

What are reservoirs?

Reservoirs are a source of water for agriculture and provide temporary water storage in heavy rain. They are important water environments that support diverse organisms.

Damage caused by reservoirs

In recent years, we have seen natural disasters that breach the reservoirs and cause broader damage, notably the 2011 Tohoku earthquake and the heavy rains falling on west Japan in July, 2018. About 80% of destruction has been due to heavy rain, while 20% has been due to earthquakes. Given these occurrences, responsibility for the agricultural reservoirs was clarified and the Agricultural Pond Management and Conservation Act was enacted on July 1, 2019, to ensure the proper management and maintenance of the ponds.

About the Agricultural Pond Management and Conservation Act (external link)

https://www.maff.go.jp/j/nousin/bousai/bousai_saigai/b_tameike/kanrihozenhou.html



Agricultural Pond Overflow Forecast Map

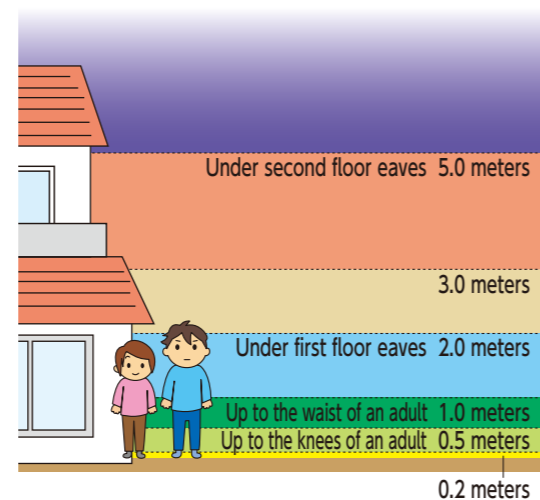
It can be expected that the embankment will breach due to heavy rain or a large-scale earthquake when the agricultural reservoir is full. This map shows local residents the range of possible inundation damage, evacuation locations (schools, community halls, etc.) and information about key roads that serve as evacuation routes.

Before a disaster occurs, you should learn with your family and neighbors what areas might be subject to inundation and the location of evacuation sites, and use this information to prepare for and undertake safe evacuation activities.

Reading the map

The map shows areas of inundation when the banks of agricultural ponds are breached. The depth of the water will change over time, but the map shows the maximum expected depths. Areas of inundation will vary depending on the amount of stored water in the ponds, the amount of rainfall, the size of the earthquake, and other factors.

Inundation depth reference



Day-to-day management for disaster prevention

In general, the agricultural ponds are maintained and managed by water users' associations or similar made up of the beneficiary farmers. However, as they also serve as temporary reservoirs for heavy rains, all local residents should work together to protect them, not just the farmers.

- In order to minimize damage caused by large earthquakes and heavy rain, **regularly cut the weeds on the embankments, remove debris such as driftwood from the intakes and spillways (discharge channels), and inspect the pond.**
- The embankments and connecting structures should be checked especially carefully for abnormalities such as fissures, subsidence, and water leakage.

Note: For your safety and protection, always conduct inspections and patrols in a group of several people.

Preparing for disasters (agricultural pond managers)

- If heavy rain, such as that caused by a typhoon, is expected, reduce the water level in advance so as to reduce downstream impact.
- When an earthquake occurs or a heavy rain special warning is issued, carefully check the pond. If there are any abnormalities, contact emergency services and reduce the water level.

Disaster-significant agricultural ponds

According to national guidelines, agricultural ponds corresponding to the following items are designated as "disaster-significant agricultural ponds".

1. The collapse of the pond's embankments will have an effect on residences, hospitals, schools, or other important public facilities.
2. Other ponds as designated by the city.



[Contact] Agriculture Policy Division https://www.maff.go.jp/j/nousin/bousai/bousai_saigai/b_tameike/

In these cases, there is a risk of agricultural ponds collapsing!

Immediately after an earthquake When a large earthquake occurs, cracks and landslides in embankments and ground liquefaction occur. These phenomena increase the risk of embankments collapsing.

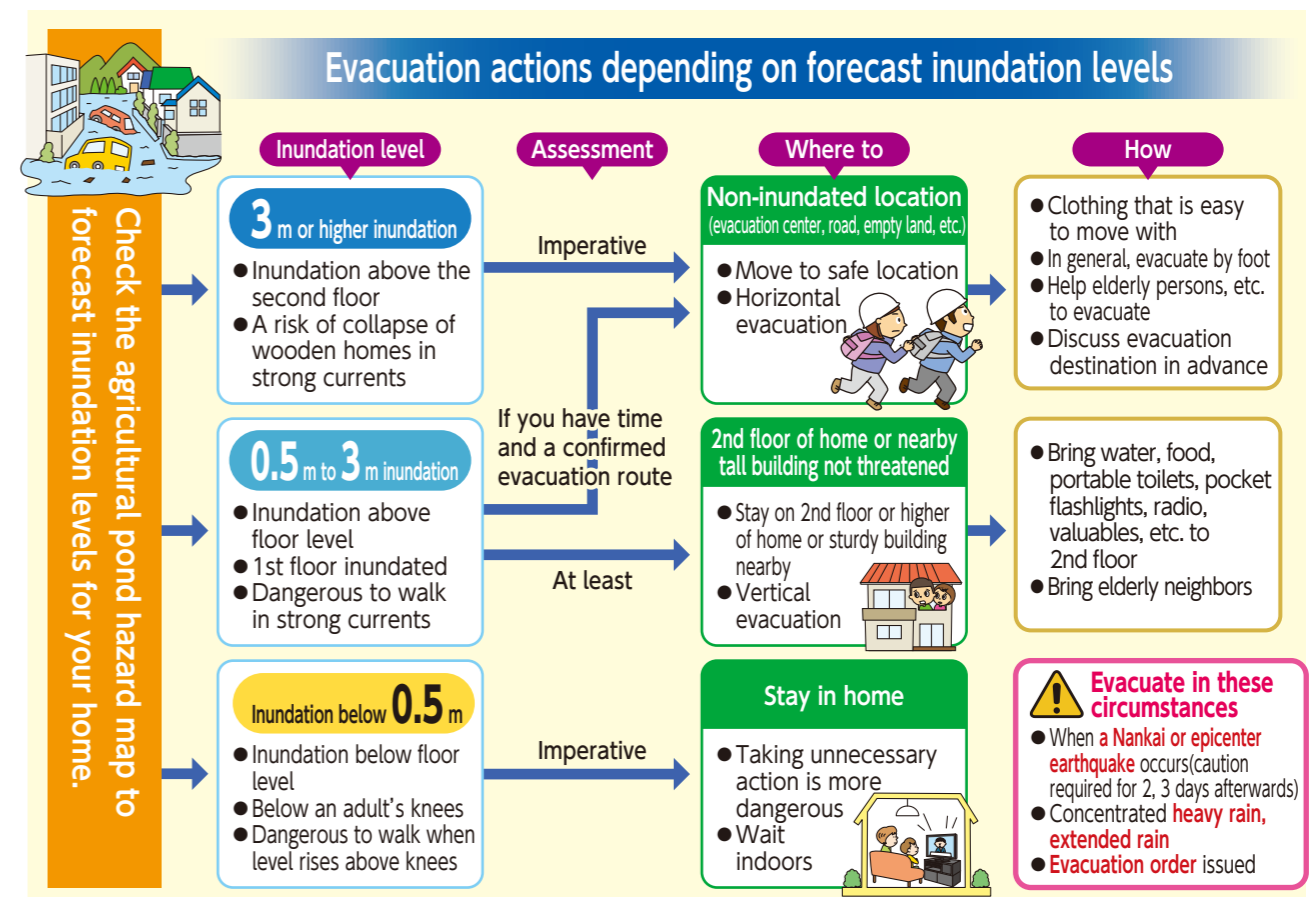
If there are long periods of heavy rain Agricultural pond spillways (structures that discharge excess storage water) have limited capacity. If local heavy rains such as torrential downpours continue for a long period of time, the water level of the pond will rise. The force of the water overflowing the embankment will erode the embankment, which may lead to a collapse.

Evacuate before the pond embankments collapse!

In an emergency, it is not possible to notify people that a pond's embankments have collapsed. The key is to evacuate **before the collapse occurs**. It is important to always be conscious of disaster prevention, and be prepared for every eventuality.

1 Disaster preparation

Check agricultural pond overflow forecast maps and know the locations of danger areas, evacuation centers, and safe roads.



2 Gather information

Check weather reports on the television or radio. Pay attention to the earthquake early warnings, typhoon updates, and evacuation information.

3 Evacuate

In general, evacuate by foot. If it is too dangerous outside, move to a high place within your home. When evacuating, **call on elderly neighbors and similar, provide help**, and evacuate with the mutual assistance of local residents.