



NOTE ON RESOURCES DEALING WITH THE MANAGEMENT OF THE WATER SECTOR IN SPAIN IN THE FACE OF THE COVID-19 CRISIS

Background

This note is written with the objective of sharing information in international fora in which DG Water participates. The purpose of the note is to provide useful information on the measures taken by the Government in relation to water supply and wastewater treatment and its management in the face of the COVID-19 crisis. Before any further action, let us share a very special memory to those who are no longer with us after this disease.

INFORMATION ON WATER MEASURES

Declaration of the Alarm State

Following the shift by the World Health Organization (WHO) on 11 March 2020 from the emergency public health situation caused by COVID-19 to international pandemic, and as a result of the rapid advance of contagion amongst the population, the Government declared, on 14 March 2020, the state of alarm throughout the whole national territory. This declaration was made under the current legal provisions in force and does not undermine any fundamental right.

Royal Decree 463/2020 of 14 March, by which the state of alarm is declared, allows the Government to take all measures for the management of the health crisis situation caused by COVID-19, including the restrictions to the free movement of persons, reinforces the health system, and it ensures the supply of certain goods and services, amongst other provisions.

The state of alarm was initially established for a fortnight of calendar, having been extended twice by agreement of the Parliament, until May 10th by their corresponding Royal Decrees, which also amend RD 465/2020 for some measures.

In the light of the provisions issued, various ministerial orders and new rules have been developed, which complement the previous ones in order to strengthen action against the spread of the virus in the health, labour, social and economic fields.

Critical infrastructures and essential services related to water supply and sanitation.

The declaration of the alarm state establishes the obligation of critical operators of essential services to take the necessary measures to ensure the provision of their corresponding essential services. This requirement shall also apply to those suppliers which, not being critical in nature, are essential to ensure the supply of those essential services. Water supply, treatment, transport, purification and sanitation services have been considered and ruled as essential.



Law 8/2011 of 28 April establishes measures for the protection of critical infrastructures and defines an essential service as the service necessary for the maintenance of basic social functions, health, security, social and economic welfare of citizens, or the effective functioning of State Institutions and Public Administrations. The strategic sector is composed of each of the differentiated areas within labor, economic and productive activities, which provides an essential service. Strategic structures are the physical and information technology facilities, networks, systems and equipment on which the operation of essential services rests. Strategic infrastructures take on critical quality when their operation is indispensable and does not allow for alternative solutions, so their disruption or destruction would have a serious impact on essential services, and their operation is carried out by critical operators. **Water is considered a strategic sector in that law and, therefore, the subject of the set of protection measures corresponding to its critical infrastructures.**

Water supply, treatment, transport, purification and sanitation have been considered essential services during the state of alarm. As such, they are exempt from the application of mobility reduction measures in the context of the fight against COVID-19. This has been ruled according to the list of essential services of Royal Decree-Law 10/2020, of 29 March, which regulates a recoverable remuneration permit for workers who do not provide essential services.

The Ministry of Health Order SND/274/2020 of 22 March lays down measures in relation to water drinking supply and wastewater treatment services, as a recognition as essential services. The measures are aimed at: 1) To ensure access to basic and indispensable consumables in order to perform the service under the conditions required by water and sanitary legislation applicable to these services; 2) To allow essential services for the disposal of their own stocks in order to be able to provide their activity with a guarantee and uninterrupted process avoiding the generation of public health problems. 3) To allow essential services for the supply of hygienic products and materials necessary to provide the service.

Measures taken by the Ministry for the Ecological Transition and the Demographic Challenge

Given the consideration of the water essential services by Royal Decree-Law 10/2020, of 29 March, it also provides for the prohibition of suspending the supply of water to domestic consumers in their homes, even if this possibility is included in their signed contracts. Furthermore, the time elapsed during the alarm state shall not be calculated for the purposes of the time limits of the previously initiated water suspension procedures.

In the field of the provision of public services by the Ministry, in the context of the measures taken to contain the public health emergency caused by COVID-19, it is that of limiting the provision of face-to-face services to the essentials, whenever possible by the non-face-to-face mode of work. Thus, as far as possible, working physical meetings will be avoided, with the suspension of those involving travel to another locality. The use of videoconferencing will also be encouraged.



Notwithstanding the above, the Ministry shall identify their critical services and ensure that they remain operational within the margins of compliance with the criteria to ensure public health.

Critical services in the field of the Directorate-General for Water and the Hydrographic Confederations.

The Directorate-General for Water, as well as the Hydrographic Confederations (River Basin Districts) have established their corresponding contingency plans in order to provide adequate provision of their critical services. In this sense, they have been considered as critical services: **automatic water information systems, laboratories and monitoring and policy of the water domain and the operation and maintenance of hydraulic infrastructures (including dams, canals, pipes and any other infrastructure that serves for the storage, transport and distribution of water, as well as the infrastructures necessary for its operation).** In the administrative field, cash and payment services, and communications (ITCs) and security services are maintained.

The Hydrographic Confederations have developed their own contingency plans, which establish a series of measures consisting of ensuring the proper functioning of critical services without compromising the health of persons who access their operation in person. Physical access of staff will be made through a shift system, maintaining the stipulated social distance and with adequate health protection systems.

Regarding the suspension of the deadlines of the projects under implementation and other administrative procedures, such suspensions shall be applied with conformity by both parties and always following the safety standards and criteria to prevent the spread of the virus. For example, in the case of the process of public participation of the phase corresponding to the Important Issues Schemes of the hydrological planning cycle 2021-2027, the six-month period, which began on 25 January, has been suspended. However, and for the duration of the state of alarm, in the face of the impossibility of organizing the territorial and sectoral meetings scheduled in the publicoparticipation process for this phase, a set of virtual seminars with free access have been organized through the Ministry's website, requiring only a prior registration.. In addition, both the planning office of the Hydrographic Confederations and the Directorate-General of Water itself will continue to receive comments and proposals from all stakeholders and the general public through the emails enabled for this purpose.

The value of cooperation to strengthen responses

From the Directorate-General for Water we encourage to strengthen the exchange of experiences through **cooperation**, using the **mechanisms offered by the UfM, of the tools of the IME, and taking advantage of the capacity of MEMBO** for the exchange of experiences at the basin level.

Cooperation initiatives should aim at strengthening governance within Integrated Water Resources Management as a framework for action to achieve SDG6 under the 2030 Agenda. Cooperation should also serve as a platform in order to exchange good practices for **sectoral, administrative and public-private coordination, which has been proved as a main pillar for effectively facing the crisis.**



Measures in the water supply and wastewater sector

Water companies have developed their contingency plans as well as taken specific measures in the face of the alarm state. Among the implemented actions are: **the closure of offices of public service, online availability for consultations and complaints, adoption of security measures for the protection of workers, guarantee of continuity in services and in general any other measures for preventing the spread of the virus.**

The Spanish Association of Water Supply and Sanitation ([AEAS](#)) and the Spanish Association of Water Service Management Companies ([AGA](#)) have developed the document "Basis for a contingency plan". Other there is also worth mentioning the documents by AEAS Specialized Working Commissions on the "Proposal of measures to be taken in drinking water facilities" and " Proposal of measures to be taken in wastewater facilities"

Some regional authorities have sent briefs to the companies responsible for the management and operation of the treatment plants to implement their contingency plans with the aim of ensuring both the safety of workers and the operation of the service. In this regard, organizational measures have been taken to maintain incident-free operation and to take extreme precautions for operating personnel. To this end, duplication in shifts has been eliminated and visits by anyone outside the plant's work have been cancelled, in addition to the measures involving the use of masks and gloves, a regular equipment for workers.

Some examples: [Contingency plan of the water company of the Community of Madrid Canal de Isabel II](#); [procedure for virtual communication of incidents of the Bilbao Water Consortium – Bizkaia](#)

The Wastewater Treatment sector and Science are joining efforts in order to provide insights on virus survival in wastewater and assess risk associated with this. Here we include some preliminary results obtained with a limited sampling over three months:

- Genetic material has been found in a large number of samples, especially in cities with higher numbers of contagions
- Due to the complexity of the sampling itself, the results are mainly qualitative and non-quantitative at this moment
- After secondary treatment, genetic material has been detected in a very low number of samples
- In samples taken after tertiary treatment, no trace of genetic material has been found, so it can be inferred that there is no risk in the use of reclaimed waters for reuse, at least with the data obtained so far.

Resuming, the nature of COVID 19 makes it easily degradable in wastewater treatment systems unlike other viruses that are more resilient.



Measures related to the transport network for the water sector

A recent report prepared by the Joint Research Centre of the European Commission has carried out a preliminary analysis on the safety of the supply of critical chemicals needed for the functioning of drinking water and sanitation services during the COVID-19 crisis. This report indicates that, although it has been detected, there is no evidence that the COVID-19 virus has been transmitted through sewage systems with or without wastewater treatment. In addition, there is no evidence that workers in the wastewater treatment facilities have suffered from severe acute respiratory syndrome (SARS), which is caused by another type of coronavirus that caused a large outbreak of acute respiratory diseases in 2003.

The report performs a rapid analysis of the risks of failure in the operation of water treatment and wastewater plants, warning of a high risk of failure of chemicals supply for the operation of plants, due to restrictions to the road transport, which is the majority form of transport in the European Union.

The report therefore concludes that the chemicals and reactive substances necessary for water treatment should be considered as priority products for transport. The European Commission has published the Communication “on the implementation of the Green Lanes under the Guidelines for border management measures to protect health and ensure the availability of goods and essential services (2020/C 96 I/01)” The aim is to temporarily suspend all types of road access restrictions existing in the UE territory (weekend transit, nightly, sectoral prohibitions, etc.) for the transport of goods by road and for the necessary free movement of transport workers. Transport workers, irrespective of their nationality and place of residence, must be able to cross internal borders. Any restrictions, such as those imposed on the displacement and compulsory quarantine of transport workers, should be removed, without prejudice to the adoption of proportionate and specifically adapted measures by the competent authorities to minimize the risk of contagion.

The Ministry of Transport, Mobility and Urban Agenda has adopted the corresponding resolution in the national territory regarding the flexibility of the driving and rest times of our carriers and the possibility of them taking the normal weekly rest in the vehicle for the duration of the current alarm state. This resolution is in the way of the guidelines established in this regard by the European Union.

ANNEX

Information and links of interest on COVID-19 in water

According to the information produced so far there is no evidence that human coronaviruses are present in waterbodies (both surface and underground). In terms of water supply, WHO considers that the presence of COVID-19 has not been detected in the drinking water supply and with current knowledge, the risk to supply is low. One of the characteristics of the virus is its coating by a fat, fragile membrane. This makes this virus less stable and that oxidizers like chlorine prove highly effective for deactivation. In addition, high temperatures, low pH, sunlight and common disinfectants facilitate the death of this virus.



Therefore, it is considered that current water treatments such as filtration and disinfection should deactivate COVID-19. For effective centralized disinfection, there should be a residual concentration of free chlorine of 0.5 mg/l after at least 30 minutes of contact time in pH < 8.0. A chlorine residue must be maintained throughout the distribution system. In places where centralized treatment and safe water supplies are not available through pipes, a number of domestic water treatment technologies are effective in removing or destroying viruses, including boiling, high-performance ultra and nanomembrane filters, solar irradiation, and in non-cloud water, UV irradiation and proper free chlorine dosing.

As for the temperature for the survival of the COVID-19 virus in drinking water, waste water and surfaces, whether persistence in drinking water is possible, there is no current evidence that human coronaviruses are present in surface or groundwater sources or transmitted through contaminated drinking water. While there is no evidence to date of the survival of the COVID-19 virus in water or wastewater, the virus is likely to become significantly faster inactivated than human enteric viruses not wrapped with water-known transmission (e.g. adenovirus, norovirus, rotavirus, and hepatitis A). For example, one study found that human coronavirus survived only 2 days in dechlorinated tap water and hospital wastewater at 20°C. Other studies agree that human coronavirus had a 99.9% death from 2 days to 2 weeks at 23°C and 25°C respectively.

As for the permanence of the virus in the facilities, a recent review of the survival of human coronaviruses on surfaces found great variability, ranging from 2 hours to 9-12 days. Survival time depends on a number of factors, such as surface type, temperature, relative humidity, and the stress of the specific virus. This review also found effective inactivation (within 1 min) using common disinfectants such as 70% ethanol and sodium hypochlorite. All this on the premise of maintaining and extreme good hygiene practices.

With regard to safe wastewater management, as we have seen above, there is no evidence to date that the COVID-19 virus has been transmitted through sewage systems, with or without wastewater treatment. In addition, there is no evidence that wastewater and wastewater treatment workers contracted SARS, another type of coronavirus that caused a large outbreak of acute respiratory disease in 2003.

As part of an integrated public health policy, each stage of wastewater treatment (with its retention and dilution time) should reduce the potential risk. Best practices should be followed to protect the occupational health of workers in sanitation treatment facilities. Workers should wear appropriate personal protective equipment, including protective clothing, gloves, boots, goggles or face protector, mask, often perform hand hygiene, and avoid touching the eyes, nose and mouth with unwashed hands.

The [iAgua](#) news website shows up-to-date information on the evolution of the virus in the water sector.

[General information on the evolution of COVID-19 in Spain and campaign #EsteVirusLoParamosUnidos.](#)

The daily update of the situation in Spain is at <https://covid19.isciii.es/>. The Carlos III Institute of Health, an institution under the Ministry of Science and Innovation and



specialized in public health surveillance, conducts a daily [epidemiological report](#) on the disease.

The Ministry of Health, Consumer Affairs and Social Welfare started the #EsteVirusLoParamosUnidos campaign. It is a campaign of dissemination and information against the coronavirus, with motivating phrases released to the citizens, such as "We stop it every time you wash your hands"; "We stop it when you meet by videoconference"; "We stop it if you stay home"; "We stop it if you travel only when it's essential"; "We stop it if you avoid crowded places"; "We stop it when you don't share false information"; "We stop it if you help and listen to our professionals" or "We stop it when you trust that we're going to get through this"...