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## Study on the Usage Status of Public Enshrinement Facilities and Public Natural Burial Sites the User of Public Cremation Facilities in Gyeonggi-do Using the E-Haneul Funeral Information System

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### **Abstract**

*We presented the research analysis results and policy recommendations for this study as follows. First, we findings it was analyzed that the cremation number in public cremation facilities increased at a high ratio of 7.5% per year on average. Therefore, policies to expand the supply of public cremation facilities in preparation for the continuous increase in cremation demand must be implemented as soon as possible. Second, in this study we users of public enshrinement facilities accounted for 21.0% of total cremation number, and it was analyzed that the ratio increased at an annual average of 9.0%. Therefore, as the supply reaches its limit within 1 year in Suwon City and within 2 years in Seongnam City, policies to expand the supply of public enshrinement facilities in Suwon City and Seongnam City must be implemented urgently. Third, it was analyzed through we research users of public natural burial sites accounted for a very low percentage of 1.6% of total cremation number. Therefore, policies such as creating a pleasant environment for public natural burial sites, improving facilities, and public relations activities to promote the use of public natural burial sites at the government-wide should be preceded.*

**Keywords:** *E-Haneul Funeral Information System, Funeral Facilities, Cremation, Enshrinement, Natural Burial Sites.*

### **1. Introduction**

In Korea, ahead of entering a super-aged society in 2025, the deaths number due to the aging population is increasing rapidly every year. Accordingly, the cremation number in public cremation facilities using the E-Haneul Funeral Information System, an online cremation reservation system established by the Ministry of Health and Welfare to operate all public cremation facilities nationwide as a unified reservation system[1],

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is increasing every year.

The increase in the cremation number is also increasing the demand of facilities for enshrining cremated ashes in public enshrinement facilities or public natural burial sites. The current 「Act on Funeral Services, ETC」 (Article 2) defines cremation facilities, enshrinement facilities, and natural burial sites as funeral facilities[2]. Therefore, the purpose of this study is to make policy proposals to enhance the convenience of citizens and the vitalization of facility use through research and analysis on the use of public cremation facilities, public enshrinement facilities, and public natural burial sites using the E-Haneul Funeral Information System. And among the 317,680 deaths nationwide in 2021, the deaths number in Gyeonggi-do is 67,399, accounting for 21.2%, showing the highest mortality ratio[3]. Therefore, this study selected Gyeonggi-do, which has the highest ratio of deaths among local governments in Korea, as the research subject.

## 2. Current Status of Operation by Public Funeral Facilities in Gyeonggi-do

As shown in Table 1, the current status of public funeral facilities such as public cremation facilities, public enshrinement facilities, and public natural burial sites located in Gyeonggi-do[4, 5, 6, 7]. There are four public cremation facilities installed and operated in Suwon City, Seongnam City, Yongin City and Hwaseong City. In addition, the size of the cremation furnaces 48 sets in total, Seongnam City has the largest with 15, followed by Hwaseong City with 13, Yongin City with 11, and Suwon City with 9. Therefore, the size of cremation furnaces in Gyeonggi-do is insufficient compared to the deaths. The enshrinement(supply) capacity of public enshrinement facilities installed and operated by Suwon City, Seongnam City, Yongin City, and Hwaseong City is a total of 156,393. Among these, a total of 77,585 were enshrined in public enshrinement facilities, and the enshrinement numbers that can be enshrined in the future is 78,808. The ratio of enshrinement number by public enshrinement facility was 98.3% in Suwon City and 82.2% in Seongnam City, indicating an urgent need to expand public enshrinement facilities. The burial(supply) capacity of public public nature burial sites installed and operated by Suwon City, Yongin City and Hwaseong City is a total of 38,659. Among these a total of 5,405 were buried in public natural burial sites, and the number of possible burials in the future is 33,254. The ratio of the burial number compared to the burial(supply) capacity of public nature burial sites is only 14.0%. Therefore, it was analyzed that the usage ratio of public nature burial sites in Gyeonggi-do was very low.

**Table 1. Status of public funeral facilities in Gyeonggi-do(As of December 2021)**

Sort		Unit	Sum total	Suwon City	Seongnam City	Yongin City	Hwaseong City
Public Cremation Facilities	Cremation Facilities	Locations	4	1	1	1	1
	Cremation Furnaces	Set	48	9	15	11	13
Public Enshrinement Facilities	Enshrinement (Supply) Ability【A】	People	156,393	34,763	25,421	48,144	48,065
	Enshrinement Number【B】		77,585	34,169	20,908	15,865	6,643
	Number of Remaining		78,808	594	4,513	32,279	41,422

	Enshrinement【A-B】						
Public Nature Burial Sites	Burial(Supply) Capacity【A】		38,659	6,000	-	6,705	25,954
	Burial Number【B】		5,405	3,434	-	1,448	523
	Number of Remaining Burial【A-B】		33,254	2,566	-	5,257	25,431

### 3. Analysis of Usage Status by Public Funeral Facilities in Gyeonggi-do

#### 3.1 Usage Status of Public Funeral Facilities in Suwon City

As shown in Figure 1, during the period from 2015 to 2021, the current status of users of public cremation facilities, public enshrinement facilities, and public natural burial sites in Suwon City using the E-Haneul Funeral information system[8]. It was analyzed that the cremation number in public cremation facilities increased by 1,975(20.5%) from 9,653 in 2015 to 11,628 in 2021, an annual average increase of 3.4% compared to 2015. The users number who placed cremated ashes in public cremation facilities increased by 277(11.9%) from 2,335 in 2015 to 2,612 in 2021, an annual average increase of 2.0% compared to 2015. It was analyzed that the users number buried in public natural burial sites increased by 230(98.7%) from 233 in 2015 to 463 in 2021, a significant increase of 16.5% per year compared to 2015. Therefore, 24.3% of total cremation number were enshrined in public enshrinement facilities, and 3.4% were enshrined in public enshrinement facilities, and the usage ratio of public enshrinement facilities was very low. On the other hand, it was analyzed that the increase ratio in the users number of public natural buria sites increased significantly.

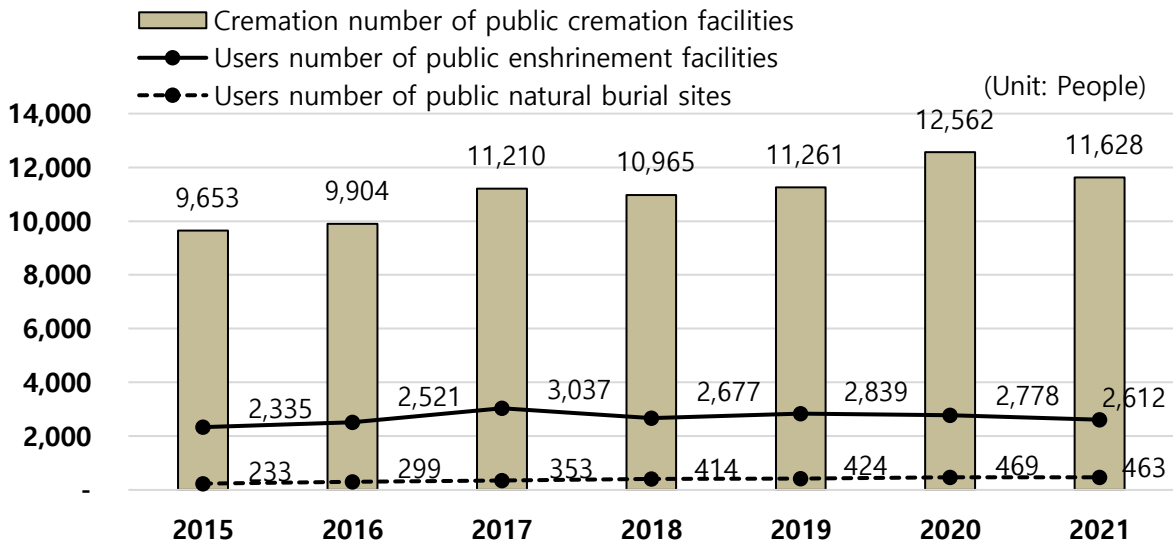


Figure 1. Usage status by public funeral facilities in Suwon City

### 3.2 Usage Status of Public Funeral Facilities in Seongnam City

As shown in Figure 2, during the period from 2015 to 2021, the current status of users of public cremation facilities, public enshrinement facilities, and public natural burial sites in Seongnam City using the E-Haneul Funeral information system[9]. It was analyzed that the cremation number in public cremation facilities increased by 3,293(26.9%) from 12,242 in 2015 to 15,535 in 2021, an annual average increase of 4.5% compared to 2015. The users number who placed cremated ashes in public cremation facilities decreased by 95(3.4%) from 2,769 in 2015 to 2,674 in 2021, an annual average decrease of 0.6% compared to 2015. In addition, it was analyzed that among total cremation number, the users number enshrined in public enshrinement facilities accounted for 19.6%. As Seongnam City currently does not have public natural burial sites installed, public natural burial sites should be installed to improve the convenience of citizens through the provision of One Stop Total Funeral Service[10].

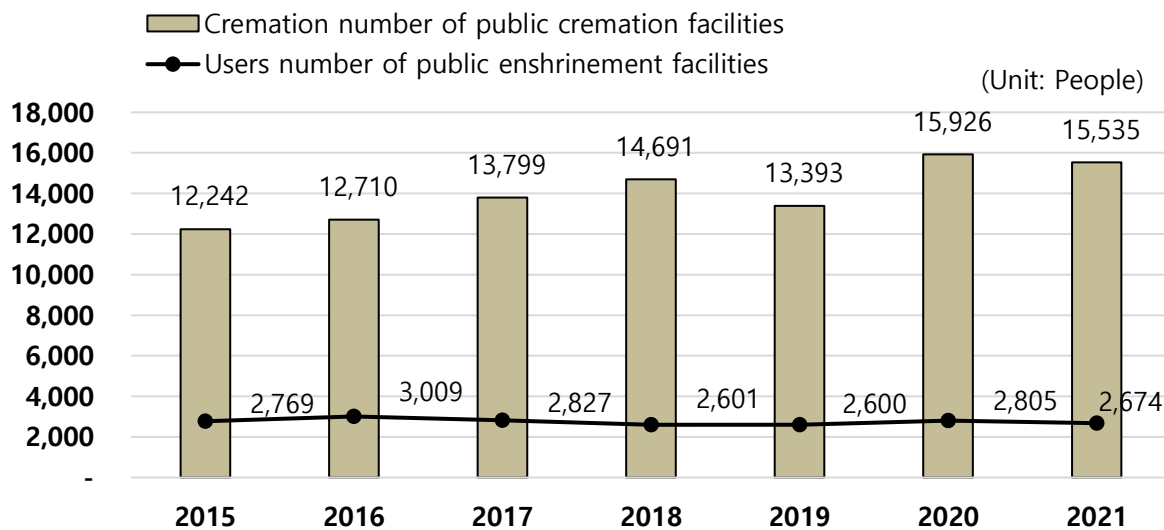


Figure 2. Usage status by public funeral facilities in Seongnam City

### 3.3 Usage Status of Public Funeral Facilities in Yongin City

As shown in Figure 3, during the period from 2015 to 2021, the current status of users of public cremation facilities, public enshrinement facilities, and public natural burial sites in Yongin City using the E-Haneul Funeral information system[11]. It was analyzed that the cremation number in public cremation facilities increased by 2,029(20.6%) from 9,828 in 2015 to 11,857 in 2021, an annual average increase of 3.4% compared to 2015. The users number who placed cremated ashes in public cremation facilities increased by 538(31.1%) from 1,729 in 2015 to 2,267 in 2021, an annual average increase of 5.2% compared to 2015. It was analyzed that the users number buried in public natural burial sites increased by 208(297.1%) from 70 in 2015 to 278 in 2021, a significant increase of 49.5% per year compared to 2015. It was analyzed that the users number buried in public natural burial sites increased by 208(297.1%) from 70 in 2015 to 278 in 2021, a significant increase of 49.5% per year compared to 2015. Therefore, among total cremation number, the users number enshrined in public enshrinement facilities is 17.7%, and the users number enshrined in public natural burial sites is 1.8%, the usage ratio of the public natural burial sites is very low. On the other hand, it was analyzed that the increase ratio in the users number of public natural burial sites increased significantly.

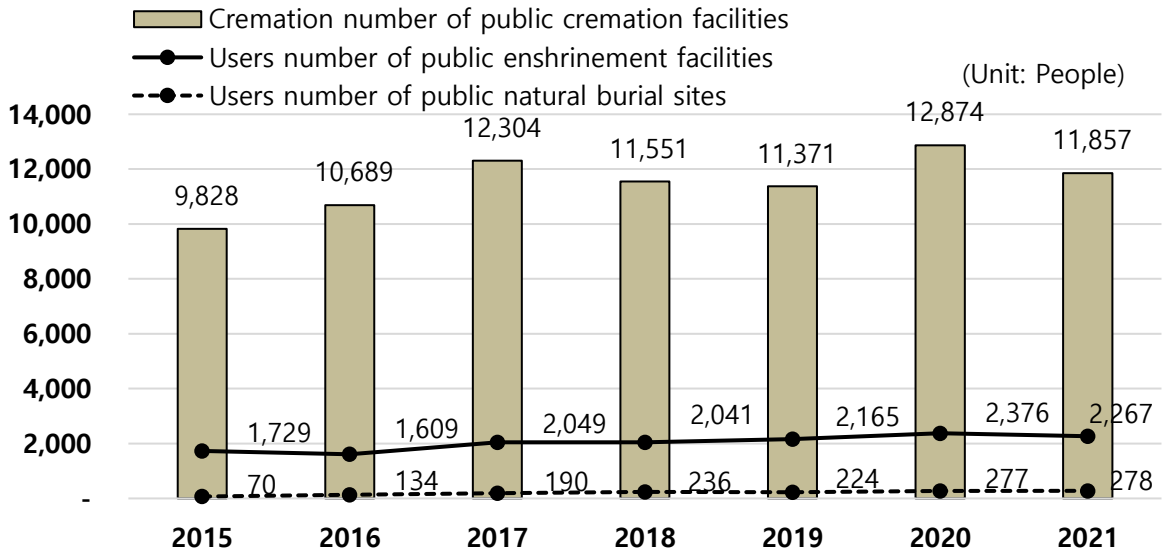


Figure 3. Usage status by public funeral facilities in Yongin City

### 3.4 Usage Status of Public Funeral Facilities in Hwaseong City

As shown in Figure 4, during the period from July 1, 2021 to December 31, 2021 of the public funeral facilities in Hwaseong City, which opened on July 1, 2021, public cremation facilities, public enshrinement facilities, and public natural burial sites using the E-Haneul Funeral information system the user status [12]. Among the total cremation number in public cremation facilities, the users number enshrined in public cremation facilities was 2,972, accounting for 42.3% of the total cremation number, and the usage ratio was analyzed to be very high. In addition, the users number who were buried in public natural burial sites was 261, which was analyzed to be 3.7% of the total cremations number. Therefore, it was analyzed that the users number of public enshrinement facilities was very high, whereas the users number of public natural burial sites was relatively low.

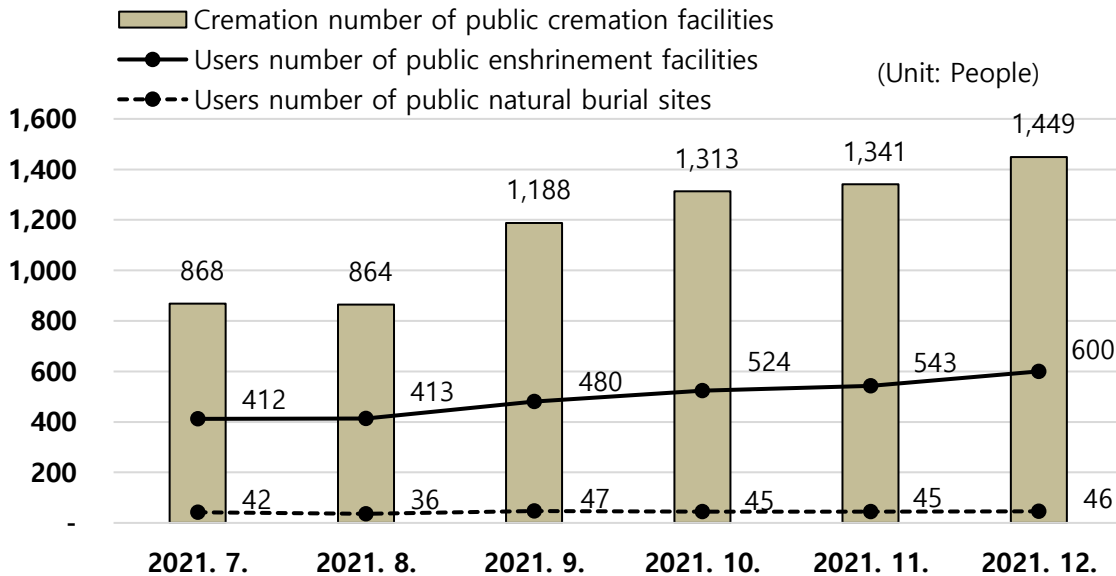


Figure 4. Usage status by public funeral facilities in Hwaseong City

## 4. Comprehensive Analysis Results

### 4.1 Status of Cremation in Public Cremation Facilities

As shown in Figure 5, during the period from 2015 to 2021, the cremation number by year in four public cremation facilities in Gyeonggi-do, including Suwon City, Seongnam City, Yongin City, and Hwaseong City, using the E-Haneul Funeral Information system. During the period from 2015 to 2021, the total cremation number in public cremation facilities was 262,976, with Seongnam City has the highest number of 98,296, followed by Yongin City with 80,474, Suwon City with 77,183, and Hwaseong City with 7,023. It was analyzed that the total cremation number in public cremation facilities increased by 14,320 (45.1%) from 31,723 in 2015 to 46,043 in 2021, an annual average of 7.5% compared to 2015. In addition, it was analyzed that the construction of public cremation facilities(Hwaseong City) led to an increase in demand for public cremation facilities using the E-Haneul Funeral Information System, which had a significant impact on the increase in the total cremation number[13].

Gyeonggi-do has a net inflow of population each year, resulting in a continuous natural population increase such as 22,630 in 2019, 14,943 in 2020, and 8,740 in 2021 [14], and an increase in the deaths number due to an increase in the elderly population, a short supply of public cremation facilities is expected. Therefore, there is an urgent need to prepare countermeasures for this.

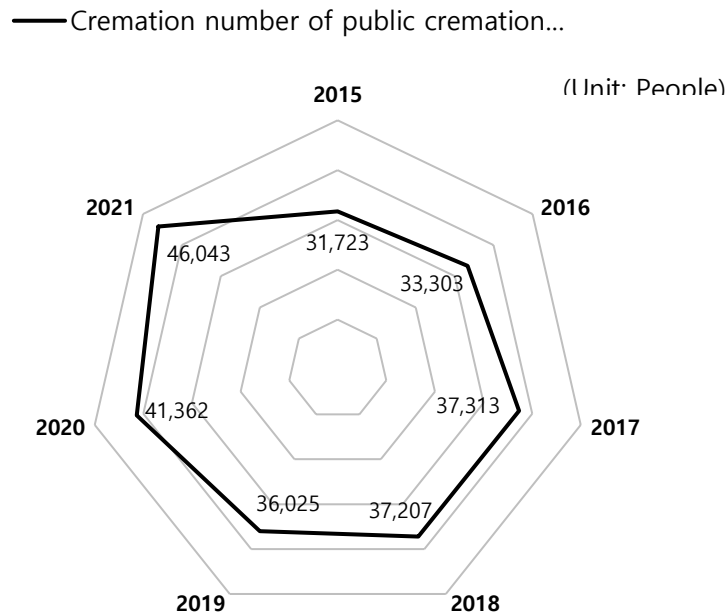


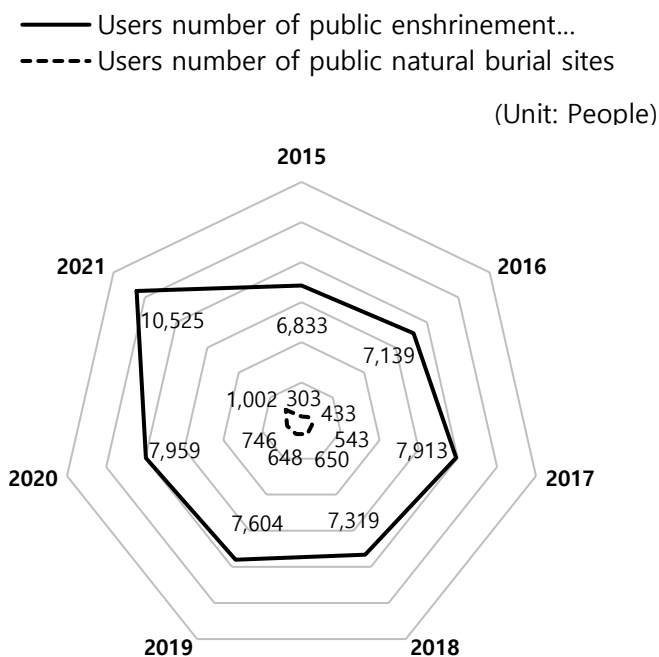
Figure 5. Cremation status of public cremation facilities

### 4.2 Usage Status of Public Enshrinement Facilities and Public Natural Burial Sites

As shown in Figure 6, during the period from 2015 to 2021, the usage status of public enshrinement facilities and public natural burial sites by year among cremation number in four public cremation facilities in Gyeonggi-do, including Suwon City, Seongnam City, Yongin City, and Hwaseong City, using the E-Haneul Funeral Information system. During the period from 2015 to 2021, the total enshrinement number in public enshrinement facilities was 55,292, which was 21.0% of the total cremation number(262,976). In addition, as

for the enshrinement number by public enshrinement facilities, Seongnam City had the highest number of 19,285, followed by Suwon City with 18,799, Yongin City with 14,236, and Hwaseong City with 2,972. It was analyzed that the total enshrinement number in public enshrinement facilities increased by 3,692(54.0%) from 6,833 in 2015 to 10,525 in 2021, an annual average of 9.0% compared to 2015. In addition, the cremation ratio in 2021 reached 92.9% [15] due to the increasing trend in the cremation number using public cremation facilities in Gyeonggi-do and the annual increase in cremation ratio. Therefore, it is expected that the enshrinement number in public enshrinement facilities will continue to increase due to the increase in the cremation number.

During the period from 2015 to 2021, the total users number in public natural burial sites was 4,325, compared to the total cremation number(262,976), it was analyzed as very low at 1.6%. And the users number by public natural burial sites was highest in Suwon City with 2,655, followed by Yongin City with 1,409 and Hwaseong City with 261. It was analyzed that the total users number in public natural burial sites increased by 699 (230.7%) from 303 in 2015 to 1,002 in 2021, an annual average of 38.4% compared to 2015. In addition, as a result of the continuous increase in demand for cremation and the 2021 social survey results by the Statistical Korea, it was found that 33.0% preferred the natural burial method after cremation[16]. Accordingly, it is expected that the usage ratio of public natural burial sites will continue to increase in the future.



**Figure 6. Usage status of public enshrinement facilities and public natural burial sites**

## 5. Conclusion

We summarized the research and analysis results of this study and suggested policy suggestions to promote the use of business facilities as follows. First, we findings it was analyzed that the cremation number in public cremation facilities increased at a high ratio of 7.5% per year on average. Therefore, policies to expand the supply of public cremation facilities in preparation for the continuous increase in cremation demand must be implemented as soon as possible in the future. Second, users of public enshrinement facilities accounted for

21.0% of total cremation number, and it was analyzed that the ratio increased at an annual average of 9.0%. In addition, as the cremation number increases due to the an increase in the deaths number, the demand for public enshrinement facilities is expected to increase rapidly every year. Therefore, we presented as Suwon City, which lacks the ability to supply public enshrinement facilities, reaches its limit within one year and Seongnam City within two years, policies to expand the supply of public enshrinement facilities to Suwon City and Seongnam City should be urgently implemented. Third, it was analyzed through we research The users number of public natural burial sites accounted for a very low ratio of 1.6% of the total cremation numbe, and it was analyzed that it rose at a very high rate of 38.4% on average per year. Therefore, although the increase ratio in the users number of public natural burial sites is increasing at the greatest ratio every year, it is analyzed to be sufficient for supply capacity of public natural burial sites because the usage ratio compared to the cremation number is very low and the demand for use is low. However, policies such as creating a pleasant environment for public natural burial sites and improving facilities to increase the usage ratio of public natural burial sites after cremation, and public relations activities to promote the use of public natural burial sites at the government-wide should be preceded.

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