



Water supply in Constantinople

Summary :

Despite its extraordinary strategic location between the Golden Horn and the sea of Marmara, Constantinople had a major deficit of water supply for drinking, bathing and recreational purposes throughout its history. The quality of drinking water was of utmost concern, especially during summers and periods of siege. The acute problem of water supply was partially resolved by complex water system comprised of aqueducts and cisterns, supplemented by few local springs and wells.

Date

4th - 15th century

Geographical Location

Constantinople, Istanbul

1. Water Supply in Constantinople

Despite its extraordinary strategic location between the Golden Horn and the Sea of Marmara on the sea route connecting the Black Sea and the Mediterranean, the ancient Greek colonial city of Byzantium had a major deficit of natural supply of freshwater for drinking, bathing and recreational purposes.¹ The small Lykos and other minor springs, as well as local wells, could not sustain a population of any size throughout city history.² In a city with no rivers, few springs and fast runoff of rainwater, the problem of water supply was crucial and long-standing. From the earliest times water was channeled to the city from the European hinterland and subsequently stored in **cisterns** and supplied by fountains.

The acute problem of water supply prompted Roman Emperor **Hadrian** (r. 117-138) to build a gravity-fed aqueduct that conveyed water from the region, today called Halkali, about 15 km to the northwest of the ancient city.³ The problem became even more apparent when in 324 Emperor **Constantine I** (d. 337) decided to establish his eponymous city and new capital of the Roman Empire at the site of **Byzantium**.⁴ With the **consecration of Constantinople** in 330, the need for water supply and storage of freshwater within the city walls rose drastically. Among the major water consumers were the **Imperial Palace** and baths, and Hadrian's aqueduct was presumably crucial for maintaining Constantinople's water system. By the later 4th century Emperor **Valens** (r. 364-378) restored the water conduit set by Hadrian, whose section within the city is today known as the **Aqueduct of Valens**.⁵ Nevertheless, the city was still often described as dying of thirst.⁶

By the time of Emperor **Justinian** (r. 527-565) a complex network of pipes drew additional water supply from the forest of Belgrade more than 250 kms west of the city. The two rivers in the forest, known as the Sweet Waters of Europe, provided at least twice as more water than the sources in Halkali region.⁷ Approximately thirty stone bridges and hundreds of kilometers of underground tunnels still survive in the forested hills of Thrace and at least two subterranean channels carried the main supply to **Constantinople**.⁸

Though some minor lines of water supply were added at later periods, the water supply infrastructure gradually collapsed, and already by the 6th and 7th centuries the cisterns became the major water supply in the city.⁹ Numerous reservoirs that stored water by the 7th century were needed not only tapped for drinking and hygienic purposes, but also for baths, small-scale irrigation, and as power for mills and **automata**.¹⁰ Middle Byzantine Constantinople acquired additional cisterns, most of them for monasteries and wealthy households. During the **Latin rule in Constantinople** (1204-1261), the city shrunk in both the population and actual use of urban space. Due to general neglect of water and sewage systems, water supply in Late Byzantine **Constantinople** was never restored, neither in scope nor in capacity. When the Ottoman Turks **conquered the city**, the ancient water system suffered continual decline, though the so-called Valens' Aqueduct was repaired and new, independent water systems were added.¹¹

2. Construction



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Roman water engineers relied on centuries-long experience of hydrological engineering when designing the initial water system in Constantinople. The system reflects sophisticated and high knowledge and understanding of lifting devices, inverted siphons, and fluid mechanics.¹² High-pressure plumbing served many needs. Terracotta and lead pipes ran beneath cobbled roads and sidewalks. Settling tanks for water-borne sediment were located at critical junctures for frequent cleaning.¹³ Habitually repaired during the Byzantine and Ottoman times, the entire system constituted the longest water channels of the ancient Mediterranean.¹⁴

Paradoxically, the sophisticated water supply in Constantinople as set by Roman engineers, could have been the cause of some major calamities in the city. Historically, exposed, supra-terrain sections were especially weak in times of siege. Between the 4th and 7th centuries many cisterns and water tanks were built to alleviate this weakness. However, cisterns required frequent cleaning for hygienic reasons and yet sometimes abandoned cisterns were used as dumping places, cemeteries and ossuaries.¹⁵ Huge [plague outbreaks](#) in the city, the Byzantines often associated with stagnant, polluted water, and this can be certainly associated with misuse of water cisterns.¹⁶ By the 20th century the aqueducts were populated by millions of bats. This fact is graphically illustrated by an anecdote of 4,000 okes (more than 5,000 kg) of bat dung from the aqueducts sent to Istanbul during the rule of Sultan Abdülhamid II (r. 1876-1909) as fertilizer for his imperial gardens.¹⁷

3. Consumers

As in Rome, the main water consumers were imperial palaces, public baths and city population. Throughout its history, average daily consumption of water in Constantinople was about 10,000 m³.¹⁸ In addition to water for drinking purposes, water was needed for bathing and recreational purposes, small-scale irrigation systems for gardens and parks, as well as power for mills and automata.¹⁹ Water fountains were especially praised for not only providing water but also for cooling the city during summer.²⁰ The whole water system was not interconnected, but essentially consisted of several independent systems built by emperors, prefects, bureaucrats and wealthy citizens.²¹ Water managers used automatic distribution stations, supplemented by manual valves to maintain supply and shut down less essential services in times of water shortage. The first to benefit were fountains, baths and latrines in the palace, followed by houses of well-connected families. General needs were met by public bathhouses and fountains (*nymphaeae*), with the steady flow of water flushing latrines and drains.²² It remains understudied how private individuals and institutions accessed the public water supply, though the statement that Justinian granted to the nunnery of St. Olympias “three ounces of water per day”²³ suggests some regulations of water concession.²⁴

Many people dug wells and cisterns to supplement their water supply at home.²⁵ Though well-to-do families often had private, small water cisterns in their houses, the general populace most often used fountains for water supply.²⁶ Small fountains with basins and multiple taps were found in [agoras](#) and on street corners in all parts of [Constantinople](#). People visited these places daily, filling and carrying home heavy amphorae and jars with water. Enterprising vendors sold water by the cup in the streets.²⁷ Cold freshwater of good drinking quality was precious in hot climate. An anonymous writer thus advised drinking only freshwater in July and another one recommended drinking water from natural springs because it does not smell, has good taste and is cold year round.²⁸ The accounts suggest how water from natural springs was actually a commodity in Constantinople, and that cisterns were sometimes filled with long-stagnant and otherwise polluted water.

Other evidence provides additional insight into water culture in Constantinople. Originally written in the 5th century, the document *Notitia urbis Constantinopolitanae* lists, among the most important objects, four main cisterns and four principal fountains.²⁹ These cisterns and fountains not only provided water for drinking and bathing purposes, but also for recreation and amusement. In the 11th century, Cedrenus, in the text following the description of Theodosios I's death in 395, records how Lausus displayed his collection of sculptures in the vicinity of [Philoxenos cistern](#).³⁰ He refers to the Knidian Aphrodite statue that stood there among others, a statue that showed the goddess nude, with her garment draped over a large hydria, as if about to step into bath. We may even speculate that Lausus not only showed the ancient sculpture of Aphrodite in Constantinople, but also that he provided a water installation for a display.³¹ Practice of displaying sculptures at water-works, including both streams pouring from the rock and formal fountains,



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continued in Middle Byzantine Constantinople. Byzantine bishop and poet, John Geometres, describes the suburban garden of the Aretai, graced with "fountains, pools and their myriad devices".³² Almost co-currently, a 10th-c. Arab prisoner in the city, Harun ibn-Yahya, records how on special occasions on imperial request, water of cisterns that supplied city fountains could have been mixed with wine and honey:

*Next to the dome in the courtyard of honor stands a cistern at a distance of two hundred paces. It provides water for the statues on the columns. When the holiday approaches, this cistern is filled with ten thousand pitchers of wine and a thousand of pitchers of honey. Finally, everything is seasoned with a camel's load of nard, cloves and cinnamon. The cistern is covered so that all is hidden from view. On the day of the festival, the emperor leaves the palace and comes to church. He examines the statues and the wine that flows out of their mouths and ears. He watches it gradually gathering in basin until it is completely filled. Everyone in his train who accompanies him to the festival receives a glass of this wine filled to the brim.*³³

However, constant concern with water supply was the reason drought was a serious calamity and some saints reportedly possessed the gift of bringing rain.³⁴ In addition to its use in the rite of baptism and for the blessing of water for Epiphany, water and its source (*pege*) were also powerful symbols of life and purification. The church of the [Virgin Zoodochos Pege](#) (mean. Life-giving Fount) stood in the Constantinopolitan suburb of Pege. Fountains and holy water springs themselves were occasionally decorated with marble reliefs representing the [Virgin orans](#), the arms outstretched and the palms pierced, so that water could flow from the Virgin hands.³⁵

1. Forchheimer, P. and Strzygowski, J., *Die Byzantinischen Wasserbehälter von Konstantinopel* (Wien 1893); Janin, R., *Constantinople byzantine. Développement urbain et répertoire topographique* (Paris 1964), pp. 198-224; Müller-Wiener, W., *Bildlexikon zur Topographie Istanbuls*, (Tübingen 1977), pp. 271-285; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18; Kuban, D., *Istanbul. An Urban History: Byzantion, Constantinopolis, Istanbul* (Istanbul 1996), pp. 100-104; Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72-75.
2. About the scarcity of water, especially during summer, Procopius writes: "In the summer session the imperial city used to suffer the scarcity of water as a general thing..." Procopius, *Buildings* I, xi.10-15, trans. H.B. Dewing. Loeb Classical Library (London 1940), pp. 90-3.
3. Mentioned in numerous ancient documents and being located in the Halkali region, a military zone today, Hadrian aqueduct remains generally understudied except for the two more recent books in Turkish that deal with the water supply in the Halkali. More in Mango, C., *Le développement urbain de Constantinople, IVe-VIIe siècles* (Paris 1985), p. 40; Yerasimos, S., *Constantinople. Istanbul's Historical Heritage* (Richmond 2007), pp. 57-61; Çeçen, K., *Istanbul'un Vakif Sularından Taksim ve Hamidiye Sulari* (Istanbul, 1992), pp. 26-27, summary in English pp. 13-20; Çeçen, K., *Istanbul'un Vakif Sularından Halkali Sulari* (Istanbul, 1991), summary in English pp. 15-18.
4. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72-75
5. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72-75; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18; Müller-Wiener, W., *Bildlexikon zur Topographie Istanbuls* (Tübingen 1977), pp. 271-277.
6. Themistius, *Or.* 13, 167d, G. Downey – Norman, A.F. (eds), *Themistii orationes* 1 (Leipzig 1965), pp. 240-1; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), p. 12.
7. Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18; Kuban, D., *Istanbul. An Urban History: Byzantion, Constantinopolis, Istanbul* (Istanbul 1996), pp. 100-104; Çeçen, K., *Istanbul'un Vakif Sularından Halkali Sulari* (Istanbul, 1991), summary in English pp. 15-18.
8. The Belgrade region is filled with ancient aqueducts, conduits, and small dams. Yet, it should be emphasized that most of the studied visible remains of this water system belong to the Ottoman period. Future studies which would clarify questions on chronology of the development of water system in Constantinople are still needed. On the problem see Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18; K. Çeçen, *Istanbul'un Vakif Sularından Taksim ve Hamidiye Sulari* (Istanbul, 1992), pp.



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26-27, summary in English pp. 13-20.

9. Çeçen, K., *İstanbul'un Vakıf Sularından Taksim ve Hamidiye Sulari* (Istanbul, 1992), pp. 26-27, summary in English pp. 13-20.

10. Magdalino, P., "The Literary Perception of Everyday Life in Byzantium: Some General Considerations and the Case of John Apokaukos," *Byzantinoslavica* 48 (1987), pp. 32-8; Magdalino, P., "Church, Bath and Diakonia in Medieval Constantinople," in R. Morris (ed.), *Church and People in Byzantium* (Birmingham 1990), pp. 165-88.

11. Çeçen, K., *İstanbul'un Vakıf Sularından Halkali Sulari* (Istanbul, 1991), summary in English pp. 15-18.

12. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72–75; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18.

13. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), p. 74.

14. The structure and use of water system in Byzantine and Ottoman times are still to be studied. In addition to seminal works by Forchheimer, P. and Strzygowski, J., *Die Byzantinischen Wasserbehälter von Konstantinopel* (Wien 1893); Janin, R., *Constantinople byzantine. Développement urbain et répertoire topographique* (Paris 21964), pp. 198-224; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18 and others, on the water system in Ottoman times see, for example, works by Çeçen, K., *İstanbul'un Vakıf Sularından Taksim ve Hamidiye Sulari* (Istanbul, 1992), pp. 26-27, summary in English pp. 13-20; Çeçen, K., *İstanbul'un Vakıf Sularından Halkali Sulari* (Istanbul, 1991), summary in English pp. 15-18 and van de Waal, E. H., "Manuscript Maps in the Topkapı Saray Library, Istanbul," *Imago Mundi* 23 (1969), pp. 81-95 where he points to a 17th-c. map of the water supply in Istanbul (Topkapı Saray inv. no. 1445, H.1886).

15. See for example, the Saraçhane area, where the cistern ceased to be in use at the same time as the church of St. Polyeuktos, in the early 13th century. The remains of human bones found in it, suggest either that a cemetery existed in the area and that the bones were transferred to the abandoned cistern after cleaning of the 20th-c. cemetery, or that the cistern was in later periods used as an ossuary: Harrison, R. M., Firatli, N. and Hayes, J. W., "Excavations at Saraçhane in Istanbul: Fifth Preliminary Report, with a Contribution on A Seventh-Century Pottery Group," *Dumbarton Oaks Papers* 22 (1968), pp. 196-201.

16. For example, following the 6th-c. Nika Revolt of 532, one of the greatest outbreaks of plague in Constantinople occurred in 542. On stagnated, dirty water as the possible reason for this plague, see: P. Magdalino, "The Maritime Neighborhoods of Constantinople: Commercial and Residential Functions, Sixth to Twelfth Centuries," *Dumbarton Oaks Papers* 54 (2000), pp. 209-226.

17. Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron, and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), p. 13.

18. Kiefer, K. M. and Loerke, W., "Constantinople, Monuments of: Cisterns," in *The Oxford Dictionary of Byzantium* 1 (New York–Oxford 1991), pp. 518-519.

19. Magdalino, P., "Water" in *The Oxford Dictionary of Byzantium* 3 (New York–Oxford 1991) p. 2191.

20. In 1403, Roy Gonzáles de Clavijo praises numerous fountains and wells that cooled the city: J.P.A van der Vin, *Travelers to Greece and Constantinople: Ancient Monuments and Old Traditions in Medieval Travelers' Tales* (Leiden 1980), pp. 249-291.

21. Kuban, D., *Istanbul. An Urban History: Byzantium, Constantinopolis, Istanbul* (Istanbul 1996), p. 101.

22. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72–75.

23. Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), p.17, with reference to «The Narratio Sergiae de translatione S. Olympiadis», ed. H. Delehay, *Analecta Bollandiana* 16 (1897), p. 45. Mango further proposes that measurements actually refer to the use of a three-inch pipe, as the diameter of the pipe was a measure of water supply in antiquity. On the later see: Hodge, T.A., *Roman Aqueducts and Water Supply* (London 1992), pp. 296ff.

24. Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot



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1995), p.17.

25. Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), p. 75.

26. On this prolonged tradition in Ottoman Istanbul see most recently: Hamadeh, S., "Splash and Spectacle: The Obsession with Fountains in Eighteenth-Century Istanbul," *Muqarnas* 19 (2002), pp. 123-148, esp. n. 2 for references to primary sources.

27. For example, in the tenth century Luitprand, bishop of Cremona, a historian and diplomat in Constantinople was appealed to see water being sold on the city streets. Magdalino, P., "Water" in *The Oxford Dictionary of Byzantium* 3 (New York–Oxford 1991) p. 2191; Mango, C., "The Water Supply of Constantinople," in C. Mango, G. Dagron and G. Greatrex (eds.), *Constantinople and Its Hinterland* (Aldershot 1995), pp. 9-18; Rautman, M., "Constantinople-Water Supply," in *Daily Life in the Byzantine Empire* (Westport-Connecticut-London 2006), pp. 72–75.

28. Magdalino, P., "Water" in *The Oxford Dictionary of Byzantium* 3 (New York–Oxford 1991) p. 2191.

29. *Notitia urbis Constantinopolitanae* in O. Seeck (ed.), *Notitia Dignitatum* (Berlin 1875; repr. Frankfurt 1962), p. 245.

30. George Cedrenus, *Historiarum Compendium* 1, ed. I. Bekker (CSHB, Bonn 1838), p. 564; Guberti Bassett, S., " 'Excellent Offerings': The Lausus Collection in Constantinople," *The Art Bulletin* 82.1 (Mar. 2000), pp. 6-7, with older references.

31. Furthermore, some inscriptions found in the Basilica (Yerebatan) cistern also refer to the "embellishments," see Mango, C. A., "The Byzantine Inscriptions of Constantinople: A Bibliographical Survey," *American Journal of Archaeology* 55.1 (Jan. 1951), pp. 52-66.

32. Maguire, H., "Gardens and Parks in Constantinople," *Dumbarton Oaks Papers* 54 (2000), p. 257, with further reference to John Geometres who wrote about gardens and parks in medieval Constantinople.

33. Yerasimos, S., *Constantinople. Istanbul's Historical Heritage* (Richmond 2007), p. 82, with reference to *The Book of Precious Things*.

34. Magdalino, P., "Water" in *The Oxford Dictionary of Byzantium* 3 (New York–Oxford 1991) p. 2191.

35. Several plaques with similar iconography are found in Constantinople, including the famous one from the excavations at Mangana, today in the Archeological Museum in Istanbul; see Evans, H. C. and Wixom, W. D., (eds.), *The Glory of Byzantium, Art and Culture of the Middle Byzantine Era A.D. 843-1261* (New York, 1997), cat. no. 291 with further references.

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Glossary :

-  **agora, the**
The term initially meant the gathering of the people. During historical times this gathering was called ecclesia and the word agora meant the public space where citizens gathered. The agora consists of commercial and religious buildings as well as constructions of political character.
-  **automata (byz.)**
Mechanical devices powered by compressed air or water. They were attested in the Magnaura in the 10th c. and included the throne of Solomon, which could be lifted in the air, mechanical birds that fluttered their wings and roaring golden lions. They may have been a 9th-c. invention based on the work of Hero of Alexandria (1st c. AD), but it is unclear if they were actually Byzantine inventions.
-  **cistern**
A receptacle for holding rainwater, but also water transported from elsewhere, in order to keep it stored. The cisterns were either covered or open, and they could have more than one compartments.
-  **orans**
(lat., mean. praying): An iconographic type which was used mainly for representations of the Virgin in Byzantine art. It depicts a standing, frontal figure with its hands open, lifted to shoulder height to either side.. It was the typical early Christian posture of praying, but in Middle Byzantine years, when the prayer is depicted with the proskynesis type, the orans type becomes more rare.

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Quotations

Themistius on the city suffering from thirst

[...] δίψει δὲ αὐτὴν καὶ ἀρχμῶ ὀρώη πιεζομένην καὶ ὀλίγον ἀπολιμπάνουσαν τοῦ ἀποπτῆναι αὐτῶ χρυσῶ καὶ αὐτῇ πορφύρα.

Themistius, *Or.* 13, 167d, G. Downey – Norman, A.F. (eds), *Themistii orationes* 1 (Leipzig 1965), pp. 240-1.

Procopius on the works of Justinian I to ensure the capital's water supply

Ὅπερ δὲ ὕδατος εὐπορίας περὶ ἐνταῦθα διαπεπόνηται τῶ βασιλεῖ τούτῳ αὐτίκα δηλώσω. θέρους ὥρα ἡ βασιλεὺς πόλις ὕδατος ὑπεσπάνιζεν ἐκ τοῦ ἐπὶ πλεῖστον, καίπερ ἐς τοὺς ἄλλους καιροὺς διαρκῆς ἔχουσα. τοῦ γὰρ καιροῦ τῆνικάδε ἀρχμοὺς ἔχοντος ἔλασσόνως ἢ κατὰ τὰς ἄλλας ὥρας αἱ πηγαὶ τὸ ὕδωρ ἀποβλυστάνουσαι καταδεεστέραν παρείχοντο τὴν ὀχεταγωγίαν τῇ πόλει. διὸ δὴ ὁ βασιλεὺς ἐπενόει τοιάδε. κατὰ τὴν βασιλείωσ στοάν, ἵνα δὴ τὰς δίκας παρασκευάζονται οἱ τε ἕητορες καὶ εἰσαγωγεῖς καὶ εἴ τινες ἄλλοι τοῦ ἔργου τούτου ἐπιμελοῦνται, αὐλή τις ἐστὶν ὑπερμεγέθης, περιμήκης μὲν καὶ εὐρους ἱκανῶς ἔχουσα, ἐν



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τετραπλεύρω δὲ περίστυλος οὖσα, οὐκ ἐπὶ γεώδους ἐδάφους τοῖς αὐτὴν δειμαμένοις, ἀλλ' ἐπὶ πέτρας πεποιημένη. στοαί τε τὴν αὐλήν περιβάλλουσι τέσσαρες, κατὰ πλευρὰν ἐκάστην ἐστῶσαι. ταύτην τε οὖν καὶ τῶν στοῶν μίαν, ἥπερ αὐτῆς τέτραπται πρὸς ἄνεμον νότον, ἐς βάθους μέγα τι χρῆμα κατορύξας Ἰουστινιανὸς βασιλεὺς, ἀποβαλλομένοις τῇ περιουσίᾳ κατὰ τὰς ἄλλας ὥρας τοῖς ὕδασι ἐς θέρος ἐν ἐπιτηδείῳ θησαυρὸν ἔθετο. δεχόμενα γὰρ τὰ ἔλυτρα τάδε τοῦ ὄχετοῦ τὴν ἐπιρροὴν ὑπερβλύζοντος στενοχωρούμενοις μὲν τοῖς ὕδασι τότε χαρίζεται χώραν, ποθινῶν δὲ αὐτῶν γινομένων ἐπὶ καιροῦ τοῖς δεομένοις παρέχεται πόρον. οὕτω μὲν μὴ προσδεῖν Βυζαντίοις ποτίμων ὑδάτων βασιλεὺς Ἰουστινιανὸς διεπράξατο.

I shall now describe the labours which were carried out here by this Emperor to ensure an abundant water-supply. In the summer season the imperial city used to suffer from scarcity of water as a general thing, though at the other seasons it enjoyed a sufficiency. Because that period always brings droughts, the springs, running less freely than at the other seasons, used to deliver through the conduits a less abundant flow of water to the city. Wherefore the Emperor devised the following plan. At the Imperial Portico, where the lawyers and prosecutors prepare their cases, as well as all others who are concerned with such matters, there is a certain very large court (aulê), very long, and broad in proportion, surrounded by columns (peristylos) on the four sides (tetrapleuron), not set upon a foundation of earth by those who constructed it, but built upon living rock. Four colonnaded stoas surround the court, standing one on each side. Excavating to a great depth this court and one of the stoas (that which faces toward the south), the Emperor Justinian made a suitable storage reservoir for the summer season, to contain the water which had been wasted because of its very abundance during the other seasons. For receiving this overflow of the aqueduct when its stream is spilling over, this cistern both furnishes a place for the water which for the moment can find no space, and provides a supply for those who need it when water becomes scarce. Thus the Emperor Justinian made provision that the people of Byzantium should not be in want of fresh water.

Procopius, *Buildings* I, xi.10-15, trans. H.B. Dewing, *Procopius Opera*, vol. 7. Loeb Classical Library (London 1940), pp.90-3.

Statues of the Lausus collection in the vicinity of the Philoxenus cistern

Ὅτι ἐν τοῖς Λαύσου ἦσαν οἰκήματα παμποίκικλα καὶ ξενοδοχεῖά τινα, ὅπου ἡ φιλόξενος ἐχορήγει τὸ ὕδωρ, ἔνθα ἔσχε τὴν κλησιν. ἴστατο δὲ καὶ τὸ ἀγαλμα τῆς Λινδίας Ἀθηνᾶς τετράπηχυν ἐκ λίθου σμαράγδου, ἔργον Σκύλλιδος καὶ Διποίνου τῶν ἀγαλματοργῶν, ὅπερ ποτὲ δῶρον ἔπεμψε Σέσωστρις Αἰγύπτου τύραννος Κλεοβούλῳ τῷ Λινδίῳ τυράννῳ. καὶ ἡ Κνιδία Ἀφροδίτη ἐκ λίθου λευκῆς, γυμνή, μόνην τὴν αἰδῶ τῇ χειρὶ περιστέλλουσα, ἔργον τοῦ Κνιδίου Πραξιτέλους.

[transl.: «Note that in the quarter of Lausos there used to be various buildings and certain hostels at the place where the [cistern of] Philoxenus ["fond of guests"] provided its water, whence its name. There stood there also a statue of Lindian Athena, four cubits high, of emerald stone, the work of the sculptors Skyllis and Dipoinos, which Sesostris, tyrant of Egypt, once sent as a gift to Kleoboulos, tyrant of Lindos. Likewise the Knidian Aphrodite of white stone, naked, shielding with her hand only her pudenda, a work of Praxiteles of Knidos.»]

George Cedrenus, *Historiarum Compendium* 1, ed. I. Bekker (CSHB, Bonn 1838), p. 564; transl. in Guberti Bassett, S., " 'Excellent Offerings': The Lausus Collection in Constantinople," *The Art Bulletin* 82.1 (Mar. 2000), pp. 6-7.