



Agenzia Regionale
per la Protezione dell'Ambiente
della Lombardia

LA QUALITA' DELLE ACQUE DEL MINCIO E DI ALTRI CORSI D'ACQUA DEL SUO BACINO NELLE INDAGINI ARPA DEL 2004

a cura di **LORENZA GALASSI**

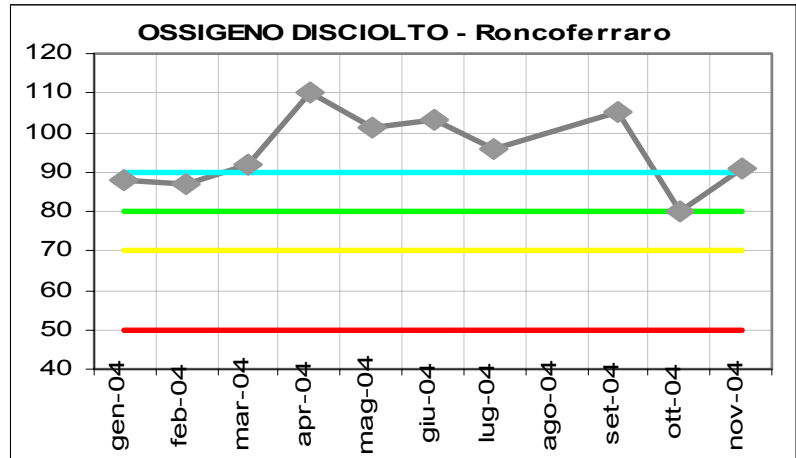
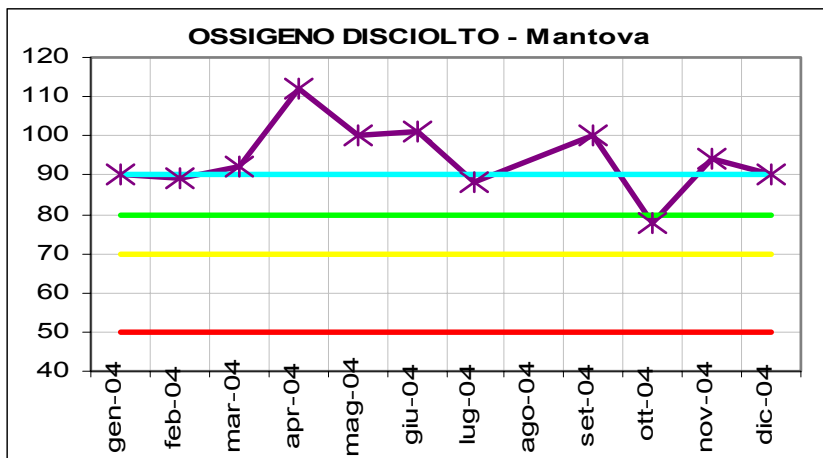
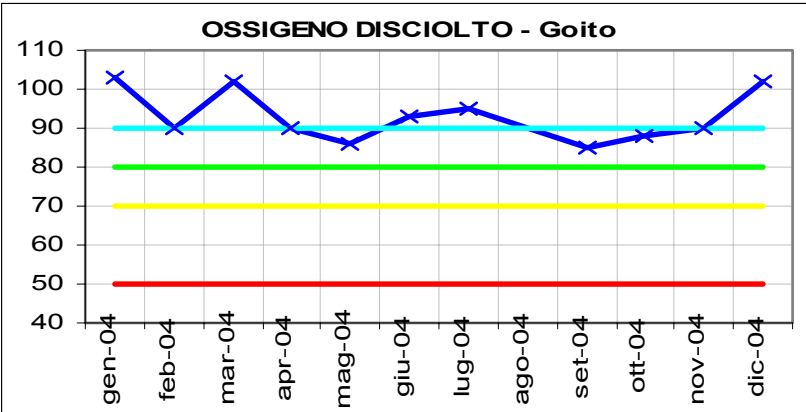
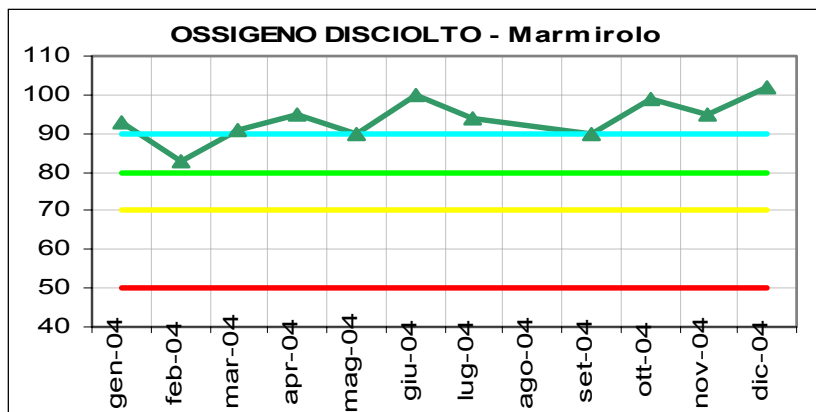
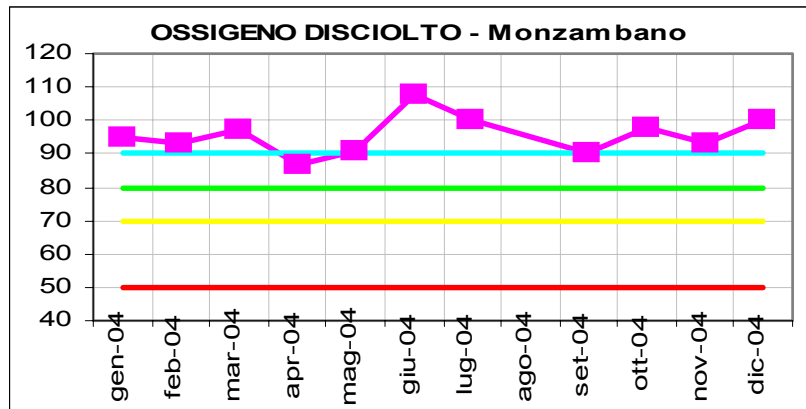
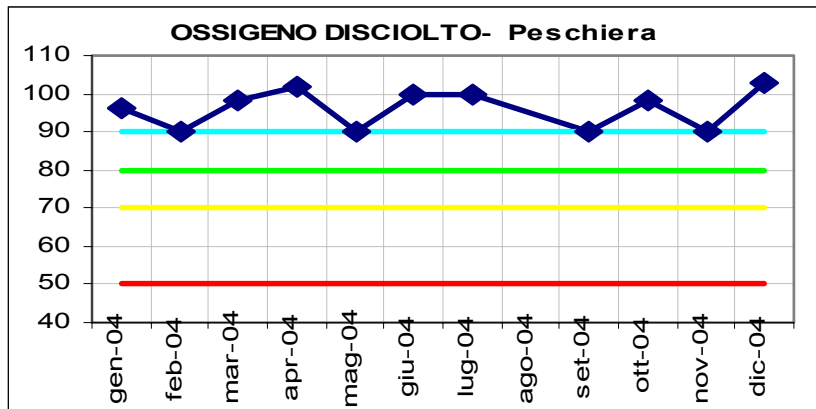
ARPA Mantova

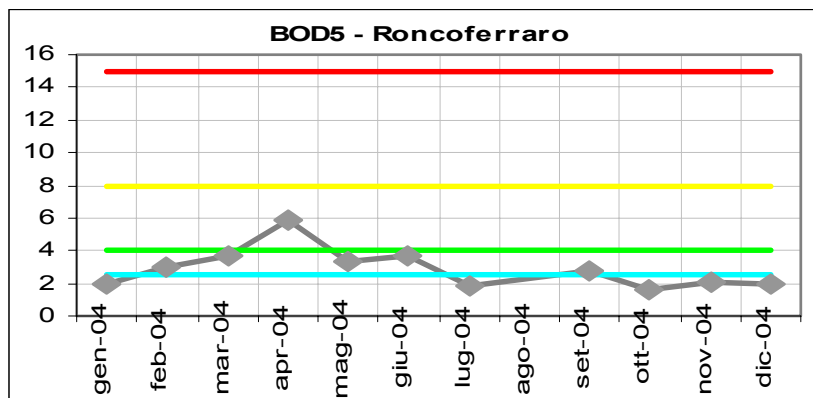
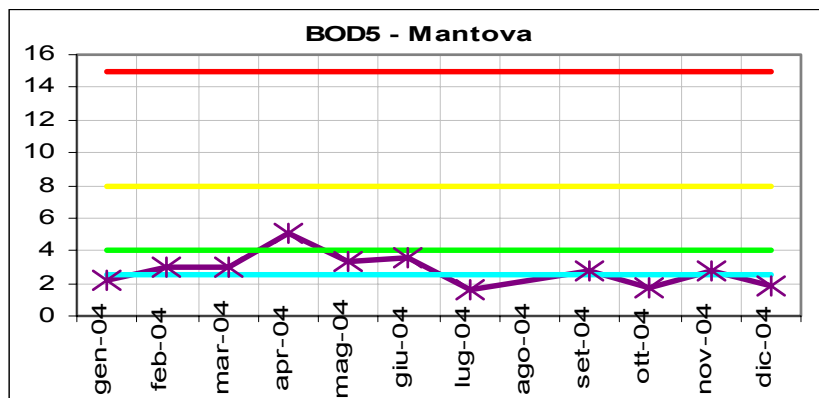
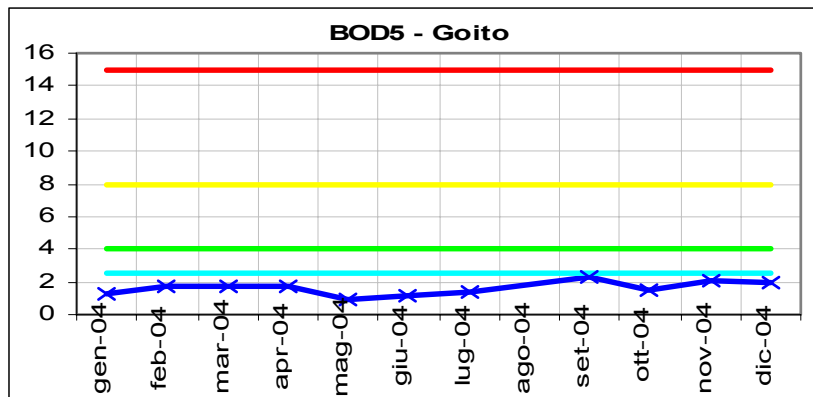
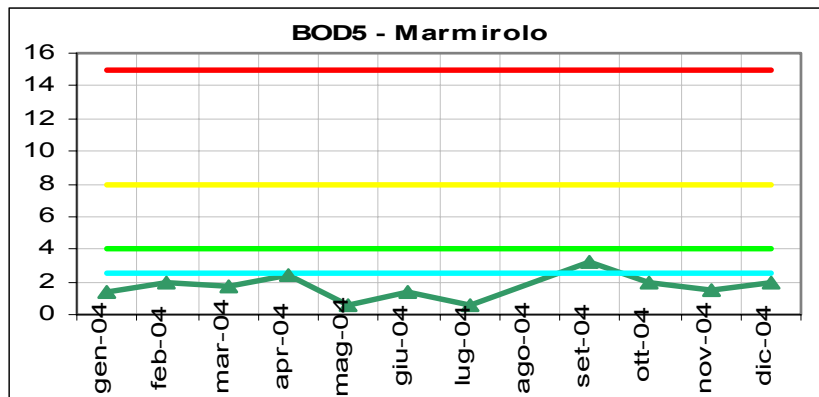
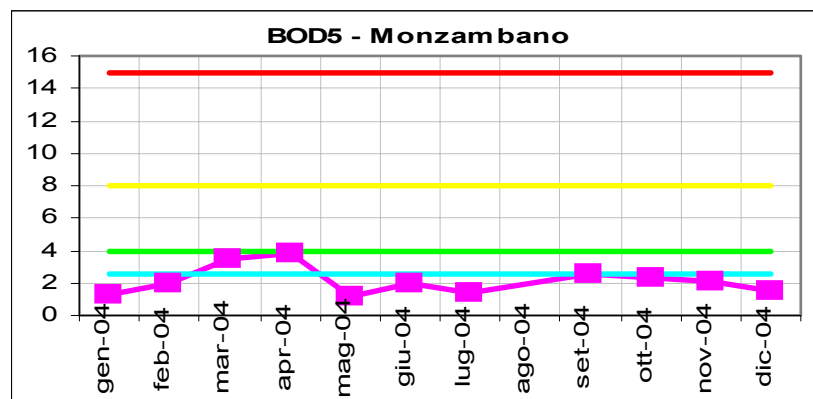
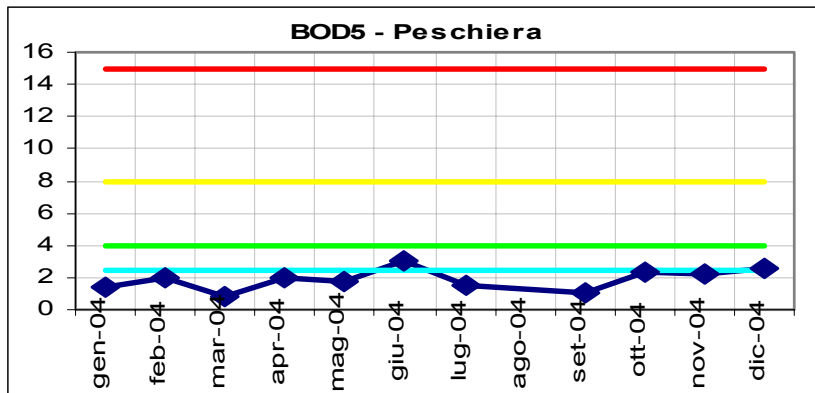
Presentazione del Rapporto sul Mincio
Rivalta – Corte Mincio 24.06.05

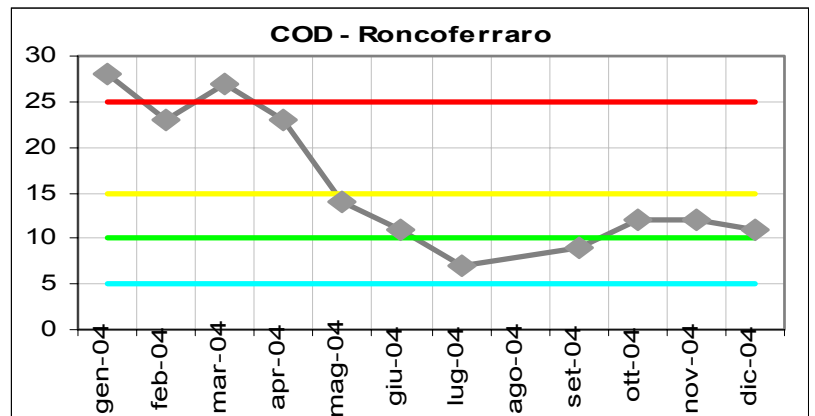
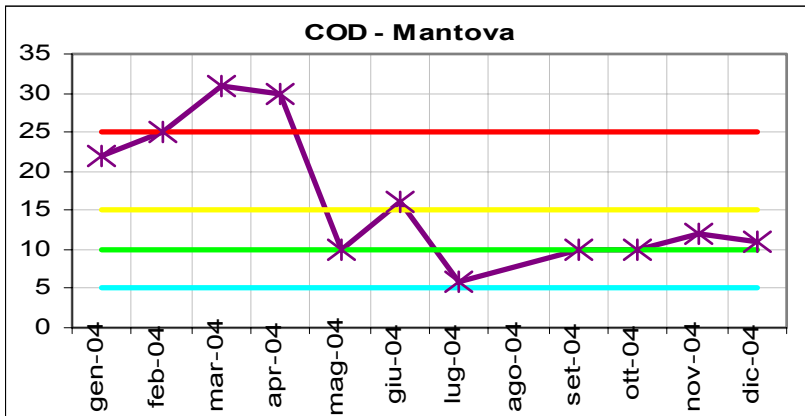
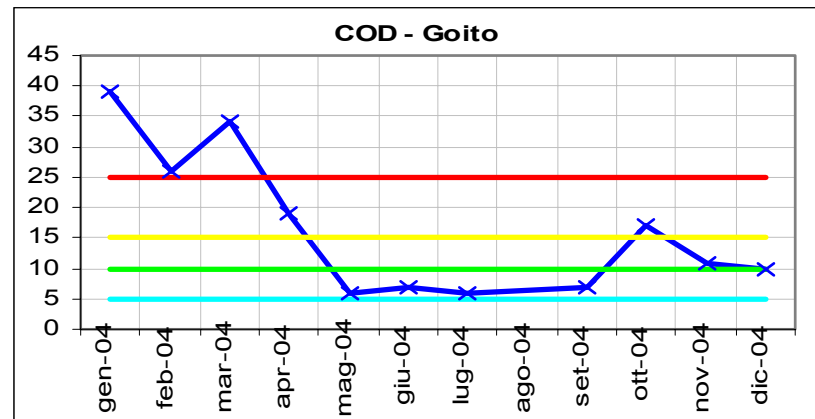
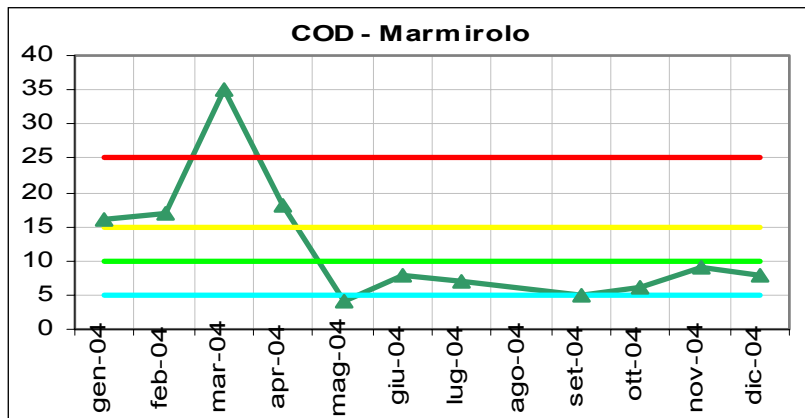
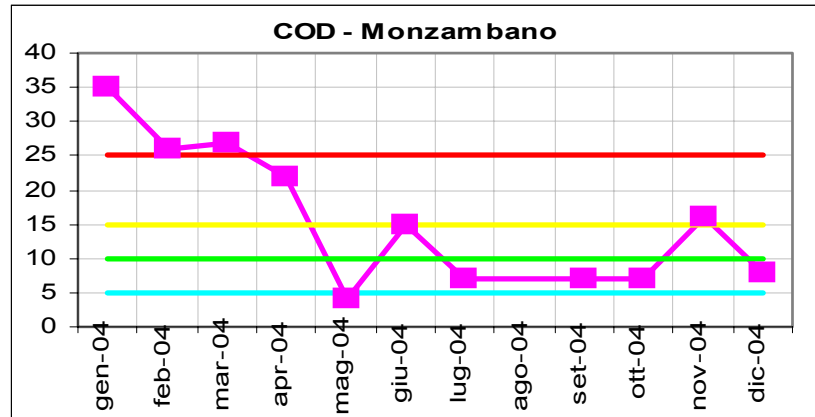
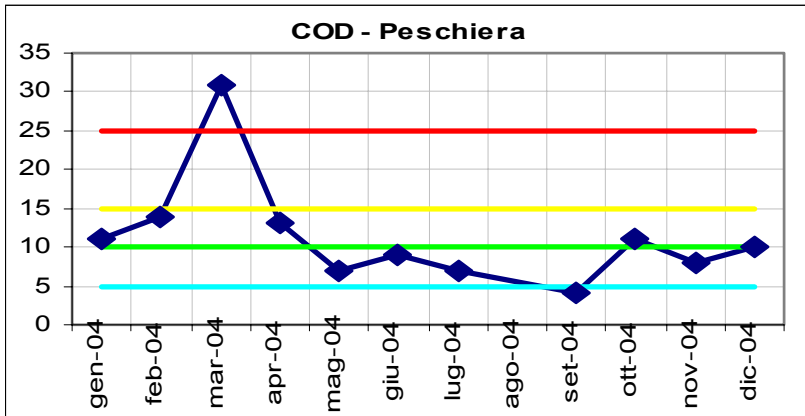
75° le anno 2004			Peschiera	Monzambano	Marmirolo	Goito	Mantova	Roncoferraro
OD	100 - OD	% sat.	10,00	9,25	10,00	12,50	12,00	12,25
BOD5		mg/l	2,23	2,38	1,93	1,78	3,08	3,40
COD		mg/l	13,25	23,00	17,25	27,25	22,75	23,00
N NH4	N-NH4	mg/l	0,09	0,10	0,06	0,08	0,11	0,13
N NO3	N-NO3	mg/l	0,40	2,03	1,90	2,63	3,35	3,63
P totale	P tot	mg/l	0,05	0,14	0,08	0,11	0,16	0,15
E. Coli		UFC/100 ml	7,50	350,00	200,00	500,00	625,00	200,00
IBE (media)		(1-12)	5,67	6,50	8,40	8,57	5,52	5,32

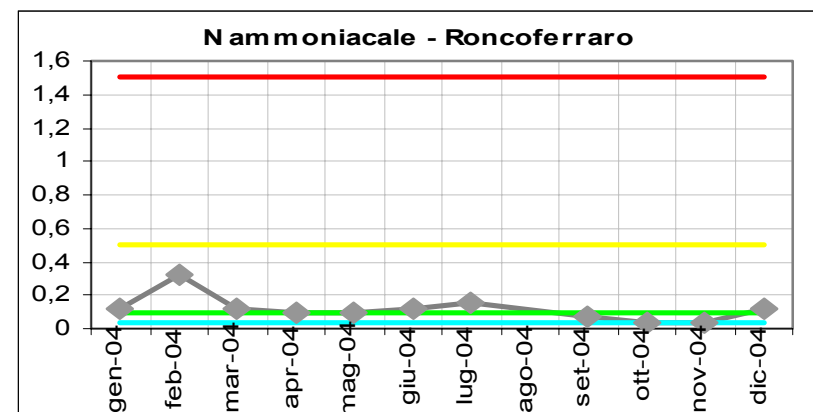
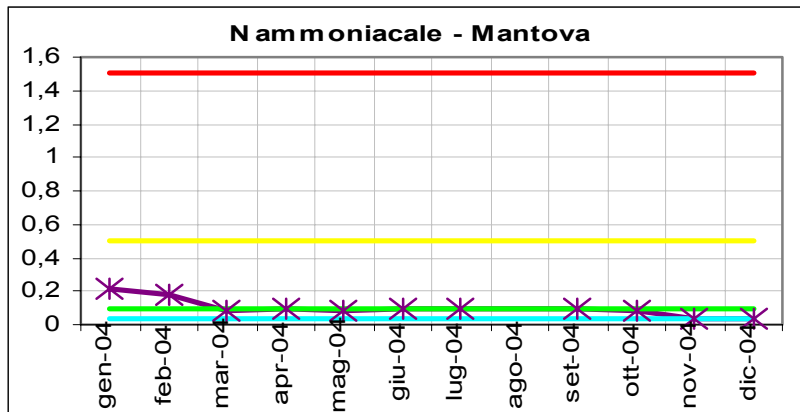
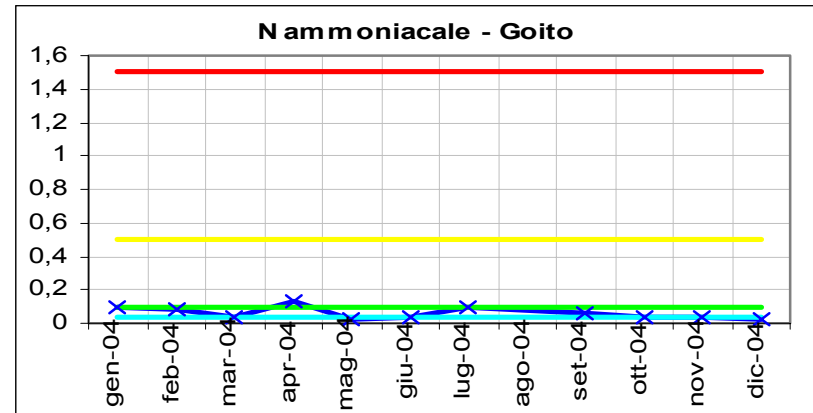
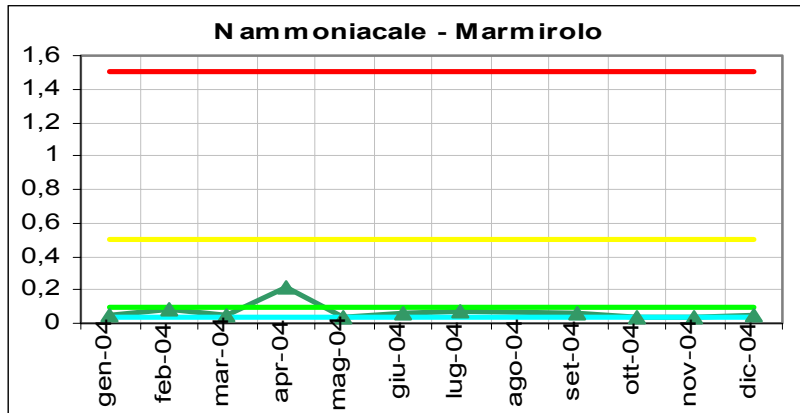
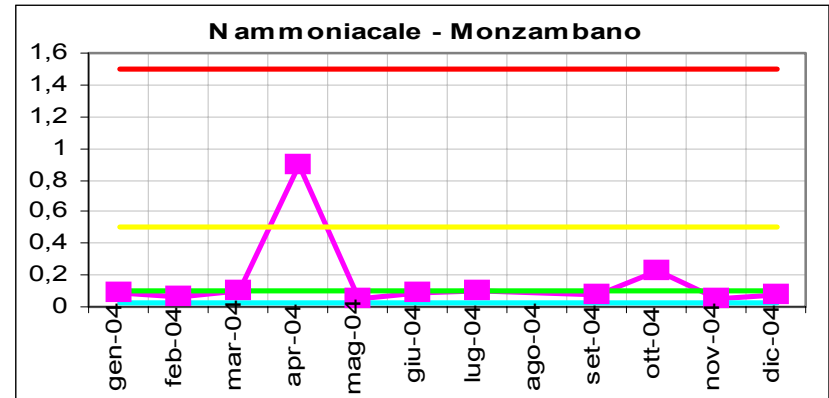
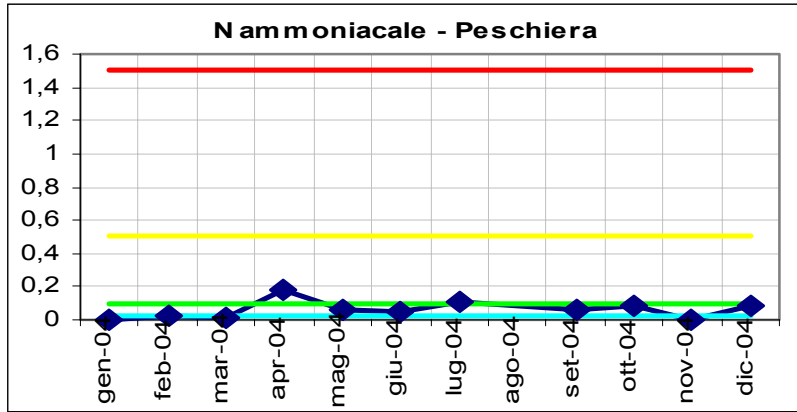
LIM anno 2004			Peschiera	Monzambano	Marmirolo	Goito	Mantova	Roncoferraro
OD	100 - OD	% sat.	80	80	80	40	40	40
BOD5		mg/l	80	80	80	80	40	40
COD		mg/l	20	10	10	5	10	10
N NH4	N-NH4	mg/l	40	40	40	40	20	20
N NO3	N-NO3	mg/l	40	20	20	20	20	20
P totale	P tot	mg/l	80	40	40	40	20	20
E. Coli		UFC/100 ml	80	40	40	40	40	40
LIM		(1-12)	420	310	310	265	190	190
IBE (media)			6/5	6/7	8/9	9/8	5/6	5/6

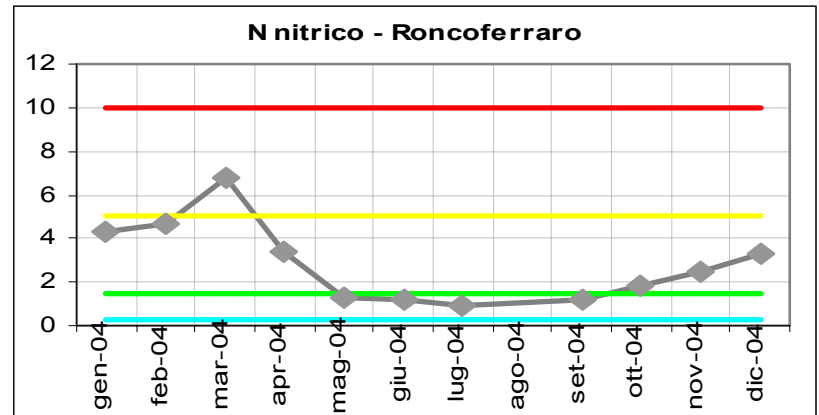
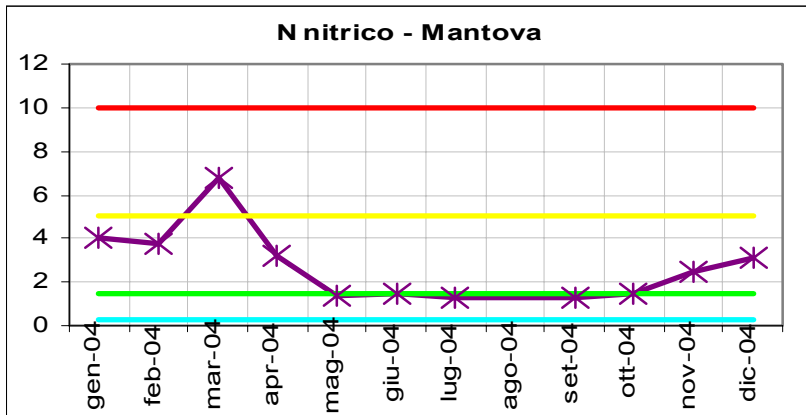
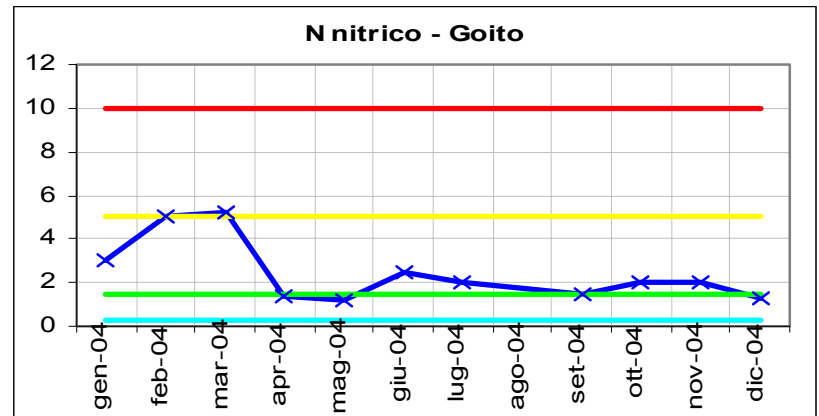
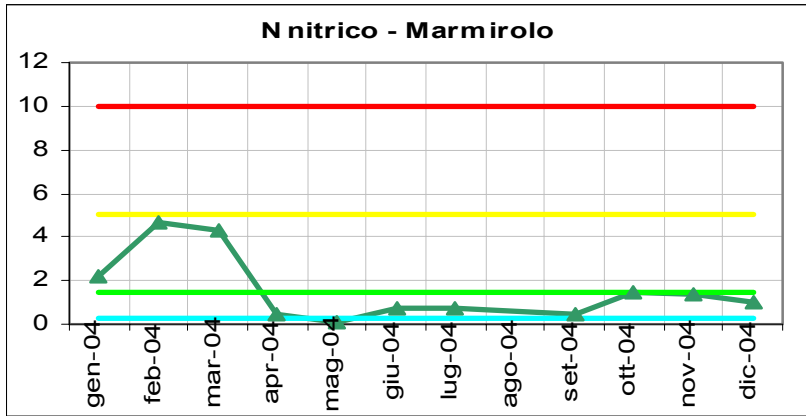
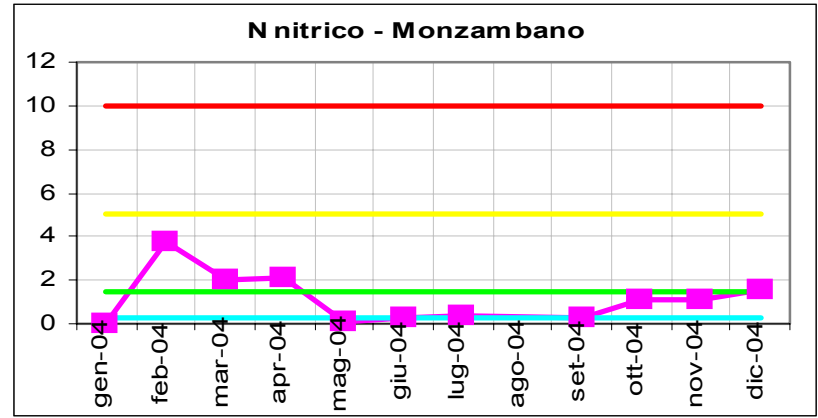
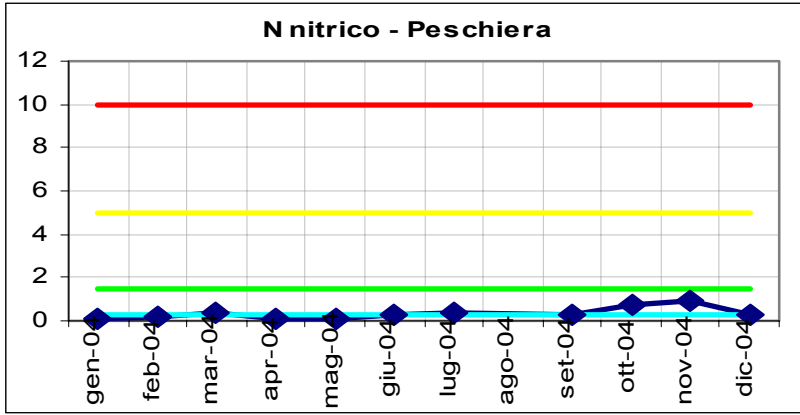
	Peschiera	Monzambano	Marmirolo	Goito	Mantova	Roncoferraro
IBE	3	3	2	2	4	4
Livello	2	2	2	2	3	3
SECA	CLASSE 3	CLASSE 3	CLASSE 2	CLASSE 2	CLASSE 4	CLASSE 4

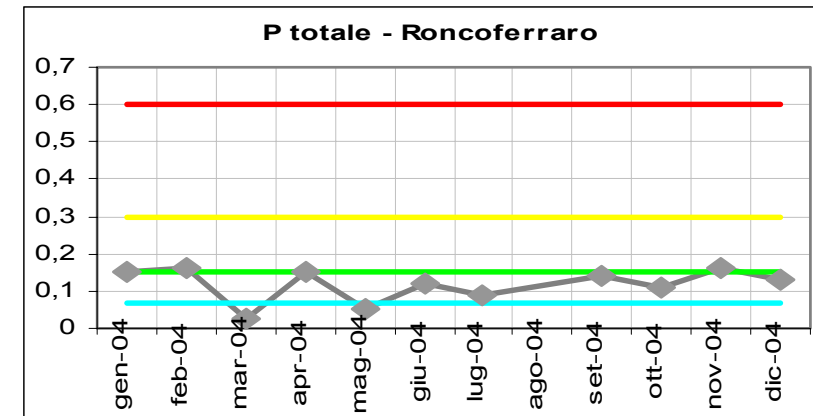
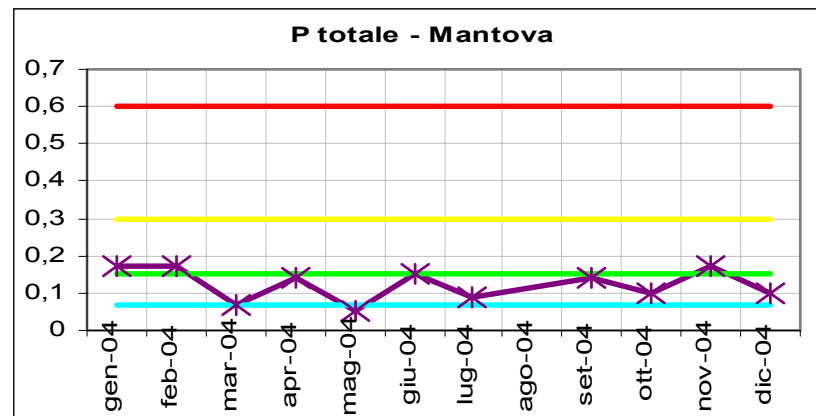
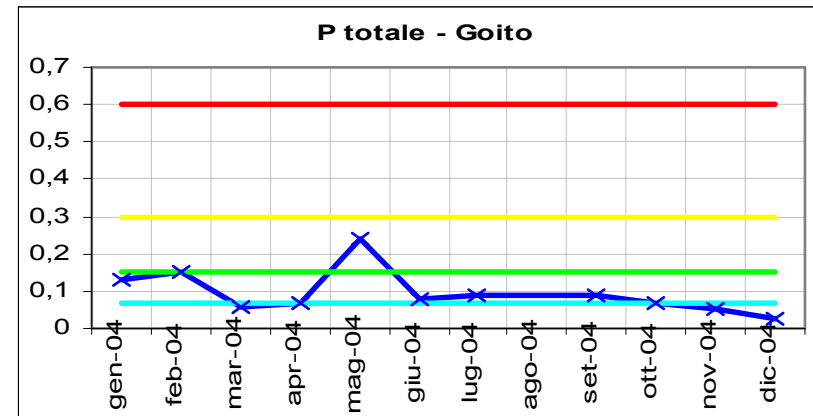
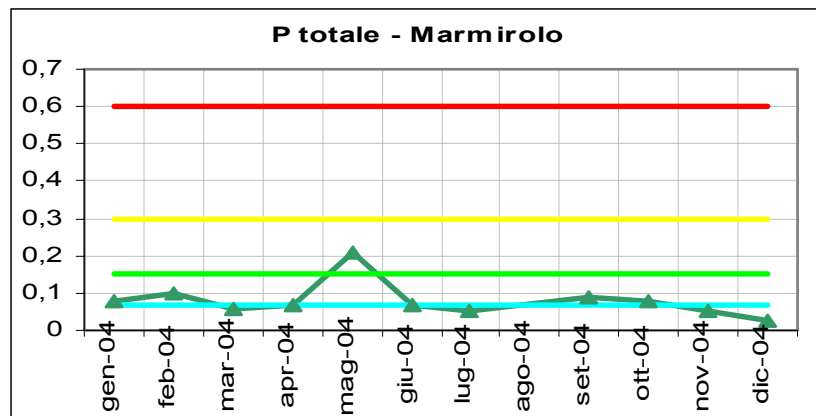
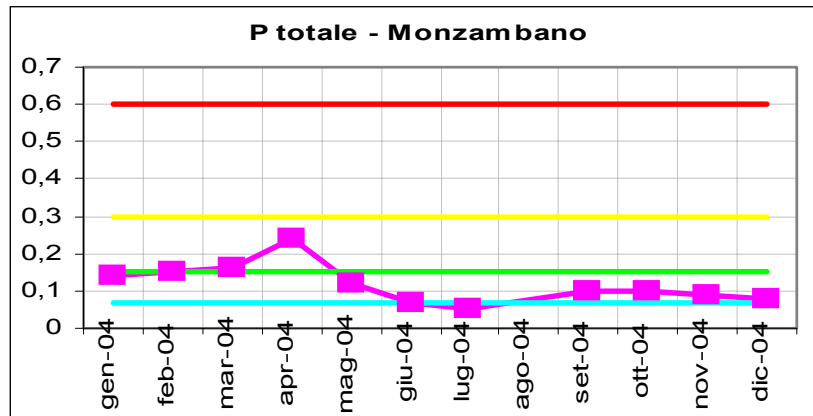
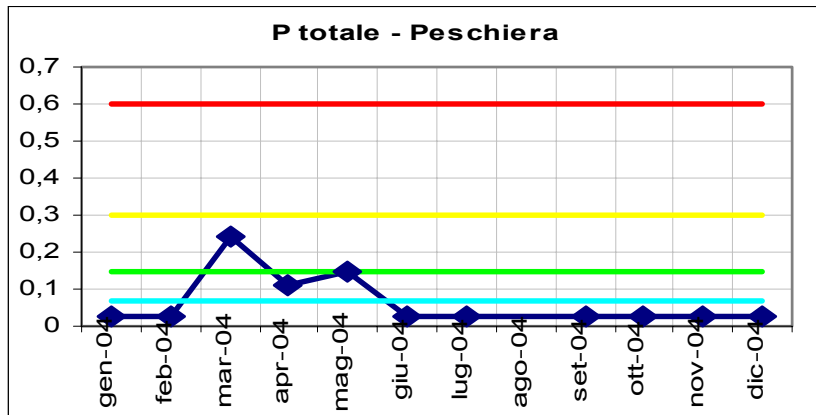


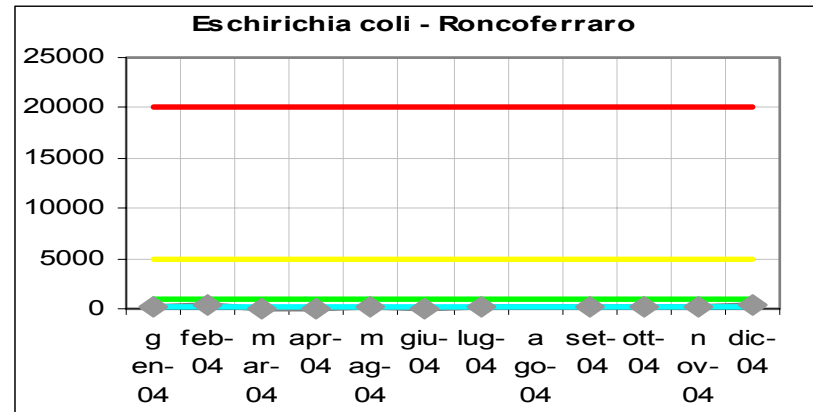
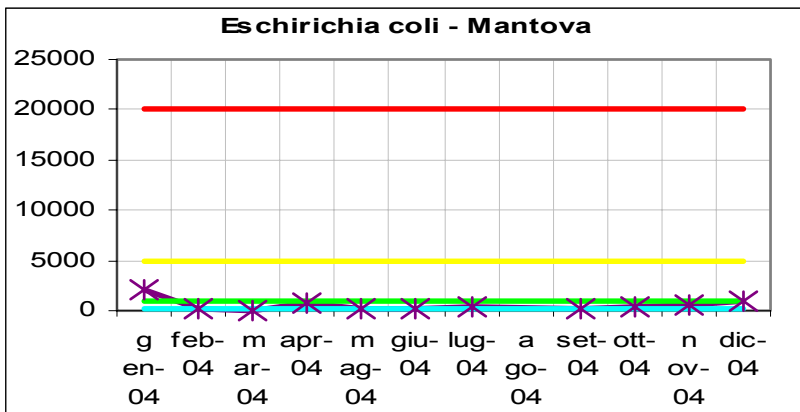
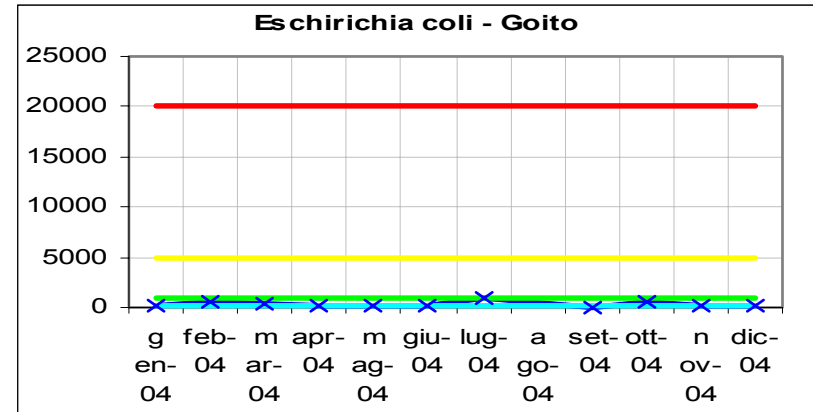
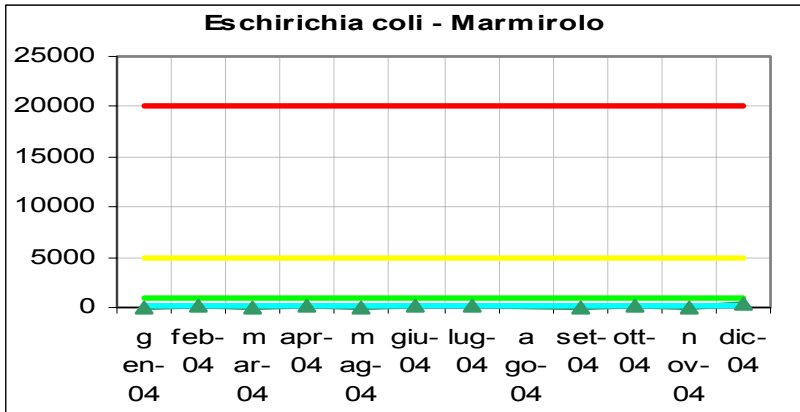
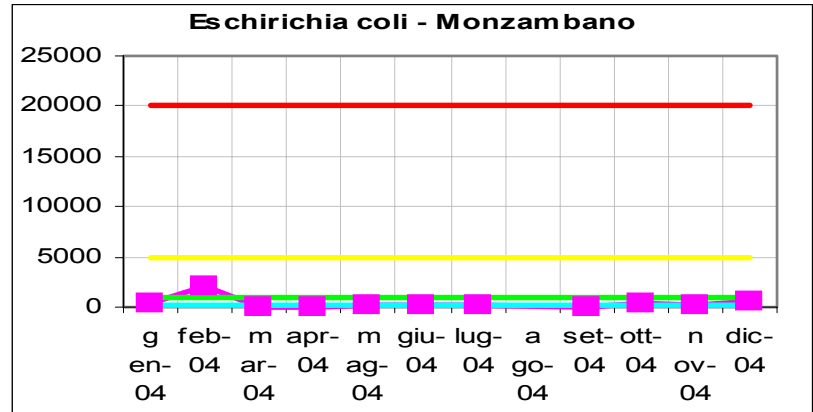
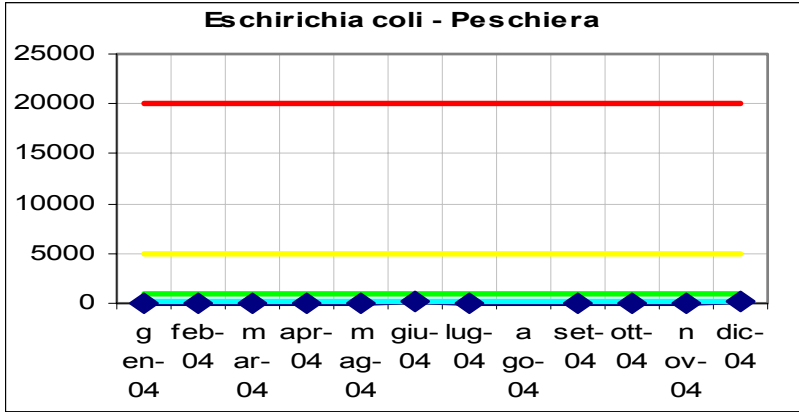


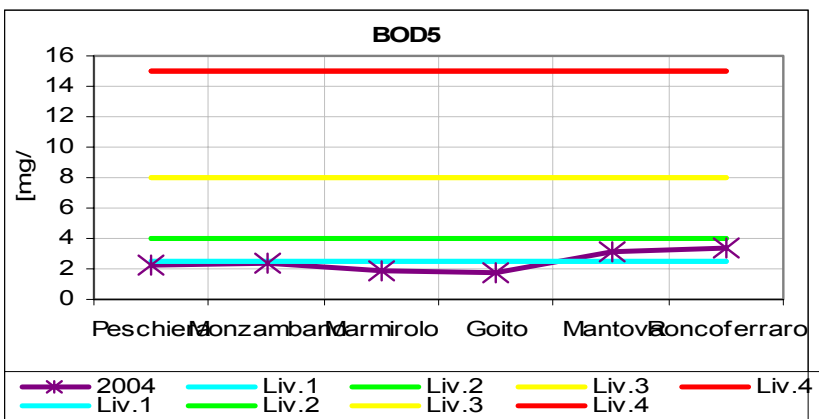
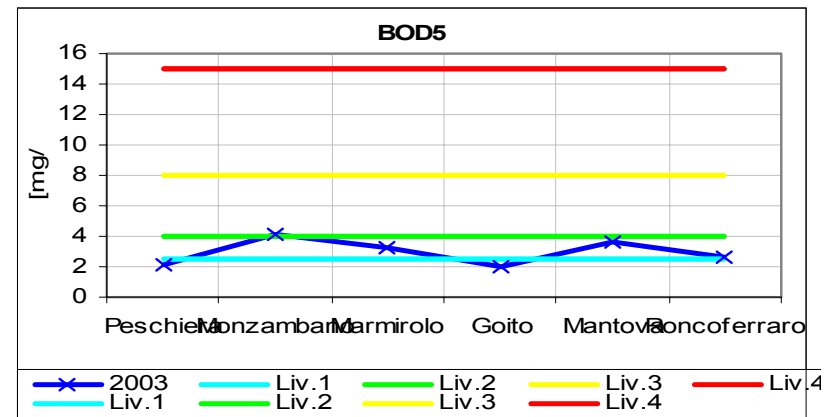
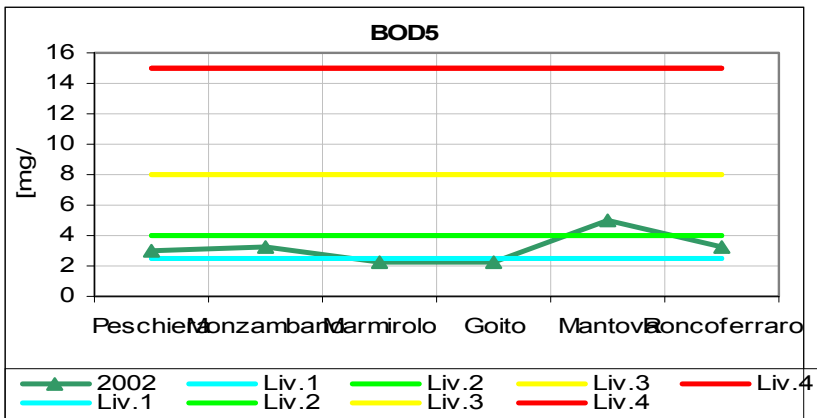
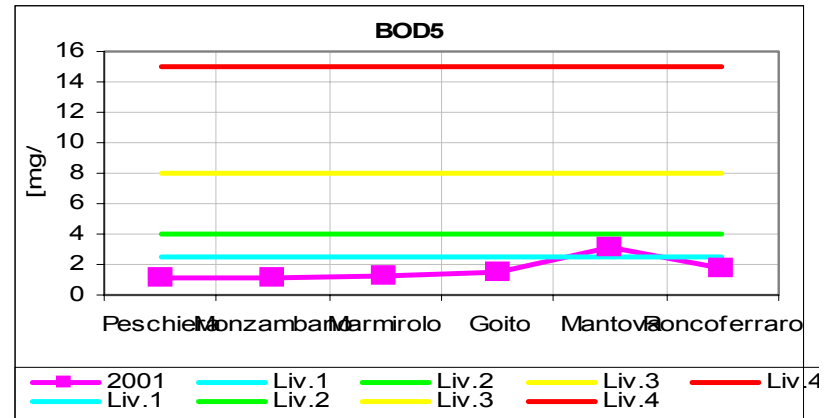
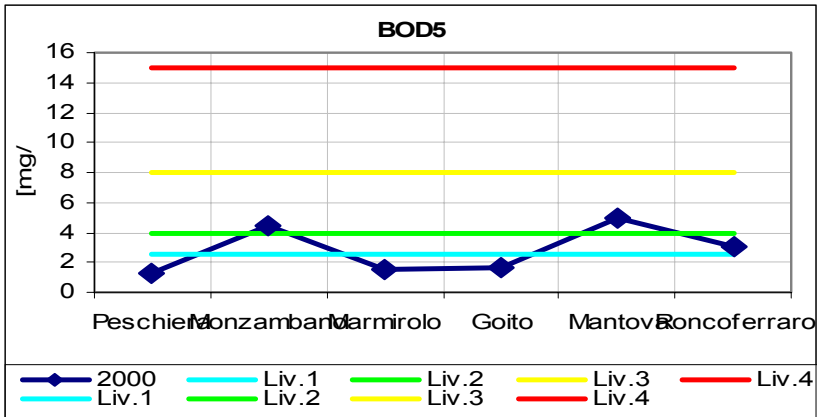


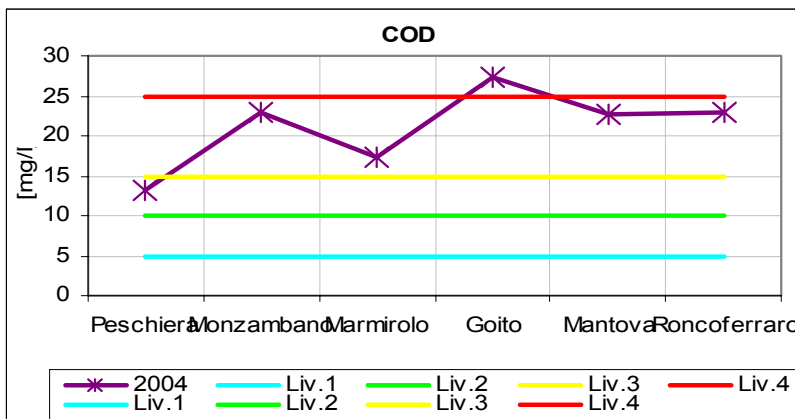
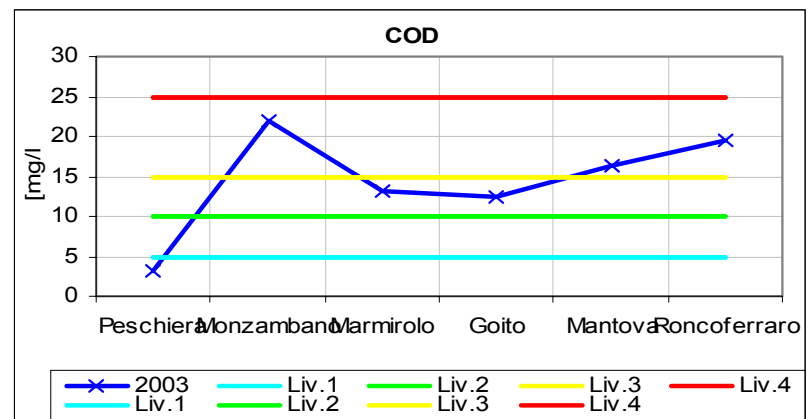
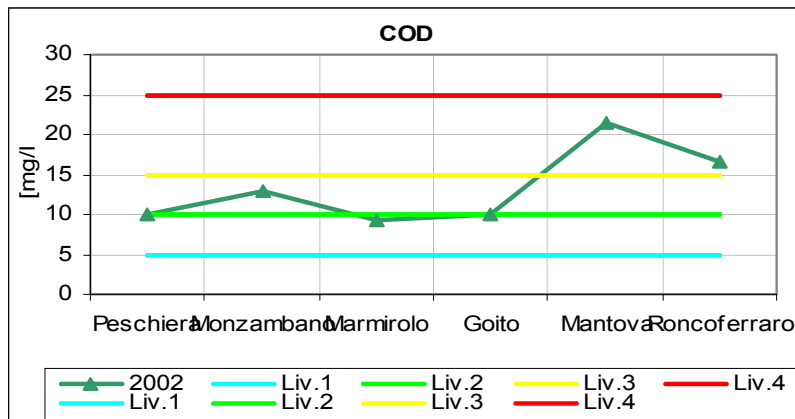
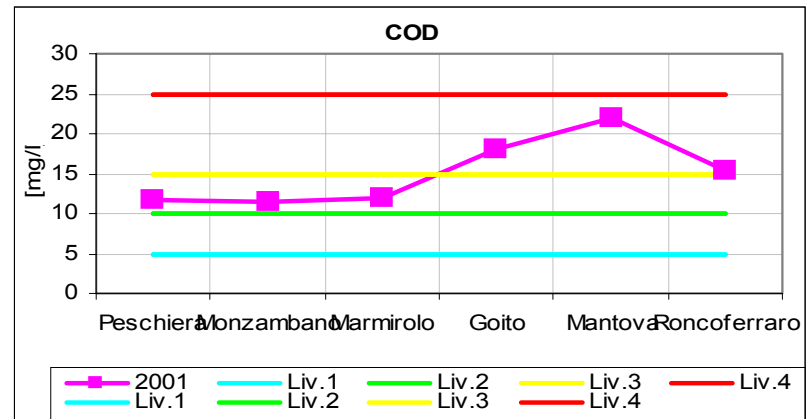
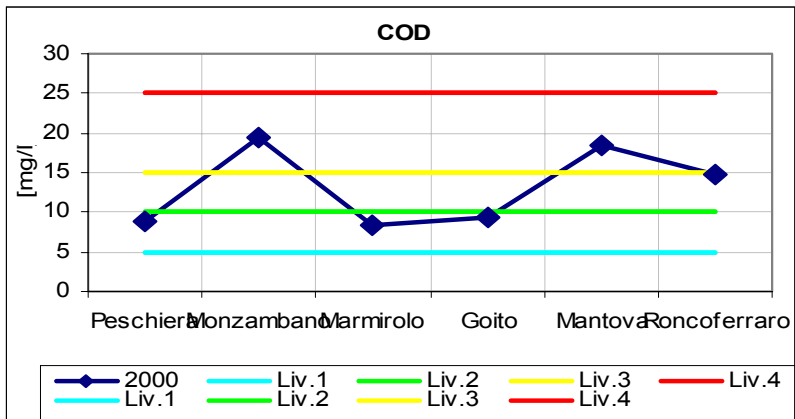


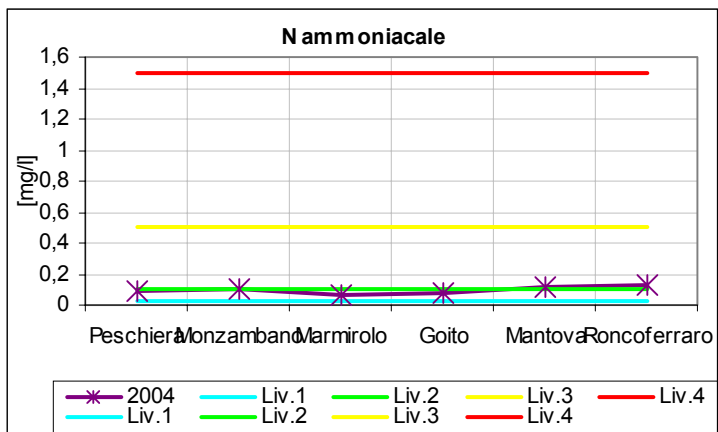
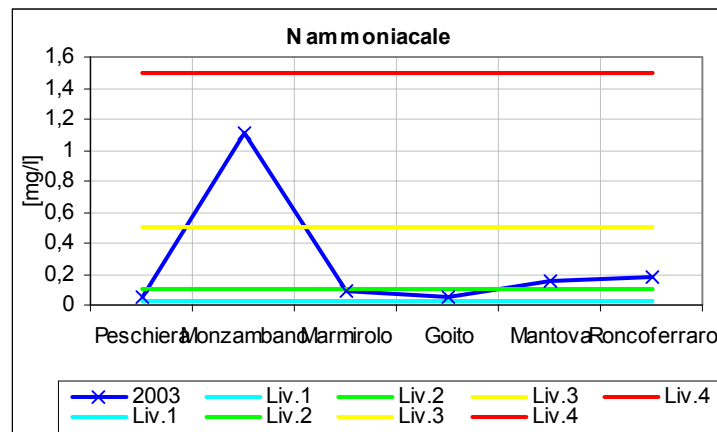
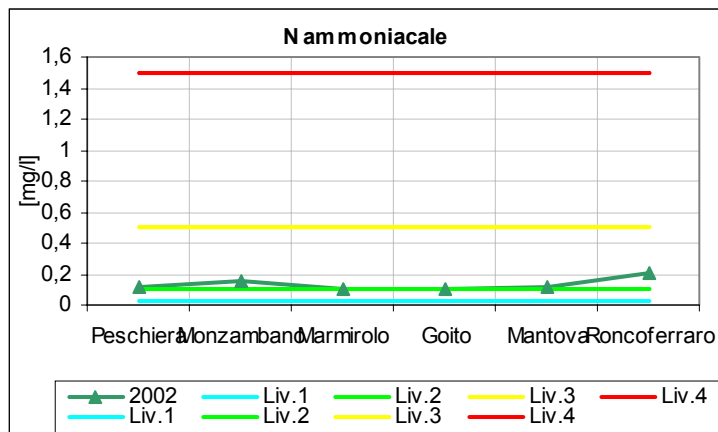
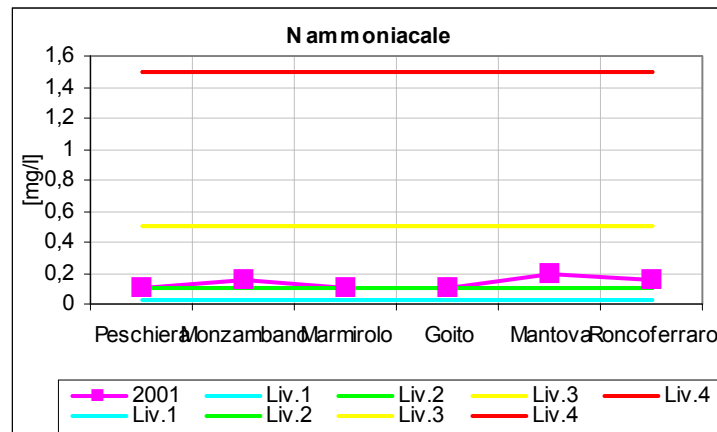
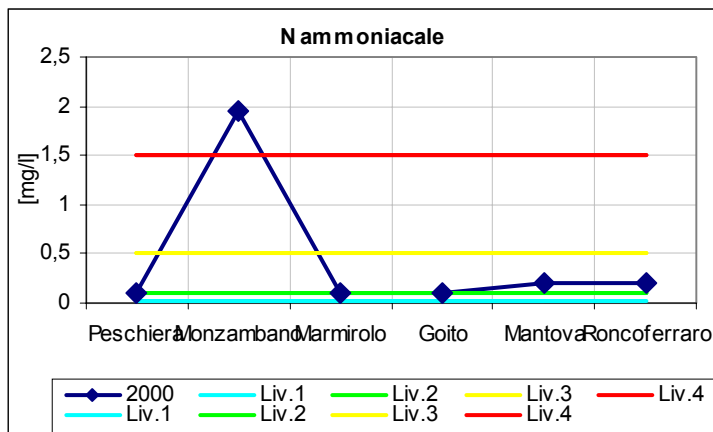


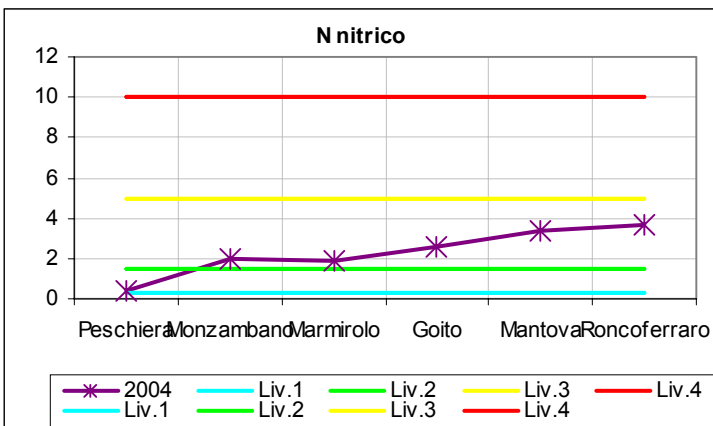
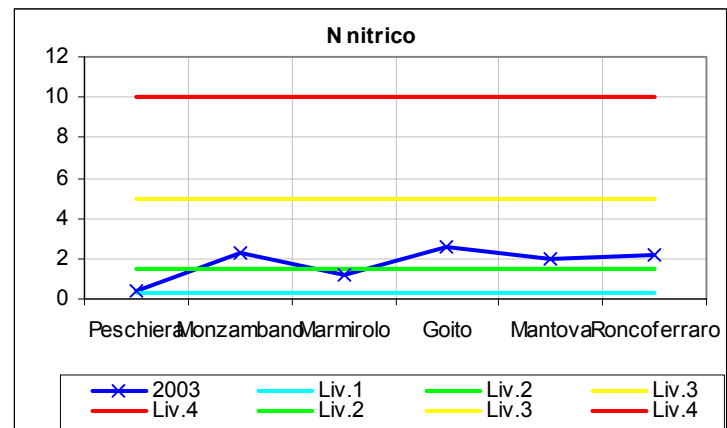
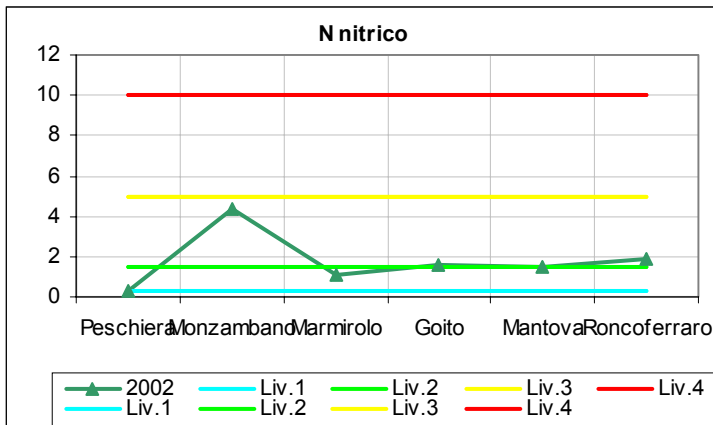
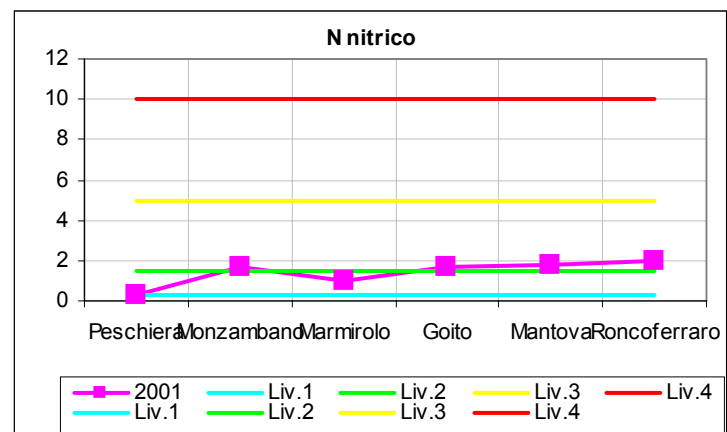
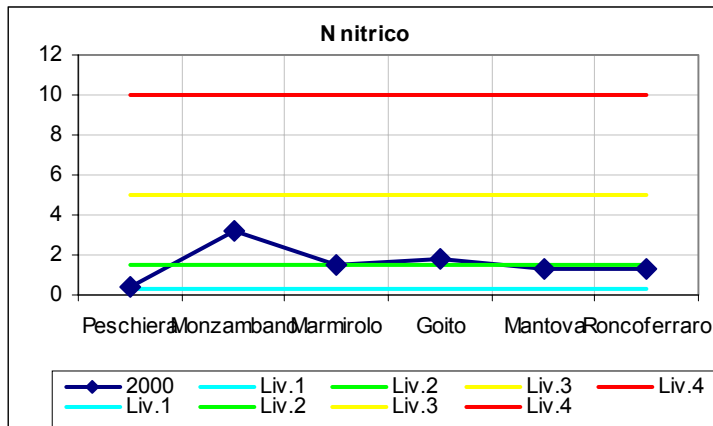


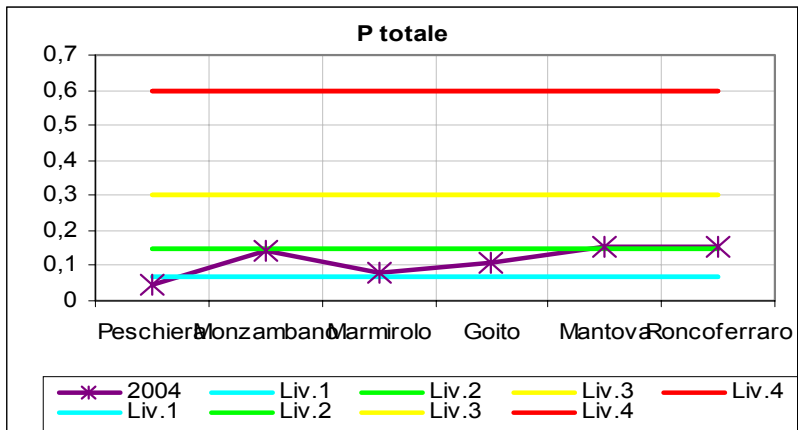
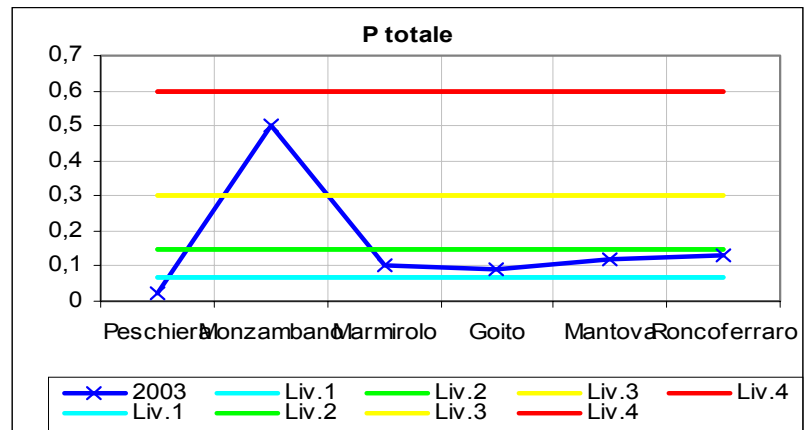
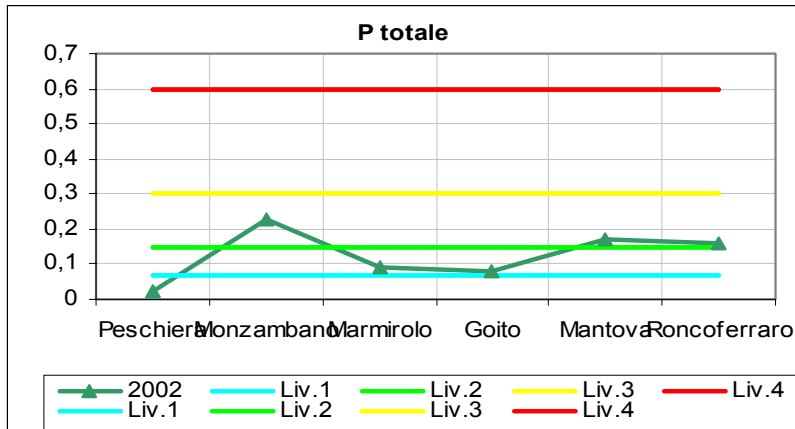
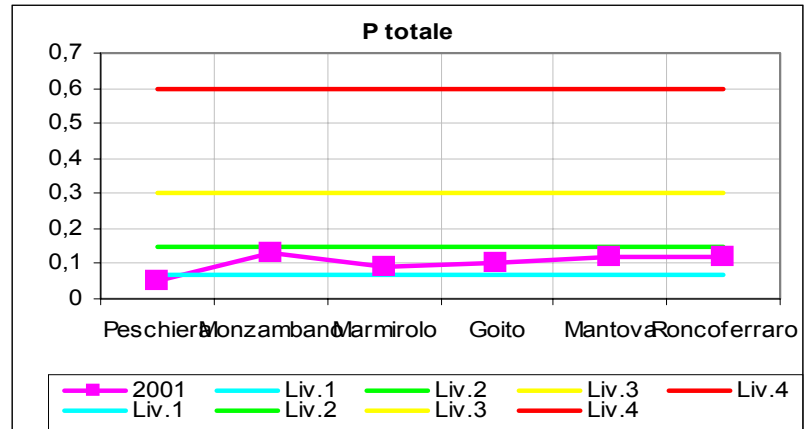
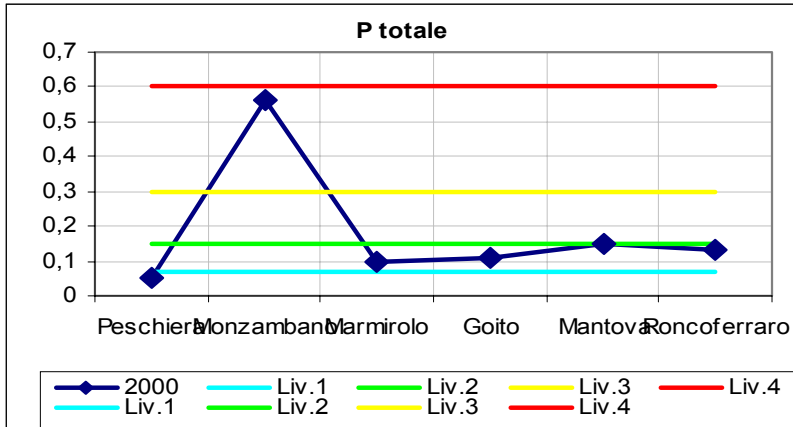


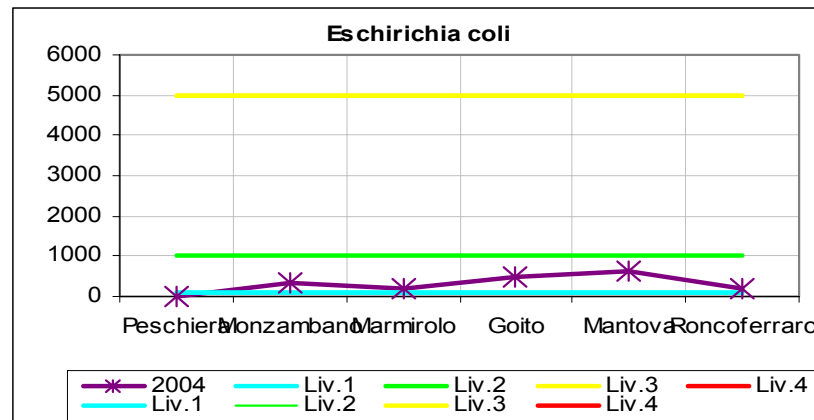
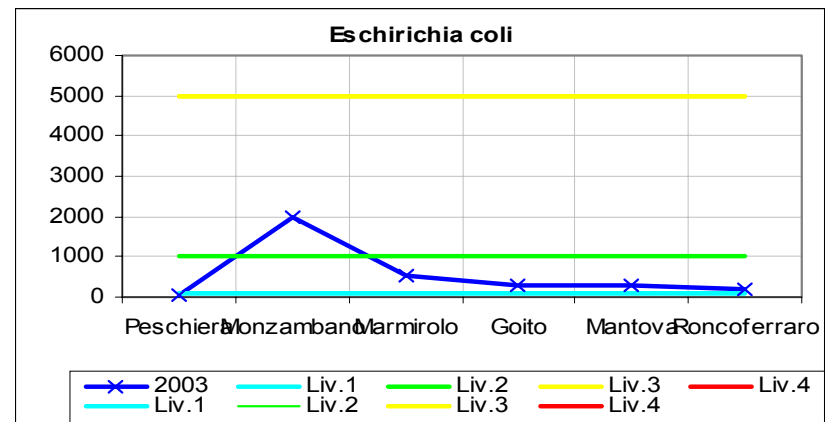
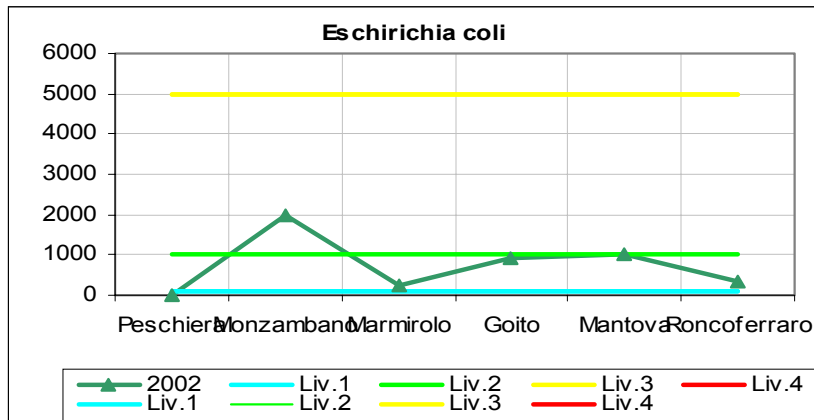
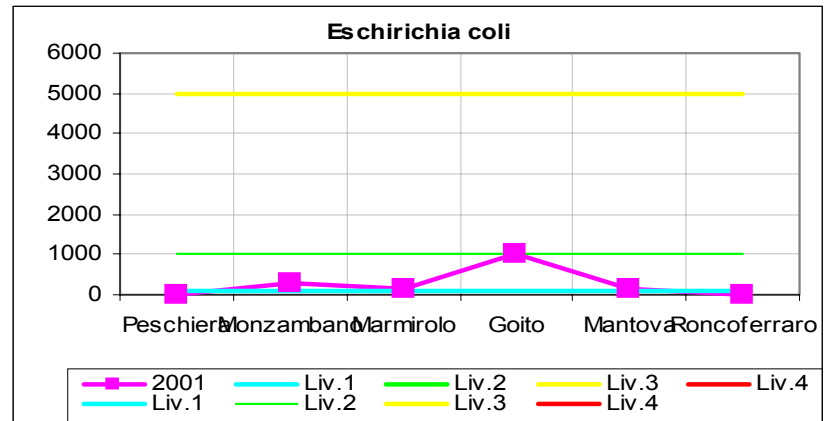
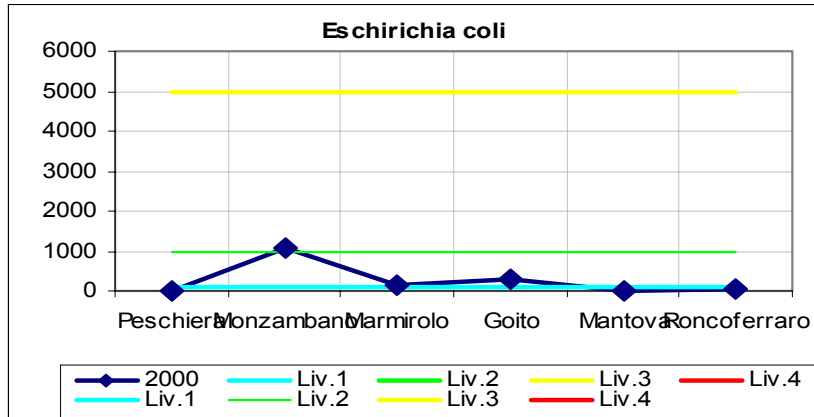












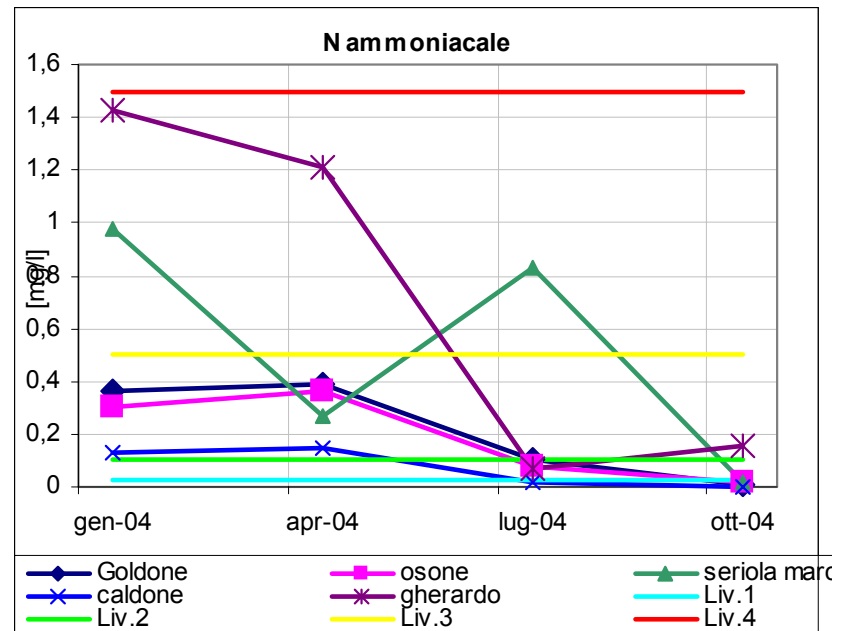
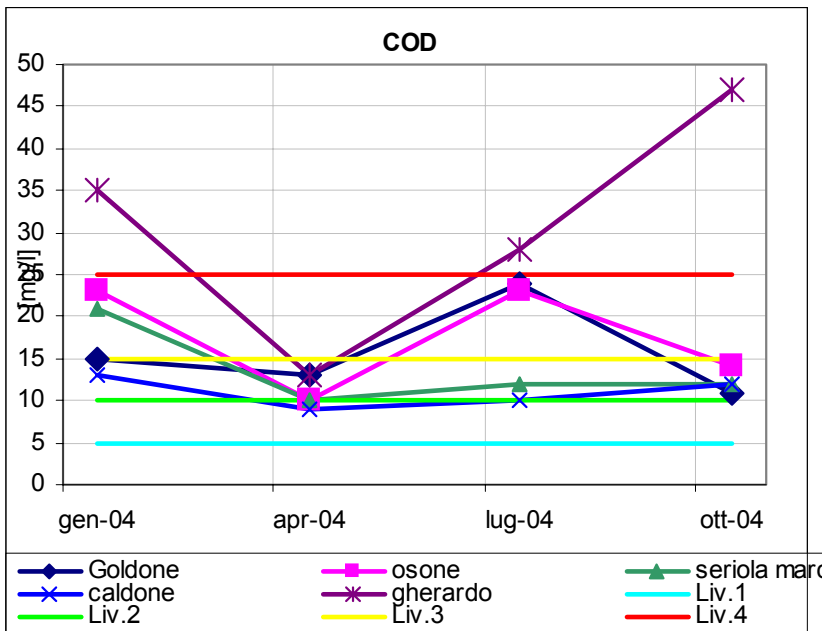
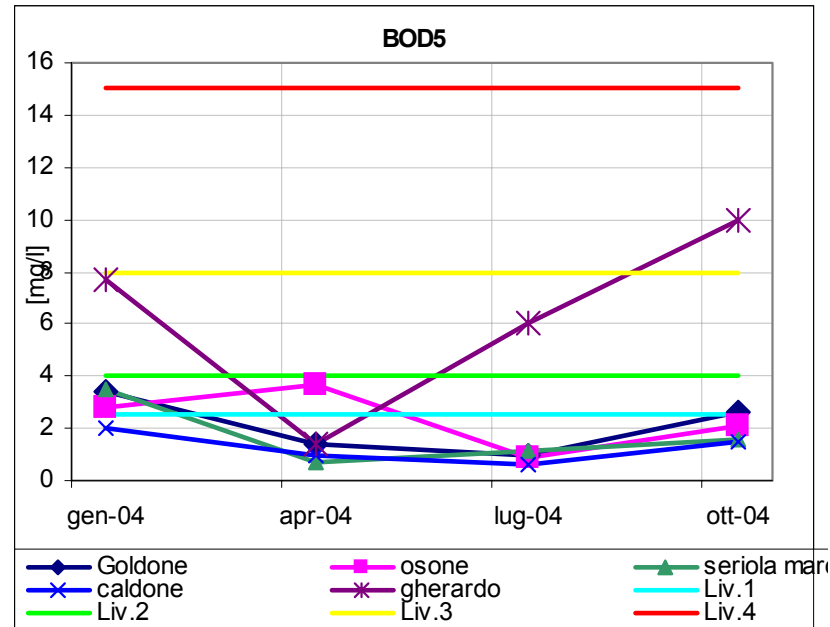
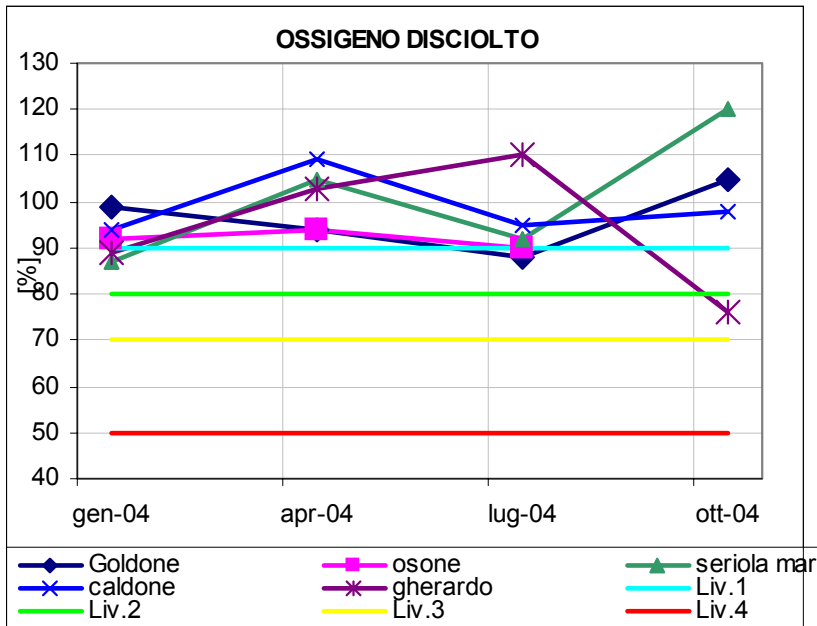
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		Zn µg/l	Zn µg/l	Cu µg/l	Cr µg/l	Ni µg/l	Pb µg/l	As µg/l	Cd µg/l	Cd µg/l	Hg µg/l	Hg µg/l	Fe µg/l
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Peschiera	23/02/2004	< 10	< 10	< 5	< 5	< 2	< 5	< 2	< 0,5	< 0,5	< 0,2	< 0,2	< 10
Peschiera	16/03/2004	< 10	< 10	< 5	< 5	< 2	< 5	< 2	< 0,5	< 0,5	< 0,2	< 0,2	< 10
Peschiera	06/04/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Peschiera	17/05/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Peschiera	08/06/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
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Peschiera	01/12/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	19/01/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	23/02/2004	12	12	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	16/03/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	06/04/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	18
Monzambano	17/05/2004	15	15	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	08/06/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	< 10
Monzambano	12/07/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	30/08/2004	<10	<10	<5	<5	<5	<5	2	<0,5	<0,5	<0,2	<0,2	< 10
Monzambano	20/09/2004	<10	<10	<5	<5	<5	<5	2	<0,5	<0,5	<0,2	<0,2	< 10
Monzambano	18/10/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	15/11/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Monzambano	01/12/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10

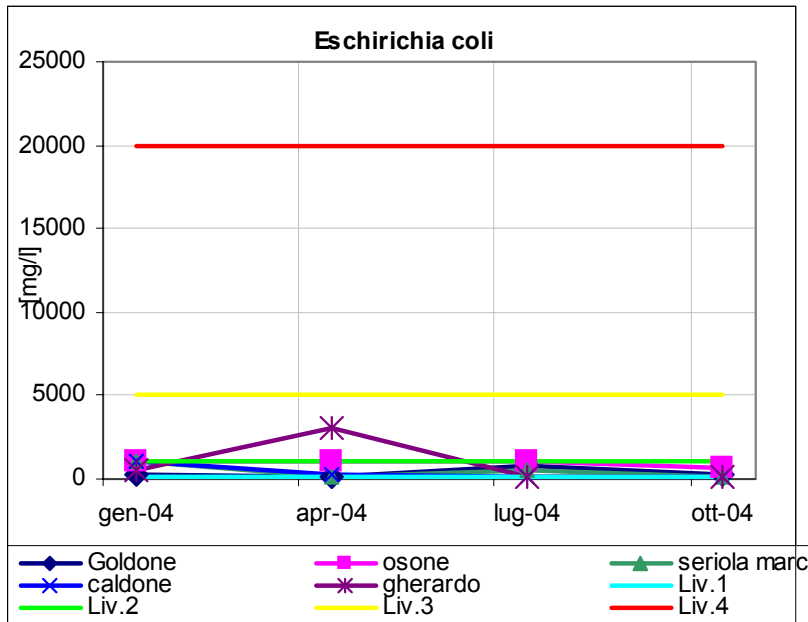
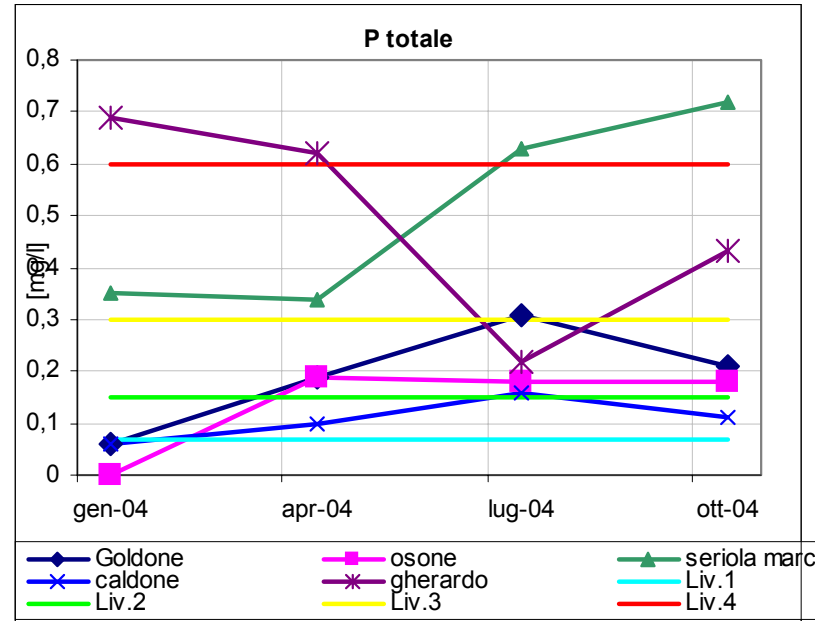
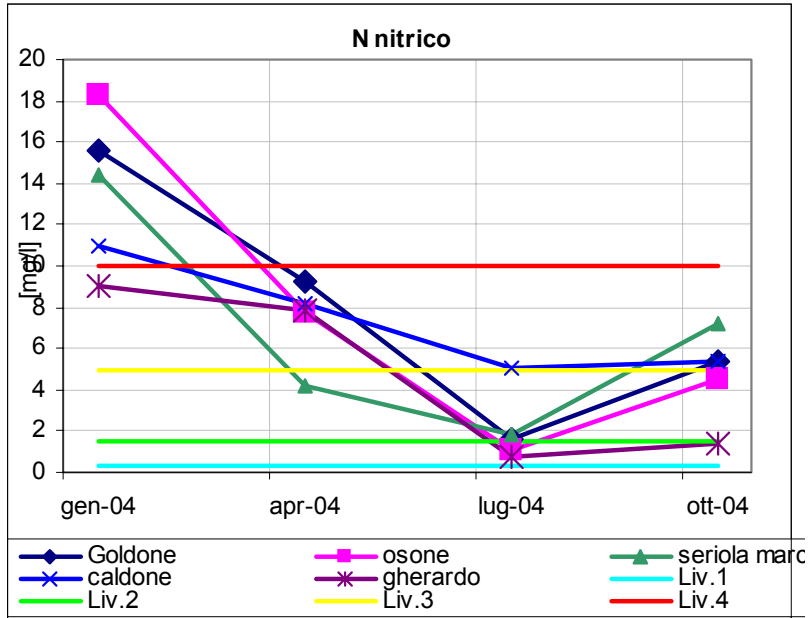
Codice stazione	Data prelievo gg/mm/aa	Zinco	Zinco disciolto	Rame	Cromo	Nichel	Piombo	Arsenico	Cadmio	Cadmio disciolto	Mercurio	Mercurio disciolto	Ferro
		Zn µg/l	Zn µg/l	Cu µg/l	Cr µg/l	Ni µg/l	Pb µg/l	As µg/l	Cd µg/l	Cd µg/l	Hg µg/l	Hg µg/l	Fe µg/l
Marmiolo	19/01/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	23/02/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	10
Marmiolo	16/03/2004	12	12	8	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	06/04/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	17/05/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	08/06/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	12/07/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	30/08/2004	11	10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	20/09/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	18/10/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	15/11/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Marmiolo	01/12/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	19/01/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	23/02/2004	13	10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	11
Goito	16/03/2004	<10	<10	6	<5	<5	<5	2	<0,5	<0,5	<0,2	<0,2	<10
Goito	06/04/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	17/05/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	08/06/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	12/07/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	30/08/2004	<10	<10	<5	<5	<5	<5	3	<0,5	<0,5	<0,2	<0,2	10
Goito	20/09/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	18/10/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	15/11/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Goito	01/12/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10

Codice stazione	Data prelievo gg/mm/aa	Zinco	Zinco disciolto	Rame	Cromo	Nichel	Piombo	Arsenico	Cadmio	Cadmio disciolto	Mercurio	Mercurio disciolto	Ferro
		Zn µg/l	Zn µg/l	Cu µg/l	Cr µg/l	Ni µg/l	Pb µg/l	As µg/l	Cd µg/l	Cd µg/l	Hg µg/l	Hg µg/l	Fe µg/l
Mantova	19/01/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	23/02/2004	20	18	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	12
Mantova	16/03/2004	22	22	8	<5	<5	<5	3	<0,5	<0,5	<0,2	<0,2	<10
Mantova	06/04/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	17/05/2004	15	15	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	08/06/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	12/07/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	30/08/2004	<10	<10	<5	<5	<5	<5	3	<0,5	<0,5	<0,2	<0,2	14
Mantova	20/09/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	18/10/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	15/11/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Mantova	01/12/2004	<10	<10	<5	<5	<5	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	19/01/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	23/02/2004	28	27	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	13
Roncoferraro	16/03/2004	<10	<10	<5	<5	<2	<5	3	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	06/04/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	17/05/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	08/06/2004	<10	<10	<5	<5	<2	<5	3	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	12/07/2004	<10	<10	<5	<5	<2	<5	2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	30/08/2004	<10	<10	<5	<5	<2	<5	3	<0,5	<0,5	<0,2	<0,2	11
Roncoferraro	20/09/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	18/10/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	15/11/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10
Roncoferraro	01/12/2004	<10	<10	<5	<5	<2	<5	<2	<0,5	<0,5	<0,2	<0,2	<10

75° le			Seriola Marchionale	Goldone	Caldone	Osone	Gherardo
OD	100 - OD	% sat.	14,75	7,5	6,75	10	14,25
BOD5		mg/l	2,1	2,8	1,6	3,0	8,3
COD		mg/l	14,3	17,3	12,3	23,0	38,0
N NH4	N-NH4	mg/l	0,9	0,4	0,1	0,3	1,3
N NO3	N-NO3	mg/l	9,0	10,8	8,9	10,4	8,1
P tot.	P tot	mg/l	0,7	0,2	0,1	0,2	0,6
E.coli		UFC/100 ml	625,0	350,0	400,0	1000,0	1125,0

			Seriola Marchionale	Goldone	Caldone	Osone	Gherardo
Ossigeno	100 - OD	% sat.	40	80	80	80	40
OD		mg/l	80	40	80	40	10
COD		mg/l	20	10	20	10	5
N NH4	N-NH4	mg/l	10	20	20	20	10
N NO3	N-NO3	mg/l	10	5	10	5	10
P tot.	P tot	mg/l	5	20	40	20	5
E.coli		UFC/100 ml	40	40	40	40	20
TOTALE		(1-12)	205	215	290	215	100
LIM			Liv.3	Liv.3	Liv.2	Liv.3	Liv4





Classificazione PTUA Regione Lombardia

Corpo Idrico	Rilevanza corpo idrico	Tipo	Punti di monitoraggio	LIM		IBE		Stato Ecologico (SECA)	Stato Ambientale (SACA)
				classe	valore	classe	valore		
Mincio	Significativo	Naturale							
			Peschiera	2	410	III	6	3	Sufficiente
			Monzambano	3	130	III	6	3	Sufficiente
			Marmirolo	2	260	III	7	3	Sufficiente
			Goito	2	320	II	8	2	Buono
			Mantova	2	250	III	6	3	Sufficiente
Roncoferraro	3	210	IV	5	4	Scadente			
Seriola Marchionale	Carico	Artificiale	Ceresara	4	115			4	Scadente
Goldone	Carico	Artificiale	Rodigo	4	115			4	Scadente
Caldone	Carico	Artificiale	Goito	3	230			3	
Osonè	Carico	Artificiale	Castellucchio	3	160			3	
Gherardo	Carico	Artificiale	Bagnolo S.Vito	4	95			4	Scadente

Classificazione ARPA anno 2004

Corpo Idrico	Rilevanza corpo idrico	Tipo	Punti di monitoraggio	LIM		IBE		Stato Ecologico (SECA)	Stato Ambientale (SACA)
				classe	valore	classe	valore		
Mincio	Significativo	Naturale							
			Peschiera	2	420	3	5,67	3	
			Monzambano	2	310	3	6,5	3	
			Marmirolo	2	310	2	8,4	2	
			Goito	2	265	2	8,57	2	
			Mantova	3	190	4	5,52	4	
Roncoferraro	3	190	4	5,32	4				
Seriola Marchionale	Carico	Artificiale	Ceresara	3	205			3	
Goldone	Carico	Artificiale	Rodigo	3	215			3	
Caldone	Carico	Artificiale	Goito	2	290			2	
Osonè	Carico	Artificiale	Castellucchio	3	215			3	
Gherardo	Carico	Artificiale	Bagnolo S.Vito	100	4			4	