

# CASE STUDY: The History of Water Supply on the Central Coast

## 8. Alternative scenarios for the Central Coast Water Supply 1975

Based on stream flow data, population growth predictions, and estimated water supply needs to meet this growth up until 2010, **ten** alternative long term water supply **schemes** were assessed in the 1975 investigations. The ten schemes were:

**Table 2: Ten alternative Schemes evaluated in 1975 for their potential to meet the future water supply needs of the Central Coast**

Scheme	Principal infrastructure proposed
1.	Mangrove Creek Dam Stge1, MacDonald River Weir, Mangrove Creek Dam Stge2
2	Mangrove Creek Dam Stge1, MacDonald River Weir, MacDonald River Dam (1200 ha)
3.	MacDonald River Dam B (2920 ha)
4.	Lower Mangrove Creek Dam, Jiliby Creek Dam, MacDonald River Dam A (780ha)
5.	Mangrove Creek Dam Stge 1, MacDonald River Weir, Colo River and Webb's Ck Weirs
6.	Mangrove Creek Dam Stge 1, Wollombi Brook Weir, Mangrove Creek Dam Stge2
7.	Extension from Sydney Water Supply with Transfer System developed in three stages
8.	Extension from Newcastle Water Supply with Transfer System developed in four stages
9.	Water Renovation - Mangrove Creek Dam Stge 2, Wastewater Reclamation 1 & 2
10.	Desalination – Desalination Stage 1 & 2

With the exception of schemes 7, 8 and 10, the different schemes called for construction of one or more dams in the region. Other infrastructural needs included extensions to the network of weirs, pipelines, pump stations and treatment plants.

### ACTIVITY:

Examine the Table of data taken from “Formulation and Evaluation of Alternative Schemes” Volume 1 of Report 1 of “Report on Investigations for Water Supply to the Gosford-Wyong Region”, January 1975, Department of Public Works N.S.W., p. 31.

**Table 3: Comparison of alternative dam sites for the alternative schemes assessed in 1975**

Potential Dam Site	Catchment Area (km <sup>2</sup> )	Average Annual Streamflow (10 <sup>6</sup> cubic metres/year)		Storage Capacity (10 <sup>6</sup> cubic metres)	Cost in 1975 \$ (\$M)
		Nov 1934 to Feb 1942	1904 to 1973		
Jiliby Creek	32	0.8	6.6	Stge 1 127.3 Stge 1 & 2 155.0	9.4 25.3
Lower Mangrove Creek	231	10.9	40.3	Stge 1 14.5 Stge 1 & 2 164.0	3.8 20.9
Mangrove Creek	101	4.8	17.7	Stge1 181.0 Stge1&2 455.0	18.2 28.6
MacDonald River	1,248	6.7	103.5	Dam A 227.0 455.0 Dam B 886.0	20.7 25.9 33.7
Wollombi Brook	1,030	5.5	154.7	740.0	47.0
Colo River	4,560	79.3	588.5	455.0	65.0

### QUESTIONS:

1. Considering the ten schemes listed above and the data in this Table, can you suggest reasons why the recommendation was given to proceed with the construction of Stage 1 of the Mangrove Creek Dam?
2. See if you can discover what is significant about the period Nov 1934 to Feb 1942. Why were the estimated average annual streamflows so low in those years? (Suggestion: The Bureau of Meteorology website might be of assistance.)