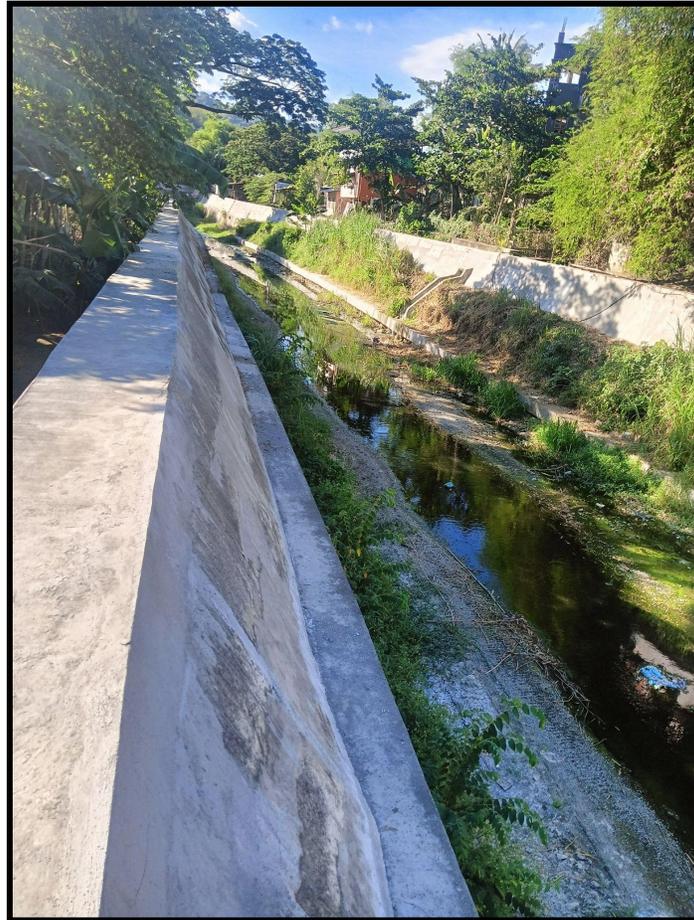


## Assignment 2: Maximum Flood Heights

Group 10

**Barangay San Jose** is a riverside community that has long struggled with flooding, especially during heavy rains. According to residents, a retaining wall was built earlier this year to help prevent severe flooding in the area. The structure now stands as a protective barrier between the river and nearby homes.



*The River in Barangay San Jose*

Flooding has been a long-standing problem for many households in Barangay San Jose. Residents shared that before the newly built retaining wall was constructed, floodwaters from the river could reach as high as the second floor of their homes. The new wall has significantly reduced this risk, bringing a sense of relief and safety to the community.



*Some of the Houses Near the River*

The height of the **original retaining wall** was measured at **2.89 meters** using a tape measure. The **newly built wall on top** adds an **additional 2.31 meters**, bringing the total height from the bottom of the river to the top of the new wall to **5.2 meters**.



*Measuring the Height of the Walls*

According to residents, they have not experienced any catastrophic flooding since the construction of the new retaining wall. **Before the wall was built**, floodwaters could reach up to the second floor of their homes, **averaging about 4.48 meters above ground level**. When referenced from the base of the river (excluding the height of the newly built retaining wall), **the estimated maximum flood height was around 7.37 meters**.

**After the construction of the new wall**, the highest flood level recorded so far only reached **50 centimeters above ground level**. Referenced from the base of the river, **the estimated maximum flood height has dropped significantly to 3.39 meters**.



*Measuring the Maximum Flood Height*