# **Guidelines for Citizen Actions** in Case of Underground Flooding

### **Underground Parking Lot**



- Leave the vehicle immediat ely if even a small amount of water starts to accumulate (do not attempt to move the vehicle).
- Do not enter the undergrou nd parking lot for vehicle insp ection.

#### **Sub-basement and Underground Shopping Mall**



- In case water starts to accumulate even slightly or there is backflow from drains, turn off electricity and evacuate immediately.
- If the water outside is kneehigh or higher, open the door together with others and evacuate quickly.
- Opening the door alone is difficult if the water level is knee-high or higher

### **Underground Stairs**



- Evacuate immediately if even a small amount of water flows in.
- Evacuation becomes difficult when the water reaches ankle height
- Hold onto the handrail while moving.
- Wear sports shoes or go barefoot if necessary for evacuation.

## Guidelines for Citizen Actions for Vehicle Users



### 1. Vehicle Flooding

- Before two-thirds of the tires are submerged, move the vehicle to a safe place.
- When flooding occurs, break the window with the driver's seat headrest metal rod and evacuate.



### 2. Escaping from a Flooded Vehicle

 If you cannot break the window, wait until the water level inside and outside the vehicle is less than 30cm, then evacuate quickly when the door opens.



### 3. Avoid Driving in Heavy Rain

 Move the vehicle to a safe place and wait until the rain subsides.



### 4. Do Not Enter Underground Tunnels

Do not enter if water accumulates inside the tunnel.



### 5. Avoid Crossing Underwater Bridges

- · Detour or wait in a safe place.
- If the vehicle becomes isolated, open the opposite door to escape.

Please note that these action guidelines are based on general situations for each disaster type and may vary in specific circumstances.

Safety is enhanced when following these guidelines together with others.

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Citizens' Action Guidelines by Disaster Type

# Heavy Rain and Flooding





# **Understanding Concentrated Heavy Rain**

### What is Concentrated Heavy Rain?

- The phenomenon where a large amount of rain falls in a narrow area within a short period.
- Criteria for issuing heavy rain warnings.

Heavy Rain Warning	Heavy Rain Advisory		
Expected rainfall of 60 mm or more in 3 hours	Expected rainfall of 90 mm or more in 3 hours		
Expected rainfall of 110 mm or more in 12 hours	Expected rainfall of 180 mm or more in 12 hours		

#### Record-breaking heavy rain in the capital region

Date	August 8, '22
Casualties	7 deaths and 1 missing person
Incident Overview	Maximum 400 mm of rainfall occurred



# **Current Situation and Major Causes**

### Nationwide Heavy Rain(Flooding) Damage Status (Last 3 years '19-'21)

Cate	egory	2019	2020	2021	20
Human casualties (people)	Deaths · Missing	-	44	3	47
	Evacuees	102	17,960	1,369	19,431
Property (millio	y damage on won)	1,650	1,095,171	40,646	1,137,467

### **Major Causes of Heavy Rain and Flooding**

- Trend of shorter winters and longer summers due to climate change.
- Increased frequency of heavy rainfall due to the extended presence of hot and humid air from the south and increased atmospheric moisture in the Korean Peninsula.

# Preparation for Heavy Rain and Flooding

#### **Prepare emergency supplies**

- Prepare a flashlight rather than candles for power outages.
- Prepare emergency food, drinking water, and first aid supplies.
- Prepare a mobile phone charger, portable burner, blanket, etc.

#### Familiarize yourself with evacuation methods

- Share evacuation methods and evacuation locations with your family.
- Install the Safety Steppingstone App to receive disaster information.

### **Safety Tips**



#### Evacuate to a safe area

Do not approach areas prone to flooding



#### Limit outdoor activities

Refrain from going out and check weather conditions



### Do not approach coastal areas or riverbanks

Be cautious of swift currents



#### Do not approach the steep slopes of mountains and valleys

Beware of swift currents, landslides, etc.

# **Guidelines for Citizen Actions during Concentrated Heavy Rain and Flooding**



- 1. Evacuate to a safe place
- Avoid low-lying areas and areas prone to flooding.



- 2. Continuously monitor weather conditions
- Close doors and windows when indoors.
- Cut off electricity and gas before flooding occur



- 3. Be familiar with possible evacuation places and routes in advance
- Evacuate to higher ground.
- · Do not drive in flooded areas.



4. Do not go out to check embankments or water levels in rice paddies and ditches.



 Campers in mountainous and valley areas should evacuate and avoid approaching steep slopes.



6. If isolated, call 119 for assistance or seek help from nearby individuals.