

MONITORAGGIO QUALITA delle ACQUE

OSOPPO - anno 2019 -

- criterio 3.2.5 ASC Freshwater trout Standard (Appendix IIB) -

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
14/01/2019	pH	INLET	SINGLE GRAB	YES	YES	7,34
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	6,30
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,43
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	7,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	2,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,08
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,04
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
18/02/2019	pH	INLET	SINGLE GRAB	YES	YES	7,36
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	6,20
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,40
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	3,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,09
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,60
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,03
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
18/03/2019	pH	INLET	SINGLE GRAB	YES	YES	7,32
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	6,10
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,43
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	2,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,06
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,70
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,05
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
23/04/2019	pH	INLET	SINGLE GRAB	YES	YES	7,30
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1,00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5,90
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0,01
	pH	OUTLET	SINGLE GRAB	YES	YES	7,45
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	3,00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	2,00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10,00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,09
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6,70
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0,06

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
27/05/2019	pH	INLET	SINGLE GRAB	YES	YES	7.28
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.40
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.42
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.05
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.02
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
24/06/2019	pH	INLET	SINGLE GRAB	YES	YES	7.24
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	3.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.60
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.46
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	4.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.09
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.50
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.05
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
15/07/2019	pH	INLET	SINGLE GRAB	YES	YES	7.29
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	2.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.010
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.50
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.43
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.130
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.70
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.07
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
19/08/2019	pH	INLET	SINGLE GRAB	YES	YES	7.25
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	4.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.70
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.46
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	8.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.16
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.50
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.06
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
16/09/2019	pH	INLET	SINGLE GRAB	YES	YES	7.30
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	2.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.50
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.42
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	9.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.14
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.80
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.05

DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
14/10/2019	pH	INLET	SINGLE GRAB	YES	YES	7.28
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.80
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.47
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.12
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.50
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.06
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
18/11/2019	pH	INLET	SINGLE GRAB	YES	YES	7.25
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.60
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.42
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	8.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	2.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.14
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.60
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.05
DATE	ANALYSIS	LOCATION	METHOD	SAMPLING BY THIRD PARTY?	ANALYSIS BY THIRD PARTY	RESULT
16/12/2019	pH	INLET	SINGLE GRAB	YES	YES	7.29
	SOS (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	BOD (mg/l)	INLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	INLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	INLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	N nitrico (mg/l)	INLET	SINGLE GRAB	YES	YES	5.80
	P tot (mg/l)	INLET	SINGLE GRAB	YES	YES	0.01
	pH	OUTLET	SINGLE GRAB	YES	YES	7.48
	SOS (mg/l)	OUTLET	SINGLE GRAB	YES	YES	5.00
	BOD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	1.00
	COD (mg/l)	OUTLET	SINGLE GRAB	YES	YES	10.00
	N amm (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.10
	N nitroso (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.09
	N nitrico (mg/l)	OUTLET	SINGLE GRAB	YES	YES	6.50
	P tot (mg/l)	OUTLET	SINGLE GRAB	YES	YES	0.02

SATURAZIONE MINIMA di OSSIGENO DISCIOLTO

OSOPPO - anno 2019 -

- criterio 3.2.2 ASC Freshwater trout Standard (Appendix IIB) -

ACQUA IN USCITA VASCHE ALLEVAMENTO

MESE	DATA RILEVAZIONE	OSSIGENO DISCIOLTO [mg/l]	TEMPERATURA	PRESSIONE [mmHg]	VALORE SATURAZIONE DI O ₂ [mg/l]	SATURAZIONE PERCENTUALE [%]
GENNAIO	21/01/2019	10,1	9,1	751,12	11,56	87,37
FEBBRAIO	18/02/2019	10,2	9,3	751,12	11,50	88,70
MARZO	18/03/2019	10,2	9,5	751,12	11,44	89,16
APRILE	23/04/2019	9,7	9,7	751,12	11,38	85,24
MAGGIO	27/05/2019	9,9	9,9	751,12	11,32	87,46
GIUGNO	24/06/2019	10,2	10,2	751,12	11,23	90,83
LUGLIO	15/07/2019	10,6	10,6	751,12	11,11	95,41
AGOSTO	19/08/2019	10,9	10,9	751,12	11,02	98,91
SETTEMBRE	16/09/2019	10,9	10,9	751,12	11,02	98,91
OTTOBRE	14/10/2019	10,5	10,5	751,12	11,14	94,25
NOVEMBRE	18/11/2019	10,1	10,1	751,12	11,25	89,78
DICEMBRE	16/12/2019	9,8	9,8	751,12	11,35	86,34

La % di saturazione di OD (concentrazione di ossigeno disciolto; in inglese DO) è data dal rapporto, in % appunto, tra l'effettiva quantità di OD e il massimo valore possibile in funzione della temperatura e dell'altitudine.

Altitudine OSOPPO= 185m.

Pressione in funzione dell'altitudine: $p = 0,9877^q$; dove P=pressione in atm - q=altitudine in centinaia di metri (nel caso di OSOPPO q=1,85), da cui $p = 0,984892 \text{ atm}$ (751,12mm di Hg)

Dalla Tabella allegata si ottengono i valori di saturazione di O₂

	°C	750mm	760mm	751,12mm	valore saturazione
temperatura più bassa	9	11,5	11,6	11,5888	14,2888
temperatura più alta	10	11,2	11,3	11,2888	
temperatura rilevata					
temperatura più bassa	10	11,2	11,3	11,2888	14,244
temperatura più alta	11	10,94	11	10,99328	
temperatura rilevata					
temperatura più bassa	11	10,94	11	10,99328	13,24256
temperatura più alta	12	10,7	10,8	10,7888	
temperatura rilevata					
temperatura più bassa	12	10,7	10,8	10,7888	14,30816
temperatura più alta	13	10,46	10,5	10,49552	
temperatura rilevata					