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## **The Water in the Jaws of Power Politics: Social Dimensions of Water Supply Construction in Belgrade 1868–1941**

### **The Methodological Framework of the Research**

The United Nations has marked World Water Day annually on March 22<sup>nd</sup> since 1993. The initiative to establish and mark a special day was not motivated by a sense of propriety, nor was the day meant to be of a purely ceremonial nature – it was instead the result of a real necessity to point out an issue that burdens a great number of people. It is estimated that water scarcity and poor sanitary conditions contribute to the deaths of around a million and a half children annually.<sup>1</sup> There are too few cities nowadays whose citizens can quench their thirst directly from a tap linked to a public water supply. The basic issues in this regard boil down to an insufficient number of sources of drinkable water and a lack of adequate water infrastructure.<sup>2</sup>

At first glance it seems that the citizens of Belgrade, a city with two great rivers, should be among those few lucky ones who should not have to fight this battle as well. However, the reality is starkly different. Inadequate, antiquated, and poorly maintained water infrastructure, unable to keep up with the process of urbanization and construction, also has to address the novel challenges brought about by river pollution. This infrastructure is the key reason why Belgrade water is below the level of satisfactory quality.<sup>3</sup>

Concerned about this state of affairs and professionally tasked with studying the past, we could not help but ask ourselves: when and in what way were the citizens of this city provided with the first modern water supply? Has this infrastructure been improved, and did it have the capacity to keep up with the expansion and urbanization of the city – a constant trend from the end of the 19<sup>th</sup> century and through half of the 20<sup>th</sup> century? In search of an adequate research

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<sup>1</sup> United Nations. World Water Day, 22 March, <https://www.un.org/en/observances/water-day>, accessed 1.10.2022.

<sup>2</sup> More on this issue from the historiographic point of view: Petri S. Juuti, Tapio S. Katko, Heikki S. Vuorinen (Eds.), *Environmental History of Water- Global views on community water supply and sanitation* (London: IWA Publishing, Alliance House, 2007).

<sup>3</sup> Svetlana Preradović, “Rizici česmovace”, *Vreme*, 24.5.2001, <https://www.vreme.com/vreme/rizici-cesmovace/>, accessed 1.10.2022.

framework, we recognized that the main idea was that it was necessary for this research to exceed an event-based, i.e. narrowly factographic, historiography. We have opted for the path dependence method as an additional tool. This method, as the American historian Martin Melosi points out, allows for a new dimension in the traditional use of historical causality for understanding the mutual relationship between technology, institutions, politics, and specific social phenomena in the context of urban history research.<sup>4</sup>

The intention is to penetrate, using the classic historical method as well as path dependence theory, the complex mechanisms involved in introducing advanced technologies and technical systems into a patriarchal, conservative, and stagnant environment regarding modernisation. This refers not only to the transfer and implementation of the technology, but also to the factors that greatly shaped and influenced the processes of making and implementing decisions. Alongside its material and technical aspects, the implementation of water supply systems undoubtedly has a political and social dimension.<sup>5</sup> One focus of this work is on the role of social phenomena, such as corruption, government discontinuity, and the fear of the new and that which is foreign, in the tracing, inhibition, and realization of this process. The subject of this research is taken into consideration over a wide chronological span. During the time that stretches from the first inking of the idea to build a modern water supply, to the emergence of the governmental and legal discontinuity caused by the occupation of Yugoslavia during World War II, several capital projects were implemented. This obliged us to strive towards producing an analysis that would show how and to what extent the solutions that had come before influenced future planning and projects.

The relationship between infrastructure and citizens is a two-way street. The citizens are entirely dependent upon that infrastructure, the lack of which would jeopardize their existence and development. On the other hand, the citizenry's habits, way of life, awareness, and understanding of their own responsibilities directly influence the appearance, advancement, and maintenance of the infrastructure. For example, if a great number of citizens do not see the importance of regularly paying their water consumption bills, or are not financially able to do so, this will undoubtedly endanger the functioning as well as further planning and construction of infrastructure. One portion of this work pertains to the relationship of the citizenry to the existing infrastructure and its capacities. In these concrete cases, the most drastic are the instances of reckless water consumption. It is because of these cases that the role of government does not end with construction and maintenance of infrastructure. Education aimed at aiding the development of awareness among the citizenry about the necessity of correct and conscientious management of infrastructure is equally imperative. This paper

<sup>4</sup> Martin V. Melosi, "Path Dependence and Urban History: Is a Marriage Possible?", in Dieter Schott, Bill Luckin, Geneviève Massard-Guilbaud (Eds.), *Resources of the City. Contributions to an Environmental History of Modern Europe* (Aldershot [et al.]: Ashgate 2005), 262-275.

<sup>5</sup> Birte Förster, Martin Bauch, Einführung: "Wasserinfrastrukturen und Macht. Politisch-soziale Dimensionen technischer Systeme", in Id. (Eds.), *Wasserinfrastrukturen und Macht von der Antike bis zur Gegenwart* (Berlin: De Gruyter Oldenbourg, 2015), 9-21, 9f.

will also strive to answer the question of what the role and influence of individuals and certain social groups in this process is.

### **“Cold Water, Good Water”**

Since ancient times, the functioning of larger residential areas has been impossible without a source of clean water. People endeavored to settle near rivers and other water sources, as well as to design and implement systems that would provide a stable inflow of water to their community. This was not only a question of securing a supply of drinking water, but also a question of hygiene. The lack of bacteriologically safe water has led to great epidemics that have taken a great many lives throughout human history. The first known water supply on the territory of today's Belgrade was built by the Romans for the needs of their army. It has not been determined when it was constructed, but it is known that the water was taken from a stream by way of fired ceramic pipes and transported from today's Mali Mokri Lug to the fortress.<sup>6</sup>

Water plays a special role in Islamic religion and culture. In line with this, the Ottoman government sought to build a drinking fountain near every mosque, and public bathrooms, i.e. *hammams*, were widespread. The Bulbuder water supply was built in Belgrade during the Ottoman rule. It drew water from five wells in Bulbulder, while its pipe system ran through Palilula, in what today are George Washington Street and Dušanova Street, to the drinking fountains in Dorćol. This water supply was later modified. The Ottomans built a large reservoir near today's Tašmajdan, as well as towers along the water supply lines at regular intervals.

The towers, known as *terazije*, served as places to measure water and transport it further. This is what one part of Belgrade's city center is named after. The water supply transported water to drinking fountains that Belgraders used as their main source of potable water. A small number of wells served as alternative supply channels and rainwater was used as public supply water. This was all insufficient, and a major lack of water was felt in Ottoman Belgrade. This is exemplified by the fact that the occupation of waterboy, or *sakadžija*, was rather widespread. Waterboys carried water from the Danube and the Sava in barrels on their two-wheelers, selling river water for watering gardens and spring water for drinking, shouting along Belgrade streets: “Cold water, good water.”<sup>7</sup>

### **The Construction of the First Modern Water Supply**

Since 1841, Belgrade had been the capital of the Principality of Serbia, and was later the capital of the Kingdom of Serbia. Its population was 54,249 in 1890. There was a drastic increase in the population during this period. According

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<sup>6</sup> Милка Јовановић, “Снабдевање Београда водом до изградње модерног водовода 1892. године”, *Годишњак града Београда* 5 (1960), 241f.

<sup>7</sup> *Ibid.* 242-246.

to certain estimates, the city grew by a factor of 20 between 1820 and 1910. This trend influenced the expansion of the city and its construction. Between 1834 and 1910, the number of homes multiplied by nine. Around 10 family members comprised a Belgrade home, and single-story construction and small-scale rental were prevalent. This kind of expansion alongside a difficult financial status brought about stark economic and social differentiation. In 1900, 73.4% of Belgrade citizens possessed no immovable assets.<sup>8</sup>

With forced urbanization and mass settlement, the existing water supply system was additionally jeopardized in subsequent decades. The population that was settling in Belgrade had come from rural areas and was unaccustomed to life in urban conditions. This was reflected in its water consumption habits. Citizens of Belgrade would connect to the system without any oversight, independently build drinking fountains in their yards, and use the municipal drinking water for laundry and watering their gardens. Water quality was low, and the water was murky after every rainfall. Water shortages occurred constantly and, as municipal president Vladan Đorđević noted in 1884, only the wealthy parts of the population could afford for one of their family members to bathe once a week. Faced with a constant influx of new settlers, the city was confronting a situation that endangered the lives of Belgraders and threatened to bring about a large-scale pandemic.<sup>9</sup>

Emilijan Josimović, the first Serbian urbanist, was the first one to propose the idea of constructing a modern water supply, as far back as 1867. This idea was proposed to the city government once again in 1880, with the suggestion that this and other similar capital projects be financed through credit. Different foreign companies offered comprehensive solutions for infrastructural projects, but no deal was made. In 1884, things were finally jumpstarted by the appointment of Vladan Đorđević as the head of the Municipality of the City of Belgrade. At the moment of his appointment, he was already famous as a healthcare and sanitation reformer. This is the role Đorđević would play during his term governing Belgrade. Immediately following his appointment, one of his priorities was the construction of the water supply.<sup>10</sup>

It was clear that grand infrastructural projects could not be implemented in Belgrade without adequate funding, legislation, and experts. These conditions were met through the adoption of the Law on Excise Tax in Belgrade in 1884. According to the law, the state could take upon itself the responsibility for the construction of the water supply, sewer, and other projects by establishing an excise tax, which would guarantee payment of interest and amortize debt accrued through loans taken out by the municipality. The

<sup>8</sup> More on this subject in: Милован Радовановић, “Демографски односи 1815-1914. године”, in *Историја Београда*, Vol. 2 (Београд: Просвета 1974), 266-298.

<sup>9</sup> Дубравка Стојановић, *Калдрма и асфалт: Урбанизација и европеизација Београда 1890-1914* (Београд: Удружење за друштвену историју, 2012), 139f.

<sup>10</sup> More on the role of Vladan Đorđević as head of the Belgrade municipality in: Зорица Циврић Флорес, *Хроника изградње комуналне инфраструктуре у Београду, 1884–1903* (Београд: Музеј науке и технике: Арт студио Црно на бело, 2022), 17-19.

municipality thus put in place measures to force the citizens to connect to the new infrastructure.<sup>11</sup>

The legislation could have become a dead letter were it not for an administration that was able to implement it. The Belgrade municipal administration that greeted Đorđević upon his appointment was operating without a legal framework and was too large, inefficient, and costly. Over half of the entire municipal budget was used for employee salaries. A large amount of municipal taxes went uncollected, and the desks of the clerks sagged under the weight of unresolved cases. The source of these issues could be found in the staff, which was mostly filled with people who did not possess the knowledge or the experience to fulfill their duties. As Đorđević himself notes, instead of experts, laypeople had been employed on the basis of party affiliation. For these people, working in the municipality was a good way to resolve their basic existential concerns. He mentions the example of the most important engineering department, which was not led by an engineer. This resulted in one of the newly finished bridges breaking in several places, certain streets being inexpertly leveled, etc.<sup>12</sup>

After noting these issues, the new mayor started implementing extensive reforms. He enforced strict discipline, and in only four months 468 of the 6,000 waiting cases had been resolved, and the lagging tax payments had been collected.<sup>13</sup> He suggested reorganizing the departments within the municipality. The engineering department was a particular focus, so the mayor insisted that the head of the department be an engineer by calling, as well as that more vacancies be opened.<sup>14</sup> For the implementation of modern technologies, Đorđević could not entirely rely on domestic experts, who were few and far between. As an expert of good reputation, he managed to include a certain number of engineering advisors, entrepreneurs, and bankers from abroad.<sup>15</sup>

It was the advice of these foreign experts that convinced Đorđević to suggest that a committee be formed, tasked with getting acquainted with the modern infrastructure of other European capitals, and with suggesting solutions after looking into the circumstances in Belgrade. The committee went on the road in November of 1884 and returned in January of 1885, after visiting Timișoara, Budapest, Vienna, Munich, Berlin, Strasbourg, Paris, London, and other cities. They noted that these cities used variegated water supply sources for their citizenry. Some of them used springs or underground sources, while others used purified river water. After collecting their insights, the committee members suggested that research be done into spring water in Belgrade. This spring water was supposed to satisfy the needs of 80,000 citizens, with 100 liters of water per person.<sup>16</sup> In

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<sup>11</sup> *Српске новине*, 23.6.1884, 726.

<sup>12</sup> *Београдски општински послови*, 4 (Београд: Краљевско-српска државна штампарија, 1885), 1-9.

<sup>13</sup> Јелена Јовановић Симић, *Владан Ђорђевић: Портрет неуморног ствараоца* (Београд: Српска академија наука и уметности, 2020), 105.

<sup>14</sup> Циврић Флорес, *Хроника изградње*, 21.

<sup>15</sup> *Ibid.* 27.

<sup>16</sup> Стојановић, *Калдрма и асфалт*, 140f.

case that there was not enough spring water, they suggested the alternative of combined supply (spring and underground water for drinking, and water from the river Sava as public supply water). They suggested the possibility of purifying water from the Sava as a final alternative. As already mentioned, at this moment Belgrade had a population of 54,249. These suggestions show that the city government was well aware of the dynamics of urbanization, given that it was in search of water sources that could satisfy the population if it grew by a third. The committee also suggested which of the foreign partners should be tasked with implementing solutions in line with this study.<sup>17</sup>

In March of 1885, the municipality adopted the proposition to research water springs in Belgrade, in accordance with the committee's guidelines. After preparatory research, Wilhelm Sigmund was enlisted. This expert, who had already researched mineral waters in Serbia, suggested in his report that there was enough water in the Mokroluški Creek to satisfy almost double the current population of Belgrade. Based on this report, the city government made the decision to perform the necessary soil drilling. The first data arrived in August of 1885. Parallel to this, the municipality implemented projects related to the construction of sewage and lighting systems. Everything was going according to plan, and it seemed that Belgrade was finally en route to securing adequate and modern basic infrastructure.

However, certain occurrences showcased once again that consensus and the synchronization of the activities of the higher and lower levels of government are necessary to implement such important infrastructural projects. A conflict arose between the Administration of the Town of Belgrade (police-administrative institutions), which was supported by the Ministry of Interior and the prime minister Milutin Garašanin, and the Municipality of the City of Belgrade. Đorđević, the municipal president, submitted a proposal for the reform of the municipal administration which was stopped by the Interior Minister, Dimitrije Marinković. The Administration of the Town of Belgrade made the decision that the committee that was formed did not have jurisdiction, and that the municipal president had insulted the police in his annual report. This was just a ruse — essentially the situation was really about political conflicts. After the clash with the prime minister Garašanin, Stojan Novaković resigned from his position as Minister of the Interior. A new government was formed, and Đorđević, who was close friends with Novaković, found himself on the wrong side of the conflict. Regardless of all efforts and their outcomes, political factors prevailed, and at a session in August of 1885 the municipal board cast a vote of no confidence in Đorđević. Aware of the political obstructions and his precarious position, Đorđević resigned. In the same month, Mihailo Krstić Petrović took over management of the municipality.<sup>18</sup> In addition, the Serbian-Bulgarian War broke out in March of 1885, slowing down all municipal activities. Water research was brought to a close with no data having been gathered on the quantity and quality of the water, nor further

<sup>17</sup> Циврић Флорес, *Хроника изградње*, 42f.

<sup>18</sup> *Ibid.* 60-62.

guidelines established on what would be necessary in order to collect these data. The aforementioned circumstances stopped this project entirely.<sup>19</sup>

Petrović, the new municipal president, was aware of the importance of the project, but also of the difficult position in which the municipality found itself. It was a challenge to decide whether and how they would continue down the road Đorđević had mapped out. Their hands were somewhat tied in making the choice. The previous administration had ordered seven projects, and the ensuing financial obligations towards the authors of the projects were an issue. On the other hand, political factors were dominant and could not be disregarded, as they had undoubtedly shaped attitudes towards previous solutions. They created a climate that forced members of the new administration to question everything about the legacy of their predecessors. As the old administration was systematic in its activities, it was technically and technologically difficult to question and overturn previously made decisions.

The new administration focused on sources and types of financing. A discussion broke out during a session in November of 1886 regarding the funding model that new projects should adopt. Most council members, together with the municipal president, were of the opinion that the water supply should be financed through a concession agreement, and not through resources collected through the excise tax, as had previously been decided. As one of the council members explained, this choice was made because none of the large-scale work that the Municipality of the City of Belgrade had done independently had been done satisfactorily. This decision also blocked reinvestment in the projects that had been ordered in 1885. The expediency of adopting the concession solution was questionable, as future concessioners would have the right to oversee projects independently.<sup>20</sup>

It is necessary to also point out the unstable financial circumstances in which the appropriate model for water supply financing was sought. This will most easily be illustrated by the example of the founding of the municipal class lottery as one of the main sources of financing for the construction of the sewer system. Drawing lottery tickets was one of the favorite pastimes of the citizenry of the time. In funding a project in this manner, the Municipality of the City of Belgrade did not risk a thing. The lottery would be organized and implemented by a private company, and the profit would be shared. The city government found an adequate foreign partner, and all that was needed was a green light from the state. At first, the regime supported this move by the city government. A problem emerged, however, when Mihajlo Vujić, one of the council members of the Belgrade municipality who was active in introducing the lottery, was appointed as the Treasury Minister. Aware of the importance and possibility of a new source of financing, he refused to concede the lottery to the municipality, bringing it under the jurisdiction of the state. The state received a new source of financing, and the city government was left empty-handed.<sup>21</sup>

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<sup>19</sup> *Београдске општинске новине* (further: *БОН*), 8.3.1887, 94.

<sup>20</sup> *БОН*, 20.3.1887, 93–96.

<sup>21</sup> Циврић Флорес, *Хроника изградње*, 79–84; *БОН*, 10.10.1937, 643.

Regardless of the changes, these were certainly steps forward, but discontinuity within the city government would disturb the dynamics of the project's implementation. Mihajlo Bogičević, municipality president, was appointed Minister of Construction and replaced as municipal president by Svetomir Nikolajević. Nikolajević would end up spending only five months as the head of Belgrade, after which he would be replaced by Živko Karabiberović.

The call for a concession agreement to design and build the water supply, sewer, and lighting was launched in January of 1887. All interested parties had the opportunity to send their proposals to the address of the municipal government until March of that same year. This process could not come to fruition without encountering difficulties caused by the sluggish and inept administration. After the call was over, the municipality also received letters of intent from three interested bidders, aside from the regular proposals. The bidders noted that the call had been too short, taking into account that the municipality had not made a determination on what the future water supply should look like. They asked for the call to be extended so that they could send in their proposals. During a special meeting of the municipal government, members were up in arms about whether it was expedient to heed these pleas. After a fiery discussion, 14 council members voted for the call not to be extended, with 12 members voting yea.<sup>22</sup>

Later on, the observations of the companies asking for an extension would prove to have been accurate. When questioned by the committee tasked with opening the proposals, Nikolajević, the municipal president at the time, found it "sad" to admit that the municipality had no plans to build the water supply. This made one of the committee members tasked with opening proposals conclude that the city government had no idea what kind of water supply it intended to build.<sup>23</sup> This example clearly shows the ruinous nature of the constant discontinuity in city government. The solutions were found by one, planned by another, and then realized by a third municipal administration. Time kept passing, and the situation was becoming more and more dire.

In May of 1887, the municipality even considered signing a contract for a temporary water supply after receiving an offer from a private company. The idea was for this company to find an adequate water source, build a reservoir, and install pipes beneath the main city streets. The water would be sold by the hectoliter until the municipality had built its own water supply. After the construction of a new supply, the entire temporary network would be demolished, and the roads returned to their original state. The city government considered this offer seriously, but it never came to fruition.<sup>24</sup> What we can conclude from this episode is not only that the issue of solving the water supply was taken as urgent, but also that some private entrepreneurs were convinced that the city government was incapable of building a water supply in the near future.

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<sup>22</sup> БОИ, 22.3.1887, 113–115.

<sup>23</sup> Циврић Флорес, *Хроника изградње*, 86.

<sup>24</sup> *Ibid.* 86f.



A big step was made in April of 1887. The report on the study of underground and spring water in Belgrade was finally in front of the members of the Municipality of the City of Belgrade. The main conclusion of the two committees was that Belgrade had enough underground water, and that digging wells could secure a stable water supply for all Belgraders' needs. Regardless of the results, the members of the committees also expressed the opinion that there were even richer water sources in Beli Potok, on the outskirts of Mount Avala, and that it was necessary to continue the research.<sup>25</sup> The option of using the Sava River as a water supply resource was discarded and the research was directed elsewhere.

Unlike the study of potential water sources, the call for the concession agreement was a complete failure. The municipal call was incomplete and general, which resulted in many identical proposals being submitted. The Grand Committee constituted to evaluate the offers was only able to note that none of the proposals could be adopted. It is telling that all offers of the prospective concessioners were based on the supposition that water supply would come from the Sava River, an assumption which was entirely contrary to the results and the decisions of the committee for underground and spring water research. This reflected the inability of the municipal government to work systematically. The committee's work and the adoption of its decisions showcased the acute ills of the Serbian society of that time. The municipal council members did not show up to meetings, even those that were delegated to work in the Grand Committee itself.<sup>26</sup>

These were only the first manifestations of the immaturity of the political elite. It was clear that the mishandling of the call for a concession agreement had led to a new postponement of the water supply construction. This prolongation would negatively impact the mood of the citizens, who were already at the end of their rope. In the deeply politicized and politically unstable society that was the Serbian society of that time, the citizens' dissatisfaction would pose a danger for any regime. Populist sentiments were frequently used in order to humor the wider public. Once more they prevailed over the opinions and competences of experts. Heated arguments about whether to adopt or reject the opinion of the Grand Committee arose during the city assembly sessions. Svetimir Nikolajević, the municipal president, and a certain number of council members took the side of the experts. They considered the entire situation objectively and saw the Municipality as the main culprit for the delays. The other side strove to be pragmatic, but also to look for solutions outside of the legal framework. It was suggested that members speak to the bidders privately, which would be illegal. This motion passed in a 14 to 10 vote.

The Grand Committee's opinion was rejected. The conclusion that was adopted tasked the Grand Committee with announcing the best offer, based on which the Municipality would then "barter" further. The Grand Committee did

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<sup>25</sup> БОН, 12.4.1887, 143f.

<sup>26</sup> Циврић Флорес, *Хроника изградње*, 92.

not act on these decisions, but instead closed the matter.<sup>27</sup> Despite pressure, some members of the expert public defended their integrity, making it clear to the politicians that they put public interest above opportunism and humoring the masses. It was quite certain that Belgraders would not see a water supply soon. An initiative was introduced to reconstruct the existing water supply. This initiative did not go further than the planning stage, with another change of the municipal president.

Things started moving again during 1888. Oskar Smreker, an engineer from Mannheim (but born near Celje), showed interest in conducting a study and preparatory works for the new Belgrade water supply. At the beginning of May, Smreker submitted two proposals to the desk of Karabiberović, the president of the Belgrade municipality. Taught by experience and aware of what had been done, the members of the city government worked systematically this time. A committee was formed and tasked with the evaluation of the proposals and determining the scope of the new research into the water springs. A larger group of Serbian engineers was involved in the process this time. This was no accident, as students who graduated abroad started arriving back home at this time. An awareness of the importance of the engineering profession was developing, confirmed by the formation of the Association of Serbian Engineers in 1890. This certainly fulfilled one of the most important prerequisites for the successful modernisation and urbanization of Belgrade. Unlike foreign ones, domestic experts were well acquainted with the circumstances in which they would be operating (from the political situation to the people's mentality). Patriotism should not be disregarded as one of the elements that motivated domestic engineers, and was lacking in experts coming from abroad.<sup>28</sup>

Serbian engineers were part of the committee tasked with evaluating Smreker's central project. In its report, the committee did not restrict itself to such a narrow scope. Young engineers strove to point out the entire genesis of the issue of the water supply construction. This meant the analysis of all of the important steps. The general impression of the committee was that there was a constant meandering in the search for water supply solutions. The engineers demanded more transparency, because as a result of the insufficient information being presented, the general public's opinion was that too much time and resources had already been spent on the water supply research. The water source research was conducted through committees, which disempowered permanent management. Committees made decisions and provided recommendations, but the Municipality would not adopt and implement them. Enlisting foreign experts for work that could have been done by domestic ones resulted in an increase in expenses by a third or more. It was noted that it would be necessary for the Municipality to send one engineer on an apprenticeship abroad, in order to have competent staff able to manage and maintain the water supply after the construction.

<sup>27</sup> *БОН*, 6.9.1887, 375–380; *БОН*, 13.9.1887, 384f.; Циврић Флорес, *Хроника изградње*, 101.

<sup>28</sup> Циврић Флорес, *Хроника изградње*, 115–117.

Smreker's proposal was considered solid, technically speaking, and Smreker himself was considered adequate to the task of completing the project. A key criticism of the plan was that it suggested building a combined system which would encompass both spring water and water from the Sava River. The committee was against it for two reasons: this kind of system would be expensive to maintain, and since not all of the springs had been researched yet, the need to also use river water had not been substantiated. It was suggested that all concession agreements be rejected and an alternative source of financing be found. It was taken as an imperative to complete the water springs research. Only after taking into account its results could the decision be made on the composition of the water supply.<sup>29</sup> This time, those operating the levers of power had complete confidence in the experts and showed expediency in their work. Only a few days after the report was submitted, the council members adopted it and made the decision to turn the committee into what would be called the Permanent Technical Committee. Deadlines were set. It was planned for the research to be finished in autumn of 1888 and for construction to start in the first half of 1889.<sup>30</sup>

Not everyone within the Municipality viewed the role and the person of Smreker the engineer with benevolence. The criticisms that certain council members directed at him, as well as the general attitude towards the issue of the water supply construction, reflected the social climate, mentality, and consciousness of the people of the time. Kosta Crnogorac, a professor of natural sciences, spoke in a malicious tone about the foreign experts that were enlisted to research the water springs. When speaking of the engineer Smreker, he kept referring to him as "some" Smreker in an attempt to reduce perceptions of his competence and person. He noted that money had been spent and that the research had not been conducted. This council member also showed his arrogance by proposing that he should take the committee members out to Mount Avala and show them "the imperial source of water." Based on his subjective opinion, the truth of which he had convinced himself on a picnic during which he found a spring and "quenched his thirst" with his students, he claimed that this mountain had plenty of quality water. In the end, he noted that the Municipality did not have his vote to spend additional resources to research the springs near Makiš.

There were entirely different tones in the city hall. Council member Milan Mostić emphasized, "Aren't we all good Serbs, and there is no doubt that each of us considers and should consider himself the best Serb," but also that he did not care "whether it is a Turk, a Chinese, a Hungarian, the devil or Serb, Slav, etc. – let him find me good water that I need and that will keep us all healthy and alive." The members of the Permanent Technical Committee such as Kosta Glavinić could not understand opinions such as that of Crnogorac. This engineer pointed out that it was not a disgrace for a foreigner to conduct research, and that it struck him as odd to believe that it would be sufficient for "two

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<sup>29</sup> *BOH*, 3.7.1888, 169–172; *BOH*, 10.7.1888, 177–181; *BOH*, 17.7.1888, 185–189.

<sup>30</sup> *BOH*, 28.11.1888, 326–333.

peasants or two other inexperienced persons and one professor to go to Avala and look for water for Belgrade.”<sup>31</sup>

Despite the dissonant tones, the municipal government made the decision to trust Smreker and the group of Serbian engineers. In November 1888, it was decided that Smreker should be tasked with developing a detailed project for the construction of the water supply. One of the prerequisites for this step was to first conduct the final research on Bele Vode. The decision was made also to create a financial board that would find a financing model.<sup>32</sup>

Smreker felt that he was trusted by the Belgrade municipality. Thus, he attempted to secure management of the construction work on the water supply for himself, in addition to the planning of the project, without an open call. This episode is instructive when it comes to understanding and evaluating the potential of the municipality to oversee the construction independently. The Technical Committee evaluated Smreker’s proposal, had no doubts, and recommended that he be trusted with the management of the construction, concluding that the Municipality of the City of Belgrade did not have adequate personnel. It was already clear that in case of a decision to manage the construction independently, the municipality would have to hire “an experienced foreign engineer.” In addition, by hiring Smreker, the municipality would not have to send domestic engineers abroad. They would be able to gain knowledge and experience on site, which they could then use for further management and exploitation of the water supply.<sup>33</sup>

The making of these important decisions took place in a climate of political instability. The 1880s in the Kingdom of Serbia were marked by the struggle of the Radical Party against the absolute power of King Milan. During this period, the first Radical government was formed, the King abdicated, his son Aleksandar Obrenović came to the throne, and Queen Natalija was exiled. All this was accompanied by the protests of Belgrade citizens. Constant changes were taking place within the municipal government. In February of 1889, a new municipal council was constituted, and would function as it was then composed for almost a year. After the new constitution was adopted in 1888 and the Law on Municipalities of 1889 was implemented, there were elections and new changes within the municipal government. Nikola Pašić, the new president and leader of the Radical party who would later become an esteemed statesman, became the head of the Belgrade municipality in December. At the beginning of 1891, yet another new municipal council was constituted.<sup>34</sup>

The aforementioned matters slowed down but did not stop further steps from being taken towards the construction of the new Belgrade water supply. The contract with the engineer Smreker was signed on April 3<sup>rd</sup>, 1889. It was

<sup>31</sup> БОН, 28.11.1888, 333-336.

<sup>32</sup> БОН, 15.12.1888, 345f.

<sup>33</sup> БОН, 19.2.1888, 42f.

<sup>34</sup> Владимир Стојанчевић, “Политичка историја 1878-1903.”, in *Историја Београда*, Vol. 2 (Београд: Просвета 1974), 173-187; Циврић Флорес, *Хроника изградње*, 149.

envisioned that every Belgrader would have access to 8,000 m<sup>3</sup> of water when the water supply reached its full capacity.<sup>35</sup> Finally, on July 30<sup>th</sup>, 1889, the municipal council made the decision that the future water supply would extract water from the area of Bele Vode, and that the program for the design of the detailed project should be sent to Smreker. Until April 1890, the general project was done and entrusted to Smreker to shape it further. The experts did their part of the work and the construction could begin as far as they were concerned.<sup>36</sup>

Unfortunately, the procedure for finding a financing model lagged behind the work of the experts. It was only in May of 1890 that it was decided that the Municipality would borrow ten million dinars for the water supply and other projects related to the communal and road infrastructure. This decision was supposed to be confirmed by the voting Belgraders. The atmosphere that marked this process was emblematic on several accounts. Before the vote, Belgrade was covered in the posters of political parties calling upon the citizens to vote for or against this decision of the municipality. This attested to the high level of politicization of the Serbian society of the time. Belgraders themselves did not show maturity and, instead of doing their duty, did not show up to polling stations in sufficient numbers. It was only on the second try that this initiative of the municipality was confirmed. Finally, during an assembly on June 3<sup>rd</sup> of 1890, most Belgraders voted for the initiative, and the municipality was able to ask for the loan.<sup>37</sup>

The water supply was built between the summer of 1890 and June of 1892, with certain issues arising in the course of the construction and the procurement of the equipment. By the time the water supply was being constructed, the technology had further advanced from its state when the project was designed. Certain technical solutions like the steam pump with a rudder were patented.<sup>38</sup> This required changes and additions to be made on the fly. The new Belgrade water supply was opened in Terazije on the great Orthodox holiday of Petrovdan, on June 29<sup>th</sup>, 1892.<sup>39</sup>

However, the construction of the new water supply did not mean a stable water supply for Belgrade. The water quality was low, and the taps were dry during the summer months. The water capacity was inadequate compared to the needs of the population in Belgrade at the time. There were not enough experts to manage and maintain the water supply. Citizens were behaving unconscionably in the way they used water in the summer months. As the causes of these occurrences were identical or similar to the ones mentioned in the previous part of the paper, we will not elaborate further.

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<sup>35</sup> Ibid. 137f.

<sup>36</sup> Ibid. 137f., 141.

<sup>37</sup> *Мале Новине*, 4. јун 1890, 1.

<sup>38</sup> More on the details during construction: Циврић Флорес, *Хроника изградње*, 171-193.

<sup>39</sup> *БОН*, 28.6.1892, 1; *БОН*, 5.7.1892, 1.

## The Kingdom of Serbs, Croats and Slovenes/Yugoslavia

After World War I was over, Belgrade became the political, administrative, cultural, and economic capital of the Kingdom of Serbs, Croats, and Slovenes. This ensured and accelerated its further urbanization and brought about a sudden population increase. The most intense population growth occurred between 1921 and 1929. The population of Belgrade was 135,000 in 1921, 244,000 in 1929, and 288,938 in 1935.<sup>40</sup> Most citizens of Belgrade were of poor financial status. Between 1934 and 1935, 67,000 of employed people had monthly salaries below 900 dinars. The minimum amount necessary for family sustenance was 2,200 dinars, which attests to the fact that the average Belgrader had to fight hard to make enough money to maintain basic living conditions.<sup>41</sup>

In spite of the formation of the new state, the political practices that had existed in the Kingdom of Serbia continued during this period. Between 1918 and 1941, 16 municipal administrations were constituted and dismissed. As Branislav Gligorijević notes, municipal administrations were exclusively politically marked, and the general interests of the citizens were subordinate to party interests. This fact was even more pronounced when it came to the municipal budget, because the central government was able to influence the formation and spending of this budget. The municipal budget shared the fate of the state treasury, as its expenses were greater than its revenues. Asking for loans was the only solution for covering the deficit, as well as for making investments.<sup>42</sup> Taking into account that these phenomena also manifested themselves during the previous period of analysis, we can conclude that this was one of the negative path dependence factors that influenced the process of enacting and implementing the city's policy.

As already highlighted, there was a huge population influx in these conditions, which caused a "construction frenzy," as Vladana Prica Putnik notes, which "resulted only in the partial construction of the infrastructure and the inconsistent urban planning." It is important to point out an additional factor which greatly influenced the need for a drastic increase in the capacity of the Belgrade water supply. The apartment construction as well as the housing culture were drastically altered compared to what one would find at the end of the 19<sup>th</sup> and the first decade of the 20<sup>th</sup> century. Multistory buildings and bathrooms became the standard in the apartment construction of the interwar period. Before World War I was over, houses with bathrooms were rare, while in 1920 77.5% of the newly built apartments had them. The bathrooms were equipped with washbasins and bathtubs with taps, as well as toilet

<sup>40</sup> More on the demographic trends of interwar Belgrade in: Милован Радовановић, "Демографски односи 1918-1941.", in *Историја Београда*, Vol. 3, 157-162.

<sup>41</sup> Томислав Богавца, *Становништво Београда 1918-1991* (Београд: Београдски издавачко-графички завод, 1991), 106.

<sup>42</sup> More in: Бранислав Глигоријевић, "Општина града Београда 1918-1941.", in *Историја Београда*, Vol. 3, 128-152.

cisterns.<sup>43</sup> This factor, along with the increase in population, greatly influenced water consumption. Before World War I, the citizens spent close to 1,829,528 liters per year, but in 1920 they spent 3,412,356 liters.<sup>44</sup>

Because of political and economic instability, the Municipality of Belgrade could not keep up with this pace of city development nor plan for and build adequate new water, sewer, and road infrastructure in a timely fashion. The existing water supply, with occasional upkeep, was exploited to its limits although it was clear that Belgrade needed a new solution for its water supply. This kind of approach inevitably brought about acute water shortages. As noted in certain newspaper articles, “entire parts [of the city] received water in limited capacity, very rarely during the day,” and were often faced with dry taps for multiple days.<sup>45</sup> This was one of the major communal issues of the capital during the interwar period.

The first initiative to expand the capacities of the Belgrade water supply was launched in 1921. The idea itself and its realization attest to the inability of the city administration to implement a long-term solution to the issue. A pumping station was built during this year. It collected water from the Sava River near the famous Belgrade swimming area called “The Three Poplars” (*tri topole*). This water was transported to consumers unpurified. During 1921, the construction of a new installation for pumping and purifying water was built in the same place. Once again, the unfavorable financial situation acted as a delaying factor in the process of modernizing and expanding Belgrade’s water supply capacities. The construction lasted all the way until 1924 because of the lack of financial resources, but was finished thanks to the material received in the form of war reparations from Germany. The water was connected to the network for street cleaning, watering of green areas, and for other similar needs of the city and households. When necessary it could also be redirected into the drinking water supply system.<sup>46</sup>

Water consumption increased by unprecedented proportions. During 1923, Belgraders consumed 5,078,248 liters of water.<sup>47</sup> The water treatment plant was connected to the water supply and started operating in January 1924.<sup>48</sup> After this plant started working, the city administration vociferously promised Belgraders that there would be no more water shortages and that they would have 100 liters of water available per day. The following summer would show that these promises were unrealistic. In June of 1925, a huge water shortage occurred. The water supply would only carry water at night, and the taps would already be dry

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<sup>43</sup> More about residential architecture during the interwar: Владана Путник Прица, *Стамбена архитектура Београда 1918-1941* (Београд: Завод за заштиту споменика културе града Београда, 2022).

<sup>44</sup> *Време*, 13.3.1925, 7.

<sup>45</sup> *Време*, 20.10.1924, 4.

<sup>46</sup> Aleksandar Milošević, *Beogradski vodovod: 1892-1975* (Beograd: “Export-press”, 1975), 59.

<sup>47</sup> *Време*, 13.3.1925, 7.

<sup>48</sup> *Време*, 1.1.1924, 4.

by five o'clock in the morning.<sup>49</sup> The first instance of the phenomenon of an uneven water supply based on location occurred during this period. Professor Stevan Ivanić pointed out that water was not distributed evenly, and that parts of the city closer to the city center received preferential treatment. He was so critical of the water supply management that he noted that it acted as “a mother for the city center, and an evil stepmother towards the outskirts of town.”<sup>50</sup>

The taking out of a loan by the municipality in order to improve the infrastructure in 1924 clearly attests to its inability to finance such an operation from its own resources. The proposal to take out this loan at the State Mortgage Bank in the amount of 55,000,000 dinars in order to build “a larger water supply and more perfect lighting and tram installations” found its way in front of the municipal council members.<sup>51</sup> In what measure this was a burden that left Municipality unable to finance this kind of project from its own resources is evident in the fact that, in 1924, a total of 39,820,543 dinars poured into the municipal treasury as revenue from taxes.<sup>52</sup>

Belgraders were falsely promised that they would soon have a water supply whose capacities would satisfy their needs, with these claims coming from the most highly positioned officials. In October of 1927, Dimitrije Stevanović, the director of the Belgrade water supply, announced that the water supply issues would be solved by July of 1928.<sup>53</sup> During this period, the most intense work to date was done on the Belgrade water supply. One well was built during 1927, while six more wells were built in 1928 in Makiš, increasing the capacity for purification of the Sava water.<sup>54</sup>

Despite these efforts, the promises were not kept, and the city government was justifiably the target of criticism. Dr Stevan Ivanić, who saw the municipal initiatives as merely patching up the already patched up water supply, voiced his concerns once again. He criticized the policy of paving the roads before solving the existential issue of water supply. He urged the officials not to search for short-term solutions, but to plan a water supply which could supply a much larger population than the existing numbers.<sup>55</sup>

The example of using the combined water system in Belgrade apartments and houses clearly shows the level of awareness of the water consumers of the time. Newspaper articles often noted that Belgraders used public supply water for drinking, endangering their health in the process. This practice was particularly widespread during the summer months when water shortages would occur. Such lack of discipline in keeping the sources separate forced the city government to abolish the combined water supply in residential buildings in 1929.<sup>56</sup>

<sup>49</sup> *Време*, 31.7.1925, 5.

<sup>50</sup> *Ibid.*

<sup>51</sup> *Време*, 12.4.1924, 4.

<sup>52</sup> Глигоријевић, Општина града Београда, 123.

<sup>53</sup> *Време*, 28.10.1927, 4.

<sup>54</sup> *БОН*, 15.8.1929, 14.

<sup>55</sup> *Време*, 10.8.1928, 9.

<sup>56</sup> Milošević, *Beogradski vodovod*, 61.



Between 1919 and 1930, a total of 118,941,800 dinars was invested in the Belgrade water supply. Out of this amount 26,506,000 was allotted for water capture and purification, 36,520,800 for drawing water and conveying it to the city and the reservoirs, and 55,915,000 dinars for the construction and maintenance of the network and water sharing infrastructure. During the first years after World War I, investment in the water supply was done through the reparations Germany paid out to the Kingdom of SCS. After this start, investment through loans began. Between 1919 and 1930, the water supply received a total allocation of 103,900,000 dinars. During 1928, a record 28,350,000 dinars was invested. The total revenue that year was 17,000,000 dinars, which was almost 40% less than what had been invested into the water supply.<sup>57</sup> During 1929, 8,783,014 m<sup>3</sup> of water was spent, which amounted to 106 liters a day per resident. This number was markedly below the world average, which we can note in the examples of daily per capita usage in the following major cities: London 170 liters, Rome 400 liters, New York 450 liters, and Paris 200 liters.<sup>58</sup>

During this time, water was not treated as an average trade product. As the experts of the time asserted, its price had to be kept in line so that the citizenry and the economy “would be able to withstand [the price] without major material sacrifice, on the one hand; on the other hand, the revenue from water supply had to be sufficient for the municipality to be able to cover its expenses related to the water supply itself.”<sup>59</sup> The data listed in the previous paragraph demonstrate the fact that, because of the poor material status and low purchasing power of the citizenry, the water had to be sold at a social price. Social pricing was used to humor the voters in a deeply politicized society. The price of water was not all – there was also the issue of payment. It would be unpopular to bring about and implement harsh measures to ensure more consistent payments from consumers. During 1923, the total revenue from water was 4,800,000 dinars, while the budgetary expenditure for the water supply was 13,500,000 dinars. The city government during this period used a tariff formula put in place in 1892. Using this formula meant that, on average, the Belgrade water supply lost half of dinar on every cubic meter of water consumed between 1925 and 1930. The fact that it stayed in place, with certain modifications, during the interwar period as well speaks to the fact that alternating municipal administrations heading the city of Belgrade were led by political motives above all.<sup>60</sup> The regime was not only buying peace with the low price of water, but also absolving certain groups of consumers from the requirement to pay.<sup>61</sup>

The flywheel for the new work on the expansion of the water supply was provided by the second installment of materials, valued at 37,806,428 dinars, which arrived to Belgrade in 1929 and 1930 in the name of war reparations. From

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<sup>57</sup> *Општинске новине*, 1.9.1931, 1116.

<sup>58</sup> *Време*, 29.11.1930, 5.

<sup>59</sup> Реља Аранитовић, *Београдски водовод-пре и данас* (Београд: Графички уметнички завод Планета, 1931), 3.

<sup>60</sup> *Општинске новине*, 1.9.1931, 1119f.

<sup>61</sup> *Општинске новине*, 1.3.1939, 209.

this time until 1935, the most intense work of the interwar period was done. The production capacity of drinking water was increased. This was achieved through the construction of the so-called “northern tension”, with 19 new wells which had the capacity to produce 190 liters of water per second. The construction and expansion of the water supply network was aimed at those parts of Belgrade whose residents had the most issues with the water supply. Parallel to the modernization and expansion of the capacity, the number of staff working on the Belgrade water supply was strengthened as well. From 1930 to 1932, the largest number of hydro engineers were employed. Experts were also represented in the highest positions for making and implementing decisions. From 1930 to 1932, the Belgrade municipality was headed by Milan Nešić, an engineer. As a hydrology engineer and professor at the Technical Faculty in Belgrade, he was undoubtedly familiar with the importance of building and expanding the capacities of the water supply, as well as the strengthening of its staff. All of these efforts resulted in Belgrade having a water supply that could produce a significantly larger amount of water than was necessary for the population, for the first time in its modern history. The capacity of the Belgrade water supply in 1936 was 53,000 m<sup>3</sup> per day, while the needs of the consumers amounted to 40,000 m<sup>3</sup> daily.<sup>62</sup>

The golden age of the Belgrade water supply did not last long. The city grew, the population increased, and efforts were not made to sustain the advantage created in 1936. Water shortages started to occur again. According to certain data, the water supply had a capacity of 51,000 m<sup>3</sup> in 1939, while the needs of the population were 6,000 m<sup>3</sup> greater than this amount. The water supply management was aware of the forthcoming shortages, so it would warn the population a month in advance. For the first time there were disagreements, and accusations were made between the water supply management and the municipality. The water supply management marked the municipal government as the key culprit for the shortages because they had not approved a credit for the improvement of the water supply three years prior. Contradictory information also appeared in public. Before the shortages, the water supply management stated that it was only in 1942 that Belgrade would have the capacity to satisfy its current needs for water supply. When taps went dry in July of 1939, it assured the residents that the water supply capacity would be expanded by 33% by the following month. Such irresponsible behavior additionally upset Belgraders, and opinions were present in the media that “it would be better to tell the citizens what the situation was really like, so they could mount abandoned private pumps and open wells.”<sup>63</sup>

The public pressure was great, and the city government did not view the criticisms aimed at it by the water supply management benevolently. They were looking for a person to carry the burden of responsibility, eventually placing it on the water supply manager and engineer Slobodan Petrović, who resigned. This did not appease the spirits but rather deepened the disagreements of the municipal

<sup>62</sup> Milošević, *Beogradski vodovod*, 70-76.

<sup>63</sup> *Народно благостање*, 29.7.1939, 469f.

council members. Some individuals demanded that the motives behind engineer Petrović's resignation be made public. The municipal president Vlada Ilić entered the discussion with the council members and shifted the blame for the water shortage onto the management of the water supply. In an attempt to justify his role in public, he denied that the municipality had not approved loans. As his main argument, he asserted that the water supply had not made use of all of the resources put at its disposal through credit. His "crowning piece of evidence" was the amount of 7,500,000 of the total of 100,000,000 dinars which had been approved between 1935 and 1939. The president of the municipality and certain council members noted that the problem was not in new investments that would bring about expansion, but in the poorly-conducted management of the existing capacities.<sup>64</sup> It is telling that after the fall of the municipal administration headed by Ilić, engineer Petrović was elected as a city council member in the new administration.<sup>65</sup> This episode illustrates the heated political atmosphere in the society of the Kingdom of Yugoslavia, the intrusion of politics into expert areas, and the extent of the politicization of all issues. This atmosphere undoubtedly silenced the voices of experts and stopped the process of modernisation.

Here it is necessary to point out the character of Vlada Ilić and the time during which he managed the Municipality of the City of Belgrade. As a rich industrialist, he came to the head of the Municipality of the City of Belgrade in 1935. He stayed in this position until 1939, which is one of the longest terms of office in the interwar period. This period endured in memory as the golden age of the Yugoslav capital, during which many projects were started and completed. We can conclude from this that there was a certain continuity to the city management during this time, as such a continuity would be a necessary factor in facilitating the implementation of great projects. In addition, the city was headed by a man of great energy, capable and ready to face even the most complex issues. This raises the question of how it was possible that no investments were made in the water supply during his term, a fact that resulted in losing the advantage in the race to establish a regular water supply and eventually led to the occurrence of new shortages. Here it can be hypothesized that, because of previous enormous investments in the water supply, the municipality's focus was on other more acute issues. For example, a lot was done during this period regarding the improvement of healthcare for Belgraders. Several capital buildings and other constructions were also completed, such as the Belgrade Fair, the Bridge of King Peter II, etc.<sup>66</sup> Politically speaking, the construction of aboveground facilities such as schools and hospitals had a much bigger impact on regular citizens with regard to increasing the reputation of the regime than the money that was spent on water supply infrastructure. This fact should not be disregarded.

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<sup>64</sup> *Правда*, 13.8.1939, 4; *Општинске новине*, 24.8.1939, 383f.

<sup>65</sup> *Општинске новине*, 1.9.1939, 505.

<sup>66</sup> More on the life and work of Vlada Ilić in: Саша Станковић, *Влада Илић: први модерни градоначелник Београда* (Београд: Albion book, 2018).

As soon as 1940, water supply was highlighted as the most difficult issue the city administration was facing.<sup>67</sup> Aware of the state of things in the 1930s, the city government launched an initiative to find a long-term solution for the issue of water supply. Water supply was also an item in the General Urban Plan adopted in 1939. The project was thunderously announced in the media. It was envisioned that a water supply would be built that could supply 900,000 residents with water, as the population of Belgrade was projected to increase in the next 30 years. Such a water supply would cost 300,000,000 dinars. This was an enormous amount of money, which required the government to plan the construction in stages. According to the first projections, it was foreseen that the entire project would be completed in 1966.<sup>68</sup>

Although the Kingdom of Yugoslavia kept outside of the conflict in 1939, World War II brought about a new reality. Economic and political circumstances slowed down or postponed all major infrastructure projects. The city government oriented itself towards solving issues created by the war in Europe, as well as preparing the population for the possibility of entering the conflict. It was under these circumstances that the new expansion of the Belgrade water supply was to take place.

The type of challenge the Belgrade water supply was facing is best described in some cases involving the procurement of new machines and equipment. The city administration had purchased 26 well sets from a German firm in the first half of 1939. They were supposed to arrive by August of the same year. The factory asked for a postponement until October, but the equipment was not delivered even then. The city administration intervened several times. This had no effect, and the equipment did not arrive in Belgrade until the end of January 1940. The late deliveries of contracted goods by German firms nearly became a general trend, which made the city administration opt to try to rely on domestic production as much as possible.<sup>69</sup>

Issues arose with the goods bought from firms in countries that had become occupied by Nazi Germany in the meantime. A call for the procurement of new well digging machines was published in December 1939.<sup>70</sup> The best offer was made by the French company Benoto. The machines were worth 900,000 dinars. The equipment was ordered, but there were complications regarding its delivery due to the fall of France in June of 1940. It was seized during transport through Italy by the local government. After some arbitration, the equipment was delivered to Belgrade in October of 1940.<sup>71</sup> Despite such difficult circumstances, the Belgrade water supply managed to start digging and building a significant number of wells, installing new equipment to expand the capacity of the water supply by 10,000 m<sup>3</sup>.<sup>72</sup> By the beginning of 1941, all of the ordered equipment

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<sup>67</sup> *Време*, 2.10.1940, 7.

<sup>68</sup> *Правда*, 21.9.1936, 10.

<sup>69</sup> *Време*, 26.1.1940, 10.

<sup>70</sup> *БОН*, 7.12.1939, 8.

<sup>71</sup> *Време*, 2.10.1940, 7; Milošević, *Beogradski vodovod*, 82.

<sup>72</sup> Milošević, *Beogradski vodovod*, 82f.

had made it to Belgrade, creating the conditions necessary to continue working. The bombing in April as well as the Nazi occupation would stop the realization of these plans, and the city administration and Belgrade residents would find themselves facing new challenges, which put the battle for water on the back burner.

### Conclusion

From the end of the 19<sup>th</sup> to the first half of the 20<sup>th</sup> century, the municipal government in Belgrade fought a constant battle resulting from accelerated urbanization and the settlement of a large number of new residents. For the most part, the battle took place within the context of a poor economic situation and an acute lack of sufficient funding in the municipal treasury. This was the main factor that dictated the intensity of the construction of the water supply infrastructure during this period. During almost forty-nine years and through different forms of government, we can clearly see the continuity of a poor and sluggish administration in the analysis of the planning, construction, and maintenance of the water supply. The administration was also influenced by and dependent on political movements in great measure. Continued and deep politicization manifested numerous times during this process, so much so that it endangered the integrity of experts and influenced the types of decisions that were made, as well as the dynamics of how those decisions would be made and implemented. The price of water was kept low as a tool to keep the social peace throughout the period analyzed. This made it impossible to accumulate the more significant financial resources necessary for the further improvement of services. All of the above were negative path dependency factors that generally determined and hindered the government's struggle to provide the citizens of Belgrade with an adequate water supply system.

As expected, when the Belgrade municipality was headed by experts who had a clear plan concerning how and in what direction the water supply should develop, there was accelerated and timely development. It was only during this time that Belgraders had more water than they needed. Almost as a rule, after each expansion in capacity it was only a few years later that Belgraders were faced with dry taps. Inadequate sewer, public transport, lighting, and roads were equally important issues that burdened and hobbled Belgrade's development. Due to unstable finances the city government had to juggle priorities, weighing which hole would be the first to be patched up. Politically speaking, fortifying the water supply was not as attractive as constructing hospitals, schools, and other infrastructural facilities. In a society that was politically unstable and almost constantly in the midst of an election campaign, this factor also caused disregard for the issue of regular water supply, with solutions only being presented when the situation had already become dire. Taking this into consideration, it should not be surprising that the war reparations material received from Germany in the interwar period was the flywheel for the construction and expansion of the Belgrade water supply. Parallel to urbanization, the formation of a citizenry was occurring

in Belgrade. People who came from rural areas and who were not familiar with the living conditions in urban circumstances additionally burdened the water supply infrastructure. During the interwar period, the practice of unconscionable water consumption was continued. This shows that the regime did not pay enough attention to the education of citizenry in this respect.

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