
(Some) Test Cases
Project 1

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**The following test cases serve as a baseline for comparison. The values provided are subject to additional verification, and in certain instances, discrepancies may occur due to variations in the adopted strategies.*

The following test cases apply only to the **Small Dataset**

T2.1 - Maximum Flow

Expected total flow: 1643

By city:

C_1-Porto Moniz 18

C_2-São Vicente 34

C_3-Santana 46

C_4-Machico 137

C_5-Santa Cruz 295

C_6-Funchal 664

C_7-Câmara de Lobos 225

C_8-Ribeira Brava 89

C_9-Ponta do Sol 59

C_10-Calheta 76

T2.2 - Water Demand vs Actual Flow

C_6-Funchal

- Demand: 740
- Actual Flow: 664
- Deficit: 76

T3.1 - Reliability and Sensitivity to Failures (Reservoir)

Case: Reservoir R_4: Ribeiro Frio is removed (it had a maximum delivery of 385 m³/sec)

City	Old Flow	New Flow
C_4: Machico	137	136
C_5: Santa Cruz	295	100
C_6: Funchal	664	475

T3.2 - Reliability and Sensitivity to Failures (Pumping Stations)

Case: Pumping Station PS_1 is removed These cities are affected:

City	Old Flow	New Flow
C_5: Santa Cruz	295	278
C_6: Funchal	664	625
C_1: Porto Moniz	18	0
C_10: Calheta	76	50

T3.3 - Reliability and Sensitivity to Failures (Pipelines)

Case 1: Only PS_9 - PS_10 is removed. No city is affected.

Case 2: Only PS_4 - PS_5 is removed. No city is affected.

Case 3: Both PS_9 - PS_10 and PS_4 - PS_5 are removed. City affected:

City	Old Flow	New Flow
C_6: Funchal	664	572