

24 November 2009



Cassandra Stephenson - Committee Clerk
Standing Committee on Public Administration
Legislative Council
Parliament House
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Attention: Cassandra Stephenson

Dear Ms Stephenson

Re : Inquiry into Recreation Activities within Public Drinking Water Source Areas

Enclosed is my submission to the Inquiry.

I would be pleased to contribute to subsequent clarification and/or discussion of any of the issues I have raised on the following pages.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'D Osborne', is shown below the 'Yours sincerely' text.

David Osborne

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Submission to Standing Committee on Public Administration
Inquiry into Recreation Activities within Public Drinking Water Source Areas
Submission by D.G. Osborne

24 November 2009

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I. My interest in the Inquiry

- *“Everybody needs beauty as well as bread, places to play in and places to pray in, where Nature may heal and cheer and give strength to body and soul alike.”*
- John Muir (1838-1914), Scottish-American wilderness preservationist & naturalist.
"The Hetch Hetchy Valley" Sierra Club Bulletin, Vol. VI, No.4, Jan. 1908.
 - **I am an active Perth-based recreational bushwalker** who spends part of most weekends from April to November of each year walking in the Darling Range water catchment areas, often as a voluntary leader or member of bushwalking groups, including the Perth Bushwalkers Club. I have a very extensive knowledge of areas within ~100km of Perth that are of current and future recreation interest to bushwalkers. Since 2002 I have logged (using GPS tracking) over 3500km of walking distance in the region. I have shared my information with others to encourage anyone who can walk, young or not-so-young, to discover the great wealth of opportunities for bushwalking close to Perth.
 - **My non-commercial, sole-authored website [WalkGPS: Bushwalks in the Perth region, Western Australia](http://www.walkgps.com) (www.walkgps.com)** is well known within the W.A bushwalking community, both to established clubs and to independent walkers, and to DEC and DSR. The website provides quite comprehensive information on over 55 bushwalking areas in the Perth region, including 33 areas within the drinking water catchments (see **Figure 1** and **Table 1**).
- I strongly urge Inquiry Committee members to visit [WalkGPS](http://www.walkgps.com) to gauge the public value of the information provided there and its particular relevance to the Inquiry in relation to bushwalking as a key, desirable recreation activity in the drinking water catchments. Most of the information presented on the website is authored by myself and is either not accessible to the public through other sources or is difficult to access or conveniently gather.
- Strong community interest in my website also reflects a growing level of interest in bushwalking opportunities in the region. Regular positive feedback from visitors to the site indicates the information provided is well regarded and widely useful within the community.
- **Background information on my professional qualifications and standing:**
 - BSc (Hons) Geology, plus Grad. Dip. in Bus. Admin.
 - Currently Managing Director / President of an active oil and gas exploration and production company with offices in Perth.

II. General comments on recreational access issues (with particular reference to bushwalking).

1. **A need for access to drinking water catchments for bushwalking close to Perth.** - It is in the community's interest to ensure that sensible access for bushwalking as a recreational activity in the drinking water catchments is maintained and preferably increased.

There can be little benefit to the community of pure and near-sterile water if it comes at the cost of a generally unfit and unhealthy populace lacking access to sufficient enjoyable recreational activities.
2. **Bushwalking has a “relatively low potential” to “impact on the catchment environment and water quality”.** – Quote from Statewide Policy 13, Section 3.1.2, 2003.
3. **Disjunction between State recreational strategies and recreational opportunities.** - Various past and present W.A. State Government recreational strategies for Western Australia (the latest being DSR's “W.A. Trails Strategy 2009-2015”) have recognised the need to encourage all Western Australians to walk more and to develop environments in which the decision to walk is easier. By far the best value for money in ‘health’ can be derived from ensuring people walk more. Yet regulation in W.A. in some areas has appeared intent on decreasing rather than increasing access to bushwalking opportunities across large areas of our northern (north of Dwellingup) water catchments in the Darling Range.
4. **The majority of good bushwalking opportunities near Perth lie within the northern water catchments.** - **Figure 1** and **Table 1** indicate 33 areas within the northern catchments. Those catchments cover around 4100 sq km near Perth, and include ~80% of the total of traditional bushwalking areas in the region.

5. **Much of the traditional bushwalking in the catchments is not confined to ‘designated’ trails but is ‘off-track’ (cross-country) and occurs in general areas, not on defined “trails”.** - Off-track walk routes pass through unmodified, natural environment. Under the Australian Standard for walking trail construction (AS 2156.1 of 2001) these would be classified as Grade 6 routes. They are **not** existing worn foot-tracks or developed paths. Walkers rarely follow exactly the same off-track route more than once through a walk area. Unfortunately the nature of off-track walk routes is often misunderstood in Government Departments and in the community, often being loosely described as ‘trails’ or ‘tracks’ which tends to convey the wrong impression that they are along distinct, worn pathways. To minimise ongoing confusion, informal off-track walking ‘routes’ would be better described as ‘walk corridors’, or even more practically and simply as **“walk areas”** as on **Figure 1**. Without a clear understanding of the true nature of traditional bushwalking, policy-makers may inadvertently fail to recognize and address the real recreational needs. In particular, the absence of existing, developed or worn “trails” is not an indicator that an area is not currently used, or will not be used in future by bushwalkers.

6. **Traditional bushwalking has minimal environmental impact.** - Most cross-country bushwalkers find their own ‘routes’ using map and compass, and more recently GPS navigation, which is part of the enjoyment and adventure of this increasingly popular recreational activity. Such off-track bushwalking does not create discernable worn tracks: Walkers seldom follow exactly the same route more than once (which in any event is very difficult to do, due to inherent navigation uncertainties with both GPS and compass); and even boot-prints are very rarely left, due to the mainly hard lateritic and gravelly surface over large areas of the catchment, and the relatively dry climate of the region. Off-track walkers therefore have negligible impact on the environment, despite not being on existing trails. Any bushwalker impact is insignificant compared with the impact of kangaroos, emus, and feral pigs.

For example, off-track bushwalking has been easily accessible and popular for many years in the Christmas Tree Well area (off Brookton Highway, in Mundaring catchment), but there is still no evidence of any ‘trails’ having developed as a result of that activity. Ironically the low impact of walkers along such trails, and the lack of published ‘route’ maps for most of such walk areas can be mistakenly taken to suggest they are seldom visited and have no special recreational amenity value to the community.

Concerns expressed by DoW, *et al* regarding the risk from bushwalkers of human faecal contamination of drinking water sources are lacking in objectivity and balance, as per item 12 below.

7. **DoW ‘Plans’ of 2007.** – [Drinking Water Source Protection Plans](#) published by the Department of Water (DoW) in 2007 in effect recommended extending the prohibition on all traditional off-track bushwalking opportunities to cover the entire forested water catchment areas in the ‘Perth region’, far beyond the limits of the 2km-wide ‘Reservoir Protection Zones’ (RPZs) around the water reservoirs (**Figure 2**). DoW’s intention was to restrict bushwalking to **“designated trails”**, which are currently non-existent for bushwalking over most of the catchments (apart from the Bibbulmun Track). While planning to block access the DoW had previously contended ***“there is a vast array of National Parks, Reserves and State Forest in W.A. that people may traverse”***.....***“There are many traditional bushwalking tracks that provide pleasant views and access to waterbodies which are within close proximity to Perth and outside RPZs.”*** (DoW, 3 Feb. 2006). DoW chose to be unaware that 80% of traditional bushwalking opportunities within the Perth region lie within those same catchments, which also happen to include extensive areas of ***“National Parks, Reserves and State Forest”*** (**Figure 3**).

8. **Impact of DoW ‘Plans’.** - If the DoW’s Plans of 2007 were to be implemented, approximately 80% of the traditional bushwalking opportunities within ~100km of Perth city would become an ***“unacceptable activity”*** and bushwalking across most of the region would end.

9. **The impact of camping (or ‘overnight stays’) policy.** – Under **Statewide Policy 13 (“Policy Guidelines for Recreation within Public Drinking Water Source Areas on Crown Land”**, 2003) camping (or ‘backpacking with overnight stays’) has been banned within most of the forested walk areas within the water catchment areas, with walkers being restricted to 15 **“designated”** campsites along the Bibbulmun Track between the Kalamunda Terminus and Dwellingup townsite. Within a larger part of the catchment areas, away from the Bibbulmun Track, bushwalkers are therefore limited to day walks only.

10. The impact of Reservoir Protection Zones (RPZs) and bauxite mining leases on the remaining ‘accessible’ outer catchment areas:

Sub-areas of northern catchments (<i>north of Dwellingup</i>)	Area (sq km)	%
Existing RPZs	395	9.6
Bauxite mining (<i>existing and past; Alcoa</i>)	275	6.7
Bauxite mining (<i>future expected expansions; Alcoa & Worsley/BHP</i>)	est. 520	12.7
Forested outer catchments accessible to bushwalkers	2910	71
TOTAL northern catchments (<i>north of Dwellingup</i>)	4100	100

Table 1: The extent of RPZs and bauxite mining in the northern catchments.

As indicated in **Table 1** above, existing RPZs and existing and future bauxite mining activities will ultimately reduce by almost 30% (~1200 sq km), the total area potentially accessible for bushwalking and other recreation in the northern catchments (except for walking permitted through Mundaring RPZ on the Bibbulmun Track).

11. The positive recreational potential of mined and ‘rehabilitated’ areas within the catchments, and the issue of trail-bike riding. - The mined areas have very little to offer to bushwalkers, but they do have good potential to provide excellent alternative recreational opportunities for the following:

- picnickers
- mountain bike riding
- horse riding
- trail-bike riding

For example, since its opening in 1975 at Alcoa’s old Jarrahdale mine site, Langford Park has become a very popular recreational area, with good mountain bike and bridle trails, and featuring a large man-made lake, adventure playground, large lawn areas, pine and blue gum forests, and a barbecue area. (Alcoa’s more recent rehabilitation methods aim at putting back a self-sustaining jarrah forest ecosystem rather than the pines and exotic blue gums that were planted at Langford Park.)

Parts of other large rehabilitated minesite areas should be used to provide additional similar recreational opportunities as provided at Langford Park, and in particular for the special needs of trail-bike riding:

Trail-bike riding is a rapidly growing recreational pursuit in W.A. (with an estimated 50,000 trail bikes now being ridden; from estimate in “**W.A. Trail Bike Strategy**” by Trail Bike Management Australia; Exec. Summary, June 2008). The particular challenges posed by trail-bike riding have been recognised in the development of the Trail Bike Strategy. Trail bike riding is entirely unsuited to most areas of the catchments and especially in the National Park areas, such as the **Wandoo National Park** where it has become almost ubiquitous and extremely popular with young riders.

I urge the Committee to specifically address the urgent need to manage the ‘explosion’ of trail-bike riding activity within the catchments. It seems very unlikely that the Trail Bike Strategy on its own can result in the necessary early action. The cumulative impacts of uncontrolled trail bike access can already be observed within the catchments, with rapid and often extreme damage occurring along water courses and to the environment generally (see **Figure 4** photos). A greatly accelerated spread of die-back disease throughout the catchments appears inevitable. The impacts are unsustainable and devastating for the environment. Bike noise is also incompatible with other recreational activities in the catchments, including bushwalking in particular.

Until trail-bike riders are provided with (and directed to) adequate designated ‘Off-Road Areas’ and a diversity of trails where they can ride in reasonably controlled but enjoyable environments, many will continue to ride indiscriminately (often cross-country) through otherwise undisturbed areas of the catchments and in the National Parks.

Establishment of recreational opportunities for trail bike riders within the large areas of the mined and ‘rehabilitated’ areas should be considered as a key and urgent part of the solution. In the short-term, and prior to the transition to designated bike trails, such areas should contribute to the “trails inventory” for trail bike riders. A trails inventory is one of the “Trails Planning” recommendations in the Trail Bike Strategy.

12. The significance of National Parks. - Significant areas of several National Parks lie within the northern catchments. These include the Wandoo N.P., Monadnocks N.P., Serpentine N.P., Midgegoroo N.P., Korung N.P., Helena N.P., and Beelu N.P. (**Figure 3**). In total these Parks cover more than 10% (or ~440 sq km) of the 4100 sq km northern catchments area. Given their status as National Parks, these highlight a need for continued bushwalking access to the water catchments consistent with the need for access to the National Parks lying within those water catchments. Unfortunately, it seems that specific Management Plans for the National Parks within the northern catchments are *“a long way off”* (DEC source, *pers comm.*, Nov. 2009), with the exception of Serpentine National Park for which a Plan does exist.

13. The need for objectivity and balance - It is of considerable concern that the DoW in attempting to justify its restrictive recommendations in the recent past has referred to a report titled *“Recreational Access to Drinking Water Catchments and Storages in Australia”* (by CRC for Water Quality and Treatment, Research Report # 24, 2006 ; ISBN 1876616482). Careful scrutiny of that report reveals that it is unfortunately neither independent, nor authoritative, nor rigorous, nor objective (**Appendix 1**). The report is reflective of other statements by the CRC, DoW and DoH which have presented selective and frequently alarmist views of *“documented impacts”* of recreational activities on water quality, including for example information provided for the community by the CRC at the Logue Brook Dialogue Forum, 22 July 2006. See also **Appendices 2, 3 and 4** of this submission.

A more recent research report commissioned by DEC and DSR, *“State of Play: A review of recreation in drinking water catchment areas in the Southwest Region of Western Australia”* (by Curtin Sustainable Tourism Centre: Curtin University, 2008; ISBN 1-74067-580-0) included a more comprehensive, independent and balanced review (and referencing) than the earlier CRC report, and not surprisingly found that *“recreation poses a very minor risk relative to ...other activities”* and *“The presence of these other threats in ...catchments suggests the significantly higher risk to water quality can be managed without reverting to exclusion.*

Bushwalkers and the broader community recognise the obvious need to protect drinking water quality, but they also expect our State regulators to show objectivity and balance. Desired levels of ‘protection’ should be rational, not totally disproportionate to actual or perceived risks to water quality. The *‘precautionary principle’*, while very relevant to the issues of climate change, is now also widely cited by regulators such as DoW to justify excessive control policies without consideration of broader implications and realities. Internationally-respected applications of the Precautionary Principle recognise that a zero risk objective is unrealistic and unsustainable.

14. Public consultation processes – I applaud the decision to take the important issue of *Recreation Activities within Public Drinking Water Source Areas* to an Inquiry by the Parliamentary Public Administration Committee of the Legislative Council rather than leaving it in the hands of Government Departments.

My prior personal experiences with submissions direct to Government Departments have been unsatisfactory, particularly in relation to DoW’s controversial draft Drinking Water Source Protection Plans of 2007. The actual processes, attitudes and outcomes which myself and others have encountered have been inconsistent with the promises of *“close consultation with the stakeholders”*. It should be of general concern to the Committee that processes intended to protect the public interest can be manifestly abused (as occurred in 2007) in order to advance Departmental biases and objectives irrespective of the community’s often well-informed views and broader perspectives.

15. In addition to the views and information I present here, I strongly support most of the views of the Federation of Western Australian Bushwalkers Inc. as summarized in their excellent *Draft Position Paper* titled *“Access to Water Catchment Areas for Traditional Bushwalking Activities”* accessible on line via www.perthbushwalkers.asn.au/ . That paper expressed additional specific concerns with the DoW’s recent attitude to bushwalker access to the water catchments. I intend my submission should complement, rather than repeat content of any submission by the Federation to the Inquiry.

III. The specific need for opportunities for recreational bushwalking activities close to Perth

- 1. The popularity of walking as a recreational pursuit in W.A.** – There is a very large and growing potential ‘market’ of walkers in Perth that will need satisfying outlets for their chosen recreational activity in the future.

The nationwide [*Exercise, Recreation and Sport Survey \(“ERASS”\) 2008 Annual Report*](#) (by Australian Sports Commission and State Government agencies) shows that **44.7% of Western Australians participated in walking and bushwalking in 2008**, by far the highest participation in any type of recreation activity in the State. The next highest recreation activity was aerobics/fitness with 23%, followed by swimming with 17%. Many of W.A.’s ‘walkers’ (in the broader sense), estimated at 738,800 in the ERASS Report, do not identify themselves primarily as ‘bushwalkers’, but nevertheless would spend significant walking time on trails in the bush. The number of ‘walkers’ in W.A. also increased markedly by 19.5% from 2007 to 2008. 65

- 2. Outside of the water catchments, few opportunities exist near Perth for bushwalking in suitable forested areas.** – **Figure 3** highlights the fact that the northern water catchments cover almost the entire forested area between Mundaring and Dwellingup comprising mainly State Forest (including active mining leases) and also several National Parks (see Section II, item 12 above; page 5). Ongoing access to the water catchments is therefore hugely important for maintaining and increasing the number and diversity of bushwalking opportunities for the community.
- 3. The importance of proximity to Perth.** – Time and convenience are critical considerations for encouraging participation in any recreational activity today. Many walkers can’t make the time commitment needed for extended walks involving backpacking and camping, such as on the Bibbulmun Track, whereas a day walk may be possible for them most weekends during the walking season.

For the majority of walks in the water catchments in the Perth Hills area, walkers can leave Perth at 8.00am and be back well before 5.00pm, having completed a fulfilling, but not exhausting day walk. By definition a day walk is completed within a single day, including travel to and from the start point of the walk. Minimal advance preparation is required, whereas more extended overnight walks require more time on planning and provisioning. Day walks are also attractive to many walkers who prefer the comfort of the lighter day pack and/or have no wish to camp out.

Escalating fuel prices will also in future likely increasingly limit conventional travel to more remote bushwalking opportunities and will further increase the need for bushwalking opportunities in the water catchment areas close to Perth.

- 4. The need for walking opportunities beyond the Bibbulmun Track.** – A lack of wide public awareness of the potential for other distance bushwalking opportunities close to Perth is not surprising given the DoW’s preference for prohibiting and/or discouraging access to the water catchment areas.

The Bibbulmun Track has been much promoted and has been a wonderful magnet for stimulating interest and participation in bushwalking in W.A., both by the local population and visitors to the State. However, despite the popularity of walking, and the efforts of my own non-commercial website ([*WalkGPS*](#)), most of W.A.’s walkers remain unaware of the great wealth of other walking opportunities in other areas of the Perth Hills away from the Bibbulmun Track. The Perth Hills section of the Track, and perhaps the Coastal Plain Walk and Yaberoo Budjara Trails in the Yanchep area, remain for many walkers their only knowledge of a significant bushwalking activity close to Perth. Without obvious ‘follow-up’ opportunities, they look elsewhere to more remote opportunities, often beyond W.A., or much worse, they lose interest in bushwalking as a healthy ongoing recreational pursuit. Their Bibbulmun Track walk becomes a once-off experience of bushwalking in the Darling Range.

Furthermore, the Bibbulmun Track itself must be at high risk of becoming ‘overloaded’ and overcrowded, especially over the Perth Hills sections, with a need for other walking opportunities to take pressure off the Track to ensure it can continue to offer a healthy and enjoyable experience to walkers and a sustainable impact on the environment.

5. **The need for a diversity of types of walking opportunities for different users.** – Bushwalking opportunities in the catchments range from short walks on well-formed surfaces at the least challenging end of the spectrum, to longer (including multi-day) walks across varied terrain, on unformed surfaces, along lightly marked or unmarked ‘routes’. It is important in relation to bushwalking access issues that the significance of ‘walk corridors’ and ‘walk areas’ versus discrete developed ‘tracks’ or ‘trails’ is well understood (as per Section II, item 5 above; page 3). Access should not be limited only to designated, well-marked and developed ‘trails’ such as the Bibbulmun Track. It must be recognized that cross-country ‘routes’ that are unmarked and unformed may be equally fit for their intended purpose. A significant proportion of bushwalkers most value the greater adventure and near-wilderness experience afforded by unmarked ‘routes’ and minimal or less-developed infrastructure. The large areas of open jarrah forests and wandoo woodlands within the water catchments offer just such a near-wilderness environment close to Perth (see **Figure 5** photos).
6. **The need for ‘backpacking with overnight stays’ (or ‘wild’ camping).** – The recent past policy (under Policy 13) prohibiting overnight stays within the catchments outside of the RPZs needs objective and balanced review. Although many walkers are attracted by the time and convenience advantages of day walks, the most satisfying walking often involves backpacking cross-country over a number of days and camping out, to become immersed in the ‘wilderness’ experience. Backpacking bushwalkers have a good reputation for good bush hygiene and sanitation and leave no traces on the environment (as per **Section II, item 6** above).

Allowing such camping in the water catchments (as occurred in the past, prior to Policy 13) would bring additional diversity to the types of opportunities for recreational bushwalking activities close to Perth.

As just one example, **Figure 6** highlights a personal vision of moderate distance (~65km) 3-day walks through the beautiful, open wandoo woodlands (including the Wandoo National Park) in the outer catchment area, with trail heads at Christmas Tree Well picnic area off Brookton Highway and at The Lakes Roadhouse at the corner of Great Eastern and Great Southern Highways (and/or at Mount Observation picnic area off Great Southern Highway). I have personally visited these walk areas many times to test and optimise these potential cross-country routes (and alternatives) for walking enjoyment.

Restored opportunity for ‘wild’ camping within the water catchments would enable such walking opportunities to be provided for in a future Park Management Plan for the relatively new Wandoo National Park. Sadly, it seems such a Management Plan may be many years away (DEC, pers comm., Nov. 2009).

7. **The need for more reasonable access to the areas currently designated or recommended by DoW as Reservoir Protection Zones.** – As indicated in **Appendix 2**, there appears to be no justification for RPZs of 2 km width which prohibit bushwalker access to an unnecessarily large area of generally the best, most attractive bushwalking environments in the catchments. That area is nearly 10% of total the northern catchments (see **Table 1** above; page 4).

Figure 7 (Bushwalking ‘Intensity’ Map) shows actual routes walked by the author (and recorded by GPS) within the water catchments, including in the walk areas numbered on Figures 1 and 2. The recorded routes are not discrete established trails as such, but simply individual (mainly cross-country) walks within general “**walk areas**” (see also Section II, item 5; page 3). **Figure 7** also highlights the major impact of the RPZs and the Alcoa bauxite mining operations in restricting bushwalking along a western ‘fairway’ of the Darling Range, with the most opportunities occurring by default further east, especially bounding Albany Highway (mainly in the Monadnocks National Park) and between Brookton and Great Southern Highways (in the wandoo woodlands, including Wandoo National Park). Those eastern areas provide many excellent bushwalking opportunities, but the areas within the RPZs have particular recreational value, not only due to their closer proximity to Perth, but also in view of their special aesthetic qualities i.e. proximity to the reservoirs combined with the often locally more rugged, interesting landscapes that are typical around the reservoirs in contrast to other more gentle and undulating areas that dominate large areas of the eastern Darling ‘Plateau’.

8. The relevance of bauxite mining and mineral lease areas to the need for access to other areas of the catchments. – Further to my comments under Section II, items 10 & 11 (page 4) above:

The expansion of bauxite mining is increasing the need for access to remaining areas of the catchments, including greater areas of the RPZs.

Existing bauxite mining and mineral lease areas already impact upon large areas of the northern catchment areas. As in **Table 1** above (page 4), bauxite mining activities will ultimately affect almost 20% (~800 sq km) of the area of the northern catchments. The presence of extensive past and present bauxite mining operations across much of the outer catchments between Albany Highway and South Western Highway (i.e. between Armadale/Wungong Dam in the north and Dwellingup/South Dandalup Dam in the south), means much of that western ‘fairway’ is unsuitable and/or unavailable for bushwalking outside of the RPZs. ‘Rehabilitated’ mining areas offer minimal aesthetic value for bushwalking. Post-mining ‘rehabilitation’ cannot duplicate the original, intrinsic qualities of a particular area, even in the long term.

Mining companies understandably downplay the negative impacts of their operations including on future recreational values. e.g. A relevant environmental management plan by Worsley Alumina proclaimed that *“recreational values will be re-established in any areas where mining activities will disturb those values”* and *“the visual impact of mining operations will not be permanent”* (ref. Worsley Alumina Project Expansion “Environmental Review and Management Plan” (ERMP) by Worsley Alumina Pty Ltd, May 2005; Exec. Summary, pp.23-24). In fact, while rehabilitation efforts now focus strongly on early re-establishment of native vegetation and ecosystems (and the protection of endangered animal species), the mining inescapably removes the laterite cap rock and destroys the associated ‘breakaways’ which give the landscape much of its character and interest. Re-landscaped, mined areas of the catchment therefore have little to offer to bushwalkers.

The specific impact of mining expansions upon traditional bushwalking opportunities near Perth has also been understated. e.g. Worsley Alumina’s mining expansion plan of 2005, which was subsequently approved by the EPA in 2008, also noted that one of the EPA objectives was that *“existing and planned recreational uses are not compromised”* (ref. ERMP Executive Summary, p.52). However the same Expansion Plan also quite misleadingly asserted (e.g. Exec. Summary, p.23) that there are only *“a small number of recreational sites within and near the proposed mining areas”* and also that *“most of the identified sites are in the area around the Bibbulmun Track”*. While it is correct that there are *“few formal recreational areas”* (ERMP Exec. Summary, p.29), there are in fact a significant number of valuable, informal recreational areas within the planned Worsley mining expansion areas, and they are *not* confined to the area *“around the Bibbulmun Track”*:

i.e. At least five (5) of the example bushwalking areas indicated on **Figure 1** are expected to be impacted by the Worsley mining expansion. They are as follows (**Table 2**):

Walk Area no. (Fig.1)	Name	Within catchment area?
19	Qualen Road	Mundaring Catchment
20	Christmas Tree Well	Mundaring Catchment
27	Upper Dale River	Beyond catchment (State Forest)
29	Gibbs Rocks	Canning River Catchment
29b	Bannister Hill	Beyond catchment (State Forest)

Table 2: Examples of existing bushwalking areas that will be affected by bauxite mining expansions.

Three of the above five areas lie within the northern water catchments. The other two lie just outside the catchments, but the future likely loss of those walking areas to mining will further increase the need for additional walking opportunities within the catchment areas away from the mining activities .

e.g. **Bannister Hill** walk area (Walk Area #29b) within the Gyngoorda forestry block, near North Bannister, has long been very popular with bushwalkers due to its easy access from Albany Highway, its areas of mature wandoo woodlands, laterite breakaways, stream gullies, granite outcrops, scenic views, and variety of vegetation types and bird-life. The *“Forests on Foot”* book (Meney & Brown,1985) which is no longer published, but still very popular, noted that this area is *“particularly attractive for bushwalking”*.

I am also aware that the Perth Bushwalkers Club usually organises at least one walk in the Bannister Hill area each year. Without the approved mining expansion, walking would continue to increase in the area due to the growing popularity of off-track navigation (including by 'Geocachers', 'Orienteers', and 'Rogainers' in addition to traditional bushwalkers). Worsley's indicative mine plan encroaches substantially on the area and mining operations will have a major future adverse impact, resulting in noise, visual disturbance, and permanent loss of recreational and visual amenity and of recreational values, especially as laterite breakaways and mature wandoo woodlands will be affected. A crusher plant location is planned within the Bannister Hill walk area, and the indicative conveyor belt route passes along the transport corridor through the area. These will result in major direct disturbances in terms of noise, loss of recreational and visual amenity, and likely loss of access.

Loss of this prime bushwalking amenity just outside of the northern water catchments will inevitably increase the need for opportunities **within** the adjacent catchments.

Furthermore, the **longevity** of mining expansion operations within the catchments will have a substantial long-term negative impact on access to traditional bushwalking opportunities in the outer catchments. The Worsley ERMP Exec. Summary (p.23) included the following understatement: ***"In the short term, access to areas frequented for recreational pursuits will be prohibited (in some instances), or require access by alternative routes, which may be a minor inconvenience. Access will be re-established when mining operations cease."***

The Worsley expansion has a potential life of 30-35 years. Some of the existing (and potential) walk areas along the mining 'envelope' rely on vehicle access variously via Wearne, Pike, McCallum, part of Watershed, and/or Metro Roads. Blocking of any of those roads to public access (which appears inevitable under the approved Plan) during the mining expansion will make the adjacent areas inaccessible to the public for bushwalking and other recreational purposes, for an unspecified period. That would be more than the ***"minor inconvenience"*** to bushwalkers that Worsley claims and would further narrow the bushwalking opportunities in the catchment areas. The ERMP also does not give any indication of the timeframe that Worsley implied by "short term" loss of public access. If vehicle access is blocked along existing public roads within the mining expansion envelope, it will have the adverse impact of encouraging illegal access from the west (from Albany Highway) via existing forestry tracks through the 'Die-back Disease Risk Areas' and water catchment.

Note: The author of this submission presented a non-confidential submission on the Worsley ERMP to the EPA on 1 August 2005 but received no feedback whatsoever from EPA on the outcome of the public submissions and finalization of the approved ERMP. Consistent with my comments under Section II, item 13), once again it seems that the promised ***"close consultation with the stakeholders"*** was procedural lip-service rather than a bona fide commitment. When the public does show informed interest in the issues it deserves far more from Governments and their Departments.



[1 Table, 7 Figures, 3 Appendices follow]

Walk I.D. No.	WALK AREA Click on a walk name below for walk details.	ROAD DISTANCE from PERTH Kms (approx.)
3	Piesse Brook - KALAMUNDA NAT. PARK	18
3e	Kattamordo Variation (Pickering Brook-Mt Gunjin)	28
5a	Boulder Rock- Poison Gully	44
7	Manns Gully – Chinamans Gully (MUNDARING)	35
7a	Barton's Mill - Little Darkin	36
8	North Ledge - South Ledge (MUNDARING WEIR)	35
9	Mt. Gorrie	65
9a	Ngangaguringguring Hill	62
10	Serpentine Falls – Kittys Gorge	60
11	Eagle Hill (GLENEAGLE)	54
11a	Turtle Pool - Eagle Hill	58
12	Mt. Dale – Beraking Brook	67
13	Serpentine – Karnet Rock	62
14	Three Mountains	60
14a	Mt. Randall area	58
15	Mt. Yetar	80
15a	Nockine Brook	89
15b	Mt. Billy area	80
18	Upper Darkin	80
18a	Flynn Hills	87
18b	Upper Darkin Variation	83
19	Qualen Rd.	76
19a	Gunapin Ridge	89
20	Christmas Tree Well	64
20a	Running Brook	64
21	Mt. Cooke	73
22	Windsor Rocks – North	70
23	Mt. Solus	74
24	Windsor Rocks – South	74
25	Mt. Observation – Pony Hill	73
28	Geddes Rock	69
29	Gibbs Rocks	110
29c	Boonerring Hill	87

Table 3: List of example traditional bushwalking locations within the water catchments, with road distances from Perth city.

(Walk I.D. numbers are from WalkGPS website: www.walkgps.com).

***Note:** The above list is not claimed to be an exhaustive list of **all** existing and potential bushwalking locations. Other walkers would undoubtedly recognize additional walk areas.*

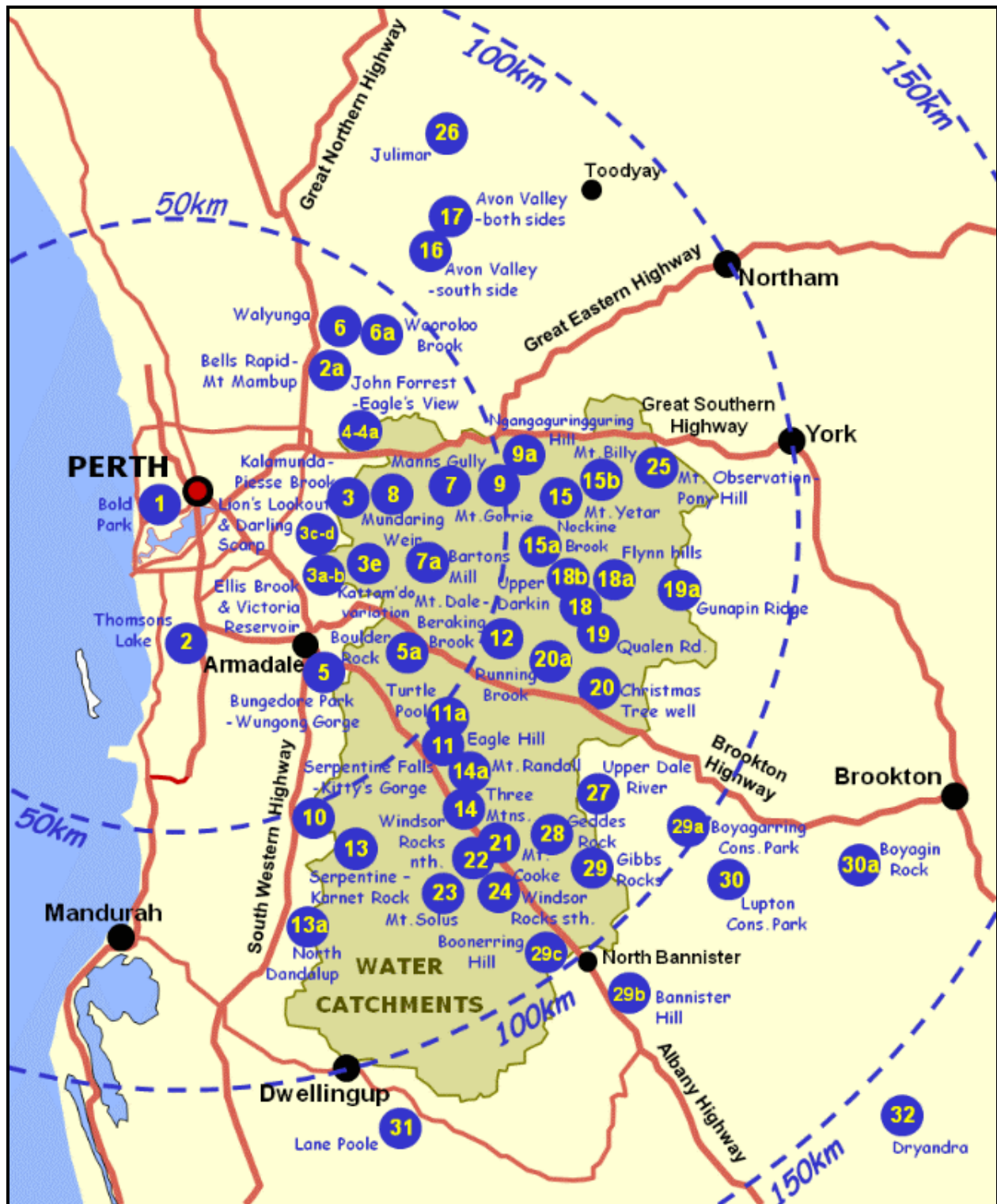


Figure 1: Bushwalking areas in relation to the northern water catchments and distance from Perth city.

(Numbers refer to walk ref. no. on Table 3 and on WalkGPS website: www.walkgps.com).

*Note: The map author (WalkGPS) does not claim the map shows **all** bushwalking locations. Other walkers would undoubtedly recognize additional walk areas.*

Bushwalking in northern catchments

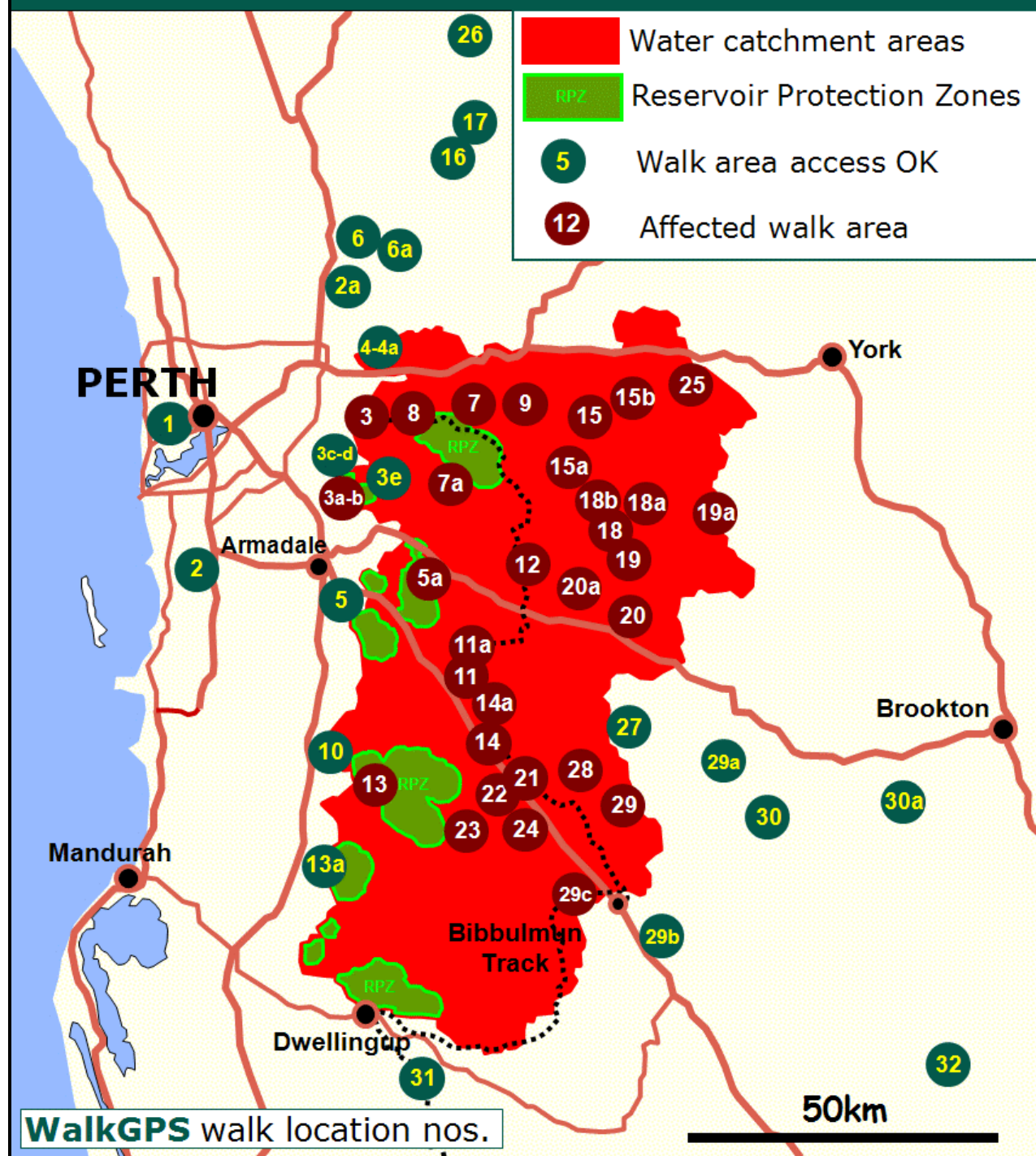


Figure 2: Walk areas affected by RPZs (in green) and the greater water catchments areas (in red). (Numbers refer to walk ref. no. on Table 3 and on WalkGPS website: www.walkgps.com).

Parks, Reserves & State Forests

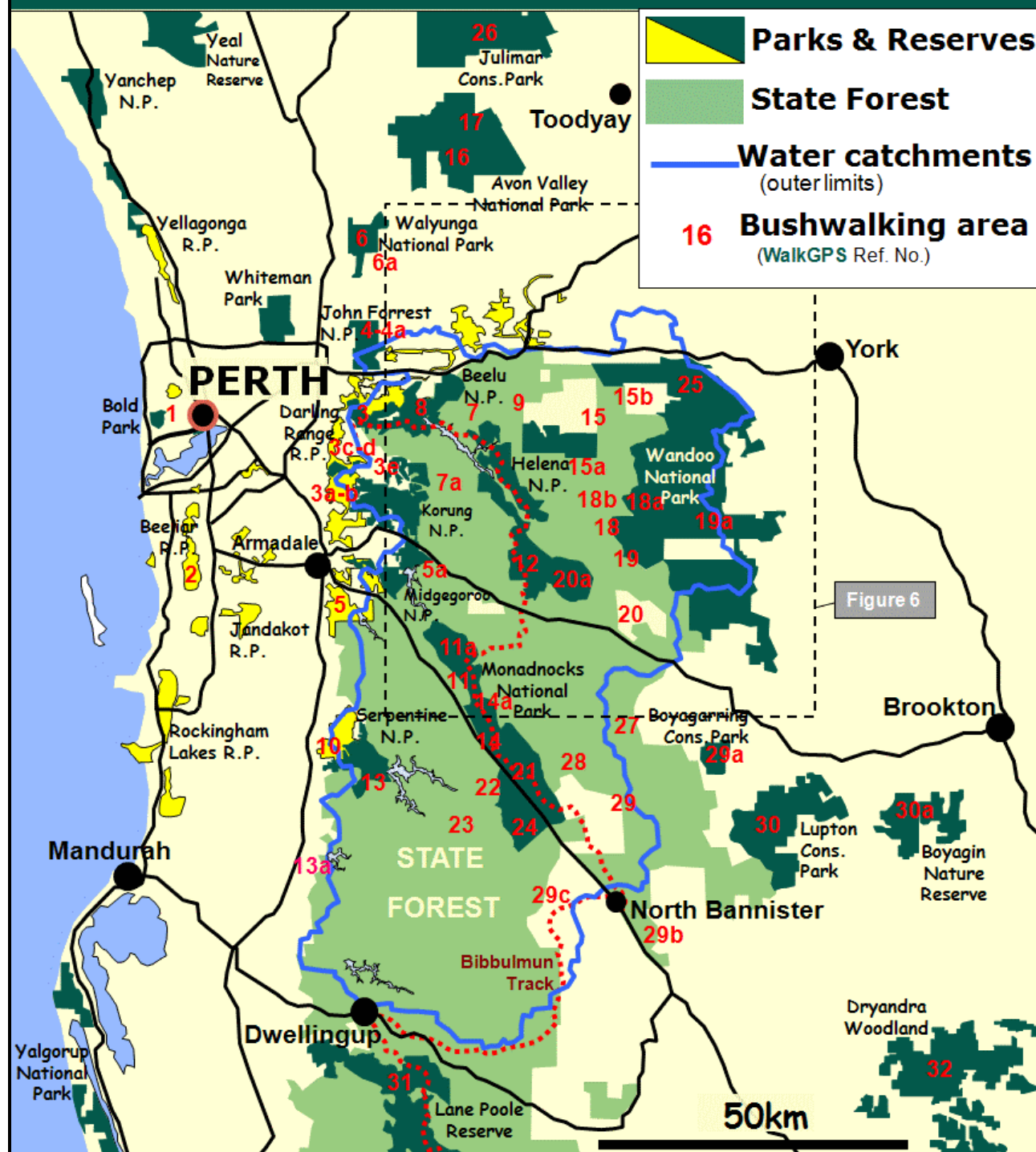


Figure 3: Northern water catchment limits in relation to State Forest, Parks & Reserves. (Numbers refer to walk ref. no. Table 3 and on WalkGPS website: www.walkgps.com). (The Bibbulmun Track is indicated by red dashed line.)



Figure 4: The impact of uncontrolled trail-bike riding within Wandoo National Park within the northern water catchment (Mundaring catchment).



Mount Dale area
(within Mundaring Weir catchment)



Boonerring Hill area
(within Serpentine catchment)



'Three Mountains' area
(within Canning River & Serpentine catchment)



'Flynn hills' area
(within Mundaring Weir catchment)



Upper Darkin River area
(within Mundaring Weir catchment)



Geddes Rock area
(within Canning River catchment)



Eagle Hill area (Gleneagle)
(within Canning River catchment)



Upper Darkin area
(within Mundaring Weir catchment)

Figure 5: A selection of photos of bushwalking areas within the water catchments near Perth.
(See www.walkgps.com for additional photos.)

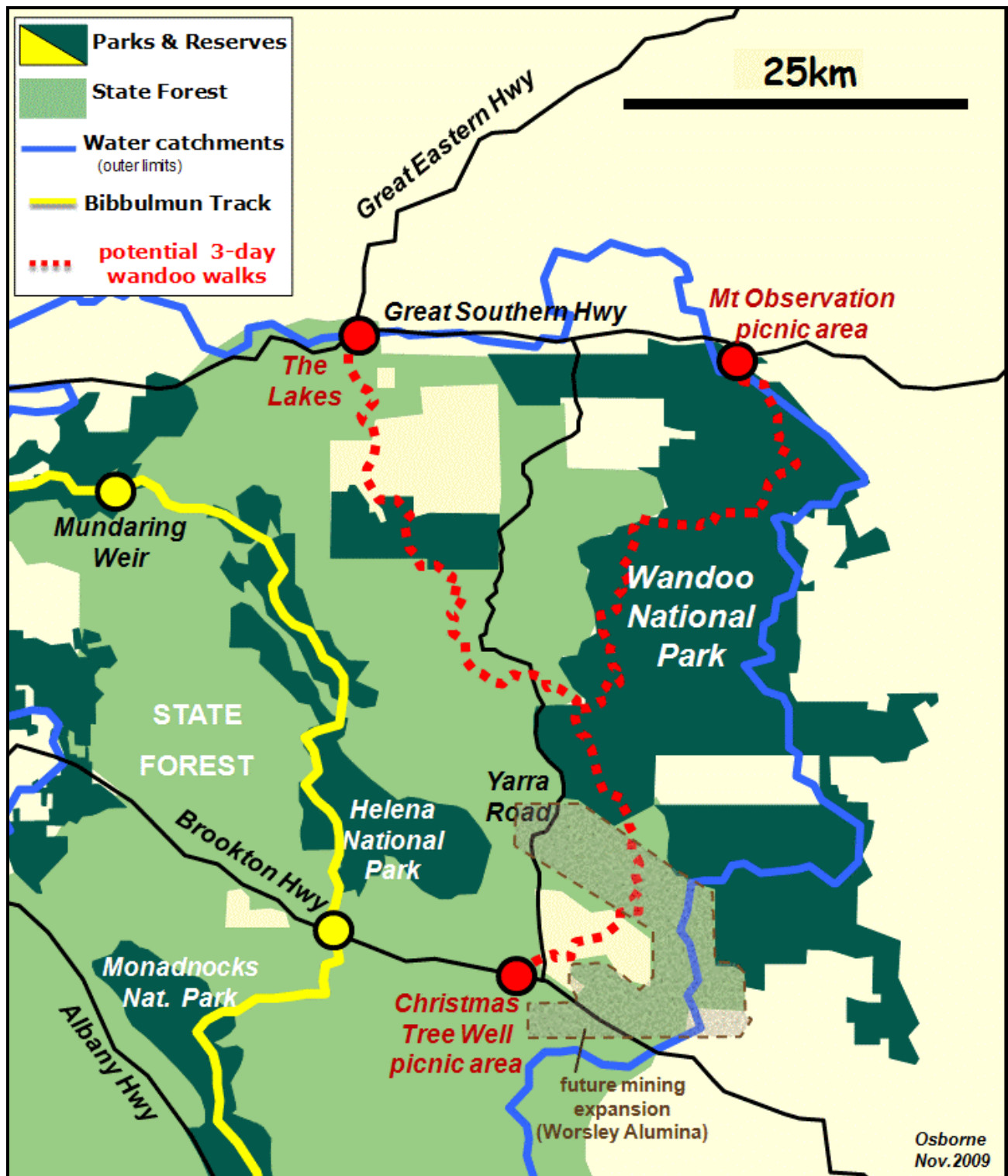


Figure 6: Examples of potential 3-day (65 km) walks through Wandoo National Park and adjacent State Forest in the outer catchment, away from the Bibbulmun Track. (Bibbulmun Track shown in yellow).

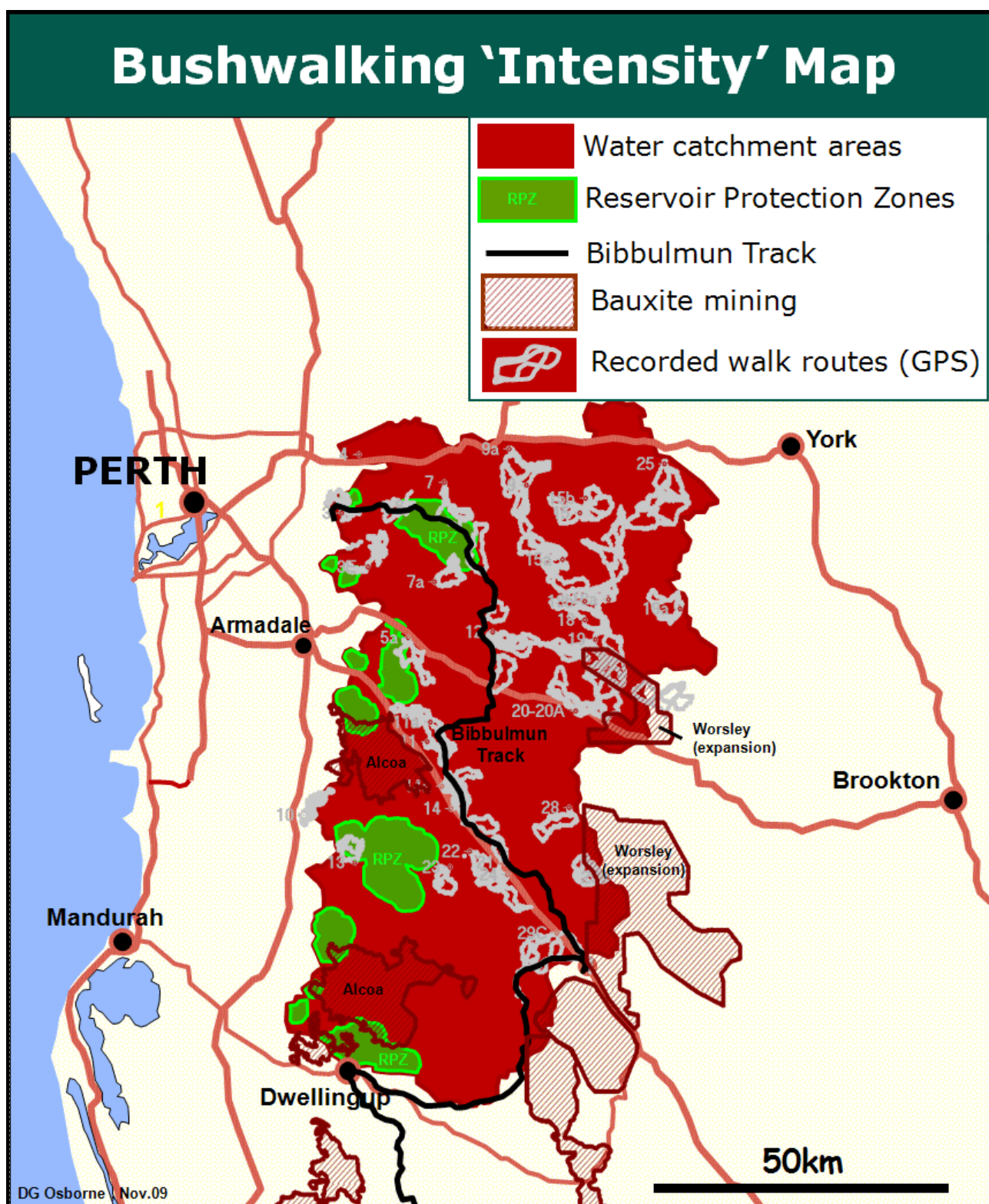


Figure 7: Walking 'intensity' map showing actual routes walked by the author (and recorded by GPS) in the period 2002-2009 within the northern water catchments. (Bibbulmun Track shown in black).

Appendix 1

WalkGPS commentary on CRC Research Report # 24, 2006

"Recreational Access to Drinking Water Catchments and Storages in Australia"

DoW often refers to CRC Report #24 in attempting to justify its current approach and recommendations.

The following quotes (italicized) are from a summary of the CRC report (for full **Executive Summary** see: http://www.waterquality.crc.org.au/publications/resreport24_execsumm.htm):

Quote:

"A risk based decision making framework is proposed that can assist those faced with the challenge of deciding whether or not to permit recreational access, and the nature and extent of any recreational activities permitted within water supply catchments. This report is limited to consideration of drinking water supply issues although it is noted that there are range of other factors, e.g. ecological impacts, security concerns and legal aspects of recreational access, that can be major concerns for decision-makers. The approach proposed in the report provides a systematic and rigorous basis for decision making and planning in relation to recreational access in drinking water catchments and storages."

However,

"The information gaps that exist are very difficult to fill. The qualitative cause and effect and conceptual relationships between recreational access and impacts on water quality are now well established. However, there is only limited quantitative data on the impact of any particular type or level of recreational activity on drinking water quality. It is unlikely that the costs involved in quantifying these relationships will be justifiable by any agency or organisation. Therefore, a precautionary approach is proposed whereby the ecological integrity of Australia's remaining conservation and wilderness areas are protected and the quality of the yielded water is secured." - End quote

DoW has referred to the CRC report as if it is an **independent, authoritative** document. That is **not** the case. Consider the following:

1. **CRC project participants** - Six (or 66%) of the total of nine participating/cooperating organisations were State Water Corps/Catchment Authorities, the other three being the CRC itself, one University, and one State Department of Human Services (ref. **Section 2.2** of the Report). No independent community-based recreational organisations were involved.
2. **National workshop participants** - The Report "aimed to outline the key outcomes of a key national workshop held in 2004". The 28 individuals who attended the workshop were similarly limited to the participating organisations and their "invited expert guests". The guests were also evidently drawn from the same organisations and State Government Departments. Again no guests from independent community-based recreational organisations were present at the workshop (ref. **Appendix 1** of the Report).
3. **Lack of consultation** - In referring to "past research" on community attitudes to existing and potential recreation uses, the Report refers primarily to a dated **1986** report on Sydney's drinking water catchment (ref. p.5, **Section 5**, para.1). The CRC 'researchers' were seemingly intent on "*understanding the impacts of recreational access*" without reference to the key recreational stakeholders themselves. Ironically the Report itself manifestly lacks the rigour which it purports to provide in relation to matters of recreational access. e.g. It includes sweeping generalisations and assumptions with regard to increased recreational pressures on the catchments due to increased population, without any reference to the increased range of recreational pursuits available today, many of which draw the community away from the forested catchments rather than toward them.
4. **The Report Disclaimer** - Paragraph 3 of the Report's "Disclaimer" (ref. **p.2**) while possibly standard, could reasonably be read as a candid acknowledgement of the Report's serious limitations. **Quote** : "**The research report does not purport to be a comprehensive statement and analysis of its subject matter, and if further expert advice is required, the services of a competent professional should be sought.**"

Report # 24 was initiated at a time when State Government's around Australia were grappling with how they could use their potentially powerful new regulatory tool, the '**precautionary principle**'. Their challenge was captured in the following extract from a submission of the Conservation Commission of W.A. to the Department of Premier & Cabinet (One can only assume the language wasn't intentionally self-deprecating!):

Quote : "...the '**precautionary principle**'. While the concept appears as one of the 11 core sustainability principles, **its operationalisation needs to be spelt out to clarify how the principle would play an active part in the policies and day-to-day operations of Government agencies.**"

(Source: www.sustainability.dpc.wa.gov.au/docs/submissions_to_draft/Conservation%20Commission%20.pdf undated, prob ~ 2003).

The CRC Report's ultimate recommendation of a 'precautionary approach' and the DoW's endorsement of that approach and its subsequent recommendations are extremely disappointing but in no way surprising given the make-up of the CRC project participant organisations combined with the prevailing regulatory group-think.

Report # 24 is neither independent, nor authoritative, nor rigorous, nor objective. It appears to satisfy the self-fulfilling objectives of the participant regulators, including the DoW in W.A., but also justifies the recreational community's lack of confidence in the DoW and its current over-zealous approach to water resource management.

Read the full 44-page Report and judge for yourself. It is available from some State libraries; ref. **ISBN 1876616482**. Alternatively you can buy your own copy of the report (for \$70!) from the CRC via http://www.waterquality.crc.org.au/publication_occpr_resrpts.htm.

WalkGPS

January 2008
www.walkgps.com

Appendix 2

In their own words:

Quotes on drinking water protection issues from W.A. DoW and DoH, et al

(with commentary by D.G. Osborne, 13 Nov. 2009)

QUOTE: *“In addition to catchment areas (outside RPZs), there is a vast array of National Parks, Reserves and State Forest in Western Australia that people may traverse.”“There are many traditional bushwalking tracks that provide pleasant views and access to waterbodies which are within close proximity to Perth and outside RPZs.”* (DoW, letter of 3 Feb. 2006; **Appendix 3**).

My comments: In fact by mid-2007 DoW had finalised Plans to exclude traditional walking across the entire catchments **both** outside and inside of RPZs. They also chose to be unaware that 80% of traditional bushwalking opportunities within the Perth region lie within those same catchments, which also happen to include extensive areas of “National Parks, Reserves and State Forest” within reasonable distance of Perth.

QUOTE: *“RPZs in Western Australia are currently set [sic] at 2 km from the top water level of the reservoir. The Department is currently considering buffer areas of less than 2 km, however any future changes will need to pass through legislation”.* (DoW, letter of 3 Feb 2006; **Appendix 3**).

My comment: By mid-2007, DoW had finalized Plans which proposed 2 km-wide RPZs with no indication that zones of less than 2 km had or would be considered. The 2 km wide exclusion zone around the reservoirs appears to have been based on an initial arbitrary distance (ref. *Metropolitan Water Supply, Sewerage and Drainage By-laws 1981*). The 2 km width has been subsequently adopted for Reservoir Protection Zones (RPZs) by regulatory bodies, including DoW and Department of Health (DoH), despite no evidence of serious scientific review of its validity over a period for more than **25 years**.

As the Federation of W.A. Bushwalkers draft Position paper of 2007 has aptly remarked: “...*in Water Quality Protection Note, WQPN6 of February 2006 (“Vegetation buffers to sensitive water resources”), which DoW claimed represented its “current views” and “guidance” it appears to be implicitly acknowledged that a ‘Prohibited Zone’ across the entire 2 km RPZ width is unnecessary. The DoW when defining default buffer dimensions that are “considered most suited to the south-west of WA”, indicates in the Note that a minimum appropriate vegetation buffer width within RPZs is 100-200m. DoW’s own [earlier] publications and statements therefore show an awareness that a 2km exclusion zone is not universally warranted for protection of reservoirs.*”

QUOTE: *“The Department of Health supports the 2 km RPZ exclusion zone for the protection of public health. A key message offered from the Department of Health is that the current system of protected catchments has been successful in protecting public health.”* (DoW, 3 Feb 2006; **Appendix 3**).

My comment: In fact that same “successful” system had allowed bushwalkers access to the catchments, **including** the more recent RPZ areas, over at least half a century without any adverse incidents nor any concerns regarding perceived risk to water quality and public health. In balancing relative risks and potential consequences, public health concerns should extend to the loss of recreational opportunities for the community, and the consequences and future costs to the community of increasingly inactive, unhealthy lifestyles, encouraged by blinkered regulation.

QUOTE: Bushwalking has a “*relatively low potential*” to “*impact on the catchment environment and water quality*”. (Waters & Rivers Commission, Statewide Policy 13, Section 3.1.2, 2003).

My comment: Agreed.

QUOTE: *“The consequences of getting it wrong come at a high cost to public health (refer to Walkerton example...)”*. (DoW , 3 Feb 2006; **Appendix 3**).

My comments: The *“Walkerton example”* is much cited by water and health ‘authorities’ as an example of contamination of drinking water supplies and the need for a multiple barrier approach to drinking water protection. The Walkerton incident of May 2000 was an outbreak of waterborne disease which resulted in 7 deaths and more than 2300 illnesses. It was an unusual case resulting ultimately from **extreme** incompetence at management levels within the Public Utilities Commission itself over a long period, involving particularly poor system management and ineffective regulatory oversight: *“Officials at all levels had numerous opportunities to correct a system that was obviously failing, but chose to ignore the issue”* (quote from p.155 of *“Don’t Drink the Water: The Walkerton Tragedy”* by Brenda Lee Burke, 2001, Trafford Publishing; ISBN 1-55212-713-3).

The Walkerton incident is seldom presented objectively and in its full context by the ‘authorities’ including in Australia. Despite the obvious key lessons for management itself from the Walkerton incident, our W.A. State DoW and DoH in their summaries elsewhere of the incident (e.g. WQPN 36 of April 2006), make selective reference only to the symptoms of a failed system, with never a mention of the underlying gross failure of management itself at all levels. They also downplay the long-term management failings with the comment that *“It is important to appreciate that the drinking water system at Walkerton operated for more than eight years without major incident up until the year 2000.”* Such biased filtering of the facts for a concerned public audience can only be interpreted as intended to ‘alarm’ a trusting public into accepting, without challenge, over-zealous policies.

As the Federation of W.A. Bushwalkers draft Position Paper of 2007 has aptly remarked: *“The public should never be encouraged to believe that a simplistic policy of ‘risk avoidance’ is an effective or necessary panacea for dramatic failings in effective management such as in the Walkerton outbreak and Sydney scare. When managements in any area are derelict in their duties, no policies or controls of any kind will “avoid” risks and the adverse consequences of risk events. Protection against failures in water management cannot be achieved through ‘risk avoidance’ within the drinking water system that is being managed, but must be through the introduction of regular, comprehensive, independent audits of the management system itself.”*

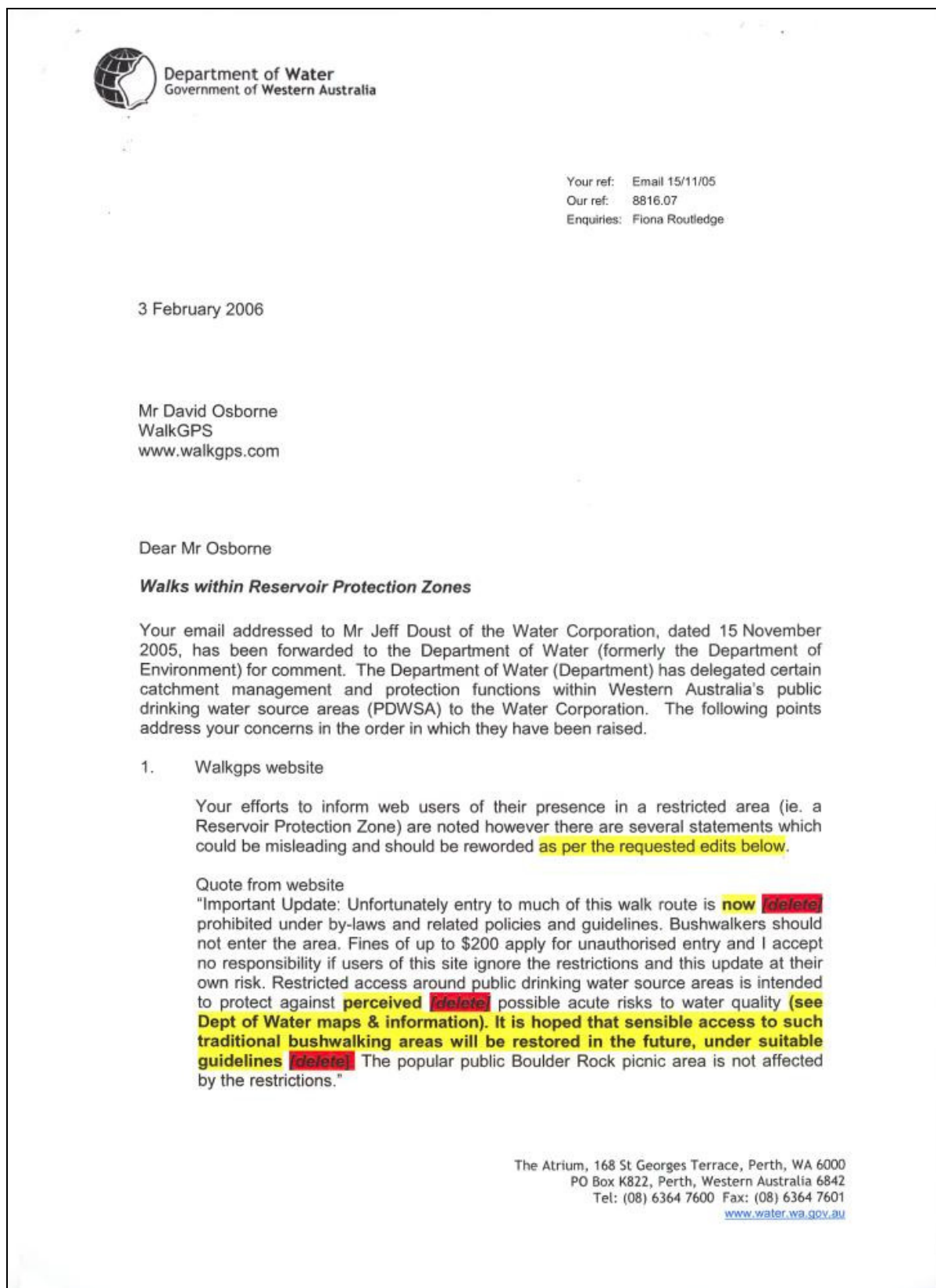
QUOTE: *“...one has to tell people that there is a certain probabilistic risk and this we cannot avoid. So there is no life without risk, and people in their own home life, they understand that: driving a car is risky, smoking a cigarette is risky, air pollution in the city is risky. So water is not completely risk free.”* (Dr. Richard Helmer, in referring to the 1998 Sydney ‘boil water’ scare, while overseeing the development of international water health and safety guidelines for the World Health Organisation; ABC Radio National, 22 Nov. 1998).

Appendix 3

DoW letter of 3 February 2006 to author of current submission

(in response to author's email of 15 November 2005; see **Appendix 4**).

Note: Colour highlighting in the letter has been added by the author of this submission.



Entry to Reservoir Protection Zones (RPZ), also referred to as Prohibited Zones, has always been restricted in accordance with By-law 4.3.6 of the *Metropolitan Water Supply Sewerage and Drainage (MWSSD) By-laws 1981*:

"No unauthorised person shall enter Crown land within a prohibited zone on any catchment area except for the purposes of –

- (a) Travelling through the prohibited area on public roads, or
- (b) Travelling along private roads constructed for the Commission or Forests Department and which are open for public use, or
- (c) Picnicking within designated picnic sites provided and serviced by the Commission."

Use of the word 'perceived' suggests that there may not be risks associated with permitting unauthorised access within the RPZ. The RPZ immediately surrounds the reservoir and access to this area may encourage contact with the waterbody. One of the greatest risks to water quality is from pathogens, as a result of direct human and domestic animal contact with the waterbody. The smallest amount of faecal material on the recreational user could contain pathogens that may contaminate the drinking water source. Faecal material may also enter the reservoir through defecation within the catchment and subsequent overland flow into the reservoir after rainfall.

Unauthorised access to RPZs is prohibited. ~~Please remove the statement which suggests that access may be restored in the future.~~ The Department is not considering such action.

2. Possible future access to RPZs

Boulder Rock

Boulder Rock picnic site was established over 20 years ago. It is also a registered site under the *Aboriginal Heritage Act 1972*. The site, which has been closed since January 2005 due to fire, had not been upgraded with appropriate facilities as the Department of Conservation and Land Conservation (CALM) was undertaking negotiations with Nyoongar elders regarding its future use. A decision has been made to close this site within the next couple of months. The carpark and access way will be rehabilitated. CALM has advised that a Ranger will inspect the site to address your litter concerns. For further information on this matter, please contact Jamie Ridley, CALM Perth Hills District, tel: 9295 1955.

Serpentine Pipehead Dam Catchment Area

The picnic area below the Serpentine Dam wall is outside the RPZ of the Serpentine Dam but within the RPZ of the Pipehead Dam. Water Corporation's on-site Dam Ranger actively manages the site. The toilet facilities at this site are sealed composting units, there is no release to the environment.

The *Metropolitan Water Supply Sewerage and Drainage By-laws 1981* has provisions for the establishment of picnic areas within gazetted catchment areas. In addition, *Statewide Policy No. 13 Policy and Guidelines for Recreation within Public Drinking Water Source Areas on Crown Land* (2003), allows for picnicking and walking within Priority 1, Priority 2 and Priority 3 areas of Public Drinking Water Areas (PDWSAs), including Bickley, Mundaring and Middle Helena catchments (which you were concerned would become 'prohibited zones').

Reservoir Protection Zone Exclusions

The purpose of proclaiming Public Drinking Water Source Areas is to protect the catchment from degradation of water quality. It is against legislation to permit unauthorised access into RPZs (refer to MWSSD by-law 4.3.6).

Please note that RPZs comprise a small relative percentage of the total area within each catchment. For example, the RPZ of Stirling Dam comprises 14% of the total catchment area.

Your comments relating to the 1997 Water Corporation study are noted. The risks associated with bushwalking are comparatively less than some other land uses and activities within PDWSAs. However, if bushwalking were permitted in RPZs it would be difficult to control. For example the utilised area would not be well defined (as is the case with picnic sites), which makes management and patrolling difficult. In addition, allowing people into the RPZ for one activity sets a precedent for other activities that would also claim to be 'low risk'. I am sure you can appreciate that cumulatively the risks would be high.

Water Futures (2005) *Technical Advice on ACT Reservoir Recreational Water Use Options* describes the potential impacts of recreational access in drinking water catchments. The following points are noted for your information;

- "Faecal release on shore, and in the inner catchment, although it would almost certainly be forbidden, would be expected to take place occasionally if shore-based and inner catchment recreational activity were permitted. Defecation on shore or in drainage lines that contribute to the reservoir during storms would contaminate water readily through the action of rain events".
- "Unless supervision of the site is constant and overt, with activity controls enforced, it is reasonable to expect additional shoreline foot traffic, organic littering and organic bait addition, leading directly or indirectly to increased turbidity and nutrient impacts on the reservoir".

Excluding people from a small proportion of each gazetted PDWSA by no means encourages a sedentary lifestyle. It actively promotes Western Australia's commitment to protecting public health by endorsing best practice - the *Australian Drinking Water Guidelines* 'multiple barrier' approach (see <http://www7.health.gov.au/nhmrc/publications/synopses/eh19syn.htm>). In addition to catchment areas (outside RPZs), there is a vast array of National Parks, Reserves and State Forest in Western Australia that people may traverse.

The concept of RPZs is not new. The MWSSD by-laws introduced provisions for a prohibited zone in 1981. Section 3.2.1 (2nd dotpoint) of Statewide Policy 13 states "Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation". It is not the lack of scientific certainty that has resulted in exclusions from RPZs, but rather the occurrence of incidents worldwide and the implementation of evolving best management practices. For example, drinking water supplies in Walkerton, Canada became contaminated in 2000, resulting in 7 fatalities and 2,300 cases of gastrointestinal illness. In 1998, 'boil water notices' were issued to over 3 million Sydney residents when monitoring indicated there were high levels of pathogens (*Cryptosporidium* and *Giardia*) in the treated water supplied to consumers. Hrudey (2004) provides further examples in *Safe Drinking Water – Lessons from recent outbreaks in affluent nations*, available for purchase from www.iwapublishing.com.

The historical significance of bushwalking in RPZs has been recognised. Formally approved tracks and trails established prior to the development of the guidelines and implementation of RPZs have been permitted to remain open, ie. the Bibbulmun Track passes through the RPZ of the Mundaring Weir catchment. It is the Department's policy to continue to allow *incompatible* land uses which have been legally established prior to the gazettal of the PDWSA. Negotiations are undertaken with the land owner or operators to implement environmental management practices that minimise risks to the water source. The Department would not support the enhancement of these facilities or expansion of non-conforming land uses within PDWSAs. Furthermore, if opportunities presented, relocation of such non-conforming uses in RPZs would be encouraged and assistance may be provided by this Department.

Clearly, new tracks in RPZs would not be supported, as the Department does not advocate the presence of people in these sensitive zones.

There are many traditional bushwalking tracks that provide pleasant views and access to waterbodies which are within close proximity to Perth and outside RPZs. For example, Palm Terrace Walk (Lesmurdie Falls) and Rocky Pool Walk Trail (Kalamunda National Park). Further information on walk trails may be found in the Department of Conservation and Land Management's *Family Walks in Perth's Outdoors*, *More Family Walks in Perth's Outdoors*, *Bushwalks in the South-West* or the Eastern Metropolitan Regional Council's *Swan Valley and Perth Hills Trails Discovery Guide*.

RPZs in Western Australia are currently set at 2 km from the top water level of the reservoir. The Department is currently considering buffer areas of less than 2 km, however any future changes will need to pass through legislation. The Department of Health supports the 2 km RPZ exclusion zone for the protection of public health. A key message offered from the Department of Health is that the current system of protected catchments has been successful in protecting public health.

The restriction on access is consistent with practices applied in drinking water reservoirs supplying other Australian capital cities, ie. Sydney Water applies a 3 km buffer in multi-use catchments and a total exclusion around storage reservoirs in pristine catchments.

Environmental management plans may be prepared to guide activities that are *conditionally* acceptable in PDWSAs. Draft Drinking Water Source Protection Plans (DWSPP) are distributed to key stakeholders for a 6 week consultation period and placed on the Department's website for comment prior to publication (see <http://drinkingwater.water.wa.gov.au> select 'Water Source Protection Plans'). For catchments with a large number of private properties, an advertisement is placed in the local paper inviting residents to view the draft plan on the website or at the local library. The timing of each DWSPP is dependent on the issues relating to each catchment. Each plan may take a couple of years to finalise.

Section 5.4.3 of Statwide Policy No. 13 indicates that negotiations may be undertaken with clubs and associations for *approved* recreational activities. However, bushwalking in RPZs is not consistent with the recommendations of this policy. Unauthorised access to RPZs contravenes legislation and allowing for buffers around drinking water reservoirs constitutes best practice, therefore the Department can not negotiate on this position.

A precautionary approach, as recommended by the *Australian Drinking Water Guidelines*, has been adopted to ensure the safety of drinking water supplied to the community. The consequences of getting it wrong come at a high cost to public health (refer to Walkerton example described above).

If you would like to discuss this matter further, please contact me directly on 6364 6881.

Yours sincerely

Stephen Watson
Program Manager, Water Source Protection Branch

cc Jeff Doust, Water Corporation

Appendix 4

WalkGPS email exchanges with DoW: October-November 2005

From: dave [walks55@iinet.net.au]
Sent: Tuesday, 15 November 2005 10:51 PM
To: 'Jeff Doust'
Cc: 'Kathy Blakeway (Lazorov)'; 'Sean O'Loughlin'; 'Roger Partington'
Subject: Walks within Reservoir Protection Zones

Jeff

Unfortunately the GIS coords you provided to me on 21 October are in a .dgn file which my mapping software can't handle and I can't read as I don't have a CAD or similar package.

When time allows I may try scanning and digitizing the RPZ boundaries from a hard copy of the Water Corp/DOE regional 'Drinking Water Catchments' map to get the approximate outlines for comparison.

However, if you do have available coordinate listings for the RPZs (preferably in spreadsheet form), then hopefully I can import them into my mapping software.

Meanwhile I have been considering how best to address your concerns. I certainly do not wish to place users of my non-commercial **WalkGPS** website in a position where they could unknowingly be potentially liable for prosecution and fines up to \$200. The most expedient course has been to add a prominent note to each of the two walk pages which are clearly impacted by existing RPZ zones. In early November I added the following clear notes :

1) Added to **Boulder Rock-Poison Gully Walk page** :

"Important Update: Unfortunately entry to much of this walk route is now prohibited under by-laws and related policies and guidelines. Bushwalkers should not enter the area. Fines of up to \$200 apply for unauthorised entry and I accept no responsibility if users of this site ignore the restrictions and this update at their own risk. Restricted access around public drinking water source areas is intended to protect against perceived possible acute risks to water quality (see Water Corp./DOE maps & information, 2004). It is hoped that sensible access to such traditional bushwalking areas will be restored in the future, under suitable guidelines. The popular public Boulder Rock picnic area is not affected by the restrictions."

2) Added to **Serpentine-Karnet Rock Walk page** :

"Important Update: Unfortunately entry to much of this walk route is now prohibited under by-laws and related policies and guidelines. Bushwalkers should not enter the area. Fines of up to \$200 apply for unauthorised entry and I accept no responsibility if users of this site ignore the restrictions and this update at their own risk. Restricted access around public drinking water source areas is intended to protect against perceived possible acute risks to water quality (see Water Corp./DOE maps & information, 2004). It is hoped that sensible access to such traditional bushwalking areas will be restored in the future, under suitable guidelines. The nearby popular public picnic areas are not affected by the restrictions."

I should also point out that the Home page on my website has since inception advised visitors that

"These walks are mainly within State Forest, National Parks, Conservation Parks, Nature Reserves and water catchment areas. Restrictions on vehicle and walker access may apply or vary from time to time."

Potential users of the website are therefore also alerted to the fact that access restrictions of one form or other may apply to particular walk routes and also that rules and regulations (or more particularly the way they are applied), may be modified from time to time. It is preferable that users of the site are made aware in that way that restrictions may change from time-to-time and that they check for themselves that they have up-to-date information on access rules, rather than relying on second-hand information that will not necessarily be current. Most users of internet websites would be aware of that responsibility upon themselves.

Possible future access?

The over-riding purpose of my website is to encourage the healthy recreational pursuit of bushwalking in areas near Perth that are most likely to instill a love and real appreciation of the environment. Bushwalkers invariably care deeply about, and know how to care for, the natural environment.

It is clear that Perth's drinking water supplies must be appropriately protected. However, sweeping restrictions on access, whilst seemingly the simplest management option, appear to ignore the very low risk nature of certain healthy activities, particularly bushwalking.

Bushwalking, whether on-track or off-track, is a very low impact activity. I believe it has minimal real potential risk and cost to water quality, especially relative to other activities that are encouraged. For example, the popular Boulder Rock public picnic area, just off Brookton Highway, lies just outside the 2 kilometre zone around Canning Reservoir. However, run-off from its extensive granite slopes flows directly into Death Adder Creek which itself drains into Canning Reservoir. There are no toilet facilities at the picnic area, so the risk from poor hygiene around the heavily-visited picnic area could be considered to be significant (as reflected in the amount of litter around the area). Similarly, at Serpentine Dam, the very popular lower picnic area below the Dam wall lies at the upper end of the Serpentine Pipehead Dam Catchment area. Although, in that case there are toilet facilities, the potential impact of concentrated human activities within the catchment there would clearly be far more significant than any bushwalking activity.

It would be a great loss of resource to the community if other popular walking areas close to the city, such as within the Bickley, Mundaring and 'Middle Helena' catchments, also ultimately become 'prohibited' zones.

Objectively, the risk of bushwalkers contaminating drinking water sources and adding significantly to the costs of maintaining water quality is clearly minimal (-a fact that seems to be partly acknowledged from Water Corp's 1997 review of recreational activities, summarized in Section 3.1.2 of the 2003 Guidelines), especially compared for example to the obvious potential for contamination frequently seen at public picnic areas such as those I have referred to above.

Moreover any perceived risk of added costs of water treatment needs to be weighed against the health cost to the community of encouraging the sedentary lifestyle which is one effect of further decreasing opportunities for bushwalking as an attractive recreational activity. -Ironically, the four planned measures of the "success" of the 2003 policy (see section 4.3) do not consider this cost to the community of loss of public amenity.

In today's world, the focus of regulators on the "avoidance" of perceived possible risks which are at most minimal must become a concern for the broader community. It has the unfortunate effect of distracting attention and diverting resources from addressing and mitigating the very real and major obvious risk to the community of potential deliberate acts of large-scale contamination of public drinking water sources from dam walls which are easily and directly accessible to the public by road.

It is a real loss to the community that many of the traditional bushwalking areas are being progressively 'locked away' in RPZs etc with seemingly no new science, evidence, or argument to justify that action other than "lack of scientific certainty" (see Section 3.2.1 of the 2003 Guidelines, second dot point).

The 2003 Guidelines appear to have underestimated the historical significance of bushwalking in the RPZs (see second last dot point under Section 1.5.1). Perhaps there was insufficient consultation process with community stakeholders.

I note that the 2003 Guidelines may not be reviewed for at least "five years from the date of publication" (i.e. no review likely before July 2008; Section 4.3 of the Guidelines).

I appreciate that Water Corp. was not the author of the 1985 by-laws, nor the 2003 Guidelines, but I would like to explore with you what possible mechanisms might be available to bushwalkers to formally regain access to RPZs under appropriate guidelines.

For example, I note that Section 2.6 (and similarly Section 5.1) of the July 2003 "Policy & Guidelines.." indicates that:

"In special instances, where the activity has been approved historically, activities may be undertaken in accordance with a permit or prior written approval. This includes recognition of recreational activities and facilities that have been established prior to the development of this policy under agreement with preceding State agencies or Governments." - As a long-established and accepted activity, having negligible risk to water quality, bushwalking would clearly come under that umbrella. Given its long history in most of these areas, bushwalking would reasonably be considered to be an historically significant activity.

To the best of my knowledge, for many years subsequent to the introduction of the by-laws almost 25 years ago (1981), the activity of bushwalking (both on-track and off-track) appears to have been rightly recognized by the regulator/s (most notably Water Corp?) not to have been incompatible with the protection of water quality. Certainly bushwalking clubs appear to have been permitted reasonable access to the water catchments, presumably including areas now captured within current and anticipated RPZs.

I note your comment that there are many areas both within and external to drinking water catchment areas that are outside the RPZ that can be legally accessed. Sadly however, many of the best, traditional bushwalking areas were in fact within 2kms of water source areas. The zones up to 2km wide around relatively small reservoirs 'lock away' disproportionately large total surrounding land areas. Yet seemingly little if any real scientific justification is given. Due to the nature of the mainly gentle Darling Plateau terrain, there are fewer options for alternative attractive bushwalking areas away from the RPZs than are available in other States. Consequently, restrictions on bushwalking that might seem acceptable to the community in other States, are not appropriate for the Perth region.

From the 2003 Guidelines it seems that there may be two or three possible mechanisms available to bushwalkers to seek to regain legitimate access to RPZs ? i.e.:

1. **Environmental management plan** (as per Sections 2.4 & 5.4.1 in the 2003 Guidelines) :
This seems to be the most formal approach and would presumably need to be submitted by a recognized bushwalking organization.
2. **Water Source Protection Plan ('WSPP')** (as per Sections 4.1 & 4.2 in the 2003 Guidelines) :

Sent: Friday, 21 October 2005 12:28

To: 'dave'

Subject: RE: Walkgps walks promoted within Reservoir Protection Zones

Thanks for your reply Dave. I am glad to know that I have been able to establish contact with you.

I have attached a GIS file with some RPZ areas. Please note that this is not a quality checked file and was prepared for use on a very large scale map where the detail could not be checked easily. In a brief review I feel that it is generally accurate although there are a few areas with errors which in some cases I believe has undersized the RPZ. The file does however serve to give you a quick appreciation of the zones. Note this file has been used to mark the RPZ on CALM's latest Swan Region Atlas map booklet and their latest COG mapping series.

"could you please clarify the significance of the statement on page 20 in the "Policy & Guidelines" document under Section 4.2.1 which indicates "RPZs are not currently recognized in the public drinking water source protection by-laws".

I believe that the statement refers to the simple fact that "Reservoir Protection Zones" is a newer name for the same restricted area that is defined and termed as "Prohibited Zone" in the Bylaws. The newer name better conveys the reason for the access restriction (ie for reservoir protection) and the intention is to change the naming in a proposed bylaw amendment process.

The relevant bylaws currently read as follows.

4.3.6 No unauthorised person shall enter Crown land within a prohibited zone on any catchment area except for the purposes of :

- (a) Travelling through the prohibited area on public roads, or
- (b) Travelling along private roads constructed for the Commission or Forests Department 3 and which are open for public use, or
- (c) Picnicking within designated picnic sites provided and serviced by the Commission.

4.2.2.2 Prohibited Zone means that part of a catchment area which lies:

- (a) Upstream of a dam, and
- (b) Within 2 kilometres of the top water level of any reservoir in which water is or can be stored.

The Bylaws and the Act are available on-line at

<http://www.slp.wa.gov.au/statutes/regs.nsf/Current%20Legislation%20Version2?OpenView&Start=1&Count=600&Expand=24.15&RestrictToCategory=M#24.15>

Regards,

Jeff

From: dave [mailto:walks55@inet.net.au]

Sent: Friday, 21 October 2005 10:50

To: Jeff Doust

Subject: RE: Walkgps walks promoted within Reservoir Protection Zones

Jeff

Thanks for your e-mail re your concerns regarding routes included on my non-commercial website for bushwalkers.

I am reviewing the information you have provided.

It would be useful if as suggested you could make available to me in electronic format the GIS information defining the actual boundaries of the RPZs, so that I can plot them directly onto my maps for direct comparison.

Meanwhile could you please clarify the significance of the statement on page 20 in the "Policy & Guidelines" document under Section 4.2.1 which indicates "RPZs are not currently recognized in the public drinking water source protection by-laws".

Regards

Dave Osborne

www.walkgps.com <<http://www.walkgps.com/>>

[End of submission document].

D.G. Osborne

24 Nov. 2009