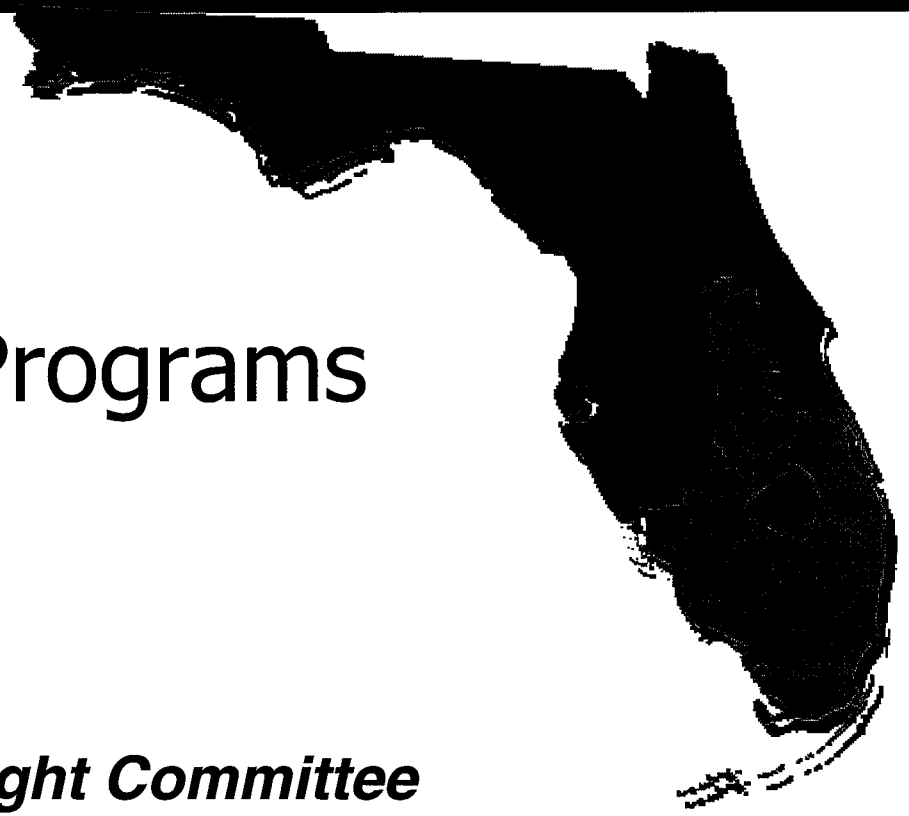
Attachment 6

SOUTH FLORIDA WATER MANAGEMENT DISTRICT



Status Report on Phosphorus Control Programs

Technical Oversight Committee
August 5, 2002

sfwmd.gov

Summary

- Phosphorus Control Program of Settlement Agreement - *doing better than expected!*
  - EAA Best Management Practices
  - Stormwater Treatment Areas (STAs)

- Other activities implemented to accelerate restoration
  - STA optimization
  - Advanced Treatment Technologies
  - STA enhancements

EAA Best Management Practices

- Pump operations, fertilizer application, erosion control
- 25% load reduction target
  - averaging more than 50% reduction
  - more than 1,300 tons of EAA phosphorus load reduced from EPA inflows

Summary of BMP Performance

Water Year (May-April)	Observed TP Load EAA to WCAs MT	Predicted TP Load EAA to WCAs MT	TP Removed EAA to WCAs MT	TP Reduction
1994	128	159	31	20%
1995	246	370	123	33%
1996	156	490	335	68%
1997	115	238	123	52%
1998	142	240	98	41%
1999	105	227	123	54%
2000	174	412	238	58%
2001	50	184	134	73%
2002	64	188	124	66%
total	**1180**	**2509**	**1330**	**53%**

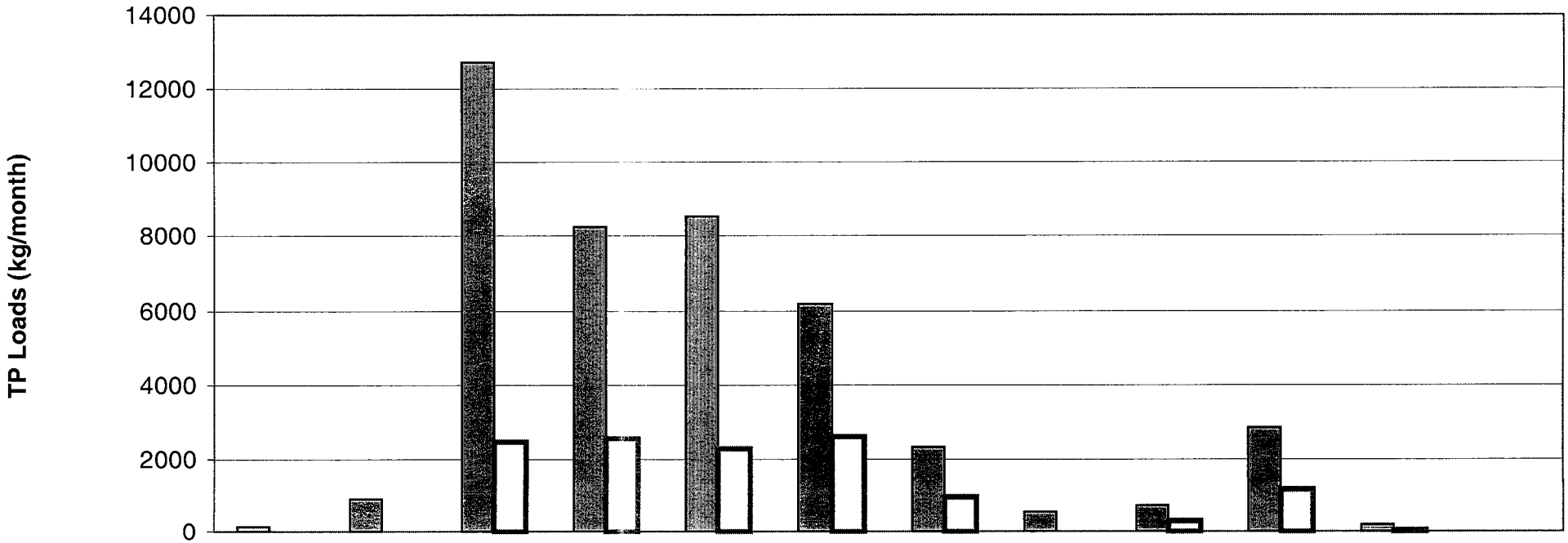
Preliminary data from Everglades Regulation Division

Stormwater Treatment Areas

- 50 ppb discharge target
  - averaging 33 ppb
  - almost 200 tons reduced from EPA inflows
    - more than 110 tons of EAA P removed
- 3 of 4 complete
  - STA-1E and STA-3/4 to be complete next year

STA-1W Load Reductions - Water Year 2002

Preliminary Data

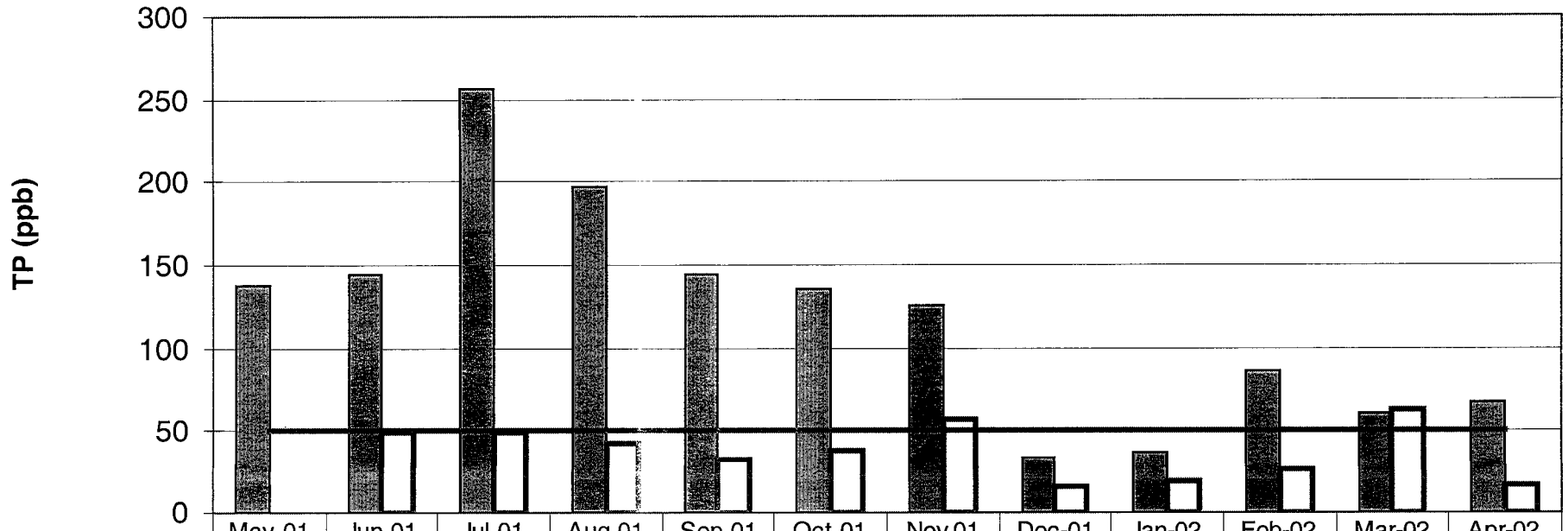


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow (G-302)	156	919	12,723	8,262	8,562	6,152	2,305	501	697	2,852	181	6
Outflow	-	14	2,455	2,582	2,293	2,610	942	1	296	1,143	59	14

Over 123 tons removed to date

STA-1W P Concentrations - Water Year 2002

Preliminary Data



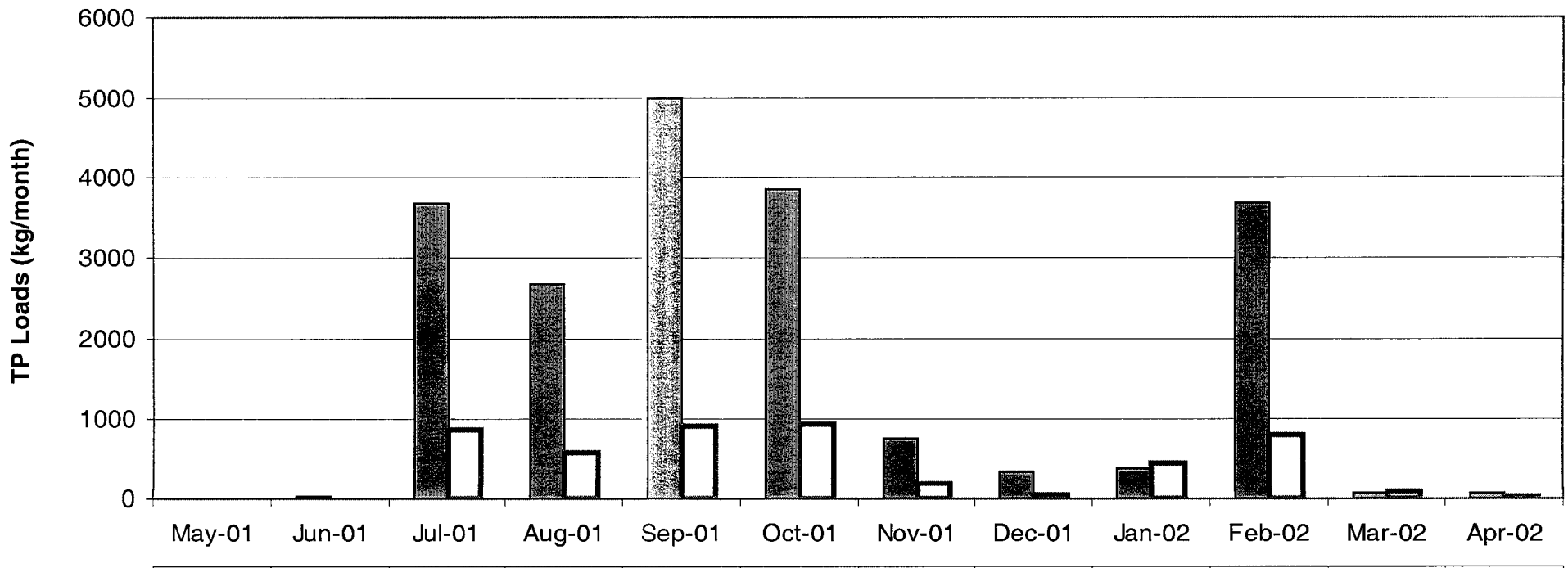
	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow (G-302)	138	144	256	197	145	136	126	33	37	86	61	67
Outflow	0	49	49	43	33	38	57	16	18	25	62	17
Interim Target	50	50	50	50	50	50	50	50	50	50	50	50

Inflow (G-302) Outflow Interim Target

To date: average discharge concentration = 27 ppb

STA-2 Load Reductions - Water Year 2002

Preliminary Data

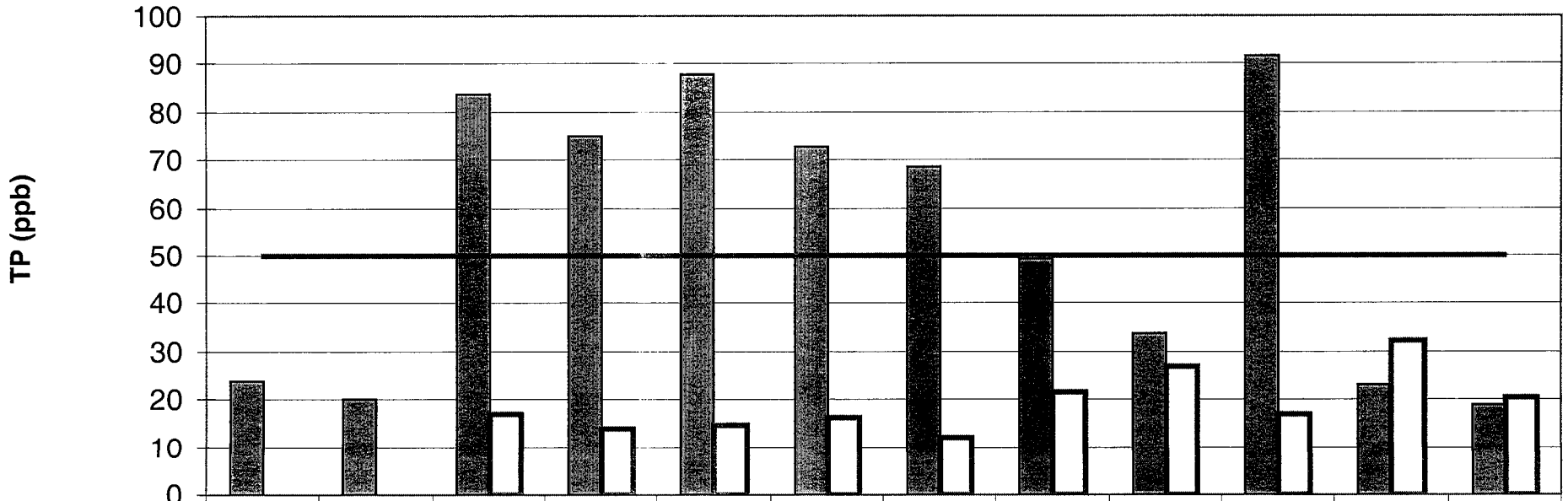


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	0	23	3,675	2,672	4,984	3,853	775	359	384	3,683	61	66
Outflow	-	-	884	581	916	946	190	47	452	809	80	11

Over 15 tons removed to date

STA-2 P Concentrations - Water Year 2002

Preliminary Data

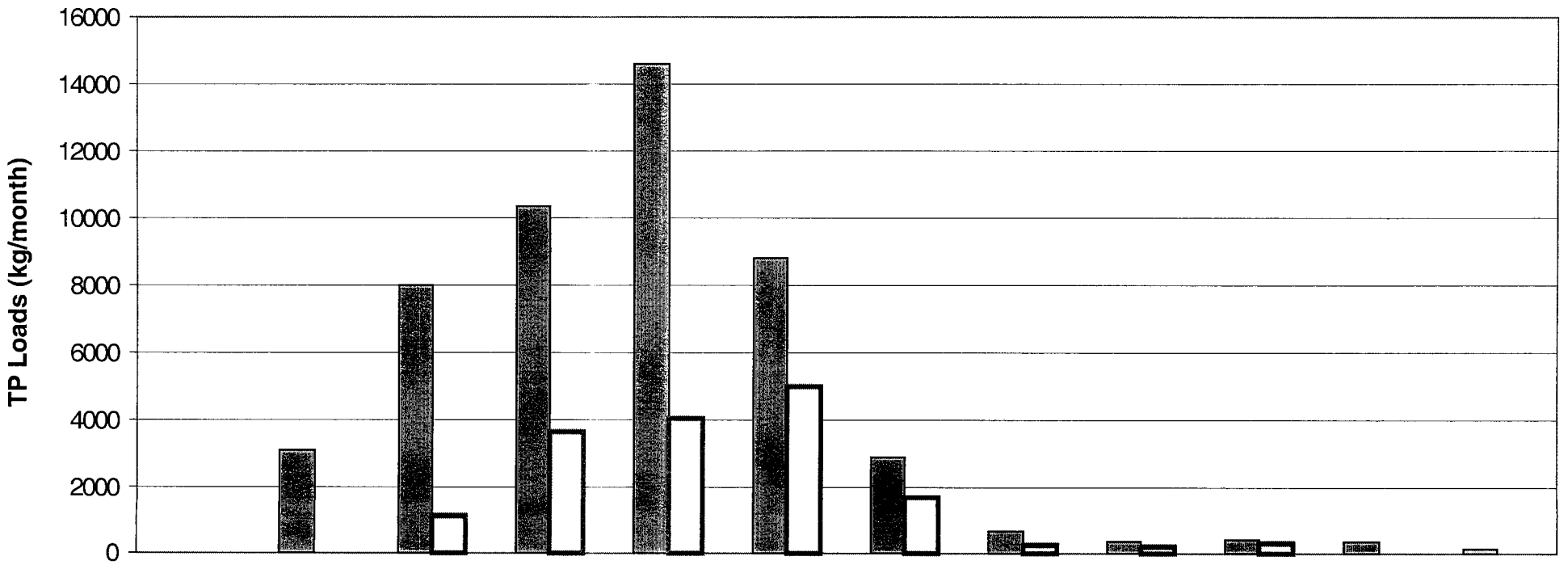


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	24	20	84	75	88	73	69	49	34	92	23	19
Outflow	0	0	17	14	15	16	12	21	27	17	32	20
Interim Target	50	50	50	50	50	50	50	50	50	50	50	50

To date: average discharge concentration = 16 ppb

STA-5 Load Reductions - Water Year 2002

Preliminary Data



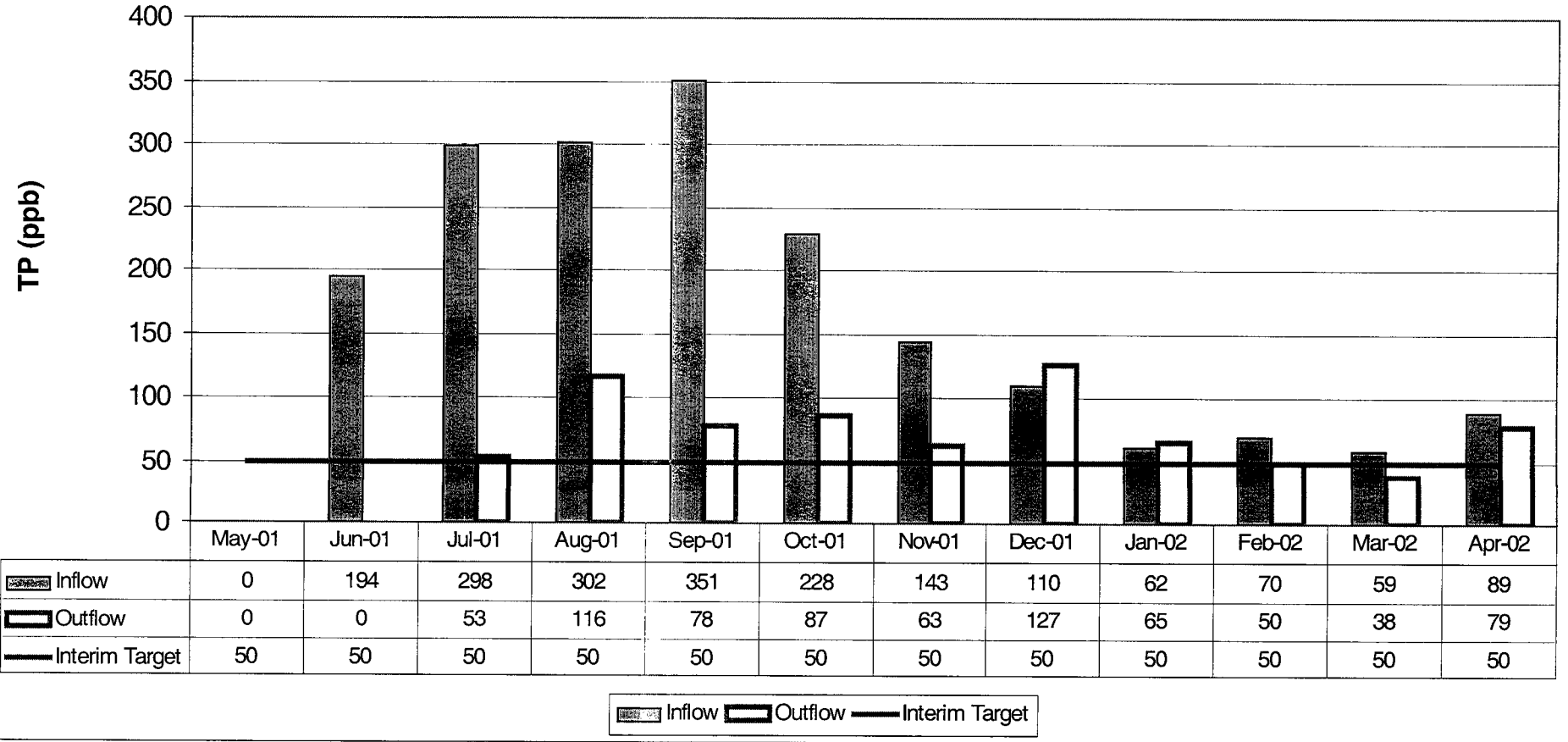
	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	-	3,075	8,017	10,342	14,609	8,791	2,875	644	370	412	346	129
Outflow	-	-	1,117	3,626	4,040	5,014	1,675	225	198	290	25	1

Over 41 tons removed to date

STA-5 P Concentrations - Water Year 2002

Preliminary Data

Note: The outlet gates were opened once per month between November and March for maintenance purposes; TP concentrations were elevated due to shallow water conditions.

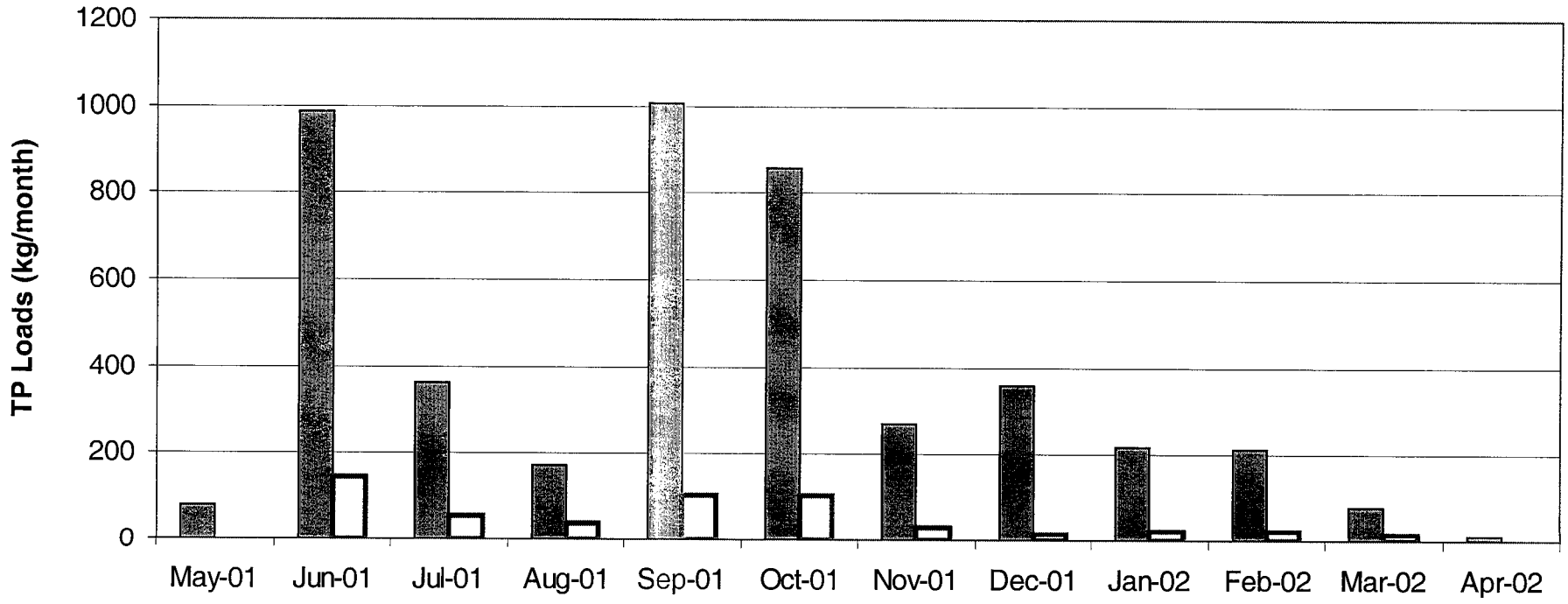


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	0	194	298	302	351	228	143	110	62	70	59	89
Outflow	0	0	53	116	78	87	63	127	65	50	38	79
Interim Target	50	50	50	50	50	50	50	50	50	50	50	50

To date: average discharge concentration = 87 ppb

STA-6 Load Reductions - Water Year 2002

Preliminary Data

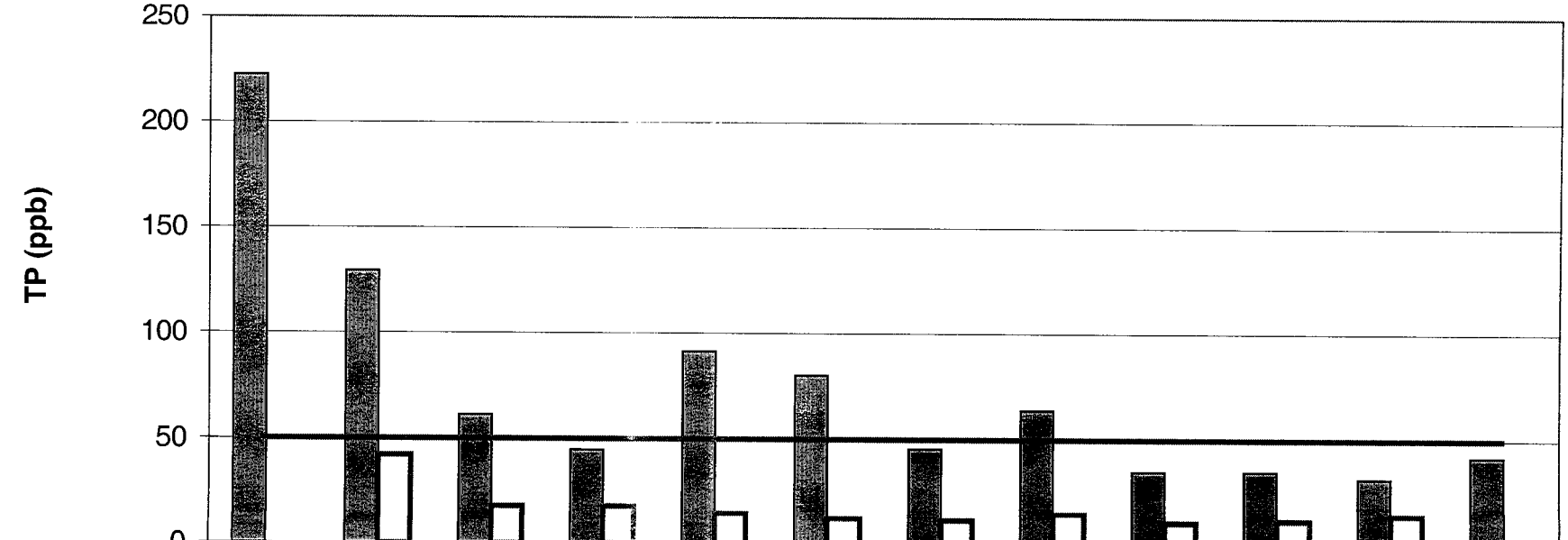


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	81	988	361	174	1007	856	272	360	216	214	79	12
Outflow	0	145	58	39	104	106	34	16	23	26	15	0

Over 17 tons removed to date

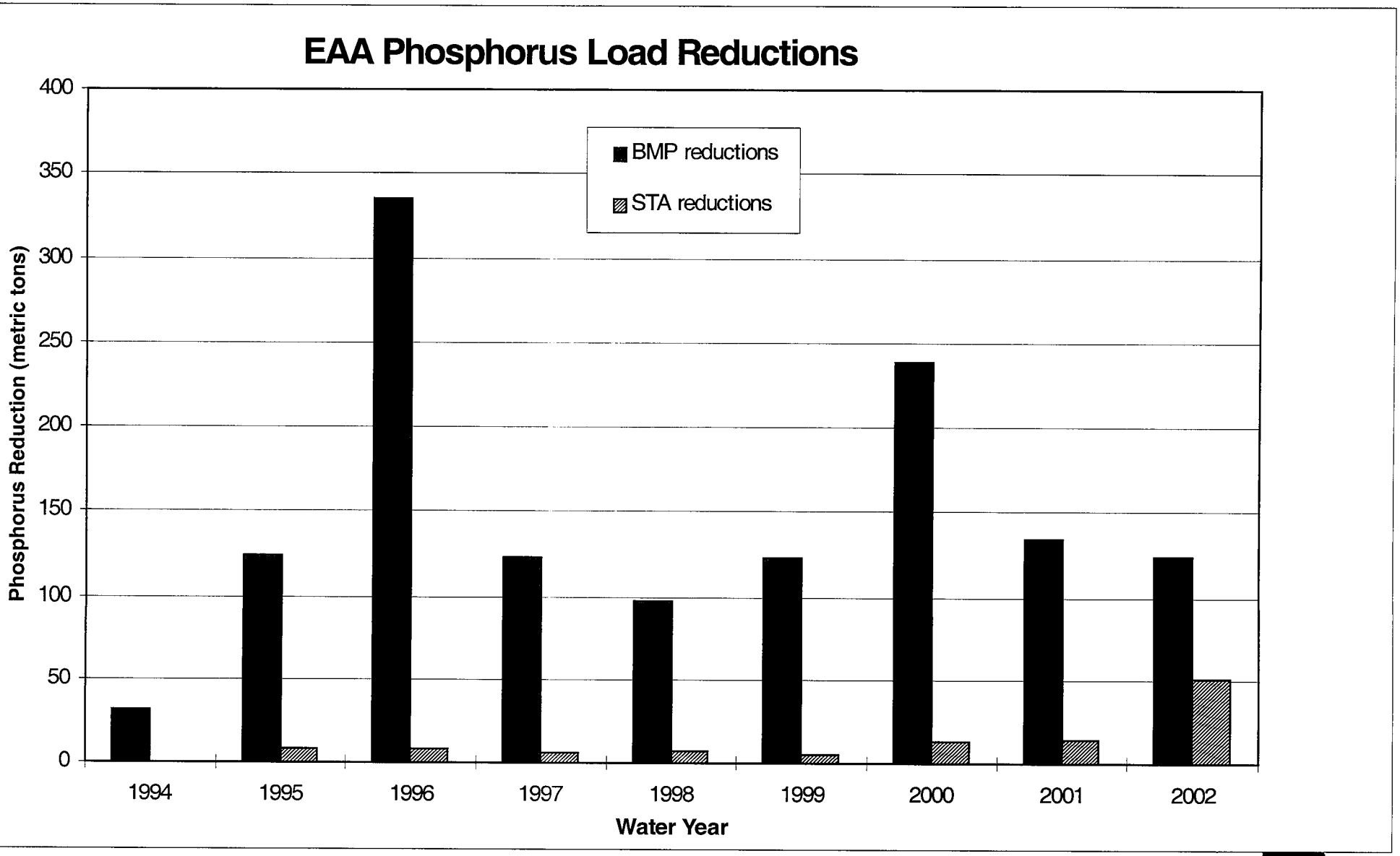
STA-6 P Concentrations - Water Year 2002

Preliminary Data

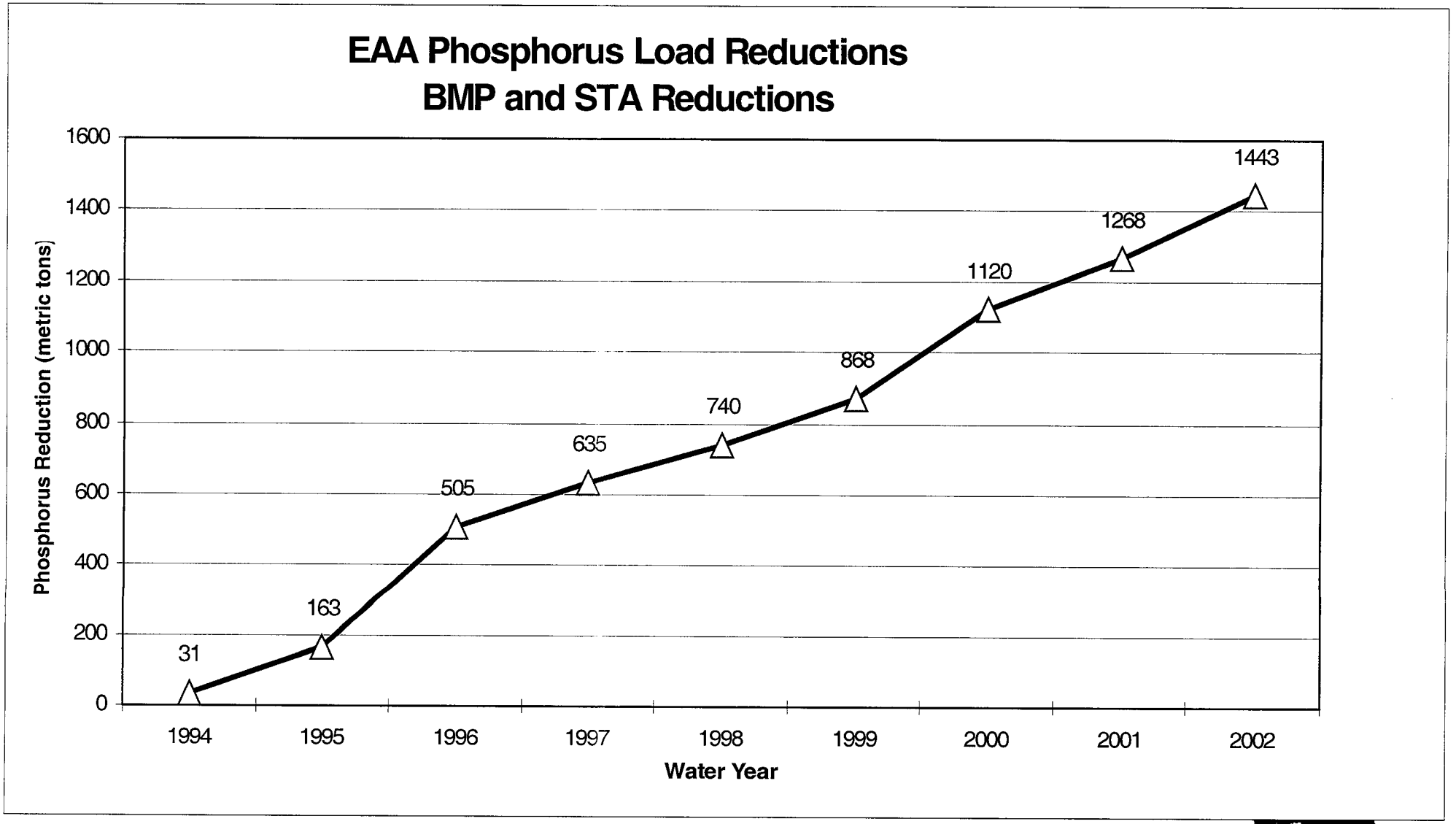


	May-01	Jun-01	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02
Inflow	223	129	61	45	92	80	46	64	36	36	32	42
Outflow	0	42	18	18	14	12	12	15	10	11	14	0
Interim Target	50	50	50	50	50	50	50	50	50	50	50	50

To date: average discharge concentration = 19 ppb



Preliminary data



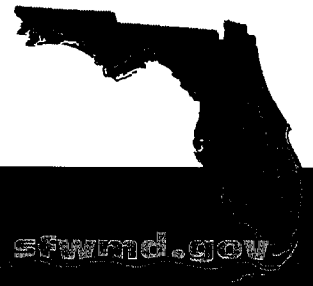
Preliminary data

Accelerating Restoration

- $35 million invested in reducing phosphorus inflows to the Everglades
  - STA Optimization
    - emergent systems: 20-30 ppb (large scale)
  - Advanced Treatment Technology research
    - SAV: 14-35 ppb (large scale)
    - PSTA: 12-35 ppb (field scale)
    - chemical treatment: (small scale)

Accelerating Restoration

- Conversion of emergent to SAV
  - over 5,000 ac in STA-1W, STA-2 and STA-5
- Improving STA hydraulics
  - fill in field ditches and canals parallel to flow
  - minimize short-circuiting
  - raised outlet weirs in STA-2 Cell 1 to minimize dry out
  - maintain minimum depths during drought
- Balancing flows and loads



2003 Everglades Consolidate Report

- More details will be in the *2003 Everglades Consolidate Report*
- Draft available on-line beginning end of August
- Peer-review workshops Sept 24-25