

## LIST OF RECENT UNIVERSITY THESES REPORTING HYDROLOGICAL STUDIES

This list has been prepared to publicise material which may assist particular studies. Masters and Ph.D. theses are housed in respective university libraries. B.Sc. (Hons) and postgraduate diploma reports are usually held by the department concerned and may be consulted at the discretion of the departmental head.

### AUCKLAND UNIVERSITY

#### *Department of Civil Engineering*

- Chai, C. N. 1979: A review of urban stormwater drainage. (Report No. 198).
- Mukumba, R. 1978: Mathematical model of the Kaipara River. (Report No. 180).
- Oldcorn, G. 1978: Estimating peak flow given minimal data. (M.E.) (Report No. 184).
- Patel, R. J. 1981: Mathematical model of the Kaipara Catchment. (Report No. 245).
- Tan, H. Y. 1982: Modelling of natural river temperature. (Report No. 270).
- Toong, A. T. 1982: Regional flood frequency analysis of small catchments. (Report No. 273).

#### *Department of Geography*

- Dowdle, B. 1980: Aspects of the hydrology of the Pukekohe basalt aquifers. (M.A.).
- Gregory, C. R. 1979: Aspects of the beach geomorphology of Waiheke Island. (M.Sc.).
- Gunn, J. 1978: Karst hydrology and solution in the Waitomo district, New Zealand. (Ph.D.).
- Herald, J. R. 1979: Changes in streamflow in a small drainage basin following afforestation in radiata pine. (M.Sc.).
- Le Marquand, D. W. 1979: Dynamics of some Waitemata Harbour beaches. (M.A.).
- Lee, V. S. 1979: Mass movements associated with the rainstorm of March 1979 in the Parakao area, Northland. (M.A.).
- Male, A. G. R. 1977: Mapping suspended sediment in coastal waters from orbital imagery. (M.A.).
- Muir, M. 1979: The shore geomorphology of Lake Taupo. (M.A.).
- Parnell, K. E. 1981: Estuarine water dispersion and exchange in Lucas Creek, Upper Waitemata Harbour. (M.A.).
- Peek, S. M. 1979: A comparative study of beach morpho-dynamics on the east and west coasts of the North Island, New Zealand. (M.A.).
- Price, R. F. 1980: The spatial differentiation of solute generation in the Rangitopuni Basin, Auckland. (M.A.).
- Turpenny, B. W. 1979: Temporal variations in stream solute concentrations. (M.A.).

## CANTERBURY UNIVERSITY

### *Centre for Resource Management*

- Greatrex, T. A. 1977: Managing catchments for water yield. (Dip.Nat. Res.).
- Hughey, K. R. D. 1980: Hydrological aspects of brown trout management in the Selwyn River system, Canterbury, New Zealand. (M.Sc.).
- Joll, H. M. 1970: Aggregates as a resource. (M.Sc.).
- Moody, T. J. 1980: The significance of the riparian zone in forest land management. (Dip.Nat.Res.).
- Nelson, L. R. 1981: Use options for the lower Ashley riverbed. (M.Sc.).
- Shepard, T. G. 1978: The use of climatic data in irrigation planning in New Zealand. (Dip.Nat.Res.).

### *Department of Civil Engineering*

- Beable, M. E. 1976: A simulation method for predicting hydrological effects of land-use changes. (Ph.D.).
- Broome, P. B. 1979: A regional linear model for New Zealand urban catchments. (M.E. project report).
- Day, M. C. 1976: A model for steady ground water flow in North Canterbury. (M.E. project report).
- Hoffmeister, R. G. 1976: Runoff predictions for ungauged catchments using representative basins. (M.E. project report).
- Mackay, G. H. 1976: Determination of unit hydrographs from recorded rainfall and runoff data: the transform approach. (M.E. project report).
- Meyer, R. L. 1978: The pollutional loading due to storm water runoff. (M.E. project report).
- Oldham, K. 1980: A groundwater model study for the city of Timaru. (M.E. project report).
- Reid, H. 1977: An appraisal of a kinematic wave catchment model. (M.E. project report).
- Sissons, W. G. 1979: Economic design of bridge waterways. (M.E. project report).

### *Department of Geography*

- Bates, B. D. 1979: Natural piping in loess: an example of subsurface water movement, Port Hills, Christchurch. (M.Sc.).
- McLennan, G. S. 1980: Hurunui River temperatures: pattern and process. (M.Sc.).
- Prowse, T. D. 1981: The snow environment of the Craigieburn Range. (Ph.D.).
- Stevenson, D. J. 1980: The trace metal content and acidity of Christchurch precipitation. (M.Sc.).

### *Department of Geology*

- Dicker, M. G. I. 1981: The hydrology of the Waimea Plains alluvial basin. (M.Sc.) (Engineering Geology).
- Hawkes, M. R. 1981: The effect of bedrock geology on sediment yield in an alpine area of extreme rainfall. (M.Sc.).

## LINCOLN COLLEGE

### *Agricultural Engineering Department*

- Carran, P. S. 1978: The prediction of wind-affected sprinkler performance. (M.E.) (NZAEI Thesis in Ag. Engg. No. 3).
- Datt, U. 1980: The hydraulic and hydrologic design problems of a particular tidal outfall and its sensitivity to input parameters. (M.Agr.Sc.).
- Hayward, J. A. 1978: Hydrology and stream sediments in a mountain catchment. (Ph.D.) (TGML Special Publication 17).
- Heiler, T. D. 1982: Simulation-based design of water harvesting schemes for irrigation. (Ph.D.) (NZAEI Theses in Agricultural Engineering 5.).
- Hong, Le Ba. 1979: A study of stream braiding. (M.Agr.Sc.).
- Jamieson, P. D. 1981: Transpiration and the water relations of barley. (Ph.D.).
- Lawson, C. A. 1978: Lower Waitaki river development; a multi-objective planning approach. (M.E.).
- Riddell, D. C. 1980: Investigation of physical and hydrological characteristics of the Lismore stony silt loam. (M.Appl.Ec.).
- Samad, M. F. A. 1977: An experimental investigation of the hydrodynamic lift-force acting on a sphere close to a boundary. (M.E.).
- Shiati, K. 1978: Parameter identification for the linear equation of groundwater flow. (M.Agr.Sc.).
- Smart, G. M. 1978: The development and application of analytical techniques for planning of irrigation systems. (Ph.D.).
- Souhangir, A. A. 1977: Water table geometry and related groundwater recharge near Halkett, Waimakariri River, New Zealand. (M.Agr.Sc.).
- Sriboonlue, V. 1979: A method for the determination of the ratio of hydraulic conductivity to drainable porosity from the measurement of water table recession. (M.E.).
- Taylor, A. R. 1982: A method for surface irrigation design based on infiltration using the border strip as an infiltrometer. (Ph.D.).
- Whittaker, J. G. 1982: Flow and sediment movement in stepped channels. (Ph.D.).
- Yusoff, E. 1977: Reclamation assessment of Lake Ellesmere shorelands. (M.Agr.Sc.).
- Zare, M. 1978: Infiltration and underflow near Halkett in the braided Waimakariri riverbed, New Zealand. (M.Agr.Sc.).

## MASSEY UNIVERSITY

### *Department of Geography*

- Johnston, D. B. 1976: An examination of decision making in adjustment to the flood hazard with particular reference to the Lower Manawatu region. (M.A.).
- Walker, E. A. 1975: An appraisal of water use management in New Zealand. (M.Phil.).

### *Department of Soil Science*

- Bargh, B. J. 1976: A study of the hydrological and sedimentological characteristics of two catchments of contrasting land use. (M.Agr.Sc.).
- Bristow, M. 1978: Effect of grazing cattle on the transport of water,

- sediment and nutrients in tile drainage. (Dip.Agr.Sc.).
- Clothier, B. E. 1977: Aspects of the water balance of an oats crop grown on a layered soil. (Ph.D.).
- Cook, F. J. 1976: The effect of irrigation on the drainage behaviour the Tokomaru silt loam in relation to the soil's physical properties. (Dip. Agr.Sc.).
- Cook, F. J. 1980: Hydraulic properties of four soils from the Heretaunga Plains and prediction of their soil water behaviour during border-dyke irrigation. (M.Phil.).
- Corker, R. B. 1977: Saturated hydraulic conductivity measurements on the Tokomaru silt loam. (Dip.Agr.Sc.).
- Owen, D. 1975: Hydrological investigation of subsurface drainage systems used for water harvesting. (B.Agr.Sc.(Hons.)).
- Sharples, A. N. 1977: Source and transport of phosphorus and nitrogen in a stream draining a predominantly pasture catchment. (Ph.D.).
- Wood, R. 1979: An evaluation of three flood estimation methods on the Massey catchment. (B.Agr.Sc.(Hons.)).

#### OTAGO UNIVERSITY

##### *Department of Geography*

- Bardsley, W. E. 1980: Some applications of extreme value theory to sedimentology. (Ph.D.).
- Bascand, G. M. 1981: Diffusion of overhead sprinklers: a study in frost hazard adjustment. (B.A.(Hons.)).
- Bray, J. C. 1981: The snow hazard in Mackenzie County: Farmer's perceptions and adjustments. (B.A.(Hons.)).
- Chamberlain, B. G. 1979: A rainfall-runoff model for Tomahawk Catchment. (B.S.(Hons.)).
- Chiew, W. Y. 1979: Stormflow and its relation to phosphate loading in Tomahawk Catchment. (M.Sc.).
- Cleugh, H. A. 1981: Evaporation estimates for irrigated pasture in the Maniototo. (B.Sc.(Hons.)).
- Grimmond, C. S. B. 1980: Runoff from seasonal snow in the Fraser catchment, Central Otago. (B.Sc.(Hons.)).
- Harrison, W. 1980: The calculation of evapotranspiration losses in the water balance of a small Central Otago catchment. (M.Sc.).
- McLay, A. D. 1980: A predictive model for mean monthly runoff. (B.Sc. (Hons.)).
- Murray, D. L. 1981: Effects of hillslope form and soil heterogeneity on runoff source areas. (Ph.D.).
- Paterson, J. D. 1980: Human response to flooding in Maita. (B.A. (Hons.)).
- Russ, L. M. 1981: Surface water tables in soils of the north east Taieri Plains. (Dip.Sci.).

#### VICTORIA UNIVERSITY OF WELLINGTON

##### *Department of Geography*

- Chaney, A. 1980: Hydrological characteristics of small catchments—

- particular reference to the relationship between rainfall and run-off and stream discharge. (B.Sc.).
- Clark, J. W. 1981: Surface run-off and infiltration in a small hill country catchment in the Wairarapa. (B.Sc.).
- Dalton, L. 1976: The Ruamahanga slip: its form, origin and age. (B.Sc.).
- Hutchings, J. 1976: The effect of urban development on the run-off characteristics of a drainage basin west of Johnsonville. (B.A.).
- Kerrison, G. C. 1981: Tunnel gully erosion in an east Wairarapa hill country catchment. (B.Sc.).
- McConchie, J. A. 1977: The geomorphic and hydrologic response of the Stokes Valley catchment to the 20th December, 1976 storm. (B.Sc.).
- Marx, S. L. 1976: The environmental impact of off-road vehicles—the effect on soil properties and geomorphic processes. (B.Sc.).
- Owen, R. C. 1981: The differential control of slope aspect on the stability and management of hill country soils. (M.Sc.).
- Owen, R. C. 1977: Interception losses in a stand of hard beech at Lake Pounui, south eastern Wairarapa. (B.Sc.).
- Salinger, M. J. 1981: The New Zealand climate: the instrumental record. (Ph.D.).
- Schofield, R. J. 1979: Suburban geomorphology—the response and effects of suburbanisation upon the geomorphology of the Wellington fault zone, Western Hutt Valley. (B.Sc.).
- Stubbe, F. 1981: A changing riverscape 1854 to 1880, the Lower Waiohine catchment, Greytown, Wairarapa. (B.A.).

#### WAIKATO UNIVERSITY

##### *Department of Earth Sciences*

- Bennett, J. R. 1975: Implication of alterations in catchment and stream channel characteristics in the Upper Mangawhara Valley. (M.Sc.).
- Bridson, J. D. 1981: The effects of an extreme meteorological event on sediment production in a small steepland catchment, South Auckland, New Zealand. (M.Sc.).
- Davies-Colley, R. J. 1976: Sediment dynamics of Tauranga Harbour and the Tauranga Inlet. (M.Sc.).
- Lynch, R. P. 1975: Effects of land use of infiltration and other physical properties of Kaharoa and fine gravelly sand at Kaharoa. (M.Sc.).
- Mann, R. B. 1980: The effects of urbanization on a small hydrological catchment. (M.Sc.).
- Marks, G. P. 1975: Sedimentology of Omaro barrier spit, Whangapoua Harbour, Coromandel Peninsula. (M.Sc.).
- Millar, A. S. 1980: Hydrology and surficial sediments of Whangarei Harbour. (M.Sc.).
- Phillips, C. J. 1980: Hydrology and sedimentology of an artificial lake, Lake Matahina, N.Z. (M.Sc.).
- Phipps, A. G. 1982: Solute movement in a steepland catchment. (M.Sc.).
- Simmers, I. 1975: An analysis of the surface water resources of the Upper Taieri River, Otago. (Ph.D.).
- Smith, D. B. 1980: Sea level oscillation, hydrology and sedimentology of Mercury Bay. (M.Sc.).