

## An Implementation of Automatic Flap Gate Weir Type III-A & III-B as Structural Irrigation Water Management Best Practice



**Chaiya Phoungphotisop**

Director of Irrigation Development Institute (IDI)

RID Pak Kret, THAILAND

ph.chaiya44@gmail.com



**Praponth Kaurpan**

Advisory Engineer

Irrigation Development Institute (IDI)

RID Pak Kret, THAILAND

wmd\_cm@yahoo.com

## Flap Gate Weir TYPE I and TYPE II



2553



2554









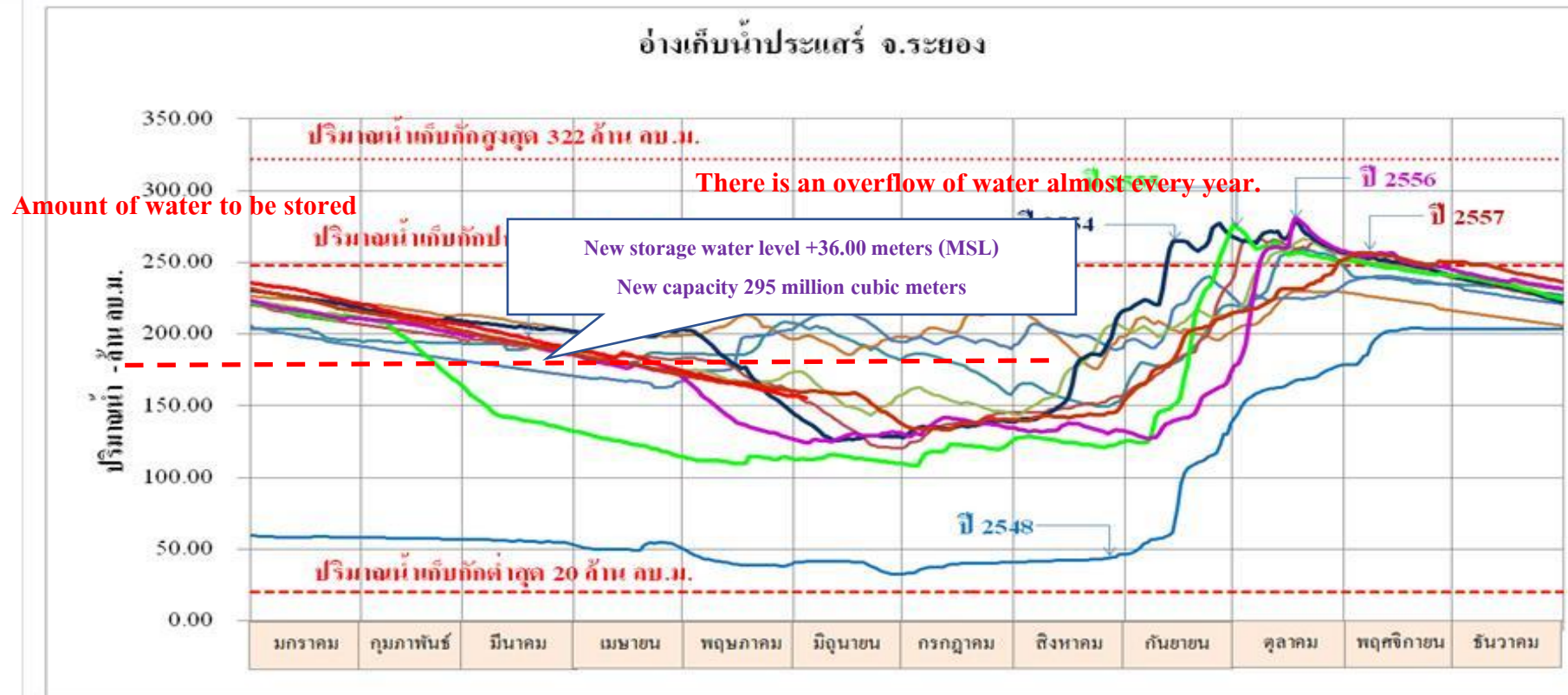






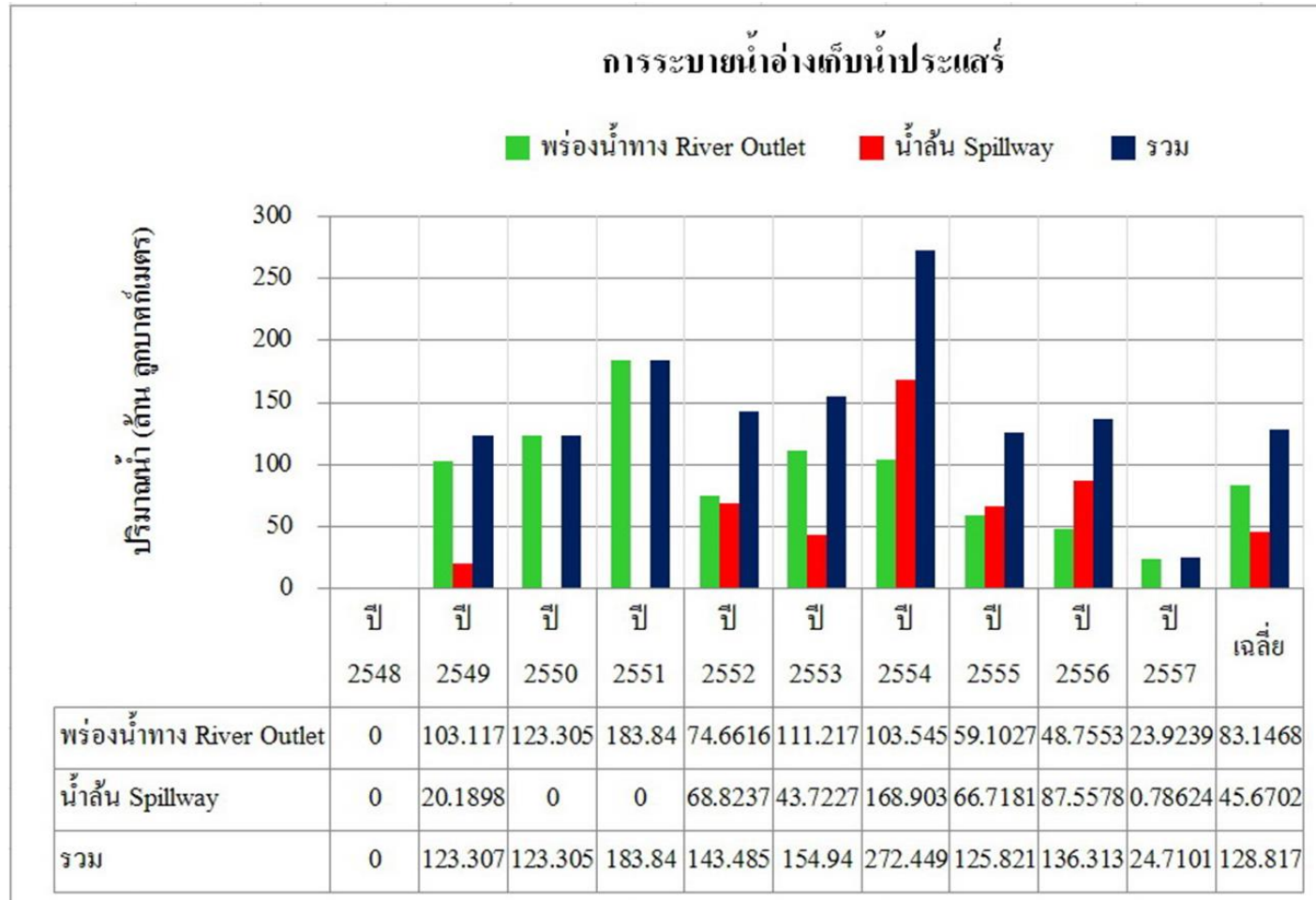
The Prasae Flap Gate type III-A is the first pilot project under “the Looking Back project” issued in 2015



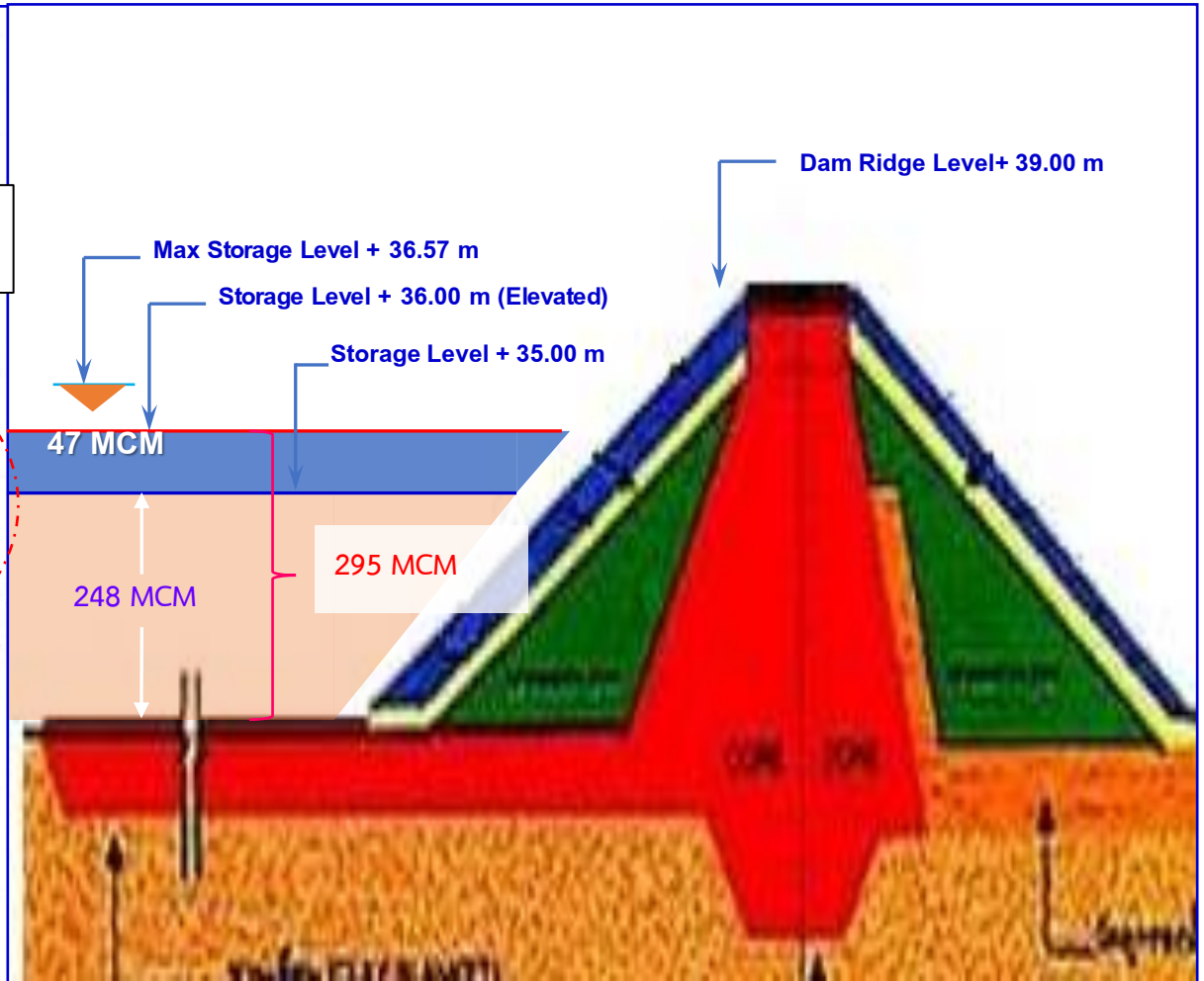
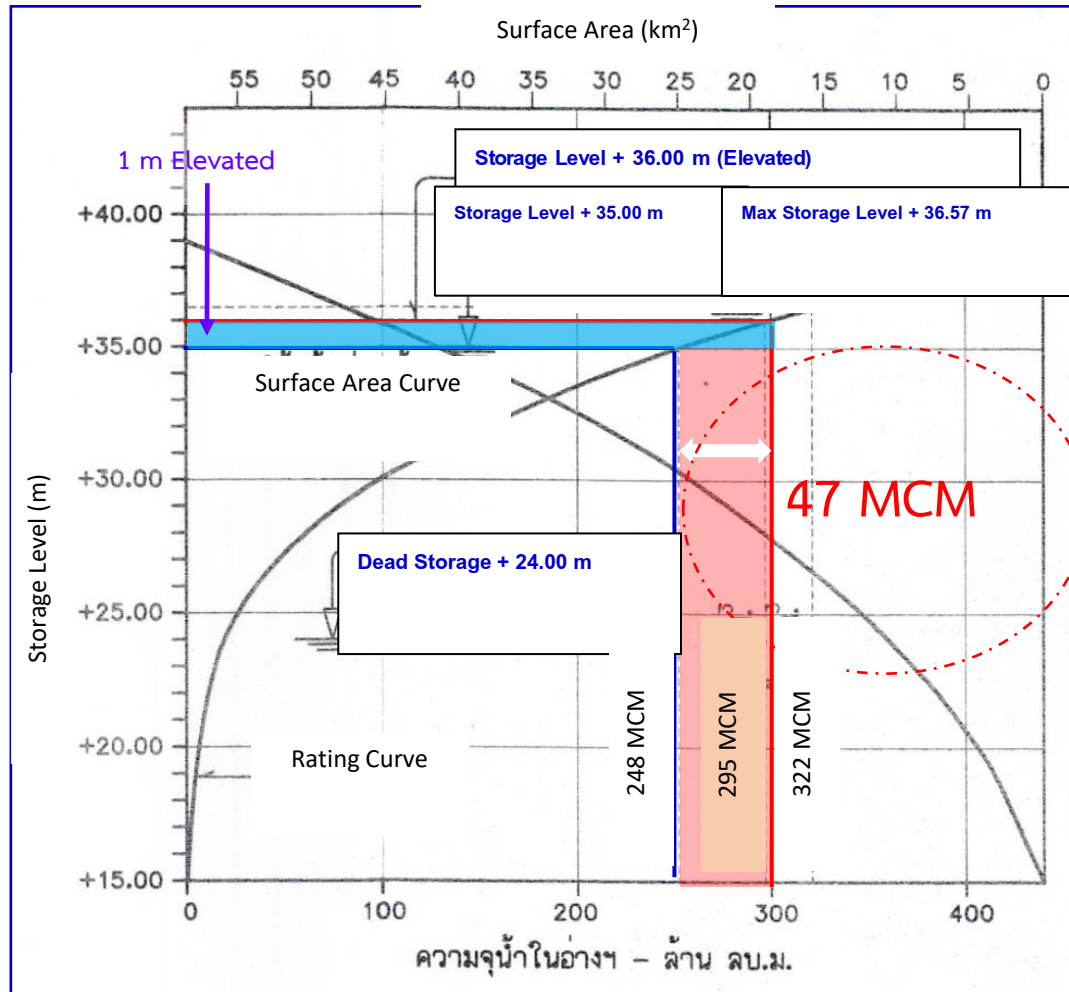




## Optimization of water storage in Prasae, Rayong Province



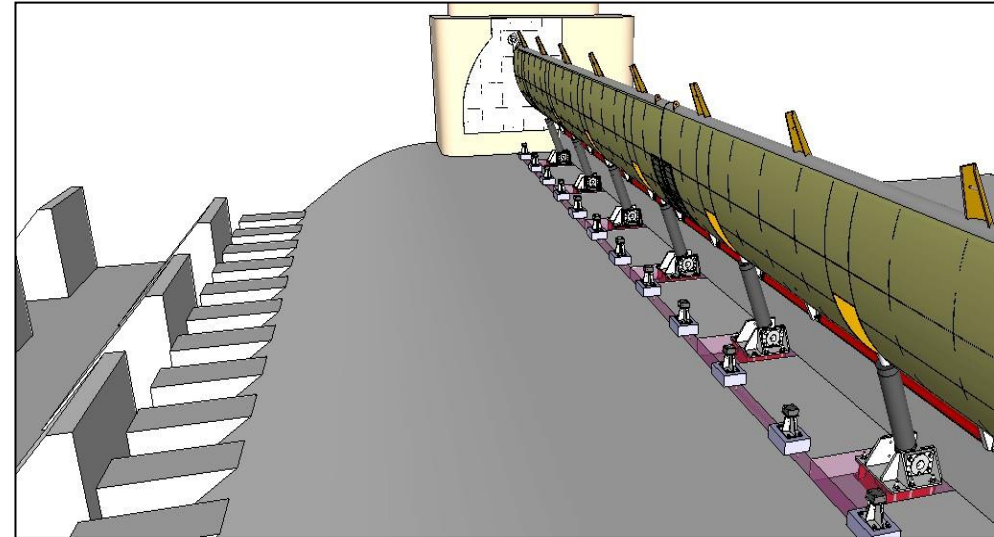
The graph shows the average amount of water overflow through the Spillway at 45.67 million cubic meters.





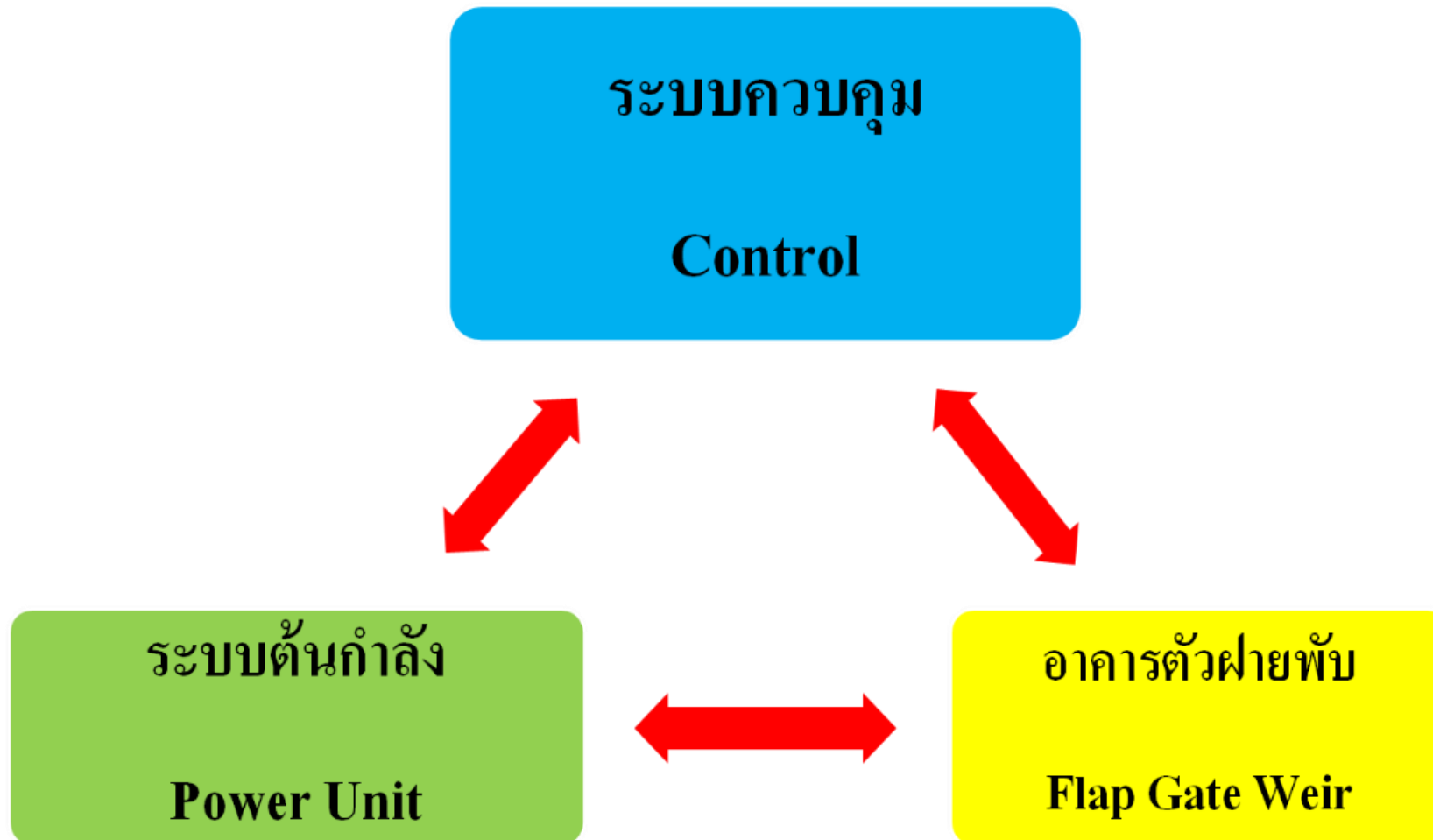


Install a Type III-B folding flap gate to store water and to help prevent flooding in front of the flap gate.



Hydraulic system of folding weir Type III-B  
Installed on Nong Salik weir, Pa Sang District,  
Lamphun Province

## The components of Flap Gate Weir Type III-A





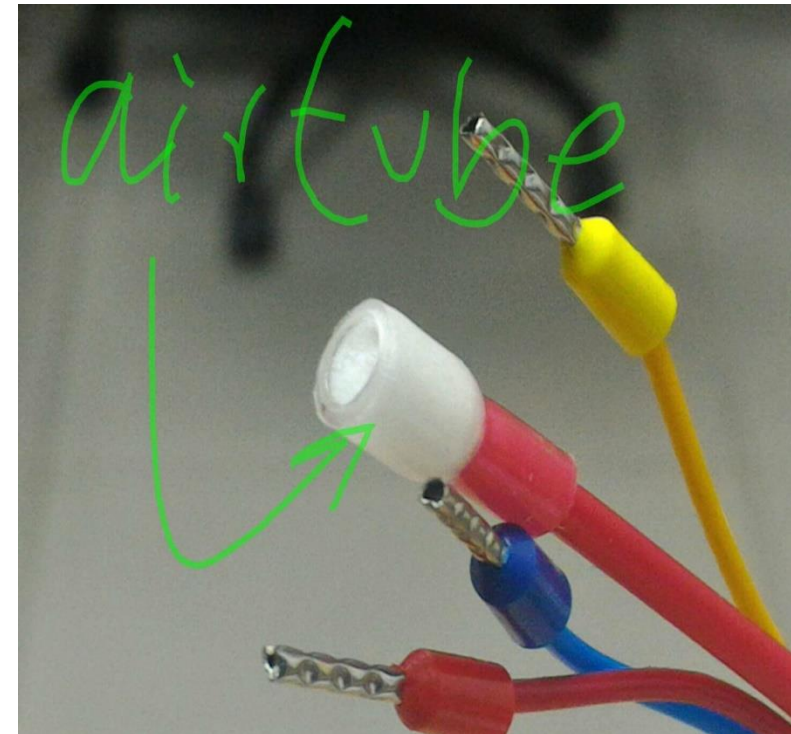


## Prasae Reservoir capacity enhancement project

The sensor and air tube package were installed toward water level measurements called the absolute pressure sensor named after the original sensor were modified to correct the inaccuracy flaws caused by ambient pressures error.

**LT0422**

**Flood and Rivers Pressure Level Transducer**





The absolute pressure sensor were named after the original sensor were modified to correct the inaccuracy flaws caused by ambient pressures error.



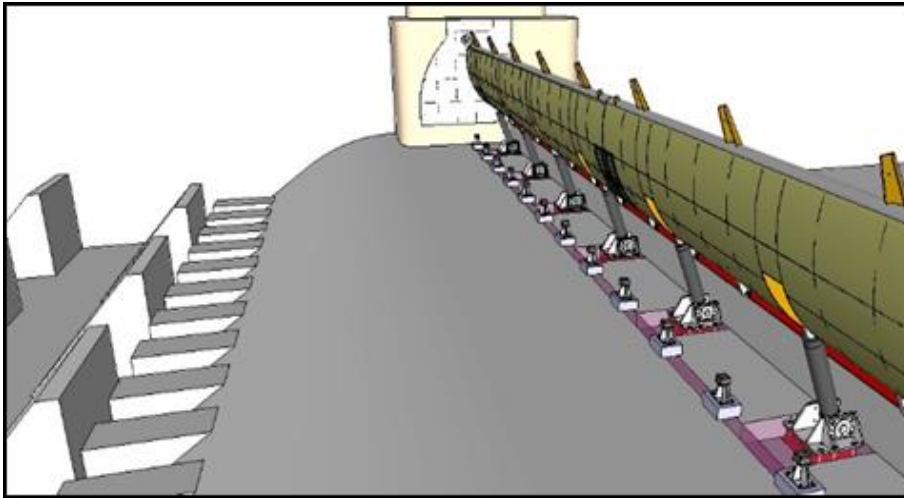




# Prasae Reservoir capacity enhancement project

The absolute pressure sensor can be located in water level monitoring system





the design blueprint shows the  
hydraulic system of type III A flap  
gates

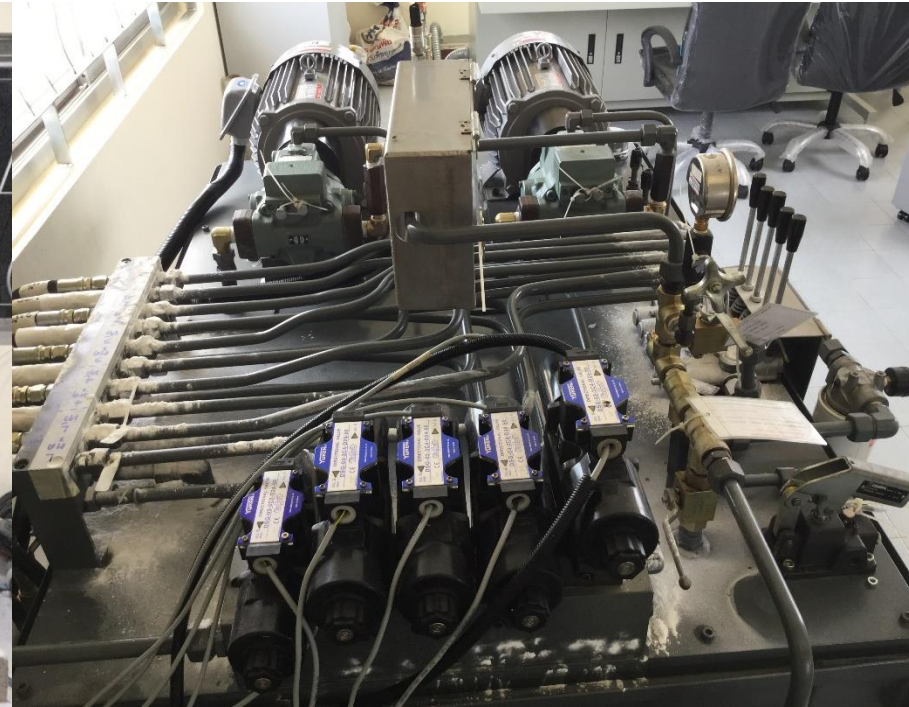
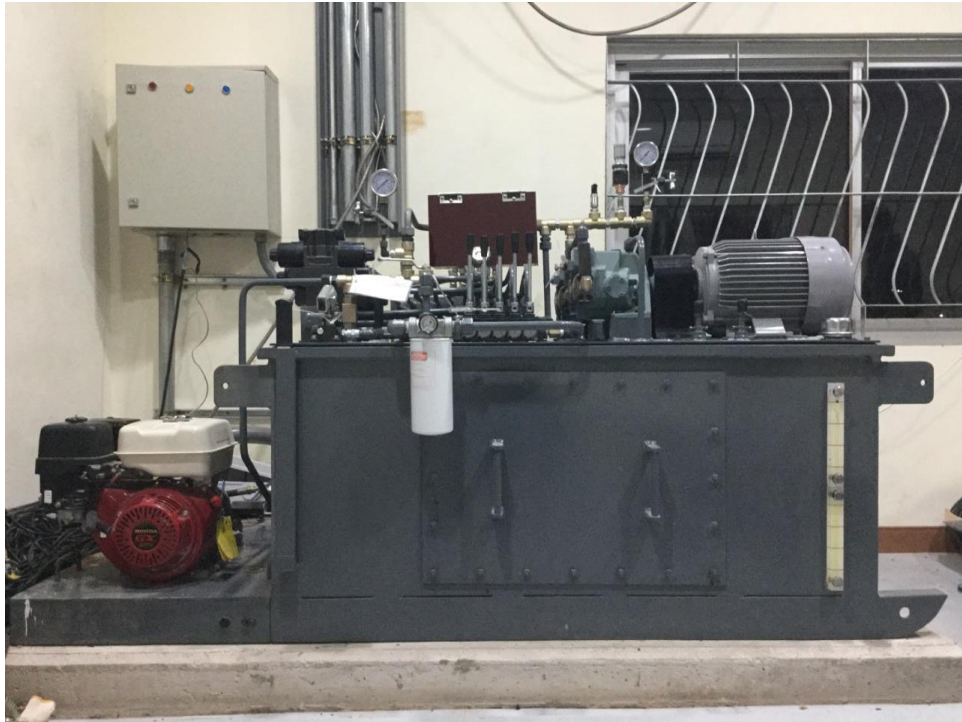


Hydraulic system of Flap Gate Weir type III A  
installed on the dam's spillway of Prasair  
Reservoir, Wang Chan, Rayong





Beck up power supply were also install to operate under electrical outages situation





## The control unit of 4 flap gates using PLC (Programable logic controller)







## The success of the folding weir works





Prasae Reservoir Install a Type III-A folding dam to start collecting water to help prevent flooding at the bottom of the reservoir.



Hydraulic System of Type III-B flap Gates mounted On Nong Saleek weir, Pa Sang, Lamphun



## SUMMARY AND ACKNOWLEDGMENTS

THANK YOU

