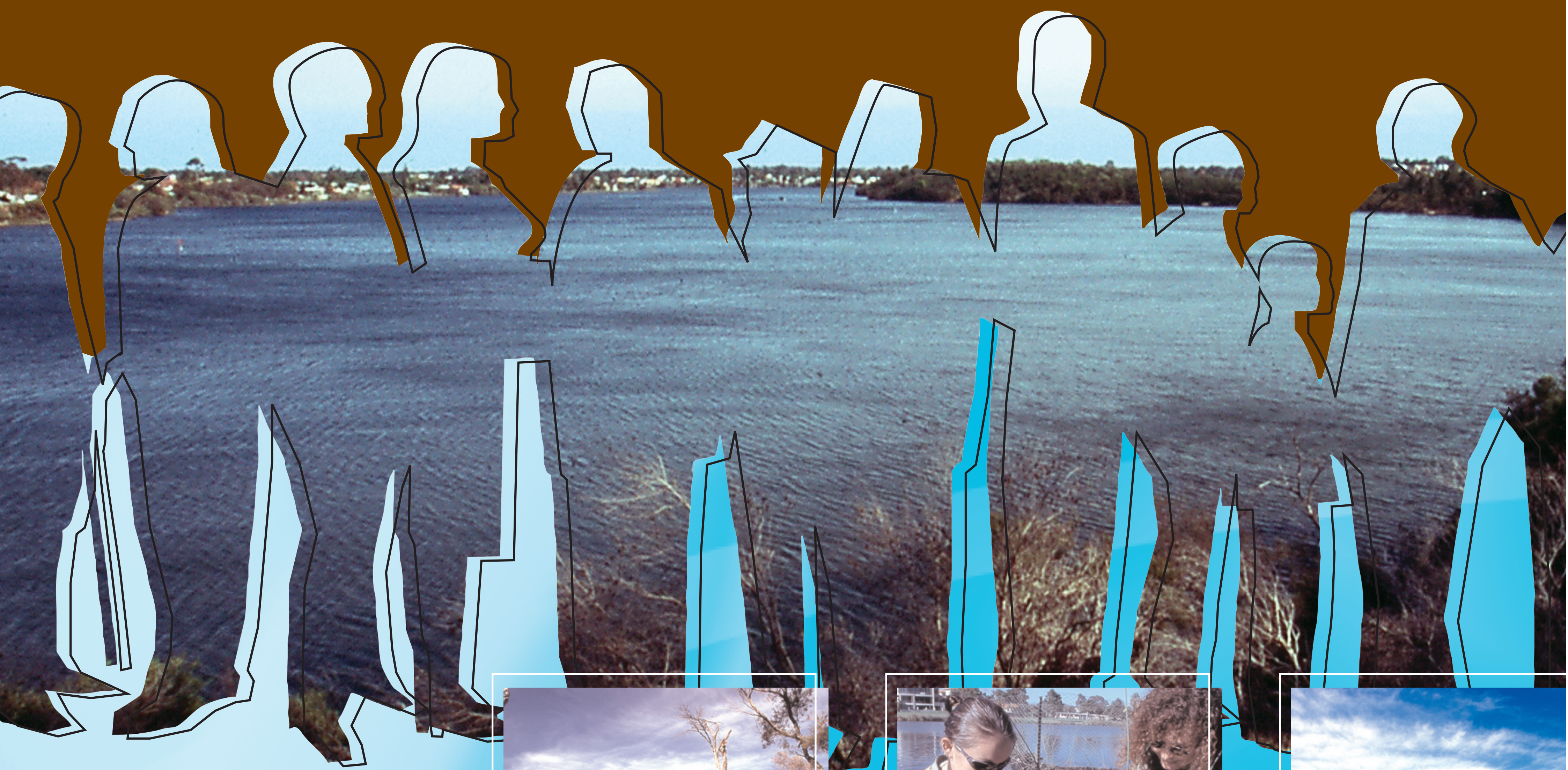
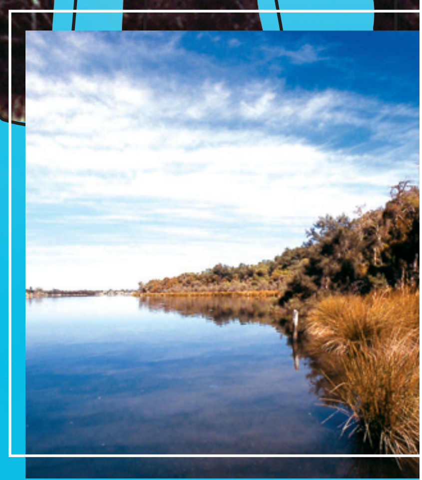
City of South Perth

INTEGRATED CATCHMENT MANAGEMENT PLAN

VOLUME 2 STUDY REPORT

SEPTEMBER 2004





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ecoscape

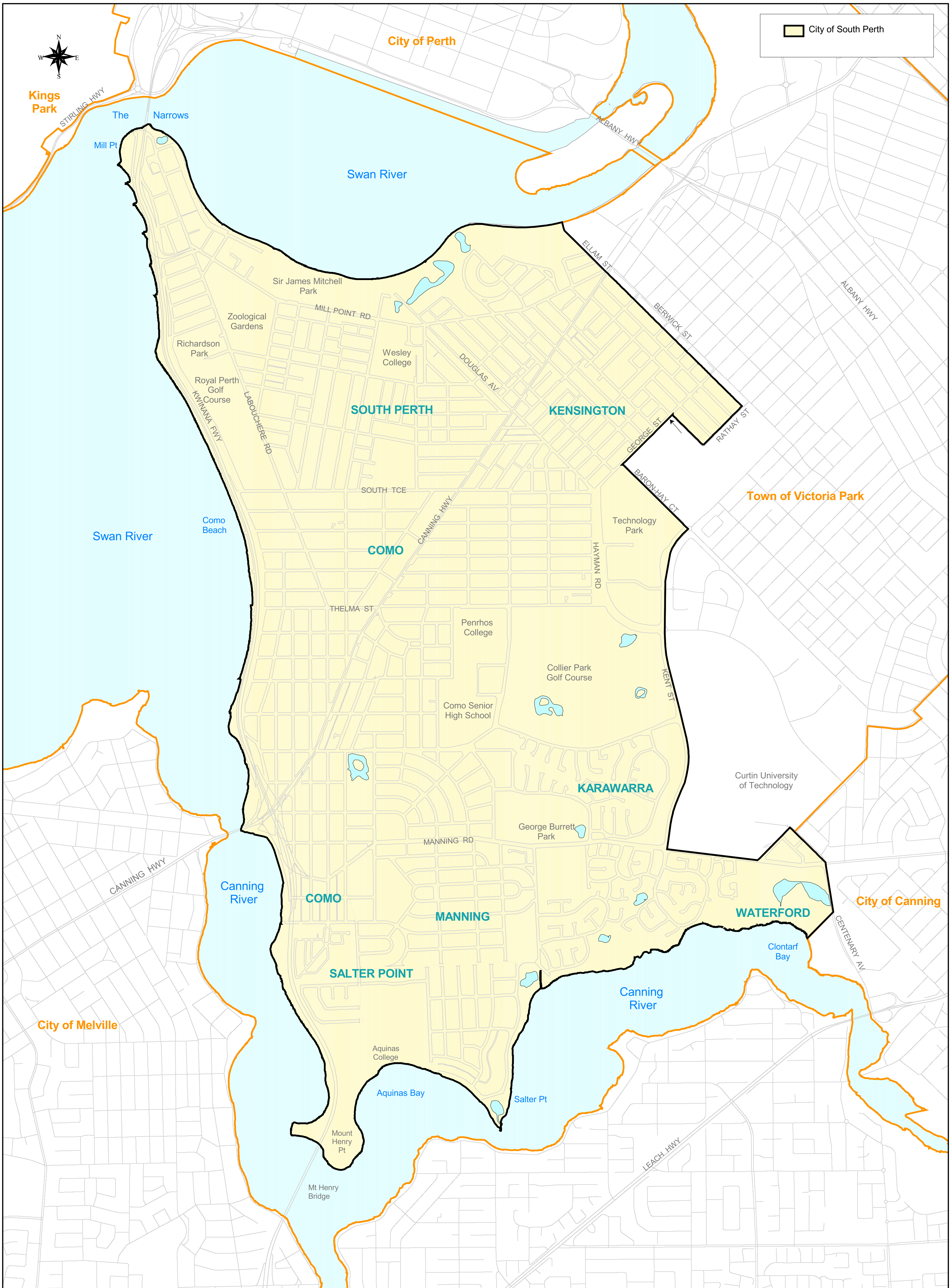

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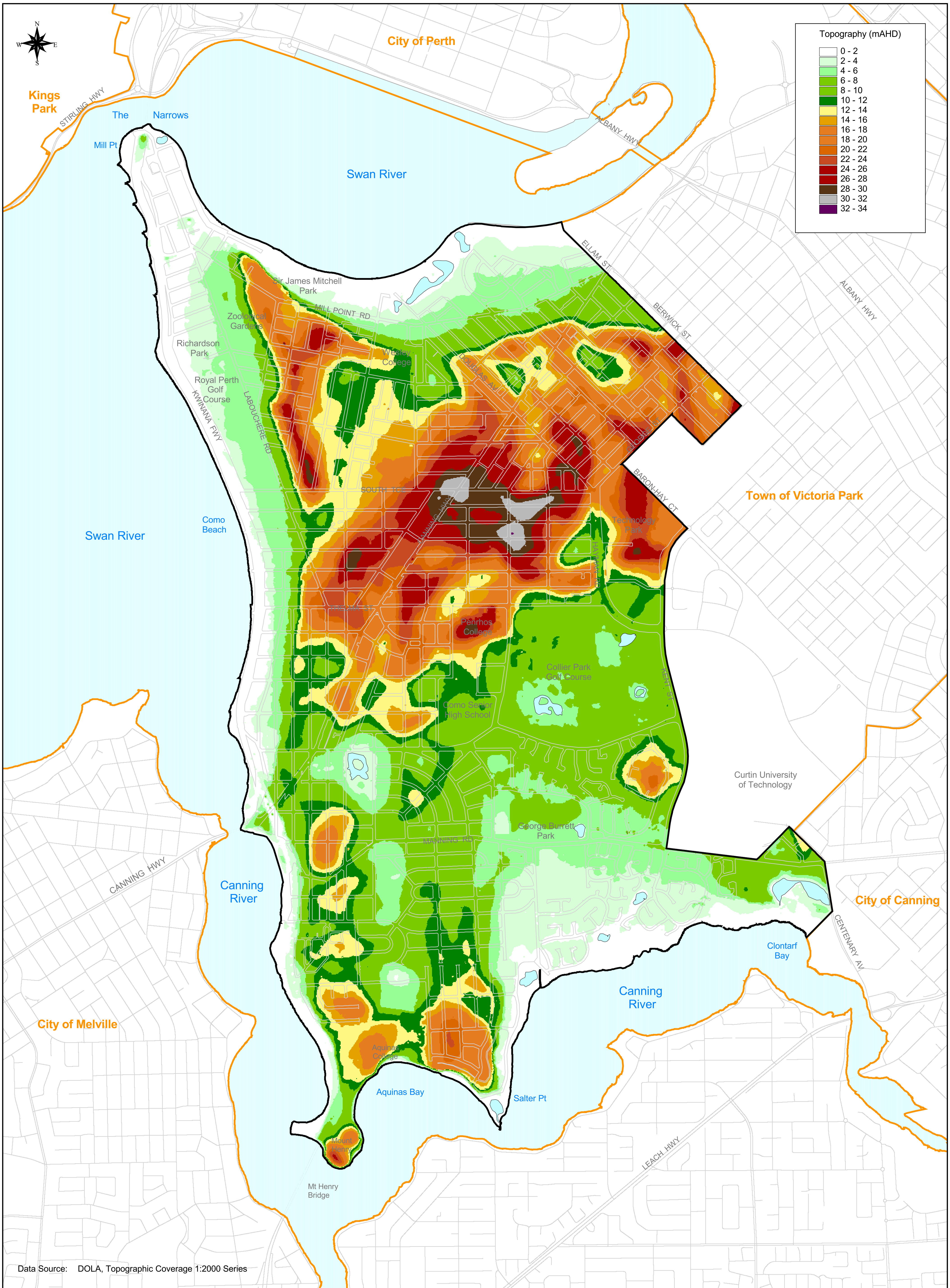
Figure 1: Location Map / Study Area



Data Source: DOLA, Topographic Coverage 1:2000 Series

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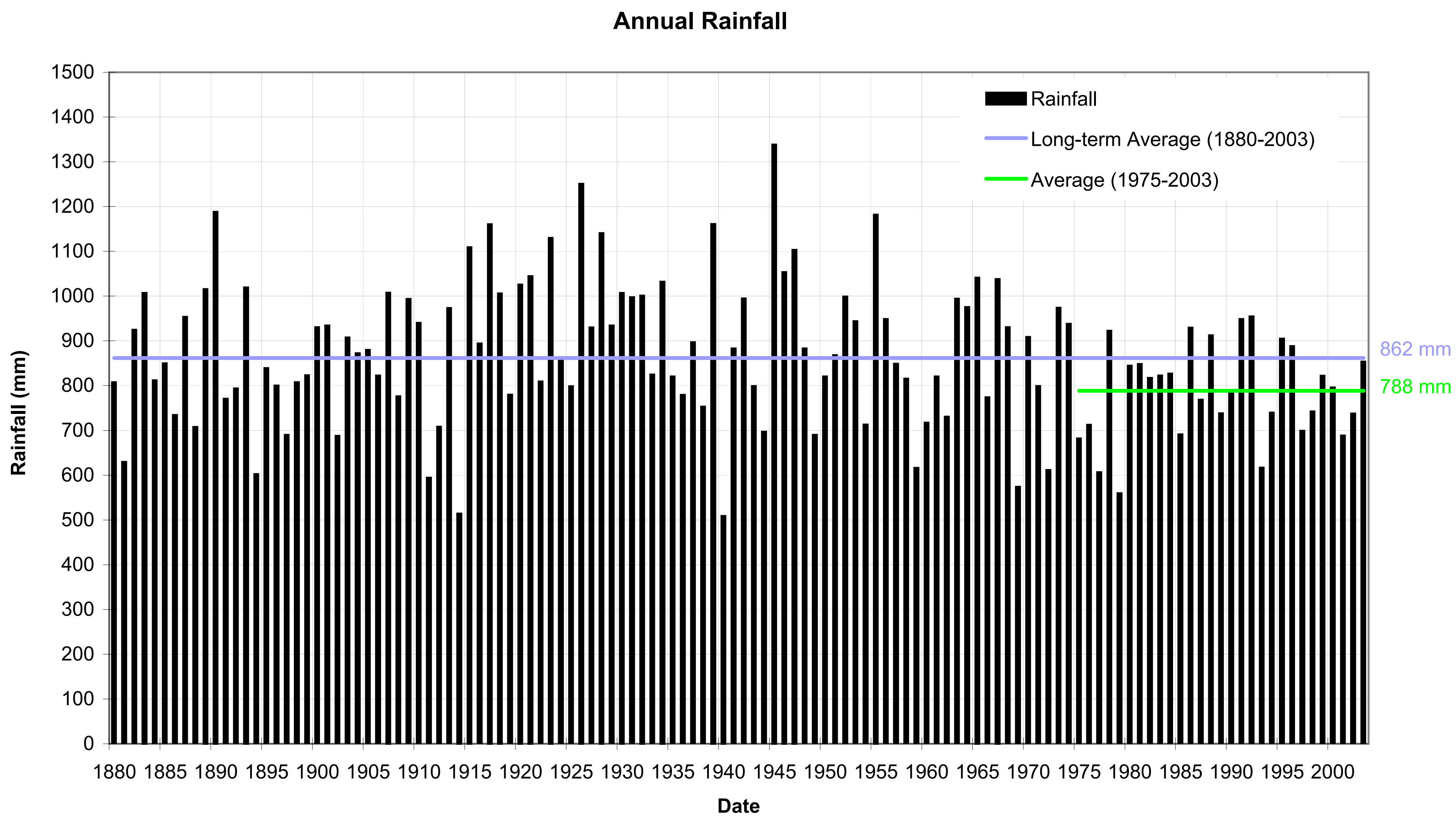
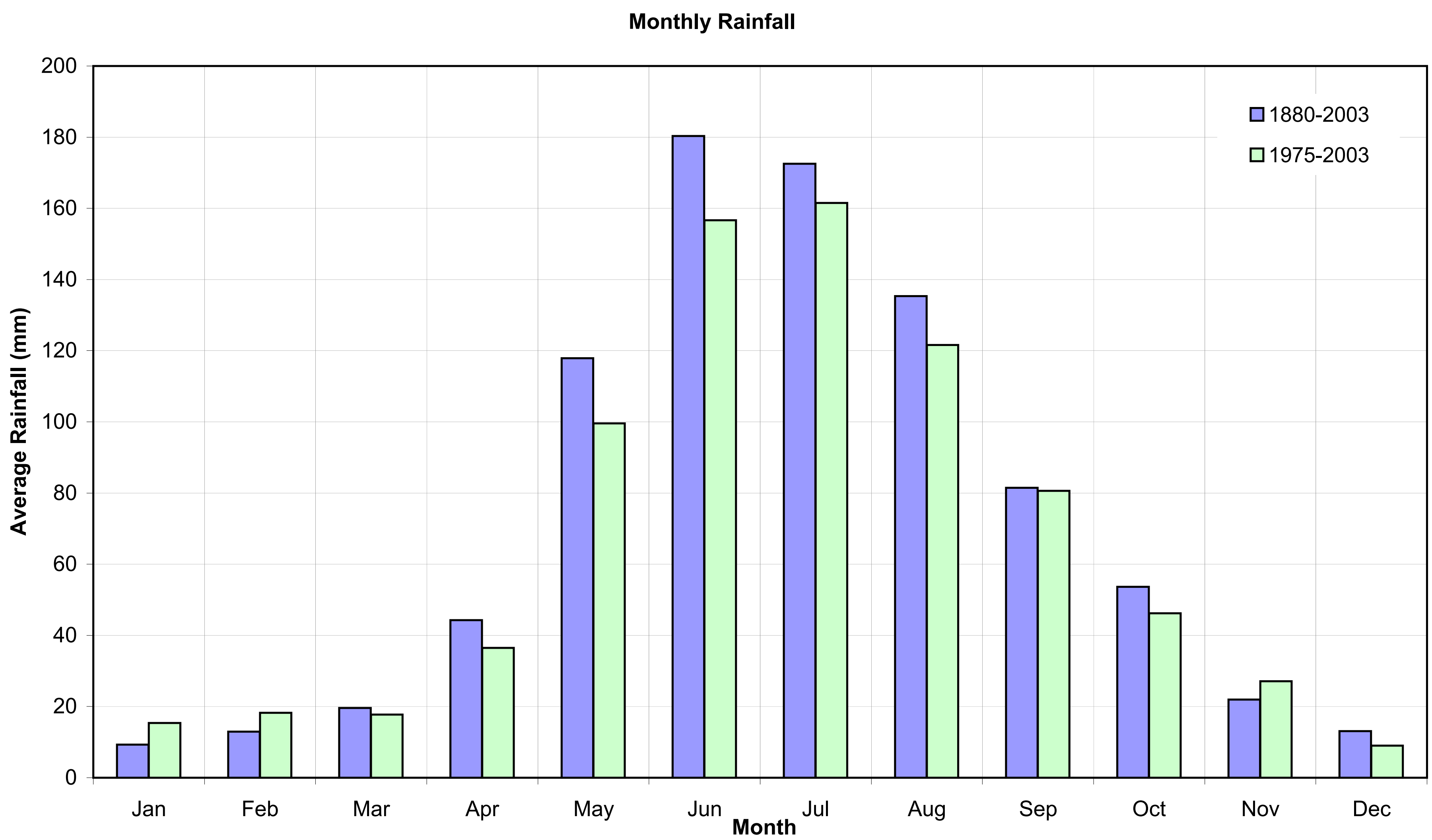
Figure 2: Topography





Data Source: Rainfall Data based on Perth Regional Office (Bureau of Meteorology)

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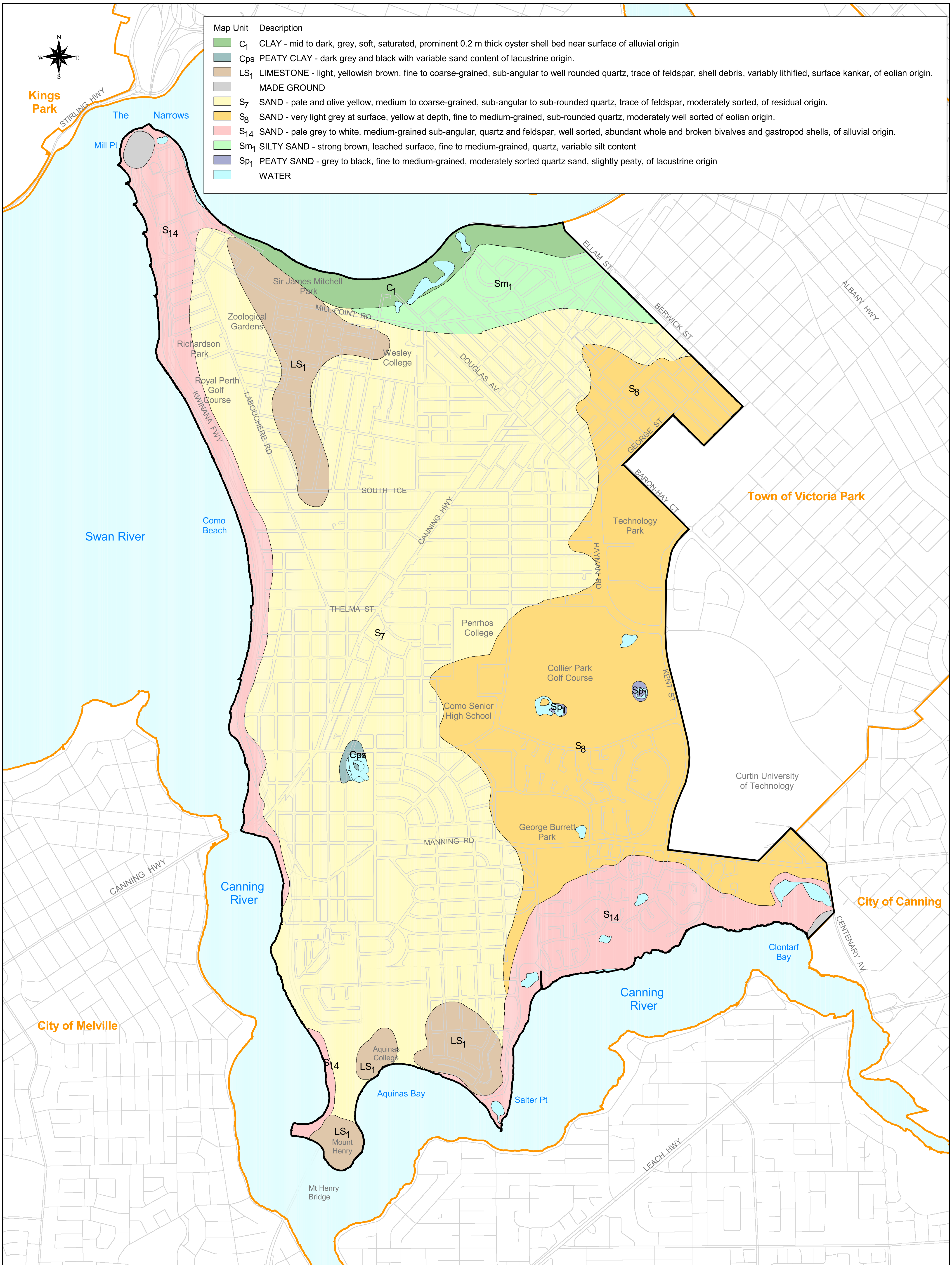
Figure 3: Annual and Monthly Rainfall



Data Source: Gozzard J.R. (1986) Perth Sheet 2034 II and part 2034 III and 2134 III, Fremantle Sheets 2033 I and 2033 IV, Armadale part Sheets 2033 I and 2133 IV, Perth Metropolitan Region Environmental Geology Series, GSWA

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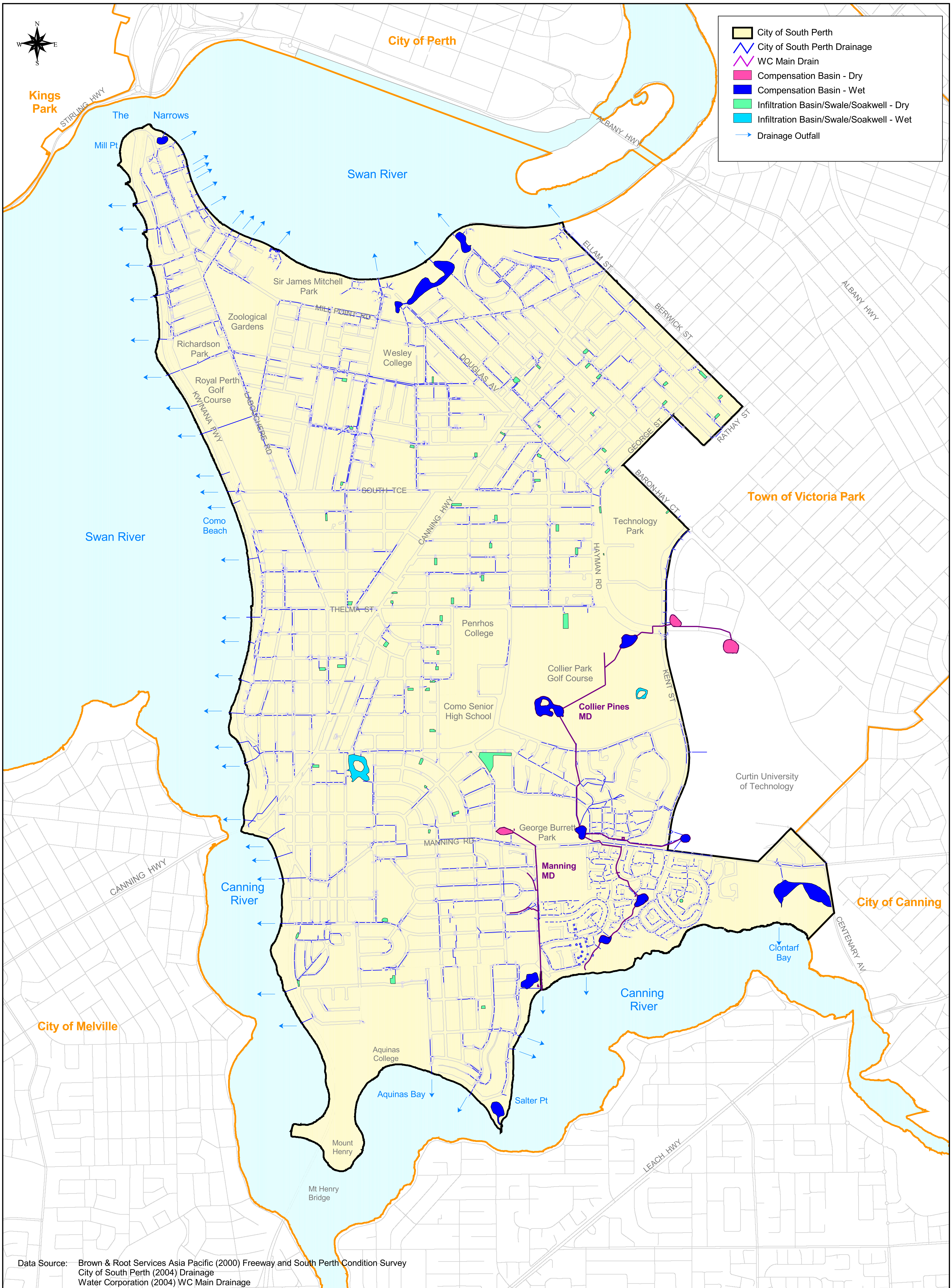
Figure 4: Environmental Geology Map



Data Source: Brown & Root Services Asia Pacific (2000) Freeway and South Perth Condition Survey
City of South Perth (2004) Drainage
Water Corporation (2004) WC Main Drainage

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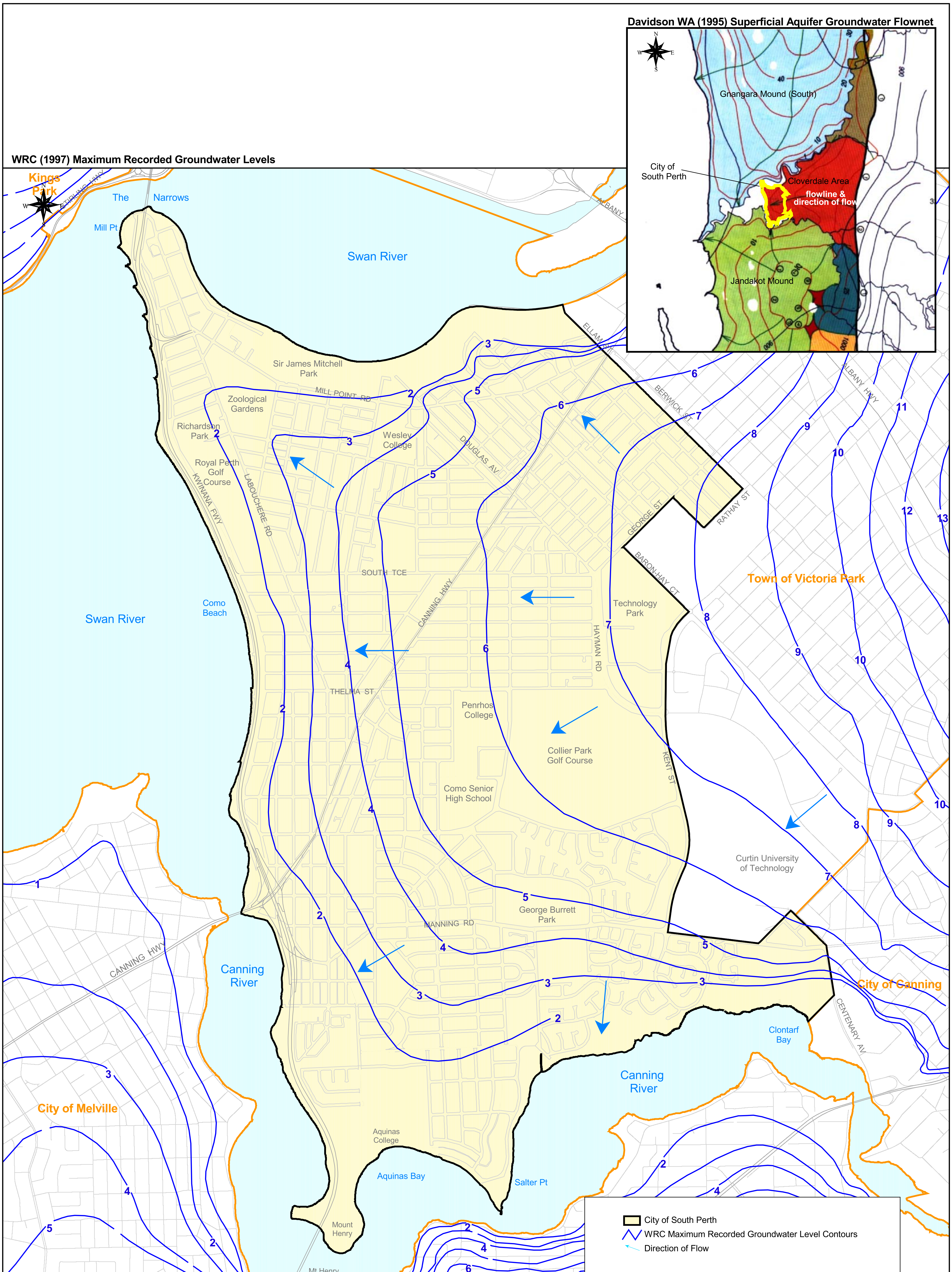
Figure 5: Drainage Overview (City of South Perth & Water Corporation)



Data Source: WRC (1997a) Perth Groundwater Atlas
Davidson, W.A. (1995) Hydrogeology and Groundwater Resources of the Perth Region Western Australia, Dept of Minerals and Energy, Bulletin 142

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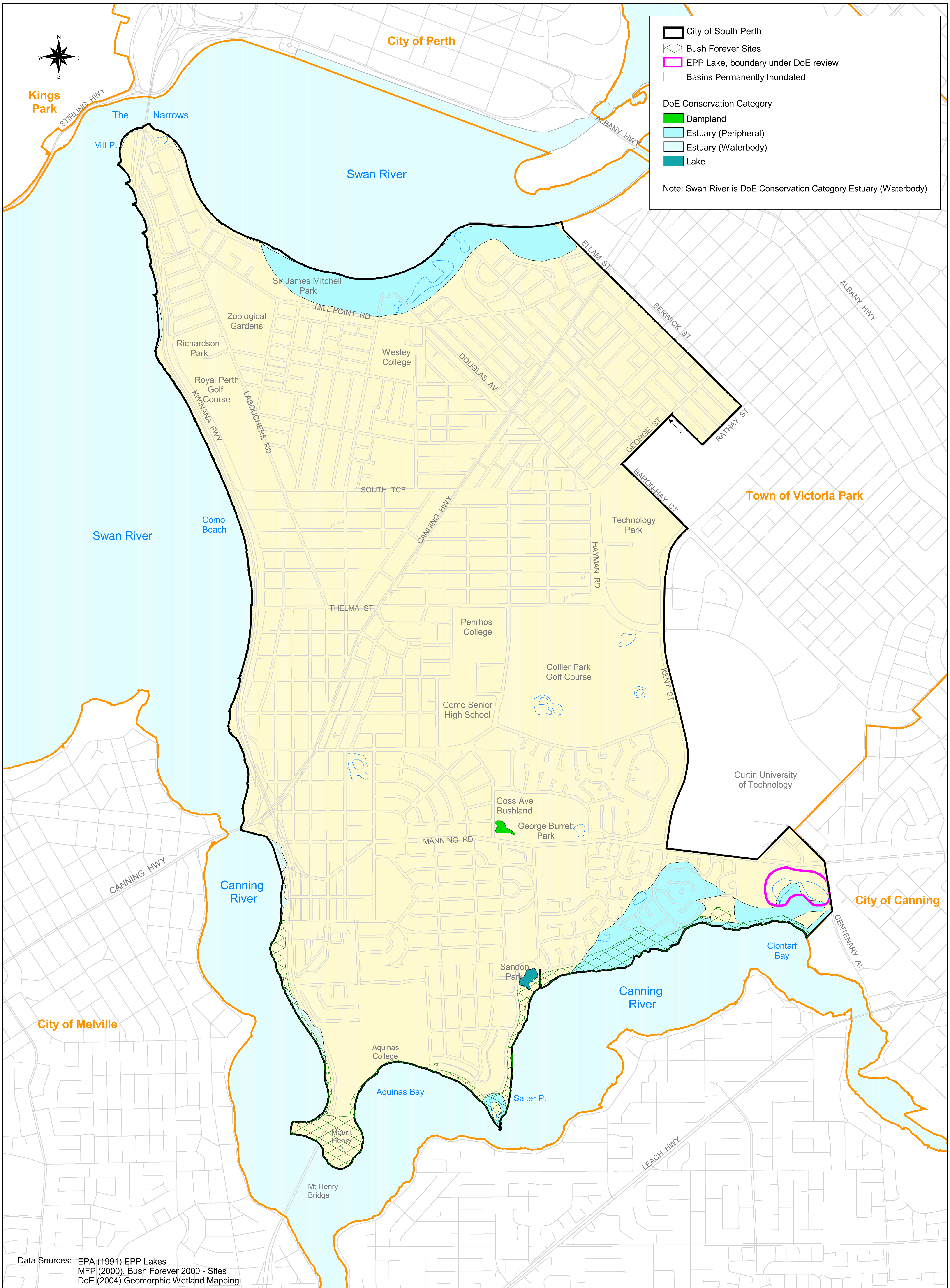
Figure 6: Maximum Recorded Groundwater Level Contours



Data Sources: EPA (1991) EPP Lakes
MFP (2000), Bush Forever 2000 - Sites
DoE (2004) Geomorphic Wetland Mapping

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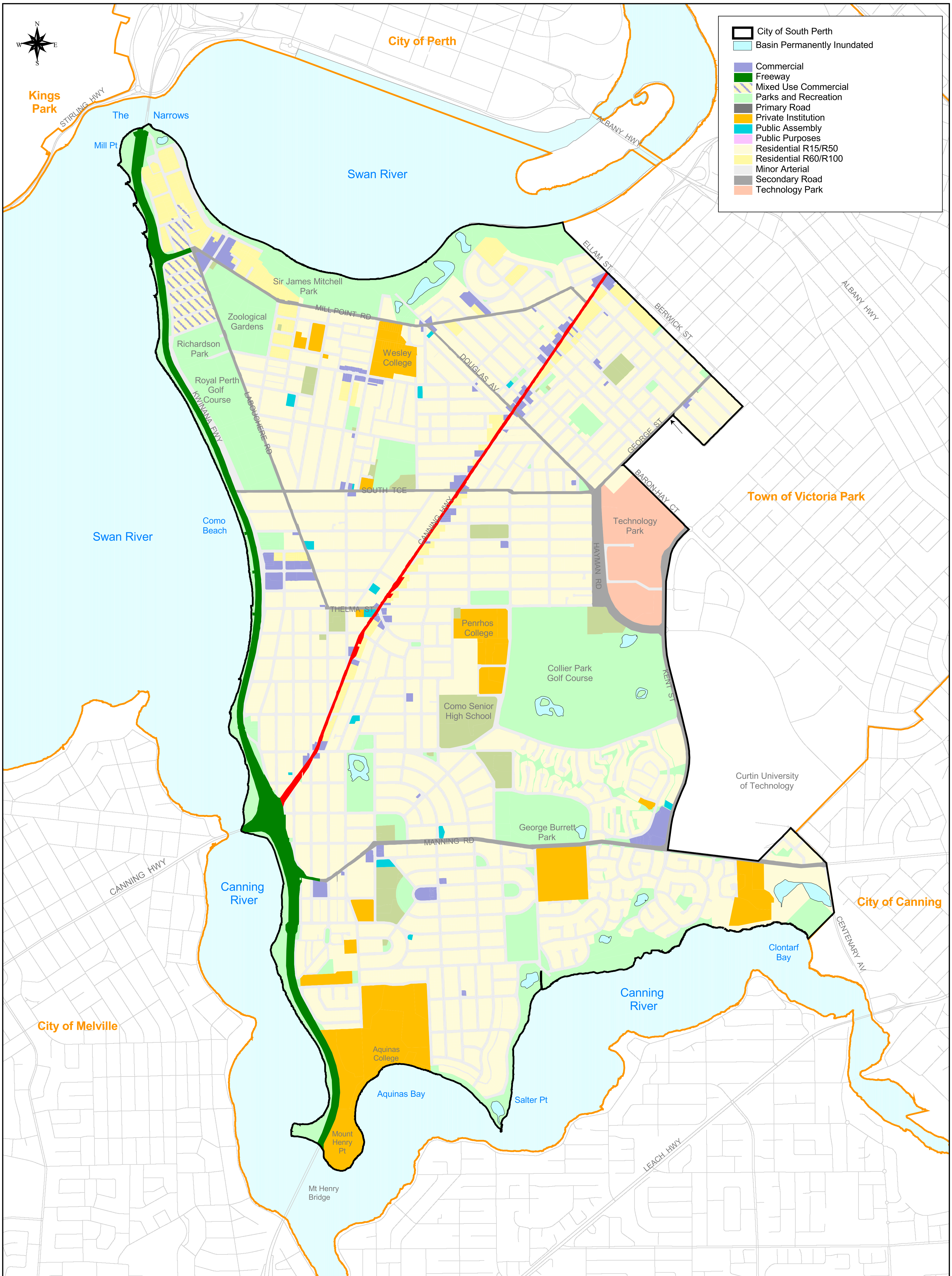
Figure 7: DoE Conservation Category Wetlands, EPP Lakes and Bush Forever Sites



Data Source: City of South Perth (2004) Cadastre, Local Town Planning Scheme

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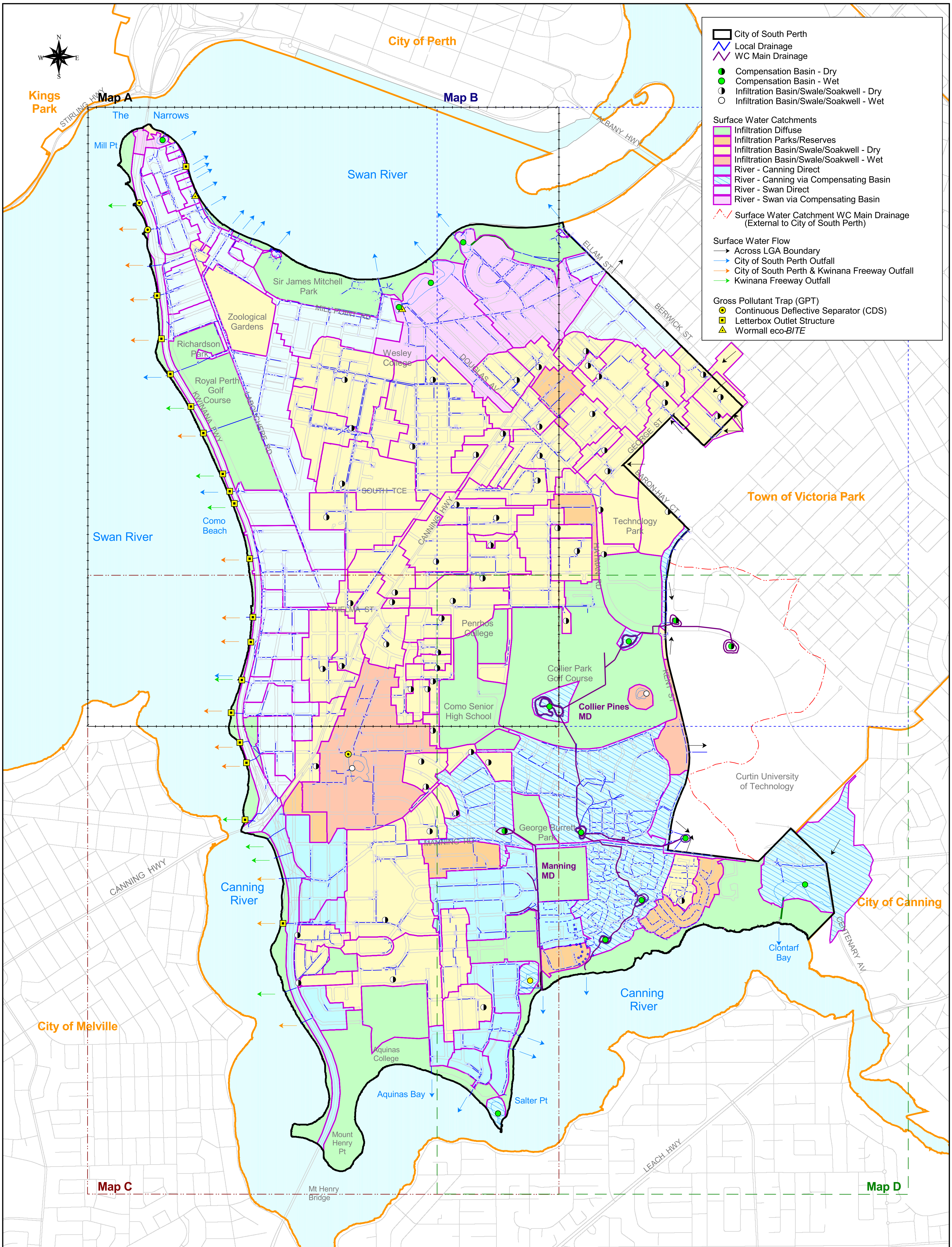
Figure 8: Land Use & Road Classification



Data Source: Brown & Root Services Asia Pacific (2000) Freeway and South Perth Condition Survey
City of South Perth (2004) Drainage Plans, GPT and Sump Locations
Main Roads WA (2004) Narrows Bridge Duplication Drainage Plans
Water Corporation (2004) City of South Perth Main Drains

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Figure 9: Surface Water Catchment Mapping Overview

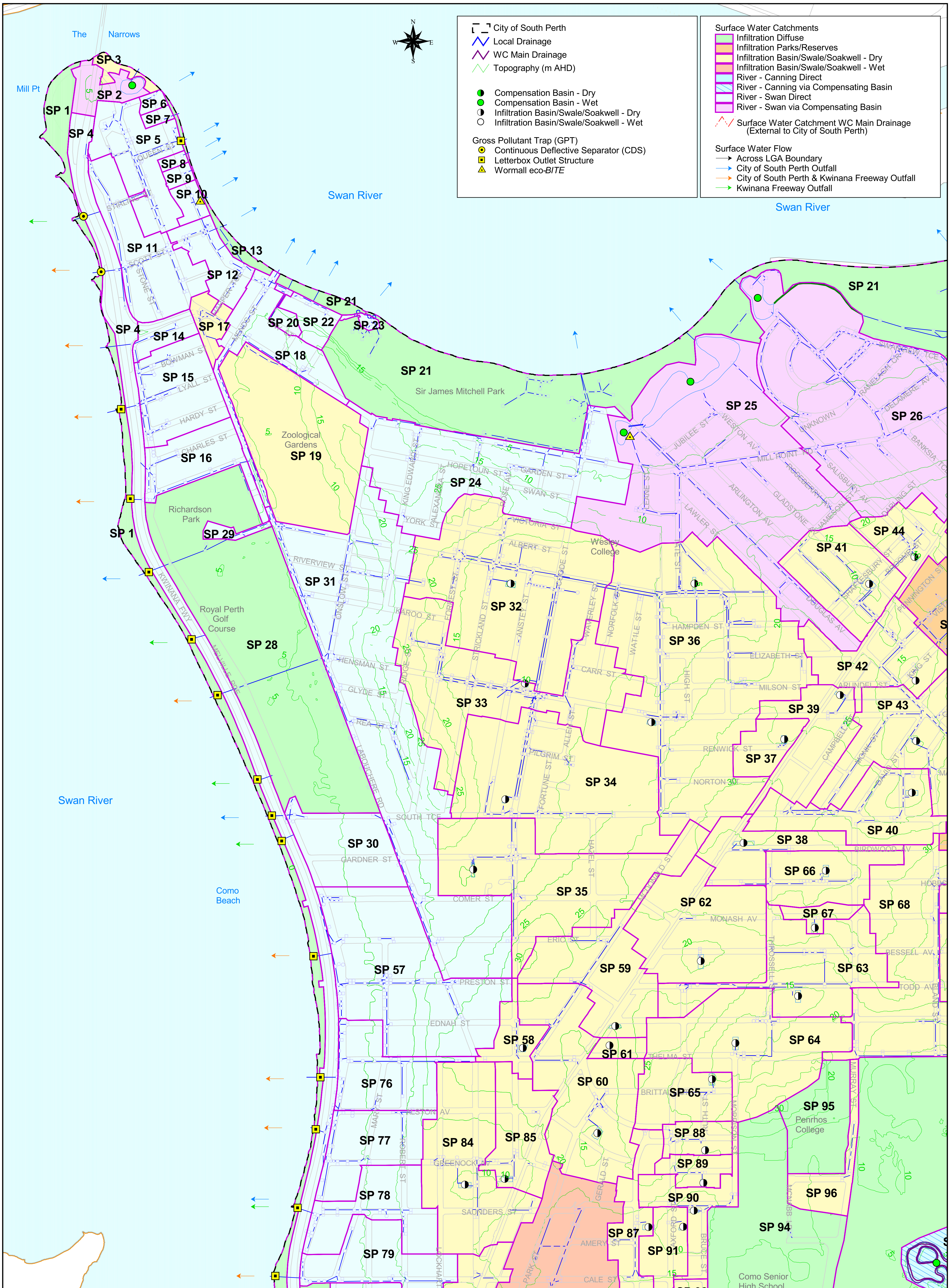

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Figure 10: Surface Water Catchment Mapping Map A

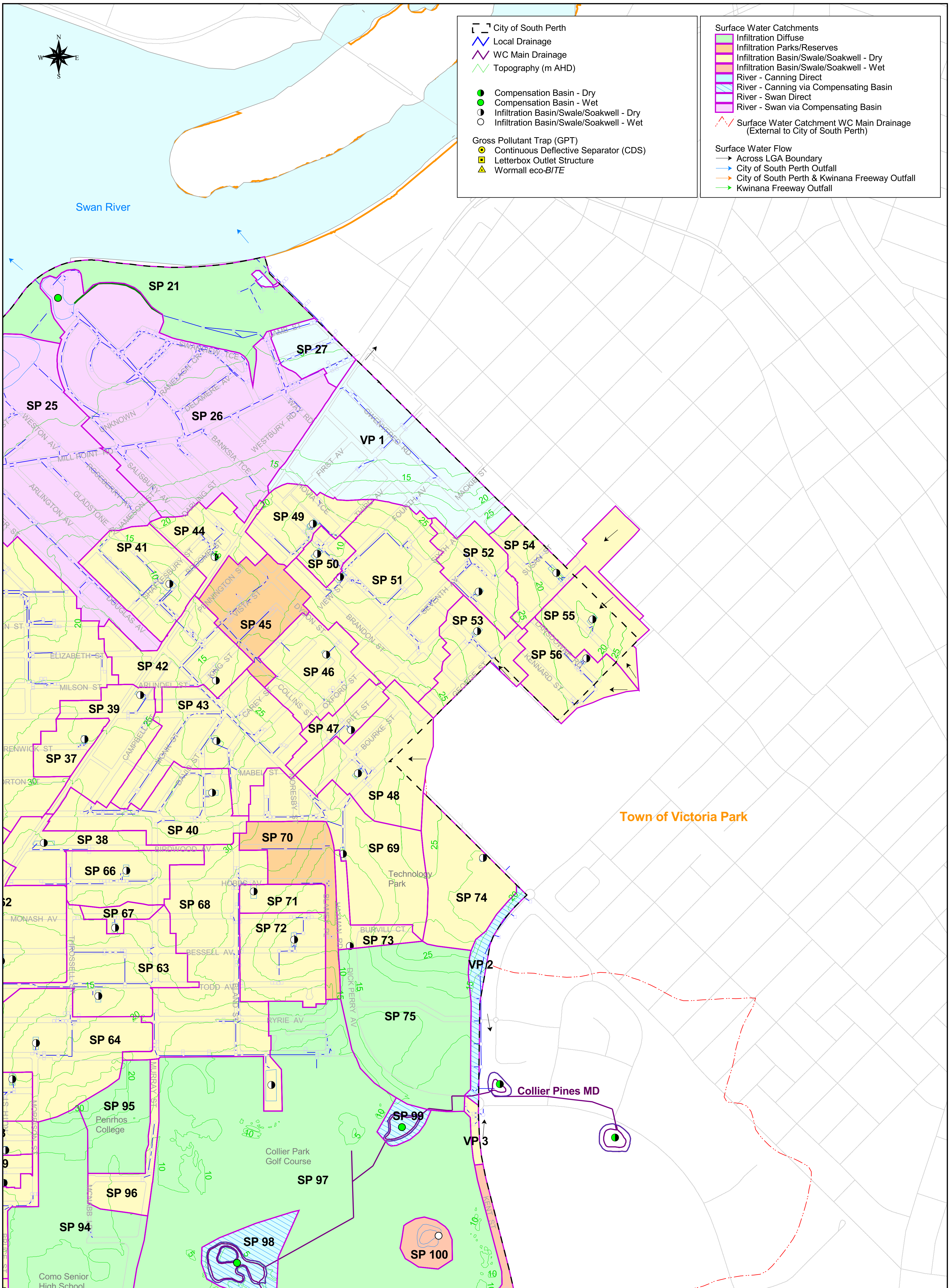

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Figure 11: Surface Water Catchment Mapping Map B

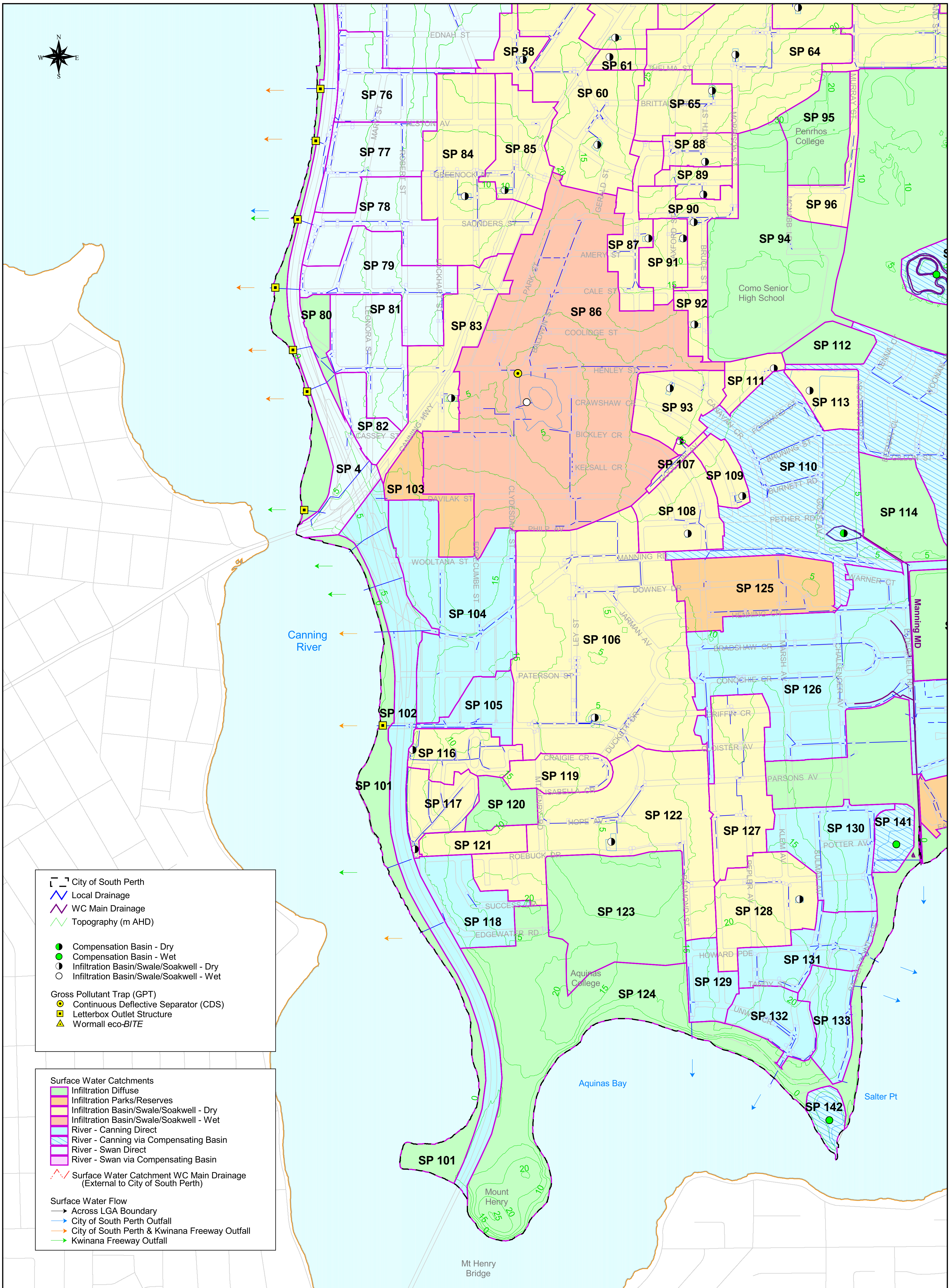

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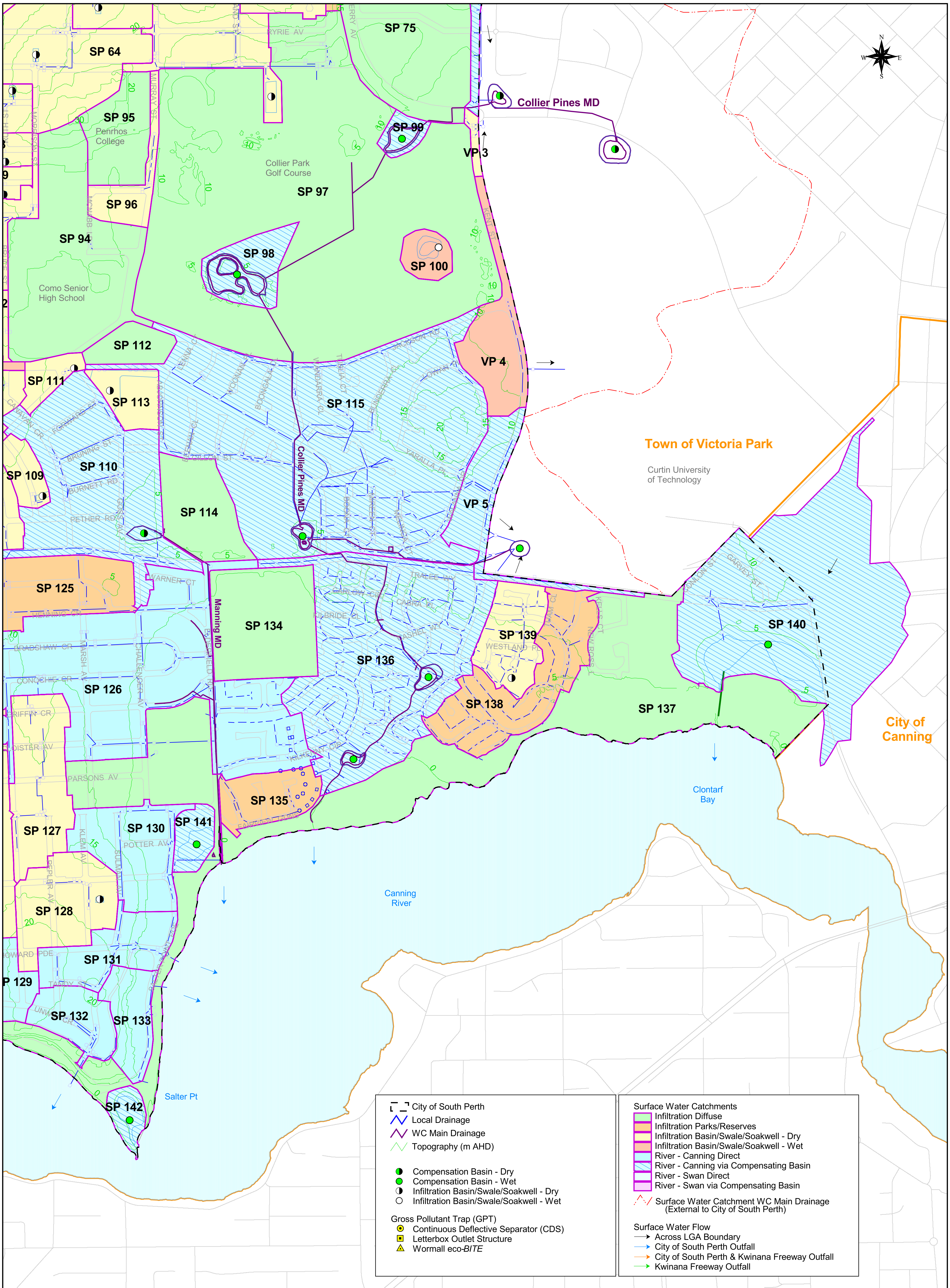
Figure 12: Surface Water Catchment Mapping
Map C



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Scale 1:12000

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Figure 13: Surface Water Catchment Mapping Map D

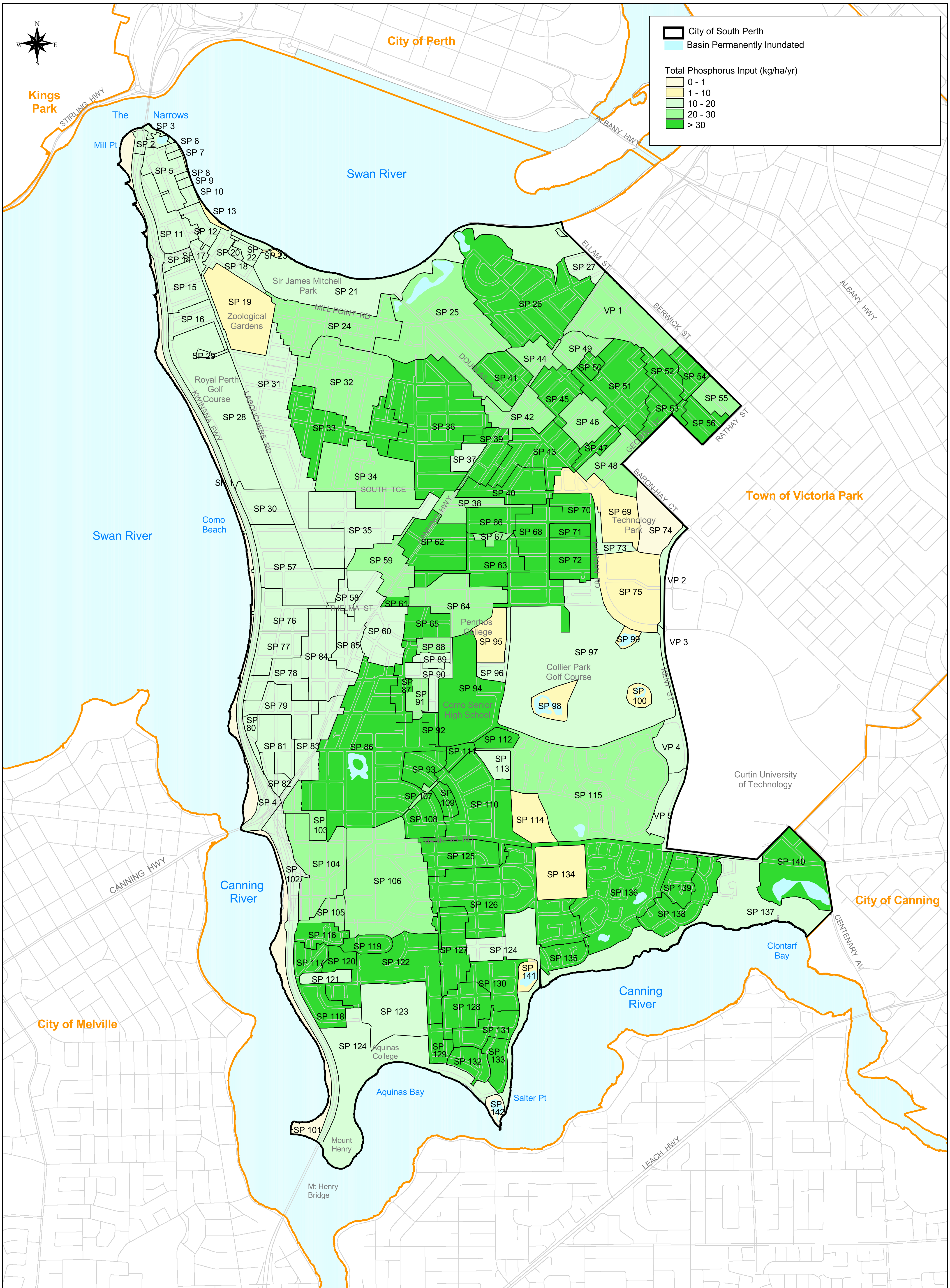

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Figure 14: Surface Water Catchments Nutrient Input by Total Phosphorus

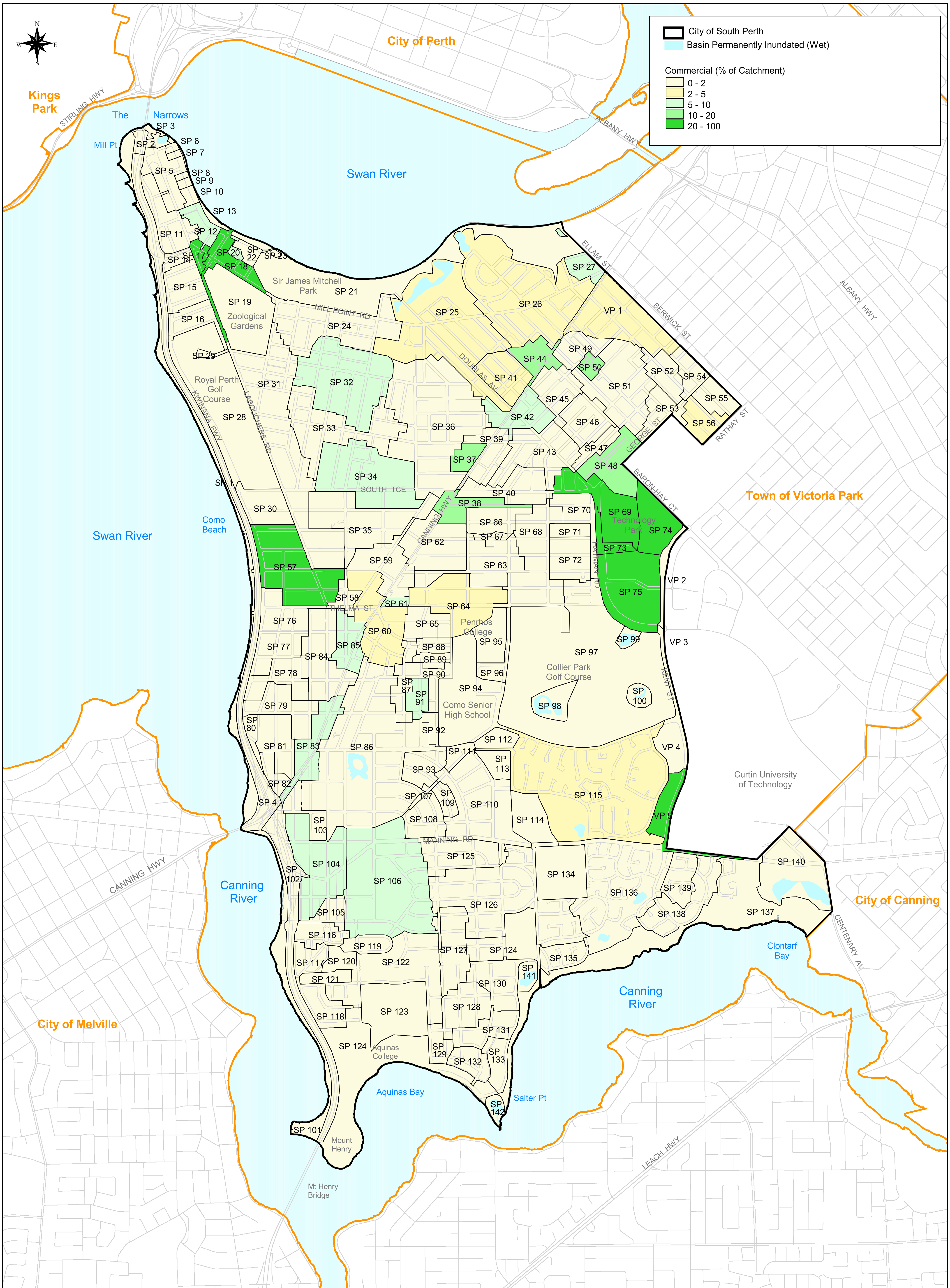

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Figure 15: Surface Water Catchments
Commercial by Percentage

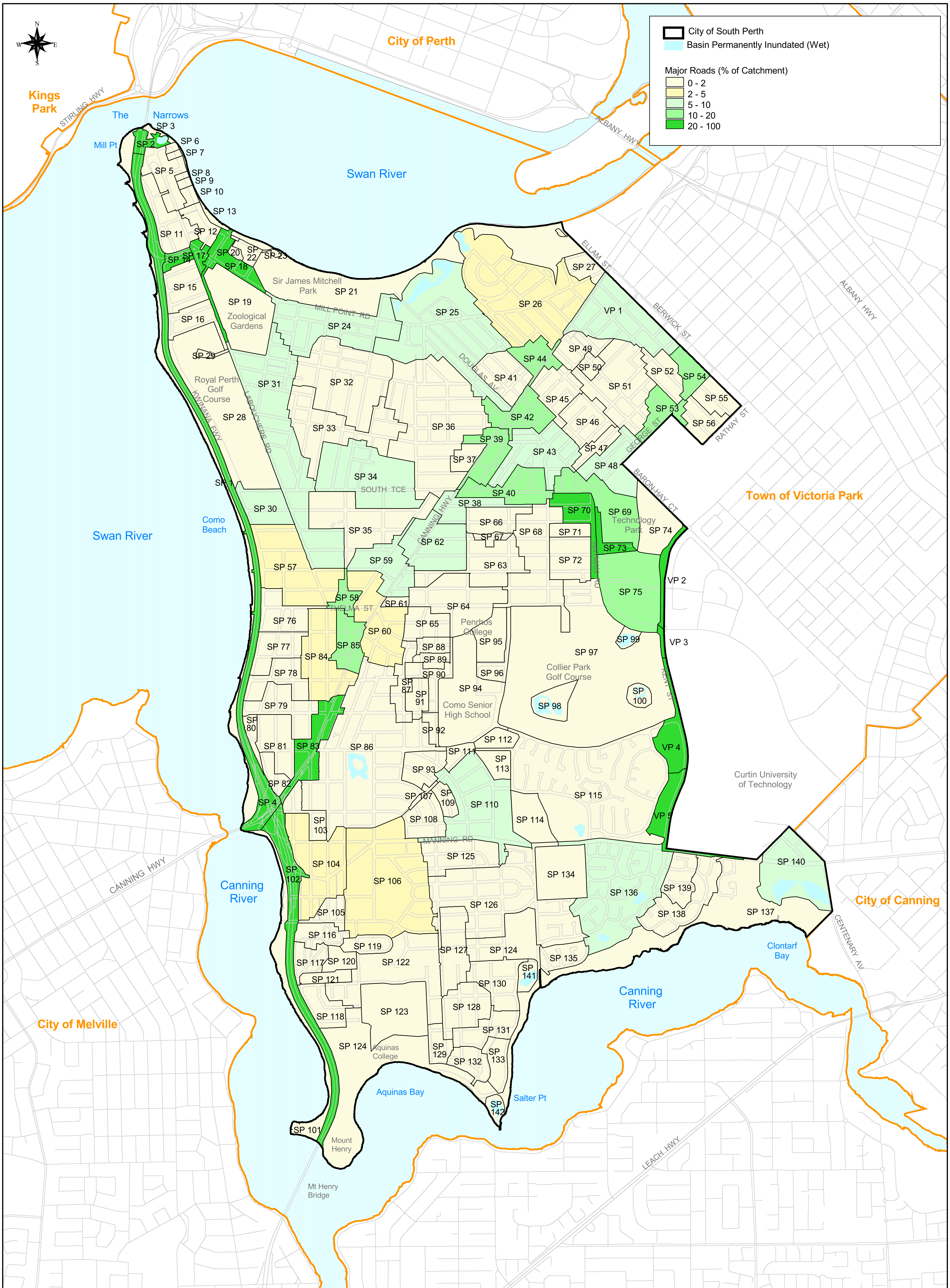

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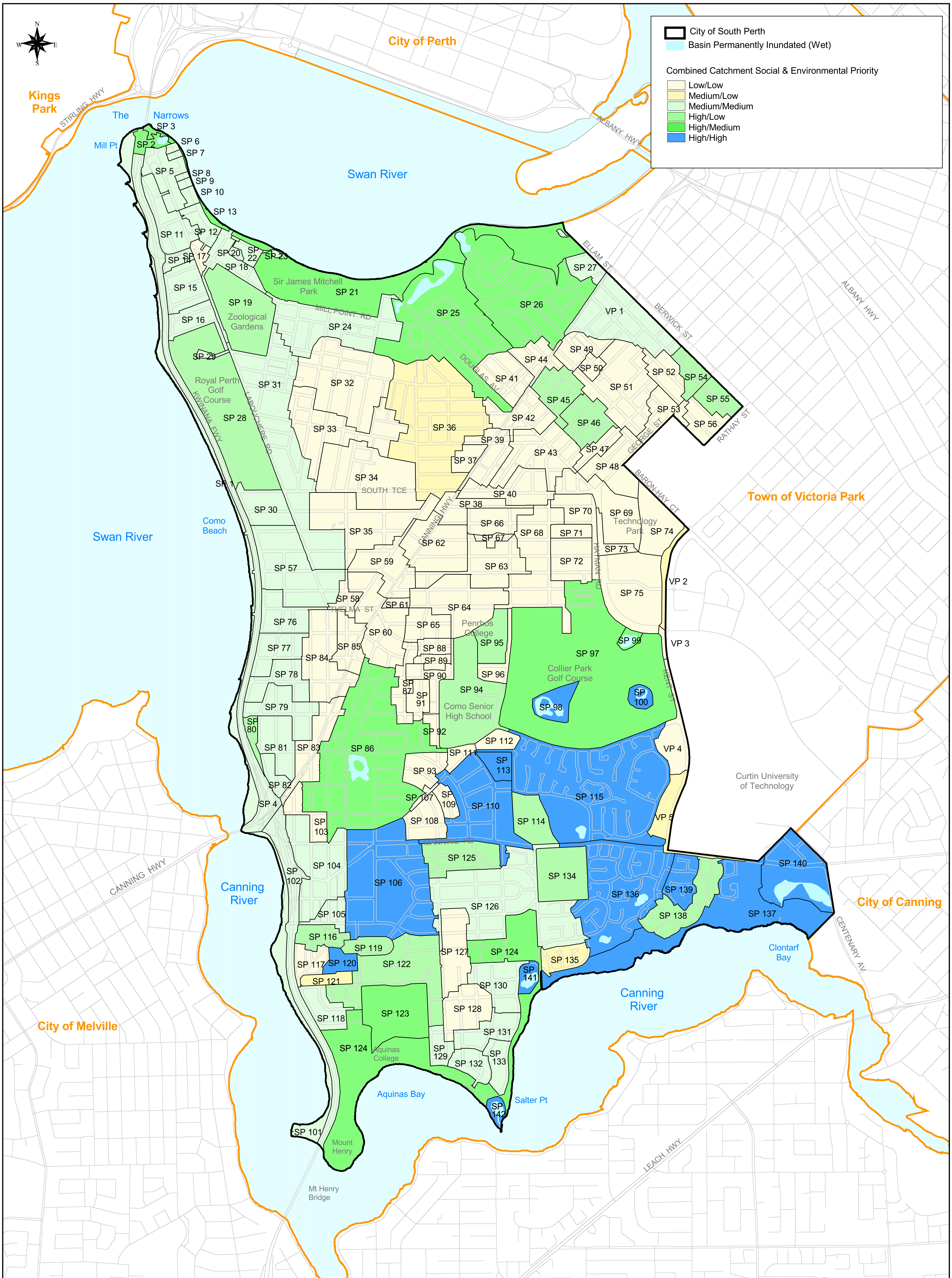
Figure 16: Surface Water Catchments
Major Roads Area by Percentage



Data Source: Ecoscape (2004) City of South Perth ICM: Environmental Management

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Figure 17: Combination of Priorities based on Social & Environmental Attributes

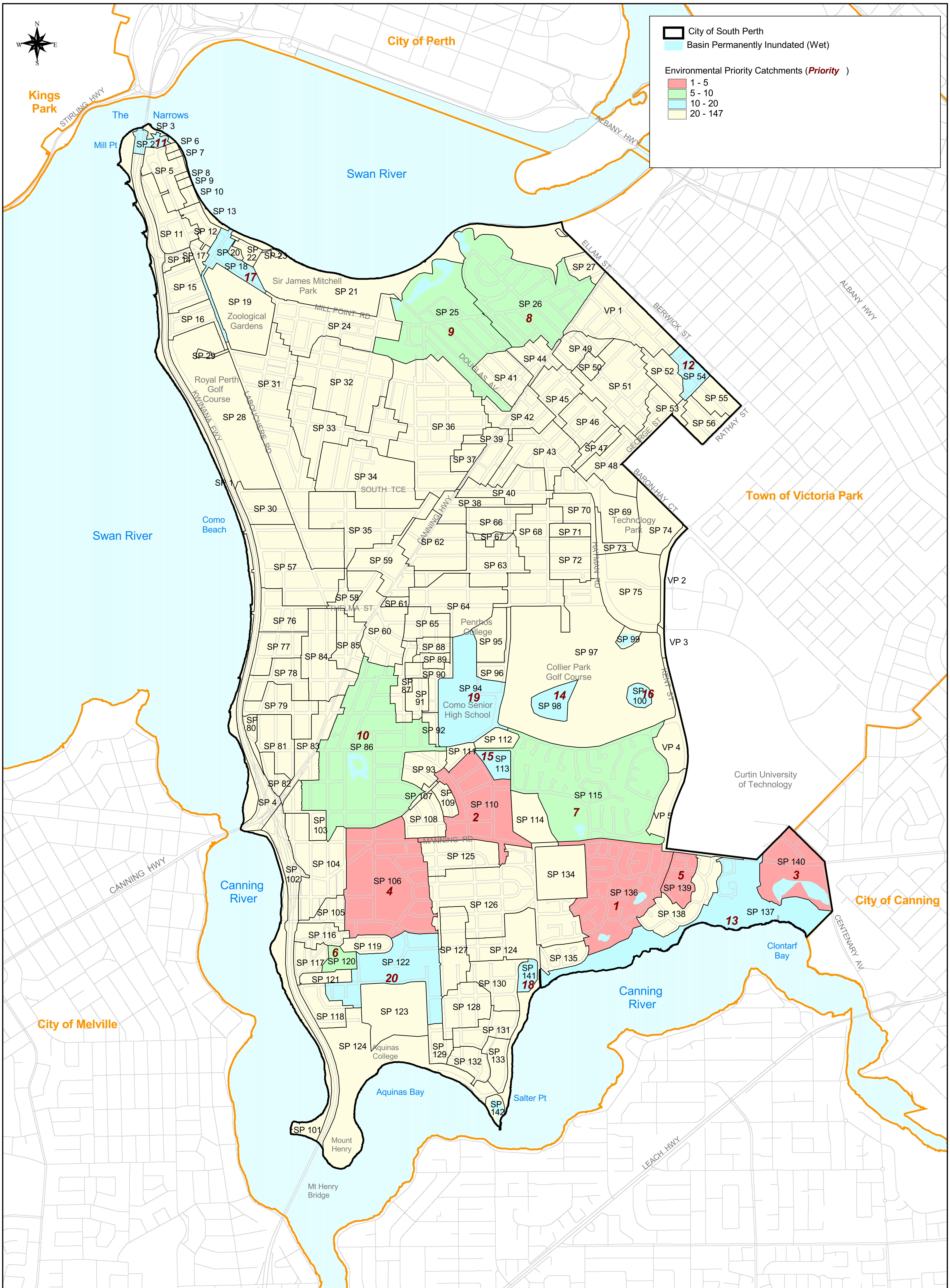

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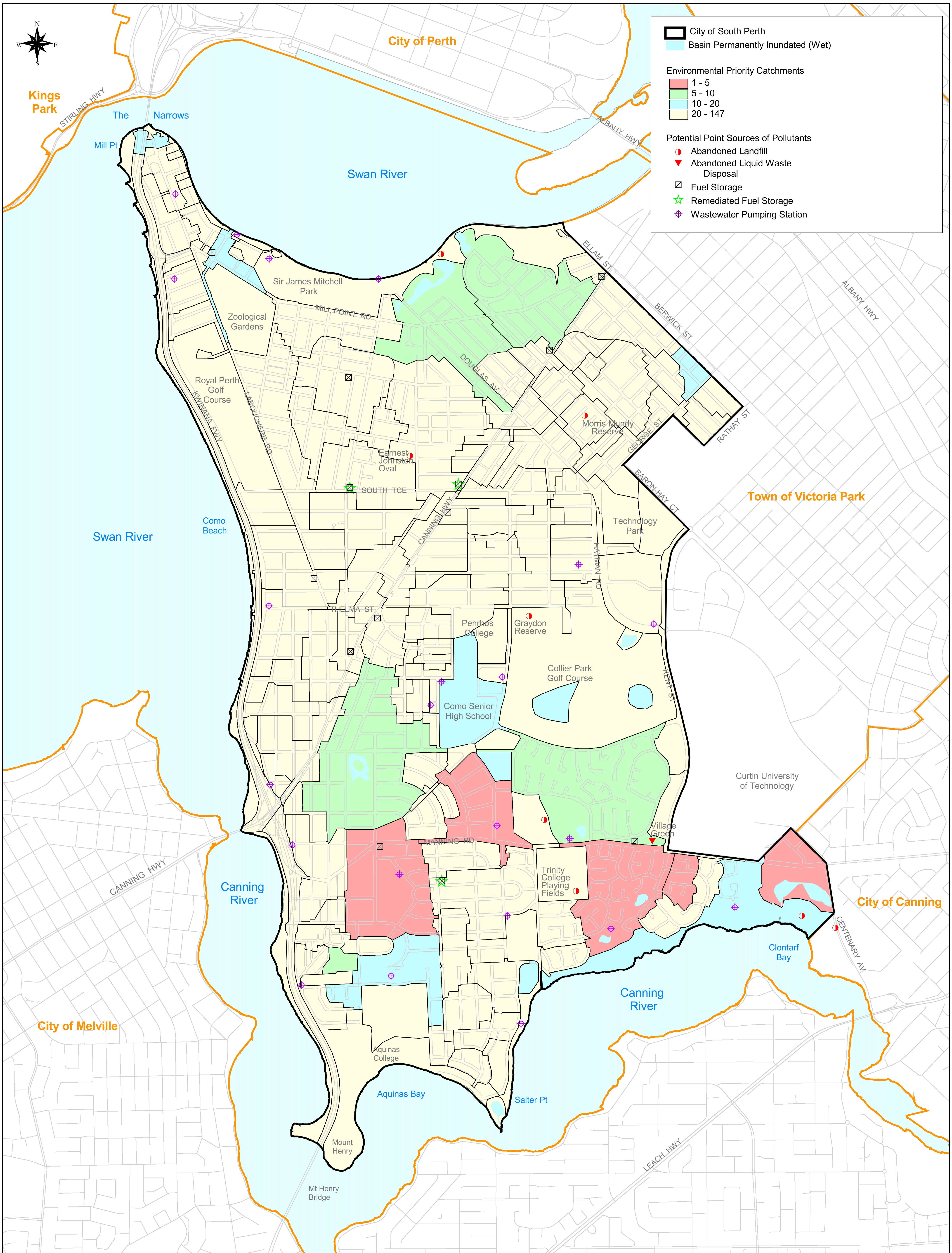
Figure 18: Environmental Priority Catchments



Data Sources: Hirschberg, K.J. (1991) Inventory of Known and Inferred Point Sources of Groundwater Contamination in the Perth basin, W.A. Perth: Department of Mines, WA
WC (2004) Location of Wastewater Pumping Stations
WRC (1997) Perth Groundwater Atlas

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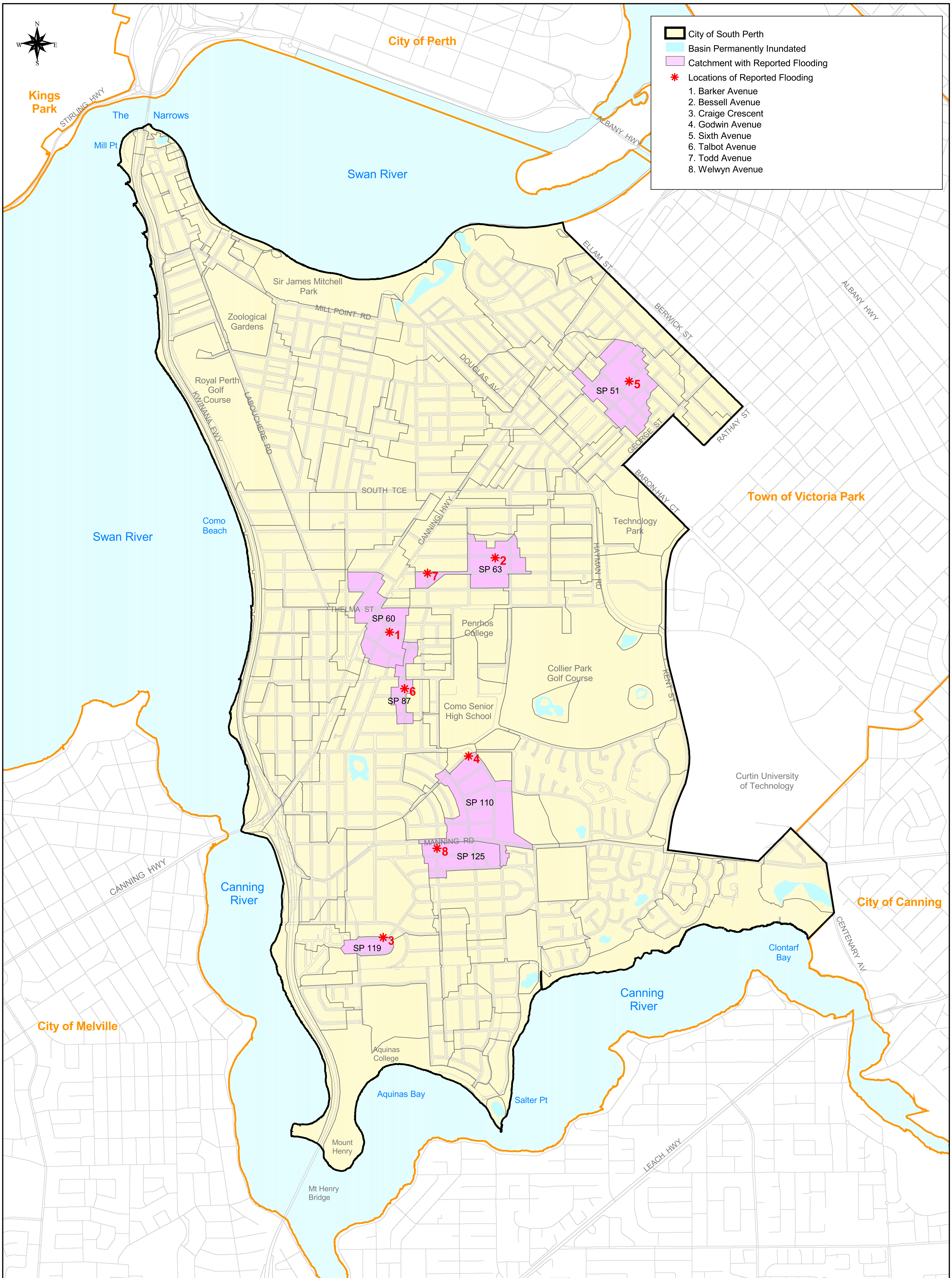
Figure 19: Environmental Priority Catchments & Potential Point Sources of Pollutants



Data Sources: City of South Perth (2004) Drainage Problem Areas

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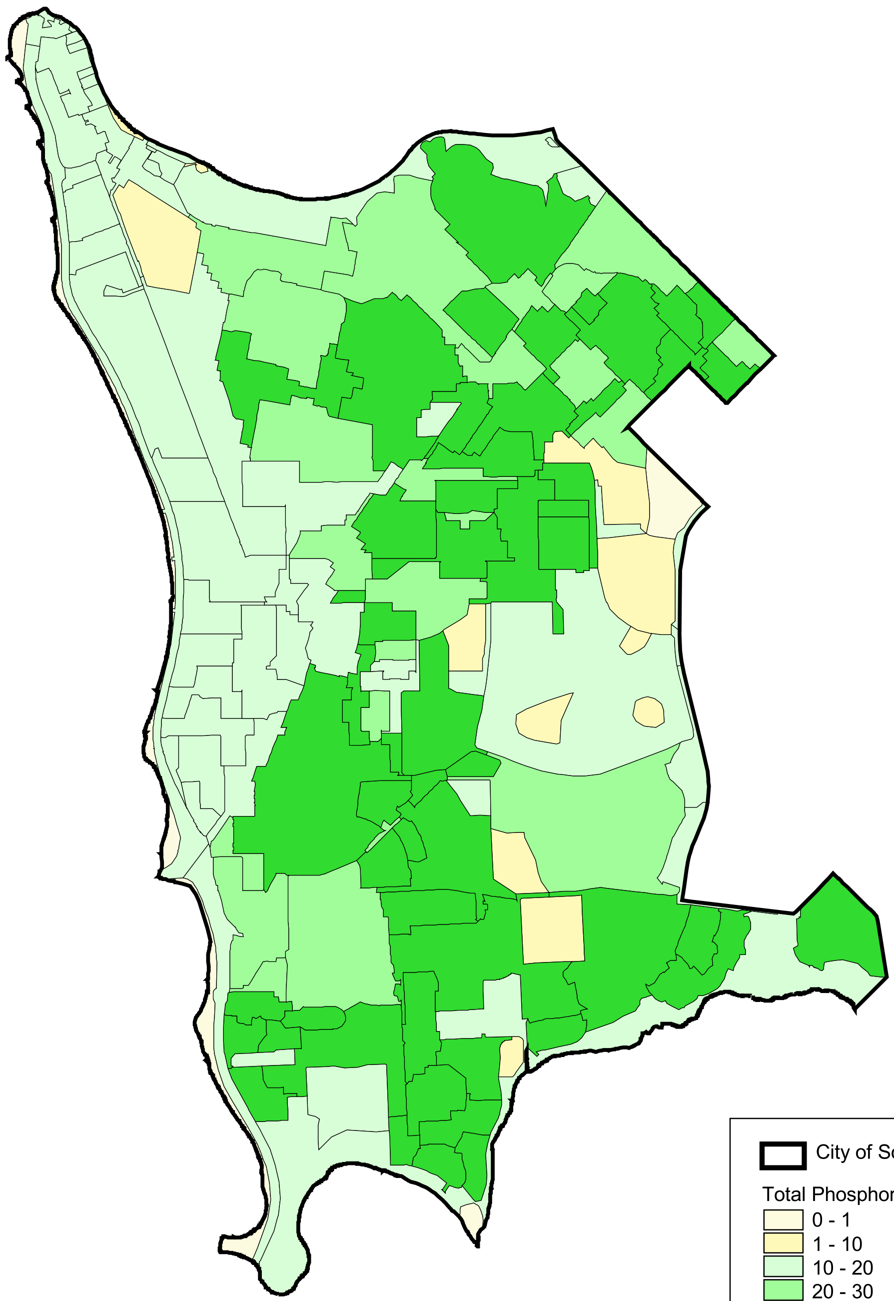
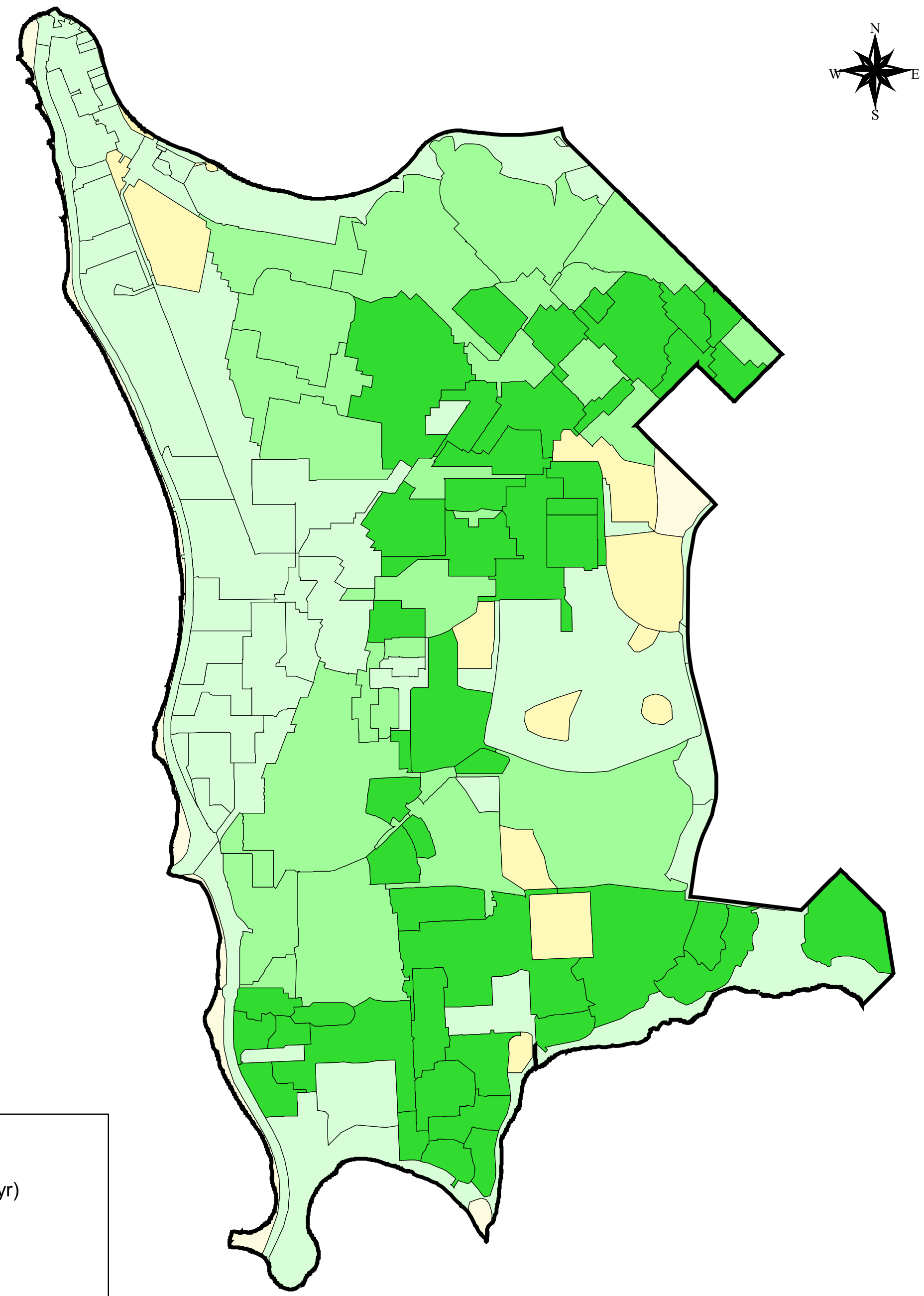
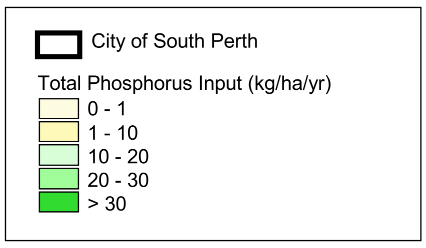
Figure 20: Surface Water Catchments Locations of Reported Flooding

A) Existing Total Phosphorus Input

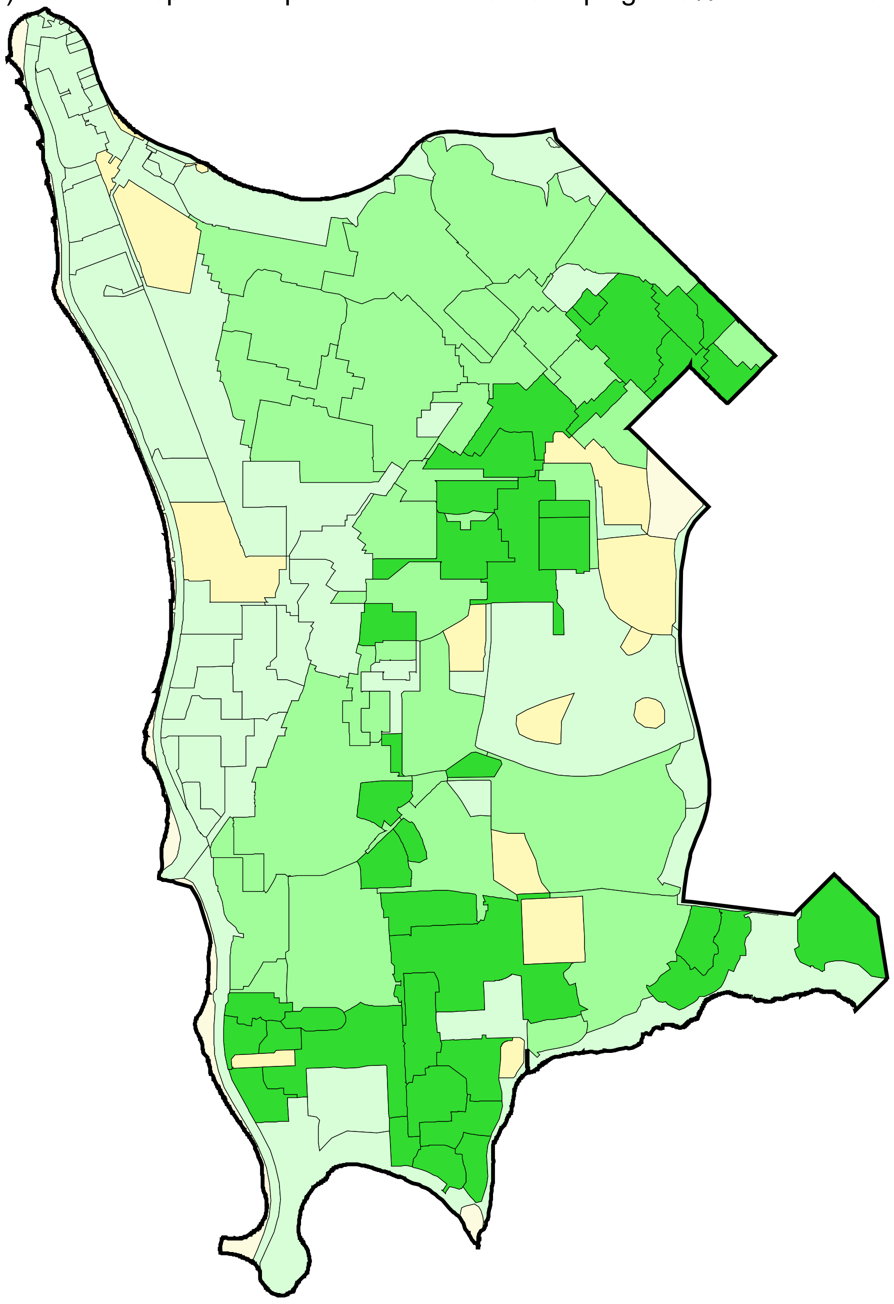


B) Total Phosphorus Input with Education Campaign 10% Effectiveness





C) Total Phosphorus Input with Education Campaign 20% Effectiveness



D) Total Phosphorus Input with Education Campaign 30% Effectiveness

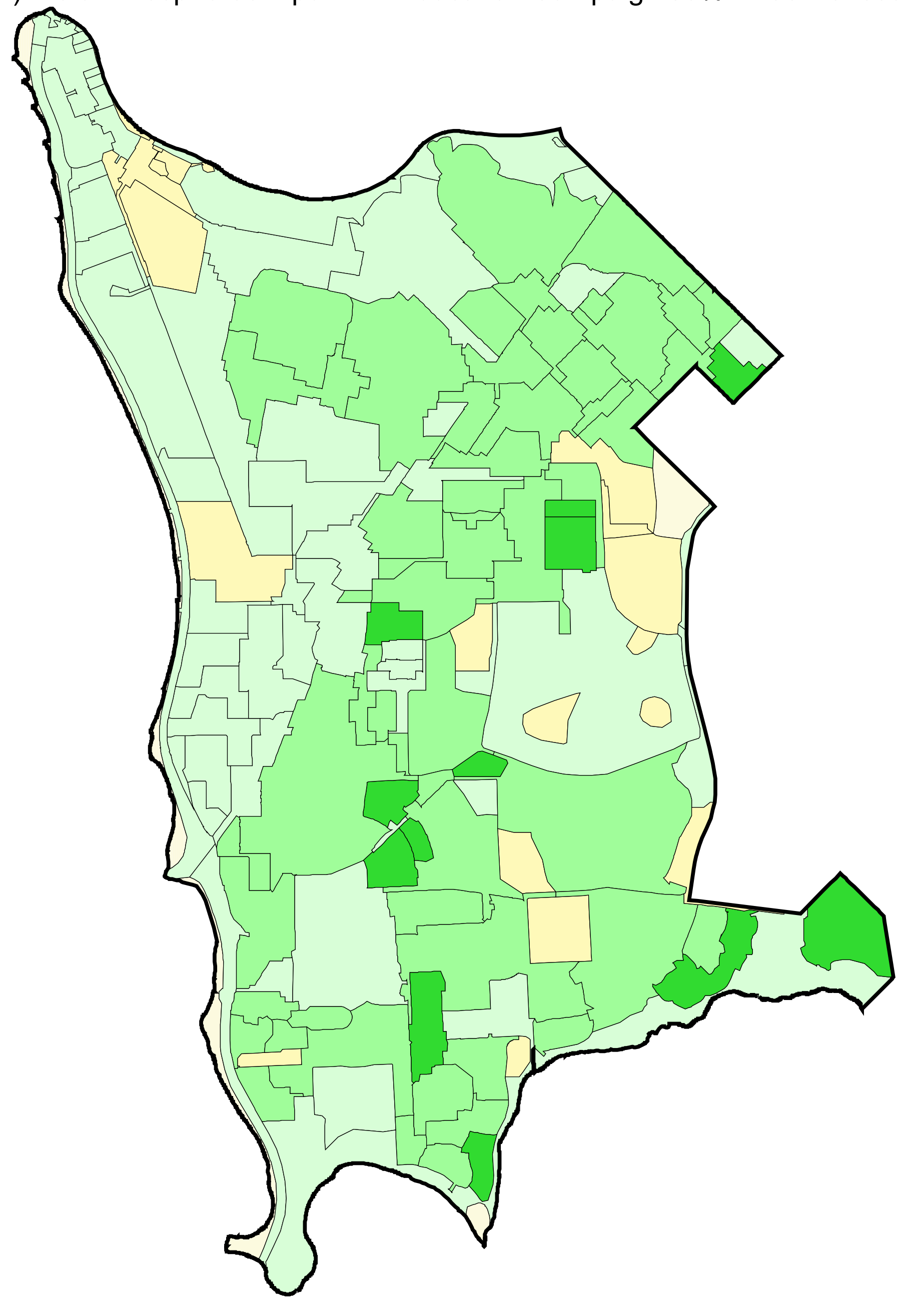


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Figure 21: Impact of Education Campaigns on Total Phosphorus Input

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