



SPATIAL INFORMATION DAY 2010

Adelaide Convention Centre | FRIDAY 13 AUGUST 2010

Spatial Information Day 2010 Abstract

Title: Re-establishing the 1956 River Murray Flood Level

Session: 6 – Securing Water Resources

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Abstract:

In 1956 the flood of the River Murray was the largest known since white settlement. The actual height of the flood level in Riverland regions has been recorded in various files and “water marks” have been located in many places.

The authors were asked to verify the validity of a digital definition of the flood level in the Lower Lakes area of the Murray. Finding a traceability chain to verify this data proved to be almost impossible. It was a classic “cold”, (and wet), case.

Most of the bench marks used by the Engineering & Water Supply in the flood era were gone and their value on AHD, (Australian Height Datum 1971), could not be verified. Therefore published lists of flood levels at various locations could also not be verified.

Going back to first principles was the only answer. The method used by the authors involved re-establishing AHD levels, (E.L.s), for the flood from observations of two attributes:

1. E.L.s on existing monuments depicting flood levels
2. E.L.s on the natural surface where the flood level can be clearly identified from flood level peak photography

Three data sets were used to assist in locating “natural surface” flood level points.

1. The 1956 flood level shown on the 1:10,000 scale orthophotmaps produce by the Lands Department in the 1970's.
2. The cadastral (boundary) framework shown on orthophotmaps
3. The 1956 flood level peak aerial photography

The event had a profound effect on many aspects of “river life”. One author was involved through the classification of shack sites and, later, the freeholding of land. The re-establishment of the flood level was vital to both projects since certain approvals could not be given below the 1956 flood line. Until completion of this project it was not known how accurately the “flood line” could be re-defined, forty-four years later.

The livelihood of many people and businesses have been affected by the positioning of the flood line. This paper presents a method of defining the position of the 1956 Murray River flood line both from aerial photography and recovered together with statistics.

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