

Cura aquarum and *curator aquarum* – the Head of Rome's Water Supply Administration

Adrian Vladu*

Abstract: *The importance of water supply to any human community goes without saying. At the end of the 1st century A.D., Rome developed an impressive water infrastructure consisting of nine aqueducts. This huge network of pipes that distributed water on almost the whole surface of the ancient city could not function without rigorous maintenance. This work fell under the responsibility of the aquarii, a team that formed the familia aquaria, a component part of cura aquarum, an office led by the curator aquarum. The description of the structure of the cura aquarum and of the tasks of the team that represented it, as well as the activity of curator aquarum, are the subject of this paper.*

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Introduction

Water supply was very important for any settlement in the Roman world, both from a practical point of view, by providing the water necessary

* Adrian Vladu is a PhD student at the Faculty of History, University of Bucharest. His field of interest consists of classical archaeology. He is currently finishing his thesis on “Roman aqueducts: innovation, evolution and effects on the environment. Comparative analysis: the city of Rome and the province of Moesia Inferior” and performing archaeological field work at Histria and Noviodunum. Contact: vladu.adrian@gmail.com.

for human consumption, for carrying out economic activities or for feeding the public baths and fountains, thus with a role in maintaining public health, but also from a political point of view, the Roman aqueducts, especially those from Rome, were means of propaganda regardless of the period in which they were built, the financier or magistrate dealing with the construction of an aqueduct receiving immense political capital; in the imperial period this honor was given to the prince.

For the good functioning of the water network supply of the city of Rome, the person responsible was *curator aquarum*, the head of the *cura aquarum*, an office that cared for the water distribution, the maintenance of the aqueducts of Rome (both in the area of the city and beyond) and the expansion of the water network when necessary.

This article aims to present this office and the *curator aquarum*, but not after reviewing the main primary sources used, followed by a succinct presentation of Republican practices in water distribution in Rome and by the evaluation of Marcus Agrippa's contribution to Rome's water distribution infrastructure and administration. The article will also focus on Sextus Iulius Frontinus, the author of the most important ancient written work dealing with the water supply of Rome and *curator aquarum* during the Nerva-Traian period, one of the most capable characters in this position.

Ancient sources

In general, the ancient literary sources dealing with water supply in the Roman world can be easily divided into two categories: main and secondary sources. In the category of the secondary ones can be included all

the works of the ancient authors that refer to the aqueducts, characters or events that marked the emergence, development and operation of this impressive water supply network. The works to be included in this category are numerous and written in different historical periods: Appian, “*Historia Romana*” (1st century A.D.); Casius Dio, “*Historia Romana*” (2nd century A.D.); Flavius Josephus, “*De bello Judaico*” (1st century A.D.); Plinius Maior, “*Historia Naturalis*” (1st century A.D.); Plinius Secundus, “*Epistulae*” and “*Panegyricus*” (2nd century A.D.); Quintilian, “*Institutio Oratoria*” (1st century A.D.); Strabo, “*Geographia*” (2nd century A.D.); Tacitus, “*Annales*”, “*Historiae*” (2nd century A.D.) and “*Agricola*” (1st century A.D.), Titus Livius, “*Ab Urbe Condita*” (1st - 2nd century A.D.) or “*The Laws of The XII Tables*” from the 4th century B.C.

In the category of the main primary sources we have the only two ancient works dealing directly with the water supply in the Roman world: Vitruvius, “*De Architectura*”, with the 8th chapter dedicated exclusively to the description of the Roman hydraulic installations, and “*De aquaeductu urbis Romae*” of Sextus Iulius Frontinus, by far the most important written source we have on the water supply network of Rome as a whole.

Vitruvius' work is very valuable in studying the field he approached (Roman architecture), simply because it is the only ancient work in this field that has survived; Trevor Hodge has so far considered that he is receiving more credit than he really deserves. The main quality of Vitruvius' work lies

in the fact that, for most of the information provided, it is the only source we have.¹

On the other hand, Frontinus' "De aquaeductu urbis Romae" is the work of a specialist in the field of Roman administration and it was written from the position of *curator aquarum*, which he had been occupying since 97 A.D., informing us from the beginning that it was designed to be a useful guide, both for him and for his successors in office.² Frontinus' work gives us valuable information about the entire network of Rome's aqueducts. It gives us data about the construction of each aqueduct of the city, about the stories and legends behind these huge projects, about the volume of water that reached Rome through its aqueducts and about their route from source to the point of distribution. Also from Frontinus we know most of the legislation on water distribution and the names of the occupants of the position of *curator aquarum* from the introduction of this magistracy to his time in office. Frontinus' work is an excellent tool for studying the aqueducts of Rome, but it gives us very little information about the construction and maintenance of hydraulic installations outside Rome.

Republican period

During the Republic, the administration of the water network of Rome and the maintenance and construction of the aqueducts was the responsibility of the ediles, the pretors and the censors. The censors were

¹ Trevor Hodge, "Vitruvius, Lead Pipes and Lead Poisoning", in: *American Journal of Archaeology*, vol. 85, no. 4, 1981, p. 488.

² Frontinus, *De aquaeductu Urbis Romae*, I, 2.

responsible for maintaining and developing the water network, three of the four republican aqueducts: *Aqua Appia*, *Anio Vetus* and *Tepula* being built under their supervision, while *Aqua Marcia* was built under the surveillance of a praetor. The censors also dealt with contracting the labour force for the building of the aqueducts and inspecting the work after it was completed.³ Sometimes these officials coordinated various activities aimed at the proper functioning of the water distribution network in Rome such as the maintenance of public fountains and sewers;⁴ the collection of charges for the use of the public water supply network could also be made by private contractors (*publicanii*).⁵

Evidence of the importance and appreciation of these tasks is also the fact that the aqueducts received the names of the people under whose supervision they were built: *Aqua Appia* is named after the censor Appius Caludius Crassus (*Caecus*) and *Aqua Marcia* gets the name of the praetor Quintus Marcius Rex.⁶

Agrippa's contribution

Agrippa's accomplishments in improving Rome's infrastructure in general and in water supply in particular are also mentioned by the ancient

³ Peter J. Aicher, *Guide to the Aqueducts of Ancient Rome*, Wauconda, Bolchazi-Carducci Publishers, 1995, p. 23.

⁴ Titus Livius, *Ab Urbe Condita*, XXXIX, XLIV.

⁵ Vitruvius, *De Architectura*, 8, 6.

⁶ Christer Bruun, "Medius fidius ... tantam pecuniam Nicomedenses perdidierint!" Roman Water Supply, Public Administration and Private Contractors", in: Jean-Jacques Aubert (ed.), *Tache Publiques et entreprise privée dans le monde Romain, sous la direction de Jean-Jacques Aubert*, Neuchâtel, Université de Neuchâtel, 2003, p. 306.

authors: Strabo recalls Agrippa's special concern for the construction of public fountains,⁷ Dio Cassius presents his work as an edile in the year 35 B.C., when, without using public funds, he did numerous public works: he “repaired all the public buildings and all the streets, cleaned out the sewers [...]”.⁸ Also from Dio Cassius we learn that in the year 25 B.C. Agrippa “beautified the city at its own expense”, involving here the construction of many public buildings including the Basilica of Neptune and “the building called Pantheon”.⁹

During Augustus' Principate, there was an explosion in the building of aqueducts throughout the Empire and a revolution of Rome's water network administration, Agrippa becoming practically the first *curator aquarum* of the city of Rome, even though this office became official only after his death, in 11 B.C., when it was ratified by the Senate.¹⁰ Agrippa's contribution to the development of Rome's water network was an extremely important one; besides the achievements of the city's distribution, its name is related to the bringing into the city of three of the 11 aqueducts of Rome. Agrippa deals with the construction of *Aqua Iulia* (33 B.C.) and *Virgo* (28 B.C.), basically rebuilding *Aqua Tepula*, the pipeline of Agrippa's *Tepula* being carried near the city by Marcia's arches;¹¹ the bigger height at the edge of the city allowed it to fuel areas that the republican aqueduct, built in 125 B.C., could not reach.

⁷ Strabo, *Geographia*, V, 3, 8.

⁸ Cassius Dio, *Historia Romana*, XLIX, 43.

⁹ *Ibidem*, LIII, 27.

¹⁰ Peter J. Aicher, *op. cit.*, p. 23.

¹¹ Harry B. Evans, “Agrippa's Water Plan”, in: *American Journal of Archaeology*, vol. 86, no. 3, 1982, p. 404.

A very important accomplishment is Agrippa's systematic planning of the water supply network of Rome, which began to be implemented in the 3rd decade of the 1st century B.C., continually evolving for more than 20 years. Modifying the route of *Tepula* by adding new branches and building the other two aqueducts (*Aqua Virgo* and *Aqua Iulia*) made the areas of Rome that did not benefit from efficient supply know the advantages of the city's aqueduct system. The three aqueducts completed each other, the *Aqua Virgo* fed the Field of Mars, and *Tepula* and *Iulia* the eastern regions, especially *Esquelin*;¹² the combined water volume of the three aqueducts doubled the amount of water reaching Rome at that moment.

The efficiency of the system created by Agrippa is largely due to the specialization of the aqueducts built under its coordination, each aqueduct having clearly defined the areas in which it supplies water, a proof of this efficiency being the fact that for supplying Augustus' *Naumachia*, constructed on the Field of Mars, a new aqueduct was built (*Aqua Alsietina*), especially to feed it.¹³

Another impressive legacy left by Agrippa to Rome's water network administration was the team of workers consisting of 240 slaves specialized in the maintenance of the aqueducts. This team was given by Augustus to the Roman state, the Senate organizing them in a *familia publica*, whose expense was borne by public funds.¹⁴ This team was extended by Claudius, who added

¹² *Ibidem*, p. 410.

¹³ *Ibidem*, p. 411.

¹⁴ Peter J. Aicher, *op. cit.*, p. 23.

another 460 slaves, commissioned by a *curator aquarum* who also managed the funds for their upkeep.

Cura aquarum and curator aquarum

Starting with Augustus, and especially with the year 11 B.C.,¹⁵ a reorganization of Rome's water supply administration took place. A *Senatus Consultum* formalized the office of *curator aquarum*, a magistrate who was at the head of an office called the *cura aquarum*, which probably also had a headquarters - *statio aquarum*. It is difficult to locate this building with certainty, since Frontinus does not mention it. Numerous researchers, including Christer Bruun, offer two possible places where this office could have been located: the area around the *Juturna* spring located in the *Forum Romanum* is mentioned as a possible seat of the *cura aquarum* on two inscriptions – *Genio stationis aquarum* (*CIL* 36781) and a dedicated inscription by *curator aquarum et Miniciae* Flavius Lollianus Mavortius in the year 328 BC (*CIL* 3695).¹⁶ The second possible place for this headquarters is the sacred area of the current Argentina Square, located on the site of the ancient *Campus Martius*, Filippo Coareli not excluding both versions being correct, with the *cura aquarum* having two or more seats in which they operate.¹⁷

¹⁵ *Ibidem*, p. 24.

¹⁶ Christer Bruun, “*Aqueductum e statio aquarum. La sede della cura aquarum di Roma*”, in: Anna Leone, Domenico Palombi, Susan Walker, Eva Margareta Steinby, *Res Bene Gestae. Ricerche di storia urbana su Roma antica in onore di Eva Margareta Steinby*, Roma, Quasar, 2007, p. 8.

¹⁷ *Ibidem*, p. 9.

Curator aquarum enjoyed certain privileges, including the permission to wear the *toga praetexta*. He was appointed by the emperor for an undetermined period of time and there were periods when the position remained vacant or even occupied by two people at the same time.¹⁸ Thomas Ashby believes it was the most prestigious non-political office in Rome;¹⁹ most of the occupants were of senatorial rank, holding important public offices before and after this magistracy. From Frontinus, as well as from epigraphic sources and inscriptions found on lead pipes or other ancient literary sources, we know most of the occupants of this office over time.

The first *curator aquarum* of Rome was M. Valerius Messala Corvinus, after the death of Marcus Agrippa²⁰ (11 B.C.). He was a successful attorney²¹ and had a tumultuous military career: in 43 B.C. we find him at Philippi in the Republican camp,²² in 36 fought against Pompey,²³ in 31 he was a consul and held military command at Actium²⁴ and in the year 11 B.C. is named by Augustus *curator aquarum*,²⁵ a magistracy he will hold until 13 A.D.

C. Ateius Capita, during the consulates of Plancus and Silius²⁶ (13 A.D.), was another successful lawyer. With his legal knowledge, he had gained a leading position in the state. He had famous ancestors, his

¹⁸ Peter J. Aicher, *op. cit.*, p. 24.

¹⁹ Thomas Ashby, *The Aqueducts of Ancient Rome*, Oxford, Clarendon Press, 1935, p. 18.

²⁰ Frontinus, *op. cit.*, II, 102.

²¹ Tacitus, *Annales*, XI, 6.

²² *Ibidem*, IV, 34.

²³ Appian, *Historia romana*, V, 103.

²⁴ *Ibidem*, IV, 38.

²⁵ Frontinus, *op. cit.*, II, 99.

²⁶ *Ibidem*, II, 102.

grandfather being a centurion in Sylla's army and his father a *praetor*. In 5 B.C. he held the consulate²⁷ and in 13 A.D. he would go on to become *curator aquarum* for 10 years,²⁸ until his death came in the year 22 A.D.²⁹ In the year 15 A.D., he was commissioned by Tiberius to remedy the situation following the floods caused by the Tiber.³⁰

Lucius Tarius Rufus, during the consulates of Gaius Asinius Pollio and Gaius Antistius Vetus³¹ (23 A.D.), of humble origins, owed his public ascension to his military qualities. He held the consulate in 16 B.C., became very rich, Pliny the Elder telling us that he spent 100 million sesterces for the purchase of agricultural farms at Picenum.³² He occupied the post of *curator aquarum* for one year since 23 A.D.³³

Marcus Cocceius Nerva (the grandfather of the emperor), during the consulates of Servius Cornelius Cethegus and Lucius Visellius Varro³⁴ (24 A.D.), again a trusted lawyer, close to Tiberius,³⁵ consul in 24 B.C.,³⁶ occupied the position of *curator aquarum* for 10 years, until 33 A.D.³⁷

Gaius Octavius Laenas, during the consulates of Fabius Persicus and Lucius Vitellius (34 A.D.), a less known character, served as *curator aquarum* for four years, until 38 A.D.³⁸

²⁷ Tacitus, *Annales*, III, 75.

²⁸ Frontinus, *op. cit.*, II, 102.

²⁹ Tacitus, *Annales*, III, 75.

³⁰ *Ibidem*, I, 76.

³¹ Frontinus, *op. cit.*, II, 102.

³² Pliniu, *Historia Naturalis*, XVIII. 37.

³³ Frontinus, *op. cit.*, II, 102.

³⁴ *Ibidem*, II, 102.

³⁵ Tacitus, *Annales*, VI, 26.

³⁶ *Ibidem*, IV, 18.

³⁷ Frontinus, *op. cit.*, II, 102.

³⁸ *Ibidem*, II, 102.

Marcus Porcius Cato, during the consulates of Marcus Aquila Iulianus and Nonius Asprenas³⁹ (38 A.D.), was a *praetor* in the year 28;⁴⁰ he served as *curator aquarum* for only a month.

Aulus Didius Gallus, during the consulates of Servius Asinius Celer and Sextus Nonius Quintilianus (38 A.D.), occupied the position for eleven years, until 49 A.D.,⁴¹ after which he became the governor of Moesia⁴² and Britannia between 51 and 58 A.D.⁴³

Cnaeus Domitius Afer became *curator aquarum* during the consulates of Quintus Veranius and Pompeius Longinus (49 A.D.). Quintilian considered him “by far the greatest of all the orators whom it has been my good fortune to know”.⁴⁴ We know he had been a *praetor* in the year 26 A.D., when Tacitus presented him as one of Agrippina’s accusers.⁴⁵ He held the consulate in 39 A.D.,⁴⁶ occupying the office of *curator aquarum* until his death in 59 A.D.⁴⁷

Lucius Calpurnius Piso, during the fourth consulate of Nero and Cossus (60 A.D.), was one of the consuls of the year 57, alongside Nero.⁴⁸ In the year 62, Nero entrusted him with the organization of public revenues⁴⁹

³⁹ *Ibidem*, II, 102.

⁴⁰ Tacitus, *Annales*, IV, 68.

⁴¹ Frontinus, *op. cit.*, II, 102.

⁴² Tacitus, *Annales*, XII, 15.

⁴³ *Ibidem*, XIV, 29.

⁴⁴ Quintilian, *Oratoria*, XII, XI, 3.

⁴⁵ Tacitus, *Annales*, IV, 52.

⁴⁶ Cassius Dio, *Historia Romana*, LIX, 20.

⁴⁷ Tacitus, *Annales*, XIV, 19.

⁴⁸ Paul A. Gallivan, “Some Comments on the Fasti for the Reign of Nero”, in: *The Classical Quarterly*, New Series, vol. 24, no. 2, 1974, p. 291.

⁴⁹ Tacitus, *Annales*, XV, 18.

and in the year 69 he was the proconsul of Africa⁵⁰ and *curator aquarum* for three years until 63.⁵¹ In 70 was assassinated in Carthage.⁵²

Petronius Turpilianus, during the consulates of Memmius Regulus and Lucius Verginius Rufus (63 A.D.), was consul in the year 61⁵³ and governor of Britannia between 61 and 63;⁵⁴ in the year 65, he received a triumph after the military achievements in Britannia.⁵⁵ In 68 he was murdered by Galba in Rome after he tried an agreement with him.⁵⁶ He served as *curator aquarum* until the year 64 A.D.⁵⁷

Publius Marius Celsus, during the consulates of Crassus Frugi and Laecanius Bassus (64 A.D.), was consul in the year 62⁵⁸ and between the years 64 and 66 he held the office of *curator aquarum*.⁵⁹

Fonteus Agrippa, became *curator aquarum* during the consulates of Luccius Telesinus and Suetonius Paullinus (66 A.D.), was *consul suffectus* in 58, replacing Nero.⁶⁰ In 68 he was the proconsul of Asia and the next year, in 69 A.D., he was moved to command the legions in Moesia.⁶¹ He was killed in the same year in the fight with the Sarmatians who invaded Moesia.⁶²

Albius Crispus, of humble origins, born in Vercelae, got to possess an impressive fortune during the consulates of Silius Italicus and Gallerius

⁵⁰ Idem, *Historiae*, IV, 38.

⁵¹ Frontinus, *op. cit.*, II, 102.

⁵² Tacitus, *Historiae*, IV, 48.

⁵³ Idem, *Annales*, XIV, 39.

⁵⁴ Idem, *Agricola*, XVI.

⁵⁵ Idem, *Annales*, XIV, 72.

⁵⁶ Idem, *Historiae*, I, 6.

⁵⁷ Frontinus, *op. cit.*, II, 102.

⁵⁸ Paul A. Gallivan, *op. cit.*, p. 291.

⁵⁹ Frontinus, *op. cit.*, II, 102.

⁶⁰ Paul A. Gallivan, *op. cit.*, p. 291.

⁶¹ Tacitus, *Historiae*, III, 46.

⁶² Josephus, *De bello Judaico*, VIII, IV, 3.

Trachalus (68 A.D.).⁶³ He was a successful orator;⁶⁴ in the year 71, he was proconsul of Africa⁶⁵ and *curator aquarum* between 68 and 71 A.D.⁶⁶

Pompeius Silvanus, *curator aquarum* during the third consulate of Vespasianus and Cocceius Nerva⁶⁷ (71 A.D.), was consul in the year 45.⁶⁸ He also amassed great wealth and was the proconsul of Africa in 58⁶⁹ and governor of Dalmatia between 69 and 70.⁷⁰ In the year 70, the Senate entrusted him with the task of collecting the sum of 10 million sesterces⁷¹ and in the year 74 he received his second consulate.⁷²

Tampius Flavianus, during the second consulate of Caesar Domitianus and Valerius Messalinus⁷³ (73 A.D.), was the governor of Africa⁷⁴ and *legatus Augusti pro praetore Pannoniae* in the year 69⁷⁵ when he was rescued by Vespasian from the fury of the rebellious soldiers.⁷⁶

Acilius Aviola, during the 5th consulate of Vespasianus and the 3rd of Titus Caesar (74 A.D.), was consul in the year 54⁷⁷ and *curator aquarum* until 97.⁷⁸

⁶³ Tacitus, *Dialogus de oratoribus*, VIII.

⁶⁴ Quintilian, *Oratoria*, X, I, 119.

⁶⁵ Pliniu, *Historia Naturalis*, XIX, 4.

⁶⁶ Frontinus, *op. cit.*, II, 102.

⁶⁷ *Ibidem*, II, 102.

⁶⁸ Josephus, *De bello Judaico*, XX, I, 2.

⁶⁹ Tacitus, *Annales*, XIII, 52.

⁷⁰ Idem, *Historiae*, II, 86; III, 50.

⁷¹ *Ibidem*, IV, 47.

⁷² Frontinus, *op. cit.*, II, 102.

⁷³ *Ibidem*, II, 102.

⁷⁴ Pliniu, *Historia Naturalis*, IX, 26.

⁷⁵ Tacitus, *Historiae*, II, 86.

⁷⁶ *Ibidem*, III, 4; 10; 11.

⁷⁷ Tacitus, *Annales*, XII, 64.

⁷⁸ Frontinus, *op. cit.*, II, 102.

Sextus Iulius Frontinus

Sextus Iulius Frontinus was probably the best known and most capable occupant of this position. He was born around 35 A.D., the place of his birth unknown: researchers who dealt with his biography offer Sicily and Gallia as two possibilities.

Frontinus' public activity can be divided into three periods: for the early period we do not have much direct information; in the 50s, he participated as an officer in the Parthian campaigns, and in the sixth decade, he was *procurator* of the provinces of Hispania and Africa.⁷⁹

The second period of Frontinus' career, which we know more about, begins with the position of *praetor urbanus*.⁸⁰ Between the years 70-73, he held a military command in Gallia, probably *legatus legionis*⁸¹ and in 73 he received the honor of being consul for the 1st time. After serving as consul, he was named *legatus Augusti pro praetore* in Britannia⁸², where he replaced Petillius Cerialis, remaining in office until Agricola arrived in the year 77 or 78.⁸³

In the year 83 he participated in Domitian's military campaigns in Germania and the next year is named the proconsul of the province of Asia, as evidenced by some coins from Smyrna and an inscription at Hieropolis in Phrygia. In the last years of Domitian's reign, he is no longer very active in

⁷⁹ R. H. Rodgers, *Frontinus. De aquaeductu urbis Romae*, Cambridge, Cambridge University Press, 2004, p. 2.

⁸⁰ Tacitus, *Historiae*, XXXIX.

⁸¹ Strabo, *Geographia*, IV, 3.

⁸² Trevor Hodge, *Roman Aqueducts and Water Supply*, London, Gerald Duckworth & Co. Ltd., 1992, p. 16.

⁸³ Tacitus, *Agricola*, XVII.

public life, but there is no evidence of his fall from the Emperor's disgrace. Eck and Southern even suggest that he was part of Domitian's closest entourage; it is most likely that, during this period, he was dedicated to literary work.

Frontinus' last and most productive period of his public career begins with Nerva's reign. In 97, he is named *curator aquarum*⁸⁴ and in the same year he is also part of a senatorial commission dealing with economic problems.⁸⁵ In 98 and 100 he shares the consulate with Trajan, which shows the appreciation enjoyed by Frontinus during this period – Pliny has mentioned the honors he received both from Nerva and from Trajan.⁸⁶

Frontinus' notoriety is also evidenced by the many references to him in the writings of ancient authors, Tacitus makes a laudatory characterization when describing his work in Britannia,⁸⁷ Martial depicts Frontinus relaxing at Anxur,⁸⁸ Pliny describes him as one of the most eminent citizens whom Rome had at that time when he chose him as a counselor in an issue related to an inheritance⁸⁹ and from the letter to C. Plinius Russonius we find out about the modesty of Frontinus, who refused to have his lifetime achievements written on the epitaph of his tombstone.⁹⁰

⁸⁴ Frontinus, *op. cit.*, I, 1.

⁸⁵ Pliniu, *Panegyricus*, 62, 2.

⁸⁶ *Ibidem*, 61, 5.

⁸⁷ Tacitus, *Agricola*, XVII.

⁸⁸ Martial, *Epigrammata*, X, 58.

⁸⁹ Plinius, *Epistulae*, V, 1.

⁹⁰ *Ibidem*, IX, 19.

The position of *curator aquarum*

Curator aquarum had a staff formed by two *adiutores*, accountants and an architect⁹¹ with whom he coordinated a team with two categories of workers: the administrative (bureaucratic) and technical staff involved in construction and maintenance of aqueducts that formed the water supply network of imperial Rome.⁹² In addition, to coordinating the water network maintenance team, he also ensure the compliance with the legislation in the field, observing the amount of water that could be consumed by an individual depending on his authorization, had to prevent or limit the existing abuses (Frontinus makes obsessive references to these abuses) and generally safeguard the good functioning of Rome's entire water supply network.⁹³

Adiutores, who were practically technical counselors, are not very well known to us, but Frontinus gives us the names of the first two who occupied this position in the Messalla Corvinus mandate: Postumus Sulpicius and L. Cominius.⁹⁴ Other names have been certified by epigraphic sources, the assistants of Didius Gallus: T. Rufius Nepos (*CIL VI 9245*) and M. Cornelius Firmus (*CIL VI 1248*). It is possible that, among the numerous names inscribed on the lead pipes, there could be some *adiutores*, but the inscriptions does not mention their position in the *cura aquarum*.⁹⁵

Procuratores aquarum appear with the extension of the team made by Claudius. They were responsible for coordinating the *familia aquaria*

⁹¹ Peter J. Aicher, *op. cit.*, p. 25.

⁹² Leon Homo, *Rome impériale et l'urbanisme dans l'antiquité*, Paris, Edition Albin Michel, p. 198.

⁹³ Frontinus, *op. cit.*, II, 103.

⁹⁴ *Ibidem*, II, 99.

⁹⁵ Thomas Ashby, *op. cit.*, p. 23.

Caesaris and for the distribution of the funds necessary for the maintenance of the aqueducts of Rome, as well as for granting the authorization to use the public water supply network *in nomine Caesaris*, having to deal directly with its implementation.⁹⁶

The technical staff, represented by the *aquarii (familia aquaria)*, was coordinated by engineers who supervised the construction, maintenance and repair of the aqueducts and all the infrastructure necessary for the efficient water supply of the imperial capital. *Familia aquaria* was divided into two different teams: *familia aquaria publica*, the legacy of Agrippa, represented by the 240 slaves, which he gave to the Roman state and *familia aquaria Caesaris*, a team formed by Claudius and represented by 460 workers, most of them also slaves.⁹⁷

From Frontinus, we have information about the various categories of workers and their tasks: those who dealt with the distribution of water were called *vilicus*, *castellarius* was the person responsible for the maintenance of the *castellum divisorium* and of the secondary *castela* that were present in a large number on the water distribution lines inside the city, *circitor* was the aqueduct inspection worker, *silicarius* was the one responsible for maintaining the pavement that was above the largest part of the water distribution installation, formed mainly from lead pipes. The leadpipe-making workers were called *plumbarii* and *punctiis* were those who were responsible for connecting new users to the public water supply network.⁹⁸

⁹⁶ Frontinus, *op. cit.*, II, 105.

⁹⁷ Peter J. Aicher, *op. cit.*, p. 23.

⁹⁸ Frontinus, *op. cit.*, II, 65.

With respect to the users of the Rome water supply network for the republican period, we know from Frontinus that all the water from the aqueducts was delivered for public consumption, that no private person had the right to consume more water than the surplus resulting from public feeding, the exception to this rule being represented by some important citizens but only with the consent of the community.⁹⁹ During the Empire we can distinguish three great water consumers: the imperial house (*nomine Caesaris* - the imperial gardens and palaces); public services (*opera publica* - public baths and institutions) and public fountains (*munera*). There was also a large number of private consumers, their access to water being restricted by technical means (if the area where they lived was fed by an aqueduct), social status, but especially the financial situation (the ability to pay for this service).¹⁰⁰

Over time, there have been several funding sources for the construction of aqueducts: sponsorships of wealthy citizens, the prey of war (Frontinus says that *Aqua Anio Vetus* was financed entirely by the money resulting from the war booty gained after the victory of Rome on King Pirrhus)¹⁰¹, public money resulting from taxes,¹⁰² proceeds from land leases, the use of markets or fines. The source of financing for hydraulic works has changed over time: if during the Republic this fell into the community, during the Empire private sponsors became increasingly known, funding public works with the goal of improving the image of the donor.¹⁰³

⁹⁹ *Ibidem*, II, 94.

¹⁰⁰ Gică Băeștean, *Aprovizionarea cu apă în Dacia romană*, Cluj-Napoca, Edit. MEGA, 2007, p. 36.

¹⁰¹ Frontinus, *op. cit.*, I, 6.

¹⁰² Peter J. Aicher, *op. cit.*, p. 26.

¹⁰³ Gică Băeștean, *op. cit.*, p. 30.

Another important investor was the emperor, on whose behalf (or with his direct involvement) an important number of aqueducts was built throughout the Empire: Augustus took care of the construction of the aqueducts of Brixia, Pola, Venafrum, Capua, Lucus Feroniae, Caere, Fulginiae, Nemausus, Cyrene, Ephesus¹⁰⁴ and *Aqua Alsietina* in Rome;¹⁰⁵ Claudius finished the construction of the aqueducts started by Caracalla, *Aqua Claudia* and *Anio Novus*, Traian built *Aqua Traiana* in Rome;¹⁰⁶ Hadrian built aqueducts in Dyrrachium, Gabi, Athens and Sarmisegetusa, Antoninus Pius was involved in the construction of the aqueducts of *Castrum Novum* and *Scolacium*,¹⁰⁷ while Alexander Severus built the last aqueduct of ancient Rome, *Aqua Alexandrina*, in 226 A.D.¹⁰⁸

A mention of water management dates back to the year 450 B.C. when the *Law of the XII Tables* regulated the damage caused by rainwater. If a watercourse was directed to a private property, the owner had the right to sue the culprit in order to recover the damage.¹⁰⁹ Water was also mentioned in the treaty between Rome and Carthage in 348 B.C., which stated that a source of water from the Carthaginian territory should not be used in action against Carthage or its allies, and vice versa.¹¹⁰ The evolution of water legislation was also mentioned by Frontinus (“the practices of our forefathers

¹⁰⁴ *Ibidem*, p. 32.

¹⁰⁵ Frontinus, *op. cit.*, I, 11.

¹⁰⁶ Gregory S. Aldrete, *Daily life in the Roman City: Rome, Pompeii, and Ostia*, Westport, Greenwood Publishing Group, 2004, p. 29.

¹⁰⁷ Gică Băeștean, *op. cit.*, p. 32.

¹⁰⁸ Gregory S. Aldrete, *op. cit.*, p. 29.

¹⁰⁹ ***, *The Law of the XII Tables*, VII, 8.

¹¹⁰ Christer Bruun, “Water Legislation in the Ancient World”, in: Orjan Wikander (ed.), *Handbook of Ancient Water Technologies*, Leiden, Brill, 2000, p. 576.

differ from ours”): in ancient times the water that arrived in the city was consumed only for public benefit, an individual who wanted to feed his personal dwelling had to have the consent of the community.¹¹¹

The right to provide access to a water source belonged to the different authorities over time; sometimes this task fell to the ediles, sometimes to the censors.¹¹² The caretakers of existing aqueducts in Frontinus' era were the contractors, who were forced to have a fixed number of workers both outside and inside the city. The resolution of the Senate during the consulates of Gaius Licinius and Quintus Fabius shows that the task of inspecting aqueducts and public fountains belonged to censors and ediles or to the questors.¹¹³

Frontinus mentions a fine of 10,000 sesterces for those who polluted a source of water; land irrigated illegally from a public water supply could have been confiscated and a slave who violated this law, even without the master's knowledge, was fined. From Augustus' time, the administration of the water network of Rome fell on a single man - Marcus Agrippa; the office of *curator aquarum* became official after his death, through a resolution passed by the Senate in 11 A.D.¹¹⁴

At the beginning of the imperial period, the maintenance and cleaning of the aqueducts was the responsibility of the imperial and local administration. In Late Antiquity, the situation changed, Constantine's law of 330 stated that the owners of the lands through which the aqueducts were passing were obliged to clean them in exchange for exemption from other

¹¹¹ Frontinus, *op. cit.*, II, 94.

¹¹² *Ibidem*, II, 95.

¹¹³ *Ibidem*, II, 96.

¹¹⁴ *Ibidem*, II, 97.

public obligations. The punishment for the failure to discharge these debts was the confiscation of the possessions.¹¹⁵

Conclusions

Given the impressive dimensions of the network that supplied water in the great ancient city, the need for an efficient administrative office is obvious. *Cura aquarum* was led by the *curator aquarum*, who was responsible for two *adiutores* (assistants), accountants and architects who coordinated the teams of workers involved in the maintenance and extension of the water supply network: *familia aquaria publica* and *familia aquaria Caesaris*.

In the case of the first occupants of the position of *curator aquarum*, a pattern of choosing the person in charge of this office can be observed. The permanent or long-standing character of the magistracy becomes obvious when taking into consideration that a large part of the occupants remained in their post until their death. Most of them were former consuls, but we can also note a predilection for lawyers in the appointment of this important magistracy; Thomas Ashby even considered that it was the most important non-political public office in Rome. Evidence for the importance of this magistracy, apart from the appointment being reserved for the prince, is also the fact that its occupants held influential public positions before and after the management of this department, if they did not leave it by their death.

¹¹⁵ Christer Bruun, “Water Legislation in the Ancient World”..., p. 593.

Starting with the Principate of Augustus, there is a reorganization of the administration in the field of water supply: in the year 11 B.C. the office of *curator aquarum* became official and the contributions of Agrippa doubled the quantity of water that reached Rome through its pipeline. Another important achievement of Agrippa was the formation of a team of 240 slaves specialized in maintenance work; these were organized by Augustus after Agrippa's death in a *familia publica* owned by the Roman state and paid from public funds.

A radical change in the *cura aquarum* occurred during Claudius' time. Two new important aqueducts were brought into the city: *Claudia* and *Anio Novus*, the extension of the aqueduct network making necessary to supplement the labor force used for maintenance. Thus emerged the *familia aquaria Caesaris*, a team of 460 people, mostly slaves, who were supposed to reinforce the number of workers specialized in aqueduct maintenance and water distribution coordination.

There are two characters whose contribution and activity have made a decisive mark on the water supply network and administration of Rome: Marcus Vipsanius Agrippa, whose work doubled the amount of water reaching Rome and who was also the founder of the *familia aquaria*; the second individual worth mentioning is Sextus Iulius Frontinus, a successful character in his time, three times consul, who reformed the office of *curator aquatum*, reorganizing it and making it more efficient by fighting the abuse and theft from the public network.

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