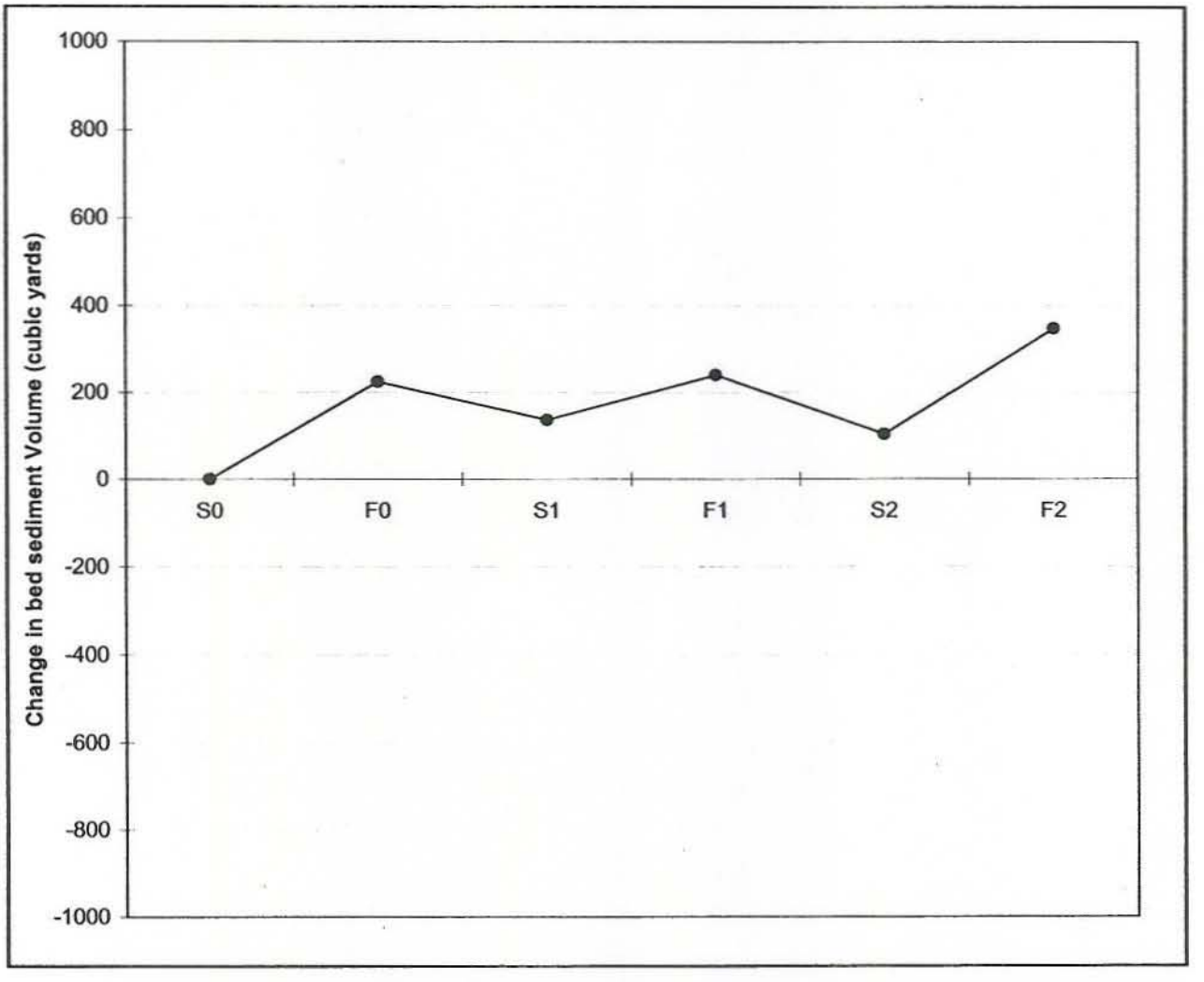
Monitoring Site OR2



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR2	Fall 2000 minus Spring 2000	275	0.4	20,000
	Spring 2001 minus Fall 2000	-835	-1.1	
	Fall 2001 minus Spring 2001	763	1.0	
	Spring 2002 minus Fall 2001	-132	-0.2	
	Fall 2002 minus Spring 2002	412	0.5	
	Fall 2002 minus Spring 2000	483	0.7	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

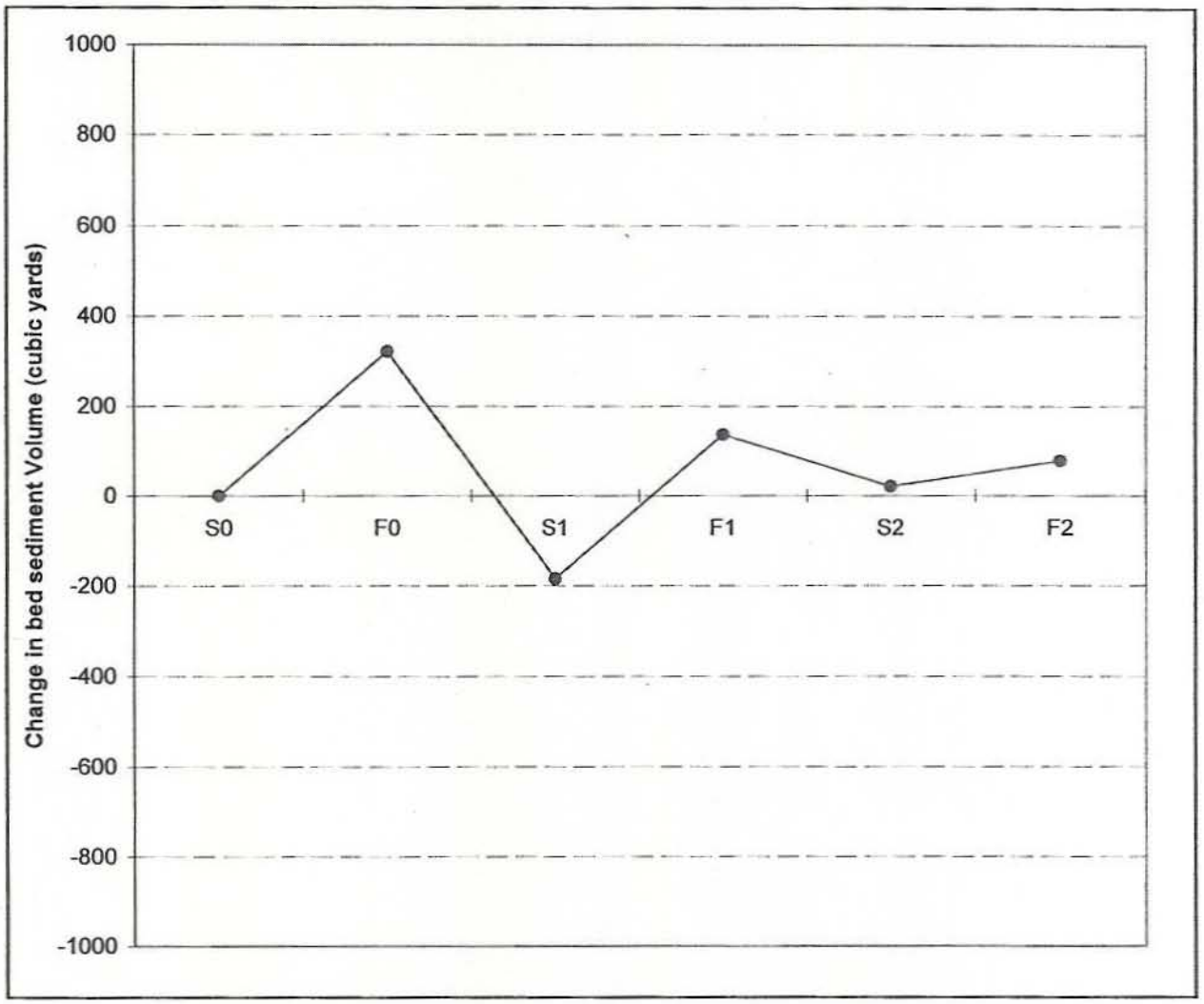
Monitoring Site OR3



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR3	Fall 2000 minus Spring 2000	225	0.3	20,000
	Spring 2001 minus Fall 2000	-88	-0.1	
	Fall 2001 minus Spring 2001	103	0.1	
	Spring 2002 minus Fall 2001	-136	-0.2	
	Fall 2002 minus Spring 2002	243	0.3	
	Fall 2002 minus Spring 2000	347	0.5	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

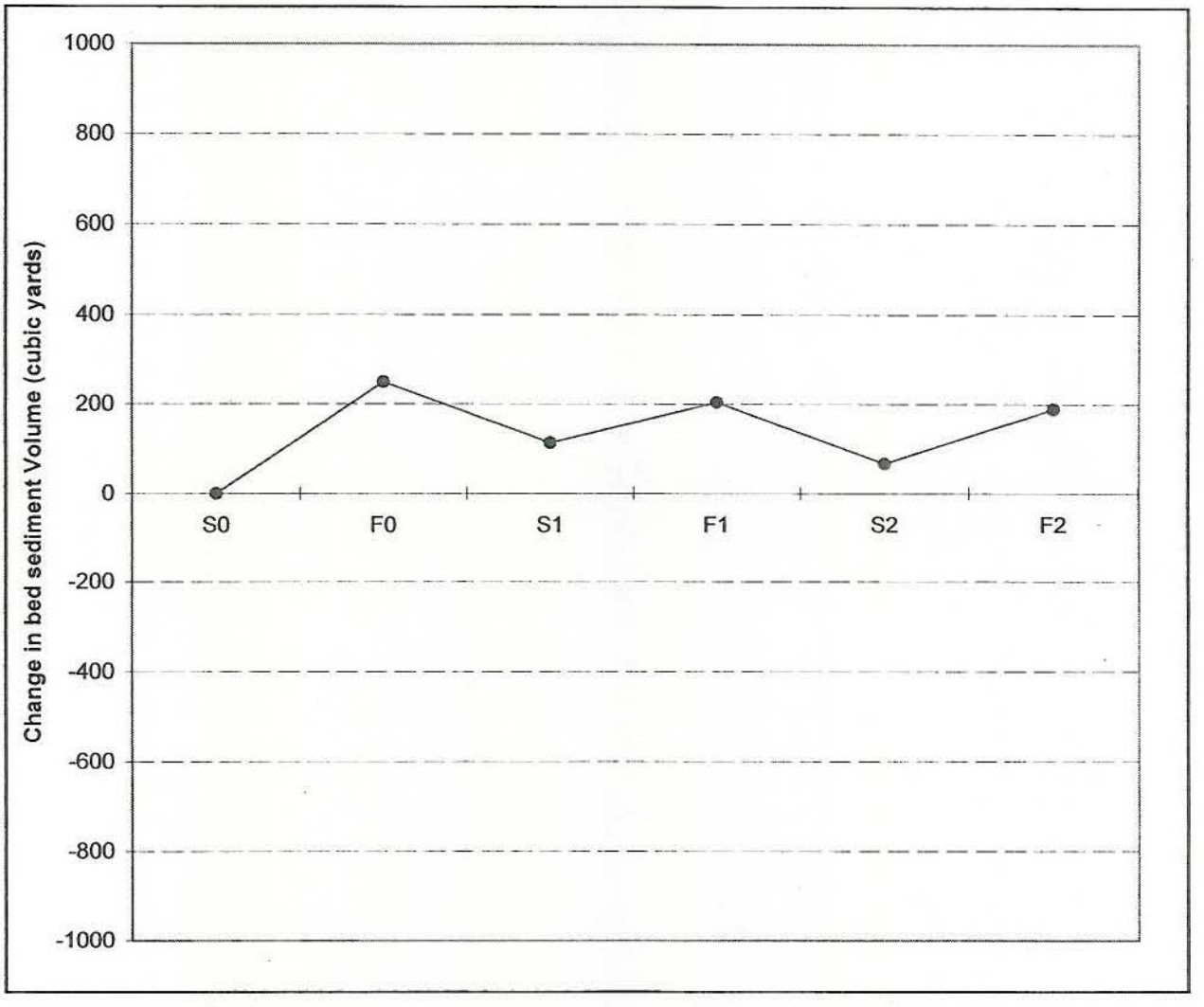
Monitoring Site OR4



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR4	Fall 2000 minus Spring 2000	321	0.4	20,000
	Spring 2001 minus Fall 2000	-505	-0.7	
	Fall 2001 minus Spring 2001	320	0.4	
	Spring 2002 minus Fall 2001	-115	-0.2	
	Fall 2002 minus Spring 2002	57	0.1	
	Fall 2002 minus Spring 2000	78	0.1	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

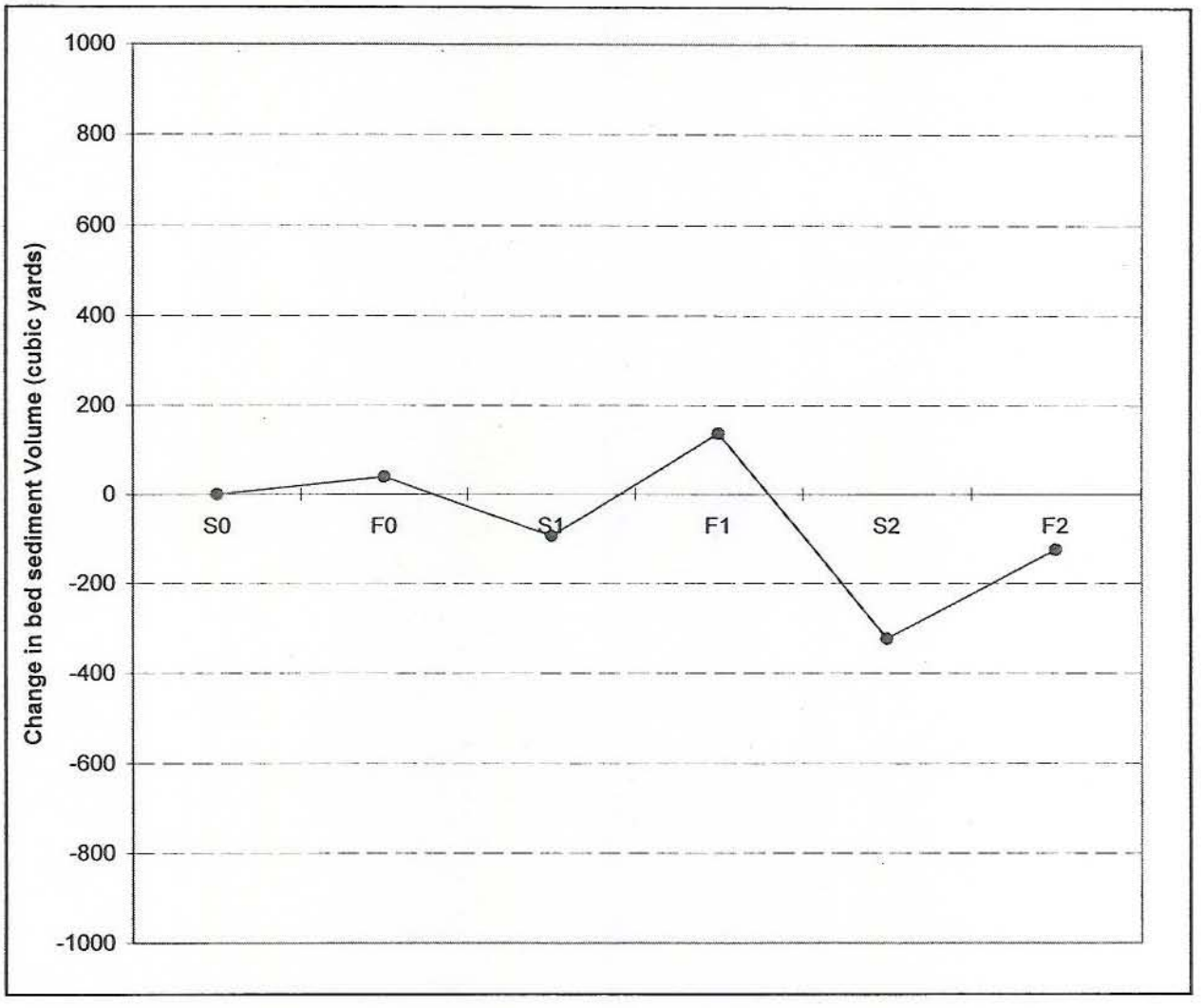
Monitoring Site OR5



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR5	Fall 2000 minus Spring 2000	249	0.3	20,000
	Spring 2001 minus Fall 2000	-136	-0.2	
	Fall 2001 minus Spring 2001	91	0.1	
	Spring 2002 minus Fall 2001	-137	-0.2	
	Fall 2002 minus Spring 2002	122	0.2	
	Fall 2002 minus Spring 2000	189	0.3	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

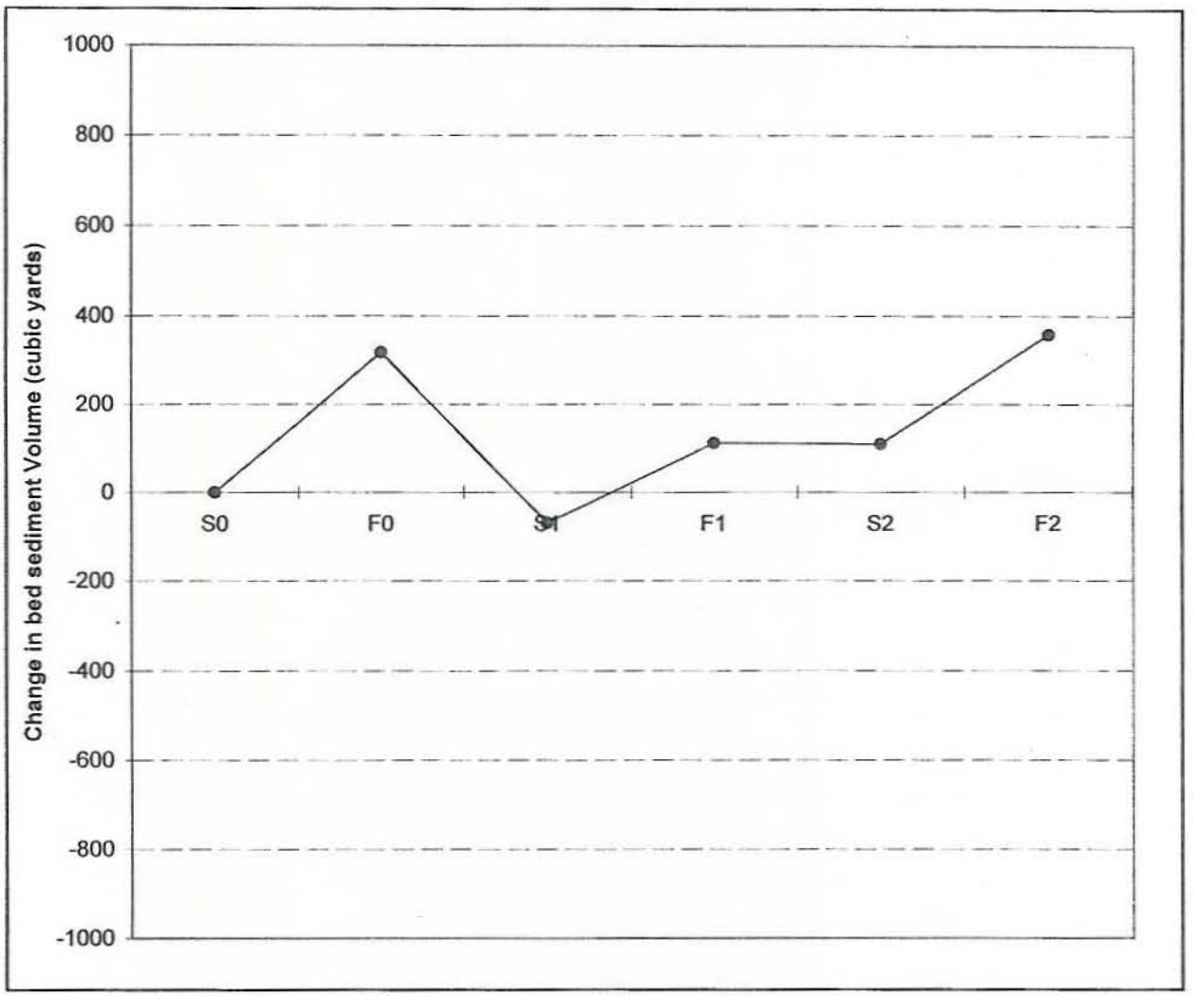
Monitoring Site OR6



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR6	Fall 2000 minus Spring 2000	39	0.1	20,000
	Spring 2001 minus Fall 2000	-133	-0.2	
	Fall 2001 minus Spring 2001	231	0.3	
	Spring 2002 minus Fall 2001	-460	-0.6	
	Fall 2002 minus Spring 2002	198	0.3	
	Fall 2002 minus Spring 2000	-125	-0.2	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

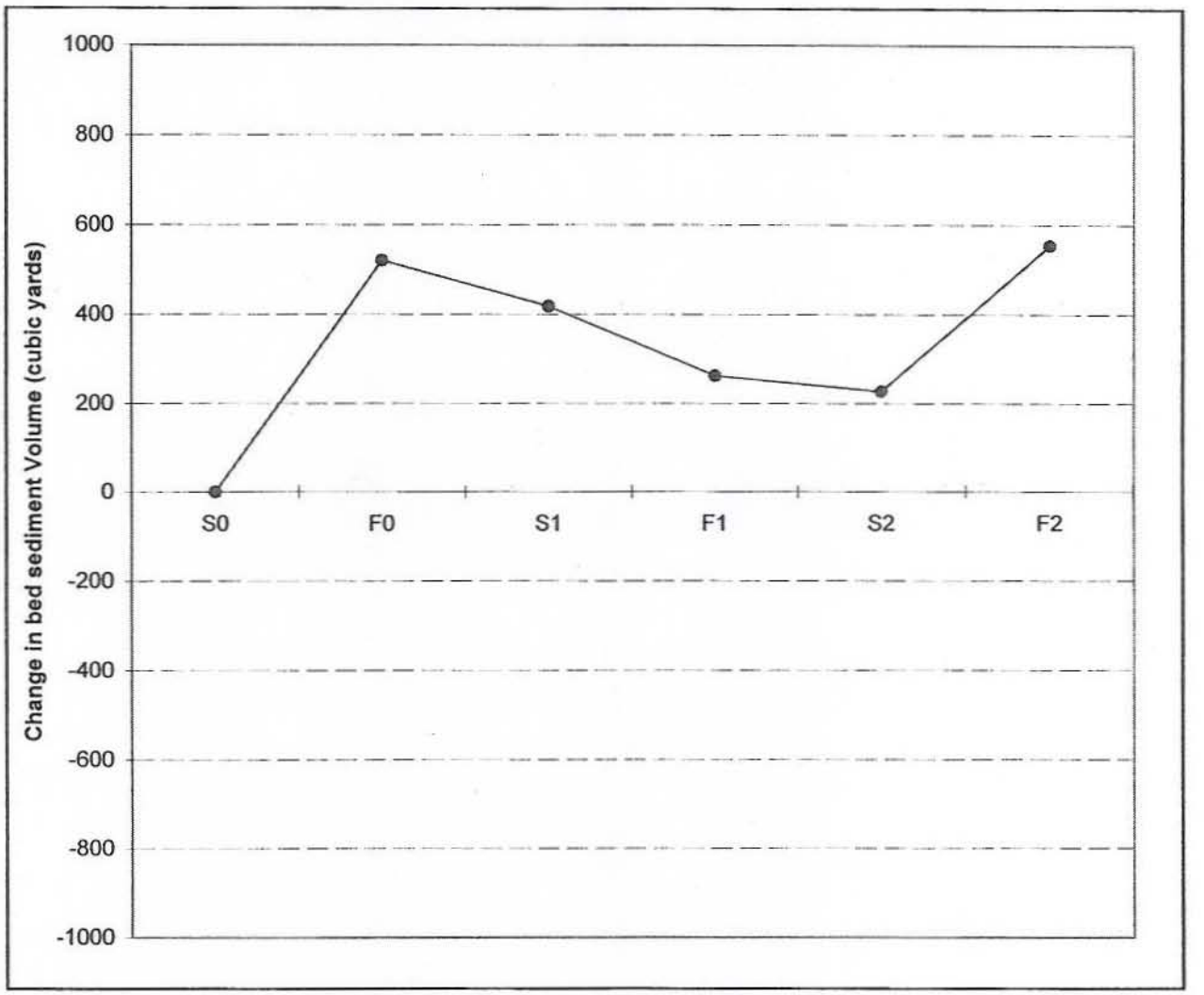
Monitoring Site OR7



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR7	Fall 2000 minus Spring 2000	317	0.4	20,000
	Spring 2001 minus Fall 2000	-387	-0.5	
	Fall 2001 minus Spring 2001	182	0.2	
	Spring 2002 minus Fall 2001	-2	0.0	
	Fall 2002 minus Spring 2002	248	0.3	
	Fall 2002 minus Spring 2000	358	0.5	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

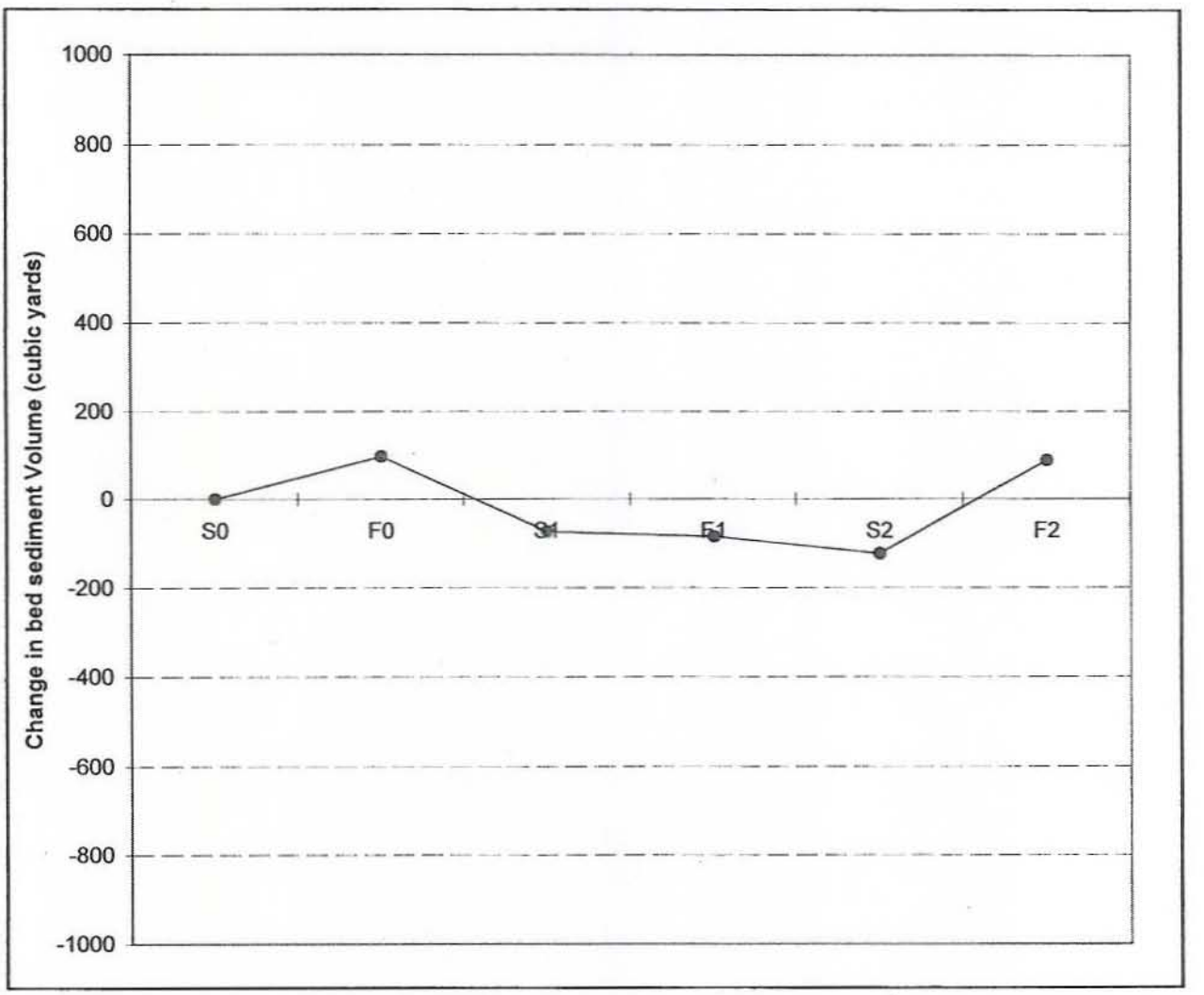
Monitoring Site OR8



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR8	Fall 2000 minus Spring 2000	520	0.7	20,000
	Spring 2001 minus Fall 2000	-102	-0.1	
	Fall 2001 minus Spring 2001	-156	-0.2	
	Spring 2002 minus Fall 2001	-35	0.0	
	Fall 2002 minus Spring 2002	327	0.4	
	Fall 2002 minus Spring 2000	554	0.7	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

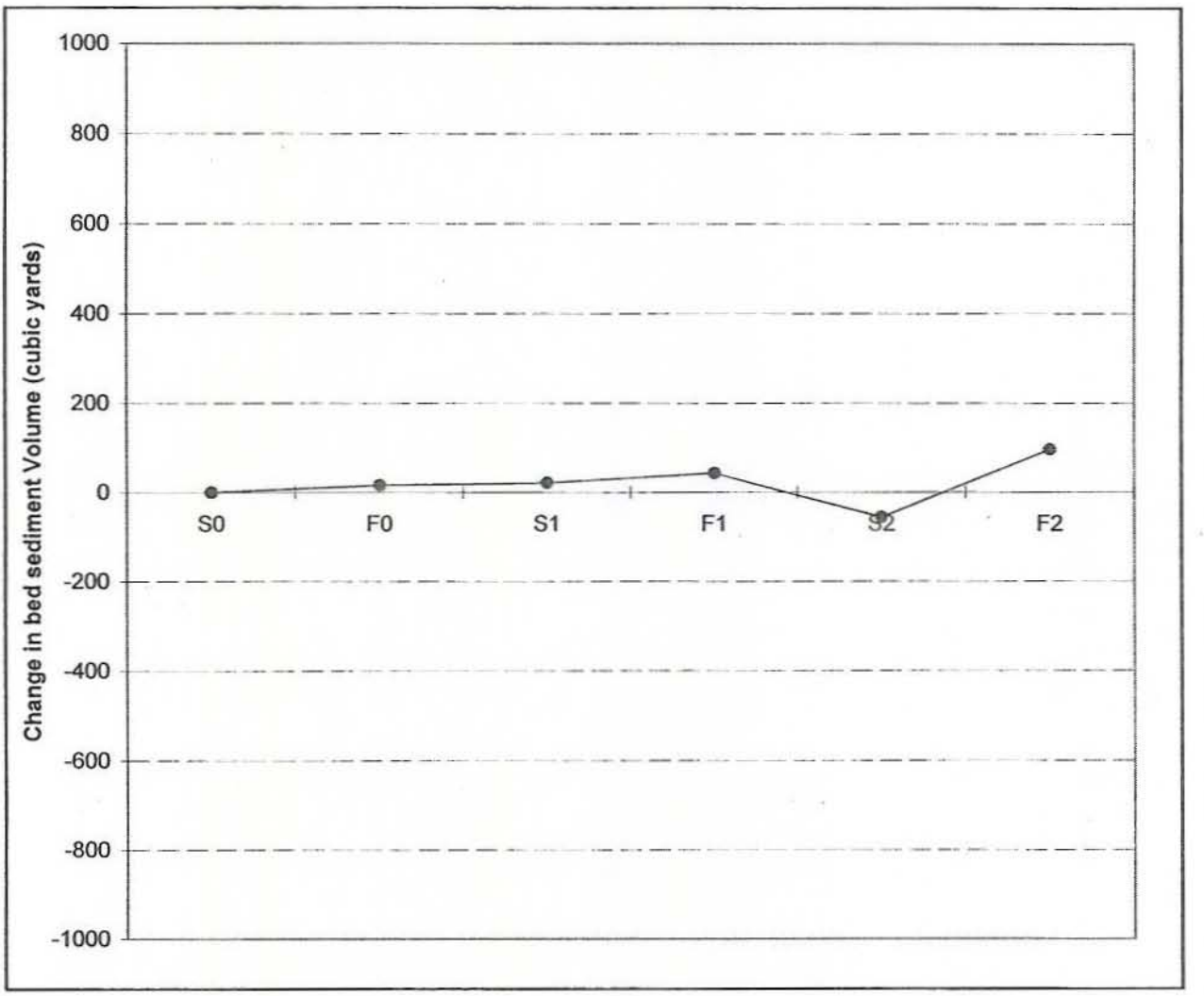
Monitoring Site OR9



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
OR9	Fall 2000 minus Spring 2000	97	0.1	20,000
	Spring 2001 minus Fall 2000	-171	-0.2	
	Fall 2001 minus Spring 2001	-11	0.0	
	Spring 2002 minus Fall 2001	-39	-0.1	
	Fall 2002 minus Spring 2002	212	0.3	
	Fall 2002 minus Spring 2000	88	0.1	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

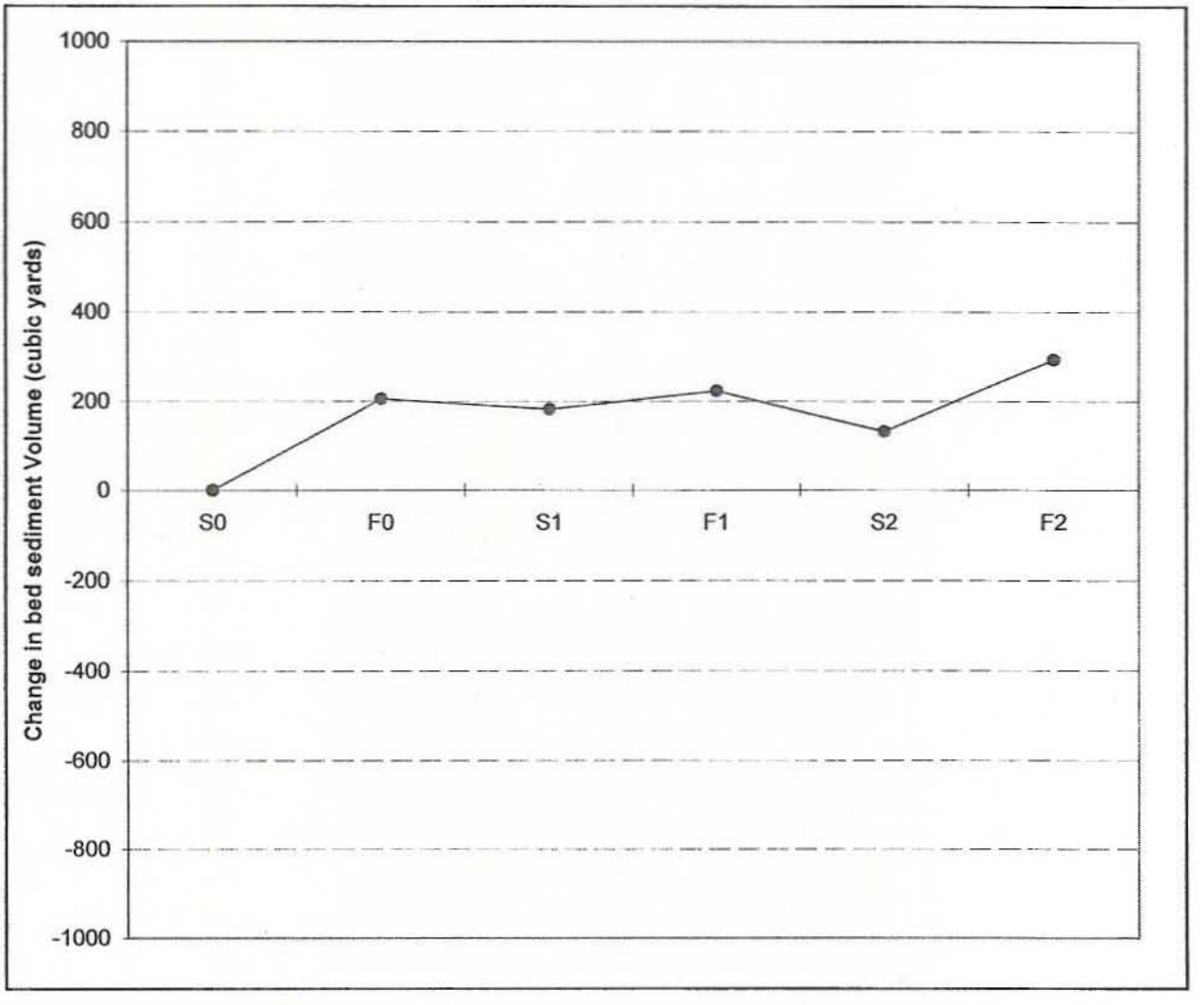
Monitoring Site GLC1A



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC1A	Fall 2000 minus Spring 2000	16	0.0	20,000
	Spring 2001 minus Fall 2000	5	0.0	
	Fall 2001 minus Spring 2001	22	0.0	
	Spring 2002 minus Fall 2001	-100	-0.1	
	Fall 2002 minus Spring 2002	153	0.2	
	Fall 2002 minus Spring 2000	96	0.1	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

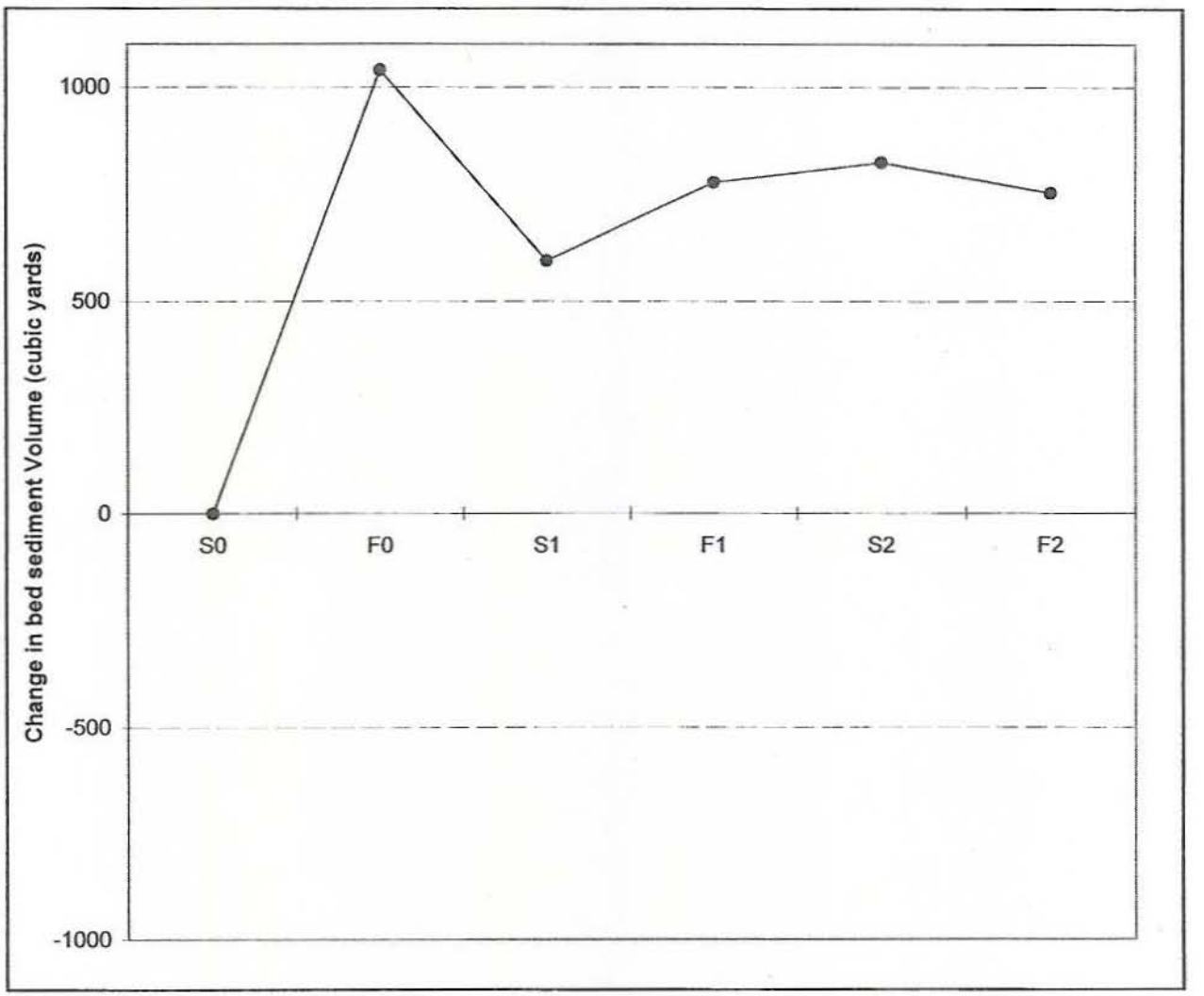
Monitoring Site GLC1B



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC1B	Fall 2000 minus Spring 2000	206	0.3	20,000
	Spring 2001 minus Fall 2000	-23	0.0	
	Fall 2001 minus Spring 2001	40	0.1	
	Spring 2002 minus Fall 2001	-90	-0.1	
	Fall 2002 minus Spring 2002	161	0.2	
	Fall 2002 minus Spring 2000	294	0.4	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

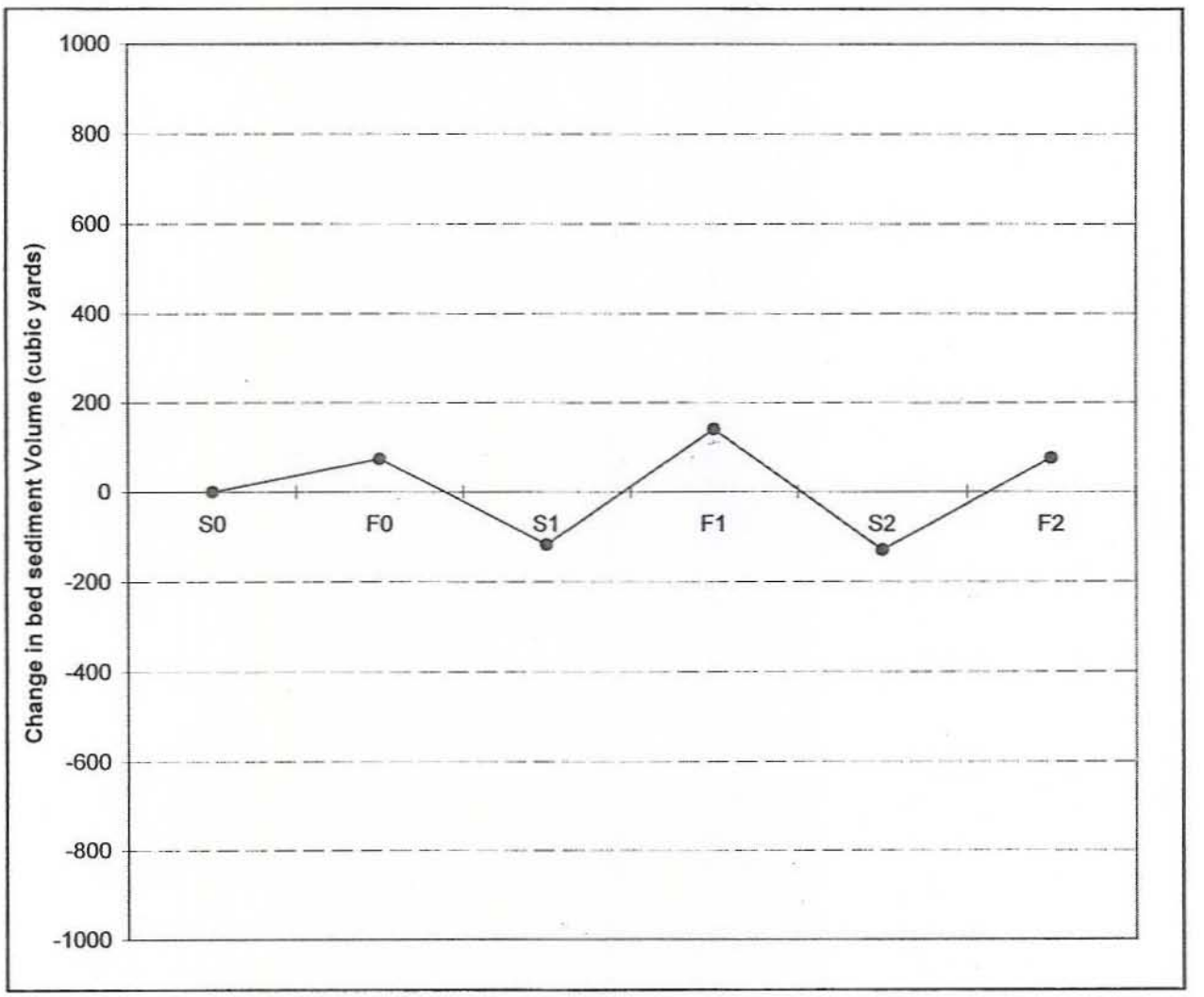
Monitoring Site GLC2



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC2	Fall 2000 minus Spring 2000	1040	0.2	120,000
	Spring 2001 minus Fall 2000	-444	-0.1	
	Fall 2001 minus Spring 2001	182	0.0	
	Spring 2002 minus Fall 2001	47	0.0	
	Fall 2002 minus Spring 2002	-71	0.0	
	Fall 2002 minus Spring 2000	754	0.2	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

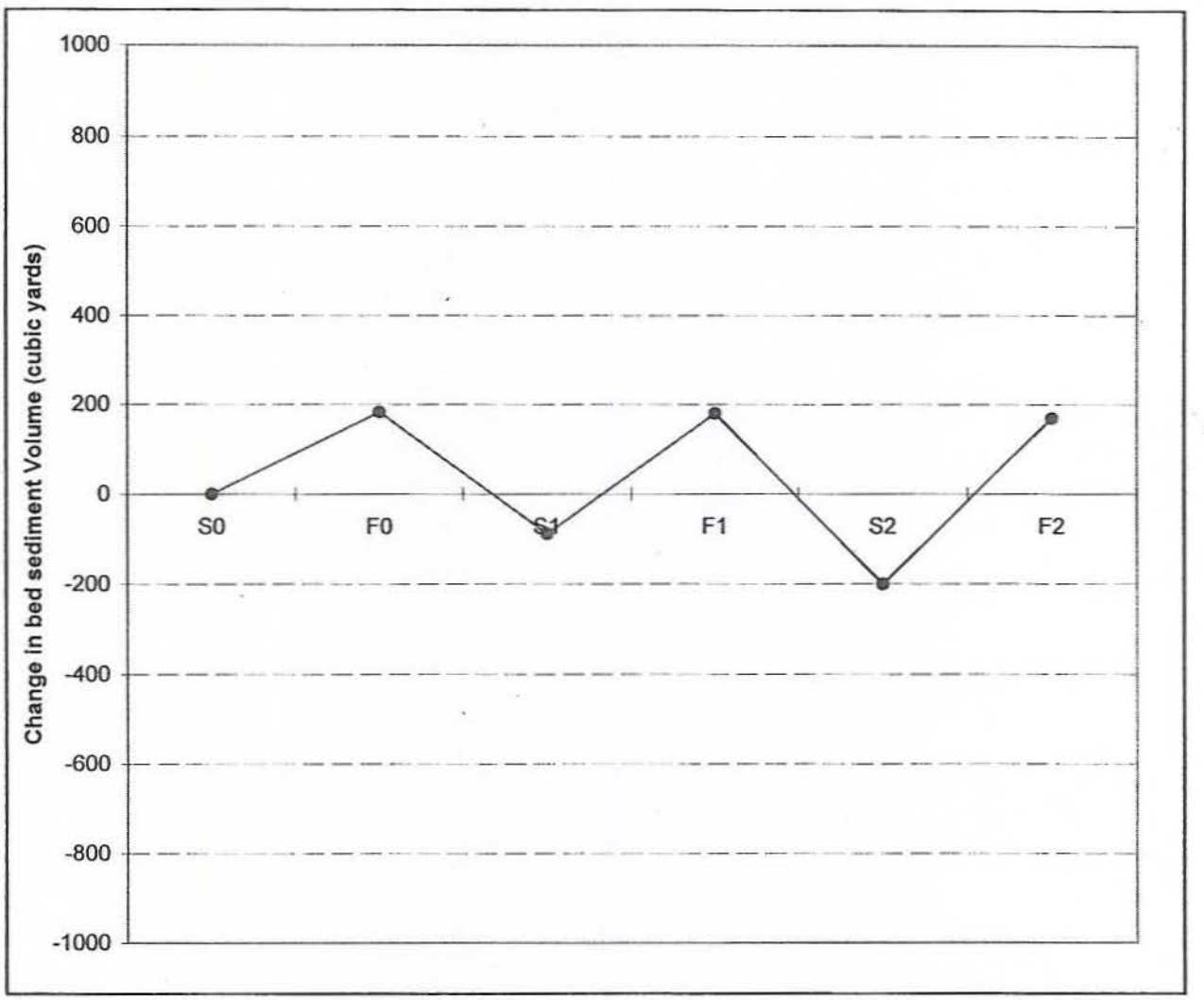
Monitoring Site GLC3



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC3	Fall 2000 minus Spring 2000	74	0.1	20,000
	Spring 2001 minus Fall 2000	-192	-0.3	
	Fall 2001 minus Spring 2001	259	0.3	
	Spring 2002 minus Fall 2001	-271	-0.4	
	Fall 2002 minus Spring 2002	206	0.3	
	Fall 2002 minus Spring 2000	76	0.1	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

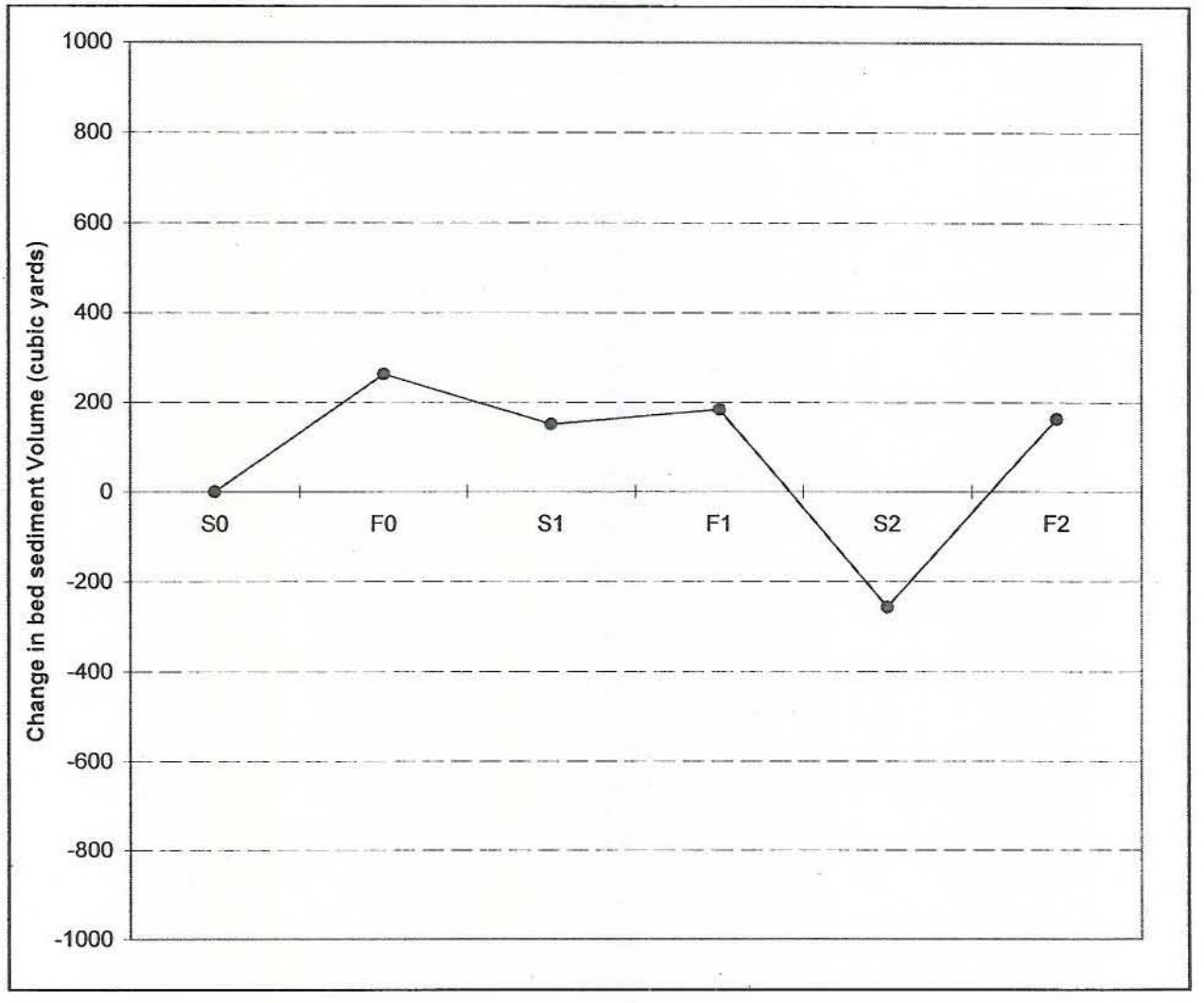
Monitoring Site GLC4



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC4	Fall 2000 minus Spring 2000	183	0.2	20,000
	Spring 2001 minus Fall 2000	-271	-0.4	
	Fall 2001 minus Spring 2001	268	0.4	
	Spring 2002 minus Fall 2001	-381	-0.5	
	Fall 2002 minus Spring 2002	370	0.5	
	Fall 2002 minus Spring 2000	169	0.2	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

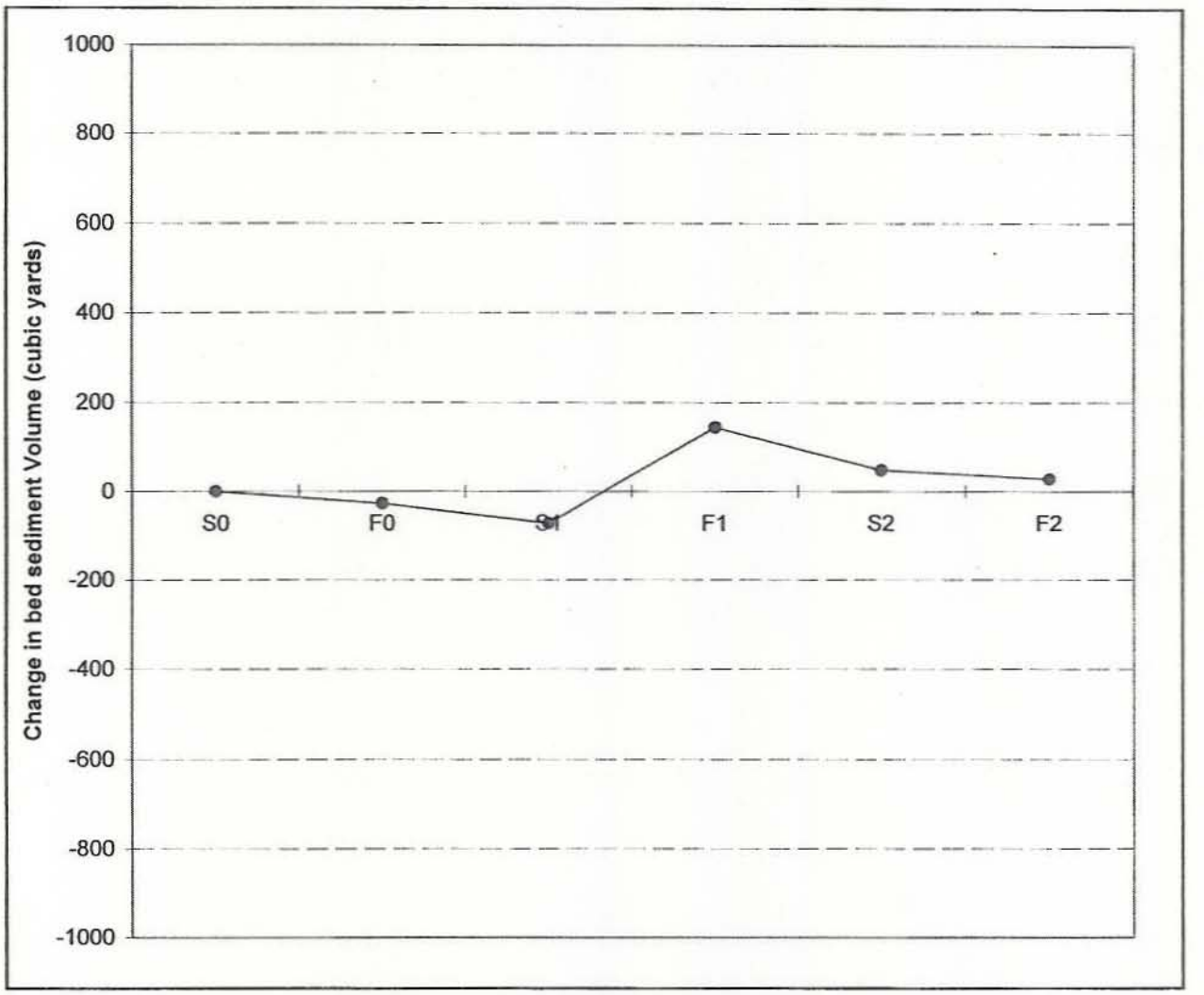
Monitoring Site GLC5



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
GLC5	Fall 2000 minus Spring 2000	263	0.4	20,000
	Spring 2001 minus Fall 2000	-112	-0.2	
	Fall 2001 minus Spring 2001	33	0.0	
	Spring 2002 minus Fall 2001	-441	-0.6	
	Fall 2002 minus Spring 2002	420	0.6	
	Fall 2002 minus Spring 2000	163	0.2	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

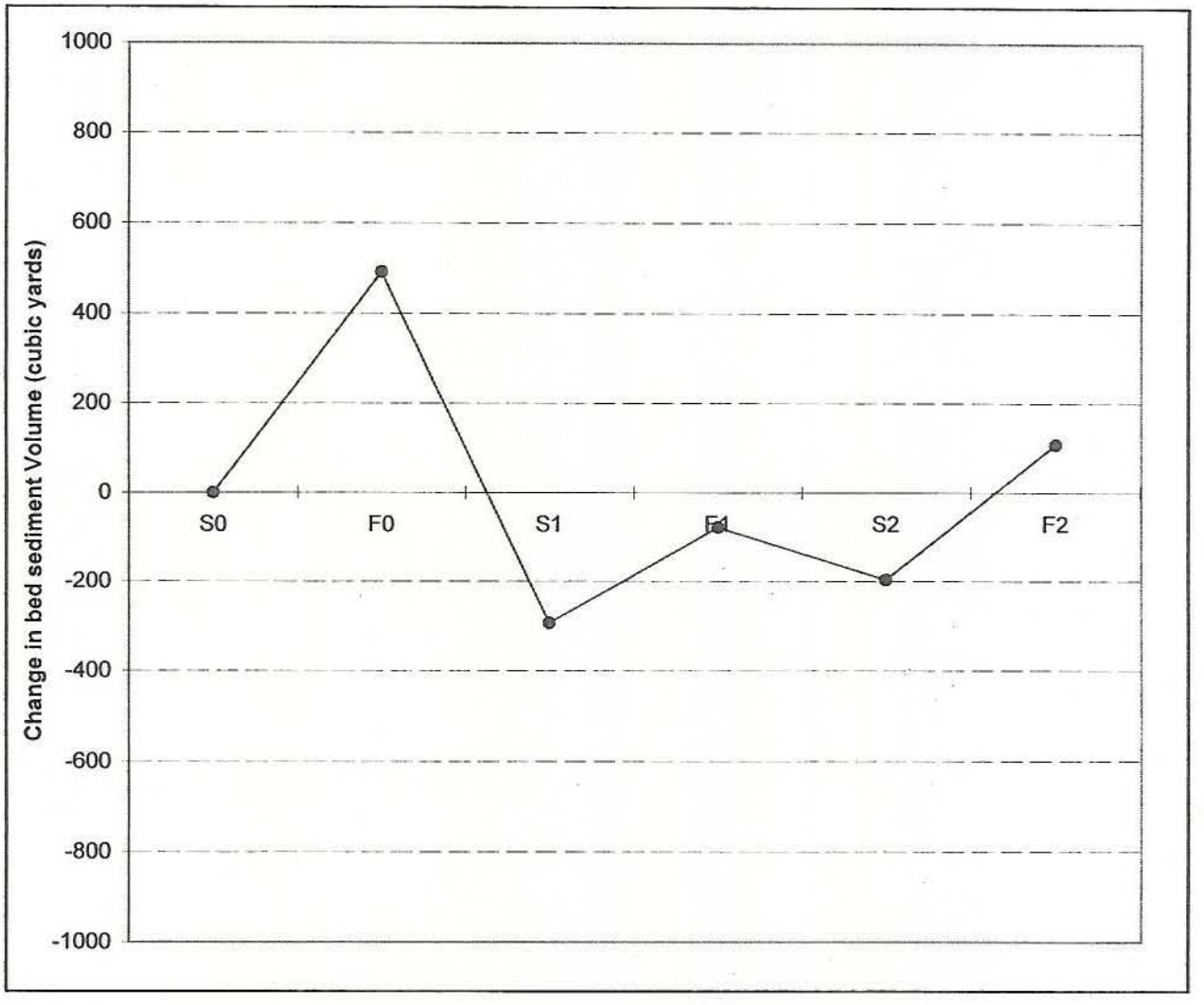
Monitoring Site MR1



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
MR1	Fall 2000 minus Spring 2000	-27	0.0	20,000
	Spring 2001 minus Fall 2000	-45	-0.1	
	Fall 2001 minus Spring 2001	217	0.3	
	Spring 2002 minus Fall 2001	-97	-0.1	
	Fall 2002 minus Spring 2002	-20	0.0	
	Fall 2002 minus Spring 2000	28	0.0	

SDIP Streambed Bathymetry Surveys
Streambed Surface Comparison
Change in Consecutive Surveys and Total Change from Spring 2000 to Fall 2002

Monitoring Site DC1



Station	Compared Surveys	Net volume change (cubic yards)	Average Change in Bed Height (feet)	Area of Analysis (square feet)
DC1	Fall 2000 minus Spring 2000	492	0.2	55,000
	Spring 2001 minus Fall 2000	-787	-0.4	
	Fall 2001 minus Spring 2001	216	0.1	
	Spring 2002 minus Fall 2001	-118	-0.1	
	Fall 2002 minus Spring 2002	305	0.1	
	Fall 2002 minus Spring 2000	108	0.1	

Appendix 4

Notes:

1. Each percentile value shown, (ϕx), is the sediment size indicated by the cumulative distribution curve for a particular "percent finer" value. For example, the percentile value ϕ50 indicates the sediment size where 50% of the sediment sample is finer (and passes through the sieve size indicated). Cumulative distribution curves for each sample are attached.
2. Percentile values and mean grain size values shown in bold indicate the following: 1) The absolute percentile values could not be determined from the cumulative distribution curve; 2) the "actual" percentile value is at least greater than or equal to the (phi) value indicated; and 3) subsequently, the calculated mean grain size values (derived from the percentile values) are approximate only. The "actual" mean grain size value is equal to or less than the value shown (the value shown thus represents the mean grain size "upper limit").
3. Mean sediment grain size values were calculated using a cumulative distribution curve and either of the following equations:

   Equation 1 (Folk & Ward (1957)): Mean = (ϕ16 + ϕ50+ ϕ84)/3
   Equation 2 (Trask (1932)): Mean = (D25+D75)/2
   Where:
   a. "ϕ x" represents the sediment size (in phi) for which "x"% of the sediment sample is finer (referred to as the "xth percentile"). See note 1, above.
   b. "Dx" represents the sediment size (in mm) for which "x"% of the sediment sample is finer (referred to as the "xth percentile"). See note 1, above.

   Note: Equation 1 was used when the 16th percentile value could be determined from the cumulative distribution curve; **Equation 2** was used when the 16th percentile value could not be determined from the cumulative distribution curve, and the 25th percentile value could be determined. Where neither the 16th or 25th percentile value could be determined, **Equation 1** was used, and an estimated value (mean grain size) was calculated.

Abbreviations:

mm	millimeter
ϕ	phi (to convert ϕ units to millimeter: millimeter = 2^(- ϕ))
-	sample not collected (unless otherwise noted)
OR	Old River
MR	Middle River
DC	Doughty Cut
GLC	Grant Line Canal
cl	center line (of river)
rt	right bank (of river)
lt	left bank (of river)

Footnotes:

The sediment sample collected at DC1rt (spring 1998) contained both a fine and a coarse sediment layer. Each of these discrete layers was separated in the field and submitted to the lab for sieve analysis. No composite sample was submitted for analysis; therefore, these samples were not included for comparison with subsequent samples collected from this site.

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR1 (rt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			05/27/98	10/15/98	04/26/99	09/22/99	03/29/00	09/28/00	04/23/01	09/06/01	04/11/02	09/09/02
	sieve size (mm)	sieve size (ϕ)	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt	OR1rt
Sieve Size			98052713	98101501	99042646	99092206	00032901	00092848	01042314	01090601	02041113	02090901
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%				100%	100%				100%
#30	0.59	0.76	95%	100%	100%	100%	99%	99%	100%	100%	100%	99%
#50	0.3	1.74	5%	99%	84%	29%	16%	24%	99%	94%	53%	91%
#100	0.15	2.74	1%	46%	9%	7%	2%	8%	98%	64%	8%	36%
#200	0.073	3.78	0%	5%	1%	5%	0%	5%	92%	24%	3%	13%
#230	0.065	3.94		4%	1%	5%		5%	87%	18%	2%	11%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5		1.73	3.77	3.23	3.78	2.50	3.78	3.94	3.94	3.35	3.94
	ϕ_{16}		1.62	3.50	2.64	2.33	1.74	2.21	3.94	3.94	2.55	3.61
	ϕ_{25}		1.52	3.27	2.52	1.93	1.62	1.71	3.94	3.75	2.36	3.22
	ϕ_{50}		1.25	2.67	2.19	1.44	1.34	1.40	3.94	3.10	1.80	2.48
	ϕ_{75}		0.97	2.20	1.86	1.10	1.04	1.08	3.94	2.37	1.28	2.03
	ϕ_{84}		0.88	2.02	1.74	0.98	0.95	0.95	3.94	2.06	1.10	1.86
	ϕ_{95}		0.76	1.80	1.06	0.83	0.80	0.80	3.25	1.55	0.88	1.25
Distribution Parameters	Mean Grain Size (ϕ)		1.25	2.73	2.19	1.58	1.34	1.52	3.94	3.06	1.82	2.65
	Mean Grain Size (mm)		0.420	0.151	0.219	0.334	0.394	0.349	0.065	0.120	0.284	0.159
Classification	Mean Grain Size Classification		medium sand	fine sand	fine sand	medium sand	medium sand	medium sand	NA	very fine sand	medium sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR1 (cl)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			05/27/98	10/15/98	04/26/99	09/22/99	03/29/00	09/28/00	04/23/01	09/06/01	04/11/02	09/09/02
	sieve size (mm)	sieve size (ϕ)	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl	OR1cl
Sieve Size			98052712	98101502	99042647	99092205	00032902	00092849	01042315	01090602	02041114	02090902
1-1/2"	38.1	-5.3										
3/4"	19.04	-4.3										
3/8"	9.53	-3.3										
#4	4.76	-2.3										
#8	2.38	-1.3				100%						
#16	1.19	-0.3	100%	100%	100%	98%	100%	100%	100%	100%	100%	100%
#30	0.59	0.8	80%	89%	90%	51%	94%	92%	98%	84%	93%	81%
#50	0.3	1.7	1%	4%	3%	9%	4%	7%	31%	7%	5%	7%
#100	0.15	2.7	0%	0%	0%	8%	0%	5%	21%	4%	1%	4%
#200	0.073	3.8	0%	0%	0%	6%		3%	18%	2%	0%	2%
#230	0.065	3.9	0%	0%	0%	6%		3%	16%	2%	0%	2%
5M	0.005	7.6										
2M	0.002	9.0										
1M	0.001	10.0										
	Notes											
Percentiles	ϕ_5		1.74	1.73	1.71	3.94	1.74	2.74	3.94	2.34	1.73	2.40
	ϕ_{16}		1.55	1.60	1.60	1.59	1.60	1.63	3.95	1.62	1.62	1.62
	ϕ_{25}		1.45	1.50	1.50	1.37	1.50	1.53	2.34	1.50	1.50	1.50
	ϕ_{50}		1.13	1.20	1.21	0.75	1.25	1.25	1.47	1.20	1.25	1.18
	ϕ_{75}		0.83	0.93	0.94	0.24	0.97	0.97	1.10	0.89	0.98	0.85
	ϕ_{84}		0.55	0.81	0.82	0.04	0.87	0.87	0.98	0.78	0.86	0.60
	ϕ_{95}		0.00	0.20	0.24	-0.19	0.60	0.35	0.80	0.06	0.45	0.00
Distribution Parameters	Mean Grain Size (ϕ)		1.08	1.20	1.21	0.79	1.24	1.25	2.13	1.20	1.24	1.13
	Mean Grain Size (mm)		0.474	0.434	0.432	0.577	0.423	0.420	0.228	0.435	0.422	0.456
Classification	Mean Grain Size Classification	———	medium sand	medium sand	medium sand	coarse sand	medium sand	medium sand	fine sand	medium sand	medium sand	medium sand

Notes: See explanation of notes, abbreviations and footnotes attached.

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR1 (lt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			05/27/98	10/15/98	04/26/99	09/22/99	03/29/00	09/28/00	04/23/01	09/06/01	04/11/02	09/09/02
			OR1lt	OR1lt	OR1lt	OR1lt	OR1lt	OR1lt	OR1lt	OR1lt	OR1lt	OR1lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052711	98101503	9904268	99092204	00032903	00092850	01042316	01090603	02041115	
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25		100%						100%		
3/8"	9.53	-3.25		99%		100%	100%	100%		97%	100%	
#4	4.76	-2.25	100%	90%		99%	98%	95%		93%	99%	
#8	2.38	-1.25	98%	77%		99%	94%	84%	100%	89%	97%	
#16	1.19	-0.25	17%	46%		91%	71%	53%	97%	71%	79%	
#30	0.59	0.76	1%	11%		41%	17%	22%	73%	31%	23%	
#50	0.3	1.74	1%	3%		12%	1%	12%	27%	12%	5%	
#100	0.15	2.74	1%	2%		8%	0%	3%	25%	3%	2%	
#200	0.073	3.78	1%	1%		4%		1%	20%	1%	1%	
#230	0.065	3.94	1%	0%		4%		1%	18%	1%	1%	
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes				4/26/1999 (no recovery)							9/9/2002 (no recove
Percentiles	ϕ_5		0.50	1.50	-	3.50	1.50	2.50	3.94	2.50	1.74	-
	ϕ_{16}		-0.20	0.60	-	1.60	0.80	1.35	3.94	1.52	1.14	-
	ϕ_{25}		-0.35	0.35	-	1.30	0.60	0.65	2.75	1.09	0.70	-
	ϕ_{50}		-0.67	-0.40	-	0.56	0.15	-0.15	1.23	0.30	0.29	-
	ϕ_{75}		-0.98	-1.20	-	0.05	-0.41	-0.95	0.68	-0.49	-0.20	-
	ϕ_{84}		-1.10	-1.80	-	-0.10	-0.80	-1.25	0.30	-1.00	-0.52	-
	ϕ_{95}		-1.20	-2.79	-	-0.77	-1.50	-2.25	-0.19	-2.78	-1.15	-
Distribution Parameters	Mean Grain Size (ϕ)		-0.66	-0.53	-	0.69	0.05	-0.02	1.72	0.27	0.30	-
	Mean Grain Size (mm)		1.576	1.447		0.621	0.966	1.012	0.305	0.827	0.810	

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR2 (rt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR2rt	OR2rt	OR2rt	OR2rt	OR2rt	OR2rt	OR2rt	OR2rt	OR2rt	OR2rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052714	98101504	99042643	99092209	00032904	00092739	01042311	01090604	02041110	02090903
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25		100%								
#4	4.76	-2.25	100%	99%				100%	100%		100%	100%
#8	2.38	-1.25	96%	97%		100%	100%	98%	99%	100%	98%	98%
#16	1.19	-0.25	72%	80%		82%	95%	83%	86%	99%	86%	90%
#30	0.59	0.76	10%	25%		40%	40%	39%	41%	62%	54%	40%
#50	0.3	1.74	1%	9%		27%	20%	30%	24%	6%	37%	12%
#100	0.15	2.74	0%	6%		22%	11%	24%	17%	4%	21%	9%
#200	0.073	3.78	0%	3%		12%	5%	11%	9%	3%	8%	7%
#230	0.065	3.94	0%	2%		10%	3%	9%	8%	3%	7%	6%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes			4/26/1999 (no recovery)								
Percentiles	ϕ_5											
	ϕ_{16}		0.65	1.33		3.35	2.20	3.38	2.85	1.55	3.15	1.60
	ϕ_{25}											
	ϕ_{50}		0.10	0.30		0.52	0.58	0.50	0.55	0.99	1.00	0.55
	ϕ_{75}											
	ϕ_{84}		-0.75	-0.50		-0.38	-0.05	-0.33	-0.20	0.15	-0.20	-0.13
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		0.00	0.38	-	1.16	0.91	1.18	1.07	0.90	1.32	0.67
	Mean Grain Size (mm)		1.000	0.770	-	0.446	0.532	0.440	0.477	0.537	0.401	0.627
Classification	Mean Grain Size Classification		coarse sand	coarse sand	-	medium sand	coarse sand	medium sand	medium sand	coarse sand	medium sand	coarse sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR2 (cl)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR2cl	OR2cl	OR2cl	OR2cl	OR2cl	OR2cl	OR2cl	OR2cl	OR2cl	OR2cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052715	98101505	99042644	99092208	00032905	00092740	01042312	01090605	02041111	02090904
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25					100%					
#16	1.19	-0.25	100%	100%	100%	100%	99%	100%	100%	100%	100%	100%
#30	0.59	0.76	92%	97%	95%	93%	85%	89%	83%	88%	84%	88%
#50	0.3	1.74	7%	11%	5%	21%	28%	19%	4%	31%	7%	10%
#100	0.15	2.74	0%	1%	0%	7%	6%	11%	1%	23%	2%	5%
#200	0.073	3.78	0%	0%	0%	6%	3%	8%		21%	2%	4%
#230	0.065	3.94	0%	0%	0%	5%	3%	7%		20%	2%	4%
5M	0.005	7.64								9%		
2M	0.002	8.97								6%		
1M	0.001	9.97								5%		
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		1.64	1.68	1.62	2.10	2.32	2.15	1.58	5.30	1.62	1.66
	ϕ_{25}								1.48	2.48		
	ϕ_{50}		1.25	1.30	1.25	1.35	1.41	1.35	1.18	1.41	1.19	1.23
	ϕ_{75}								0.85	0.99		
	ϕ_{84}		0.85	0.90	0.89	0.89	0.82	0.88	0.70	0.82	0.75	0.80
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		1.25	1.29	1.25	1.45	1.52	1.46	1.15	2.51	1.19	1.23
	Mean Grain Size (mm)		0.421	0.408	0.419	0.367	0.349	0.363	0.450	0.176	0.439	0.426
Classification	Mean Grain Size Classification		medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	fine sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR2 (lt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR2lt	OR2lt	OR2lt	OR2lt	OR2lt	OR2lt	OR2lt	OR2lt	OR2lt	OR2lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052716	98101506	99042645	99092207	00032906	00092741	01042313	01090606	02041112	02090905
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
#30	0.59	0.76	95%	97%	86%	93%	95%	94%	92%	99%	98%	97%
#50	0.3	1.74	28%	54%	21%	37%	34%	43%	22%	90%	59%	68%
#100	0.15	2.74	1%	34%	8%	19%	7%	33%	11%	81%	42%	56%
#200	0.073	3.78	1%	19%	4%	12%	3%	28%	9%	49%	22%	45%
#230	0.065	3.94	0%	15%	3%	10%	2%	25%	8%	41%	17%	40%
5M	0.005	7.64										13%
2M	0.002	8.97										9%
1M	0.001	9.97										7%
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		2.18	3.90	2.13	3.17	2.40	3.94	2.26	3.94	3.94	7.20
	ϕ_{25}						2.05	3.94	1.70	3.94	3.62	6.00
	ϕ_{50}		1.42	1.93	1.30	1.50	1.48	1.60	1.35	3.73	2.25	3.30
	ϕ_{75}						1.08	1.12	1.00	2.92	1.34	1.50
	ϕ_{84}		0.92	1.05	0.80	0.92	0.95	0.96	0.88	2.40	1.11	1.20
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		1.51	2.29	1.41	1.86	1.61	2.53	1.50	3.36	2.43	3.90
	Mean Grain Size (mm)		0.352	0.204	0.376	0.275	0.328	0.173	0.354	0.098	0.185	0.067
Classification	Mean Grain Size Classification		medium sand	fine sand	medium sand	medium sand	medium sand	NA	medium sand	NA	fine sand	very fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR3 (rt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR3rt	OR3rt	OR3rt	OR3rt	OR3rt	OR3rt	OR3rt	OR3rt	OR3rt	OR3rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052717	98101507	99042640	99092212	00032907	00092742	01042308	01090607	02041107	02090906
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25					100%					
#30	0.59	0.76	100%	100%	100%	100%	98%	100%	100%	100%		100%
#50	0.3	1.74	81%	96%	98%	96%	96%	99%	30%	99%	100%	96%
#100	0.15	2.74	3%	59%	53%	43%	74%	93%	2%	89%	99%	62%
#200	0.073	3.78	1%	29%	24%	16%	31%	78%	1%	49%	97%	29%
#230	0.065	3.94	1%	23%	20%	14%	26%	70%	1%	41%	95%	26%
5M	0.005	7.64								12%	32%	
2M	0.002	8.97								10%	22%	
1M	0.001	9.97								9%	16%	
	Notes											
Percentiles	ϕ_5							3.94				
	ϕ_{16}		2.57	3.94	3.94	3.77	3.94	3.94	2.25	7.10	9.97	3.94
	ϕ_{25}		2.45	3.90	3.75	3.43	3.94	3.94			8.60	3.94
	ϕ_{50}		2.14	3.04	2.85	2.60	3.32	3.94	1.45	3.73	6.60	3.10
	ϕ_{75}		1.80	2.30	2.25	2.13	2.70	3.85			5.10	2.35
	ϕ_{84}		1.55	2.05	2.03	1.95	2.24	3.33	0.99	2.85	4.55	2.07
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		2.09	3.10	3.00	2.77	3.17	3.74	1.56	4.56	7.04	3.04
	Mean Grain Size (mm)		0.235	0.117	0.125	0.146	0.111	0.075	0.338	0.042	0.008	0.122
Classification	Mean Grain Size Classification		fine sand	very fine sand	very fine sand	fine sand	NA	NA	medium sand	silt	silt	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR3 (cl)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR3cl	OR3cl	OR3cl	OR3cl	OR3cl	OR3cl	OR3cl	OR3cl	OR3cl	OR3cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052718	98101508	99042641	99092211	00032908	00092743	01042309	01090608	02041108	02090907
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25		100%								
#16	1.19	-0.25	100%	99%	100%	100%	100%	100%	100%	100%	100%	100%
#30	0.59	0.76	97%	94%	97%	98%	98%	99%	74%	96%	95%	95%
#50	0.3	1.74	11%	8%	18%	16%	14%	31%	3%	31%	18%	16%
#100	0.15	2.74	1%	1%	1%	6%	1%	13%	1%	22%	9%	10%
#200	0.073	3.78	1%	0%	1%	5%	0%	11%	0%	19%	8%	9%
#230	0.065	3.94	1%	0%	0%	5%		10%	0%	18%	7%	9%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		1.68	1.65	1.85	1.75	1.72	2.55	1.55	3.94	1.95	1.74
	ϕ_{25}		1.58						1.44	2.40		
	ϕ_{50}		1.30	1.25	1.35	1.35	1.32	1.46	1.10	1.45	1.33	1.33
	ϕ_{75}		1.00						0.72	1.07		
	ϕ_{84}		0.90	0.88	0.92	0.92	0.91	0.97	0.35	0.95	0.90	0.90
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		1.29	1.26	1.37	1.34	1.32	1.66	1.00	1.74	1.39	1.32
	Mean Grain Size (mm)		0.408	0.418	0.386	0.395	0.401	0.316	0.500	0.300	0.381	0.400
Classification	Mean Grain Size Classification		medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR3 (lt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/6/2001	4/11/2002	9/9/2002
			OR3lt	OR3lt	OR3lt	OR3lt	OR3lt	OR3lt	OR3lt	OR3lt	OR3lt	OR3lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052719	98101509	99042642	99092210	00032909	00092744	01042310	01090609	02041109	02090908
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25							100%			
#4	4.76	-2.25	100%	100%		100%			98%		100%	
#8	2.38	-1.25	99%	97%	100%	98%	100%	100%	82%	100%	96%	100%
#16	1.19	-0.25	84%	80%	94%	85%	95%	96%	36%	99%	82%	99%
#30	0.59	0.76	20%	25%	57%	48%	56%	64%	9%	90%	42%	93%
#50	0.3	1.74	1%	5%	6%	24%	1%	12%	3%	35%	14%	67%
#100	0.15	2.74	1%	4%	5%	22%	1%	11%	1%	15%	12%	56%
#200	0.073	3.78	1%	1%	3%	14%	1%	8%	1%	10%	8%	49%
#230	0.065	3.94	1%	1%	3%	13%	1%	7%	1%	10%	7%	48%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		0.96	1.20	1.54	3.50	1.47	1.65	0.50	2.70	1.65	3.94
	ϕ_{25}										1.35	3.94
	ϕ_{50}		0.30	0.30	0.90	0.70	0.87	1.02	-0.55	1.46	0.55	3.63
	ϕ_{75}										-0.06	1.45
	ϕ_{84}		-0.25	-0.50	0.00	-0.25	0.02	0.10	-1.42	0.85	-0.45	1.08
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		0.34	0.33	0.81	1.32	0.79	0.92	-0.49	1.67	0.58	2.88
	Mean Grain Size (mm)		0.792	0.794	0.569	0.401	0.580	0.527	1.404	0.314	0.667	0.136
Classification	Mean Grain Size Classification		coarse sand	coarse sand	coarse sand	medium sand	coarse sand	coarse sand	very coarse sand	medium sand	coarse sand	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR4 (rt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR4rt	OR4rt	OR4rt	OR4rt	OR4rt	OR4rt	OR4rt	OR4rt	OR4rt	OR4rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052704	98101510	99042602	99092218	00032910	00092706	01042305	01090519	02041104	02090909
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25	100%	100%	100%	100%	100%		100%		100%	100%
#8	2.38	-1.25	96%	94%	98%	95%	96%	100%	99%	100%	99%	99%
#16	1.19	-0.25	76%	69%	93%	74%	80%	96%	91%	95%	91%	87%
#30	0.59	0.76	42%	41%	84%	44%	56%	74%	52%	63%	58%	52%
#50	0.3	1.74	23%	30%	75%	31%	44%	25%	15%	20%	24%	25%
#100	0.15	2.74	14%	24%	63%	25%	34%	14%	10%	15%	17%	16%
#200	0.073	3.78	10%	18%	40%	18%	20%	9%	6%	9%	12%	10%
#230	0.065	3.94	9%	16%	34%	16%	17%	8%	5%	8%	11%	10%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5				3.94							
	ϕ_{16}		2.50	3.94	3.94	3.94	3.94	2.55	1.70	2.50	2.92	2.74
	ϕ_{25}		1.62		3.94	2.74	3.40	1.74				
	ϕ_{50}		0.53	0.45	3.33	0.55	1.25	1.25	0.82	1.05	1.00	0.82
	ϕ_{75}		-0.22			-0.30	-0.05	0.70				
	ϕ_{84}		-0.65	-0.85	0.76	-0.73	-0.50	0.30	-0.08	0.10	-0.05	-0.14
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		0.79	1.18	2.68	1.25	1.68	1.37	0.81	1.22	1.29	1.14
	Mean Grain Size (mm)		0.577	0.441	0.156	0.419	0.313	0.388	0.569	0.430	0.409	0.454
Classification	Mean Grain Size Classification		coarse sand	medium sand	NA	medium sand	medium sand	medium sand	coarse sand	medium sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR4 (cl)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR4cl	OR4cl	OR4cl	OR4cl	OR4cl	OR4cl	OR4cl	OR4cl	OR4cl	OR4cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052705	98101511	99042601	99092217	00032911	00092707	01042306	01090520	02041105	02090910
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%	100%		100%	100%					
#16	1.19	-0.25	99%	97%	100%	99%	98%	100%	100%	100%	100%	100%
#30	0.59	0.76	77%	78%	94%	90%	82%	89%	95%	90%	93%	93%
#50	0.3	1.74	6%	24%	38%	28%	24%	20%	16%	21%	21%	31%
#100	0.15	2.74	3%	20%	27%	16%	18%	6%	3%	8%	5%	12%
#200	0.073	3.78	3%	15%	16%	7%	11%	3%	2%	5%	4%	7%
#230	0.065	3.94	3%	13%	13%	6%	9%	3%	2%	4%	4%	7%
5M	0.005	7.64		5%								
2M	0.002	8.97		3%								
1M	0.001	9.97		2%								
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		1.60	3.55	3.78	2.74	3.00	2.02	1.74	2.14	2.05	2.53
	ϕ_{25}											
	ϕ_{50}		1.14	1.27	1.53	1.40	1.30	1.30	1.32	1.32	1.35	1.45
	ϕ_{75}											
	ϕ_{84}		0.45	0.45	0.94	0.84	0.63	0.83	0.90	0.85	0.88	0.90
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		1.06	1.76	2.08	1.66	1.64	1.38	1.32	1.44	1.43	1.63
	Mean Grain Size (mm)		0.479	0.296	0.236	0.316	0.320	0.383	0.401	0.369	0.372	0.324
Classification	Mean Grain Size Classification		medium sand	medium sand	fine sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR4 (lt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR4lt	OR4lt	OR4lt	OR4lt	OR4lt	OR4lt	OR4lt	OR4lt	OR4lt	OR4lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052706	98101512	99042603	99092216	00032912	00092708	01042307	01090521	02041106	02090911
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25		100%			100%	100%	100%	100%		
#30	0.59	0.76	100%	99%	100%	100%	99%	99%	99%	99%	100%	100%
#50	0.3	1.74	82%	51%	83%	97%	72%	59%	63%	57%	82%	74%
#100	0.15	2.74	10%	31%	45%	74%	49%	16%	12%	19%	24%	17%
#200	0.073	3.78	3%	23%	29%	32%	25%	8%	4%	10%	14%	7%
#230	0.065	3.94	2%	19%	23%	22%	19%	7%	3%	9%	12%	6%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		2.66	3.94	3.94	3.94	3.94	2.74	2.66	3.08	3.57	2.85
	ϕ_{25}		2.54	3.50	3.88	3.88	3.78	2.53				
	ϕ_{50}		2.18	1.80	2.60	3.34	2.70	1.95	2.00	1.92	2.28	2.15
	ϕ_{75}		1.84	1.25	1.95	2.68	1.63	1.34				
	ϕ_{84}		1.63	1.05	1.67	2.30	1.30	1.12	1.15	1.10	1.63	1.35
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		2.16	2.38	2.92	3.28	2.71	1.94	1.94	2.03	2.49	2.12
	Mean Grain Size (mm)		0.224	0.193	0.133	0.103	0.153	0.261	0.261	0.244	0.178	0.231
Classification	Mean Grain Size Classification		fine sand	fine sand	fine sand	very fine sand	fine sand	medium sand	medium sand	fine sand	fine sand	fine sand

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR5 (rt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR5rt	OR5rt	OR5rt	OR5rt	OR5rt	OR5rt	OR5rt	OR5rt	OR5rt	OR5rt
Sieve Size	grain size (mm)	sieve size (ϕ)	98052703	98101513	99042604	99092221	00032913	00092709	01042302	01090516	02041101	02090912
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25					100%		100%			
#16	1.19	-0.25	100%				99%	100%	99%			
#30	0.59	0.76	99%	100%	100%		95%	99%	95%			100%
#50	0.3	1.74	92%	97%	99%	100%	79%	97%	84%	100%	100%	98%
#100	0.15	2.74	71%	88%	86%	99%	58%	78%	70%	99%	96%	97%
#200	0.073	3.78	47%	71%	62%	98%	37%	57%	44%	95%	86%	93%
#230	0.065	3.94	40%	64%	54%	96%	33%	52%	37%	93%	83%	90%
5m	0.005	7.64	15%								27%	
2m	0.002	8.97	10%								19%	
1m	0.001	9.97	8%								14%	
	Group Name							Silt	Silty sand	Clayey silt	Silty clay	Clay
	Notes											
Percentiles	ϕ_5			3.94	3.94	3.94	3.94	3.94	3.94	3.94		3.94
	ϕ_{16}		7.50	3.94	3.94	3.94	3.94	3.94	3.94	3.94	9.60	3.94
	ϕ_{25}		6.15	3.94	3.94	3.94	3.94	3.94	3.94	3.94		3.94
	ϕ_{50}		3.65	3.94	3.94	3.94	3.13	3.94	3.54	3.94	6.13	3.94
	ϕ_{75}		2.55	3.54	3.23	3.94	1.93	2.90	2.38	3.94		3.94
	ϕ_{84}		2.10	3.00	2.82	3.94	1.42	2.42	1.74	3.94	3.90	3.94
	ϕ_{95}						0.76	1.84	0.76	3.78	2.83	3.25
Distribution Parameters	Mean Grain Size (ϕ)		4.42	3.63	3.57	3.94	2.83	3.43	3.07	3.94	6.54	3.94
	Mean Grain Size (mm)		0.047	0.081	0.084	0.065	0.141	0.093	0.119	0.065	0.011	0.065
Classification	Mean Grain Size Classification		silt	NA	NA	NA	NA	NA	NA	NA	silt	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR5 (cl)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR5cl	OR5cl	OR5cl	OR5cl	OR5cl	OR5cl	OR5cl	OR5cl	OR5cl	OR5cl
Sieve Size	grain size (mm)	sieve size (ϕ)	98052702	98101514	99042605	99092220	00032914	00092710	01042303	01090517	02041102	02090913
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%	100%	100%							
#16	1.19	-0.25	98%	98%	98%	100%	100%	100%				
#30	0.59	0.76	94%	81%	79%	96%	98%	99%	100%			
#50	0.3	1.74	93%	36%	54%	80%	76%	89%	99%	100%		
#100	0.15	2.74	91%	31%	51%	77%	72%	86%	98%	99%	100%	100%
#200	0.073	3.78	84%	25%	43%	72%	67%	81%	91%	98%	98%	98%
#230	0.065	3.94	80%	23%	40%	70%	64%	77%	86%	96%	96%	95%
5m	0.005	7.64	27%	9%	17%	24%		25%	23%	32%	33%	33%
2m	0.002	8.97	17%	7%	11%	17%		16%	15%	21%	23%	23%
1m	0.001	9.97	13%	4%	10%	14%		12%	11%	16%	16%	17%
	Notes											
Percentiles	ϕ_5						3.94	3.94			>9.97	>9.97
	ϕ_{16}		9.25	5.80	7.85	9.30	3.94	8.97	8.80	9.97	9.97	9.97
	ϕ_{25}				6.35		3.94	7.64			8.70	8.70
	ϕ_{50}		6.05	1.42	2.85	5.55	3.94	5.85	6.05	6.60	6.65	6.65
	ϕ_{75}						2.00	4.10			5.15	5.14
	ϕ_{84}		3.78	0.58	0.50	1.50	1.38	3.15	4.05	4.65	4.62	4.60
	ϕ_{95}						0.90	1.15			4.00	3.94
Distribution Parameters	Mean Grain Size (ϕ)		6.36	2.60	3.73	5.45	3.09	5.99	6.30	7.07	7.08	7.07
	Mean Grain Size (mm)		0.012	0.165	0.075	0.023	0.118	0.016	0.013	0.007	0.007	0.007
Classification	Mean Grain Size Classification		silt	fine sand	very fine sand	silt	NA	silt	silt	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR5 (lt)

			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/9/2002
			OR5lt	OR5lt	OR5lt	OR5lt	OR5lt	OR5lt	OR5lt	OR5lt	OR5lt	OR5lt
Sieve Size	grain size (mm)	sieve size (ϕ)	98052701	98101515	99042606	99092219	00032915	00092711	01042304	01090518	02041103	02090914
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25			100%							
#16	1.19	-0.25	100%	100%	99%			100%		100%		100%
#30	0.59	0.76	99%	99%	96%	100%	100%	99%	100%	99%	100%	99%
#50	0.3	1.74	95%	97%	83%	98%	99%	95%	99%	93%	99%	97%
#100	0.15	2.74	80%	83%	57%	89%	90%	80%	94%	80%	94%	83%
#200	0.073	3.78	54%	50%	29%	62%	74%	51%	78%	48%	78%	42%
#230	0.065	3.94	48%	44%	24%	55%	68%	42%	72%	41%	73%	35%
5m	0.005	7.64	20%				22%				24%	
2m	0.002	8.97	13%				15%				17%	
1m	0.001	9.97	9%				11%				12%	
	Notes											
Percentiles	ϕ_5		9.97	3.94	3.94	3.94	9.97	3.94	3.94	3.94	9.97	3.94
	ϕ_{16}		8.40	3.94	3.94	3.94	8.75	3.94	3.94	3.94	9.15	3.94
	ϕ_{25}		7.00	3.94	3.91	3.94	7.40	3.94	3.94	3.94	7.55	3.94
	ϕ_{50}		3.89	3.78	3.00	3.94	5.40	3.80	3.94	3.72	5.70	3.58
	ϕ_{75}		2.93	3.00	2.03	3.27	3.70	2.91	3.85	2.90	3.88	2.93
	ϕ_{84}		2.48	2.67	1.65	2.94	3.12	2.45	3.40	2.43	3.40	2.67
	ϕ_{95}		1.74	1.90	0.84	2.03	2.20	1.74	2.50	1.40	2.50	1.90
Distribution Parameters	Mean Grain Size (ϕ)		4.92	3.46	2.97	3.61	5.76	3.40	3.76	3.36	6.08	3.40
	Mean Grain Size (mm)		0.033	0.091	0.128	0.082	0.018	0.095	0.074	0.097	0.015	0.095
Classification	Mean Grain Size Classification		silt	NA	fine sand	NA	silt	NA	NA	NA	silt	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR6 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR6rt	OR6rt	OR6rt	OR6rt	OR6rt	OR6rt	OR6rt	OR6rt	OR6rt	OR6rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052744	98101516	99042607	99092224	00032916	00092712	01041331	01090513	02041022	02090915
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25	100%	100%						100%		
#8	2.38	-1.25	99%	99%	100%	100%	100%	100%	100%	99%	100%	100%
#16	1.19	-0.25	95%	98%	98%	99%	99%	99%	97%	97%	96%	98%
#30	0.59	0.76	69%	93%	90%	93%	95%	95%	82%	84%	73%	79%
#50	0.3	1.74	28%	78%	65%	78%	80%	56%	40%	36%	22%	36%
#100	0.15	2.74	15%	62%	39%	66%	64%	33%	25%	16%	8%	22%
#200	0.073	3.78	7%	47%	18%	52%	46%	30%	21%	14%	6%	19%
#230	0.065	3.94	5%	44%	16%	50%	43%	29%	19%	13%	6%	19%
5M	0.005	7.64					21%	16%				
2M	0.002	8.97					13%	10%				
1M	0.001	9.97					9%	6%				
	Notes											
Percentiles	ϕ_5		3.94	3.94	3.94	3.94	9.97	9.97	3.94	3.94	3.94	3.94
	ϕ_{16}		2.65	3.94	3.94	3.94	8.45	7.64	3.94	2.74	2.15	3.94
	ϕ_{25}		1.95	3.94	3.42	3.94	7.00	5.00	2.74	2.28	1.68	2.52
	ϕ_{50}		1.22	3.55	2.30	3.94	3.55	2.00	1.50	1.47	1.20	1.42
	ϕ_{75}		0.53	1.92	1.35	2.00	2.05	1.26	0.90	0.92	0.67	0.85
	ϕ_{84}		0.18	1.35	1.00	1.35	1.50	1.05	0.62	0.76	0.28	0.50
	ϕ_{95}		-0.25	0.35	0.12	0.40	0.76	0.76	-0.10	-0.10	-0.20	-0.10
Distribution Parameters	Mean Grain Size (ϕ)		1.35	2.95	2.41	3.08	4.50	3.56	1.82	1.66	1.21	1.69
	Mean Grain Size (mm)		0.392	0.130	0.188	0.119	0.044	0.085	0.283	0.317	0.432	0.311
Classification	Mean Grain Size Classification		medium sand	NA	fine sand	NA	silt	very fine sand	medium sand	medium sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR6 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR6cl	OR6cl	OR6cl	OR6cl	OR6cl	OR6cl	OR6cl	OR6cl	OR6cl	OR6cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052745	98101517	99042608	99092223	00032917	00092713	01041332	01090514	02041023	02090916
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25					100%	100%	100%		100%	
#16	1.19	-0.25	100%	100%	100%	100%	98%	99%	99%	100%	99%	100%
#30	0.59	0.76	98%	99%	99%	99%	90%	95%	95%	99%	93%	98%
#50	0.3	1.74	61%	74%	69%	75%	53%	66%	72%	79%	53%	69%
#100	0.15	2.74	12%	24%	18%	19%	18%	32%	22%	31%	6%	24%
#200	0.073	3.78	9%	20%	14%	15%	13%	28%	13%	27%	4%	20%
#230	0.065	3.94	8%	18%	13%	15%	12%	27%	9%	26%	3%	19%
5M	0.005	7.64						15%				
2M	0.002	8.97						9%				
1M	0.001	9.97						6%				
	Notes											
Percentiles	ϕ_5		3.94	3.94	3.94	3.94	3.94	9.97	3.94	3.94	3.23	3.94
	ϕ_{16}		2.65	3.94	3.25	3.50	3.15	7.30	3.43	3.94	2.52	3.94
	ϕ_{25}		2.48	2.71	2.60	2.63	2.53	4.50	2.68	3.94	2.32	2.70
	ϕ_{50}		1.96	2.22	2.11	2.18	1.82	2.20	2.17	2.33	1.80	2.15
	ϕ_{75}		1.37	1.70	1.53	1.74	1.15	1.42	1.60	1.82	1.20	1.52
	ϕ_{84}		1.12	1.34	1.24	1.37	0.92	1.15	1.22	1.50	0.98	1.22
	ϕ_{95}		0.83	0.92	0.90	0.93	0.12	0.76	0.76	0.95	0.40	0.85
Distribution Parameters	Mean Grain Size (ϕ)		1.91	2.21	2.20	2.35	1.96	3.55	2.27	2.59	1.77	2.11
	Mean Grain Size (mm)		0.266	0.217	0.218	0.196	0.256	0.085	0.207	0.166	0.294	0.232
Classification	Mean Grain Size Classification		medium sand	fine sand	fine sand	fine sand	medium sand	very fine sand	fine sand	NA	medium sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR6 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR6lt	OR6lt	OR6lt	OR6lt	OR6lt	OR6lt	OR6lt	OR6lt	OR6lt	OR6lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052746	98101518	99042609	99092222	00032918	00092714	01042301	01090515	02041024	02090917
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25									100%	
#8	2.38	-1.25		100%	100%	100%	100%	100%	100%	100%	99%	
#16	1.19	-0.25	100%	99%	98%	98%	99%	99%	97%	99%	95%	100%
#30	0.59	0.76	95%	93%	81%	79%	92%	87%	77%	86%	79%	95%
#50	0.3	1.74	67%	56%	30%	28%	54%	49%	25%	43%	39%	79%
#100	0.15	2.74	51%	28%	11%	12%	22%	30%	6%	20%	23%	54%
#200	0.073	3.78	38%	18%	7%	8%	12%	24%	3%	11%	12%	29%
#230	0.065	3.94	34%	16%	7%	8%	11%	22%	3%	9%	10%	25%
5M	0.005	7.64	17%									
2M	0.002	8.97	13%									
1M	0.001	9.97	9%									
	Notes											
Percentiles	ϕ_5		9.97	3.94	3.94	3.94	3.94	3.94	3.05	3.94	3.94	3.94
	ϕ_{16}		8.00	3.94	2.48	2.48	3.35	3.94	2.20	3.20	3.40	3.94
	ϕ_{25}		5.90	3.05	2.00	1.92	2.63	3.60	1.74	2.52	2.60	3.94
	ϕ_{50}		2.82	1.95	1.35	1.32	1.86	1.70	1.28	1.58	1.48	2.90
	ϕ_{75}		1.48	1.22	0.88	0.85	1.20	1.07	0.80	1.02	0.85	1.90
	ϕ_{84}		1.15	1.00	0.59	0.50	0.97	0.83	0.40	0.80	0.45	1.48
	ϕ_{95}		0.76	0.45	-0.09	-0.09	0.30	0.10	-0.15	0.05	-0.25	0.76
Distribution Parameters	Mean Grain Size (ϕ)		3.99	2.30	1.47	1.43	2.06	2.34	1.29	1.86	1.78	2.92
	Mean Grain Size (mm)		0.063	0.204	0.360	0.370	0.240	0.198	0.408	0.275	0.292	0.132
Classification	Mean Grain Size Classification		very fine sand	fine sand	medium sand	medium sand	fine sand	fine sand	medium sand	medium sand	medium sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR7 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR7rt	OR7rt	OR7rt	OR7rt	OR7rt	OR7rt	OR7rt	OR7rt	OR7rt	OR7rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052741	98101519	99042610	99092227	00032919	00092715	01041328	01090510	02041019	02090918
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25		100%								
3/8"	9.53	-3.25	100%	98%								
#4	4.76	-2.25	98%	98%						100%		100%
#8	2.38	-1.25	97%	97%	100%	100%	100%	100%		99%		99%
#16	1.19	-0.25	96%	96%	98%	98%	99%	99%		98%	100%	98%
#30	0.59	0.76	92%	88%	92%	91%	93%	97%	100%	93%	97%	94%
#50	0.3	1.74	65%	59%	68%	59%	69%	79%	99%	71%	73%	77%
#100	0.15	2.74	31%	35%	36%	26%	46%	50%	98%	42%	34%	56%
#200	0.073	3.78	19%	23%	27%	19%	41%	42%	93%	32%	24%	44%
#230	0.065	3.94	17%	20%	25%	18%	40%	41%	90%	30%	22%	40%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5		3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{25}		3.25	3.60	3.94	2.90	3.94	3.94	3.94	3.94	3.65	3.94
	ϕ_{50}		2.19	2.12	2.30	2.00	2.56	2.74	3.94	2.45	2.32	3.25
	ϕ_{75}		1.38	1.20	1.45	1.23	1.50	1.87	3.94	1.55	1.65	1.84
	ϕ_{84}		1.05	0.90	1.10	0.97	1.12	1.46	3.94	1.16	1.30	1.35
	ϕ_{95}		0.00	-0.10	0.25	0.20	0.40	0.87	3.35	0.35	0.82	0.50
Distribution Parameters	Mean Grain Size (ϕ)		2.39	2.40	2.70	2.07	2.54	2.71	3.94	2.52	2.65	2.85
	Mean Grain Size (mm)		0.190	0.189	0.154	0.239	0.172	0.152	0.065	0.175	0.159	0.139
Classification	Mean Grain Size Classification		fine sand	fine sand	fine sand	fine sand	NA	NA	NA	NA	fine sand	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR7 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR7cl	OR7cl	OR7cl	OR7cl	OR7cl	OR7cl	OR7cl	OR7cl	OR7cl	OR7cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052742	98101520	99042611	99092226	00032920	00092716	01041329	01090511	02041020	02090919
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25			100%	100%		100%				
#16	1.19	-0.25	100%	100%	98%	99%	100%	99%	100%	100%	100%	100%
#30	0.59	0.76	96%	98%	88%	99%	98%	98%	99%	99%	97%	99%
#50	0.3	1.74	40%	69%	54%	95%	82%	91%	91%	91%	77%	91%
#100	0.15	2.74	5%	17%	25%	68%	26%	83%	51%	61%	53%	66%
#200	0.073	3.78	4%	13%	13%	56%	19%	74%	39%	54%	45%	59%
#230	0.065	3.94	4%	12%	11%	53%	17%	71%	36%	52%	42%	57%
5M	0.005	7.64		7%	11%	36%			22%	32%		
2M	0.002	8.97		5%	8%	23%			16%	23%		
1M	0.001	9.97		3%	6%	17%			10%	16%		
	Notes											
Percentiles	ϕ_5		2.74	8.85	9.97	9.97	3.94	3.94	9.97	9.97	3.94	3.94
	ϕ_{16}		2.43	3.00	3.50	9.97	3.94	3.94	8.97	9.97	3.94	3.94
	ϕ_{25}		2.17	2.58	2.74	8.78	2.88	3.94	6.85	8.70	3.94	3.94
	ϕ_{50}		1.56	2.10	1.85	4.60	2.32	3.94	2.72	4.30	3.14	3.94
	ϕ_{75}		1.12	1.53	1.12	2.50	1.86	3.65	2.12	2.28	1.82	2.37
	ϕ_{84}		0.97	1.22	0.88	2.15	1.60	2.60	1.90	1.98	1.40	2.02
	ϕ_{95}		0.78	0.85	0.05	1.74	0.94	1.20	1.25	1.25	0.85	1.25
Distribution Parameters	Mean Grain Size (ϕ)		1.65	2.11	2.08	5.57	2.62	3.49	4.53	5.42	2.83	3.30
	Mean Grain Size (mm)		0.318	0.232	0.237	0.021	0.163	0.089	0.043	0.023	0.141	0.102
Classification	Mean Grain Size Classification		medium sand	fine sand	fine sand	silt	fine sand	NA	silt	silt	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR7 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR7lt	OR7lt	OR7lt	OR7lt	OR7lt	OR7lt	OR7lt	OR7lt	OR7lt	OR7lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052743	98101521	99042612	99092225	00032921	00092717	01041330	01090512	02041021	02090920
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%			100%		100%				
#16	1.19	-0.25	97%	100%	100%	98%		99%	100%	100%		
#30	0.59	0.76	87%	98%	99%	86%	100%	93%	99%	98%	100%	
#50	0.3	1.74	49%	91%	96%	46%	99%	65%	97%	86%	99%	100%
#100	0.15	2.74	32%	79%	86%	31%	93%	47%	89%	76%	98%	99%
#200	0.073	3.78	22%	70%	60%	22%	72%	40%	72%	64%	94%	97%
#230	0.065	3.94	20%	67%	54%	20%	67%	38%	68%	61%	92%	95%
5M	0.005	7.64	11%	20			39%	24%	36%	34%	48%	49%
2M	0.002	8.97	8%				28%	17%	25%	24%	34%	34%
1M	0.001	9.97	6%				18%	13%	17%	17%	24%	24%
	Notes											
Percentiles	ϕ_5		9.97	3.94	3.94	3.94	9.97	9.97	9.97	9.97	9.97	9.97
	ϕ_{16}		5.60	3.94	3.94	3.94	9.97	9.20	9.97	9.97	9.97	9.97
	ϕ_{25}		3.48	3.94	3.94	3.42	9.28	7.37	8.97	8.82	9.85	9.85
	ϕ_{50}		1.70	3.94	3.94	1.63	6.20	2.55	6.00	5.45	7.50	7.55
	ϕ_{75}		1.08	3.21	3.18	1.02	3.65	1.40	3.60	2.80	5.37	5.55
	ϕ_{84}		0.82	2.30	2.82	0.80	3.20	1.09	3.05	1.94	4.60	4.85
	ϕ_{95}		-0.06	1.20	1.84	0.00	2.40	0.40	2.00	1.00	3.50	3.94
Distribution Parameters	Mean Grain Size (ϕ)		2.71	3.39	3.57	2.22	6.47	4.28	6.29	5.81	7.61	7.70
	Mean Grain Size (mm)		0.153	0.095	0.084	0.215	0.011	0.051	0.013	0.018	0.005	0.005
Classification	Mean Grain Size Classification		fine sand	NA	NA	fine sand	silt	silt	silt	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

$\frac{\phi_{25}+\phi_{75}}{2} \Rightarrow \frac{(3.94 \leftarrow 7.64) + 3.21}{2} = 3.5 \rightarrow 5.43$

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR8 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR8rt	OR8rt	OR8rt	OR8rt	OR8rt	OR8rt	OR8rt	OR8rt	OR8rt	OR8rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052738	98101522	99042613	99092230	00032922	00092718	01041325	01090507	02041016	02090921
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25		100%				100%		100%		
#4	4.76	-2.25		99%		100%		99%		98%		100%
#8	2.38	-1.25		97%		99%		99%	100%	97%		99%
#16	1.19	-0.25	100%	95%		97%		98%	99%	96%		98%
#30	0.59	0.76	99%	88%		91%	100%	94%	98%	93%	100%	96%
#50	0.3	1.74	77%	55%		60%	99%	67%	95%	68%	98%	86%
#100	0.15	2.74	18%	23%		22%	98%	11%	85%	17%	92%	63%
#200	0.073	3.78	6%	15%		11%	93%	4%	76%	3%	83%	47%
#230	0.065	3.94	5%	13%		10%	91%	4%	73%	2%	80%	43%
5M	0.005	7.64	4%									
2M	0.002	8.97	2%									
1M	0.001	9.97	2%									
	Notes			4/26/99 (no recovery)								
Percentiles	ϕ_5		4.25	3.94	-	3.94	3.94	3.60	3.94	3.63	3.94	3.94
	ϕ_{16}		2.90	3.65	-	3.30	3.94	2.64	3.94	2.82	3.94	3.94
	ϕ_{25}		2.60	2.65	-	2.65	3.94	2.50	3.94	2.52	3.94	3.94
	ϕ_{50}		2.20	1.90	-	2.00	3.94	2.03	3.94	2.10	3.94	3.60
	ϕ_{75}		1.80	1.15	-	1.25	3.94	1.45	3.83	1.48	3.94	2.20
	ϕ_{84}		1.42	0.88	-	0.98	3.94	1.12	2.85	1.10	3.65	1.82
	ϕ_{95}		0.91	-0.25	-	0.08	3.35	0.50	1.74	0.10	2.25	0.85
Distribution Parameters	Mean Grain Size (ϕ)		2.17	2.14	-	2.09	3.94	1.93	3.58	2.01	3.84	3.12
	Mean Grain Size (mm)		0.222	0.226	-	0.234	0.065	0.262	0.084	0.249	0.070	0.115
Classification	Mean Grain Size Classification		fine sand	fine sand	-	fine sand	NA	medium sand	NA	fine sand	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR8 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR8cl	OR8cl	OR8cl	OR8cl	OR8cl	OR8cl	OR8cl	OR8cl	OR8cl	OR8cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052739	98101523	99042614	99092228	00032923	00092719	01041326	01090508	02041017	02090922
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25		100%							100%	
#4	4.76	-2.25		99%			100%				99%	
#8	2.38	-1.25		98%	100%	100%	96%	100%	100%		99%	
#16	1.19	-0.25	100%	95%	98%	99%	92%	99%	99%	100%	96%	100%
#30	0.59	0.76	92%	85%	88%	91%	88%	93%	92%	98%	78%	96%
#50	0.3	1.74	48%	37%	41%	58%	81%	58%	52%	80%	35%	66%
#100	0.15	2.74	10%	9%	10%	27%	60%	17%	9%	24%	10%	18%
#200	0.073	3.78	7%	8%	7%	21%	48%	11%	5%	8%	6%	12%
#230	0.065	3.94	6%	7%	6%	19%	46%	10%	5%	7%	6%	11%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5		3.94	3.94	3.94	3.94	3.94	3.94	3.78	3.94	3.94	3.94
	ϕ_{16}		2.58	2.50	2.53	3.94	3.94	2.90	2.58	3.25	2.50	3.10
	ϕ_{25}		2.33	2.16	2.25	3.05	3.94	2.53	2.35	2.71	2.13	2.60
	ϕ_{50}		1.70	1.48	1.55	2.00	3.60	1.93	1.80	2.28	1.40	2.07
	ϕ_{75}		1.13	0.98	1.02	1.23	2.02	1.25	1.18	1.82	0.82	1.45
	ϕ_{84}		0.92	0.80	0.83	0.97	1.32	1.00	0.95	1.52	0.43	1.13
	ϕ_{95}		0.37	-0.25	0.05	0.25	-1.00	0.40	0.33	0.93	-0.20	0.80
Distribution Parameters	Mean Grain Size (ϕ)		1.73	1.59	1.64	2.14	2.95	1.94	1.78	2.35	1.44	2.10
	Mean Grain Size (mm)		0.301	0.331	0.322	0.227	0.129	0.260	0.292	0.196	0.368	0.233
Classification	Mean Grain Size Classification		medium sand	medium sand	medium sand	fine sand	NA	medium sand	medium sand	fine sand	medium sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR8 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR8lt	OR8lt	OR8lt	OR8lt	OR8lt	OR8lt	OR8lt	OR8lt	OR8lt	OR8lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052740	98101524	99042615		00032924	00092720	01041327	01090509	02041018	02090923
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25									100%	
3/8"	9.53	-3.25									99%	100%
#4	4.76	-2.25	100%				100%				99%	99%
#8	2.38	-1.25	95%				99%		100%	100%	98%	99%
#16	1.19	-0.25	75%				99%	100%	95%	99%	95%	95%
#30	0.59	0.76	61%				98%	92%	64%	96%	78%	77%
#50	0.3	1.74	47%	100%			97%	32%	13%	64%	36%	37%
#100	0.15	2.74	25%	99%			88%	7%	6%	25%	18%	27%
#200	0.073	3.78	18%	98%			78%	6%	4%	17%	13%	24%
#230	0.065	3.94	17%	97%			75%	6%	4%	16%	12%	23%
5M	0.005	7.64	11%									
2M	0.002	8.97	7%									
1M	0.001	9.97	5%									
	Notes				4/26/99 (no recovery	9/22/99 (no recovery)						
Percentiles	ϕ_5		9.97	3.94	-	-	3.94	3.94	3.20	3.94	3.94	3.94
	ϕ_{16}		4.45	3.94	-	-	3.94	2.38	1.67	3.94	3.15	3.94
	ϕ_{25}		2.74	3.94	-	-	3.94	2.02	1.50	2.74	2.35	3.40
	ϕ_{50}		1.52	3.94	-	-	3.94	1.45	1.02	2.10	1.40	1.40
	ϕ_{75}		-0.22	3.94	-	-	3.94	1.02	0.40	1.40	0.83	0.82
	ϕ_{84}		-0.70	3.94	-	-	3.15	0.90	0.10	1.12	0.38	0.37
	ϕ_{95}		-1.25	3.94	-	-	1.95	0.38	-0.25	0.80	-0.25	-0.25
Distribution Parameters	Mean Grain Size (ϕ)		1.76	3.94	-	-	3.68	1.58	0.93	2.39	1.64	2.11
	Mean Grain Size (mm)		0.296	0.065	-	-	0.078	0.335	0.525	0.191	0.320	0.232
Classification	Mean Grain Size Classification		medium sand	NA	-	-	NA	medium sand	coarse sand	fine sand	medium sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR9 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR9rt	OR9rt	OR9rt	OR9rt	OR9rt	OR9rt	OR9rt	OR9rt	OR9rt	OR9rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052736	98101525	99042616	99092233	00032925	00092721	01041322	01090504	02041013	02090924
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%		100%	100%						100%
#30	0.59	0.76	98%		99%	99%				100%	100%	99%
#50	0.3	1.74	90%	100%	91%	92%	100%	100%	100%	98%	98%	95%
#100	0.15	2.74	65%	99%	68%	75%	99%	98%	99%	90%	91%	85%
#200	0.073	3.78	31%	96%	36%	53%	92%	93%	97%	67%	58%	60%
#230	0.065	3.94	25%	94%	29%	49%	88%	91%	95%	61%	50%	53%
5M	0.005	7.64	12%				42%		44%	26%		
2M	0.002	8.97	8%				30%		30%	19%		
1M	0.001	9.97	6%				23%		20%	15%		
	Notes											
Percentiles	ϕ_5		9.97	3.94	3.94	3.94	9.97	3.94	9.97	9.97	3.94	3.94
	ϕ_{16}		6.50	3.94	3.94	3.94	9.97	3.94	9.97	9.70	3.94	3.94
	ϕ_{25}		3.94	3.94	3.94	3.94	9.68	3.94	9.48	7.85	3.94	3.94
	ϕ_{50}		3.20	3.94	3.32	3.90	7.00	3.94	7.20	5.10	3.94	3.94
	ϕ_{75}		2.33	3.94	2.43	2.74	5.00	3.94	5.40	3.40	3.24	3.15
	ϕ_{84}		1.97	3.94	2.03	2.21	4.28	3.94	4.75	3.00	2.95	2.78
	ϕ_{95}		1.10	3.85	1.25	1.31	3.35	3.35	3.94	2.10	2.15	1.74
Distribution Parameters	Mean Grain Size (ϕ)		3.89	3.94	3.10	3.35	7.34	3.94	7.44	5.93	3.61	3.55
	Mean Grain Size (mm)		0.067	0.065	0.117	0.098	0.006	0.065	0.006	0.016	0.082	0.085
Classification	Mean Grain Size Classification		very fine sand	NA	NA	NA	silt	NA	silt	silt	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR9 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR9cl	OR9cl	OR9cl	OR9cl	OR9cl	OR9cl	OR9cl	OR9cl	OR9cl	OR9cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052735	98101526	99042617	99092232	00032926	00092722	01041323	01090505	02041014	02090925
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25				100%					100%	
#16	1.19	-0.25	100%	100%	100%	99%	100%			100%	99%	100%
#30	0.59	0.76	91%	97%	95%	96%	94%	100%	100%	99%	96%	97%
#50	0.3	1.74	36%	58%	43%	49%	53%	92%	97%	86%	65%	70%
#100	0.15	2.74	3%	19%	6%	27%	22%	83%	88%	66%	25%	38%
#200	0.073	3.78	2%	15%	3%	25%	13%	76%	62%	47%	16%	28%
#230	0.065	3.94	2%	14%	3%	23%	12%	72%	57%	44%	14%	26%
5M	0.005	7.64							29%			
2M	0.002	8.97							20%			
1M	0.001	9.97							14%			
	Notes											
Percentiles	ϕ_5		2.67	3.94	3.05	3.94	3.94	3.94	9.97	3.94	3.94	3.94
	ϕ_{16}		2.35	3.50	2.48	3.94	3.44	3.94	9.62	3.94	3.78	3.94
	ϕ_{25}		2.06	2.58	2.22	3.78	2.65	3.94	8.25	3.94	2.74	3.94
	ϕ_{50}		1.48	1.95	1.60	1.71	1.83	3.94	4.85	3.60	2.10	2.37
	ϕ_{75}		1.03	1.31	1.13	1.20	1.22	3.82	3.25	2.30	1.42	1.55
	ϕ_{84}		0.88	1.08	0.97	1.00	1.00	2.62	2.90	1.85	1.12	1.22
	ϕ_{95}		0.31	0.82	0.76	0.78	0.60	1.37	1.95	1.05	0.80	0.83
Distribution Parameters	Mean Grain Size (ϕ)		1.57	2.18	1.68	2.49	2.09	3.50	5.79	3.13	2.33	2.51
	Mean Grain Size (mm)		0.337	0.221	0.311	0.178	0.235	0.088	0.018	0.114	0.198	0.176
Classification	Mean Grain Size Classification		medium sand	fine sand	medium sand	fine sand	fine sand	NA	silt	NA	fine sand	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
OR9 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			OR9lt	OR9lt	OR9lt	OR9lt	OR9lt	OR9lt	OR9lt	OR9lt	OR9lt	OR9lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052737	98101527	99042618		00032927	00092723	01041324	01090506	02041015	02090926
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%	100%								
#16	1.19	-0.25	96%	99%								
#30	0.59	0.76	86%	97%			100%	100%	100%	100%	100%	
#50	0.3	1.74	57%	93%			99%	99%	99%	99%	99%	100%
#100	0.15	2.74	38%	85%			97%	99%	96%	98%	95%	99%
#200	0.073	3.78	28%	68%			77%	96%	83%	92%	80%	94%
#230	0.065	3.94	26%	63%			67%	95%	78%	90%	76%	91%
5M	0.005	7.64	16%				26%	51%	38%		42%	40%
2M	0.002	8.97	12%				20%	36%	25%		29%	28%
1M	0.001	9.97	9%				14%	27%	18%		23%	20%
	Notes			4/26/1990 (no recover		9/22/99 (no recovery)						
Percentiles	ϕ_5		9.97	3.94	-	-	9.97	9.97	9.97	3.94	9.97	9.97
	ϕ_{16}		7.64	3.94	-	-	9.63	9.97	9.97	3.94	9.97	9.97
	ϕ_{25}		4.30	3.94	-	-	7.90	9.97	8.97	3.94	9.60	9.35
	ϕ_{50}		2.10	3.94	-	-	5.50	7.75	6.53	3.94	6.75	6.90
	ϕ_{75}		1.12	3.35	-	-	3.80	5.62	4.22	3.94	4.02	5.10
	ϕ_{84}		0.80	2.80	-	-	3.40	4.90	3.70	3.94	3.50	4.45
	ϕ_{95}		-0.15	1.25	-	-	2.85	3.94	2.82	3.25	2.74	3.58
Distribution Parameters	Mean Grain Size (ϕ)		3.51	3.56	-	-	6.18	7.54	6.60	3.94	6.81	7.23
	Mean Grain Size (mm)		0.088	0.085	-	-	0.014	0.005	0.010	0.065	0.009	0.007
Classification	Mean Grain Size Classification		very fine sand	NA	-	-	silt	NA	silt	NA	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1a (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC1art	GLC1art	GLC1art	GLC1art	GLC1art	GLC1art	GLC1art	GLC1art	GLC1art	GLC1art
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052732	98101528	99042619	99092236	00032928	00092724	01041316	01090619	02041004	02090927
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25	100%	100%		100%						
#8	2.38	-1.25	99%	99%		99%					100%	
#16	1.19	-0.25	98%	99%	100%	99%			100%		99%	
#30	0.59	0.76	97%	98%	94%	98%	100%	100%	99%		99%	100%
#50	0.3	1.74	92%	97%	63%	95%	99%	97%	97%		97%	99%
#100	0.15	2.74	74%	77%	28%	63%	89%	85%	90%	100%	88%	88%
#200	0.073	3.78	58%	46%	13%	43%	65%	78%	70%	93%	62%	67%
#230	0.065	3.94	54%	41%	11%	40%	59%	74%	61%	89%	54%	64%
5M	0.005	7.64	22%				19%	28%	20%		22%	
2M	0.002	8.97	14%				13%	19%	14%		15%	
1M	0.001	9.97	10%				9%	13%	10%		11%	
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		8.60	3.94	3.55	3.94	8.30	9.47	8.50	3.94	8.80	3.94
	ϕ_{25}											
	ϕ_{50}		4.40	3.63	2.10	3.42	4.75	5.88	4.93	3.94	4.40	3.94
	ϕ_{75}											
	ϕ_{84}		2.20	2.40	1.08	2.08	2.98	2.90	3.05	3.94	2.90	2.92
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		5.07	3.32	2.24	3.15	5.34	6.08	5.49	3.94	5.37	3.60
	Mean Grain Size (mm)		0.030	0.100	0.211	0.113	0.025	0.015	0.022	0.065	0.024	0.082
Classification	Mean Grain Size Classification		silt	NA	fine sand	NA	silt	silt	silt	NA	silt	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1a (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl	GLC1acl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052733	98101529	99042620	99092235	00032929	00092725	01041317	01090620	02041005	02090928
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25		100%	100%							
#30	0.59	0.76	100%	99%	99%	100%	100%	100%	100%	100%	100%	100%
#50	0.3	1.74	80%	90%	85%	98%	96%	98%	97%	98%	95%	99%
#100	0.15	2.74	5%	29%	11%	89%	73%	87%	84%	86%	68%	96%
#200	0.073	3.78	2%	20%	7%	81%	61%	75%	66%	76%	50%	84%
#230	0.065	3.94	2%	17%	6%	75%	54%	67%	58%	70%	44%	77%
5M	0.005	7.64					16%	22%				
2M	0.002	8.97					10%	15%				
1M	0.001	9.97					7%	11%				
	Notes											
Percentiles	ϕ_5		2.74	3.94	3.94	3.94			3.94	3.94	3.94	3.94
	ϕ_{16}		2.59	3.94	2.67	3.94	7.64	8.75	3.94	3.94	3.94	3.94
	ϕ_{25}		2.47	3.20	2.55	3.94			3.94	3.94	3.94	3.94
	ϕ_{50}		2.13	2.40	2.21	3.94	4.35	5.35	3.94	3.94	3.78	3.94
	ϕ_{75}		1.80	1.98	1.87	3.94			3.25	3.80	2.47	3.94
	ϕ_{84}		1.55	1.82	1.75	3.38	2.27	3.00	2.74	2.93	2.14	3.78
	ϕ_{95}		1.00	1.20	1.03	2.05			1.88	1.98	1.74	2.82
Distribution Parameters	Mean Grain Size (ϕ)		2.09	2.59	2.21	3.75	4.75	5.70	3.54	3.60	3.29	3.89
	Mean Grain Size (mm)		0.235	0.166	0.216	0.074	0.037	0.019	0.086	0.082	0.102	0.068
Classification	Mean Grain Size Classification		fine sand	fine sand	fine sand	NA	silt	silt	NA	NA	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1a (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLCalt	GLCalt	GLCalt	GLCalt	GLCalt	GLCalt	GLCalt	GLCalt	GLCalt	GLCalt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052734	98101530	99042621	99092234	00032930	00092726	01041318	01090621	02041006	02090929
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%	100%								
#30	0.59	0.76	99%	99%		100%	100%			100%	100%	100%
#50	0.3	1.74	98%	99%	100%	99%	99%	100%	100%	99%	99%	99%
#100	0.15	2.74	85%	95%	92%	95%	93%	98%	97%	93%	94%	95%
#200	0.073	3.78	61%	69%	61%	74%	66%	74%	72%	62%	57%	60%
#230	0.065	3.94	58%	61%	53%	64%	57%	63%	63%	54%	45%	47%
5M	0.005	7.64			17%	21%	18%	21%				
2M	0.002	8.97			11%	14%	12%	13%				
1M	0.001	9.97			8%	9%	9%	10%				
	Notes											
Percentiles	ϕ_5		3.94	3.94					3.94	3.94	3.94	3.94
	ϕ_{16}		3.94	3.94	7.85	8.60	8.10	8.45	3.94	3.94	3.94	3.94
	ϕ_{25}		3.94	3.94					3.94	3.94	3.94	3.94
	ϕ_{50}		3.94	3.94	4.25	5.14	4.60	5.10	3.94	3.94	3.87	3.90
	ϕ_{75}		3.17	3.53					3.65	3.33	3.28	3.32
	ϕ_{84}		2.78	3.17	3.00	3.30	3.10	3.32	3.27	3.03	3.02	3.05
	ϕ_{95}		1.95	2.74					2.82	2.40	2.53	2.74
Distribution Parameters	Mean Grain Size (ϕ)		3.55	3.68	5.03	5.68	5.27	5.62	3.72	3.64	3.61	3.63
	Mean Grain Size (mm)		0.085	0.078	0.031	0.020	0.026	0.020	0.076	0.080	0.082	0.081
Classification	Mean Grain Size Classification		NA	NA	silt	silt	silt	silt	NA	NA	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1b (rt)

			05/27/98	10/15/98	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt	GLC1brt
Sieve Size	sieve size (mm)	sieve size (f)			99042622	99092239	00032931	00092727	01041313	01090622	02041007	02090930
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25										
#30	0.59	0.76				100%	100%	100%	100%	100%	100%	100%
#50	0.3	1.74			100%	99%	99%	99%	99%	99%	99%	99%
#100	0.15	2.74			61%	47%	87%	64%	97%	96%	84%	97%
#200	0.073	3.78			22%	31%	60%	46%	82%	80%	62%	73%
#230	0.065	3.94			18%	27%	52%	39%	74%	72%	52%	59%
5M	0.005	7.64							24%	22%		15%
2M	0.002	8.97							17%	16%		10%
1M	0.001	9.97							12%	12%		8%
	Notes		5/27/1998 (not sampled)	10/15/1998 (not sampled)								
Percentiles	ϕ_5		-	-	3.94	3.94	3.94	3.94			3.94	9.97
	ϕ_{16}		-	-	3.94	3.94	3.94	3.94	9.15	8.97	3.94	7.55
	ϕ_{25}		-	-	3.70	3.94	3.94	3.94			3.94	6.80
	ϕ_{50}		-	-	3.02	2.68	3.94	3.55	5.72	5.55	3.94	4.70
	ϕ_{75}		-	-	2.37	2.20	3.20	2.42			3.17	3.70
	ϕ_{84}		-	-	2.14	2.02	2.85	2.17	3.65	3.50	2.74	3.30
	ϕ_{95}		-	-	1.86	1.82	2.06	1.85			2.00	2.82
Distribution Parameters	Mean Grain Size (ϕ)		-	-	3.04	2.88	3.58	3.22	6.17	6.01	3.54	5.18
	Mean Grain Size (mm)		-	-	0.122	0.136	0.084	0.107	0.014	0.016	0.086	0.028
Classification	Mean Grain Size Classification		-	-	very fine sand	NA	NA	NA	silt	silt	NA	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1b (cl)

			05/27/98	10/15/98	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl	GLC1bcl
Sieve Size	sieve size (mm)	sieve size (f)			99042623	99092238	00032932	00092728	01041314	01090623	02041008	02090931
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25										
#30	0.59	0.76			100%	100%	100%	100%	100%	100%	100%	100%
#50	0.3	1.74			98%	98%	99%	99%	99%	98%	98%	99%
#100	0.15	2.74			29%	35%	36%	45%	50%	48%	34%	48%
#200	0.073	3.78			18%	20%	27%	32%	35%	37%	23%	30%
#230	0.065	3.94			16%	18%	24%	28%	31%	34%	20%	26%
5M	0.005	7.64					8%	9%	11%			
2M	0.002	8.97					5%	5%	7%			
1M	0.001	9.97					4%	3%	4%			
	Notes		5/27/1998 (not sampled)	10/15/1998 (not sampled)								
Percentiles	ϕ_5		-	-	3.94	3.94			9.60	3.94	3.94	3.94
	ϕ_{16}		-	-	3.94	3.94	5.80	6.30	6.70	3.94	3.94	3.94
	ϕ_{25}		-	-	3.12	3.42			5.05	3.94	3.58	3.94
	ϕ_{50}		-	-	2.43	2.50	2.50	2.65	2.74	2.70	2.48	2.70
	ϕ_{75}		-	-	2.07	2.10			2.22	2.20	2.10	2.21
	ϕ_{84}		-	-	1.94	1.96	1.98	2.02	2.03	2.01	1.95	2.03
	ϕ_{95}		-	-	1.78	1.79			1.82	1.80	1.78	1.82
Distribution Parameters	Mean Grain Size (ϕ)		-	-	2.77	2.76	3.43	3.66	3.82	2.88	2.84	3.08
	Mean Grain Size (mm)		-	-	0.147	0.148	0.093	0.079	0.071	0.136	0.140	0.119
Classification	Mean Grain Size Classification		-	-	fine sand	fine sand	very fine sand	very fine sand	very fine sand	NA	fine sand	very fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC1b (lt)

			05/27/98	10/15/98	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt	GLC1blt
Sieve Size	sieve size (mm)	sieve size (f)			99042624	99092237	00032933	00092729	01041315	01090624	02041009	02090932
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25						100%			100%	100%
#30	0.59	0.76				100%	100%	99%	100%		99%	99%
#50	0.3	1.74			100%	99%	99%	99%	99%	100%	97%	99%
#100	0.15	2.74			97%	83%	63%	93%	60%	96%	88%	87%
#200	0.073	3.78			83%	47%	44%	63%	35%	75%	57%	48%
#230	0.065	3.94			77%	39%	40%	54%	30%	66%	50%	40%
5M	0.005	7.64			30%	14%		18%				
2M	0.002	8.97			22%	8%		12%				
1M	0.001	9.97			16%	7%		7%				
	Notes		5/27/1998 (not sampled)	10/15/1998 (not sampled)								
Percentiles	ϕ_5		-	-			3.94	9.97	3.94	3.94	3.94	3.94
	ϕ_{16}		-	-	9.97	7.35	3.94	8.10	3.94	3.94	3.94	3.94
	ϕ_{25}		-	-			3.94	6.93	3.94	3.94	3.94	3.94
	ϕ_{50}		-	-	6.05	3.70	3.45	4.38	3.15	3.94	3.94	3.73
	ϕ_{75}		-	-			2.40	3.38	2.35	3.78	3.18	3.05
	ϕ_{84}		-	-	3.70	2.66	2.15	3.02	2.13	3.34	2.87	2.82
	ϕ_{95}		-	-			1.85	2.40	1.84	2.78	1.96	2.05
Distribution Parameters	Mean Grain Size (ϕ)		-	-	6.57	4.57	3.18	5.17	3.07	3.74	3.58	3.50
	Mean Grain Size (mm)		-	-	0.011	0.042	0.110	0.028	0.119	0.075	0.083	0.089
Classification	Mean Grain Size Classification				silt	silt	NA	silt	NA	NA	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC2 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt	GLC2rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052729	98101531	99042625	99092242	00032934	00092730	01041310	01090616	02041001	02090933
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25			100%	100%		100%				
#30	0.59	0.76	100%	100%	99%	99%	100%	99%	100%	100%	100%	100%
#50	0.3	1.74	60%	69%	62%	70%	69%	68%	77%	77%	82%	98%
#100	0.15	2.74	6%	14%	9%	20%	24%	26%	36%	48%	47%	82%
#200	0.073	3.78	2%	10%	6%	16%	10%	19%	26%	31%	34%	32%
#230	0.065	3.94	1%	9%	5%	15%	8%	18%	23%	25%	28%	25%
5M	0.005	7.64		5%								
2M	0.002	8.97		3%								
1M	0.001	9.97		1%								
	Notes											
Percentiles	ϕ_5						3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		2.55	2.70	2.60	3.78	3.34	3.94	3.94	3.94	3.94	3.94
	ϕ_{25}						2.71	2.89	3.83	3.94	3.94	3.94
	ϕ_{50}		1.93	2.10	1.97	2.12	2.16	2.16	2.40	2.67	2.65	3.40
	ϕ_{75}						1.53	1.52	1.78	1.82	1.95	2.88
	ϕ_{84}		1.15	1.28	1.16	1.27	1.27	1.25	1.45	1.45	1.63	2.61
	ϕ_{95}						0.92	0.89	0.97	0.97	1.03	1.93
Distribution Parameters	Mean Grain Size (ϕ)		1.88	2.03	1.91	2.39	2.26	2.21	2.81	2.88	2.74	3.41
	Mean Grain Size (mm)		0.272	0.245	0.266	0.191	0.209	0.217	0.143	0.136	0.150	0.094
Classification	Mean Grain Size Classification		medium sand	fine sand	medium sand	fine sand	fine sand	fine sand	fine sand	fine sand	NA	very fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC2 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl	GLC2cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052730	98101532	99042626	99092241	00032935	00092731	01041311	01090617	02041002	02090934
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25		100%			100%					
#30	0.59	0.76	100%	99%	100%	100%	99%	100%	100%	100%	100%	100%
#50	0.3	1.74	97%	86%	99%	97%	86%	98%	99%	96%	99%	99%
#100	0.15	2.74	37%	27%	57%	46%	17%	65%	39%	32%	47%	35%
#200	0.073	3.78	5%	19%	19%	16%	8%	12%	8%	13%	11%	5%
#230	0.065	3.94	3%	16%	15%	13%	6%	8%	6%	11%	9%	4%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5											
	ϕ_{16}		3.42	3.94	3.90	3.78	2.85	3.70	3.52	3.61	3.63	3.40
	ϕ_{25}											
	ϕ_{50}		2.52	2.35	2.93	2.67	2.26	3.02	2.55	2.46	2.68	2.50
	ϕ_{75}											
	ϕ_{84}		1.96	1.78	2.10	2.00	1.77	2.16	2.00	1.92	2.02	1.98
	ϕ_{95}											
Distribution Parameters	Mean Grain Size (ϕ)		2.63	2.69	2.98	2.82	2.29	2.96	2.69	2.66	2.78	2.63
	Mean Grain Size (mm)		0.161	0.155	0.127	0.142	0.204	0.129	0.155	0.158	0.146	0.162
Classification	Mean Grain Size Classification		fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	fine sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC2 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt	GLC2lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052731	98101533	99042627	99092240	00032936	00092732	01041312	01090618	02041003	02090935
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25										
#30	0.59	0.76	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
#50	0.3	1.74	86%	87%	86%	99%	95%	90%	90%	99%	88%	99%
#100	0.15	2.74	14%	9%	26%	91%	79%	47%	43%	91%	52%	72%
#200	0.073	3.78	2%	5%	20%	75%	44%	40%	37%	47%	43%	24%
#230	0.065	3.94	2%	4%	18%	70%	35%	37%	34%	37%	39%	20%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5				3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		2.71	2.65	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{25}				2.90	3.94	3.94	3.94	3.94	3.94	3.94	3.75
	ϕ_{50}		2.24	2.21	2.34	3.94	3.60	2.67	2.59	3.70	2.97	3.21
	ϕ_{75}				1.93	3.78	2.85	2.08	2.05	3.12	2.10	2.63
	ϕ_{84}		1.78	1.79	1.78	3.20	2.43	1.87	1.87	2.90	1.85	2.30
	ϕ_{95}				1.10	2.22	1.74	1.25	1.25	2.24	1.17	1.88
Distribution Parameters	Mean Grain Size (ϕ)		2.24	2.22	2.42	3.69	3.32	2.83	2.80	3.51	2.92	3.19
	Mean Grain Size (mm)		0.211	0.215	0.188	0.077	0.100	0.141	0.144	0.088	0.132	0.110
Classification	Mean Grain Size Classification		fine sand	fine sand	fine sand	NA	NA	NA	NA	NA	NA	very fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC3 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt	GLC3rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052728	98101534	99042628	99092248	00032940	00092733	01041301	01090613	02041025	02090939
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%	100%	100%		100%					
#30	0.59	0.76	99%	99%	99%	100%	99%	100%	100%	100%	100%	100%
#50	0.3	1.74	65%	75%	69%	94%	73%	89%	83%	86%	93%	99%
#100	0.15	2.74	12%	36%	34%	84%	45%	67%	61%	67%	74%	94%
#200	0.073	3.78	2%	24%	21%	57%	29%	44%	39%	50%	46%	70%
#230	0.065	3.94	1%	22%	17%	44%	23%	35%	32%	44%	37%	60%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5		3.46	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		2.66	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{25}		2.50	3.70	3.45	3.94	3.88	3.94	3.94	3.94	3.94	3.94
	ϕ_{50}		2.02	2.38	2.28	3.87	2.56	3.50	3.25	3.78	3.62	3.94
	ϕ_{75}		1.45	1.74	1.54	3.08	1.66	2.38	2.10	2.32	2.68	3.55
	ϕ_{84}		1.20	1.37	1.24	2.74	1.32	1.97	1.69	1.85	2.22	3.17
	ϕ_{95}		0.88	0.94	0.90	1.57	0.92	1.20	1.05	1.12	1.45	2.52
Distribution Parameters	Mean Grain Size (ϕ)		1.96	2.72	2.50	3.52	2.77	3.14	2.96	3.19	3.26	3.68
	Mean Grain Size (mm)		0.257	0.152	0.177	0.087	0.147	0.114	0.129	0.110	0.104	0.078
Classification	Mean Grain Size Classification		medium sand	fine sand	fine sand	NA	fine sand	NA	NA	NA	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC3 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl	GLC3cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052727	98101535	99042629	99092247	00032941	00092734	01041302	01090614	02041026	02090940
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.26	100%		100%	100%				100%		
#30	0.59	0.76	98%	100%	99%	99%	100%	100%	100%	99%	100%	100%
#50	0.3	1.74	44%	87%	58%	79%	98%	87%	89%	75%	86%	80%
#100	0.15	2.74	5%	55%	19%	56%	91%	67%	64%	44%	59%	45%
#200	0.073	3.78	2%	40%	12%	36%	64%	43%	34%	29%	40%	28%
#230	0.065	3.94	1%	37%	10%	28%	55%	35%	26%	25%	34%	23%
5M	0.005	7.64		13%								
2M	0.002	8.97		10%								
1M	0.001	9.97		7%								
	Notes											
Percentiles	ϕ_5				3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		2.45	7.20	3.20	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{25}				2.58	3.94	3.94	3.94	3.94	3.94	3.94	3.87
	ϕ_{50}		1.62	3.10	1.95	3.05	3.94	3.48	3.22	2.52	3.22	2.60
	ϕ_{75}				1.34	1.92	3.35	2.33	2.30	1.74	2.14	1.88
	ϕ_{84}		1.00	1.85	1.12	1.50	3.01	1.88	1.93	1.38	1.82	1.54
	ϕ_{95}				0.85	0.95	2.15	1.13	1.21	0.92	1.12	1.00
Distribution Parameters	Mean Grain Size (ϕ)		1.69	4.05	2.09	2.83	3.63	3.10	3.12	2.84	2.99	2.88
	Mean Grain Size (mm)		0.310	0.060	0.235	0.141	0.081	0.117	0.115	0.140	0.126	0.136
Classification	Mean Grain Size Classification		medium sand	silt	fine sand	NA	NA	NA	very fine sand	fine sand	NA	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC3 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt	GLC3lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052726	98101536	99042630	99092246	00032942	00092735	01041303	01090615	02041027	02090941
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25	100%			100%	100%					100%
#30	0.59	0.76	99%	100%	100%	99%	99%	100%	100%		100%	98%
#50	0.3	1.74	48%	98%	88%	59%	79%	95%	88%	100%	97%	88%
#100	0.15	2.74	4%	88%	52%	26%	44%	78%	67%	99%	89%	58%
#200	0.073	3.78	1%	51%	34%	17%	13%	57%	49%	91%	68%	46%
#230	0.065	3.94	1%	44%	27%	14%	10%	49%	41%	86%	58%	25%
5M	0.005	7.64								27%		13%
2M	0.002	8.97								21%		10%
1M	0.001	9.97								15%		9%
	Notes											
Percentiles	ϕ_5		2.72	3.94	3.94	3.94	3.94	3.94	3.94	9.97	3.94	9.97
	ϕ_{16}		2.48	3.94	3.94	3.83	3.68	3.94	3.94	9.80	3.94	6.70
	ϕ_{25}		2.27	3.94	3.94	2.85	3.37	3.94	3.94	8.05	3.94	3.94
	ϕ_{50}		1.70	3.80	2.85	2.01	2.56	3.92	3.72	6.20	3.94	3.43
	ϕ_{75}		1.22	3.11	2.10	1.35	1.85	2.89	2.35	4.65	3.45	2.17
	ϕ_{84}		1.03	2.84	1.85	1.12	1.50	2.39	1.95	4.06	3.00	1.87
	ϕ_{95}		0.83	2.03	1.16	0.85	0.95	1.74	1.15	3.25	2.00	1.05
Distribution Parameters	Mean Grain Size (ϕ)		1.74	3.53	2.88	2.32	2.58	3.42	3.20	6.69	3.63	4.00
	Mean Grain Size (mm)		0.300	0.087	0.136	0.200	0.167	0.094	0.109	0.010	0.081	0.063
Classification	Mean Grain Size Classification		medium sand	NA	NA	fine sand	fine sand	NA	NA	silt	NA	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC4 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt	GLC4rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052723	98101537	99042631	99092245	00032937	00092736	01041307	01090610	02041028	02090936
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25			100%						100%	
#8	2.38	-1.25	100%		97%	100%	100%	100%			99%	100%
#16	1.19	-0.25	99%		93%	99%	98%	98%	100%	100%	98%	99%
#30	0.59	0.76	82%		70%	84%	74%	79%	91%	98%	93%	98%
#50	0.3	1.74	8%		19%	32%	12%	37%	52%	95%	78%	93%
#100	0.15	2.74	2%		12%	25%	5%	31%	36%	68%	56%	71%
#200	0.073	3.78	1%		8%	18%	4%	26%	19%	39%	40%	44%
#230	0.065	3.94	1%		7%	15%	4%	24%	16%	35%	38%	40%
5M	0.005	7.64										21%
2M	0.002	8.97										15%
1M	0.001	9.97										11%
	Notes			10/15/98 (no recovery)								
Percentiles	ϕ_5						2.74	3.94	3.94	3.94	3.94	9.97
	ϕ_{16}		1.63		2.16	3.90	1.68	3.94	3.94	3.94	3.94	8.75
	ϕ_{25}						1.52	3.85	3.40	3.94	3.94	6.85
	ϕ_{50}		1.18		1.14	1.40	1.14	1.43	1.85	3.39	3.15	3.55
	ϕ_{75}						0.75	0.85	1.18	2.48	1.87	2.55
	ϕ_{84}		0.65		0.15	0.76	0.34	0.50	0.93	2.15	1.35	2.15
	ϕ_{95}						-0.12	-0.08	0.30	1.74	0.35	1.35
Distribution Parameters	Mean Grain Size (ϕ)		1.15	-	1.15	2.02	1.05	2.35	2.24	3.16	2.81	4.82
	Mean Grain Size (mm)		0.450	-	0.451	0.247	0.482	0.196	0.212	0.112	0.142	0.035
Classification	Mean Grain Size Classification		medium sand	-	medium sand	fine sand	medium sand	fine sand	fine sand	NA	NA	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC4 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl	GLC4cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052724	98101538	99042632	99092244	00032938	00092737	01041308	01090611	02041029	02090937
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25	100%	100%	100%	100%						
#8	2.38	-1.25	99%	98%	98%	99%	100%		100%	100%	100%	100%
#16	1.19	-0.25	93%	89%	90%	95%	96%	100%	97%	96%	96%	95%
#30	0.59	0.76	61%	50%	62%	74%	70%	79%	67%	75%	72%	66%
#50	0.3	1.74	10%	6%	10%	40%	11%	19%	18%	27%	27%	18%
#100	0.15	2.74	2%	2%	2%	33%	2%	12%	11%	20%	18%	10%
#200	0.073	3.78	2%	2%	1%	28%	1%	11%	8%	18%	16%	8%
#230	0.065	3.94	2%	2%	1%	26%	1%	10%	8%	17%	12%	7%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5				2.35	3.94						
	ϕ_{16}		1.62	1.51	1.62	3.94	1.65	2.15	2.00	3.94	3.78	2.00
	ϕ_{25}				1.45	3.94						
	ϕ_{50}		0.98	0.76	0.99	1.45	1.10	1.23	1.10	1.28	1.23	1.08
	ϕ_{75}				0.30	0.73						
	ϕ_{84}		0.02	-0.12	-0.02	0.28	0.21	0.52	0.18	0.34	0.25	0.13
	ϕ_{95}				-0.90	-0.25						
Distribution Parameters	Mean Grain Size (ϕ)		0.87	0.72	0.86	1.89	0.99	1.30	1.09	1.85	1.75	1.07
	Mean Grain Size (mm)		0.546	0.609	0.550	0.270	0.505	0.406	0.469	0.277	0.297	0.476
Classification	Mean Grain Size Classification		coarse sand	coarse sand	coarse sand	NA	coarse sand	medium sand	medium sand	medium sand	medium sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC4 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/6/2001	4/10/2002	9/9/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt	GLC4lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052725	98101539	99042633	99092243	00032939	00092738	01041309	01090612	02041030	02090938
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25		100%		100%			100%			
#8	2.38	-1.25	100%	99%		99%	100%	100%	99%	100%		
#16	1.19	-0.25	97%	88%	100%	92%	96%	99%	97%	99%	100%	100%
#30	0.59	0.76	42%	44%	98%	58%	79%	97%	68%	96%	97%	96%
#50	0.3	1.74	5%	21%	87%	31%	32%	88%	24%	78%	78%	55%
#100	0.15	2.74	2%	15%	71%	24%	12%	78%	17%	61%	64%	26%
#200	0.073	3.78	1%	10%	44%	17%	6%	49%	13%	45%	54%	18%
#230	0.065	3.94	1%	8%	38%	14%	6%	39%	11%	41%	52%	17%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5				3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		1.45	2.55	3.94	3.84	2.53	3.94	3.00	3.94	3.94	3.94
	ϕ_{25}				3.94	2.58	2.10	3.94	1.70	3.94	3.94	2.87
	ϕ_{50}		0.60	0.61	3.54	1.05	1.38	3.75	1.16	3.45	3.94	1.91
	ϕ_{75}				2.50	0.25	0.84	2.85	0.52	1.91	1.95	1.26
	ϕ_{84}		-0.01	-0.16	1.92	-0.02	0.46	2.14	0.20	1.42	1.43	1.04
	ϕ_{95}				1.02	-0.70	-0.20	0.96	-0.18	0.80	0.85	0.78
Distribution Parameters	Mean Grain Size (ϕ)		0.68	1.00	3.13	1.62	1.46	3.28	1.45	2.94	3.10	2.30
	Mean Grain Size (mm)		0.624	0.500	0.114	0.325	0.364	0.103	0.365	0.131	0.116	0.204
Classification	Mean Grain Size Classification		coarse sand	coarse sand	NA	medium sand	medium sand	NA	medium sand	NA	NA	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC5 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt	GLC5rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052720	98101540	99042634	99092204	00032943	00092701	01041304	01090525	02041119	02091001
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%			100%	100%		100%			
#16	1.19	-0.25	99%		100%	99%	98%	100%	98%	100%		
#30	0.59	0.76	92%		99%	73%	86%	99%	88%	97%	100%	
#50	0.3	1.74	55%		95%	41%	69%	92%	77%	93%	99%	100%
#100	0.15	2.74	26%		80%	34%	58%	64%	67%	86%	92%	91%
#200	0.073	3.78	5%		53%	27%	41%	30%	52%	64%	64%	61%
#230	0.065	3.94	3%		47%	26%	36%	25%	47%	56%	56%	54%
	0.005	7.64								21%	23%	18%
	0.002	8.97								16%	16%	13%
	0.001	9.97								11%	12%	9%
	Notes			10/15/98 (no recovery)								
Percentiles	ϕ_5		3.78		3.94	3.94	3.94	3.94	3.94	9.97		
	ϕ_{16}		3.23		3.94	3.94	3.94	3.94	3.94	8.97	8.97	8.15
	ϕ_{25}		2.79		3.94	3.94	3.94	3.94	3.94	7.20		
	ϕ_{50}		1.91		3.86	1.46	3.22	3.17	3.85	4.60	4.60	4.35
	ϕ_{75}		1.21		2.92	0.69	1.40	2.34	1.95	3.25		
	ϕ_{84}		0.98		2.48	0.33	0.88	2.02	1.15	2.85	3.02	2.98
	ϕ_{95}		0.30		1.74	-0.10	0.00	1.32	0.05	1.25		
Distribution Parameters	Mean Grain Size (ϕ)		2.04		3.43	2.32	2.68	3.14	2.98	5.47	5.53	5.16
	Mean Grain Size (mm)		0.243		0.093	0.201	0.156	0.113	0.127	0.023	0.022	0.028
Classification	Mean Grain Size Classification		fine sand		NA	fine sand	NA	very fine sand	NA	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC5 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl	GLC5cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052721	98101541	99042635	99092202	00032944	00092702	01041305	01090526	02041120	02091002
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25				100%						
#8	2.38	-1.25	100%	100%	100%	97%	100%					
#16	1.19	-0.25	98%	97%	98%	96%	99%	100%		100%	100%	
#30	0.59	0.76	88%	74%	78%	89%	92%	97%	100%	98%	99%	
#50	0.3	1.74	34%	27%	31%	64%	69%	83%	99%	93%	96%	100%
#100	0.15	2.74	6%	15%	14%	48%	49%	73%	94%	85%	85%	88%
#200	0.073	3.78	3%	12%	7%	38%	35%	61%	73%	68%	60%	62%
#230	0.065	3.94	3%	10%	5%	34%	32%	58%	65%	62%	53%	58%
	0.005	7.64							17%	23%	19%	21%
	0.002	8.97							12%	17%	13%	13%
	0.001	9.97							9%	12%	10%	8%
	Notes											
Percentiles	ϕ_5					3.94	3.94	3.94				
	ϕ_{16}		2.38	2.65	2.62	3.94	3.94	3.94	7.90	9.15	8.30	8.50
	ϕ_{25}				2.10	3.94	3.94	3.94				
	ϕ_{50}		1.45	1.26	1.35	2.60	2.70	3.94	5.10	5.10	4.30	4.75
	ϕ_{75}				0.82	1.32	1.48	2.54				
	ϕ_{84}		0.83	0.34	0.45	0.95	1.10	1.65	3.22	2.80	2.80	2.90
	ϕ_{95}				-0.10	-0.09	0.32	0.90				
Distribution Parameters	Mean Grain Size (ϕ)		1.55	1.42	1.47	2.50	2.58	3.18	5.41	5.68	5.13	5.38
	Mean Grain Size (mm)		0.341	0.375	0.360	0.177	0.167	0.111	0.024	0.019	0.028	0.024
Classification	Mean Grain Size Classification		medium sand	medium sand	medium sand	NA	NA	NA	silt	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
GLC5 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/13/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt	GLC5lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052722	98101542	99042636	99092201	00032945	00092703	01041306	01090527	02041121	02091003
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%			100%						
#16	1.19	-0.25	99%		100%	99%	100%	100%	100%	100%		100%
#30	0.59	0.76	97%		99%	98%	99%	99%	96%	99%		99%
#50	0.3	1.74	78%		98%	95%	97%	97%	87%	92%	100%	95%
#100	0.15	2.74	23%		92%	75%	86%	56%	81%	59%	87%	67%
#200	0.073	3.78	2%		61%	43%	67%	31%	62%	36%	64%	41%
#230	0.065	3.94	2%		52%	38%	63%	27%	56%	33%	60%	38%
	0.005	7.64							21%		21%	
	0.002	8.97							14%		15%	
	0.001	9.97							10%		11%	
	Notes			10/15/98 (no recovery)								
Percentiles	ϕ_5		3.62		3.94	3.94	3.94	3.94	9.97	3.94	9.97	3.94
	ϕ_{16}		3.08		3.94	3.94	3.94	3.94	8.60	3.94	8.75	3.94
	ϕ_{25}		2.70		3.94	3.94	3.94	3.94	7.20	3.94	7.30	3.94
	ϕ_{50}		2.23		3.94	3.53	3.94	3.00	4.60	3.15	4.90	3.40
	ϕ_{75}		1.80		3.30	2.74	3.34	2.27	3.07	2.25	3.30	2.45
	ϕ_{84}		1.43		3.00	2.30	2.85	2.05	2.25	1.98	2.90	2.14
	ϕ_{95}		0.85		2.22	1.74	1.92	1.78	0.85	1.30	2.12	1.74
Distribution Parameters	Mean Grain Size (ϕ)		2.25		3.63	3.26	3.58	3.00	5.15	3.02	5.52	3.16
	Mean Grain Size (mm)		0.211		0.081	0.105	0.084	0.125	0.028	0.123	0.022	0.112
Classification	Mean Grain Size Classification		fine sand		NA	NA	NA	NA	silt	NA	silt	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
MR1 (rt)

			5/27/1998	10/16/1998	4/30/1999	9/22/1999	3/30/2000	9/28/2000	4/13/2001	9/5/2001	4/10/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt	MR1 rt
Sieve Size	sieve size (mm)	sieve size (ϕ)		98101601	99043003		00033048	00092845	01041319	01090501	02041010	02091007
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25								100%		
#8	2.38	-1.25					100%			99%	100%	100%
#16	1.19	-0.25		100%			99%	100%	100%	98%	99%	99%
#30	0.59	0.76		99%			99%	99%	99%	96%	97%	99%
#50	0.3	1.74		99%			98%	98%	95%	94%	83%	92%
#100	0.15	2.74		97%	100%		94%	94%	78%	88%	53%	78%
#200	0.073	3.78		85%	99%		75%	82%	60%	66%	36%	64%
#230	0.065	3.94		80%	98%		68%	78%	56%	57%	33%	60%
5M	0.005	7.64			52%		30%	41%				
2M	0.002	8.97			34%		21%	29%				
1M	0.001	9.97			23%		15%	20%				
	Notes		5/27/1998 (no samples)			9/22/1999 (no samples)						
Percentiles	ϕ_5		-	3.94	9.97	-	9.97	9.97	3.94	3.94	3.94	3.94
	ϕ_{16}		-	3.94	9.97	-	9.80	9.97	3.94	3.94	3.94	3.94
	ϕ_{25}		-	3.94	9.79	-	8.40	9.40	3.94	3.94	3.94	3.94
	ϕ_{50}		-	3.94	7.80	-	5.70	6.75	3.94	3.94	2.92	3.94
	ϕ_{75}		-	3.94	5.80	-	3.78	4.25	2.90	3.35	2.00	2.95
	ϕ_{84}		-	3.82	5.05	-	3.30	3.60	2.39	2.92	1.66	2.32
	ϕ_{95}		-	2.90	4.20	-	2.50	2.50	1.74	1.25	0.90	1.30
Distribution Parameters	Mean Grain Size (ϕ)		-	3.90	7.80	-	6.27	6.83	3.42	3.60	2.84	3.40
	Mean Grain Size (mm)		-	0.067	0.005	-	0.013	0.009	0.093	0.082	0.140	0.095
Classification	Mean Grain Size Classification		-	NA	silt	-	silt	silt	NA	NA	NA	NA
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
MR1 (cl)

			5/27/1998	10/16/1998	4/30/1999	9/22/1999	3/30/2000	9/28/2000	4/13/2001	9/5/2001	4/10/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl	MR1 cl
Sieve Size	sieve size (mm)	sieve size (ϕ)		98101602	99043002		00033049	00092846	01041320	01090502	02041011	02091008
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25			100%		100%		100%	100%	100%	100%
#16	1.19	-0.25			99%		99%	100%	99%	99%	99%	99%
#30	0.59	0.76		100%	99%		99%	99%	99%	99%	98%	99%
#50	0.3	1.74		99%	99%		99%	99%	98%	98%	97%	98%
#100	0.15	2.74		98%	97%		98%	97%	96%	96%	94%	96%
#200	0.073	3.78		86%	79%		87%	87%	79%	84%	78%	87%
#230	0.065	3.94		80%	69%		82%	80%	70%	77%	71%	81%
5M	0.005	7.64		34%	29%			36%		33%	36%	33%
2M	0.002	8.97		26%	21%			25%		24%	25%	24%
1M	0.001	9.97		17%	14%			18%		17%	18%	17%
	Notes		5/27/1998 (no samples)			9/22/1999 (no samples)						
Percentiles	ϕ_5		-	9.97	9.97	-	3.94	9.97	3.94	9.97	9.97	9.97
	ϕ_{16}		-	9.97	9.65	-	3.94	9.97	3.94	9.97	9.97	9.97
	ϕ_{25}		-	9.10	8.30	-	3.94	8.97	3.94	8.80	8.97	8.80
	ϕ_{50}		-	6.35	5.70	-	3.94	6.50	3.94	6.25	6.20	6.30
	ϕ_{75}		-	4.35	3.85	-	3.94	4.35	3.85	4.10	3.85	4.40
	ϕ_{84}		-	3.82	3.50	-	3.85	3.84	3.47	3.78	3.40	3.85
	ϕ_{95}		-	3.00	2.85	-	3.00	2.95	2.80	2.82	2.40	2.85
Distribution Parameters	Mean Grain Size (ϕ)		-	6.71	6.28	-	3.91	6.66	3.78	6.45	6.41	6.60
	Mean Grain Size (mm)		-	0.010	0.013	-	0.067	0.010	0.073	0.011	0.012	0.010
Classification	Mean Grain Size Classification		-	silt	silt	-	NA	silt	NA	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
MR1 (lt)

			5/27/1998	10/16/1998	4/30/1999	9/22/1999	3/30/2000	9/28/2000	4/13/2001	9/5/2001	4/10/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt	MR1 lt
Sieve Size	sieve size (mm)	sieve size (ϕ)		98101603	99043001		00033050	00092847	01041321	01090503	02041012	02091009
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25										
#16	1.19	-0.25			100%							
#30	0.59	0.76			99%			100%	100%			
#50	0.3	1.74		100%	98%			99%	99%			100%
#100	0.15	2.74		99%	93%		100%	99%	99%	100%		99%
#200	0.073	3.78		98%	77%		99%	98%	98%	99%	100%	97%
#230	0.065	3.94		97%	71%		99%	98%	97%	98%	99%	95%
5M	0.005	7.64			36%		48%	56%	50%	47%	50%	34%
2M	0.002	8.97			24%		30%	35%	30%	32%	32%	24%
1M	0.001	9.97			17%		21%	24%	19%	22%	22%	17%
	Notes		5/27/1998 (no samples)			9/22/1999 (no samples)						
Percentiles	ϕ_5		-	3.94	9.97	-	9.97	9.97	9.97	9.97	9.97	9.97
	ϕ_{16}		-	3.94	9.97	-	9.97	9.97	9.97	9.97	9.97	9.97
	ϕ_{25}		-	3.94	8.85	-	9.50	9.87	9.41	9.65	9.65	8.82
	ϕ_{50}		-	3.94	6.18	-	7.50	8.00	7.64	7.42	7.64	6.68
	ϕ_{75}		-	3.94	3.82	-	5.70	6.00	5.65	5.61	5.75	5.15
	ϕ_{84}		-	3.94	3.30	-	5.01	5.20	4.95	4.95	5.08	4.61
	ϕ_{95}		-	3.94	2.35	-	4.23	4.22	4.10	4.15	4.23	3.94
Distribution Parameters	Mean Grain Size (ϕ)		-	3.94	6.48	-	7.60	7.94	7.53	7.63	7.70	7.09
	Mean Grain Size (mm)		-	0.065	0.011	-	0.005	0.004	0.005	0.005	0.005	0.007
Classification	Mean Grain Size Classification		-	NA	silt	-	silt	silt	silt	silt	silt	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
DC1 (rt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			DC1rt[1]	DC1rt	DC1rt	DC1rt	DC1rt	DC1rt	DC1rt	DC1rt	DC1rt	DC1rt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052710	98101543	99042637	99092215	00032946	00092704	01042317	01090522	02041116	02091004
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25		100%								
#16	1.19	-0.25	100%	98%		100%	100%	100%	100%		100%	
#30	0.59	0.76	99%	77%	100%	99%	92%	93%	99%	100%	99%	100%
#50	0.3	1.74	93%	47%	98%	92%	63%	70%	91%	95%	94%	97%
#100	0.15	2.74	83%	27%	82%	60%	13%	37%	56%	72%	59%	68%
#200	0.073	3.78	54%	20%	47%	42%	6%	27%	31%	45%	33%	42%
#230	0.065	3.94	50%	17%	38%	38%	5%	26%	26%	40%	28%	36%
5M	0.005	7.64	22%									12%
2M	0.002	8.97	16%									8%
1M	0.001	9.97	11%									7%
	Notes		fine split[1]									
Percentiles	ϕ_5			3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	9.97
	ϕ_{16}			3.94	3.94	3.94	2.68	3.94	3.94	3.94	3.94	7.01
	ϕ_{25}			3.02	3.94	3.94	2.50	3.94	3.94	3.94	3.94	5.65
	ϕ_{50}			1.64	3.68	3.31	2.00	2.35	2.99	3.58	3.10	3.45
	ϕ_{75}			0.83	2.95	2.27	1.33	1.52	2.20	2.61	2.28	2.50
	ϕ_{84}			0.42	2.62	2.00	1.02	1.14	1.93	2.21	2.02	2.20
	ϕ_{95}			-0.10	1.92	1.30	0.38	0.45	1.25	1.74	1.55	1.80
Distribution Parameters	Mean Grain Size (ϕ)			2.00	3.41	3.08	1.90	2.73	3.07	3.24	3.02	4.22
	Mean Grain Size (mm)			0.250	0.094	0.118	0.268	0.151	0.119	0.106	0.123	0.054
Classification	Mean Grain Size Classification			fine sand	NA	NA	medium sand	fine sand	very fine sand	NA	NA	silt
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
DC1 (cl)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			DC1cl	DC1cl	DC1cl	DC1cl	DC1cl	DC1cl	DC1cl	DC1cl	DC1cl	DC1cl
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052708	98101544	99042638	99092214	00032947	00092705	01042318	01090523	02041117	02091005
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										
#8	2.38	-1.25	100%	100%	100%	100%	100%	100%	100%	100%	100%	
#16	1.19	-0.25	98%	97%	99%	98%	96%	99%	98%	99%	99%	100%
#30	0.59	0.76	85%	73%	84%	90%	80%	91%	88%	91%	92%	93%
#50	0.3	1.74	38%	25%	37%	65%	48%	62%	53%	66%	68%	69%
#100	0.15	2.74	4%	5%	3%	44%	11%	34%	11%	38%	36%	41%
#200	0.073	3.78	1%	3%	1%	41%	8%	27%	3%	29%	18%	24%
#230	0.065	3.94	1%	3%	1%	40%	8%	26%	3%	28%	16%	22%
5M	0.005	7.64										
2M	0.002	8.97										
1M	0.001	9.97										
	Notes											
Percentiles	ϕ_5		2.70	2.74	2.68	3.94	3.94	3.94	3.51	3.94	3.94	3.94
	ϕ_{16}		2.38	2.20	2.35	3.94	2.61	3.94	2.62	3.94	3.94	3.94
	ϕ_{25}		2.12	1.74	2.09	3.94	2.35	3.94	2.40	3.94	3.38	3.71
	ϕ_{50}		1.50	1.22	1.48	2.45	1.68	2.16	1.80	2.31	2.30	2.42
	ϕ_{75}		0.96	0.68	0.95	1.35	0.92	1.30	1.12	1.39	1.45	1.50
	ϕ_{84}		0.78	0.30	0.76	1.00	0.50	1.00	0.87	1.02	1.09	1.12
	ϕ_{95}		0.00	-0.16	0.02	0.14	-0.18	0.25	0.05	0.25	0.33	0.45
Distribution Parameters	Mean Grain Size (ϕ)		1.55	1.24	1.53	2.46	1.60	2.62	1.76	2.42	2.44	2.61
	Mean Grain Size (mm)		0.341	0.423	0.346	0.181	0.331	0.163	0.295	0.186	0.184	0.164
Classification	Mean Grain Size Classification		medium sand	medium sand	medium sand	NA	medium sand	fine sand	medium sand	NA	fine sand	fine sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

SDIP Sediment Monitoring Program
Grain Size Distribution and Mean Grain Size Classification
DC1 (lt)

			5/27/1998	10/15/1998	4/26/1999	9/22/1999	3/29/2000	9/27/2000	4/23/2001	9/5/2001	4/11/2002	9/10/2002
			spring 1998	fall 1998	spring 1999	fall 1999	spring 2000	fall 2000	spring 2001	fall 2001	spring 2002	fall 2002
			DC1lt	DC1lt	DC1lt	DC1lt	DC1lt	DC1lt	DC1lt	DC1lt	DC1lt	DC1lt
Sieve Size	sieve size (mm)	sieve size (ϕ)	98052707	98101545	99042639	99092213	00032948	00092705b	01042319	01090524	02041118	02091006
1-1/2"	38.1	-5.25										
3/4"	19.04	-4.25										
3/8"	9.53	-3.25										
#4	4.76	-2.25										100%
#8	2.38	-1.25			100%		100%	100%	100%	100%	100%	99%
#16	1.19	-0.25		100%	98%		96%	99%	98%	99%	99%	96%
#30	0.59	0.76		99%	88%	100%	83%	95%	92%	95%	95%	83%
#50	0.3	1.74	100%	98%	42%	99%	36%	64%	61%	69%	63%	43%
#100	0.15	2.74	99%	91%	19%	90%	8%	38%	33%	40%	30%	13%
#200	0.073	3.78	96%	61%	13%	66%	5%	28%	15%	29%	13%	8%
#230	0.065	3.94	94%	51%	12%	57%	4%	25%	12%	27%	11%	7%
5M	0.005	7.64	37%									
2M	0.002	8.97	21%									
1M	0.001	9.97	15%									
	Notes											
Percentiles	ϕ_5		9.97	3.94	3.94	3.94	3.78	3.94	3.94	3.94	3.94	3.94
	ϕ_{16}		9.80	3.94	3.25	3.94	2.45	3.94	3.72	3.94	3.58	2.62
	ϕ_{25}		8.65	3.94	2.47	3.94	2.12	3.94	3.20	3.94	3.02	2.32
	ϕ_{50}		6.80	3.94	1.57	3.94	1.44	2.27	2.14	2.40	2.12	1.55
	ϕ_{75}		5.20	3.30	1.03	3.38	0.92	1.40	1.30	1.52	1.36	0.95
	ϕ_{84}		4.60	2.98	0.85	3.00	0.70	1.10	1.02	1.18	1.10	0.68
	ϕ_{95}		3.85	2.15	0.05	2.17	-0.18	0.76	0.25	0.76	0.76	-0.18
Distribution Parameters	Mean Grain Size (ϕ)		7.07	3.62	1.89	3.63	1.53	2.67	2.29	2.51	2.27	1.62
	Mean Grain Size (mm)		0.007	0.081	0.270	0.081	0.346	0.157	0.204	0.176	0.208	0.326
Classification	Mean Grain Size Classification		silt	NA	medium sand	NA	medium sand	fine sand	fine sand	NA	fine sand	medium sand
Notes:	See explanation of notes, abbreviations and footnotes attached.											

Appendix 5

APPENDIX 5

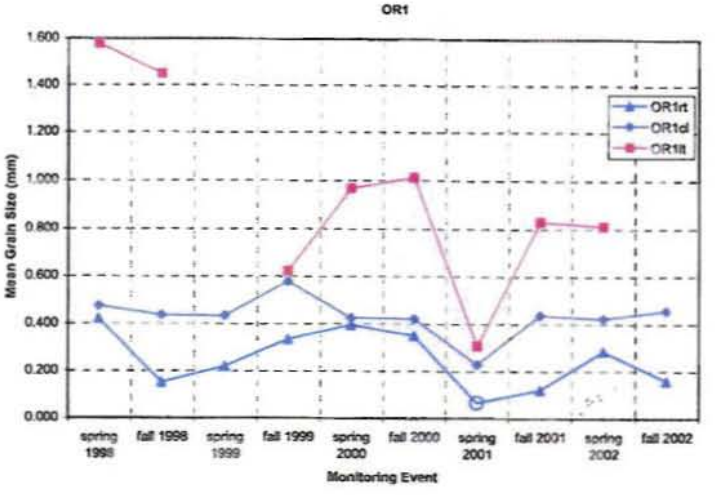
MEAN GRAIN-SIZE VALUES OVER TIME

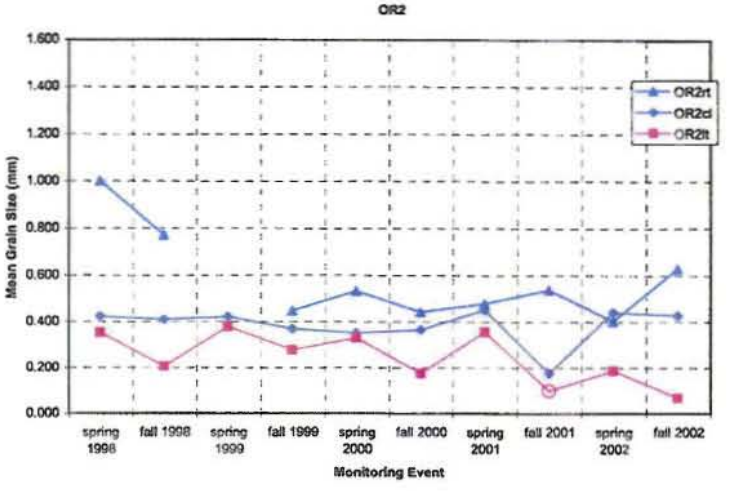
The following graphs show mean grain size values plotted over time for each monitoring site for the following years: 1998, 1999, 2000, 2001, and 2002. The sample names and their respective locations are as follows:

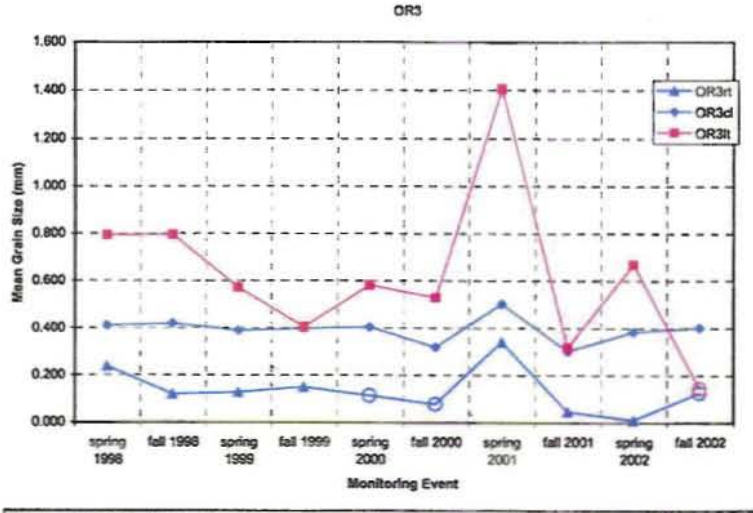
Sample Location Name

Old River:	Grant Line Canal:	Middle River:	Doughty Cut:
OR1 (rt)	GLC1a (rt)	MR1 (rt)	DC1 (rt)
OR1 (cl)	GLC1a (cl)	MR1 (cl)	DC1 (cl)
OR1 (lt)	GLC1a (lt)	MR1 (lt)	DC1 (lt)
OR2 (rt)	GLC1b (rt)		
OR2 (cl)	GLC1b (cl)		
OR2 (lt)	GLC1b (lt)		
OR3 (rt)	GLC2 (rt)		
OR3 (cl)	GLC2 (cl)		
OR3 (lt)	GLC2 (lt)		
OR4 (rt)	GLC3 (rt)		
OR4 (cl)	GLC3 (cl)		
OR4 (lt)	GLC3 (lt)		
OR5 (rt)	GLC4 (rt)		
OR5 (cl)	GLC4 (cl)		
OR5 (lt)	GLC4 (lt)		
OR6 (rt)	GLC5 (rt)		
OR6 (cl)	GLC5 (cl)		
OR6 (lt)	GLC5 (lt)		
OR7 (rt)			
OR7 (cl)			
OR7 (lt)			
OR8 (rt)			
OR8 (cl)			
OR8 (lt)			
OR9 (rt)			
OR9 (cl)			
OR9 (lt)			

SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Old River (OR1, OR2, OR3)

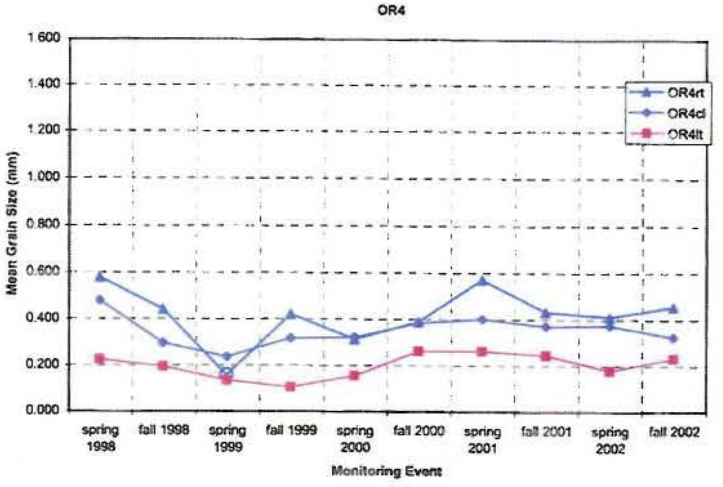


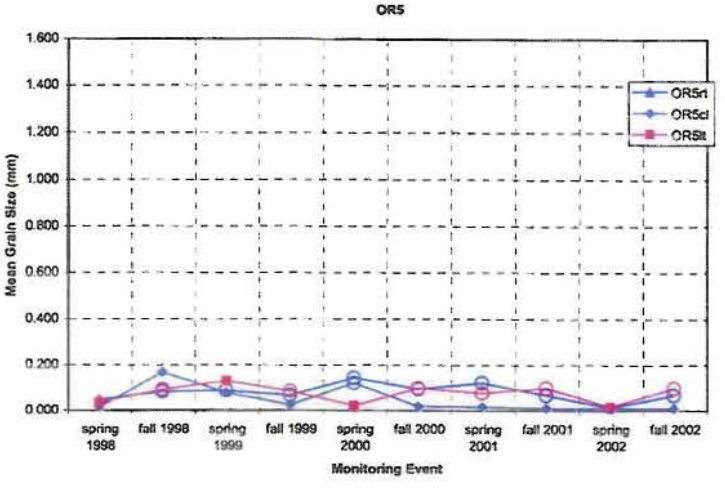


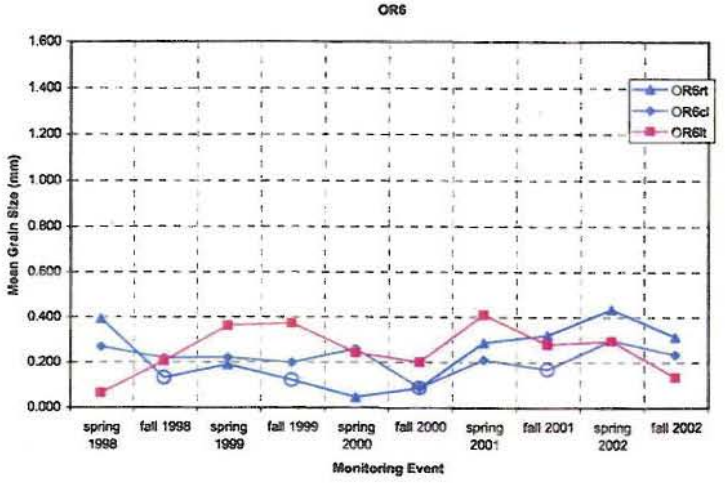


The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Old River (OR4, OR5, OR6)

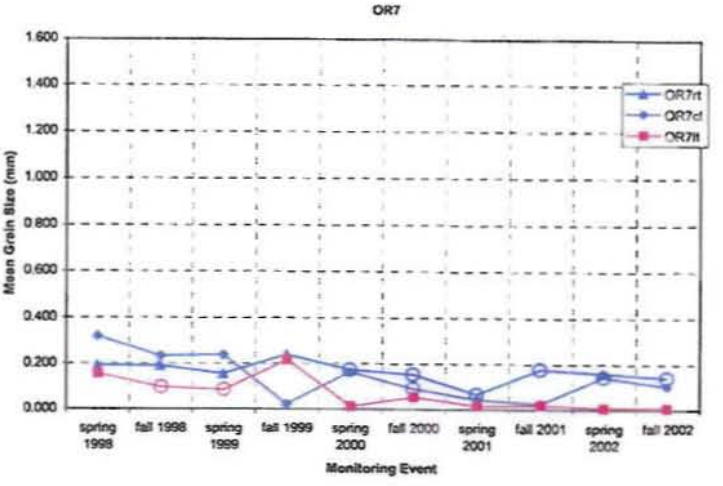


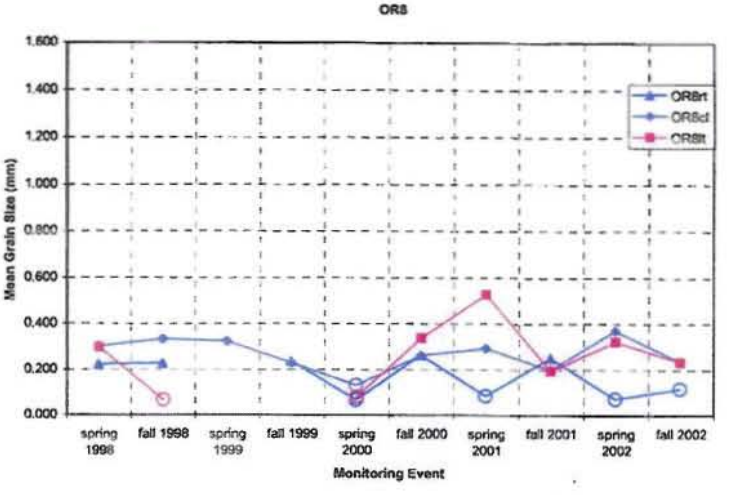


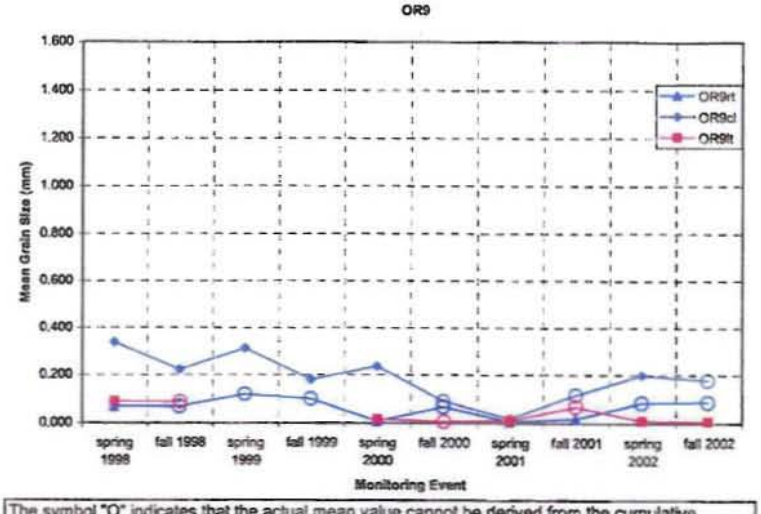


The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Old River (OR7, OR8, OR9)

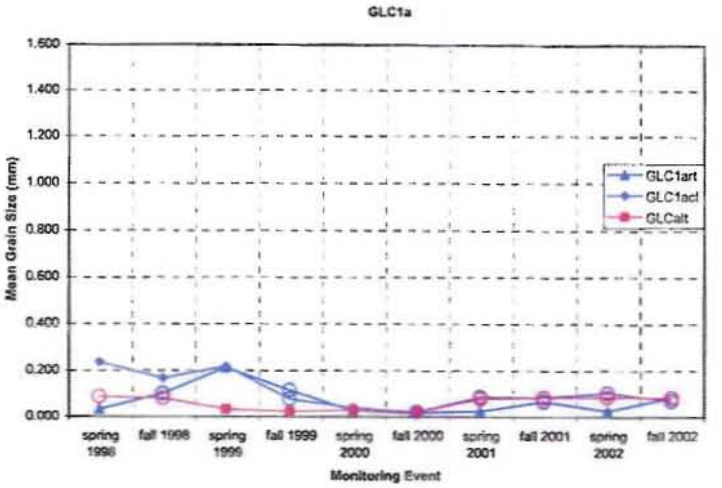


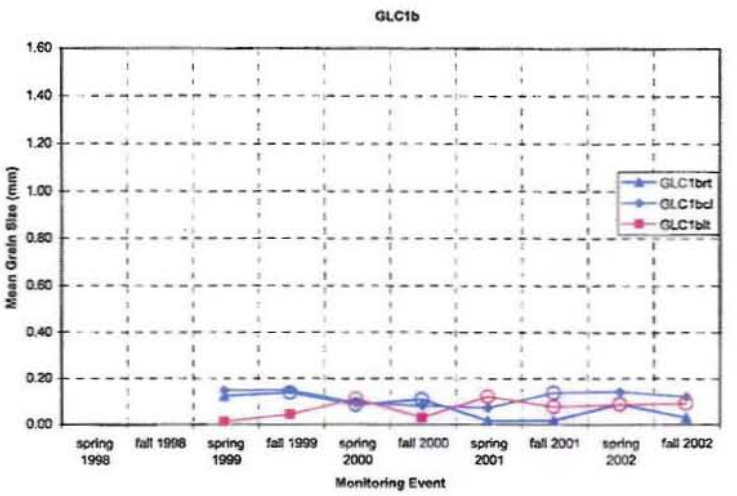


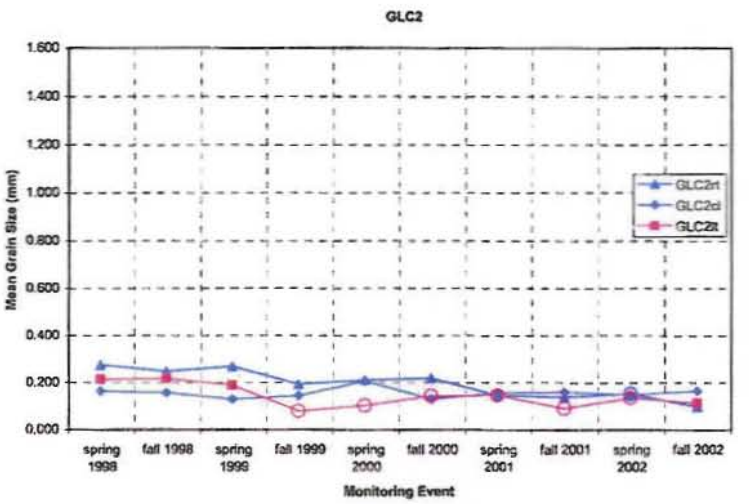


The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Grant Line Canal (GLC1a, GLC1b, GLC2)

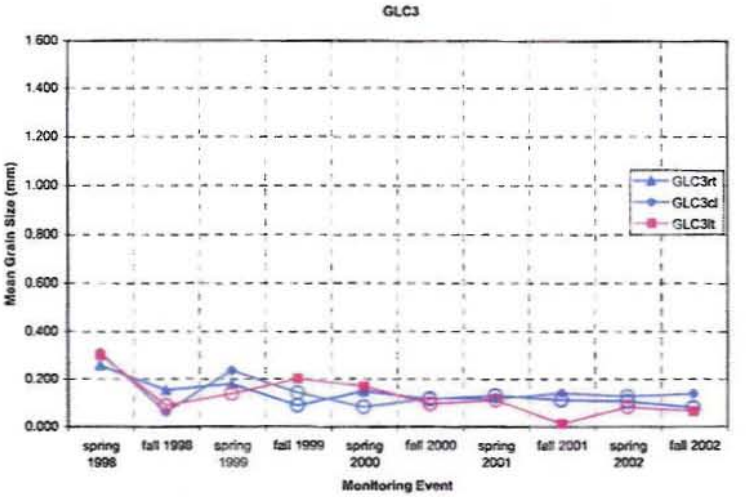


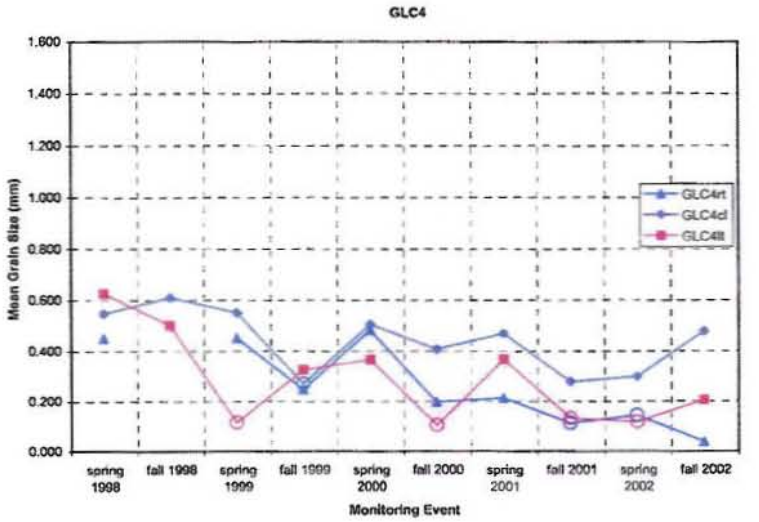


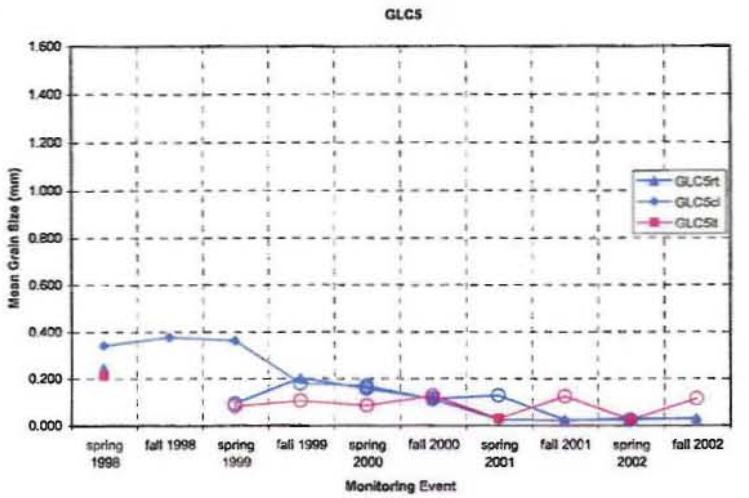


The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Grant Line Canal (GLC3, GLC4, GLC5)

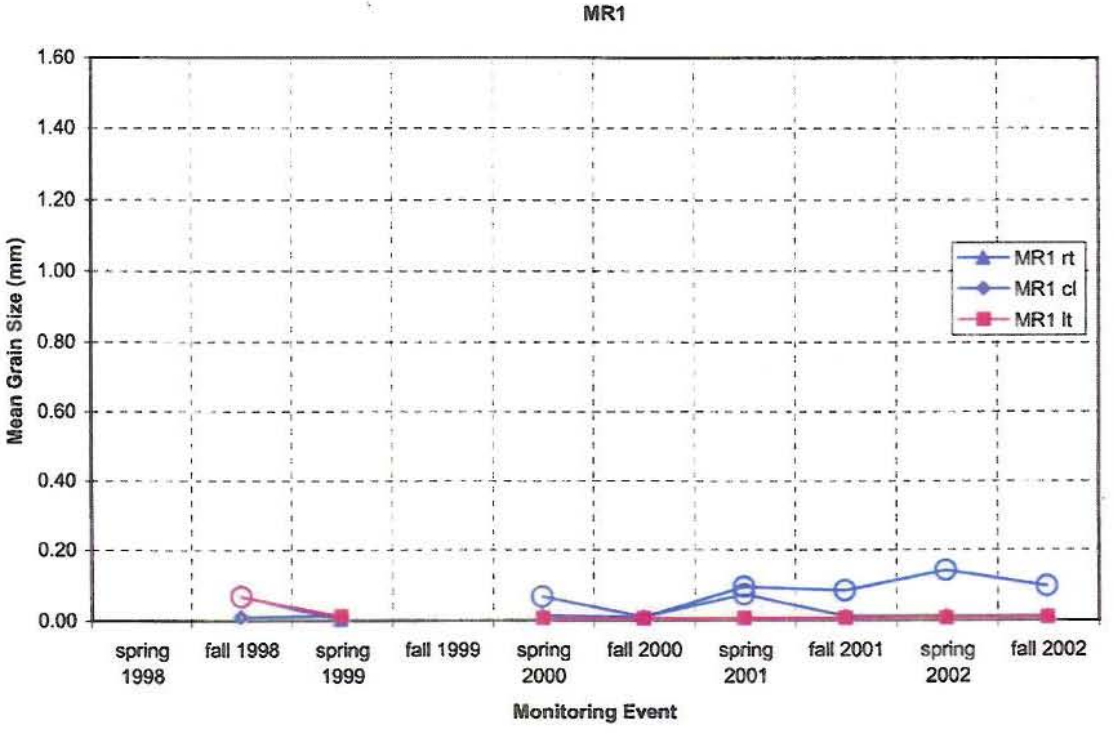


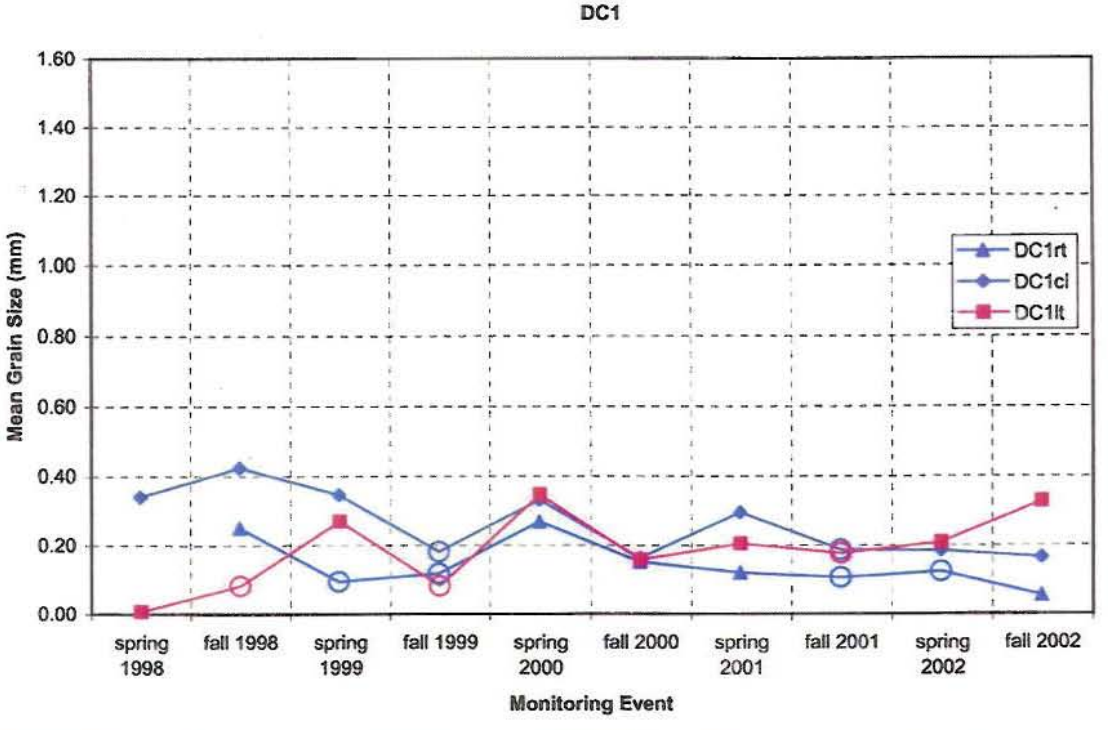




The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

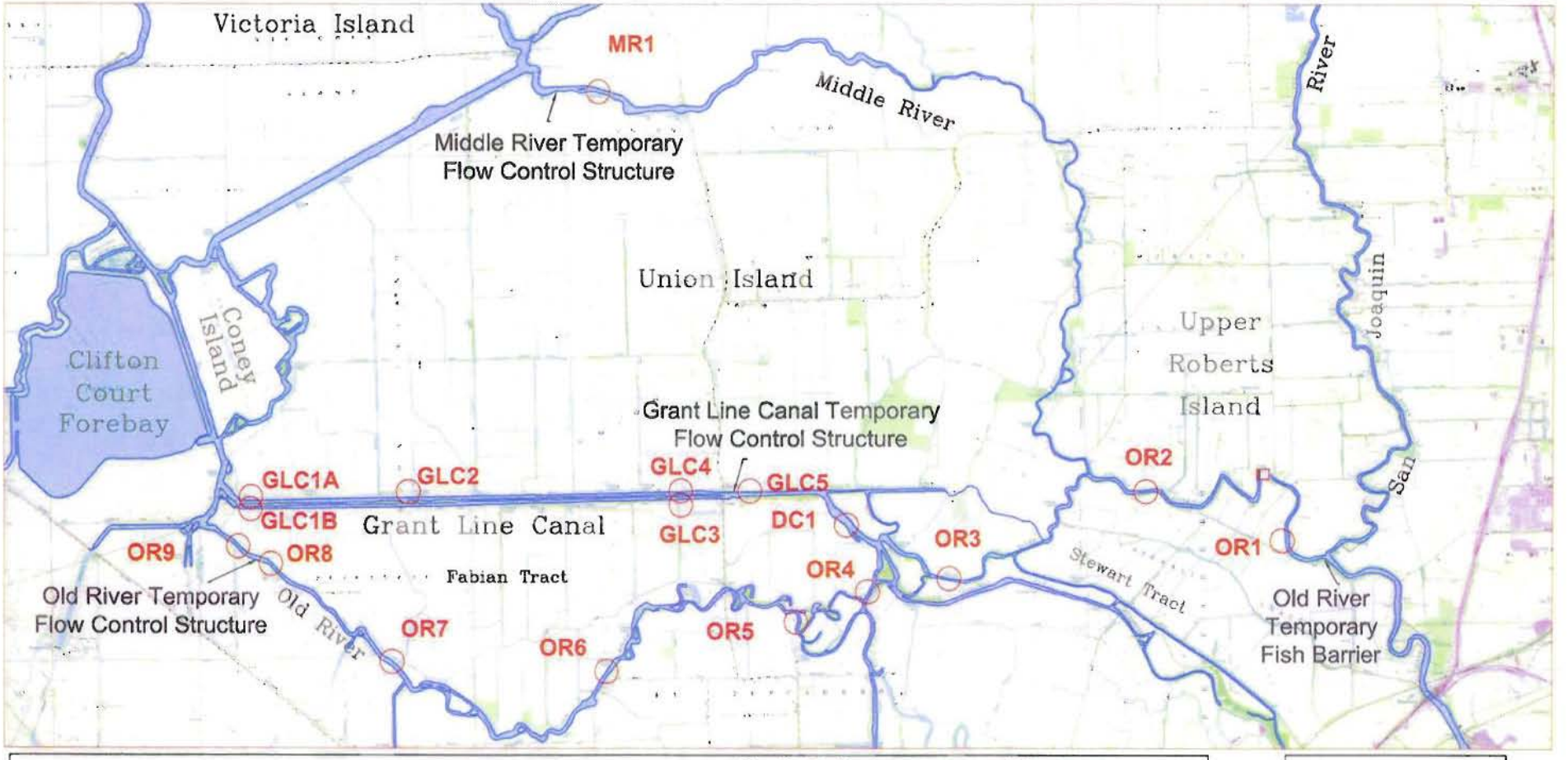
SDIP Sediment Monitoring Program
Mean Grain Size Values Over Time
Middle River and Doughty Cut (MR1, DC1)





The symbol "O" indicates that the actual mean value cannot be derived from the cumulative distribution curve, but is at least equal to or less than the value shown.

Miscellaneous



SDIP Sediment Monitoring Sites

SCALE

0 1 2 3 miles

Prepared By:
Department of Water Resources
Groundwater and Geology Section
Central District
December, 2003

N

South Delta Improvement Program
Sediment Monitoring

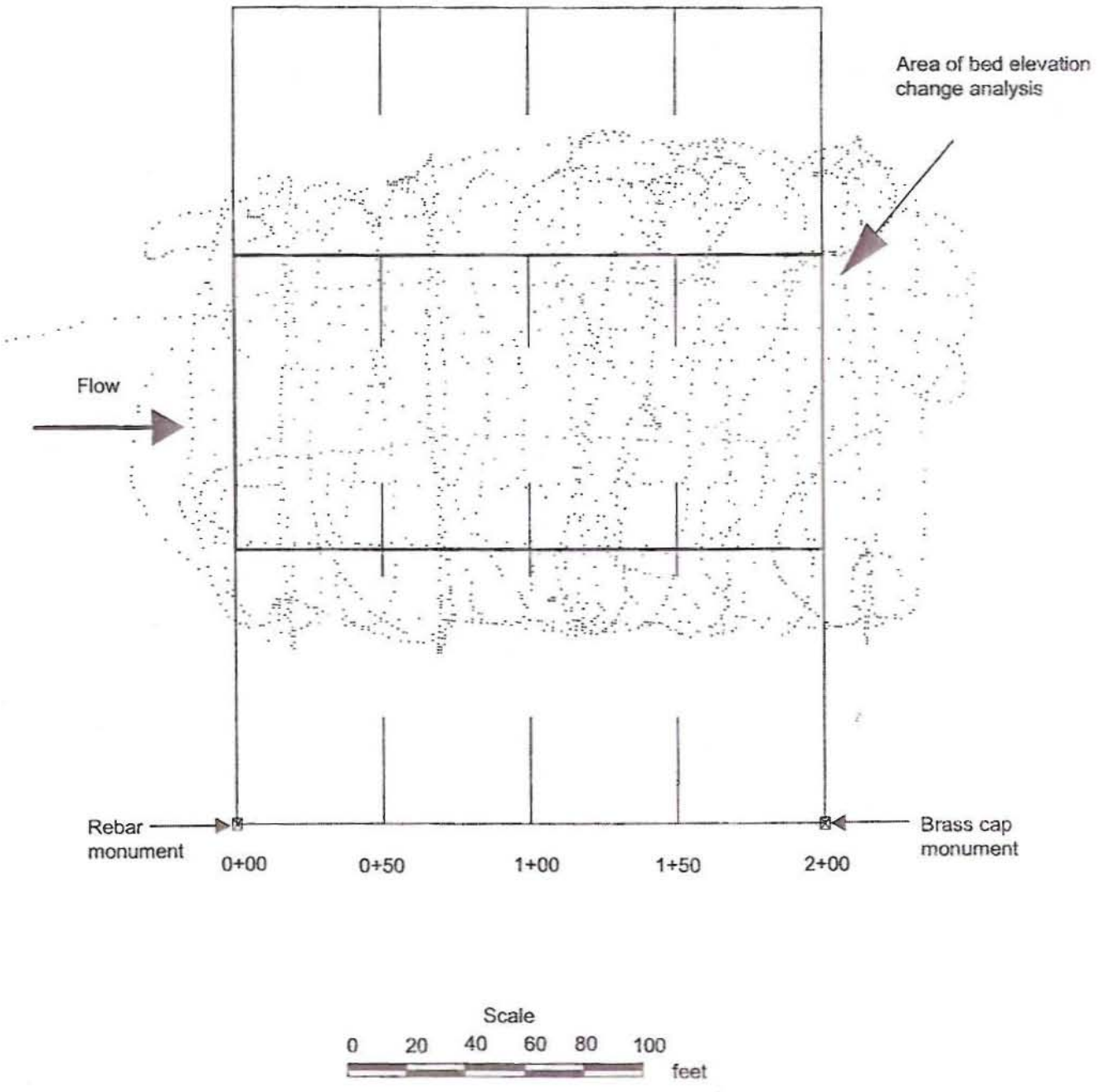
Figure 1

Bed Elevation Survey
and
Bed Sediment Monitoring Sites

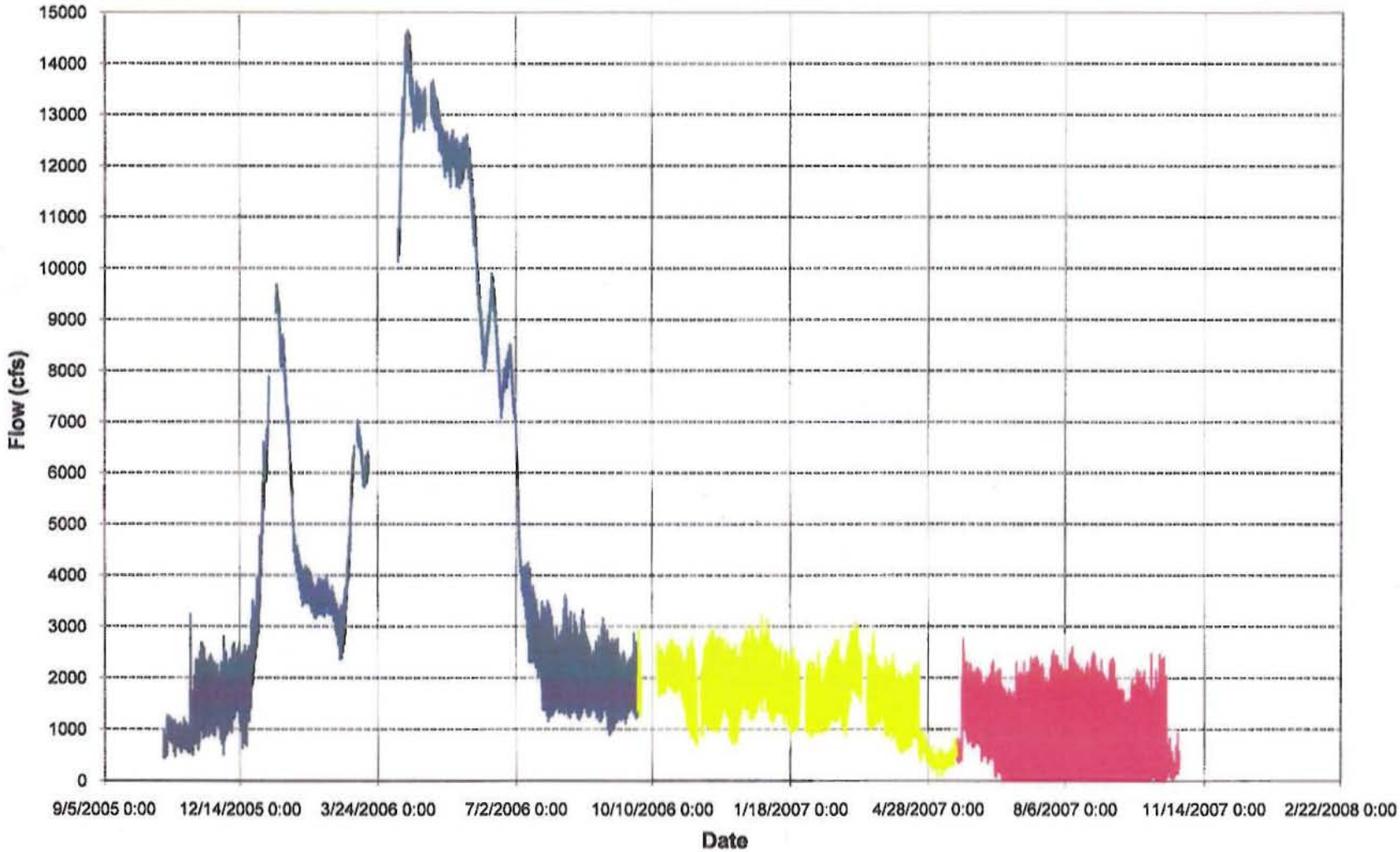
Figure 2
Distribution of Data Points Collected With Linked GPS and Acoustic Sounder

OR1 4/10/2000

(Approximately 2156 data points collected)



Old River @ Head flow data (2005-2007)
Figure 3



Temporary Barriers
(Installation and Removal Dates)
Table 1

	Middle River							Old River near Tracy (DMC)							Spring Head of Old River					
	Installation			Notched	Removal			Installation			Notched	Removal			Installation			Removal		
Year	Started	Closed	Completed		Started	Breached	Completed	Started	Closed	Completed		Started	Breached	Completed	Started	Closed	Completed	Started	Breached	Completed
1987			15-May		End of Sep		End of Sep													
1988	26-May		28-May		23-Sep		23-Sep													
1989			12-Apr		26-Sep		26-Sep													
1990			16-Apr		29-Sep		29-Sep													
1991	4-Apr		5-Apr		27-Sep		27-Sep	14-Aug		30-Aug		28-Sep		Oct-13 (i)						
1992	8-Apr		10-Apr		28-Sep		29-Sep	[illegible]		[illegible]		30-Sep		Oct-09(ii)	[illegible]		[illegible]	[illegible]		[illegible]
1993	14-Jun		17-Jun		23-Sep		24-Sep	12-May		1-Jun		27-Sep		6-Oct						
1994	23-Apr		25-Apr		29-Sep		5-Oct	[illegible]		[illegible]		28-Sep		10-Oct	[illegible]		[illegible]	18-May		20-May
1995	8-Aug		11-Aug		10-Oct		10-Oct	3-Aug		8-Aug		27-Sep		6-Oct	(vii)					
1996	18-May		20-May		29-Sep		29-Sep	12-May		10-Jun (iii)		29-Sep		16-Oct	6-May		11-May	16-May		Sep-03 (iv)
1997	3-Apr		7-Apr		27-Sep		28-Sep	8-Apr		17-Apr		30-Sep		7-Oct	9-Apr		16-Apr	15-May		19-May
1998	(vii)							(vii)							(vii)					
1999	15-May		18-May		29-Sep		2-Oct	15-May		28-May		28-Sep		8-Oct	(vii)					
2000	4-Apr		6-Apr		1-Oct		7-Oct	4-Apr		16-Apr		1-Oct		7-Oct	5-Apr		16-Apr	19-May		2-Jun
2001	20-Apr		23-Apr		12-Nov	13-Nov	17-Nov	23-Apr		26-Apr		13-Nov	14-Nov	26-Nov	17-Apr		26-Apr	23-May		30-May
2002	10-Apr		15-Apr		20-Nov	20-Nov	23-Nov	1-Apr		18-Apr		16-Nov	16-Nov	29-Nov	2-Apr		18-Apr	22-May	24-May	7-Jun
2003	12-Apr	15-Apr	23-Apr	17-Sept.	7-Nov	8-Nov	10-Nov	1-Apr	14-Apr	22-Apr	17-Sept.	13-Nov	15-Nov	25-Nov	1-Apr	15-Apr	21-Apr	16-May	18-May	3-Jun
2004	9-Apr	12-Apr	13-Apr	23-Sept.	9-Nov.	10-Nov.	12-Nov	1-Apr	15-Apr	20-Apr	10-Sept.	8-Nov.	8-Nov.	1-Dec.	1-Apr	15-Apr	21-Apr	19-May	24-May	10-Jun
2005	10-May	12-May	17-May	15-Sept.	7-Nov	8-Nov	9-Nov.	9-May	31-May	6-Jun	15-Sept.	8-Nov.	10-Nov	30-Nov	xi	xi	xi	xi	xi	xi
2006	5-Jul	7-Jul	8-Jul	1-Oct	17-Nov	18-Nov	20-Nov	7-Jul	17-Jul	31-Jul	1-Oct	13-Nov	16-Nov	8-Dec	xi	xi	xi	xi	xi	xi
2007	7-Apr	10-Apr	10-Apr	21-Sept.	19-Nov	20-Nov	29-Nov	2-Apr	18-Apr	23-Apr	21-Sept.	5-Nov	7-Nov	18-Nov	11-Apr	20-Apr	26-Apr	19-May	22-May	6-Jun

	Fall Head of Old River (v)							Grant Line Canal							
	Installation			Notched	Removal			Installation			Flashboards	Notched	Removal		
Year	Started	Closed	Completed		Started	Breached	Completed	Started	Closed	Completed	Adjusted (x)		Started	Breached	Completed
1968 (xi)	30-Sep		3-Oct		15-Nov		21-Nov								
1987	9-Sep		11-Sep				28-Nov								
1988	22-Sep		28-Sep				2-Dec								
1989	27-Sep		28-Sep		27-Nov		30-Nov								
1990	10-Sep		11-Sep				27-Nov								
1991	9-Sep		13-Sep		22-Nov		27-Nov								
1992	8-Sep		11-Sep		30-Nov		4-Dec								
1993	8-Nov (vii)		11-Nov		3-Dec		7-Dec								
1994	6-Sep		8-Sep		28-Nov		30-Nov								
1995	(vii)														
1996	30-Sep		3-Oct		18-Nov		22-Nov	17-Jun		10-Jul			2-Oct		15-Oct
1997								21-May		4-Jun			26-Sep		15-Oct
1998	(vii)							(vii)							
1999	(vii)							15-May		3-Jun			23-Sep		5-Oct
2000	27-Sep		7-Oct		27-Nov		8-Dec	19-May		1-Jun			1-Oct		7-Oct
2001	24-Sep		6-Oct		22-Nov	22-Nov	2-Dec	2-May		9-May			11-Nov	12-Nov	18-Nov
2002	24-Sep		4-Oct		11-Nov	12-Nov	21-Nov	1-Apr		12-Jun			14-Nov	18-Nov	25-Nov
2003	2-Sept.	15-Sept.	18-Sep	16-Sept.	3-Nov	4-Nov	13-Nov	1-Apr. (Partial) 9_June (Complete)	11-Jun (complete)	23-Apr. (Partial) 17-June (Complete)	16-Sept.		10-Nov	13-Nov	25-Nov
2004	7-Sep	27-Sept.	29-Sept.	28-Sept.	1-Nov.	2-Nov.	12-Nov	1-Apr. (Partial) 2-June (Complete)	9-Apr (partial) 5-June (complete)	28_Apr (partial) 9-June (complete)	9-Sept.		11-Nov	12-Nov	6-Dec
2005	19-Sept.	28-Sept.	30-Sept.	29-Sep	7-Nov	8-Nov	15-Nov	2-May (xii)	14-Jul	18-Jul	14-July & 14-Sept.		7-Nov	15-Nov	30-Nov
2006	xiii	xiii	xiii	xiii	xiii	xiii	xiii	7-Jul (xii)	20-Jul	26-Jul	20-Jul & 1-Oct		14_nov	21-Nov	6-Dec
2007	5-Oct	17-Oct	18-Oct	18-Oct.	9-Nov	10-Nov	29-Nov.	9-Apr (Partial) 27-Apr (Completed)	17-Apr (Partial) 10-May (Completed)	17-Apr (Partial) 11-May (Completed)	17-Apr (Partial) 10-May (Completed)	21-Sept.	6-Nov	8-Nov	29-Nov

(i) Barrier notched on Sept. 28, 1991. Construction resumed on Oct. 10 and finished on Oct. 13.
(ii) Barrier notched on Sept. 30, 1992. Construction resumed on Oct. 2 and finished on Oct. 9.
(iii) Construction was delayed on 5/17 and resumed on 6/5 due to high flows.
(iv) Barrier was breached on 5/ 16 on an emergency basis, but complete removal wasn't achieved until 9/3, after Corps demanded permit compliance of complete removal.
(v) Barrier was installed in previous years.
(vi) Installation delayed due to high flows.
(vii) Not installed due to high San Joaquin River flows.
(viii) Not installed upon DFG's request.
(xi) In 1963 and 1964 an old rock barge was intentionally flooded and sunk at the Head of Old River in an experiment to see if it could serv as a temporary barrier.
Results were not promising and rock was placed directly for the 1968 barrier. No barriers were in place in 1965, 1966, or 1967.
(x) Flashboards adjusted to allow minimum 6-inches flow for fish passage.
(xii) Spring HORB not installed due to high flows in the San Joaquin River
(xiii) Only above water portion of boat ramps constructed due to high flows. North abutment not installed until full closure of barrier. No "partial" barrier configuration for 2005 & 2006.

Table 2
SDIP Sediment Monitoring Program
Mean Grain-Size Values Over Time
Old River, Grant Line Canal, Middle River and Doughty Cut

	Approximate Mean Grain Size (mm)																			
Date	**OR1-lb**	**OR1-cl**	**OR1-rb**	**OR2-lb**	**OR2-cl**	**OR2-rb**	**OR3-lb**	**OR3-cl**	**OR3-rb**	**OR4-lb**	**OR4-cl**	**OR4-rb**	**OR5-lb**	**OR5-cl**	**OR5-rb**	**OR6-lb**	**OR6-cl**	**OR6-rb**	**OR7-lb**	**OR7-cl**
5/27/1998	1576	474	420	352	421	1000	792	408	235	224	479	577	33	12	47	63	266	392	153	318
10/15/1998	1447	434	151	204	408	770	794	418	117	193	296	441	91	165	81	204	217	130	95	232
4/26/1999		432	219	376	419		569	386	125	133	236	156	128	75	84	360	218	188	84	237
9/22/1999	621	577	334	275	367	446	401	395	146	103	316	419	82	23	65	370	196	119	215	21
3/20/2000	966	423	394	328	349	532	580	401	111	153	320	313	18	118	141	240	256	44	11	163
9/28/2000	1012	420	349	173	363	440	527	316	75	261	383	388	95	16	93	198	85	85	51	89
4/23/2001	305	228	65	354	450	477	1404	500	338	261	401	569	74	13	119	408	207	283	13	43
9/6/2001	827	435	120	98	176	537	314	300	42	244	369	430	97	7	65	275	166	317	18	23
4/11/2002	810	422	284	185	439	401	667	381	8	178	372	409	15	7	11	292	294	432	5	141
9/9/2002		456	159	67	426	627	136	400	122	231	324	454	95	7	65	132	232	311	5	102
3/24/2003	1244.9	498.8	263.3	65.4	416.6	397.7	544.9	420.8	12.8	137.8	229.0	408.1	205.7	56.9	184.9	148.7	93.6	34.6	44.4	226.6
9/9/2003	1145.7	550.4	168.0	214.4	408.3	515.3	104.1	223.3	17.4	190.2	314.6	457.4	21.1	14.5	15.2	280.1	108.8	21.6	37.8	26.3
4/5/2004	907.9	508.0	268.4	188.1	435.7	260.9	250.0	255.6	12.4	170.1	347.9	383.6	65.0	13.9	54.7	94.6	74.9	14.5	37.3	81.6
9/30/2004		411.7	78.0	73.3	158.4	260.5	283.2	94.1	82.9	181.5	327.6	518.7	29.3	14.6	131.3	134.3	144.1	11.5	25.6	61.1
4/5/2005		521.0	324.1	348.6	447.0	662.0	613.5	316.3	92.8	209.6	275.7	411.5	43.0	16.8	17.7	259.5	287.5	14.5	52.0	35.9
10/13/2005		437.2	161.2	174.1	352.8	747.8	507.3	203.8	70.7	172.7	317.4	444.9	65.4	19.2	19.2	51.6	98.8	14.3	44.1	48.1
5/30/2006		424.3	258.9	407.8	494.3		710.3	422.5	251.2	320.5	460.9	616.4	201.9	188.7	34.18	383.1	255.8	15.58	57	83.61
9/27/2006	1006.2	445.2	59.19	153.9	252.4	702.3	569.7	398.4	69.76	307	482.6	542.9	52.94	26.66	59.77	172.9	176.3	14.74	79.45	210
5/1/2007	125.4	590.2	263.9	160.8	267.9		521.9	358.2	32.51	428.5	437.8	433.8	56.75	23.39	47.53	226.9	249.7	16.76	12.47	53.62
10/23/2007		582	306.3	93.08	143.6	161.4	315.4	336.4	36.25	361.7	360.3	379.3	92.55	160.7	67.14	247.1	258.7	191.7	36.99	96.7
Cumulative Mean grain size - Spring (2004-2007)	-	**511**	**279**	**276**	**411**	**461**	**524**	**338**	**97**	**282**	**381**	**461**	**92**	**61**	**39**	**241**	**217**	**15**	**40**	**64**
Cumulative Mean grain size - Fall (2004-2007)	-	**469**	**151**	**124**	**227**	**468**	**419**	**258**	**65**	**256**	**372**	**471**	**60**	**55**	**69**	**151**	**169**	**58**	**47**	**104**

Table 2
SDIP Sediment Monitoring Program
Mean Grain-Size Values Over Time
Old River, Grant Line Canal, Middle River and Doughty Cut

Approximate Mean Grain Size (mm)																				
OR7-rb	OR8-lb	OR8-cl	OR8-rb	OR9-lb	OR9-cl	OR9-rb	GLC1A-lb	GLC1A-cl	GLC1A-rb	GLC1B-lb	GLC1B-cl	GLC1B-rb	GLC2-lb	GLC2-cl	GLC2-rb	GLC3-lb	GLC3-cl	GLC3-rb	GLC4-lb	GLC4-cl
190	296	301	222	88	337	67	85	235	30				211	161	272	300	310	257	624	546
189	65	331	226	85	221	65	78	166	100				215	155	245	87	60	152	500	609
154		322			311	117	31	216	211	11	147	122	188	127	266	136	235	177	114	550
239		227	234		178	98	20	74	113	42	148	136	77	142	191	200	141	87	325	270
172	78	129	65	14	235	6	26	37	25	110	93	84	100	204	209	167	81	147	364	505
152	335	260	262	5	88	64	20	19	15	28	79	107	141	129	217	94	117	114	103	406
65	525	292	84	10	18	6	76	86	22	119	71	14	144	155	143	109	115	129	365	469
175	191	196	249	65	114	16	80	82	65	75	136	16	88	158	136	10	140	110	131	277
159	320	368	70	9	198	82	82	102	24	83	140	86	132	146	150	81	126	104	116	297
139	232	233	115	7	176	85	81	68	82	89	119	28	110	162	94	63	136	78	204	476
11.5	497.9	187.0	12.5	13.3	272.5	252.5	98.5	122.6	27.7	135.4	176.4	95.9	105.1	107.7	196.2	132.2	206.2	148.3	222.9	375.0
148.0	255.9	203.5	244.2	71.7	58.7	40.6	73.1	52.3	19.0	151.6	141.8	48.4	45.6	174.0	45.6	42.0	83.9	46.8	102.4	292.0
99.3	373.4	293.9	234.8	9.3	220.0	9.4	37.9	44.0	21.2	74.1	149.5	34.2	51.0	90.9	95.1	30.5	75.9	31.9	120.8	311.2
148.1	429.7	241.9	223.9	13.2	96.3	62.0	40.6	44.1	28.8	47.8	153.4	51.2	78.7	125.0	63.0	20.7	46.1	28.9	193.5	287.8
30.6	462.0	381.9	108.5	123.0	286.6	55.1	28.0	124.7	29.3	93.7	101.0	73.9								
15.4	360.7	333.5	308.6	36.6	130.7	56.4	31.8	37.0	25.7	38.8	155.1	48.0	35.8	95.8	111.7	29.1	41.2	32.6	153.5	351.0
55.08	493.8	336.3	100.8	20.25	304.5	250.5	121.4	206	29.53	163.5	158.2	185.1	187.3	53.08	226.9	286.2	189.9	264.9	666.7	348
77.47	397.9	247.4	173.7	27.16	59.51	160.2	18.78	30.8	42.28	101.7	89.44	73.83	123	30.1	241.8	127.4	237.2	175.6	38.82	276.2
147	70.42	295.1	254.1	324.8	278.5	71.95	39.71	71.55	53.39	66.4	129.1	81.06	112	42.25	145.2	114.9	30.27	191.6	406.9	379.3
133.8	503.9	268.3	276.9	81.9	72.55	63.47	46.99	54.87	26.68	77.24	115.1	41.79	161.2		132.9	189.6	261.9	113.6	155.9	125.7
83	**350**	**327**	**175**	**119**	**272**	**97**	**57**	**112**	**33**	**99**	**134**	**94**	**117**	**62**	**156**	**144**	**99**	**163**	**398**	**346**
94	**423**	**273**	**246**	**40**	**90**	**86**	**35**	**42**	**31**	**66**	**128**	**54**	**100**	**84**	**137**	**92**	**147**	**88**	**135**	**260**

Table 2
SDIP Sediment Monitoring Program
Mean Grain-Size Values Over Time
Old River, Grant Line Canal, Middle River and Doughty Cut

Approximate Mean Grain Size (mm)									
GLC4-rb	**GLC5-lb**	**GLC5-cl**	**GLC5-rb**	**DC1-lb**	**DC1-cl**	**DC1-rb**	**MR1-lb**	**MR1-cl**	**MR1-rb**
450	211	341	243	7	341				
		375		81	423	250	65	10	67
451	81	360	93	270	346	94	11	13	5
247	105	177	201	81	181	118			
482	84	167	156	346	331	268	5	67	13
196	125	111	113	157	163	151	4	10	9
212	28	24	127	204	295	119	5	73	93
112	123	19	23	176	186	106	5	11	82
142	22	28	22	208	184	123	5	12	140
35	112	24	28	326	164	54	7	10	95
248.8	115.3	131.1	122.3	279.5	237.2	99.0	8.9	16.5	127.8
238.0	107.0	42.7	24.6	92.8	119.5	45.9			
83.2	58.9	49.4	41.2	92.4	186.8	35.4	8.6	16	42
193.4	139.5	27.8	17.9	178.2	232.7	66.2			
				238.1	254.3	119.8			
104.9	71.1	73.3	38.5	93.9	176.3	168.9			
460.7	261.3	327.5	389.6	542.8	403	418.2	9.1	14.49	18.03
303.2	129.9	60.84	71.43	278.7	437.8	505.6			
368.3	64.99	651.2	73.59	405.6	555.2	404.3			
54.06	124.9	262.3	34.05	48.26	491.9	515.2			
304	**128**	**343**	**168**	**347**	**382**	**286**	-	-	-
164	**116**	**106**	**40**	**150**	**335**	**314**	-	-	-

Table 2
SDIP Sediment Monitoring Program
Mean Grain-Size Values Over Time
Old River, Grant Line Canal, Middle River and Doughty Cut

Notes:

1. A yellow high-lighted cell indicates that the mean grain-size value shown is only approximate and that the actual value could not be derived but is at least equal to or less than the value shown (see below).
2. **Sample dates 1998 through 2002:** Approximate mean grain-size values were obtained by plotting grain-size data on cumulative grain-size distribution curves, and extracting prescribed values from the curve and entering these into either of two established formula (Folk and Ward, 1957 or Trask, 1932). Additional mean grain-size calculation specifics are provided in the report.
3. **Sample dates 2003 through 2007:** Approximate mean grain-size values were obtained using a grain size distribution and statistics sofware package, Gradistat 4.0, which allows for a more rapid calculation of grain size statistics compared to the graphically derived method used previously. The software uses the established Folk and Ward (1957) formula for statistical calculations. Additional mean grain-size calculation specifics are provided in the report.
4. An empty cell indicates that no sediment sample was collected on the date or at the sample location indicated.
5. A dashed cell indicates that a cumulative mean grain-size value could not be calculated (due to limited data).

Abbreviations:

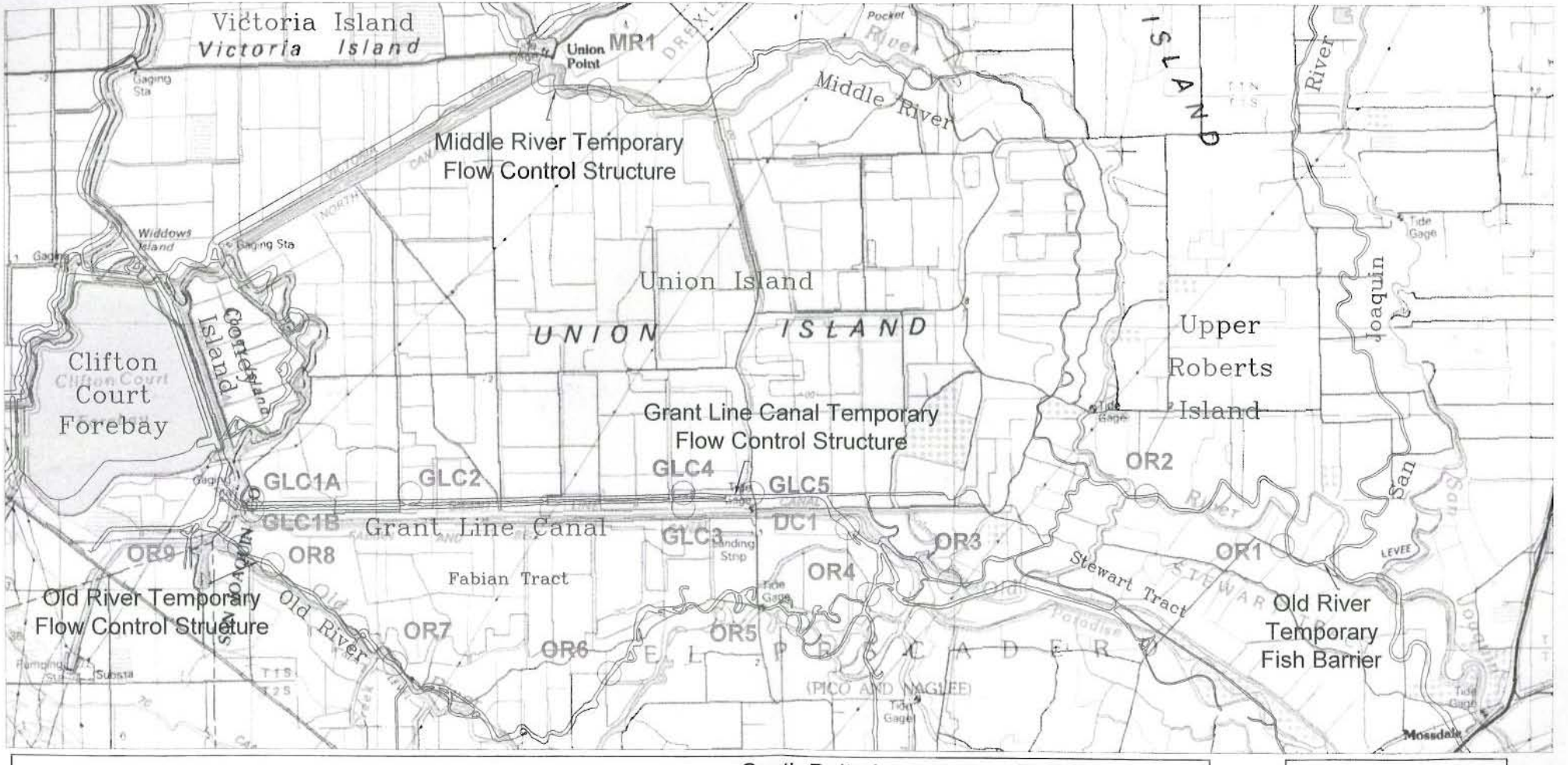
mm = micrometer

Sample Location Names:

OR = Old River
GLC = Grant Line Canal
MR = Middle River
DC = Doughty Cut

Sample Location Identifier (along channel cross-section):

cl = center line
lb = left bank
rb = right bank



SDIP Sediment Monitoring Sites

SCALE

0 1 2 3 miles

Prepared By:
Department of Water Resources
Groundwater and Geology Section
Central District
December, 2003

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South Delta Improvement Program
Sediment Monitoring

Figure 1

Bed Elevation Survey
and
Bed Sediment Monitoring Sites