WEST AUSTRALIAN FIELD AND GAME ASSOCIATION INC.

PROPOSED MODIFICATIONS TO THE EXISTING WETLAND COMPLEX SYSTEMS IN THE SOUTH WEST LAND DIVISION OF WESTERN AUSTRALIA.

TO

THE WATERBIRD RESEARCH UNIT, DEPARTMENT OF FISHERIES AND WILDLIFE

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RESEARCH SECTION.

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PROPOSED MODIFICATIONS TO THE EXISTING WETLAND COMPLEX SYSTEMS IN THE SOUTH WEST LAND DIVISION OF WESTERN AUSTRALIA.

1. ABSTRACT.

The wetlands of the South-West Land Division of Western Australia have been allocated into specific wetland complexes, according to drainage systems and geographical location. Proposals are given for the modification of some of the existing complexes, and the introduction of some not previously considered, for a greater benificial use in the determination of open waterfowl hunting seasons in Western Australia.

2. INTRODUCTION

Dr. T.L.Riggert, (formerly Snr. Research Officer with the Dept. Fisheries and Wildlife) inhis submission to the "Conservation through Reserves Committee 1974" instigated a series of wetland complexes throughout the South-West Land Division covering the major systems of all classes and types of wetlands.

These complexes were based on geographic location with emphasis in the main on drainage systems within the South-West Land Division. Surveys conducted each year prior to the declaration of Open Waterfowl Hunting seasons, however were not based on data obtained from these complexes but on rainfall falling throughout the winter months in specific meteorological districts.

In its submission to the Dept. Fisheries & Wildlife on the Standardisation of Duck Seasons in Western Australia, (Burking et al 1979) the WAFGA proposed that the basis for the determination of seasons should be based on relative data of wetlands within complexes, irrespective of geographical location or rainfall, at a nominated period, ie November each year.

In view of this, it was found that many of the existing wetland complexes, did not adequately cover the area well enough and that some modification was necessary to improve the overall data collecting system within the South-West Land Division.

In recent discussions with J.A.K. Lane of the Dept. Fisheries & Wildlife re the possible study of Wetland Utilisation by Waterbirds by the R.A.O.U. and the Dept. F.&W. it seems relevent at this stage to press for the instigation and use of the complex system.

SECTION 3.

THE EXISTING WETLAND COMPLEXES IN THE SOUTH-WEST LAND DIVISION OF WESTERN AUSTRALIA.

SECTION 3.

THE EXISTING WETLAND COMPLEXES IN THE SOUTH-WEST LAND DIVISION.

3. INTRODUCTION

The 17 existing wetlands within the South-West Land Division are briefly discussed in relation to size and geographic location. No attempt has been made to rate these complexes or place any waterfowl useage on them before a complete comprehensive study has been made.

3.1. SWAN COASTAL PLAIN

This extensive wetland complex is situated along the West Coast of the State ranging from Busselton in the South to Gingin in the north. Smith (1975) list a sub-section in the Northern region of the complex situated in the vicinity of Gingin, however, Riggert (1974) lists the whole area as one complex.

All the wetlands within the complex rely on run off from the rivers and streams flowing west from the Darling Scarp. Due to its size and geographic range, rainfall to these wetlands varies considerably from north to south. Many wetlands in the form of lakes swamps and estuaries are located in this complex and in view of the proposed modification of this and other complexes, they will be discussed in Section 4 of this submission.

3.2. ALBANY-SOUTH COAST.

Situated along the South Coast between the Augusta and Hopetoun complexes this complex was once part of an extensive area of swamps and wetlands. Extensive clearing of land for agricultural use and drainage of many of the low lying areas has reduced this complex to a series of relatively fresh water lakes and provide important areas for breeding of the Black Duck and the Grey Teal.

3.3. WAGIN-KATANNING.

This extensive complex covers a large number of wetlands (all now affected by increasing salinity due to the extensive clearing of land for Agricultural use.) and ranges from Wagin, Woodanilling, Dumbleyung and Katanning. It has been considered as the main breeding are for waterfowl within the Sout-West. Droughts over the past 10 years have greatly affected this complex to such an extent that very few of the wetlands have held water and breeding of waterfowl has been reduced. When full, these lakes hold large populations of waterfowl and at times have provided refuge during years of low rainfall when other complexes are dry. The most important wetlands within the complex are; Coblinine River & Flats, Lake Coyrecup, Dumbleyung, Gundaring, Martinup

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3.3. WAGIN-KATANNING

Murapin, Wagin, Charling, Flagstaff, Knobrup Swamp, Ewlymartup, Norring Parkyerring. Wadering, Lime, Quarbing, Nunning Swamp and Sprats Lagoon. Modificationof this complex is proposed in section 4 of this submission.

3.4. BEVERLEY

The Beverley wetland complex has as its focal point a lake system which is one of the sources of the Avon River. This has been dammed to form a series of lakes known as the Channel Lakes. These are fed by the Cunderdin salt lakes flowing from the North East. Principal wetlands in this complex are the Channel Lakes and Lake Mears.

3.5. WONGAN HILLS

This complex extends from Dowerin in the South through Wongan Hills to Lake Hind in the North-West. The principal wetlands are; Lakes Dowerin, Walyormouring (Oak Park), Damboring lakes, and lakes, Ninan, Hind and Koomberkine. Though dry in recent years these wetlands when full are used by waterfowl for feeding, breeding and migration staging when cyclonic rains bring life to the wetlands in the North-West.

3.6. LAKE GRACE.

A series of large shallow salt lakes in the South-Eastern Wheatbelt make up the Lake Grace Wetland Complex. Although these lakes are often dry, they are of major importance when they do contain water. Most of these lakes are so large that when full, waterfowl using them cannot be disturbed to any great extent. Dispersed between the major lakes are a series of smaller wetlands which are permanent or semi-permanent and waterfowl congrgate on these when the large shallow lakes dry up. The principal wetlands in the complex are; Lakes Magenta, Kondinin, Buchan, Chinocup, Grace .North & South, Jilikin and Pingorup.

3.7. LAKE KING.

To the East of the Lkae Grace wetland complex lies the Lake King series of wetlands known as the the Lake King Complex. Similar in many ways to the wetlands of the Lake Grace System with its series of large shallow salt lakes. Principal wetlands within the complex are Hurlstone, Varley, Pallorup, Camm, Carmody, Fox, Gulson, Kathleen and Lake King.

3.8. HOPETOUN

The wetlands of this complex are confined to a narrow belt adjacent to the coast between Albany and Esperance. They consist of a series of small estuaries and lakes fed by the rivers from the hinterland.

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3.8. HOPETOUN

This area holds large concentrations of waterfowl during the dry summer months, the main species being; Mountain Duck and Black Swan. The Principal wetlands are Lk. Shaster, Fitzegerald Inlet, Jerdacuttup Lakes, Margaret Cove Lake and the St. Mary River Mouth.

3.9. ESPERANCE.

This complex is made up of a series of wetlands inland from the Esperance Bay, and consists of lakes varying from fresh-water to brackish. They are permanently wet and water drains slowly from East to West through the lakes and to this extent are a single interdependent complex. These wetlands still retain much of their natural character and support large resident populations of waterfowl as well as forming an important refuge for birds during the summer period. The principal wetlands are Lake, Cheetup, Warden, Mullet, Woody, Bannitup, Barkers, Gidong, Gore, Kubitch, Mortijimup, Quallilup, Tarblong and Pink.

3.10. NARROGIN.

Known as the Northern Arthur River Wetlands, this complex lies to the East and South of the township of Narrogin. With the exception of Lake Toolibin which is still relatively fresh, the wetlands within the system are basically saline in quality due to excessive clearing of land in catchment area. For its size, it is one of the most productive waterfowl areas in the South-West, however due to sporadic flooding and summer drying it cannot be counted on as an annual breeding area. The principal wetlands are; Lakes, Toolibin, Taarblin, Mud Hut, Ibis, Billy, Bokan, Nomans, Big White and Little White,

3.11. MOROWA

The Morowa complex is of high value to waterfowl populations as it not only supports large local populations, but it is also the main area from which populations disperse into the North following cyclonic rains. This is especially important for the Grey Teal and Pink-eared species. The principal wetlands are; Lakes, Eganu, Pinjarrega, Yarra-Yarra, Three Springs Salt Lakes, Lakes, Nullewa and Arrowsmith.

3.12. JURIEN BAY

The Jurien Bay wetland complex system lies adjacent to the coast northwards from the Hill River. Its functions are similar to that of the Morowa Complex. The Principal wetlands are; Green Head Salt Lakes, Snag Island Salt Lakes, Hill River Estuary, and lakes Indoon and Logue.

3.13. WANNAMAL.

The Wannamal complex lies to the South East of Jurien Bay and is made up of wetlands which are Reserves or private property. Although most of the wetlands are filled almost every year by winter rains, they have degenerated rapidly due to extensive clearing of land causing increasing salinity. The principal wetlands in the complex are, Lakes, Wannamal, and the smaller swamps to the South, Taylors, Football, Cemetary, the Moore River between Mogumber and Moora and the Privately owned lakes in the Moora district.

3.14. LAKE MUIR

The area of this important complex varies according to the literature. Riggert (1974) illustrates two complexes ajoining each other ie, Lake Muir and an unnamed complex in the Cranbrook area around Lake Balicup. Smith (1975) see map no. 1. groups these two complexes together under the General Heading of the Lake Muir complex. In this submission the two areas will be discussed as two separate systems and details will made in section 4.

The Lake Muir system includes a series of wetlands near the Muir Highway. They serve as a breeding and feeding area for waterfowl as well as a drought refuge for birds moving South from the inland. The principal wetlands are; Byenup Lagoon, Lakes, Kulunilup, Muir, Unicup and Little Unicup lake, Noobyup, Pindicup, Tordit-Gurrup Lagoon and lakes Pooorecup and Carabundup.

3.15. AUGUSTA

These wetlands extend along the South Coast from Augusta to Wilsons Inlet and have shown that no single wetland contains a very large population of waterfowl. but the total complex of Lakes, swamps and estuaries does carry large populations especially in the summer months when inland wetlands become dry. The pricipal wetlands in the complex are; Gingilup Swamps, Broke, Hardy, Irwin, Parry. Walpole and Wilson inlets, Owingup Swamp and Lakes Jasper, Marginup and Quailayup, with the Blackwood River and estuary together with Swan Lake and the Augusta Deadwater.

3.16. CRANBROOK.

As discussed in the Lake Muir complex, in some cases this and Lake Miur are sometimes linked together. This complex is situated to the North-East of Lake Muir and contains a number of important wetlands in relation to the breeding and nesting of waterfowl. The principal wetlands are lakes; Balicup, Camel, Jebardup, Mordalup and Yarnup. Details of this complex

3.16. CRANBROOK

Details of this complex are discussed in Section 4. Modifications.

3.17. COLLIE IRRIGATION.

Riggert (1974) illustrates this complex to the East of the Swan Coastal Plain and covers the Collie Irrigation Scheme (Wellington Dam) and associated Rivers flowing to the West Coast.

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SECTION 4.

PROPOSALS FOR THE MODIFICATION OF WETLAND COMPLEXES WITHIN THE SOUTH-WEST LAND DIVISION.

SECTION 4.

THE MODIFICATIONS OF THE WETLAND COMPLEX SYSTEM IN THE SOUTH WEST LAND DIVISION AS PROPOSED BY THE WEST. AUSTRALIAN FIELD & GAME ASSOCIATION INC.

4.1. DISCUSSION.

As recorded in section 3 of this submission, a total of 17 major wetland complexes at present exist in the South-West Land Division of Western Australia. Some are very extensive and cover a range of climatic variations and differing drainage systems. Others are relatively small and could in fact be grouped. The following proposals lists these complexes which require modification and a number of new (not previously discussed)complexes are listed.

The reader may not agree with some of the proposals but the modifications are based on wetlands in areas where the change in rainfall and evaporation can vary over a relatively short distance.

4.2. DETERMINATION OF OPEN WATERFOWL HUNTING SEASONS.

During preliminary discussions with the Dept. Fisheries & Wildlife on the suggested Standardisation of Open waterfowl hunting seasons, the WAFGA felt that the only effective way to obtain data was to study information from various wetland complexes and establish a rating system on each wetland within each complex. In order for this to be instigated, the range of wetland complexes must cover the greatest possible area and range of climatical conditions in regard to rainfall, evaporation, geographic location and drainage systems. (Burking et. al. 1979). With the installation of depth gauges in a large number of wetlands the situation arises that an accurate determination of water holding capacities of wetlands can now be established and greater emphasis can be placed on which wetland within a complex is best suited to act as a sanctuary during times of low rainfall or during the open waterfowl hunting seasons. It appears at present that the lakes selected as sanctuaries in some cases leave a lot to be desired and that more thought could be put into this situation. It is hoped that following the intensive study of waterfowl utilisation of wetlands that a more realistic attitude can be established. We know very little about the majority of wetlands in many areas but by the time an in depth study is carried out we may all be better informed to make recommendations.

Modification proposals follows in this section of the report and again the reader is requested to accept this as the feelings of the WAFGA and further discussion on the complex systems would be welcommed.

4.3. SWAN COASTAL PLAIN.

As discussed in 3.1. this complex is extremely large and covers an extensive range of drainage , climatic and rainfall variables. The proposals are to spilt this complex into four smaller complexes to cover the range of factors mentioned.

4.3.1. BUSSELTON

This would cover the area from the Deadwater near the township of Dunsborough, to the swamps south of Bunbury including the Vasse and Wonnerup Esturaries. Drainage of this area is mainly "Man made" to provide arable land for agriculture and very little remains in its orriginal state. The principal wetlands within this complex would be; the Deadwater and the Vasse & Wonnerup estuaries.

4.3.2. PEEL IRRIGATION

This complex would cover the area from Bunbury North to the Coastal Lakes between Mandurah and Fremantle. Principal wetlands would be; Benger Swamp, Lakes, Clifton, Preston, the Harvey Lakes & swamps, the Waroona, Harvey, Logue Brook and Stirling Dams. the many rivers flowing from the Darling Scarp, the extensive irrigation system of the Harvey - Waroona irrigation complex Lake Gowergrup and the Serpentine River together with the large salt lakes west of Baldivis.

4.3.3. PERTH METROPOLITAN

An extensive number of wetlands occur in the Perth Metropolitan Area from Rockinham in the South to Yanchep in the north. Many of these have been altered drastically through development for housing, agriculture and industry and very few of these remain in their orriginal condition. However they provide a very important role as a drought refuge for waterfowl from the Wheatbelt during the summer months when the inland lakes dry up. They attract constant attention by the public and hand feeding is common. The major wetlands in this complex would be; Lakes, Richmond, Coogee, Thompsons, Forrestdale, Jandabup, Bibra, North, Boorogoon, Blue Gum Reserve, the Swan and Canning Rivers and Estuaries, Perry lakes, Adams,Badgerup,Goolelal, Gnangara, Gnowergup,House Swamp,Jackadder,Long Swamp, Maida Vale Lakes 1 & 2, Marginup, Little Marginup, Neerabup, and the lakes within the Yanchep National Park.

4.3.4. GINGIN.

To the north of the Perth Metropolitan Area lies an area of extensive swamps Lakes and rivers quite separate from those of the Metro area. Smith (1975) lists a separate section and although not named applies closely with the Gingin area.

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4.3.4. GINGIN

To the North of the proposed complex lies the Jurien Bay Complex and to the reader, the question may be raised as to why some of these lakes have been allocated to this particular complex. There appears to be a break in wetlands between Gingin and Jurien Bay and this is why the proposals have listed a separate complex. The Principal wetlands of this complex would be; Lake Karakin (North & South) Bidaminna, Beermulluh, White Lake, Moore River Mouth, Gingin Brook, Banbun, Chandala, Mungala, Reserve 31241, and Yurine Swamp.

4.4. ALBANY - SOUTH COAST.

No modifications are listed for this complex at this stage.

4.5. WAGIN - KATANNING.

As discussed in section 3.3., this complex extends over a large area varying in climatic conditions, rainfall and rate of evaporation. The drainage patterns show that during good seasonal rains that all these wetlands are infact linked in some way. However, in studying the situation in relation to to the Open waterfowl hunting seasons, it was felt that some consideration be given to specific areas closely allied to shooting localities. It was proposed to split the complex into separate areas and these are listed below.

4.5.1. This proposed complex lies to the East of Katanning township and the wetlands in general are fed by waters of the Colinine River and associated streams. The wetlands in this complex would be; Lakes, Ewlyamartup, Coyrecup, Granite Lagoon, Knowbrup Swamp, Knowbrup Lagoon,Causerina, Swamps, Perlungup Swamp, Minerup Lake, and the may swamps and water holes to the East.

4.5.2. DUMBLEYUNG.

Fed by waters of the Dongolocking Creek are a number of wetlands situated South and West of the Dumbleyung townsite. These wetlands are as follows, Lakes, Dumbleyung, Coomelberrup and White Water Pool.

4.5.3, WAGIN.

As with the other complexes described, the Lkaes to the East and South of Wagin, are closely linked with those of the Dumbleyung proposals, but are fed by different sources. Proposals for a Wagin complex are as follows, the principal wetlands being, Lakes, Gundaring, Bokoring, Dornducking, Wagin, Town , Salt, Parkeyerring, Little Parkeyerring, Quarbing, Norring Little Norring and Liame Lake.

4.5.4. WOODANILLING.

The wetlands of this proposed complex lie to the South - West of the Wagin Lakes and in the opinion of the authors are a separate identity fromthe wetlands to the North. The principal wetlands of this complex would be; Wadering, Queerearrup, Charling, Martinup, Mirapin, Little Murapin, Small Lake and Flagstaff.

4.5.5. BEAUFORT RIVER.

An extensive area of small swamps and pools lie to the East of the proposed Woodanilling complex. West of the Albany Highway, an area subjected to inundation can well be termed a separate complex. The principal wetlands of this proposed complex would be; Fitzes Swamp, Six Mile Pool and the Beaufort River and Flats.

4.6. BEVERLEY.

No modifications are proposed for this complex at this stage.

4.7. WONGAN HILLS.

No modifications are proposed for this complex at this stage.

4.8. LAKE GRACE.

No modifications are proposed for this complex at this stage.

4.9. LAKE KING.

No modifications are proposed for this complex at this stage.

4.10. HOPETOUN.

No modifications are proposed for this complex at this stage.

4.11. ESPERANCE.

No modifications are proposed for this complex at this stage.

4.12. NARROGIN.

No modifications are proposed for this complex at this stage.

4.13. MOROWA.

No modifications are proposed for this complex at this stage.

4.14. JURIEN BAY.

Some consideration must be given to the Lakes in the Cataby area at present not allocated to a wetland complex. Perhaps they could fall within the area allocated to the Wannamal complex, but seem apart from the designated complex systems.

4.15. WANNAMAL.

The possible inclusion of Lake Chittering into this complex may fill a gap from wetlands in this area.

4.16. LAKE MUIR.

As discussed in section 3.14. no modifications should be made to this existing complex apart from establishing a separate identity for thos wetlands which occur in the Cranbrook area. Principal wetlands would as those listed in section 3.14,

4.17. AUGUSTA.

No modifications are proposed for this complex at this stage.

4.18. CRANBROOK.

As discussed in section 3.16. The series of wetlands in this area must be considered a separate identity to those of the Lake Muir complex. The principal wetlands are those as listed in 3.16.

4.19. COLLIE IRRIGATION.

No modifications are proposed for this complex at this stage.

4.20. YEALERING .

In all the reports studied, no mention is made of the wetlands near the township of Yealering. Here is situated a separate complex of wetlands isolated from any other recognised complex system. The major wetland is the sanctuary lake, Lk. Yealering and the associated swamps to the East known localy as the Gilmans/Shipleys Swamps. Supporting these some distance to the North are situated, White Water Pool, Brown Lake and Nonalling. All play an important role for waterfowl in the area which in itself is somewhat isolated from the other wetlands complexes to the South West and the North. Biological studies carried out by the Research Section of the WAFGA have shown that this is a very important area for waterfowl in the Wheatbelt. Many species of waterfowl as well as other avifauna have been recorded but as with many wetlands within the wheatbelt is badly affected by salt.

4.21. ROTTNEST ISLAND.

To most people the island situated some 20km. west of Fremantle is well known as a holiday resort, but an extensive area of the island is covered by salt lakes which provide breeding habitat for a number of species.It is felt by the WAFGA that this area be included in the overall wetland complex system. The principal wetlands in this complex are; Lakes, Bagdad, Herschell, Serpentine, Government House, Negri and Sirius.

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SECTION 5.

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DEPARTMENT OF AGICULTURE. MISS. J. MAUGHAN. (LIBRARIAN)

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APPENDICIES.

Maps 1 - 6 showing orriginal complexes and those proposed by the WAFGA.

Maps. 1.250.000 or 1.1.000.000 scale.

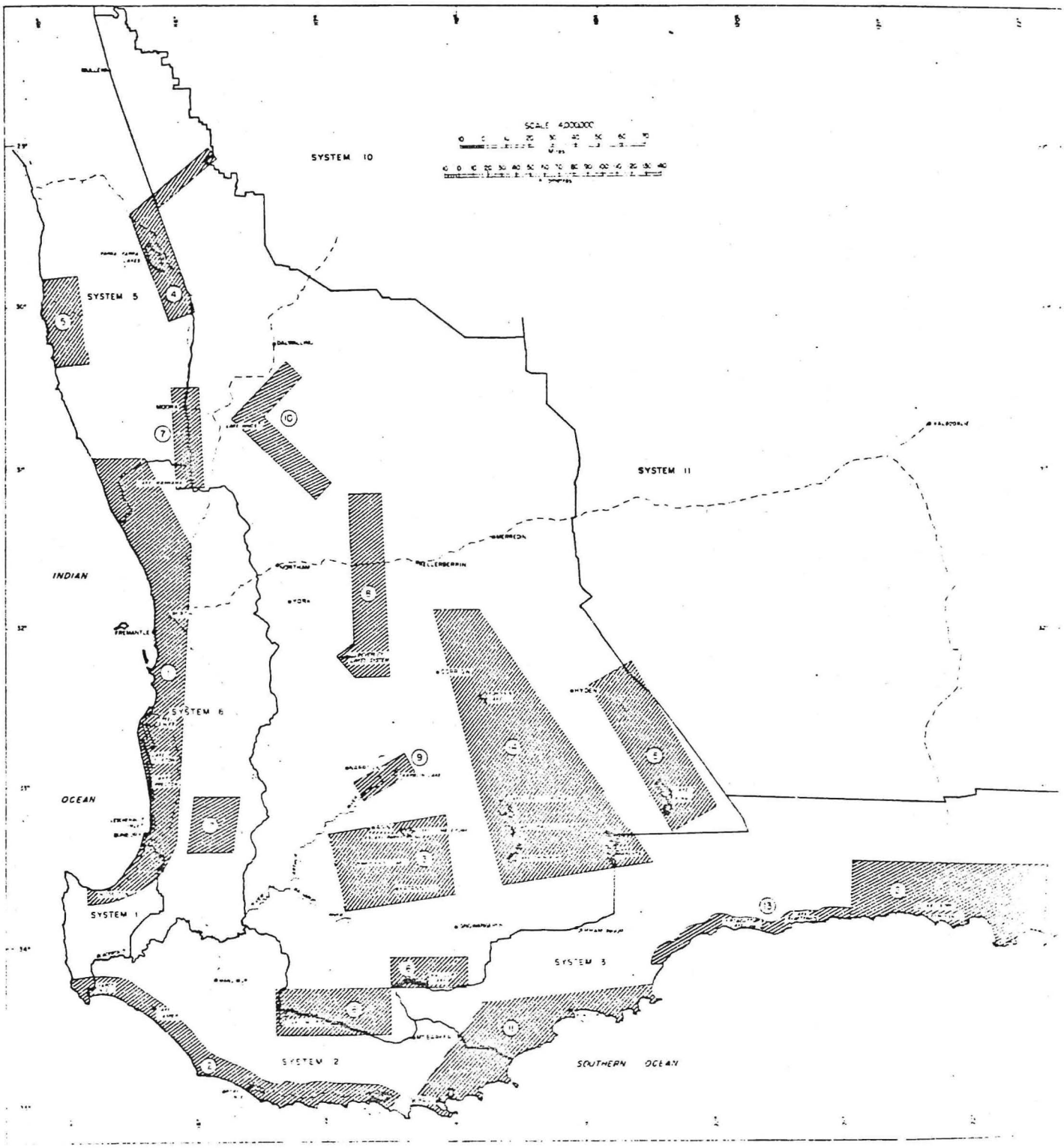
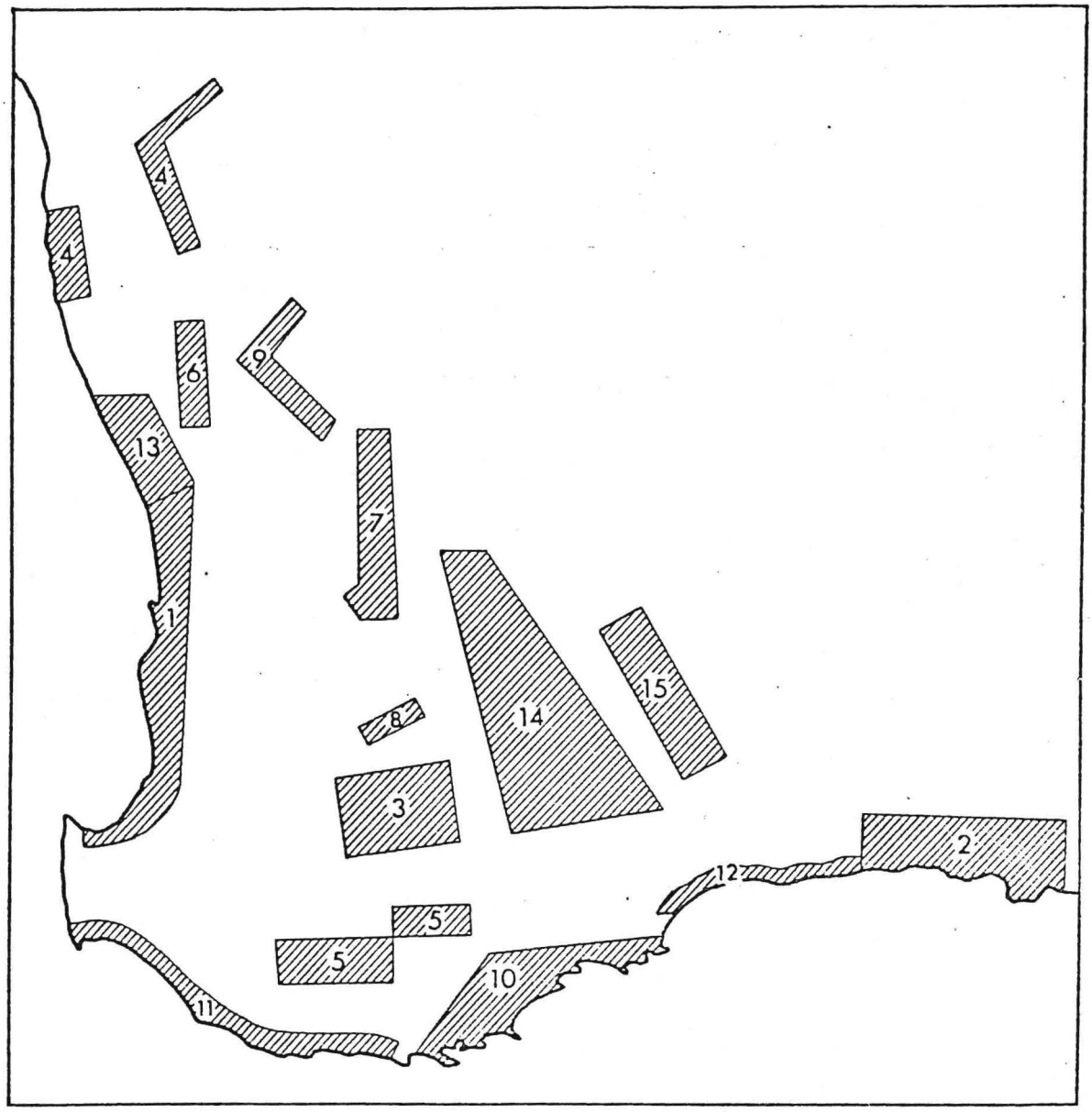


Figure 0·1 Wetland complexes of the South West

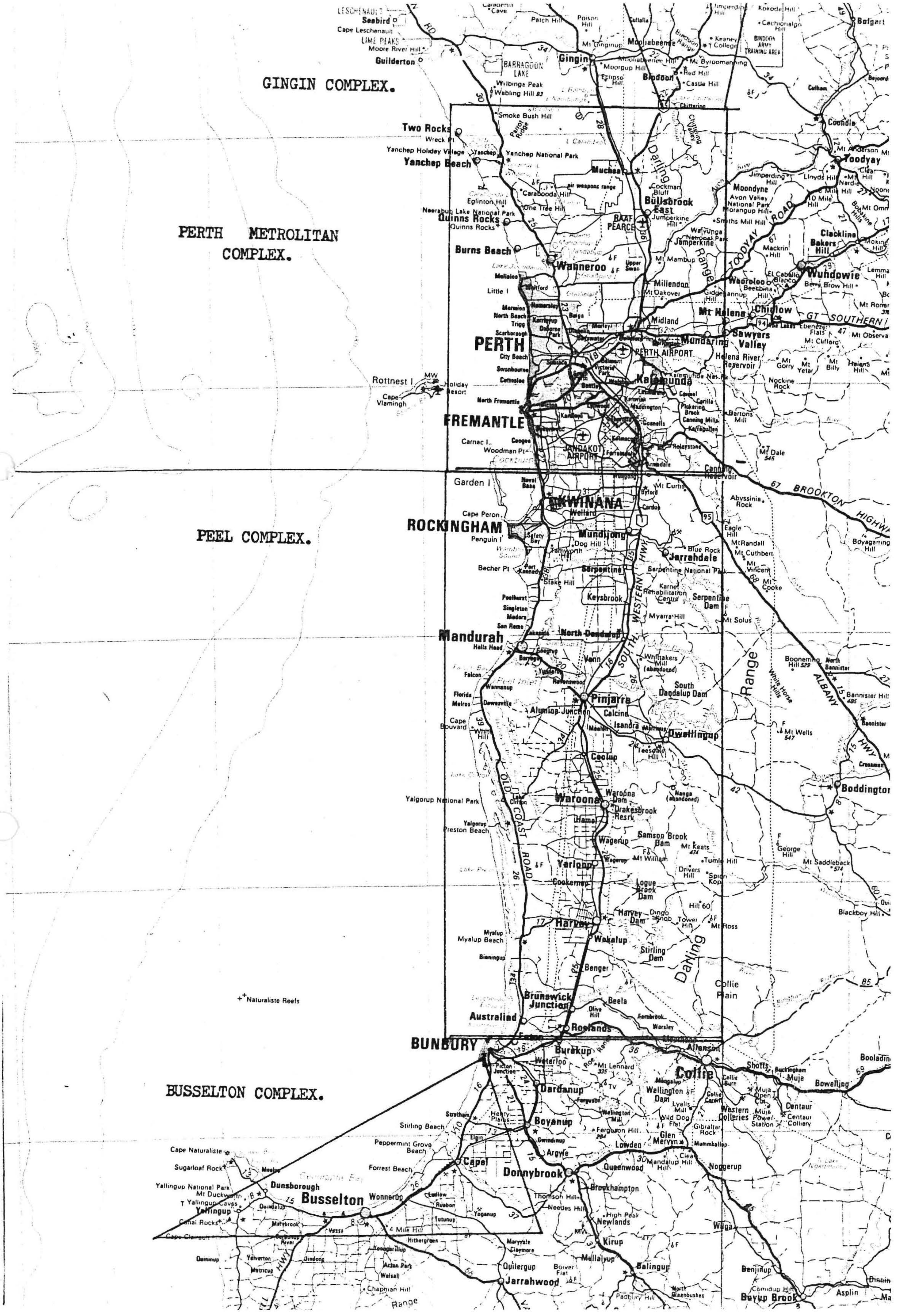


Map 1. Wetland systems of South-west Western Australia, based on water permanency and broad vegetation type. Numbers indicate ranking order of importance for waterbirds (after Riggert 1974).


WAGIN
WOODANILLING
BEAUFORT RIVER COMPLEXES
Neeralin Pool
Bungon Pool
Piesseville
Buchanan River
Duck Pond
Nallian Spring
Neeralin Pool
Gully
Wash Pool
Chuckem
Cordanilling Spring
Carbakine Spring
Carbakine Creek
WAGIN LAKE GRACE ROAD
Gundaring
Gundaring Lake
Little Dongolocking Lake
Dongolocking Lake
Puntapin Reservoir
Puntaping Rock
Wagin
Subject to inundation
Wagin Lake
Salt Lake
Murdualmurrin Lake
Granite Rocks
Arthur River
Norcott Plains
Wanaking Pool
Mailling Gully
Mailling Pool
The Washpool
Carberdine Pool
Flat Granite Rock
Mount Latham 1273
Lake Parkeyerring
Quangallin
Little Parkeyerring Lake
Lake Quarbing
Coramerning Rock Hole
Little Norring Lake
Lime Lake
Goldney Hill
Peel Plains
Bunny Peak
GREAT SOUTHERN RAILWAY
WAGIN 18 ROAD
COLLIE
BUNBURY
Tibelup Spring
Arthur River
Warup
Quangallin Tank
Mount Hugel
Norring Lake
Boyerine
Boyerine Creek
Mount Rice
Mine Hill
Dellyanine
Queerearrup Spring
Kojonolokan Hills
Flagstaff Lake
Wardering Spring
Lake Charling
Wardering Lake
Small Lake
Dumnin Lake
Beaufort River Flats
Martinup Lake
Strathmore Hill 1169
Bagamine Spring
East Arthur
ALBANY HIGHWAY
Yunning Swamp
Spratts Lagoon
Washing Pool
Deep Pool
Martup Pool
Kunmallup Well
Kenine Hill
Bunjalaring Spring
Six Mile Pool
River
Beaufort
Subject to inundation
Quonening Pool
Deep Pool
Round Pool
Carrolup Pool
Fitzes Swamp
Cohen Soak
Boscabel
Clear Lake
Rushy Lake
Fifty Two Creek
Thornton Hill 1248
Saddleback Hill
DARKAN 17 MI
BOKAL 10 MI
KYLIE 2 MI
BOKAL 8 MI
MUDIARUP 16 MI
MUDIARUP 15 MI
MUDIARUP 15 MI

KATANNING COMPLEX.

MAP No.5


GINGIN COMPLEX.
PERTH METROLITAN COMPLEX.
PEEL COMPLEX.
BUSSELTON COMPLEX.
Gingin
Bindoon
Two Rocks
Yanchep Beach
Toodyay
Bullsbrook East
Quinns Rocks
Burns Beach
Wanneroo
Midland
Mt Helena
Chidlow
Wundowie
Mundaring
Sawyers Valley
PERTH
PERTH AIRPORT
Rottnest I
Kalamunda
FREMANTLE
JANDAKOT AIRPORT
Garden I
KWINANA
ROCKINGHAM
Mundijong
Jarrahdale
Serpentine
Keysbrook
Mandurah
North Dandalup
Pinjarra
Dwellingup
Waroona
Yalgorup National Park
Yarloop
Harvey
Boddington
Brunswick Junction
Australind
BUNBURY
Collie
Dardanup
Boyanup
Capel
Donnybrook
Dunsborough
Busselton
Yallingup
Cape Naturaliste
Jarrahwood
Balingup
Boyup Brook
Darling Range
BROOKTON HIGHWAY
ALBANY HWY
SOUTH WESTERN HWY
OLD COAST ROAD
TOODYAY ROAD
GT SOUTHERN

DUMBLEYUNG COMPLEX
MAP No.
Dumbleyung
Dumbleyung Lake
Kukerin
Duggan
Moulyinning
Condlelight
Wishbone
Nippering
Nyabing
Big Lake
WAGIN LAKE GRACE ROAD
Clayhole Soak
Blechynden Soak
Tincurring
Dongolocking Spring
Dongolocking Creek
Horsebone Soak
Paperbark Soak
Moulyinning Dam
Dickson Rocks
Tamacurring Rock
Doradine Spring
Macaulay Soak
Dorradin Gully
Cooarring Pool
Pingarning Soak
PINGARNING HILLS
Pingarning Rock Hole
Conical Rock
Bandering Rock Hole
Yaudling Waterhole
Bollaning Rock
Nunagin Spring
White Water Pool
Coomelberrup Lake
Coomelberrup Rock
Boolanalling
BULLOCK HILLS
Datatine Gully
Quartiming Soak
Dualling Soak
Merilup Soak
Meritup
Nampup Soak
Nyabing Soak
Currans Soak
Gnowanallup Tank
Kuringup
ABANDONED
Gravel pit
Golf course
Inundation
Drain
Subject
Wash Pool Gully
Slake Well