

Greenway and Purgatory Creek Catchments

Greenways Creek enters the Hunter River estuary about 5 or 6 km upstream of Hexham Bridge. The majority of the creek's catchment is used for rural pursuits, however there are large areas of bushland and some significant urban areas.

Woodberry, Beresfield and Thornton all fall within the catchment, which extends south through bushland to Black Hill. The catchment has an area of 5340 hectares.

Scotch Dairy Creek and Weakley's Flat Creek are the major tributaries that run into Woodberry Swamp, which in turn is drained by Greenways Creek. Woodberry Swamp is a large feature at the bottom of the catchment and is listed as a SEPP 14 wetland.

Land use of the catchment since 1966 is shown in table 15 below.

Table 15: Landuse and Development Since 1966

Land Use	1966 (%)	1975(%)	1993(%)	1998(%)
Bushland	44%	37%	33%	31%
Poultry Sheds	0%	4%	4%	4%
Urban General	2%	7%	10%	12%
Industrial	1%	1%	1%	5%
Grazing & Rural Residential	40%	40%	40%	34%
Cropping	4%	4%	4%	4%
Wetlands	9%	7%	8%	8%

The catchment that existed within Greenways, 4-Mile and Millers Forest catchments had a population of 28,000 in 1998. The main population centres in the catchment are Thornton, Beresfield and Woodberry. Large industrial areas are located at Thornton and Weakleys Flat, which is currently being expanded.

The main agricultural pursuit in the catchment is grazing, however there is also a large chicken farming operation in the upper catchment.

Two types of flooding occur in the catchment. Flooding from the Hunter River and local catchment flooding.

The construction of levees along the Hunter River has protected the floodplain areas from nuisance flooding associated with small, frequent Hunter River floods as well as from tidal surges. The flood drains constructed in association with the levees also provide a mechanism for drainage of localised flooding / runoff from the floodplain. The agricultural productivity of the floodplain is, therefore, likely to have improved significantly as a result of the levees and drainage, however the altered hydrologic regime is likely to have had a significant effect on natural ecological processes.

Anecdotal evidence suggests that since the 1960's urbanisation of the catchment and silting of the flood drains have combined to increase the frequency and extent of inundation of low lying areas particularly in Woodberry Swamp.

The Newcastle Catchments Management Forum has recently extended its area of interest to cover Purgatory and Greenways Creek Catchments. Figure 3 indicates the Purgatory and Greenways Creek Catchments boundaries in relation to the Newcastle LGA boundary. It is envisaged that projects addressing various issues will be established, as funding becomes available, in collaboration with Maitland and Cessnock City Councils. The Newcastle Catchment Management Forum is currently recruiting a local representative from the area to participate in the process.

BIBLIOGRAPHY

- ✎ Australian Bureau of Statistics (ABS), (1996), 1996 Census.
- ✎ ANZECC & ARMCANZ, (1994), National Water Quality Management Strategy, Draft Guidelines for Urban Stormwater Management, Commonwealth of Australia.
- ✎ Armstrong, J.W. (1967), Pipelines and People: The Hunter District Water Board. Halstead Press: Sydney.
- ✎ CEPA, (1993), Urban Stormwater - A Resource Too Valuable to Waste.
- ✎ Gippel, T. and S. Priestly (1998), *Catchment Management Plan: Woodberry, Morpeth-Tenambit and Millers Forest Catchments*, a report prepared for Maitland City Council and Maitland Landcare Group.
- ✎ Hunter Water Corporation - Management Services, (1999), Outcomes Document of the Community Workshop for the Newcastle Urban Stormwater Management Plan for Newcastle City Council - 21/4/99.
- ✎ Ironbark Creek TCM Committee, (1993), The Ironbark Creek Ecosystem Report, ed by C Copeland, NSW Fisheries, Sept 1993, pub HCMT.
- ✎ Ironbark Creek TCM Committee, (1996), Ironbark Creek TCM Strategy, Volume 1, Summary Report.
- ✎ Ironbark Creek TCM Committee, (1996), Ironbark Creek TCM Strategy, Volume 2, Technical Report.
- ✎ Matthei, L. E.,(1995), Soil Landscapes of the Newcastle 1:100 000 Sheet.
- ✎ New South Wales Environment Protection Authority, (1996), Hunter Environmental Monitoring Program 1992-1996.
- ✎ New South Wales Environment Protection Authority, (1997), Managing Urban Stormwater: Treatment Techniques, EPA.
- ✎ New South Wales Department of Land & Water Conservation, (1999), Hunter Estuary Data Compilation Report, compiled by E Avery & R Main, Hunter Region.
- ✎ New South Wales Department of Planning, (1993), Lower Hunter Housing Market Study.
- ✎ New South Wales Department of Urban Affairs and Planning (DUAP), (1995), Cities for the 21st Century.
- ✎ New South Wales Public Works Department, 1991, Throsby Creek Dredging and Rehabilitation - Chemical Characteristics of Sediments.
- ✎ New South Wales Government, (1993), Local Government Act.
- ✎ New South Wales Government, (1979) Environment Planning and Assessment Act.
- ✎ Newcastle City Council, (1995), Newcastle Environmental Management Plan.
- ✎ Newcastle City Council, (1995), Newcastle Land Use Strategy.
- ✎ Newcastle City Council, (1995), Merewether Flood Behaviour Study, prepared by Snowy Mountains Engineering Corporation Ltd.
- ✎ Newcastle City Council, (1998), Newcastle Urban Strategy.
- ✎ Newcastle City Council, (1999), draft Local Environment Plan.
- ✎ Omerod, L., (1999), briefing on PhD thesis concerning Sedimentation in Ironbark Creek Catchment.
- ✎ Throsby Creek TCM Committee, (1989), Throsby Creek TCM Strategy, Volume II, Task Group Reports.
- ✎ WBM Oceanics Australia, (1999), Newcastle Coastline Hazard Definition Study.

BIBLIOGRAPHY

- ✎ Australian Bureau of Statistics (ABS), (1996), 1996 Census.
- ✎ ANZECC & ARMCANZ, (1994), National Water Quality Management Strategy, Draft Guidelines for Urban Stormwater Management, Commonwealth of Australia.
- ✎ Armstrong, J.W. (1967), Pipelines and People: The Hunter District Water Board. Halstead Press: Sydney.
- ✎ CEPA, (1993), Urban Stormwater - A Resource Too Valuable to Waste.
- ✎ Gippel, T. and S. Priestly (1998), *Catchment Management Plan: Woodberry, Morpeth-Tenambit and Millers Forest Catchments*, a report prepared for Maitland City Council and Maitland Landcare Group.
- ✎ Hunter Water Corporation - Management Services, (1999), Outcomes Document of the Community Workshop for the Newcastle Urban Stormwater Management Plan for Newcastle City Council - 21/4/99.
- ✎ Ironbark Creek TCM Committee, (1993), The Ironbark Creek Ecosystem Report, ed by C Copeland, NSW Fisheries, Sept 1993, pub HCMT.
- ✎ Ironbark Creek TCM Committee, (1996), Ironbark Creek TCM Strategy, Volume 1, Summary Report.
- ✎ Ironbark Creek TCM Committee, (1996), Ironbark Creek TCM Strategy, Volume 2, Technical Report.
- ✎ Matthei, L. E.,(1995), Soil Landscapes of the Newcastle 1:100 000 Sheet.
- ✎ New South Wales Environment Protection Authority, (1996), Hunter Environmental Monitoring Program 1992-1996.
- ✎ New South Wales Environment Protection Authority, (1997), Managing Urban Stormwater: Treatment Techniques, EPA.
- ✎ New South Wales Department of Land & Water Conservation, (1999), Hunter Estuary Data Compilation Report, compiled by E Avery & R Main, Hunter Region.
- ✎ New South Wales Department of Planning, (1993), Lower Hunter Housing Market Study.
- ✎ New South Wales Department of Urban Affairs and Planning (DUAP), (1995), Cities for the 21st Century.
- ✎ New South Wales Public Works Department, 1991, Throsby Creek Dredging and Rehabilitation - Chemical Characteristics of Sediments.
- ✎ New South Wales Government, (1993), Local Government Act.
- ✎ New South Wales Government, (1979) Environment Planning and Assessment Act.
- ✎ Newcastle City Council, (1995), Newcastle Environmental Management Plan.
- ✎ Newcastle City Council, (1995), Newcastle Land Use Strategy.
- ✎ Newcastle City Council, (1995), Merewether Flood Behaviour Study, prepared by Snowy Mountains Engineering Corporation Ltd.
- ✎ Newcastle City Council, (1998), Newcastle Urban Strategy.
- ✎ Newcastle City Council, (1999), draft Local Environment Plan.
- ✎ Omerod, L., (1999), briefing on PhD thesis concerning Sedimentation in Ironbark Creek Catchment.
- ✎ Throsby Creek TCM Committee, (1989), Throsby Creek TCM Strategy, Volume II, Task Group Reports.
- ✎ WBM Oceanics Australia, (1999), Newcastle Coastline Hazard Definition Study.