

# FLOOD STORAGE



Flood storage is the use of an outlet structure which holds floodwater then returns it to a river at a controlled rate, once the flood peak has passed. These structures provide a spillway and are especially useful in extreme events when there is more water than the watercourse can hold. This detention of floodwater can reduce peak flows down the river and ease flooding downstream, spreading the overall volume of water passed downstream over a longer period.

## Online Storage

Online storage is where water is temporarily stored within the river's channel and floodplain, usually behind a dam or impoundment structure. Slow control structures such as pipes, flumes or gates are normally located inside the impoundment structure and control the outflow of water from the storage area back into the channel.

## Offline Storage

Offline storage is where water is diverted from the river's channel, stored in a separate area (such as a pond or wetland) which may still be part of the floodplain, then later released back to the river or watercourse. An inflow structure such as a weir, diverts water to the storage area when the watercourse level exceeds a predetermined value, and an outlet structure returns the water to the watercourse after the flood peak has passed, either via gravity, pump or both.



cc-by-sa/2.0 - Pool on the Tamar flood... by Derek Harper - geograph.org.uk/p/4565527

## Benefits

- Reduces flood risk by retaining overflow that the river cannot hold.
- Ponds and wetlands can be landscaped to provide aesthetic and amenity value.
- Provides wildlife benefits to habitats and biodiversity.