MBA2150

HISTORY OF THE CARRUM SWAMP

Source: Alan R. Hood 03 9775 1249
Update: April 6, 2004

Area: 13,000 acres (52 square kilometres) [COD51]
From Frankston to Mordialloc and north to the Melbourne Warp which parallels the Dandenong – Melbourne rail line.

Catchment Area: 284 square miles (735 square kilometres) [COD51]

Rainfall: 25" near sea, 45" near hills [COD51]

The Carrum Swamp is restricted from flowing into the sea by coastal sand hills, limited to four outlets only:

- Kananook Creek
- Eel Race
- Patterson River
- Mordialloc Creek

Explorer William Hovell discovered "a very extensive fresh water marsh (from 12 to 15 miles long and 11/2 to 6 broad, and only separated from Port Phillip by a narrow ridge or bank of sand not more than from two hundred to three hundred yards wide."

The Carrum Swamp was fed by the Dandenong and Eumemmerring Creeks which collected the rain from the mountains.

July 1862
John Wood Beilby reported that flooding of the land had led to failure of his crops. [HOS]

December 1863
One of the biggest floods on the Swamp occurred. [HOS]

March 1872
The early settlers suffered from the low lying conditions to the point where they proposed to link Dandenong Creek to Mordialloc Creek, and Eumemmerring Creek to Kananook Creek, plus a secondary drain running North/South parallel to the beach [HOS]

1872
Drainage channels started from Mordialloc "Peat quaking beneath their weight" [HOS72]

June 1873
The Assistant Commissioner of Lands and Survey informed Tommy Bent, M.P. that "owing to the wet state of the land selected, residence thereon is not possible until it be drained. [HOS]

October 1874
A big flood occurred
John Keys fences stood in ***five feet of water***, Donald McSwain found his cattle over their knees in water. [HOS]

1873-1879
Joseph Chandler worked often in knee deep water to clear his land. [HOS]

Henry Comport put up a two roomed wooden hut and said "the ground was too wet to reside on continuously [and] the road to it [was] sometimes covered by ***several feet of water.[HOS]***

1879
A canal was cut to release more water volume into Port Phillip Bay, and became known as the Patterson River [COD56]

1879
The approach of draining the Carrum Swamp into the sea was reasonably successful and the first flood cleared the Patterson Inlet in October 1879. [HOS]

November 1879
The 30 foot wide cut was scoured out to 300 feet by a reverse flood from the sea. [COD53]

1880
Big Flood [COD57]

1889
Carrum Irrigation Trust – scandal [HOS97]

1889
24,000 pounds spent on flood control [HOS]

1891
One of the greatest floods in the Swamp, water 6 feet deep in the lower parts of Dandenong [COD57,60]
Large flood compared to the major flood in 1863 [HOS97]

1896
John Keir sued Carrum Waterworks Trust following a flood [HOS99]

1900
Floods swept potatoes and onions into the sea [HOS98]

1904
3 inches of rain in 24 hours – flood was three to four times bigger than engineering calculations [COD54]
Another flood descended covering the district with water two to five feet deep, Carrum Relief Fund set up [HOS99]
One hundred swampers discussed schemes for flood prevention with the Minister for Water Supply [HOS]

1905
Around this time control of the Carrum Swamp passed from Local Control to the State Government. [HOS]

The Department of Water Supply proposed enlarging Eumemmerring, McColls and Eel Race Drains. [HOS]

Report to Department of Water Supply "a high spring tide and south westerly wind combined with a day's heavy rainfall was more than any engineer could combat" [HOS]

1923-24
After further floods the Government enlarged the Eumemmerring and Dandenong Drains, built a main Outfall from Pillars Bridge to the Patterson Outlet at Carrum and constructed a Contour Drain on the east side to intercept the drainage from ***the hills around Cranbourne. [HOS]***

1923
Flood [COD54, Chelsea Historic Society]

1924
Flood [COD54, Chelsea Historic Society]

March 1931
Peak at Hammond Road - 5,038 Cusecs
[DVA report 1965]

October 1932
Peak at Hammond Road – 8,046 Cusecs
[DVA report 1965]

1934
33 hours rain, major flood [COD54]
8 inches of rain in 33 hours [HOS161]

December 1, 1934
"…the Carrum Fire Bell began to ring at 6.30 a.m. and the residents awoke to find themselves surrounded by flood waters rising a foot every ten minutes and fed by a torrent surging down the Carrum Outfall ….

"In 33 hours more than 8 inches of rain fell.

"Just after midday on the second day the Dandenong Creek began to inundate Dandenong's stores and houses, and, abandoning it's usual channel through the Shire, surged south-westerly across Elmsford and Keysborough to join water from the Mile Creek, flooding Springvale and Noble Park, and so back to the old Swamp where with the Eumemmerring Creek and Eastern Contour Drain the streams formed one vast lake and advanced on the sleeping inhabitants of the bayside.

Nearly one thousand houses were surrounded by water and 700 families forced to flee.

Fishermen used their boats to ferry people to safety, plucking some from the roof tops.

"…at Bangholme, eight feet of water had passed through the school-house itself.

[HOS161,162]

"The flood was the worst in Dandenong since 1891. By 11 p.m. on 30/11/34 the water was 3 feet deep in the town and was only 20 yards from the Shire Hall and the Bridge Hotel. The lower shopping area is underwater and 100 tons of timber was washed away under the railway viaduct where the water is 25 feet deep. The Princes Highway south of the Creek is impassable"

"Ranfurlie Golf Links covered and Princes Highway under water in several places between Springvale and Clayton

Peak at Hammond Road - 11,839 Cusecs
Estimated Rating of Dandenong Creek downstream of Kidd's Road – 12,000 Cusecs, 3.5 ft/sec, R.L. 84.

A. Khuner (1962 – Reference 1 – State Rivers and Water Supply Commission) assesses the 1934 flood as a 1 in 70 years event. [Dandenong Valley Authority Report 1965]

1936
The 1934 flood was followed by a Royal Commission in 1936 in which Alfred Priestly, Inglis Pillar and Thomas Wadsley amongst others gave evidence seeking improved drainage and reduced Rates. [HOS]

Mr E.J. Lupson, hydrologist for the State Rivers and Water Supply Commission provided the following evidence:

“it is interesting to note that the Trust Engineer (Mr Elliott) estimated an unusually heavy flood discharge in the Dandenong Creek in July, 1889, to be 1,400 cusecs, whereas in December, 1934, it was 17,000 cusecs.

“This comparison gives some indication of the tremendous increase in percentage run-off from the catchments due to settlement, with consequent opening up of the country, the formation of roads for motor transport and touring traffic and other operations all influencing to greater volume and rapidity of run-off.”

Alfred Priestly who had his land between Governor Road and the main Drain covered in water for the next 18 months sued Dandenong Council and won 1300 pounds in an out of Court settlement. [HOS]

1937
Flooding again affected Dandenong and Bangholme. [HOS]
Another big flood [COD55]

1952
A short, sharp flood breached the right bank of the main outfall, flooded Bangholme school and church, again inundated the back of Chelsea and was a strong reminder of the Shire’s vulnerability. [HOS]
5 ½ inches rain in 2 ½ hours Flood overflowed the levee banks of the Carrum Outfall [COD55]

The flood was 10 miles long, three miles wide and twelve feet deep [Chelsea Historic Society]

This was an “outside flood” caused by a depression outside the main Dandenong Creek catchment, and flood water couldn’t get back into the Carrum Outfall and out to sea.

It has been alleged that a farmer blew the levee bank with gelignite and saved many surrounding properties from major damage. Emerging information, yet to be confirmed is pointing to this being done by States Rivers and Water Supply after mutual threats had been made.

Peak at Hammond Road – 8,046 Cusecs
[*DVA report 1965]*

Following this flood, the Dandenong Shire Council bought a dragline excavator which cleared 402 chains (8 km) of drain a day. [HOS228]

1957-59
A Parliamentary Public Works Committee recommended additional work which included raising the levee banks on the Carrum Outfall six feet higher than the waters of the 1934 flood. [HOS]

1959
Peak at Hammond Road – 6,457 Cusecs
[DVA report 1965]

1964
Almost as wet at the 1891 flood, water ten feet deep over Princes Hwy (doubt expressed on depth) [COD57]

1964
The Dandenong Valley Authority was formed and extensively remodelled the system.

The Authority has justified it's remodelling by pointing to it's success in flood control, citing November 1971 as an example of a time when the water discharged through Dandenong Creek would, five years previously, have flooded residential areas. [HOS]

1965
Carrum Outfall recently remodelled by SRWSC, "estimated to be capable of discharging safely to Port Phillip Bay 22,700 Cusecs".
[DVA Report 1965]

This work was done by Utah Constructions following the completion of Eildon Weir. It appears to have been hastily done, with the southern levee bank built 150 mm higher than the northern bank so flood waters would flow towards Kananook Creek Frankston instead of Chelsea, Edithvale, Aspendale where a lot of homes had been built below known flood lines.

May 1974
No data available yet

1996
Flood to the eastern side of Worsley Road caused by raising the road two years previously.
Water up to a metre deep in nearby properties, flood pushed eastwards approximately 1/3 km.

This is approximately 300% over the estimates of Melbourne Water for the area.

Levels taken indicate a flood to the crown of Worsley Road would push floodwaters approximately ¾ km towards Dandenong Frankston Road.

The newly rebuilt Worsley Road began collapsing shortly afterwards, it's edges beginning to roll into the peat of the swamp base, evidenced by longitudinal cracks and extensive patching.

REFERENCES

COD51 Chronicles of Dandenong, Niall Brennan Page 51
HOS161 A History of Springvale, G.M. Hibbins Page 161

Note: Research is ongoing, and information is being corrected as more accurate data is discovered. We would welcome input.

SUMMARY OF MAJOR FLOOD DATES AND INTERVALS

YEAR	MONTH	INTERVAL	NOTES
1862	July		
1863	December	1 year	Whole Swamp
1872	March	9 years	
1874	October	2 years	Whole Swamp – Keys land 5'0" deep
1880		6 years	
1891		11 years	Whole Swamp – 6'0" deep in Dandenong
1896		5 years	
1900		4 years	
1904		4 years	
1923		19 years	
1924		1 year	
1931	March	7 years	
1932	October	1 year	
1934	December	2 years	Whole Swamp (22'0" deep in Chelsea)
1937		3 years	
1952		15 years	Whole Swamp
1959		7 years	
1964		5 years	
1971	November		Majority contained within levee banks
1972			
1974	May	10 years	
1996		22 years	(This gap is possibly due to history not being recorded yet)