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WETLANDS OF THE DARLING SYSTEM

WETLANDS IN RECREATION RESERVES

By Karen Majer



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 DEPARTMENT OF
CONSERVATION
AND ENVIRONMENT

Cover: Lake Joondalup, Shire of Wanneroo, showing fringing vegetation of Jointed Twig Rush, Bulrush and Swamp Paper-bark. Inset on right : White Ibis.

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Department of
Conservation and Environment
Western Australia

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FOREWORD

The importance of conservation of wetlands in Western Australia has been recognised by the Western Australian Environmental Protection Authority (EPA) in putting forward recommendations on conservation reserves (National Parks and Nature Reserves) in Western Australia^{1, 2, 3}.

In the course of the EPA's consideration of its Conservation Through Reserves Committee's (CTRC) proposals for reserves, and the formulation of recommendations, it became clear that the extent and nature of current allocation of reserves on wetland areas was not known; information on the distribution and types of surviving wetlands was inadequate; the ownership and vesting of wetland reserves was diverse, and, in consequence the use of their resources was potentially haphazard; the current status of management of wetland reserves, whilst varying with vesting authorities, localities and other factors, was generally inadequate. Virtually no formal management plans were known to exist and management tended to be of an ad hoc nature.

Recognizing that many of the wetland reserves are vested, and that the responsibility for management lies with the Authority in which they are vested, the EPA believed that it would be desirable to create a consistent pattern of allocation and development of wetland reserve resources. To achieve this there was the need to co-ordinate the approach to the development of management plans for wetland reserves, particularly in terms of overall management to cater for the differing demands made on such reserves.

As a result of these considerations the Wetlands Advisory Committee was convened in February, 1976, by the Department of Conservation and Environment, and was comprised of the following members :

| | |
|----------------------------|--|
| Mrs K. Majer (Chairperson) | Department of Conservation and Environment |
| Mr. N. Orr (Secretary) | Department of Conservation and Environment |
| Dr. N. Marchant | W.A. Herbarium |
| Dr. T. Riggert | Department of Fisheries and Wildlife |
| Dr. P.R. Wycherley | Kings Park and Botanic Gardens |
| Mr. R. Hiller | Town Planning Department |
| Mr. B. Bailey | Community Recreation Council |

The terms of reference of the Wetlands Advisory Committee were to review and advise the EPA on the desirable allocation of wetland reserve resources and the adequacy of their management.

The area selected for the initial one-year study was the region from Moore River to Bunbury, known as the Darling System ("System 6") (Fig. 1). This area was chosen firstly because it presently contains about 76% of the State's population and is an area of intensive, and often competing, land-use which places a great deal of pressure on the wetlands. Secondly, it was felt that the information collected in the course of the study would form a useful input to the CTRC committee, which was then initiating its consideration of the need for further conservation reserves in the Darling System.

The information collected by the Wetlands Advisory Committee between February, 1976 and July, 1977, and the resulting recommendations to the EPA have, however, wider relevance than purely as an input to the Darling System Study. The purpose of this bulletin is to increase the accessibility of this data, and allow dissemination of relevant information to those who may find it of practical value in future planning for wetlands.

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1. INTRODUCTION

Reserves may be set aside under Section 29(1) of the Western Australian Land Act (1933) for a variety of purposes, including "... for the health, recreation or amusement of the inhabitants." (Section 29.1(j)). Such recreation reserves may include, or be adjacent to, all or part of a wetland area.

This booklet deals with recreation reserves with wetland resources in the Darling System (Fig. 1), their uses, and the adequacy of current reserves in meeting the recreational demands placed upon them.⁴

Wetlands in other forms of reserves (particularly National Parks) and in State Forests are also often used and managed for some form of recreation^{5,6}, as are those in Local and Regional Open Space, reserves owned by Local Authorities and Water Supply dams. Such areas are not documented here, but their contribution is discussed in the section on the adequacy of reserves in meeting recreational demands. National Parks with wetland resources are dealt with in another bulletin.⁷

2. RECREATION RESERVES

The gazetted purposes which have been defined for the purpose of this booklet as recreation reserves are shown in Table 1.

2.1 Perth Metropolitan Region

Recreation reserves including, or adjacent to, wetlands in the Perth Metropolitan Region are detailed in Table 2.

One hundred and twenty three reserves are known to be gazetted for recreation on wetlands in Perth. This number constitutes a total area of 3,943 hectares. The reserves range in size from 40 square metres to 401 hectares (Kings Park). (These figures exclude National Parks).

The number of recreation reserves containing, or adjacent to, wetland areas is as follows:

- 41 reserves on parts of lotic* wetlands (largely Swan and Canning Rivers and their tributaries Neerigen Brook, Southern River, Ellis Brook, Poison Gully, Helena River, Gooralong Brook, Wooroloo Brook; also Serpentine River and creeks in the Darling Range).
- 52 reserves on the Swan River estuary.
- 30 reserves on parts of 21 lentic** wetlands.

* Lotic: running water
** Lentic: standing water

Of the lentic wetlands, three are artificial, created by damming a creek (Lake Leschenaultia), or by excavation, and the remainder are as follows:*

- 8 fresh, permanent lakes (5 large, 3 small), (Lake Jandakot, Bibra Lake, lakes in Mary Carroll Park, Blue Gum Lake, Lake Monger, Hyde Park Lake, Gnangara, Lake Jandabup).
- 4 fresh, seasonal wetlands (ranging in size from small to large) (unnamed swamps).
- 2 brackish, permanent lakes (large) (Lake Richmond, Lake Joondalup).
- 1 saline, permanent lake (large) (Lake Coogee).
- 3 totally filled or drained.

Many of these wetlands have been substantially modified by partial filling (e.g. Bibra Lake), creation of formal parkland on the foreshore (e.g. Gnangara Lake) or artificial maintenance of water levels (e.g. Blue Gum Lake).

The above figures show that the Swan and Canning River foreshores account for the great majority (almost four fifths) of the water based recreation reserves in Perth. The dominant feature of the remainder is the presence of permanent water (11 out of 15 unfilled lentic wetlands). Water quality is not such an important consideration in setting aside reserves for recreational activity as it is for conservation purposes.

2.2 The Darling System Outside the Perth Metropolitan Region

Recreation reserves including, or adjacent to, wetlands in the Darling System outside the Perth Metropolitan Region are detailed in Table 3.

One hundred and sixty reserves with wetland resources are set aside for recreation in the area (excepting National Parks). The total area of these reserves is 2,944 hectares, made up of reserves ranging from 261 square metres to 326 hectares. Many of these reserves are in or near urban areas, such as Bunbury, Mandurah, Collie and Waroona. They have either been created when the townsite was established or have been resumed as a condition of subdivision as the towns have grown.

* Wetlands are classified according to the system developed by the Wetlands Advisory Committee and detailed by Marchant⁸. For key to description of lentic wetlands see Table 2 (page 18).

As in the Metropolitan Region, the majority of these reserves are situated on river foreshores or estuaries as follows:

98 on parts of lotic wetlands (mainly Collie, Preston and Murray Rivers, also Blackwood River, Boyup Brook, Spring Gully, Hotham River, Williams River, Lennards Brook, Udumung Brook, Ferguson River, Balingup Brook, Gingin Brook, Moore River, Serpentine River, Winter Brook, Woorooloo Brook, Gnowing Spring and unnamed creeks).

47 on parts of estuaries (Peel, Harvey and Leschenault Inlets).

10 on parts of lentic wetlands

(Eleven reserves were not included due to lack of information on the nature of the wetlands).

The recreation reserves on or adjacent to the lentic* wetlands are again characterized by water permanence involving:

1 fresh, permanent, large, water body (Lake Goegrup).

3 saline, permanent large lakes (Preston, Clifton and Beermullah).

1 fresh, seasonal swamp (Bartletts Well).

1 brackish (saline?), seasonal, large lake (Muckenburra).

These numbers would, in fact, overestimate the actual numbers of reserves based on recreational use of a wetland area. Recreation reserves were classified as wetland reserves on the basis of presence of a wetland resource, whether or not the wetland is the focus of the reserve's use. In many cases, for instance the reserves on the river foreshores, on estuaries, and on the banks of permanent lakes, the water would be likely to be the factor which merited reservation of the area. However, in some cases, the presence of a small stream or seasonal swamp in a recreation reserve is incidental to the recreational use of the area. Such reserves can hardly be considered wetland recreation areas, although they have been included in the analysis.

3. RECREATIONAL USE OF WETLANDS

The various forms of recreation which are often practiced in or near wetlands are listed in Table 4. In this table,

* For key to description of lentic wetlands see Table 2 (page 18).

the activities are broadly grouped into "land-based" and "aquatic", and are further divided according to the degree of impact which they may be expected to have on the wetland ecosystem. Such a division is clearly somewhat arbitrary, since the impact of any wetland use will depend upon a number of factors, including the type of wetland, (for example, activities generating pollution will have less effect on a large fast-flowing river than a small lake), the attitudes of the users, and any management carried out (for example, exclusion of users from particularly fragile areas within the wetland). The division is useful, however, in providing a basis for discussion of the adequacy of wetland reserves in meeting recreational demands, and their management requirements.

To date there has been no detailed survey of the current nature or intensity of use of wetlands in the Darling System for either land or water based recreation, or on future recreational demands associated with population growth.

The pressure of recreational use of wetlands in and near Perth, particularly of the Swan-Canning River systems, the Peel-Harvey Inlet, and the landscaped lakes such as Lake Monger or Perry Lakes, is obviously great. The results of some surveys carried out in 1976 and 1977^{9,10,11,12} highlight this pressure and the conflicting demands for recreational use of wetland areas. The conclusions resulting from these surveys are as follows:

Available aquatic recreation areas and facilities are overcrowded.

Particularly high demands on suitable wetland areas arise from the rapidly increasing number of boats. This "boating boom" has led to the crowding of the very few suitable open water areas (particularly the Swan River) and hazards are increasing, especially to water skiers who are restricted to only a few areas. These navigable waters, which come under the jurisdiction of the Harbour and Light Department, present a special management problem. For example, it is estimated that 31,000 craft, excluding rowing boats and canoes, are currently using the Swan and Canning Rivers.¹¹ An Environment 2000 survey showed that 2,289 people visited Lake Monger on one summer day (10.00 a.m. to 4.00 p.m.)¹². Some areas (for example, Metropolitan Water Ski areas) are considered to be dangerous because of the congestion.¹³

There is competition for use of suitable areas. For instance, the Canine Association is concerned that power boats present a hazard to dogs; rowers have been excluded from use of one course on the Swan River due to increased traffic of other type of craft; canoeists prefer wilderness areas, which are quickly spoilt by too much access for other recreational use; power boats may cause a noise problem for other users and nearby residents.⁹ These conflicts are

between alternative recreational uses, and do not take into account incompatibilities between recreational and other uses (for example, power boats and wildlife conservation).

The number of users of a wetland recreation area, for example a lake, correspond to the accessibility and degree of development of the site. Most people questioned favoured further development of recreational sites, or at least discrete areas within them, mainly in a form in harmony with a conservation oriented policy. Comments such as "stop shooting", "retain natural beauty", were common, and quiet activities such as canoeing, swimming and hiking were favoured, which if regulated should not unduly disturb the natural flora and fauna.¹⁰

4. THE ADEQUACY OF WETLAND RECREATION RESERVES

The total number of reserves with wetland resources gazetted for recreation in the Darling System is 263, which appears to be large. In some of these, however, the inclusion of a wetland is incidental to the recreational use of the reserve, as already discussed. The adequacy of the remainder (where the wetland is the recreational "focus" of the reserve) can only be assessed by looking at the various recreational activities and the current allocation of reserves in areas suitable for each pursuit.

4.1 Aquatic Recreation

The criteria used to assess the potential of the wetlands within recreational reserves for aquatic recreation are size and depth of the open water. The significant dimensions for various activities are listed in Table 5.

Many other factors are seen to be relevant, however, including:

- weed and algal growth;
- the protection of shallows, their plants and wildlife;
- the protection of banks against erosion;
- bottom sediment and the effects of stirring;
- competition with shore-based and non-recreational activities;
- competition between forms of aquatic recreation;

- noise impact (on wildlife, other users and adjacent residents);
- effects of pollution, oil spillage, litter;
- access to deep water;
- availability of and access to adequate land backing;
- intensity of use;
- management.

There are few wetlands (in or out of reserves) suitable for aquatic recreation, particularly those activities requiring certain minimum areas and/or depths of open water, free of weed. Such activities include yachting, canoeing, power-boating, water-skiing, rowing, and surf-cat sailing. (Table 5).

The lower Swan and Canning Rivers (for example, around Melville Water) contain a large expanse of water deep enough for high impact aquatic recreation and their foreshores are well represented in reserves. It has already been noted, however, that these rivers are under heavy pressure of use, and are no longer capable of meeting the demands being placed upon them for boating. A marked expansion of activity on summer Saturday afternoons could not be safely accommodated. There are few other areas in or near Perth set aside for power boating, Lake Gnangara being one, but some lakes and river areas are utilized for lower-impact aquatic activities including rowing, canoeing, fishing, swimming and sailing. These areas include Loch McNess, Lake Joondalup, Lake Leschenaultia, Bickley Dam, Araluen Pool, Serpentine Falls, and Forrestdale (Jandakot) Lake. The Avon River is used for canoeing in winter.

Elsewhere, the area best endowed with wetlands is the coastal plain south of Perth, but, of its several large lakes and estuaries, only Lake Preston has an area of deep water in any way comparable with that of the Swan. (It is long and narrow and about 1,400 hectares (33%) are over two metres deep). The estuaries are shallow, and though about 25% of their areas are over one metre deep, they are for the most part suited only to use by surf-cats, canoes and other very shallow-draft craft. Power boating and other high impact activities are limited to channels in the Peel and Harvey estuaries, a small area of the Leschenault estuary near the Collie River mouth, some river channels (for example, the Serpentine below Lake Goegrup, the Collie below Brunswick River and the Murray below Pinjarra), and one or two small lakes.

Aquatic recreation which does not depend on large deep open water areas (for example canoeing, fishing, crabbing), is better catered for. Several rivers, such as the Preston, Murray, Blackwood and lower Collie Rivers, are suitable for canoeing in winter. Dams have blocked some rivers and reduced the potential of others. The fishing potential of the estuaries, dams and rivers is great, particularly Peel-Harvey and Leschenault estuaries. Most of the rivers and estuaries are poorly endowed with foreshore reserves however, and access is often limited.

North of Perth, Lake Beermullah in Gingin is used for boating, and Lake Muckenburra and the mouth of the Moore River are suited to some forms of medium-impact aquatic recreation.

In general however, areas to the north and east of Perth are poorly served with areas suited to aquatic activities. The districts of Swan, Kalamunda, Mundaring, Canning, Gosnells, Armadale-Kelmscott, Serpentine-Jarrahdale, Chittering, Toodyay, Northam, York, Beverley and Brookton have no wetlands suited to power boating and few even for swimming.

The number of wetlands suitable for deep water activities is limited, and access, particularly to river banks, is often restricted. More foreshore reserves on rivers and estuaries should be set aside if their recreational potential is to be fully realized.

The use of the few permanent water areas which have potential for aquatic recreation is further limited by the importance of these same estuaries and lakes for conservation; areas of permanent fresh water are particularly valuable and scarce. Aquatic recreation, particularly power-boating and water-skiing, is usually excluded from permanent lakes in conservation reserves, for example Lake Jandabup. Some of the deeper areas of the permanent lakes in other forms of reserves (such as recreation reserves and Regional Open Space) may have limited aquatic recreation potential, provided that such use is managed so that it harmonises with conservation of other sections of the lakes. The Metropolitan Region Planning Authority has suggested such use of Lake Joondalup, and Loch McNess is already managed towards this end by the National Parks Authority. Other suitable areas could include Lakes Gngangara, Beermullah, Muckenburra, Coogee and Richmond, and some parts of the estuaries.

For many aquatic sports, including those requiring deeper water, the several irrigation dams in the hills south of Perth have deep water areas which are suitable. The potential of these areas is as

yet only partly exploited. Water supply dams south and east of Perth could be similarly used, if the community is prepared to meet the cost of additional water treatment. This could be cheaper than construction of dams solely for water sports, particularly when it is realised that the water treatment could free land in the catchments for other recreational uses. There is adequate public land about such dams if appropriately managed, though not necessarily in recreation reserves. The feasibility and desirability of allowing recreational use of water supply catchments and dams in the future would merit further investigation. Constraints should be reviewed from time to time, as additional treatment, though costly, may eventually prove cheaper than alternative ways of meeting growing recreational demands.

Pits left after mining operations could also be made suitable for many forms of water sports - examples being the Blue Pool near Collie and dredged areas near Greenbushes. With foresight, where a long term demand can be foreseen and natural conditions are suitable, man-made lakes created by excavation and worked-out mining pits could be rehabilitated as lakes for aquatic recreation, and reserves could be provided with facilities at public access points. Such rehabilitation could be an appropriate condition of a mining lease.

4.2 Land-based Recreation

The high-impact land-based activities listed in Table 4 do not depend on the proximity of a wetland, and should not be sited near them to the detriment of the wetlands or of users who need the wetland setting. Of the medium impact activities listed in Table 4, some depend on wetlands (retrieving, digging for bait, fishing, duck shooting), while the others use wetlands as a scenic backdrop. The low-impact activities tend to be rather more dependent on the wetland, for example photography, bird watching.

There is considerable scope for land-based recreation around wetlands in and near Perth. Most of the wetlands which have already been discussed as venues for aquatic recreation provide some opportunity for medium and low-impact land-based recreation on their foreshores. In particular, sections of the Swan and Canning River foreshores are valuable recreation areas, as are a number of pools and lakes in the Perth Metropolitan area, for example Lake Joondalup. Most of these are modified to some degree, either to create permanent open water, (for example Lake Leschenaultia), or to provide grassed and "beautified" banks, often with playgrounds, (for example, Bibra Lake, Gnangara Lake). Water supply dams near Perth are popular venues for picnics and barbecues, including

Mundaring Weir, Canning and Serpentine Dams. Facilities for these activities are also provided near, or with scenic views of, water areas in some of the National Parks, for example at Lesmurdie Falls, Loch McNess (Yanchep National Park), Serpentine Falls (Serpentine National Park), the Avon River (Walyunga and Avon National Parks), and the pool in the John Forrest National Park.

The Peel-Harvey and Leschenault estuaries and the lakes in the Yalgorup National Park provide a variety of settings for passive recreation and are a valuable recreation resource for the Metropolitan Region, as well as for the population centres at Mandurah and Bunbury.

"Retreat", or low-impact activities are well catered for in National Parks, and near rivers and streams in State Forests, subject to constraints related to water supply catchments and to management plans. Limited access to conservation reserves also satisfies some people's interests.

For many people, perhaps the majority, who do not stray far from their cars, the current allocation of areas near (or with views of) wetlands for land-based recreation is adequate for present population requirements. To take account of future recreational needs associated with population growth, however, further recreation reserves will be needed around major lakes and estuaries, and along rivers and streams, particularly in the vicinity of the escarpment of the Darling Range. River foreshores are currently poorly reserved outside the Metropolitan area. Further reservation to protect the banks, and provide managed public access, would enhance the future recreational potential of these rivers and estuaries. The Serpentine, Murray, Collie, Harvey, Brunswick, Preston, Avon, and Moore Rivers and Gingin Brook, all deserve consideration in this respect (particularly where they flow through urban areas), as does the Brockman River in Chittering Valley.

Where wetlands are already reserved for recreation, further areas will in many cases be required for parking and amenities appropriate to the number of visitors anticipated. The linking and extending of present reserves around the Peel, Harvey and Leschenault estuaries, the lakes in and near Yalgorup National Park, the "Cockburn Lakes"¹⁴, and the "Rockingham Lakes" (as envisaged in the Metropolitan Region Scheme) would be valuable.

Additional areas somewhat further from the wetlands may also be needed to cater for specific forms of recreation such as camping and horse riding.

The width of foreshore reserves required will to some extent depend on the use of the wetland. For example, reserves around lakes used for active recreation need space to locate back-up facilities as well as preventing the water becoming silted, polluted or overgrown with weeds; reserves along rivers used for canoeing are needed for launching, portage and occasional stopping as well as for conservation purposes. The substantial protection of wetland vegetation would generally be appreciated by users, and would provide conservation and land-based recreation areas.

In general, the foreshore reserve should include the wetland vegetation plus a "buffer zone" of at least 20-30 metres to protect the wetland and to allow for footpaths, car-parking and other facilities appropriate to the use of the particular reserve. Reserves should be widened at points of access, at places where land-based facilities are proposed, and at places where back-up facilities for aquatic activities are proposed. (These areas would be best determined when management plans are prepared).

5. MANAGEMENT OF WETLAND RECREATION RESERVES

Provision of wetland areas to meet future recreational demands requires not only setting aside adequate reserves to provide access to wetland features, but also adequate management to preserve the wetland and to meet the range of requirements.

In areas where there is little "people pressure", recreational use may be permitted without facilities and with little management. However, intensive recreational use and the development of appropriate facilities require adequate management and control.

Management plans should be prepared before demand leads to the construction of substantial facilities or before uncontrolled use damages the habitats of wetland systems or leads to conflict. For instance, recreational wetlands which have no environmental interest in their natural state may be modified to increase public enjoyment. Wetlands in recreation or conservation reserves which have a high conservation value could allow public access only to restricted points on the shoreline. These access points can be separated from the 'conservation' areas, if necessary, by fences or channels, although dense natural vegetation will often suffice, and their facilities (notably parking) scaled to discourage inappropriate numbers of users. Signs, information boards and displays at recreation reserves will often enhance their value and help people to appreciate them.

The management of water-based recreation should include the limiting of activities which :

- pollute waterways,

- disturb bottom sediments,
- endanger wildlife,
- endanger other users of the area,
- cause a noise nuisance,
- reduce marginal vegetation.

An approach to the preparation of management plans for reserves with wetland resources is suggested in another Bulletin.¹⁵

6. ACKNOWLEDGEMENTS

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FIGURE 1: Area map for the Darling System as defined by the Conservation Through Reserves Committee of the Environmental Protection Authority.

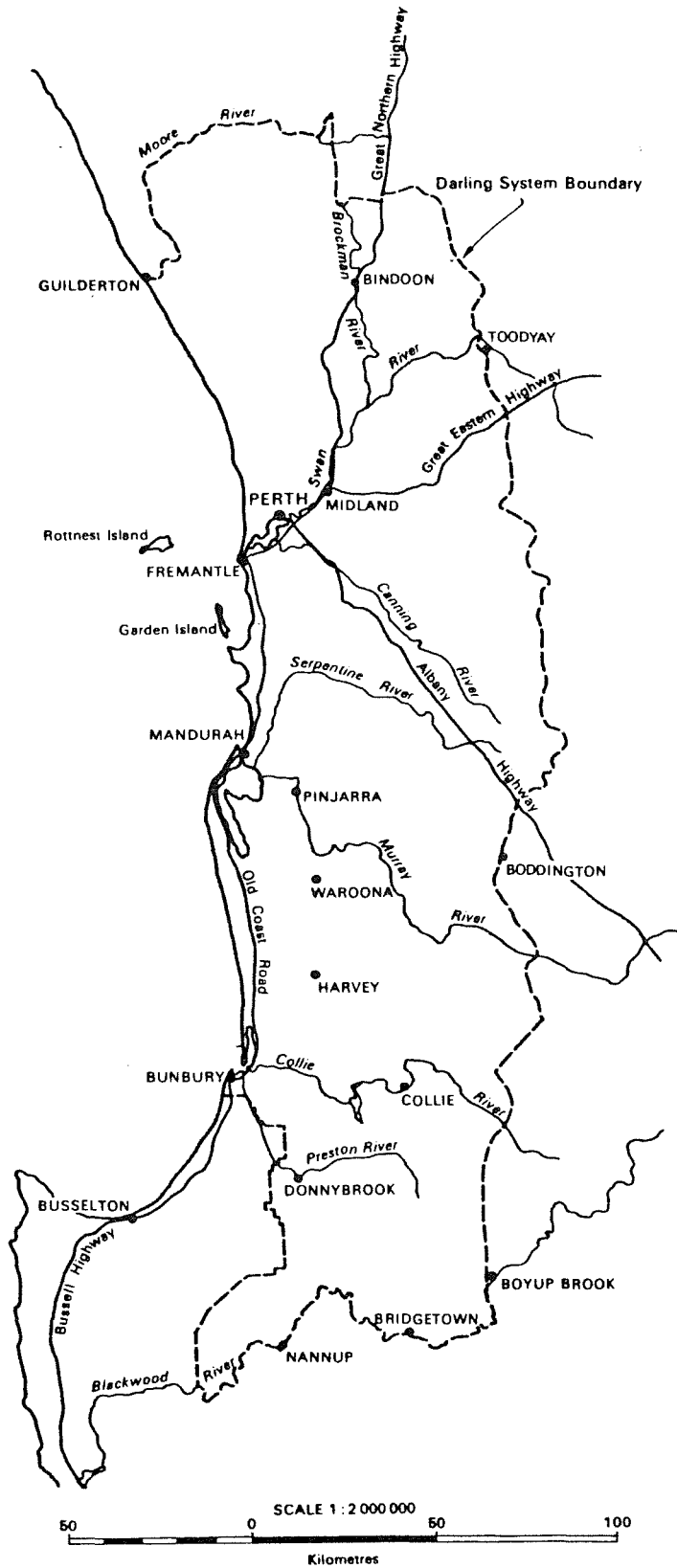


TABLE 1: Purposes of recreation reserves in the Darling System including or adjacent to wetlands

| | |
|---|---|
| Recreation | Public recreation |
| Recreation and hallsite | Racecourse and recreation |
| Recreation and swimming pool | Timber, water and camping |
| Recreation and bathing | Timber and parklands |
| Recreation and National Park | Protection and preservation of caves and flora and for health and pleasure resort |
| Recreation ground | Landing stage |
| Recreation and show ground | Landing place |
| Recreation and parklands | Rowing club premises |
| Recreation and parking | Use and requirements of rowing club |
| (Parking and recreation) | |
| Recreation and park | River improvements and camping |
| Recreation, launching ramp, and parking | Public park and recreation |
| Recreation, camping and caravans | Recreation and bird sanctuary |
| Recreation and purposes incidental | Yacht club premises |
| Recreation and conservation | Use and requirements of yacht club |
| Recreation and camping | Bird sanctuary and park |
| Recreation and river improvements | |
| Recreation and riverside improvements | |
| Park | |
| Park, picnic ground | |
| Park and recreation | |
| Parklands | |
| Parklands and recreation | |
| Picnic ground | |
| Camping | |
| Camping and conservation of flora | |
| Camping place | |
| Camping and picnic ground | |
| Water and camping | |
| Caravan park | |
| Caravan park, camping | |
| Parking and picnic | |
| Beach resort, recreation and aquatic sports | |

TABLE 2. Recreation reserves including, or adjacent to, all or part of a wetland in the Perth Metropolitan Region.

Key to description of lentic wetlands* :

| | | |
|-------------|---|---------------------------|
| Large | : | > 50 hectares |
| Medium | : | 25-50 hectares |
| Small | : | < 25 hectares |
| Fresh | : | < 1000 mg/l (December) |
| Brackish | : | 1000-3000 mg/l (December) |
| Saline | : | > 3000 mg/l (December) |
| Open | : | vegetative cover < 25% |
| Semi-open | : | vegetative cover 26-60% |
| Semi-closed | : | vegetative cover 61-90% |
| Closed | : | vegetative cover > 90% |

Key to abbreviations :

| | | |
|----------------|---|---------------------------------------|
| m ² | : | square metres |
| ha | : | hectares |
| wpl | : | with power to lease |
| W.A.W.A. | : | Western Australian Wildlife Authority |
| C.G. | : | Crown Grant |
| C/- | : | Control of |

Note: Reserve listings compiled before July, 1977.

* Based on wetland classification system adopted by the Wetlands Advisory Committee,⁴ and detailed by Marchant.⁸

TABLE 2

RECREATION RESERVES ON WETLANDS - METROPOLITAN

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|--------------------|----------------|----------------------|--------------------|---------------------------|--------------------------|-----------------------------|---|---|
| ARMADALE-KELMSCOTT | 27165 | Forrestdale Townsite | 138.4430 ha | Recreation | Armadale-Kelmscott | Lake Jandakot (Forrestdale) | Large, fresh, permanent; semi-open vegetation cover | |
| | 'A'24781 | | 243.6208 ha | Flora, Fauna & recreation | WAWA | Lake Jandakot | Large, fresh permanent; semi-open vegetation cover | |
| | 28584 | 341B/40 | 9384m ² | Recreation | Armadale-Kelmscott | Canning River foreshore | Lotic | |
| | 27073 | 341B/40 | 1462m ² | Recreation | Armadale-Kelmscott | Canning River foreshore | Lotic | |
| | 'A'6468 | 341B/40 | 17.7177 ha | Parklands | Armadale-Kelmscott | Tributary of Canning River | Lotic | |
| | 'A'4561 | 341B/40 | 461.3270 ha | Parklands | Armadale-Kelmscott | Neerigen Brook | Lotic | |
| | 28353 | 341B/40 | 3526m ² | Recreation | - | Canning River foreshore | Lotic | |
| | 28293 | 341B/40 | 9485m ² | Recreation | - | Canning River foreshore | Lotic | |
| | 27572 | 341B/40 | 3910m ² | Recreation | - | Canning River foreshore | Lotic | |
| | 28577 | 341B/40 | 1.3304 ha | Recreation | - | Canning River foreshore | Lotic | |
| | 33124 | | 3845m ² | Recreation | Armadale-Kelmscott | Southern River foreshore | Lotic | |
| | 21569 | - | 20.2429 ha | Recreation | National Parks Authority | Canning Dam Araluen | Reservoir | |
| BASSENDEAN | 'A'18091 | | 1.9197 ha | Park & Recreation | Bassendean | Swan River foreshore | Estuary | "Pickering Park" |
| | 'A'18092 | | 6981m ² | Park & Recreation | Bassendean | Swan River foreshore | Estuary | "Sandy Beach Reserve" |
| | 'A'9100 | | 6526m ² | Recreation | Bassendean | Swan River foreshore | Estuary | |
| BAYSWATER | | | | | | | | No gazetted reserves for recreation on wetlands. (Some Council owned land on river foreshore) |

TABLE 2

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|------|---------------------|-------------------|----------|-------------------------|---|---|
| BELMONT | 28420 | | 3675 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 29467 | | 2352 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 'A' 12237 | | 3.1110 ha | Recreation | Belmont | Swan River foreshore | Estuary | "Hardey Park" |
| | 26219 | | 1083 m ² | Recreation | - | Swan River foreshore | Estuary | |
| CANNING | 29130 | | 5.4018 ha | Public Recreation | Canning | Canning River foreshore | Estuary | |
| | 26292 | | 18.7571 ha | Park & Recreation | Canning | Canning River foreshore | Estuary | |
| | 26104 | | 3592 m ² | Recreation | - | Canning River foreshore | Estuary | |
| | 29689 | | 3541 m ² | Public Recreation | Canning | Canning River foreshore | Estuary | |
| | 1455 | | 9.9148 ha | Landing Place | Canning | Canning River foreshore | Estuary | |
| | 27604 | | 1.5136 ha | Recreation | Canning | Canning River foreshore | Estuary | |
| | 1289 | | 1.0117 ha | Landing Place | Canning | Canning River foreshore | Estuary | |
| | 20968 | | 2023 m ² | Recreation | - | Canning River foreshore | Estuary | |
| CLAREMONT | | | | | | | No gazetted recreation reserves on wetlands. Lake Claremont owned by Council. | |
| COCKBURN | 'A' 6208 | | 103.1948 ha | Recreation | Cockburn | Bibra Lake | Large, fresh, permanent; open | Modified Sanitary landfill on Council owned land. |
| | 30861 | | 63.1512 ha | Recreation | Cockburn | Coogee (Munster) Lake | Large, saline, permanent; semi-open vegetation cover | |
| COTTESLOE | | | | | | | No recreation reserves on wetlands | |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|-----------|---------------------|-------------------------------------|---------------------------------|-------------------------|---|---|
| EAST FREMANTLE | 'A'7800 | | 7.5669 ha | Recreation | East Fremantle | Swan River foreshore | Estuary | Women's hockey-field lacrosse field, tennis club. |
| | 26589 | | 3738 m ² | Rowing Club premises | C G Fremantle Rowing Club | Swan River foreshore | Estuary | |
| | 26590 | | 961 m ² | Use and requirements of Rowing Club | Leased to Fremantle Rowing Club | Swan River foreshore | Estuary | |
| | 27376 | | 1.0294 ha | Yacht Club Premises | East Fremantle | Swan River foreshore | Estuary | |
| | 27377 | | 1768 m ² | Use and requirements of Yacht Club | East Fremantle | Swan River foreshore | Estuary | |
| | 'A'22365 | | 7.3983 ha | Recreation | East Fremantle | Swan River foreshore | Estuary | Hockey field and oval. |
| FREMANTLE | 7708 | Cancelled | | Recreation | | Swan River foreshore | Estuary | |
| | 3048 | Cancelled | | Recreation | | Swan River foreshore | Estuary | |
| | 2022 | Cancelled | | Recreation | | Swan River foreshore | Estuary | |
| GOSNELLS | 'A'24862 | | 51.8124 ha | Recreation-Golf links | Gosnells | Unnamed Swamp | Small, fresh, permanent; semi-closed vegetation cover | Artificially permanent lake in golf course |
| | 26272 | | 3.2704 | Parklands | Gosnells | Unnamed Swamp | | |
| | 24981 | | 14.2095 ha | Recreation | Gosnells | Unnamed Swamp | | filled |
| | 33649 | | 6883 m ² | Public Recreation | Gosnells | Unnamed Swamp | Small, fresh, seasonal; semi-closed vegetation cover | drained |
| | 'A'26227 | | 6.5106 ha | Community Centre & Park | Gosnells | Canning River foreshore | Lotic | "Homestead Park" |
| | 'A'31993 | | 8.6488 ha | Bird Sanctuary and Park | Gosnells | Swamp | Large, fresh, permanent; semi-closed vegetation cover | "Mary Carroll Park" |
| | 29919 | | 9133 m ² | Public Recreation | Gosnells | Swamp | Large, fresh, seasonal; semi-closed vegetation cover | Connected to "Mary Carroll Park" (Salvinia infestation) |
| | 28361 | | 1.9073 ha | Public Recreation | Gosnells | Unnamed Swamp | Large, fresh, seasonal, semi-closed vegetation cover | Connected to 29919 Infested with salvinia |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|----------------------|----------------|---------------------|---------------------|------------------------------------|----------------------------------|-------------------------------------|---|--------------------------------------|
| GOSNELLS (cont'd) | 'A'11681 | | 178.0617 ha | Parklands | Gosnells | Creek & waterfall | Lotic | |
| | 32667 | | 2.2985 ha | Public Recreation | Gosnells | Canning River foreshore | Lotic | |
| | 28247 | | 6141 m ² | Recreation | - | Canning River foreshore | Lotic | |
| | 31946 | | 4.9700 ha | Public Recreation | Gosnells | Unnamed creek | Lotic | |
| | 'A'11681 | | 178.0617 ha | Parklands | Gosnells | Ellis Brook | Lotic | |
| | 30574 | | 4244 m ² | Public Recreation | - | Canning River foreshore | Lotic | |
| | 30692 | | 2491 m ² | Recreation | - | Canning River foreshore | Lotic | |
| | 28739 | | 1.1842 ha | Recreation | - | Canning River foreshore | Lotic | |
| | 27505 | | 1.0472 ha | Recreation | - | Canning River foreshore | Lotic | |
| | 32093 | | 3.9735 ha | Public Recreation | Gosnells | Canning River foreshore | Lotic | |
| | 33663 | | 8012 m ² | Public Recreation | Gosnells | Southern River | Lotic | |
| | 31129 | | 5094 m ² | Recreation | - | Unnamed Creek | Lotic | |
| | 33584 | | 1822 m ² | Recreation | - | Unnamed Creek | Lotic | |
| | 34273 | | 8607 m ² | Public Recreation | - | Southern River | Lotic | |
| | 34476 | | 4742 m ² | Public Recreation | - | Canning River foreshore | Lotic | |
| 33771 | | 3902 m ² | Public Recreation | - | Canning River foreshore | Lotic | | |
| KALAMUNDA | 9093 | | 13.0701 ha | Parklands & recreation | c/- Kalamunda | Poison Fully | Lotic | Only small part of creek included. |
| WINANA | 33581 | 341 D/40 | 217.6652 ha | Parks & Recreation | - | Unnamed Swamp | Large, fresh, seasonal | |
| MELVILLE | 'A'25562 | | 8.3289 ha | Recreation & Conservation of Fauna | Melville | Blue Gum Lake | Small, fresh, permanent; semi-open vegetation cover | Water levels artificially maintained |
| | 'A'4813 | | 67.5825 ha | Recreation & Immig Home | Minister for Education, Melville | Swan River foreshore (Point Walter) | Estuary | |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|----------------------|----------------|------|---------------------|-----------------------------|--------------------------|---------------------------------------|-------------------------|---|
| MELVILLE (cont'd) | 'A'2406 | | 28.5152 ha | Recreation | Melville | Swan River foreshore (Melville Water) | Estuary | |
| MOSMAN PARK | 'A'3346 | | 4.8562 ha | Recreation | Mosman Park | Swan River foreshore (Chidley Point) | Estuary | |
| | 'A'1631 | | 5.1420 ha | Recreation | Mosman Park | Swan River foreshore | Estuary | Rubbish tip |
| | 8369 | | 5691 m ² | Recreation | Mosman Park | Swan River foreshore | Estuary | Bayview Terrace Reserve. Runs along cliff top overlooking river |
| | 'A'1666 | | 2.1903 | Recreation | Mosman Park | Swan River foreshore | Estuary | |
| MUNDARING | 5342 | | 133.2737 ha | Camping | Minister for Works | Helena River | Lotic | |
| | 20765 | | 3.9735 ha | Recreation & Bird Sanctuary | - | Helena River | Lotic | |
| | 'A'2994 | | 7.7472 ha | Parklands | National Parks Authority | Unnamed creeks | Lotic | |
| | 'A'2995 | | 60.9061 ha | Park | National Parks Authority | Unnamed creeks | Lotic | |
| | 23165 | | 167.9390 ha | Recreation | Mundaring | Lake Leschenaultia | Large, fresh, permanent | Artificial-dammed creek |
| NEDLANDS | 'A'1624 | | 3.5107 ha | Recreation | Nedlands | Swan River foreshore | Estuary | Point Resolution |
| | 'A'22527 | | 3.6422 ha | Recreation | Nedlands | Swan River foreshore | Estuary | |
| | 'A'17391 | | 22.1692 ha | Recreation | Nedlands | Swan River foreshore | Estuary | |
| | 'A'29174 | | 2.1170 ha | Public Recreation | Nedlands | Swan River foreshore | Estuary | |
| | 24457 | | 1841 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 24959 | | 1237 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 29105 | | 40 m ² | Public Recreation | - | Swan River foreshore | Estuary | |
| | 24721 | | 420 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 1668 | | 14.1411 ha | Recreation | - | Swan River foreshore | Estuary | |
| | 'A'1627 | | 6804 m ² | Picnic Ground | Nedlands | Swan River foreshore | Estuary | |
| | 31183 | | 334 m ² | Recreation | - | Swan River foreshore | Estuary | |
| | 29264 | | 169 m ² | Public Recreation | - | Swan River foreshore | Estuary | |
| | 'A'23209 | | 2532 m ² | Recreation | Nedlands | Swan River foreshore | Estuary | |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------------|----------------|----------------------|---------------------|--------------------------------------|--------------------------|--|---|--|
| PEPPERMINT GROVE | 'A'7802 | | 3.5208 ha | Recreation | Peppermint Grove | Swan River foreshore | Estuary | Freshwater Bay Reserve separated from foreshore by road. |
| | 'A'17060 | | 2.2839 ha | Recreation & purposes Incidental | National Parks Authority | Swan River foreshore | Estuary | Freshwater Bay leased to Yacht Club |
| | 'A'17113 | | 3.2476 ha | Recreation | Peppermint Grove | Swan River foreshore | Estuary | Freshwater Bay |
| | 'A'22156 | | 9110 m ² | Recreation | Peppermint Grove | Swan River foreshore | Estuary | Freshwater Bay |
| PERTH | 'A'8731 | | 96.5567 ha | Public Park & Recreation | CG in trust | Lake Monger | Large, fresh, permanent; open | Modified |
| | 'A'1720 | | 400.8487 ha | Kings Park | Kings Park Board | Ornamental Lakes | Artificial | Excavated recreational lakes |
| | 'A'17375 | | 23.0534 ha | Recreation | National Parks Authority | Swan River foreshore | Estuary | |
| | 19168 | | 963 m ² | Recreation | CG | Ornamental Lake | Small, fresh, permanent | Hyde Park modified |
| | 26603 | | 1722 m ² | Recreation & drainage | Perth | ? | | |
| | 27743 | | 7.6459 ha | Recreation & River-side Improvements | Perth | Swan River foreshore | Estuary | |
| ROCKINGHAM | 'A'9025 | 341D/40 (R23-4) | 2.8378 ha | Park & Picnic Ground | - | Unnamed Swamp | Small, fresh seasonal; semi-closed vegetation cover | |
| | 9458 | 341D/40 (R39-4) | 40.4686 ha | Recreation | Rockingham | Lake Richmond foreshore | Large, brackish, permanent; open | |
| SERPENTINE-JARRAHDALE | 990 | 341C/40 (Jarrahdale) | 32.4659 ha | Camping | Serpentine-Jarrahdale | Gooralong Brook | Lotic | |
| | 29540 | 341D/40, 341C/40 | 4.1228 ha | Public Recreation | Serpentine-Jarrahdale | Serpentine River | Lotic | |
| SOUTH PERTH | 28747 | | 3065 m ² | Recreation | South Perth | Canning River foreshore | Lotic | |
| STIRLING | 'A'9323 | 1D/40 | 7.4765 ha | Recreation | Stirling | Swan River foreshore | Estuary | |
| | 24209 | | 4.9245 ha | Recreation | Stirling | Swan River foreshore & artificial lake | Estuary and artificial | Bardon Park |
| | 33966 | | 57.6407 ha | Public Recreation | Stirling | Swan River foreshore | Estuary | |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|-------------------------------|---------------------|---|--------------------------|--|--|---------------------------|
| SUBIACO | 34322 | | 1.4893 ha | Recreation | Subiaco | Swan River foreshore | Estuary | |
| | 'A'17375 | | 23.0534 ha | Recreation | National Parks Authority | Swan River foreshore | Estuary | |
| SWAN | 27583 | 28/80 (Swan 5-4) | 95.0558 ha | Recreation | Swan wpl | Unnamed creeks, (tributaries of Ellen Brook) | Lotic | |
| | 7428 | 28/80 (Toodyay 40-1) | 2.7392 ha | Recreation | Swan | Tributary of Brockman River | Lotic | |
| | 25919 | 28/80 (Toodyay 40-3) | 5.4127 ha | Recreation | - | Unnamed creek | Lotic | |
| | 777 | 1 B/40 | 16.8974 ha | Recreation | Swan | Wooroloo Brook | Lotic | |
| | 2145 | 1 B/40 | 40.4686 ha | Recreation | Swan | Unnamed Creek | Lotic | |
| | 'A'2146 | 1 B/40 | 39.8818 ha | Recreation | Swan | Wooroloo Brook | Lotic | |
| | 28574 | 1 B/40 | 7360 m ² | Recreation & Drainage | - | Tributary of Swan River | Lotic | |
| WANNEROO | 'A'313 | | | Camping - Boy Scouts | Boy Scouts Association | Lake Joondalup | Large, brackish, permanent; semi-open vegetation cover | |
| | 834 | 1A/40 (Yanchep 40-4) | 28.7858 ha | Camping & Recreation | Wanneroo wpl 21 years | Lake Joondalup | see 'A'313 | |
| | 8399 | 1A/40 (Perth 40 sheets 1 & 2) | 33.9936 ha | Recreation | Wanneroo | Gnangara Lake | Large, fresh, permanent; open | |
| | 'A'9868 | 28/80 (Yanchep 40 sheet 1) | 2789.9559 ha | Protection & Preservation of Caves & Flora & for Health & Pleasure Resort | National Parks Authority | Lock McNess Lake Yonderup Lake Wilgarup Lake | Large, fresh, permanent; semi-closed vegetation cover Medium, fresh, seasonal, semi-closed vegetation cover Medium, fresh, permanent; semi-closed vegetation cover | modified National Park |
| | 11598 | 28/80 (Yanchep 40-4) | 60.70 ha | Recreation | Wanneroo w.p.C. | Lake Pinjar | | (drained and filled) |

RECREATION RESERVES ON WETLANDS - METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|----------------------|----------------|---|-------------|--|---|-------------------|---|-------|
| WANNEROO (cont'd) | 27278 | 1A/40 (Perth 40 sheets 1 & 2) | 2.2257 ha | Recreation | Wanneroo wpl 21 years | Gnangara Lake | See 8399 | |
| | 27279 | 1A/40 (Perth 40 sheets 1 & 2) | 108.4558 ha | Recreation | Wanneroo | Gnangara Lake | See 8399 | |
| | 'A'31048 | 1A/40 (Yanch- ep 40- 4) | 465.4 ha | Recreation & Conser- vation of Flora & Fauna | Not vested Control Wanneroo & WAWA | Lake Joondalup | See 'A'313 | |
| | 32768 | 1A/40 (Yanch- ep 40- 4) | 6.3417 ha | Public Recreation | Wanneroo | Lake Joondalup | See 'A'313 | |
| | 33206 | 1A/40 (Yanch- ep 40- 4) | 22.2372 ha | Public Recreation | Wanneroo | Lake Joondalup | See 'A'313 | |
| | 33193 | 1A/40 (Yanch- ep 40- 4) | 26.3729 ha | Public Recreation | Wanneroo | Lake Joondalup | Large, fresh, permanent; semi-closed vegetation cover | |

TABLE 3. Recreation reserves including, or adjacent to, all or part of a wetland in the non-metropolitan areas.

Key to description of lentic wetlands* :

| | | |
|-------------|---|---------------------------|
| Large | : | > 50 hectares |
| Medium | : | 25-50 hectares |
| Small | : | < 25 hectares |
| Fresh | : | < 1000 mg/l (December) |
| Brackish | : | 1000-3000 mg/l (December) |
| Saline | : | > 3000 mg/l (December) |
| Open | : | vegetative cover < 25% |
| Semi-open | : | vegetative cover 26-60% |
| Semi-closed | : | vegetative cover 61-90% |
| Closed | : | vegetative cover > 90% |

Key to abbreviations :

| | | |
|----------------|---|---------------------------------------|
| m ² | : | square metres |
| ha | : | hectares |
| wpl | : | with power to lease |
| W.A.W.A. | : | Western Australian Wildlife Authority |
| C.G. | : | Crown Grant |
| C/- | : | Control of |

Note : Reserve listings compiled before July, 1977.

* Based on wetland classification system adopted by the Wetlands Advisory Committee,⁴ and detailed by Marchant.⁸

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|------------------------|----------------|------------------------|---------------------|----------------------------|--------------------------|---------------------------------|--------------|--|
| BEVERLEY | | | | | | | | No recreation reserves on wetland |
| BOYUP BROOK | 'A'20757 | 415 A/40 (Evans NW) | 3.8808 ha | Recreation and Hall-site | Boyup Brook | Collie River | Lotic | |
| | 'A'1454 | 415 D/40 (Boyup Brook) | 13.1998 ha | Recreation | Boyup Brook | Blackwood River | Lotic | |
| | 'A'11497 | 415 D/40 (Boyup Brook) | 21.9511 ha | Recreation | Boyup Brook wpl 21 years | Boyup Brook | Lotic | |
| | 'A'23783 | 415 D/40 (Boyup Brook) | 4.7601 ha | Picnic Ground | Boyup Brook | Boyup Brook & Blackwood River | Lotic | |
| | 'A'23784 | 415 D/40 (Boyup Brook) | 5.2609 ha | Recreation | Boyup Brook | Boyup Brook | Lotic | |
| | 'A'23807 | 415 D/40 (Boyup Brook) | 3.1363 ha | Recreation | Boyup Brook | Blackwood River | Lotic | |
| | 26099 | 415 D/40 (Boyup Brook) | 1.0117 ha | Recreation | - | Boyup Brook | Lotic | |
| BRIDGETOWN GREENBUSHES | 'A'22315 | 414 C/40 | 4.8916 ha | Recreation swimming pool | Bridgetown-Greenbushes | Spring Gully | Lotic | |
| | 24231 | 439 B/40 | 8094 m ² | Recreation | - | Blackwood River | Lotic | |
| | 18447 | 439 B/40 (Bridgetown) | 46.6197 ha | Recreation & National Park | - | Tributaries of Blackwood River | Lotic | |
| | 'A'23513 | 439 B/40 (Bridgetown) | - | Recreation | - | Blackwood River | Lotic | |
| | 'A'23514 | 439 B/40 (Bridgetown) | 2.9846 ha | Recreation | - | Blackwood River | Lotic | |
| | 28454 | 439 B/40 (Bridgetown) | 1.6137 ha | Park | Bridgetown-Greenbushes | Unnamed Creek | Lotic | |
| | 3449 | 439 B/40 (Bridgetown) | 3.2081 ha | Recreation | Bridgetown-Greenbushes | Unnamed Creek | Lotic | |
| BROOKTON | | | | | | | | No recreation reserves on wetlands (most of Shire outside the Darling System). |
| BUNBURY | 'A'9997 | 411 A/40 (B.C.) | 5.1175 ha | Parklands & Recreation | Bunbury wpl | Rocky Point | Estuary | |
| | 13531 | 411 A/40 (B54-4) | | Camping & Picnic ground | Bunbury | Bar Island in Leschenault Inlet | Estuary | |
| | 34030 | 411 A/40 (B54-4) | 19.4574 ha | Recreation | Bunbury wpl | Turkey Point Leschenault Inlet | Estuary | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|---------------------|----------------|-------------------------|---------------------|--|----------------|------------------------------------|--------------|-----------------------------------|
| BUNBURY (cont'd) | 'A'6962 | 411 A/40 (B69-4) | 4874 m ² | Parklands & Recreation | - | Leschenault Estuary Inlet | | |
| | 8661 | 411 A/40 (B69-4) | 1095 m ² | Recreation | Bunbury | Leschenault Estuary Inlet | | |
| | 8674 | 411 A/40 (B69-4) | 261 m ² | Recreation | - | Leschenault Estuary Inlet | | |
| | 'A'12636 | 411 A/40 (B69-4) | 5.5998 ha | Recreation | Bunbury | Anglesea Island, Leschenault Inlet | Estuary | |
| | 'A'15927 | 411 A/40 (B69-4) | 8.2987 ha | Parking & Recreation | Bunbury wpl | "Queens Gardens" Leschenault Inlet | Estuary | |
| | 27961 | 411 A/40 (B69-4) | 3521 m ² | Recreation | - | Leschenault Estuary Inlet | | |
| | 28032 | 411 A/40 (B69-4) | 4.3681 ha | Caravan Park Camping, Beach Resort, Recreation & Aquatic Sports | Bunbury wpl | Leschenault Estuary Inlet | | |
| | 28033 | 411 A/40 (B69-4) | 7.5094 ha | Caravan Park, Camping, Beach Resort, Recreation & Aquatic Sports | Bunbury wpl | Leschenault Estuary Inlet | | |
| | 28034 | 411 A/40 (B69-4) | 13.7593 ha | Recreation | Bunbury wpl | Leschenault Estuary Inlet | | |
| | 33620 | 411 A/40 (B69-4) | 1.3250 ha | Recreation, Landing Ramp, Parking | Bunbury wpl | Leschenault Estuary | | |
| | 32868 | 411 A/40 (B70-4) | 2.2308 ha | Public Recreation. | - | Bunbury Harbour & Preston River | Lotic | |
| | 25346 | 411 D/40 (B101-4) | 2876 m ² | Recreation & Drainage | Bunbury | ? | | |
| | 31866 | 411 D/40 | 40.0612 ha | Recreation | - | Preston River | Lotic | |
| BODDINGTON | 23466 | 384 A/40 | 4.8562 ha | Camping & Conservation of Flora | - | Hotham River | Lotic | |
| | 23467 | 384 A/40 | 4.0469 ha | Camping | - | Hotham River | Lotic | |
| | 8178 | 384 D/40 | 64.7497 ha | Racecourse & recreation | Boddington | Williams River | Lotic | |
| CHITTERING | 4069 | 28/80 (Gingin 40.4) | 6.8696 ha | Camping | Chittering | Lennards Brook | Lotic | |
| | 4070 | 28/80 Toodyay 40.1) | 18.2109 ha | Camping | - | Unnamed Creek | Lotic | |
| | 23546 | 28/80 (Toodyay 40.1) | 2.5166 ha | Recreation | C.G Chittering | Brockman River | Lotic | |
| | 965 | 31/80 | 163.2072 ha | Recreation | Chittering | Udumung Brook | Lotic | Partly outside the Darling System |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|--|---------------------|--------------------------------|--------------|------------------------------|--------------|-------------------------------------|
| COLLIE | 9124 | 410 D/40 (Muja T.) | 48.5623 ha | Camping Place | - | Unnamed Creek | Lotic | |
| | 17723 | 410 D/40 (Muja S. W.) | 31.3808 ha | Recreation | Collie | Collie River | Lotic | |
| | 7945 | 411 C/40 | 325.7513 ha | Parklands | c/-Collie | Unnamed Creek & Collie River | Lotic | |
| | 21407 | 411 C/40 (Collie Reg.) | 8094 m ² | Recreation | Collie | Collie River South | Lotic | |
| | 22196 | 411 C/40 (Collie Reg) | 6.2473 ha | Recreation | - | Collie River South | Lotic | |
| | 34343 | 411 C/40 (Collie Reg, 30-27, 30-28, 31-27) | 207 ha | Parklands & Recreation | Collie wpl | Collie River | Lotic | |
| | 'A'18806 | 411 C/40 (Collie 32-28, 31-28) | 1.7047 ha | Recreation & Bathing | - | Collie River | Lotic | |
| | 8278 | 411 C/40 (Collie 32-29) | 2.4281 ha | Recreation | - | Collie River | Lotic | |
| | 23606 | 411 C/40 (Collie 32-29) | | Recreation & Park | Collie | Collie River | Lotic | |
| | 22407 | 411 C/40 (Collie 31-28) | 6.7919 ha | Recreation | Collie wpl | Collie River | Lotic | |
| | 7818 | 411 C/40 (Collie 31-29) | 3743 m ² | Recreation | Collie | Collie River | Lotic | |
| | 15195 | 411 C/40 (Collie 31-29, 32-29) | 10.2617 ha | Recreation & Parking | Collie | Collie River | Lotic | |
| DANDARAGAN | | | | | | | | No recreation reserves on wetlands. |
| DARDANUP | 31324 | 411 A/40 | 2.9595 ha | Recreation | - | Collie River | Lotic | |
| | 24359 | 411 A/40 (B55-4) | 4.7424 ha | Recreation | Dardanup wpl | Collie River | Lotic | |
| | 24728 | 411 A/40 (B55-4) | 6.4761 ha | Recreation | Dardanup wpl | Collie River | Lotic | |
| | 25417 | 411 A/40 (B55-4) | 4.0968 ha | Recreation | Dardanup wpl | Collie River | Lotic | |
| | 33242 | 411 A/40 (B55-4) | 2872 m ² | Camping | Dardanup Wpl | Collie River | Lotic | |
| | 27516 | 411 A/40 (B71-4) | 4.7708 ha | Recreation | Dardanup wpl | Collie River | Lotic | |
| | 'A'295 | 411 D/40 | 12.5453 ha | Recreation, Camping & Caravans | - | Ferguson River | Lotic | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont.'d)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|---------------------|----------------|--------------------------------|---------------------|------------------------|--------------------------|---------------------|---|-------|
| DONNYBROOK-BALINGUP | 22860 | 414 A/40 | 24.2862 ha | Recreation | Donnybrook-Balingup | Unnamed Creek | Lotic | |
| | 32021 | 414 A/40 | 1.0522 ha | Recreation | - | Preston River | Lotic | |
| | 10459 | 414 A/40 (Donnybrook Central) | 5.6656 ha | Water & Camping | Donnybrook-Balingup | Preston River | Lotic | |
| | 'A'18527 | 414 A/40 (Donnybrook Central) | 1.5581 ha | Recreation | Donnybrook-Balingup | Preston River | Lotic | |
| | 'A'8979 | 414 A/40 (Donnybrook Regional) | 4.0257 ha | Parklands | Donnybrook-Balingup | Preston River | Lotic | |
| | 'A'15418 | 414 A/40 (Donnybrook Regional) | 3.5061 ha | Parklands & Recreation | Donnybrook-Balingup | Preston River | Lotic | |
| | 33927 | 414 A/40 (Donnybrook Regional) | 1.3718 ha | Caravan Park | Donnybrook-Balingup | Preston River | Lotic | |
| | 6956 | 414 B/40 (Preston) | 6.0703 ha | Recreation | Donnybrook-Balingup | Preston River | Lotic | |
| | 23724 | 414 B/40 (Preston) | 4.8562 ha | Recreation | - | Preston River | Lotic | |
| | 'A'20503 | 414 C/40 (Balingup) | 1176 m ² | Parklands | Donnybrook-Balingup | Balingup Brook | Lotic | |
| | 33491 | 414 C/40 (Balingup) | 4.7322 ha | Recreation | - | Brooklands Pool | Lotic | |
| 32998 | 414 D/40 | 1.9538 ha | Public Recreation | - | Tributary of Capel River | Lotic | | |
| GINGIN | 28617 | 28/80 (Gingin Townsite) | 3475 m ² | Park & Recreation | Gingin | Gingin Brook | Lotic | |
| | 32519 | 28/80 (Gingin Townsite) | 2469 m ² | Recreation | - | Gingin Brook | Lotic | |
| | 20366 | 28/80 (Gingin 40-2) and 31/80 | 54.6306 ha | Recreation | Gingin | Lake Mukenburra | Large, brackish (saline?) seasonal; open. | |
| | 17949 | 29/80 (Guilderton) | 19.7841 ha | Camping | Gingin | Moore River & coast | Lotic | |
| | 21473 | 29/80 (Guilderton) | 10.0202 ha | Recreation | Gingin | Moore River & coast | Lotic | |
| | 31410 | 30/80 (Gingin 40-1) | 9763 m ² | Picnic Ground | - | Moore River | Lotic | |
| | 1224 | 31/80 | 116.8075 ha | Camping | Gingin | Bartletts Well | Small, fresh seasonal | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|--------------------|----------------|-----------------------------------|---------------------|------------------------------|--------------|---------------------------------|--------------------------------|---|
| GINGIN (cont'd) | 22223 | 31/80 | 101.1714 ha | Recreation | Gingin | Beermullah Lake | Large, saline, permanent; open | Reserves on lake only - little fore shore. Surrounded by grazing land. Weed growth spoiling water skiing. |
| HARVEY | 17482 | 383 D/40 | 31.4238 ha | Recreation | c/- Harvey | Unnamed Creek | Lotic | |
| | 22672 | 383 D/40 | 71.0780 ha | Recreation | Harvey wpl | Tributary of Harvey | Lotic | |
| | 27610 | 383 D/40 | 2.2814 ha | Parking & Picnic | Harvey | Harvey Reservoir | Lotic (Dam) | |
| | 27458 | 383 D/40 (Lake Preston NE) | 10.1171 ha | Recreation | - | Lake Preston foreshore | Large, saline, permanent; open | |
| | 25973 | 411 A/40 | 5736 m ² | Recreation | - | Collie River | Lotic | |
| | 33247 | 411 A/40 (Australind) | 4.5527 ha | Public Recreation | - | Collie River | Lotic | |
| | 26858 | 411 A/40 (B55-4) | 7.7750 ha | Recreation | - | Samphire Bay, Leschenault Inlet | Estuary | |
| | 31576 | 411 A/40 (B55-4) | 4.3555 ha | Recreation | Harvey | Collie River | Lotic | |
| MANDURAH | 2990 | 380 D/40 | 72.0340 ha | Recreation & Camping | Mandurah | Harvey Estuary | Estuary | |
| | 33066 | 380 D/40 | 4603 m ² | Public Recreation | - | Harvey Estuary | Estuary | |
| | 34177 | 380 D/40 | 2105 m ² | Public Recreation | - | Harvey Estuary | Estuary | |
| | 34293 | 380 D/40 (Pi101-4) | 3913 m ² | Recreation | Mandurah wpl | Harvey Estuary & Peel Inlet | Estuary | |
| | 30701 | 380 D/40 (Pi133-4) 381 C/40 | 1.6061 ha | Recreation | - | Harvey Estuary | Estuary | |
| | 25360 | 380 A/40 (Pi 9-4) | 28.8060 ha | Recreation | - | Goegrup Lake | Pool in lotic system | Part of Serpentine River |
| | 'A'9633 | 380 A/40 (Pi23-4) | 5.8982 ha | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 14004 | 380 A/40 (Pi23-4, 39-4) | 1.4493 ha | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 19322 | 380 A/40 (Pi23-4) | 1.4569 ha | Camping | Mandurah | Peel Inlet | Estuary | |
| | 19323 | 380 A/40 (Pi23-4) | 1.8767 ha | River Improvements & Camping | Mandurah | Peel Inlet | Estuary | |
| | 'A'21231 | 380 A/40 (Pi23-4) | 6.8443 ha | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 27582 | 380 A/40 (Pi23-4 Pi39-4) | 3.4520 ha | Caravan Park | Mandurah | Peel Inlet | Estuary | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|----------------------|-----------------------|---|---------------------|--|---------------------------|---|-----------------------|--------------------|
| MANDURAH (cont'd) | 30987 | 380 A/40 (Pi23-4) | 3.9963 ha | Camping & Caravan Park | Mandurah | Peel Inlet | Estuary | |
| | 32703 | 380 A/40 (Pi23-4) | 2.3104 ha | Caravan Park & Camping | Mandurah | Entrance to Peel Inlet | Estuary | |
| | 26535 | 380 A/40 (Pi25-4) | 9073 m ² | Recreation | - | Part on Serpentine River fore- shore | Lotic | |
| | 22283 | 380 A/40 (Pi39-4) | 1821 m ² | Park & Recreation | Mandurah | Entrance to Peel Inlet | Estuary | |
| | 'A'27581 | 380 A/40 (Pi39-4) | 7.0535 ha | Recreation | Mandurah | Entrance to Peel Inlet | Estuary | |
| | 27622 | 380 A/40 (Pi39-4) | 670 m ² | Recreation | - | Entrance to Peel Inlet | Estuary | |
| | 29485 | 380 A/40 (Pi39-4) | 6588 m ² | Public Recreation | Mandurah | Soldiers Caves, Peel Inlet | Estuary | |
| | 25120 | 380 A/40 (Pi41-4) | 7016 m ² | Recreation | - | Serpentine River fore- shore | Lotic | |
| | 8185 | 380 A/40 (Pi55-4, Pi71-4 Pi72-4 Pi56-4) | - | Recreation | Mandurah | Channel & Creery Isl- and Peel Inlet | Islands in Estuary | |
| | 26105 | 380 A/40 (Pi57-4) | 9839 m ² | Recreation | - | Serpentine River fore- shore | Lotic | |
| | 'A'24729 | 380 A/40 Pi69, 70- 4) | 5453 m ² | Recreation | - | Peel Inlet | Estuary | |
| | 25414 | 380 A/40 (Pi69,70- 4) | 2911 m ² | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 28243 | 380 A/40 (Pi69,70- 4) | 3490 m ² | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 28458 | 380 A/40 (Pi69,70- 4) | 3326 m ² | Recreation | Mandurah | Peel Inlet | Estuary | |
| | 27999 | 380 A/40 (Pi86-4) | 5162 m ² | Recreation excluding camping caravan parking | Mandurah | Peel Inlet | Estuary | |
| 28349 | 380 A/40 (Pi101-4) | 3.5056 ha | Recreation | - | Peel Inlet | Estuary | | |
| MURRAY | 21038 | 380 B/40 | 61.3883 ha | Parklands & Recrea- tion | - | North Dandalup River | Lotic | |
| | 'A'5101 | 380 C/40 | 64.7497 ha | Recreation & Parklands | Conservator of Forests | Murray River | Lotic | Also in Waroona |
| | 'A'5099 | 380 C/40 | 64.7497 ha | Recreation & Parklands | Conservator of Forests | Murray River | Lotic | Also in Waroona |
| | 'A'5100 | 380 C/40 | 80.9371 ha | Recreation & Parklands | Conservator of Forests | Murray River | Lotic | Also in Waroona |
| | 'A'5102 | 380 C/40 | 220.9584 ha | Recreation & Parklands | Conservator of Forests | Murray River | Lotic | |
| | 23642 | 380 C/40 | 4.3327 ha | Camping & Recrea- tion | - | Murray River | Lotic | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|-----------------------------|---------------------|---------------------------------|--------------|-----------------------------------|----------------------|---|
| MURRAY (cont'd) | 2738 | 380 D/40 | 34.3983 ha | Recreation | - | Harvey Estuary | Estuary | |
| | 11718 | 380 D/40 | 4.0469 ha | Recreation | - | Harvey Estuary | Estuary | |
| | 27528 | 380 D/40 | 34.1959 ha | Recreation | - | Harvey Estuary | Estuary | |
| | 28796 | 380 D/40 | 5688 m ² | Public Recreation | Lake Clifton | Large, saline, permanent; open | | |
| | 33039 | 380 D/40 | 1.9516 ha | Recreation | Murray | Peel Inlet | Estuary | |
| | 31032 | 380 D/40 (Pinjarrara 14-28) | 1.2369 ha | Recreation & River Improvements | Murray | Murray River | Lotic | |
| | 33281 | 380 D/40 (Pinjarrara 14-28) | 4.5831 ha | Public Recreation | Murray | Murray River | Lotic | |
| | 31568 | 380 D/40 (Pinjarrara 14-29) | 1.4670 ha | Public Recreation | Murray | Murray River | Lotic | |
| | 25846 | 380 A/40 (Pi9-4) | 9105 m ² | Recreation | - | Lake Geogrup | Pool in Lotic System | Part of Serpentine River |
| | 27704 | 380 A/40 (Pi57-4, Pi73-4) | 6.8797 ha | Recreation | - | Serpentine River foreshore | Lotic | |
| | 27819 | 380 A/40 (Pi57-4) | 1.8742 ha | Recreation | - | Serpentine River foreshore | Lotic | |
| | 32726 | 380 A/40 (Pi58-4) | 4.4614 ha | Public Recreation | Murray | Unnamed Swamp | | Wetland extends from Goegrup Lake South (tidal) |
| | 23015 | 380 A/40 (Pi73-4) | 2.0234 ha | Recreation & Camping | Murray | Murray River & Peel Inlet | Estuary | |
| | 23016 | 380 A/40 (Pi73-4, Pi89-4) | 4.0469 ha | Recreation & Camping | Murray | Wargarloop Branch of Murray River | Estuary | |
| | 33768 | 380 A/40 (Pi73-4) | 7886 m ² | Public Recreation | - | Serpentine River | Lotic | Separated from river by road along foreshore |
| | 26735 | 380 A/40 (Pi74-4, Pi90-4) | 7.5232 ha | Recreation | Murray | Murray River foreshore | Lotic | |
| | 5621 | 380 A/40 (Pi89-4) | 5.0168 ha | Recreation | - | Murray River | Estuary | Between two branches of river, separated from both by roads |
| | 5623 | 380 A/40 (Pi89-4) | 1.3734 ha | Recreation | Murray | Murray River | Estuary | |
| | 5625 | 380 A/40 (Pi89-4) | 1.2343 ha | Recreation | - | Murray River | Estuary | |
| | 32034 | 380 A/40 (Pi89-4) | 10.0062 ha | Recreation | Murray | Yunderup Canals | artificial | Dredged canals |
| | 30715 | 380 A/40 (Pi90-4) | 1.0649 ha | Recreation | Murray | Murray River foreshore | Lotic | |
| | 8900 | 380 A/40 (Murray 12-34) | 1138 m ² | Recreation | Murray | Murray River | Lotic | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|--------------------|--|--|---------------------|---|---------------------------|--|--------------------------------------|-----------------------------|
| MURRAY (cont'd) | 33836 | 380 A/40 (Murray 12-34) | 1973 m ² | Public Recreation | - | Winter Brook | Lotic | |
| | 33446 | 380 D/40 (Pinja- rra 14- 29) | 1.2368 ha | Public Recreation | Murray | Murray River | Lotic | |
| | 26351 | 380 A/40 (Pi9-4) | 187.1042 ha | Public Recreation | - | Goegrup Lake | Pool in Lotic System | |
| | 31951 | 380 D/40 (Pinja- rra 15- 29) | 4962 m ² | Recreation | - | Murray River | Lotic | |
| | 30342 | 380 A/40 | 4.6134 ha | Recreation | Murray | Murray River | Lotic | |
| | 33749 | 380 A/40 | 1.5602 ha | Recreation & Conser- vation of Fauna | W A W A | Boodalín Island in Peel Inlet | Estuary | |
| NANNUP | 12952 | 439 A/40 | 19.9561 ha | Timber, water and camping | Conservator of Forests | Blackwood River | Lotic | |
| NORTHAM | 33050 | 2 A/40 | 3002 m ² | Public Recreation | - | Woorooloo Brook | Lotic | |
| TOODYAY | 5273 | 27 A/40 (Toody- yay 40- 2) & 28 A/40 | 59.5892 ha | Camping | Toodyay | Unnamed Creek | Lotic | |
| | 27015 | 27 D/40 (Toody- yay 08- 30) | 8879 m ² | Recreation | Toodyay | Avon River | Lotic | |
| | 33789 | 28/80 (Toody- yay 40- 2) | 12.8873 ha | Public Recreation | - | Unnamed Creek | Lotic | |
| WANDERING | 910 | 379 A/40 | 15.4034 ha | Parklands & Recrea- tion | - | Gnowing Spring | Lotic | |
| WAROONA | 'A'5099) 'A'5100) 'A'5101) 'A'5102) | | | | | | | See Murray Shire |
| | 'A'5098 | 380 D/40 380 C/40 | 121.4057 ha | Recreation & Parklands | - | Murray River | Lotic | |
| | 12408 | 383 A/40 | | Camping | Waroona | Harvey River | Lotic | |
| | 13987 | 383 A/40 | 20.2343 ha | Camping | - | Harvey River | Lotic | |
| | 'A'22091 | 383 A/40 | 61.8743 ha | Recreation & Camping | Waroona | Lake Preston & Coast | Large, saline, permanent; open | |
| | 22215 | 383 A/40 | 4.0469 ha | Drainage & Camping | - | Unnamed Creek | Lotic | |
| | 22545 | 383 A/40 | 16.3973 ha | Water & Camping | - | ? | | Drain reserv along bound |
| | 'A'23172 | 383 A/40 | 58.6794 ha | Camping | Waroona | Harvey River | Lotic | |
| | 25660 | 383 A/40 | 675 m ² | Recreation & Drainage | - | ? | | |

RECREATION RESERVES ON WETLANDS - NON-METROPOLITAN

(Cont'd)

| LOCAL AUTHORITY | RESERVE NUMBER | PLAN | AREA | PURPOSE | VESTING | WETLAND | WETLAND TYPE | NOTES |
|-----------------|----------------|----------|-----------|-----------------|-------------|---------|--------------|------------------------------------|
| WEST ARTHUR | 'A'21009 | 410 D/40 | 2.0158 ha | Camping & Water | West Arthur | ? | | |
| WILLIAMS | | | | | | | | No recreation reserves on wetlands |
| YORK | | | | | | | | No recreation reserves on wetlands |

TABLE 4: FORMS OF RECREATION PRACTICED IN OR NEAR WETLANDS.

| FORM OF RECREATION | DEGREE OF IMPACT | EXAMPLES |
|--------------------|------------------|---|
| Aquatic | high impact | Water skiing Power boating House boats Hang-gliding |
| Aquatic | medium impact | Sailing Canoeing Rowing Fishing (except from power boats) Wading Swimming |
| Land based | high impact | Off road vehicles Ball games Horse training |
| Land based | medium impact | Horse riding (r) Retrieving Duck shooting Digging for bait "Play" Picnicing (r) Barbecues Orienteering (r) Camping (r) Fishing (shore-based) (r) |
| Land based | low impact | Visual and photographic (scenery, birdwatching, wildlife observation) (r) Walking and hiking |

(Items marked 'r' may be practiced as retreat activities, requiring few facilities but ample space).

TABLE 5 : MINIMUM AREAS AND DEPTHS OF OPEN WATER REQUIRED
FOR VARIOUS FORMS OF AQUATIC RECREATION.

| Activity | Area of Open Water (ha) | Depth of Water (metres) | Additional Comments |
|---------------------|-------------------------|-------------------------|--|
| Water skiing | > 10 | > 2 | |
| Power boat racing | > 50 | > 2 | |
| Power boat cruising | Large area | > 2 | |
| House boating | Large area | > 0.5 | |
| Yacht cruising | Large area | > 1.5 | Deeper for large keel boats |
| Dinghy racing | > 30 | > 1 | More for large dinghies and keel boats |
| Rowing | > 30 | > 1 | Modified waterways and banks for top class competitions |
| Canoes | rivers preferred | > 0.5 | Shallows and bars acceptable particularly on fast flowing rivers (white water) |
| Surf cats | > 30 | > 0.5 | |
| Swimming | > 0.1 | > 1 | |
| Crabbing | > 5 | < 0.5 | |

WETLANDS OF THE DARLING SYSTEM

Wetlands are areas of seasonally, intermittently or permanently waterlogged soils or inundated land, whether natural or otherwise, fresh or saline e.g. waterlogged soils, ponds, billabongs, lakes, swamps, tidal flats, estuaries, rivers and their tributaries.

Bulletins in this series:

Wetlands in Recreation Reserves (Bulletin No. 59)

The Purposes and Vestings of Wetland Reserves
(Bulletin No. 60)

Wetlands in Conservation Reserves and
National Parks (Bulletin No. 61)

Wetland Reserves and their Management
(Bulletin No. 62)