

**Hydrochemical determination of source water contributions to Lake Lungo and Lake
Ripasottile (central Italy)**

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Supplementary Tab. 1. Rieti historical precipitation data, values are the monthly totals in millimeters. Data from the Rieti pluviometry and thermometry station.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
2003	43.8	28.4	32.6	49.2	45.8	45.0	11.8	26.2	35.6	254.8	92.4	38.6	704
2004	91.4	213.2	90.4	195.0	96.6	45.4	10.6	59.4	75.0	120.0	87.0	192.0	1276
2005	34.6	63.0	111.2	112.4	52.0	49.0	0.6	45.6	72.4	125.0	276.8	189.4	1132
2006	57.8	76.8	86.2	67.4	38.4	11.4	69.8	21.3	112.8	10.2	69.0	39.4	661
2007	76.4	85.8	92.4	31.4	94.6	28.4	1.6	8.4	45.8	35.2	54.2	48.6	603
2008	93.6	50.4	213.0	98.4	121.0	97.4	94.6	2.6	40.4	173.6	166.8	259.4	1411
2009	84.0	80.4	126.0	89.4	73.2	84.0	58.4	21.0	59.2	88.4	119.2	195.4	1079
2010	194.4	145.2	82.8	120.8	165.0	42.0	46.8	38.8	66.4	62.2	189.0	119.2	1273
2011	35.4	72.8	156.4	32.8	42.8	51.4	115.8	9.2	65.6	54.8	27.6	100.0	765
2012	31.4	56.2	12.8	103.0	92.9	10.4	13.5	42.2	221.7	197.2	210.3	117.6	1109
2013	163.5	138.1	196.0	86.1	152.2	96.0	34.8	58.6	70.6	88.4	218.9	50.1	1353
2014	202.0	141.4	79.2	125.8	---	86.4	71.6	9.3	75.2	32.8	167.8	---	992
2015	87.4	103.0	123.3	50.3	64.9	47.8	9.7	59.2	58.2	154.5	45.1	2.8	806
Mean	92	97	108	89	87	53	42	31	77	107	133	113	1013

Source: Lazio Centro Funzionale: <http://www.idrografico.roma.it/annali/>

Supplementary Tab. 2. Rieti historical temperature data. Values are the monthly mean temperature in degrees Celsius.

Year	January	February	March	April	May	June	July	August	September	October	November	December	Mean
2003	6.1	3.2	9.3	12.7	19.9	24.5	25.9	26.3	19.4	14	11	6.1	14.9
2004	4.4	6.6	9	12.5	15.2	21	23.6	23.9	18.3	16.7	9.5	7.3	14.0
2005	3.3	3.2	8.2	10.8	16.8	20.3	22.3	20.6	18.8	14	9	4.4	12.6
2006	3.9	5.5	7.9	12.9	16.5	19.3	23.4	20.5	19.2	15.7	9.6	6.8	13.4
2007	6.8	8.1	9.8	14.4	16.9	20.4	22.8	22.6	17.4	13.9	7.8	4.6	13.8
2008	6.1	6.2	8.2	11.4	16.2	20.1	21.8	22.5	17.1	14.7	9.5	5.2	13.3
2009	5.3	4.7	8.5	12.4	17.7	19	22.2	23.4	19.2	13.1	9.7	5.9	13.4
2010	4.5	6.1	8.5	12	15.1	19.3	23.5	22.2	17.9	13.6	9.9	5.4	13.2
2011	5.7	6.2	8.7	13.5	16.5	20.6	21.4	23.5	21	13.8	9.3	6.6	13.9
2012	4.7	3.1	11.1	12.2	15.6	21.7	24	25	19	15.5	11.4	4.5	14.0
2013	4.9	4.3	8.9	14	15.2	19.2	22.4	23	18.7	16.2	10.2	5.2	13.5
2014	6.7	9	9.4	12.6	15.4	20	21.1	21.9	19	16	12	6.9	14.2
2015	5.7	6.4	9.2	12.6	17.4	20.4	25.4	23.5	19.2	14.7			15.5
Mean	5.2	5.6	9.0	12.6	16.5	20.4	23.1	23.0	18.8	14.8	9.9	5.7	

Supplementary Tab. 3. Monthly major ion concentrations in Lago Lungo in 2011, data in mg L⁻¹ collected and analyzed by ARPA, Lazio.

2011	January	February	March	April	May	June	July	August	September	October	November	December
Fluoride	0.03	0.011	6.6	0.14	0.024	0.027	0.035	0.055	0.1	0.02	0.02	0.02
Chloride	7.4	7.4	0.071	7.1	7.3	6.9	7.5	7.4	7.9	7.9	8.2	7.2
Nitrite	0.048	0.031	0	0	0	0	0	0	0	0.03	0.05	0.14
Nitrate	6.3	4.2	3.2	0.11	0.86	0.24	0.5	0.2	0.13	1.1	1.6	3
Phosphate	0	0.031	0	0	0	0	0	0	0	0	0	0
Sulfate	20	19.8	17.5	16.5	12.6	10.6	11	10.8	12.6	10.7	11.5	12
Lithium	0	0	0	0	0	0	0	0	0	0	0	0
Sodium	6.4	5	4.8	5	5	4.9	6.3	6.2	6.3	7.2	6.8	7
Ammonia	0.184	0.319	0.139	0.028	0.109	0.066	0.04	0.035	0.07	0.17	0.15	0.74
Potassium	3.1	2.7	2.4	2.6	2.4	2.1	1.1	1.1	1.4	1.6	1.9	1.4
Magnesium	5.7	6	5.8	5.8	5.9	5.2	6.7	7.3	8.8	8.2	7.6	7.8
Calcium	118	101	87.5	75.4	63.2	63	56.5	54.6	61.2	71.3	75.7	87.1

Supplementary Tab. 4. Major ion concentrations in Lake Ripasottile in 2010 and 2011, data in mg L⁻¹ collected and analyzed by ARPA, Lazio.

	May 2010	June 2010	July 2010	April 2011	May 2011	June 2011	July 2011	August 2011
Chloride	5.2	4.9	4.8	5.1	4.8	4.6	6.0	5.5
Nitrate	2.4	0.9	0.1	0.7	0.7	0.1	0.2	0.2
Sulfate	109.3	118.7	115.5	113.9	109.0	151.8	166.4	163.5
Sodium	4.6	3.9	3.5	3.2	3.0	3.4	4.3	3.9
Potassium	2.6	2.3	2.0	2.5	1.9	0.9	1.2	2.6
Magnesium	19.3	24.6	24.4	23.2	21.0	24.5	30.2	27.4
Calcium	122.0	121.6	112.0	101.6	93.6	94.2	67.5	99.1