

Announcement on the prevention of the COVID-19 for the Johkasou business workers in Japan January, 2021



環境省

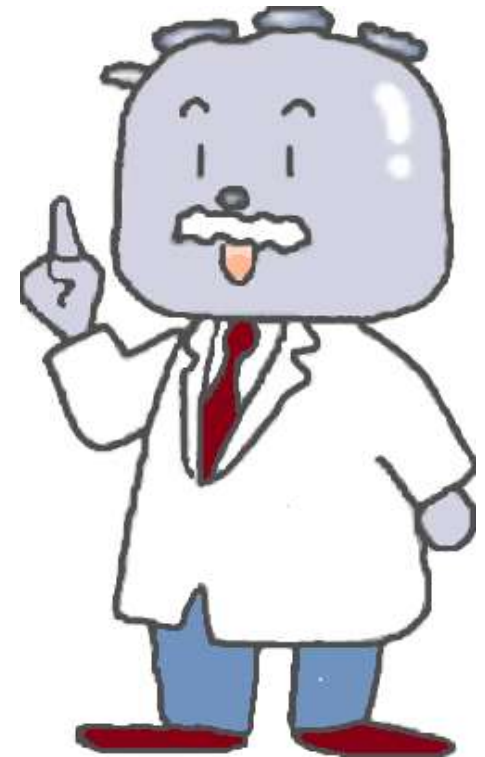
Ministry of the Environment
Government of Japan

Office for Promotion of Johkasou
Waste Management Division
Environmental Regeneration and Material Cycles Bureau
Ministry of the Environment
Government of JAPAN

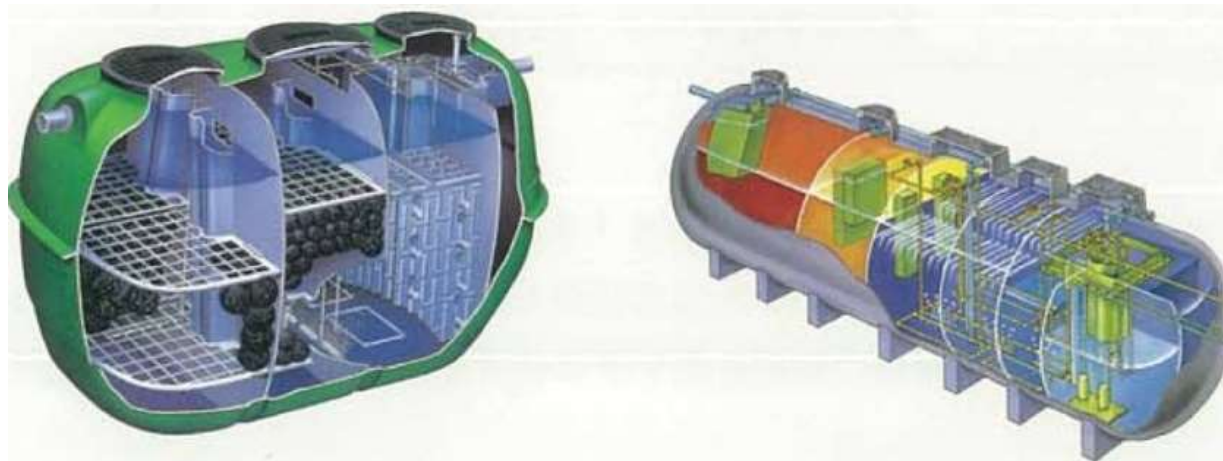
Index

1. Properties of high performance and importance of maintenance works for Johkasou
2. Legal Systems for maintenance works and its detail for Johkasou
3. Typical schedule and initial countermeasures by MOEJ for Johkasou technicians against COVID-19
4. Outline of “Providing knowledge on COVID-19” dated 10th April, 2020

Dr.Johkasou



1. Properties of high performance and importance of maintenance works for Johkasou



- The performance of Johkasou is equivalent to that of sewage treatment plants.
 - BOD \leq 20mg/L, 10mg/L, depending on the size and treatment process
 - T-N \leq (NIL) 20mg/L, 10mg/L, depending on the size and treatment process
 - T-P \leq (NIL) 1mg/L, depending on the size and treatment process
- Its performance is ensured by periodic maintenance works, similar to sewage treatment plants.
- Periodic maintenance works for Johkasou is regulated by Johkasou Act.

2. Legal Systems for maintenance works and its detail for Johkasou **Outline of Johkaou Act**

History of Johkasou Act

1960 to around 1980	With increasing population of flush toilet, rapid installation of tandoku (old type) johkasou to treat black water only
1983	Johkasou Act enacted (legislation introduced by a Diet member, came into force in 1985)
1987	National subsidy program for gappei (current type) johkasou (to treat both black and gray water) established
2000	Revised: New installation of tandoku-shori johkasou systems basically prohibited
2005	Revised: Stricter water quality management systems introduced, defining water quality conservation targets
2019	Revised: Action for conversion from tandoku johkasou (old type) to gappei johkasou (current type) and for development of data base system strengthened

During high economic growth period, water pollution accelerated.

To promote the spread of gappei johkasou and the replacement of tandoku johkasou systems

Purpose of Johkasou Act

Promotion of human waste and gray water treatment by Johkasou for;

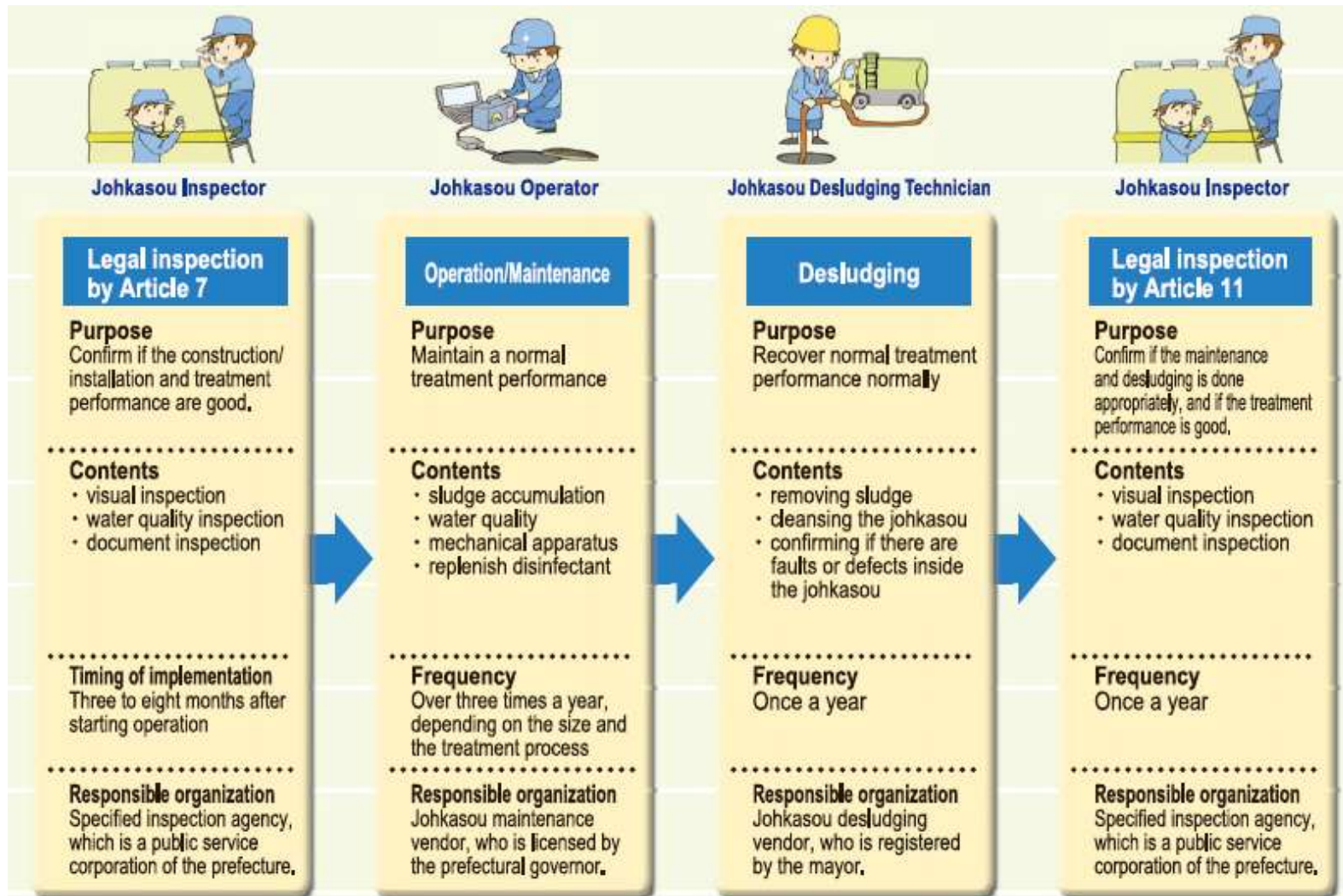
- Conservation of water quality in public water area, preservation of the living environment and improvement of public health

⇒Articles in the Law

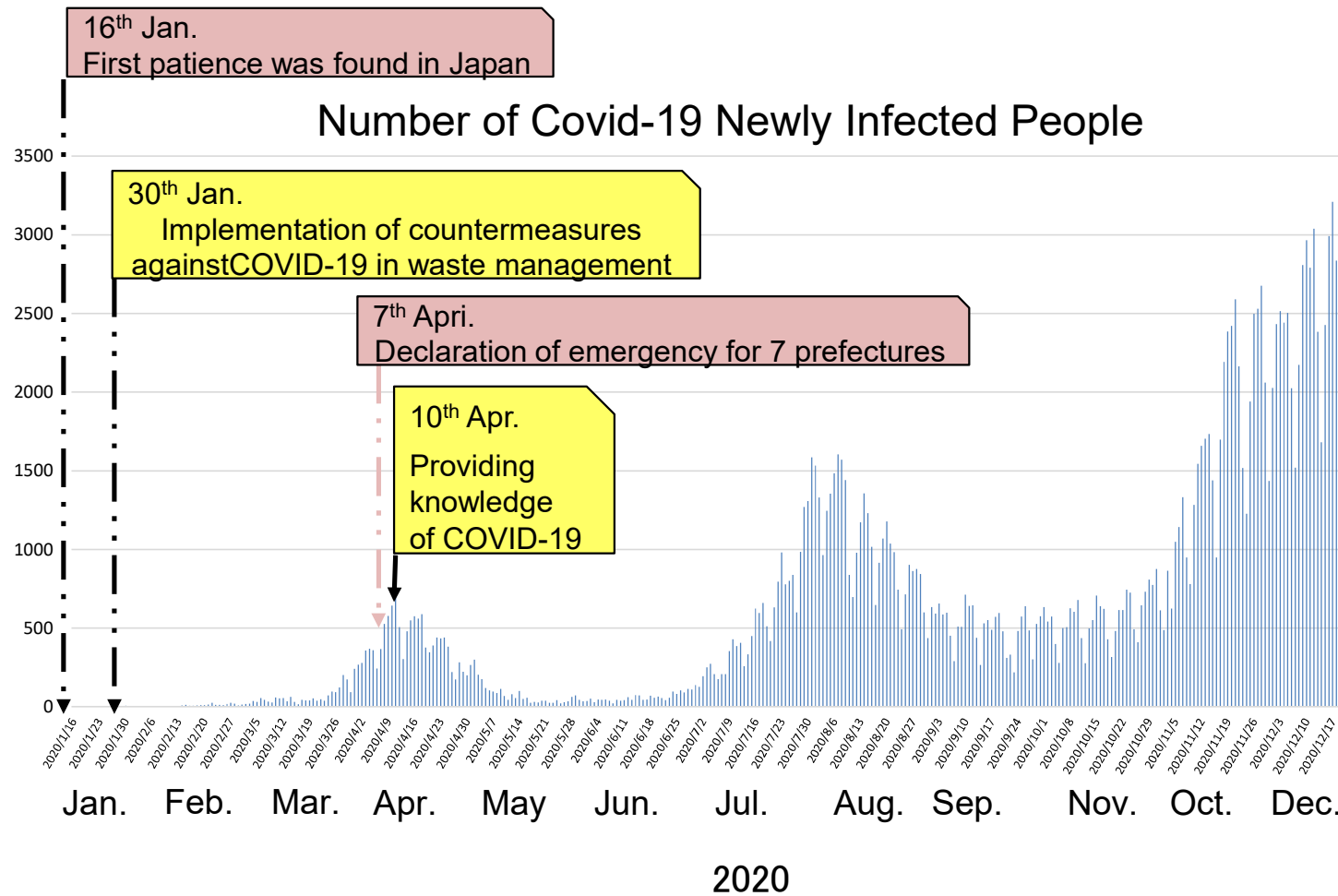
- ①Johkasou installation (※related to “Building Standard Law”)
- ②**Operation/maintenance** of Johkasou
- ③**Approval of Johkasou models**
- ④**Johkasou business** for Installation and Operation/Maintenance
- ⑤**Nationally qualified “Johkasou technicians”**
- ⑥Miscellaneous and penalties

2. Legal Systems for maintenance works and its detail for Johkasou

For periodical inspections, maintenance and desludging at site



3. Typical schedule and initial countermeasures by MOEJ for Johkasou technicians against COVID-19



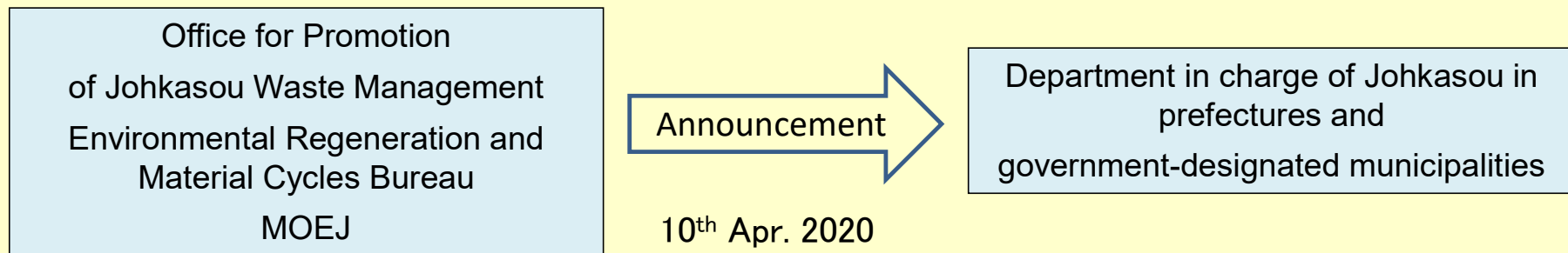
* Processing NHK data into bar graph

4. Detail of “Providing knowledge on COVID-19” dated 10th April, 2020

■ Purpose

For Johkasou site technicians such as inspection, operation and maintenance and desludging works against COVID-19, Ministry of the Environment provides information of similar viruses in water, the effects of disinfection, and the safety and health management of technicians.

■ Route



4. Outline of “Providing knowledge on COVID-19” dated 10th April, 2020

■ Outline of contents in above captioned announce, especially for Johkasou technical works.

1. Basic information of COVID-19

< General information of coronavirus and COVID-19 >

- ✓ Seven (7) types of coronavirus which infect humans have been found so far.
- ✓ In 7 types, 4 types causes common cold and it' is almost mild, and remaining 3 are SARS which was infected on 2002, MARS on 2012 and COVID-19 (SARS-CoV2) on 2019.
- ✓ Generally, Coronavirus is known to lose its infectivity due to alcohol (70%) disinfection, etc.

< Transmission route >

- ✓ Droplet infection and contact infection via hand-rail, door-knob, switch bottom and so-on which infected person touches.

< Basic infection prevention measures against contact infection >

- ✓ Washing hands with soap, disinfecting with alcohol for hand.

4. Outline of “Providing knowledge on COVID-19” dated 10th April, 2020 (Cont.)

2. Countermeasures against COVID-19, with referring the announcement of sewage section in MLIT

< Virus inactivation in the sewage treatment process >

- ✓ SARS coronavirus is inactivated in sewage at pH 7 to 8 in around 6 hours.
- ✓ Therefore, It is considered that the same type of new coronavirus can be sufficiently inactivated in the process of sewage treatment (pH 7 to 8), which requires the hydraulic retention time around 8 hours.
- ✓ The hydraulic retention time of Johkasou is around 36 to 72 hours (1.5 to 3 days).

< Effect of chlorination >

- ✓ SARS coronavirus has been found to be less infectious and more likely to die than E. coli when chlorinated.
- ✓ Therefore, It is considered that it's possible to reduce the risk of infection by applying chlorine after biological treatment for the purpose of reducing the number of coliform bacteria sufficiently.

4. Outline of “Providing knowledge on COVID-19” dated 10th April, 2020 (Cont.)

3. Latest information of COVID-19 with referring WHO dated 3rd March, 2020

- ✓ There are no cases of other coronaviruses with similar properties present in surface water or groundwater as water
- ✓ There are no cases of infection through drinking water.
- ✓ It is not so clear how long COVID-19 virus survives in surface water, However, it appears to behave other coronaviruses.

4. Outline of “Providing knowledge on COVID-19” dated 10th April, 2020 (Cont.)

4. General information for preventing the contact infection of COVID-19, with referring the training manual for Johkasou maintenance technician.

< Blocking the infection route for Johkasou maintenance and desludging works >

- ✓ The basic principle of infectious disease prevention is to block the transmission route.
- ✓ Insufficient blocking of transmission routes can infect workers if pathogens are present in Johkasou.
- ✓ A typical medium for transmitting pathogens is "fingers".
- ✓ Therefore, as a method of blocking contact infection routes in Johkasou maintenance and desludging works, Washing hands and fingers with soap etc. is a basic, effective and important method to block the infection route.
- ✓ Regarding daily methods at working site that can be used by technicians, below items shall be implemented,
 - It is important to minimize the exposure of the human body during work to block the transmission route. Therefore, wear, cap, glove, shoes, mask, goggles.
 - Cleaning and disinfection for above after use. When washing, use a dedicated washing machine and keep it out of contact with other clothes.
 - For disinfecting hands, spray-type disinfectant solutions and disinfectant supplies such as wet wipes are convenient to carry on. If technicians cannot clean or disinfect their fingers, they can use disposable gloves to block them from the source of infection.

THANK YOU FOR YOUR KIND ATTENTION.

