



# WATERY SAUCES OLDIES AND BOLDIES

Newsletter No 101

March 2023

NEWSLETTER OF THE WATER RESOURCES RETIREES ASSOCIATION

## Annual General Meeting

The Annual general Meeting of the Water Resources Retirees Association will be held on 27 April in the Community Meeting Room in Brisbane Square Library.

Members and partners are invited to attend. They will hear reports on the activities of the association, including the centenary celebrations. It is expected that our patrons or their representatives will be present as usual to report on activities of their organisations.

The meeting will also elect the office bearers who will manage the affairs of the Association for the next twelve months.

It would be really nice to meet again with former colleagues on one of the few opportunities available for social contact.

Members may have noticed reports in the press that the *Victory Hotel* has closed. The *Victory* was the venue for a number of our meetings and technical sessions after the Public Service Club closed.

COTAH was the venue at which we held our mid-year and Christmas lunches for many years. The management has gradually increased the minimum number of guests to a level beyond our capacity to comply. Accordingly we will be going elsewhere (see page 2).

## From the Editor's Chair

*Once again I say "thank you" to my daughter Jean Yates who has proof-read every one of my 59 Newsletters. It's amazing how many corrections she makes.*

*She also helps me avoid the perils of autocorrect which, among other travesties, insists on putting an apostrophe in the possessive its and surreptitiously changing the s to z in words such as utilise even though I say loudly and sternly to my computer "If I wanted it to be a zed, I'd have typed a zed". It might have understood if I'd said a zee. Helen recently typed Ring Leah (her friend) which autocorrect changed to King Lear. Until next time, au reservoir.*

**Ian Pullar, Editor**

## From the President

Greetings all. 2023 is well underway and we have held our first event, a technical presentation on Studies on Minjerribah (North Stradbroke Island). See also page 2.

The get together events held last year in Mareeba, Theodore, Yeppoon, Bundaberg, Toowoomba, and Brisbane highlighted amongst other things the strong interest by Association members and other past and present employees in opportunities to get together, reflect on past achievements, renew friendships and acquaintances, and share stories and memorabilia of historical interest.

The Committee has been giving consideration to what could be done to sustain this level of interest. Now we are seeking feedback and ideas from members on what could be done and ways to help make this happen.

In this context the Committee is considering the role of the Association as a gateway for the history of water resources development and management in Queensland, building on the offers of memorabilia made by many attendees at last year's events and the historical material collated by the Committee for the events such as the historical summary now on our web-site <http://www.waterysauces.org.au/history/general/pictorialpottedhistory.pdf>.

I am also meeting with our Patrons to discuss the potential of this role and how it may link and be of benefit to their organisations. The Committee is conscious that we would need to establish a well planned roadmap to take this forward and likely need the support of our Patrons.

The Committee is also keen to establish a process and annual program for future regional activities or events that the Association might sponsor or assist. Some more on this on page 2 of the Newsletter.

So I hope you enjoy reading all the stories assembled by our newsletter editor Ian and please provide your feedback and ideas to either me, Ian or our Secretary Peter – our contact details are on the last page of the newsletter.

*Chris Robson*

*Leontyne Price, the world famous opera singer, has turned 96. Jon Henry sent me a number of her quotations and I have included some of them at the bottom of pages –Ed.*



## Significant Anniversaries

*I was trawling through the membership list and noted that this year marks significant milestones for quite a few of our members. I must also apologise for missing the facts that David Dewar turned 80 on 19 November 2022, Kev Devlin reached 70 on 20 July last year, as did Peter Noonan on 7 October and Richard Priman on 18 November. Chris Robson hit the three score and ten mark on 4 December. We trust they all had a good celebration with many, many more to come. – Ed.*

Significant birthdays coming up in 2023:

Boris Wookovich will turn 95 on 6 August

"Wooka" aged 94  
years and 4 months



Jim Uhlmann 85 on 11 June  
Peter Bevin 85 on 21 August  
Bob Geddes 85 on 7 October  
Dennis Gilbard 85 on 22 October

80th birthdays will be celebrated by

John Potts on 17 March  
Bob Brydon on 21 May  
Peter Thompson on 4 June  
Bill Eastgate on 7 July  
John Connolly on 13 October

75th birthdays:

Barry Mewburn 15 January  
Paul Mills 8 April  
Carol Davison 20 May  
Ross Walduck 27 December

70th birthdays

Colleen Vanderstaay on 8 April  
Ken Watson on 14 June

## Future Activities

**Thursday 27 April – AGM** at the Brisbane City Council Library rooms.

**Wednesday 14 June**, Mid-year Luncheon at the German Club Zum Kaiser 416 Vulture Street South Brisbane.

**Thursday 20 July** – Luncheon and interpretative tour of the Burley Griffin Incinerator Theatre, home of Ipswich Little Theatre.

**Wed 30 August** – Social Golf at Birkdale Golf Club

**September** – Possible two day road trip to the Granite Belt – old mass gravity concrete arch dam, Emu Swamp project, Glenlyon Dam, wineries etc.

More detail will be provided closer the time.

## Get Togethers

WRRRA newsletter No 100 included a detailed report on last year's get together celebrations around the State with our wider IWS/WRC community. The State-wide scale of these get togethers was not something the WRRRA had done before, in many ways a true 'Watershed Moment'.

The extent of the get together events was wider, taken out into regional 'watersheds' around the state, and deeper than it had been before, connecting with non-member colleagues through word of mouth and now recorded on 'The Grapevine'. It was well received and only goes to show that where there is a will there is a way, and that 'Great Divides' of any nature are only in our minds and can easily be overcome by a strong desire of old and long-lost colleagues to catch up while we are all still standing. This was obvious at all the functions.

### What could be our next "Watershed moment"?

Following on from last year's events, queries have come in as to what and when future get-together events will next be held that can encourage a State-wide participation.

The Committee is keen to respond accordingly while the current energy exists so we are now seeking ideas from WRRRA members and those on 'The Grapevine', for an event this year.

One idea already suggested is to have an annual get together at a different location in the state each year to be arranged by the locals with WRRRA support (funds, communications, etc) and organised so that we get a good spread of locations over the years and that we give the opportunity for past employees to get in contact with as many others as possible. Each annual get together could be an opportunity for a bit of a holiday to visit new parts of our State and/or see other folk who weren't IWS/WRC people. Whilst having a social focus, each event could also have a local or regional milestone celebration feature.

So please, your comments or ideas would be greatly appreciated, even if to simply endorse the above idea. Anything is possible.

**We would like to hear back from you with any ideas, regardless of how big or small you think they may be. Please feel free to pass this on to other colleagues and assist us to continue to grow 'the grapevine'.**

Your ideas or suggestions can be made by email to the WRRRA secretary Peter McMahon [petermcmahon46@icloud.com](mailto:petermcmahon46@icloud.com) or WRRRA newsletter editor Ian Pullar [hpullar@bigpond.net.au](mailto:hpullar@bigpond.net.au)

WRRRA welcomes New members  
Ian Holmes, Peter Summers and Bruce Bass

To sing is the most human of the art form delivery, more than, perhaps, an instrument which has to be tuned mechanically. You are the tuner; you are the vessel. *Leontyne Price*

## Ecohydrological insights from contemporary and long term studies on Minjerribah (North Stradbroke Island)

*On 22 February, Dr Glenn McGregor of the Department of Environment and Science, Science Division, presented an extremely interesting technical seminar at the resource Sciences Centre. The attendance was disappointing, but those who attended certainly were entertained and illuminated by the address. Glenn has very kindly provided me with a synopsis of his presentation. He has also made the entire presentation available on the WRRRA website – Ed.*

There are over 70 wetlands on Minjerribah (North Stradbroke Island) including rare groundwater window lakes, palustrine sedge swamps, baseflow streams, coastal heathland-mangrove complexes, and many perched lakes that are hydrologically diverse in terms of their water budget. These wetlands support significant ecological and cultural values including unique biodiversity with complex evolutionary histories. Some examples include endemic algal species and higher plants such as the Eleocharis sedge and the North Stradbroke Island swamp daisy, as well as several rare and threatened plants and animals including the swamp orchid, Oxleyan pygmy perch, the Water mouse and wallum swamp crayfish. These freshwater wetland systems are potentially threatened by several anthropogenic stressors including urban and industrial development, tourism, exotic weeds and pest species, and groundwater extraction. To manage the island in a sustainable way we rely on a comprehensive understanding of the long-term variability of these ecosystems and their response to these stressors and climate change. However, this understanding is often limited by sparse spatial and temporal data, with few well-studied species and systems, and instrumental records spanning less than 200 years. To overcome the limitations of short-term ecological and environmental records, palaeoecological approaches offer

insights into past climates, environmental conditions, and ecological responses at a range of temporal resolutions.

Minjerribah's wetlands include some of Australia's oldest extant systems, with long, sometimes continuous sedimentary records that span several tens of thousands of years. For example, the basal organic sediments of Fern Gully Lagoon were dated to ~210,000 years before present and those from Welsby Lagoon were dated to ~80,000 years before present. Such long sediment archives are rare for continental Australia and their presence on Minjerribah provides enormous potential for palaeoclimate reconstructions aimed at understanding long-term climatic variability in the region, which is intimately linked to the El Niño Southern Oscillation. The Queensland Government has been at the forefront of using palaeoecology to guide environmental management for more than a decade.

Extensive palaeoecological studies on Minjerribah coupled with contemporary data from the groundwater-surface water monitoring network have provided insights to groundwater-surface water interactions for a range of wetland types and have been used to quantitatively infer past rainfall and the response of aquatic ecosystems, revealing a remarkable hydrological and ecological stability over 7,500 years at Blue Lake, an important cultural and environmental site. This information along with several other targeted studies examining wetland ontogeny in relation to climate and environmental drivers at a range of temporal scales has informed analyses of potential impacts of groundwater extraction scenarios on groundwater dependent ecosystems during the most severe drought in the region's history. These approaches provide a sound conceptual and qualitative foundation for contemporary management challenges. While palaeoecology can provide rapid answers to specific questions, the most influential insights may require longer-term investigations.

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## Looking Back

This photograph was taken from the 16th floor window in the new Mineral House in the early 1980s. It shows The Mansions before it was refurbished and the site left vacant by the demolition of the Bellevue Hotel. Harris Court and the Courier Mail Building (not shown) may have emerged from being shrouded to eliminate the West Indian termite infestation (and the occupancy of the irrigation and water Supply Commission).



*I was taught to sing on your interest, not your capital. Leontyne Price.*



## Vale Eric Thomas Davis 8-11-1937 – 1-12-2022

Eric received his drafting qualifications from the Brisbane Central Technical College at 2 George Street North Quay, a building which still resides within what is now the Queensland University of Technology. As a Draftsman in the Irrigation and Water Supply Commission, Eric gained early experience in Branches such as Underground Water and Construction, where he was appointed to the position of Senior Draftsman around 1970 when there was a lot going on. He was to gain further experience in other Branches within Head Office, and was a good mentor to younger staff coming up through the ranks – and a mentor not just on technical matters but on life's lessons and experiences as well. He was to take on further responsibilities after being appointed as Supervising Draftsman in the mid 1980s, and subsequently rising to the position of Drafting Manager in the old Designs Branch as management demands on the drawing office increased. He oversaw production of plans associated with such projects as the Awoonga-Callide Pipeline and Burdekin Falls Dam. Around 1990, Eric then took up an appointment as Principal Technical Officer in charge of the departmental drawing office in Giddy Road, Ayr, where an irrigation area design presence was centred to service such activity around the state. Eric was widely regarded for the experience he brought to that office. Eric went on to retire from that position and return back to Brisbane.



At the time of his death, Eric was one of the oldest remaining draftsmen from the old Irrigation and Water Supply Commission.

During his working career, Eric had an interest in many sports and staff remembered him well for his de-briefs on return from his trips overseas to several Commonwealth Games. On the social side of work, he was active in the Social Club and a number of social activities, such as the lunchtime battles on the ping-pong tables which he had with the younger staff in the then IWSC headquarters at the corner of William and Margaret Streets. He is also remembered as being a member of the original IWS rugby league team in the old Public Service League, and also as a batsman in the Commission cricket team – for those who remember it! He was also an active member of the Water Resources tennis group which seems to have existed forever and still exists today, and Eric played tennis with that group up until just a few years ago.

Eric was a keen fisherman and had more than one trip to Fraser Island with a group made up mainly of IWS draftsmen with whom he had worked over the years. On one of those trips and true to form, Eric was able to teach everyone a thing or two on the finer points of tailor fishing. One of the younger blokes not knowing how dynamic Eric could be with the rod even volunteered to be his bait boy for the day but lived to regret it, because Eric was catching so many tailor that the bloke had no time to scratch himself.

In later years, Eric was to join the Water Resources Retirees Association and true to Eric's active nature and his yearning to be involved, served as a committee member from 1993 to 1995; Vice President from 2003 to 2005; and eventually President from 2005 to 2007.

Eric can only be described as a genuine bloke and a true IWS old-boy in more ways than one and will be sadly missed.

This tribute was put together by a few of his drafting mates from the old Irrigation and Water Supply Commission days.

*When Eric became President of WRRRA in 2003, a biographical note was published in Newsletter No 47 which can be viewed on the WRRRA website. Some information is included here.*

*Eric was born in Gatton as his father was an Accountancy Lecturer at Gatton Agricultural College at the time. The family later moved to Rainworth where Eric attended Rainworth State School to Scholarship and then Industrial State High near the Botanical Gardens. As he was more interested in sport than study (though Technical drawing was his favourite subject), it was decided that after Junior he would apply for a drafting cadetship in the Public Service. He was appointed a temporary clerk with the Irrigation and Water Supply Commission, but the next year commenced work as a cadet draftsman. He attended College four nights a week.*

*One night he wagged it from College and met Jan, who was playing in the Public Service Table Tennis Competition for the Education Department. Four years later, they were married and over the following six years produced their three children, James, Julie and Ross.*

*It was certainly a privilege to know Eric as a workmate and as a fellow office bearer for WRRRA – Ed.*

Regretfully, we advise members of the deaths of **Vera Best** (aged 92), widow of Don Best, and of **Joyce Bertram** (aged 88) widow of Grahame Bertram, both in January.

**I totally and completely admit, with no qualms at all, my egomania, my selfishness, coupled with a really magnificent voice. Leontyne Price.**

## New Role with eWater Ltd for “Not Quite Retired” WRRRA Vice President

Late last year, current WRRRA Vice-President, Greg Claydon, was very pleased to announce his new role as Independent Director and Chair of the eWater Ltd Board.

At the same time, Greg acknowledged and thanked the former Chair, Dr Don Blackmore AM, who led the Board since the formation of eWater in 2005.

“Don has made an incredible contribution to sustainable water management and planning in Australia and internationally. He leaves an enduring legacy at eWater and its Board. I wish him all the best for the future,” Greg said.

### So – Who is eWater Ltd?

eWater Ltd is a not-for-profit company, jointly established and owned by the Australian Federal and all State and Territory governments, to support the sustainable management of water in Australia and around the world. Importantly, it maintains and further develops Australia’s world-class water modelling products, tools and capability and provides support and training for nationwide and international applications.

eWater began in 2005 as the eWater Cooperative Research Centre (CRC). The eWater CRC was formed by the merging of the CRC for Catchment Hydrology (1992-2005) and the CRC for Freshwater Ecology (1993-2005) under the Australian Government’s Cooperative Research Centres Programme.

Several WRRRA members, including Greg and current President Chris Robson, were involved in the formation of the eWater CRC and/or had active involvement in it and/or its predecessor CRCs.

Greg said “I recall that, at the time of thinking about a name for the new CRC, discussions were happening about the environmental, economic and enterprise elements of water, hence coining the word ‘eWater’. Of course, as the CRC evolved, many other ‘e’ words could also be applied to it, including engineering, ecology, education, evidence, expertise, engagement, excellence and enabling”.

Central to the work of the eWater CRC under its seven-year funding agreement with the Australian Government and its involvement with more than 45 partners was the development of a new eco-hydrological modelling system for Australia.

Approaching the end of the funding agreement in 2012, the members of the CRC agreed that it was time to move to the next phase. To that end, in 2012 the government members of the CRC established the next iteration of eWater Ltd as a not-for-profit, government-

owned enterprise to continue the development, adoption and commercialisation of the products and tools developed by the eWater CRC and its predecessor CRCs.

eWater Ltd is currently governed by a nine-member Board of Directors who bring a diverse range of skills and experience to the limited by guarantee public company, including water policy and management, commercialisation of Australian technology, research and development, education and training, international affairs and strategic planning.

In addition to Greg, Independent Directors on the Board are David Dreverman, Bob McMullan, Dr Grace Mitchell, Murray Rankin and Kathryn Silvester. Owner-nominated Directors are Deb Brown, Mitchell Isaacs and Andrew Reynolds.

### What does eWater Ltd do now?

eWater Ltd develops tools and provides expert advice to help public and private sector water managers to:

- design, build and implement water management software solutions,
- make evidence-based water policy and investment decisions,
- plan for and adapt to a climate changed world,
- manage catchments and river basins,
- formulate integrated water resource management solutions to meet growing urban demands, and
- develop and deliver activities which enhance sustainable water management, build climate change resilience and tackle poverty in the Indo-Pacific region and beyond.

Currently, it does this through three operating divisions:

- eWater Solutions,
- Australian Water Partnership, and
- Mekong Water Solutions.

### eWater Solutions

eWater Solutions provides software development and hydrological modelling services to advance Australia’s world-class water resources modelling tools and expertise for partners in Australia and around the world.

It provides modelling tools (such as eWater Source, MUSIC, Urban Developer and eWater Toolkit among others), technical support, capacity building and a community of practice in matters such as:

- Integrated catchment management,
- Water resource planning,
- River system management and operations,
- Stormwater quality modelling,
- Urban water management,
- Planning environmental water use, and
- Water management governance.

*Art is the only thing you cannot punch a button for. You must do it the old-fashioned way. Stay up and really burn the midnight oil. There are no compromises. Leontyne Price*

As Australia's National Hydrological Modelling Platform, adopted by the Council of Australian Governments in 2008 under the National Hydrological Modelling Strategy (which was reviewed by Greg in 2021/2), eWater Source has been developed with the aim of being:

- based on modern tools and the best available research,
- relevant for all aspects of water quantity, quality and environmental management,
- suitable for all climates and environments,
- adaptable and readily updateable to include new policy, knowledge or management approaches,
- flexible and able to link to new and existing models and other information systems, and
- supported through documented methods and guidelines and a community of practice.

All Australian government water management agencies use Source and it is increasingly being adopted by water corporations and authorities, as well as the private sector. Through Australian aid initiatives and direct engagement, Source is also being used internationally.

MUSIC – or Model for Urban Stormwater Improvement Conceptualisation – and MUSICX are Australia's leading tools for water sensitive urban design. With over 2,500 users, including 100 councils across Australia, MUSIC offers urban developers, planners, and engineers the tools to understand, design and manage the impact of urban development and other land use changes on waterways. It is a vital tool for governments at all levels to inform the development of water quality and quantity standards as our towns and cities continue to grow.

Urban Developer has been designed as a Source plugin to specifically help water managers investigate and design Integrated Water Cycle Management (IWCM) solutions in urban areas. Across Australia and internationally, IWCM strategies aim to improve the efficiency of water use, reduce environmental impacts, extend asset life and improve water supply security. Elements of the urban water cycle can be brought together within the Urban Developer tool, thus enabling the study of interactions between all water sources (traditional reticulated water supplies and alternative water supplies, such as rainwater tanks or recycled stormwater or wastewater) across a range of temporal and spatial scales.

#### Australian Water Partnership (AWP)

eWater Ltd has developed close working relations with the Australian Government Department of Foreign Affairs and Trade (DFAT), the World Bank, Asian Development Bank, the Mekong River Commission and established partnerships with a range of government water authorities in India, Laos, Cambodia, Pakistan, Afghanistan, China, and Egypt.

In 2015, eWater Ltd was selected by DFAT to establish and manage the Australian Water Partnership (AWP). The 2017 Foreign Policy White Paper names the AWP as the vehicle to share Australia's water sector expertise internationally through requests for assistance from the Indo-Pacific region.

The unique partnership approach of the AWP results in an agile, collaborative initiative that can quickly respond to critical needs, ensuring positive development outcomes and diplomatic successes.

The AWP has over 200 Australian partners, many from the private sector, that work collaboratively with many governments and multilateral partners in the region to enhance sustainable water management in the Indo-Pacific region.

AWP supports a range of activities that draw on Australian expertise to respond to requests for assistance from our In-country and International Partners, often within the context of managing water scarcity and security.

There are also several cross-cutting priorities that AWP is committed to improving across its activities, such as gender equality, disability, and social inclusion in the management of water, fostering young and emerging water professionals, and achieving positive outcomes within the water-food-energy nexus. They work in collaboration with In-country and International Partners in priority countries in South Asia, South-East Asia, East Asia, and the Pacific, and with other countries outside the Indo-Pacific on a selective basis.

The eWater Board maintains overall governance responsibilities for the AWP on advice from the AWP Advisory Committee (AWPAC), whose current members include Leith Bouilly and Emeritus Professor Poh-Ling Tan, who will be known to many WRRRA members. An AWP Expert Review Panel (ERP) assists with the technical assessment of partner proposals, outputs and recommendations of specialist delivery teams. Current AWP ERP members include WRRRA members and/or contacts Kevin Devlin, Simon Hausler, Daniel Lambert (chair of the ERP) and Murray Smith.

#### Mekong Water Solutions (MWS)

More recently eWater Group has established Mekong Water Solutions (MWS) in partnership with the Australian Government to provide services to improve the sustainable management of water in the region.

Based in Phnom Penh, Cambodia, MWS offers advice, project management and delivery services for irrigation and sustainable water management. MWS combines Australia's proven expertise in water management with local staff experienced in irrigation efficiency and local conditions to deliver regional water solutions across the Mekong Region.

eWater Ltd has strong international partnerships through managing the Australian Water Partnership and Mekong Water Solutions, both with DFAT support, and through support to the Mekong River Commission.

Interestingly, several WRRRA members will remember hosting delegations from the Mekong River Commission going back to the 1990s. Greg says he remembers those occasions well, including one instance when delegates were standing in the middle of a bridge over the Macintyre River where the river's middle thread forms the border between Queensland and New South Wales - and they were arguing about which state would be responsible if one of them fell into the river and drowned!

**I never talk about failure. I'm so proud of me. Leontyne Price.**

## The future for eWater Ltd

Greg says he sees 2023 as an opportunity to refresh the strategic direction for eWater Ltd, including strong custodianship of a modernised hydrological modelling platform that is fit-for-purpose for Australian and international users, now and into the future. It is also an opportunity for the Australian Water Partnership and Mekong Water Solutions to further strengthen international efforts and partnerships to build water security, resilience, equality and understanding in the face of climate change, population growth, demographic shifts and other challenges.

*I, and readers of the WRRRA Newsletter, are always interested to hear of the activities of their former colleagues – be they professional, social or just amusing. Unusual hobbies or events (like the article below) make for fascinating reading, so why keep the stories to yourselves? Why not share them? - Ed.*

## Challenging Historical Research

**Jon Henry**

*Jon alerted me to some fascinating work which he and a group of colleagues are undertaking and has given me permission to publish the following. Jon is certainly continuing to use the sweat of his brain as well as the sweat of his body in retirement. I look forward to hearing of the success of his venture - Ed.*

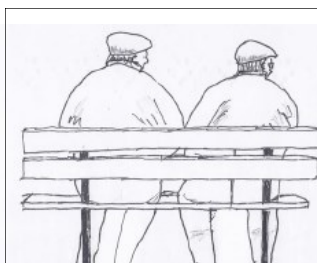
At Iluka in NSW, there are a buried historical railway and a very important shipwreck.

The railway was surveyed in 1860, built starting in 1874, commissioned in 1876, and abandoned in 1886. It was used to transport rock from a quarry to the Clarence River for the construction of the first North Breakwall. Part of it was taken up and sent to the Macleay River in 1896. Whatever is left is covered by sand. My colleagues and I have managed to dig down to it in one spot where the covering of sand is quite shallow. We know where it was and we intend to use a new system to determine the extent of it that still remains buried below the sand.

The shipwreck is that of the steamer *Phoenix*. The *Phoenix* was powered by an engine recycled from the *Sophia Jane*. The *Sophia Jane* was the very first steam ship ever to come to Australia. The engine was of the early "side lever" type. The *Phoenix* was wrecked in 1852, but nobody knows exactly where it is. My colleagues and I want to find it. This is a longer shot than the railway.

"As new Chair, I look forward to working with my fellow Board members, Michael Wilson, CEO of eWater Limited and his team, and all connected with eWater Group and its divisions - eWater Solutions, Australian Water Partnership, and Mekong Water Solutions. Together we will continue to deliver the highest standards of governance and management and strengthen our partnership with all levels of Australian governments, the Australian water industry and local partners, as well as our overseas partners," he said.

You can learn more about eWater Ltd by visiting the website [www.ewater.org.au](http://www.ewater.org.au).



*If I have a bad night's sleep, I need an afternoon nap. If I have an afternoon nap, I have a bad night's sleep.*

I have designed, constructed, and programmed a system for conducting geomagnetic surveys. The system has a very sensitive magnetic sensor, a GPS receiver, a programmable controller, a logger, and a management console. It can "see" buried and submerged iron objects far deeper than a conventional metal detector. It is to be used for archaeology. The system is destined initially for field work in relation to these relics.

Yes, I am still writing technical computer programs.

The controller is programmed in Forth and the logger is programmed in Simula. Forth is a low level programming system suitable for hardware control. Simula is a general purpose high level programming language. Simula is what I used in the Commission for the inverse problem solver and other modelling programs that ran on in-house computers. The Swedish have developed a completely transportable compiler for Simula and I have it running on the logger and all my general purpose computers.

The geomagnetic survey system also requires an inverse problem solver. It is used for calibrating the three axes of the sensor. So, yes, I am still writing inverse problem solvers.

So far, we have discovered parts of the railway with the new system. Much more work is required to find out exactly what is going on. Karla and I will be in Iluka in March for more work.

We have a resident researcher in Iluka plus other researchers in Yamba, Angourie, Wodonga, and East Maitland.

*If I do have some success, I'd like to enjoy it, for heaven's sake! What is the point of having it otherwise? Leontyne Price.*



## From the Archives

*It is 100 years since the then newly appointed Commissioner posted his first annual report, reprinted below. Members may care to read it and observe how things have changed (or not changed) over the century. When the hydrology group moved to ESP from Indooroopilly they created a digital archive of a lot of the physical records that they had. These included copies of all the Annual IWS Commission reports, Department of Water Supply Reports and Hydraulic Engineers Reports to parliament up until the early fifties. A list of these can be found on the WRRRA website and can be accessed there.— Ed.*

### REPORT OF THE COMMISSIONER

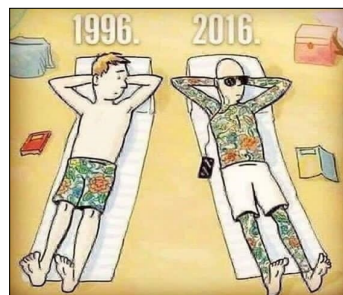
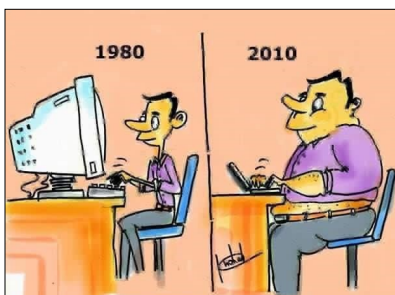
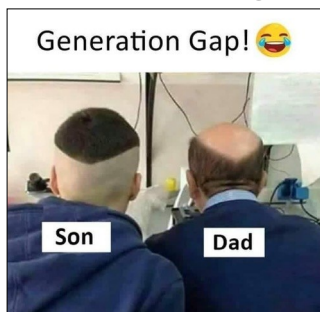
For the Financial Year Ended 30th June. 1923.

GENERAL. "The Irrigation Act of 1922" received the Royal Assent on 18th October, 1922, and under the provisions of the Act the Commissioner was appointed the same month. The Act, designed on broad lines and suited to modern conditions, became operative immediately, and steps were at once taken to constitute an Engineering and Administrative Staff. The conditions of the new appointments were sufficiently attractive to ensure applications from experienced irrigation and water conservation officers throughout Australia, with the result that a staff has been formed of an efficient and able character. Later in 1922 the Water Supply Department was placed under the control of the Commissioner of Irrigation. With the amalgamation of the two Departments, the control of water generally, and the administration of the various Acts became vested in the one authority, avoiding overlapping of operation, and obtaining higher efficiency and economy. The Inkerman Irrigation Scheme, formerly one of the activities of the Water Supply Department, also passed (in trust) into the hands of the Commissioner in April, 1923, and action was immediately taken to generally reorganise the undertaking and revalue the assets, in order to place the project on a sound financial basis, and under an efficient and businesslike system of administration. The Inkerman Area is dealt with separately in this Report. In regard to the various Acts controlling Water Supply and Conservation, for some time it has been realised that the provisions were inadequate to meet conditions now existing, and a draft Water Bill is in preparation consolidating the Acts, and bringing the water laws more in keeping with present-day requirements. Several new features are embodied in the Bill, which is of a comprehensive character. The urgent need of Water Conservation has been accentuated during the recent general period of drought, and serious thought has been given to the question. It is obvious that, whilst already large sums have been expended in bores and water facilities, still larger expenditure is essential in the future, not only to cope with the requirements of the extensive settlement projects now in hand, but also to more effectively serve the lands already settled. It is proposed to organise the State into water districts, and afford every possible facility for the conservation of water by Boards, Trusts, Groups, and individual settlers. The financial requirements, however, preclude any immediate large or general scheme of operations, but it is considered that, by a systematic and intelligent expenditure of regular and reasonable amounts, much good should result, and eventually the problem of effective water supplies should be solved at a cost sufficiently low to make the work profitable and beneficial to the State generally, and the farming and pastoral community in particular. One point that is becoming increasingly evident is the necessity for realisation by settlers that self-help is just as important as State assistance in the provision of water supplies. In a territory covering such an extensive area as Queensland, the funds available as loans and advances for water facilities are necessarily limited in comparison to the area involved. It is most important that those who can afford to finance their own works should do so as far as possible, so that the State funds should be available for assistance to those who are genuinely unable to help themselves.

  
Commissioner.

## Times Do Change

Sent by Jenny Robson. Thank you!



A healthy sex life. Best thing in the world for a woman's voice. Leontyne Price.



## Outboard Motor for Irrigation

*Gary Corbett who prepared so much material for the Q100 events, found the following article in Trove from "The Queenslander" – Thursday 19 September*

An instance of the resourcefulness of the modern farmer is quoted by the "American Agriculturist." A farmer recently acquired some additional land adjoining his farm, which was irrigated. The new ground, however, was 2ft. above the level of his ditches. To establish a direct gravity flow from the source of supply to the new property would have been a costly job, and since water was available only twice a week he was not anxious to install an expensive pumping plant.

He got over the difficulty with a small motor of the outboard type, as used in boats. He laid a flume with the intake end raised high enough to allow the flume to have a slight fall to the new ground. A pipe of bore large enough to take the propellor of the Motor was laid from the ditch to the flume Intake, with a bend at the lower end to allow the pipe to lie horizontally on the bottom of the ditch. The motor was erected on a wooden stand above the pipe, and a notch was cut in the end to admit the propeller shaft. When the motor was started the thrust of the propellor was sufficient to drive the water up the pipe into the flume, through which it gravitated to the ground to be irrigated. Running the motor for an hour or two on "water days" was sufficient to fill the ditches on the higher level. Later when the lower part was flooded by the spring rains the same motor was used to drain the land. There is a useful hint here for Queensland farmers who are favourably situated with regard to a water supply within easy reach of irrigable land.

*Further trawling of Trove by Gary turned up this additional explanation of how such a system can work in "Australia's Power Farming Magazine" – (date unknown)*

Australian farmer Alan Black, of "Kimberley" Kata-matite, in Northern Victoria, uses his outboard motor for more than just fishing.

Black has rigged his 10 hp Honda marine outboard motor for high volume water pumping for gravity irrigation, quick removal of water from flooded fields, and other emergency uses.

This is how Black's "outboard motor pump" works:

The outboard motor is carried on a frame, which clamps onto a 9-in. pipe arrangement. The unit is set right in the water (river channel or the edge of a lake or pond) for pumping.



With this application, gravity irrigation can be sped up as much as 100% by being able to raise the height of the water in the channel, explains Black. The outboard motor, when clamped to the delivery part, is equipped with a cavitation plate, which is firmly held on rubber-lined fittings. Anti-spiraling vanes are inserted immediately after the propeller.

Although the motor used by Black is a 4-stroke unit, he notes that a 2-stroke outboard would also work satisfactorily since the small amount of extra fuel used for a 5 to 10 hp, 2-stroke engine would be trivial compared with the benefit of faster irrigation.

Although the exhaust on the Honda outboard Black uses has given no trouble, he notes that there would be extra pressure encountered in using it for pumping, compared with boat work, and that this would have to be watched. The outboard Black uses for pumping water for irrigation and other uses around his farm has been left absolutely standard so that he can put it back into his boat for weekend fishing trips.

Black believes the pump's efficiency could be increased by designing special turbine shaped blades and fitting them into a neater shape than is offered by the straight pipe that he uses. However, he feels that he would rather trade some inefficiency for the ease of being able to interchange the motor for weekend boat use and special-duty pumping.

### Answers to Terry's Trivia

1. (iii) High St Toowong 2. (v) 4/1 3. (vi) The BBC
4. (iv) Tasmania 5. (iii) A town in California 6. (iii) Two of Elon Musk's children 7. (iv) Victoria.



### St Barnabas Bulletin Board

For those of you who have children and don't know it, we have a nursery downstairs.

**We should not have a tin cup out for something as important as the arts . Leontyne Price.**

# HEALTH *and beauty*

## Not all spuds may be duds

Spuds may not have the same benefits as other vegetables, but they may still have a lot of health benefits provided they're prepared the right way.

Other vegetables are known to have benefits such as lowering the risk of Type 2 diabetes, whereas potatoes have been suspected of contributing to the risk. New research at Edith Cowan University has shown that health issues associated with potatoes may actually be due to how people are preparing them and what they are eating with them.

When researchers separated boiled potatoes from mashed potatoes, fries or crisps, the boiled variety were no longer associated with higher risk of diabetes.

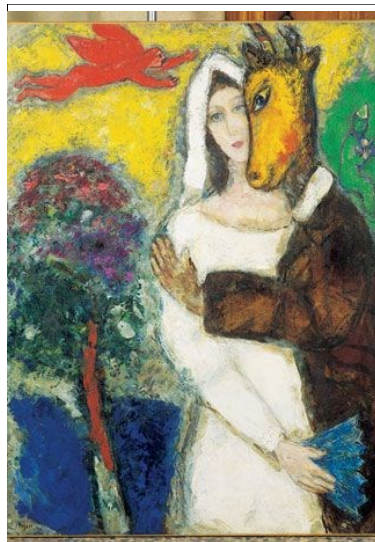
The study found that people who ate the most potatoes also consumed more butter, meat and soft drink – foods known to increase the risk of diabetes.

And a Brazilian study has shown that people who get their daily energy consumption from ultra processed foods are likely to have a faster decline in brain function than people who eat natural foods. The study, which followed 15,000 people for 6-10 years showed that those who ate the most ultra processed food showed a 28% faster cognitive decline than those who ate the least.



## Exercise those Brain Cells

Q. Each player had a bat and a ball. During the game each used another's bat and yet another's ball. Alan used the bat belonging to the player whose ball was used by Bill. Bill's bat was used by the player who used Alan's ball. Colin had used Doug's ball. Whose bat and ball had Alan and Bill used?



**Marc Chagall** 1887-1985  
Midsummer

*I always said you'd have to be a goat to get married.*

Reprinted from WRRR Newsletter No 48

## Woman - according to Harvard Math Dept

1 To find a woman you need time and money, therefore:

$$\text{Woman} = \text{Time} \times \text{Money}$$

2 "Time is Money" so

$$\text{Time} = \text{Money}$$

3 Therefore, Woman = Money x Money

$$\text{Woman} = \text{Money}^2$$

4 Money is the root of all problems.

$$\text{Money} = \sqrt{\text{Problems}}$$

5 Therefore, Woman =  $(\sqrt{\text{Problems}})^2$

$$\text{Woman} = \text{Problems}$$

A+

## Answer to last Issue's Teaser

	4	6	
7	1	8	2
	3	5	

## The King's English

What hope is there when not even the king speaks the King's English? I'm sure all other pedants like me would have heard King Charles III report that many people had sent "best wishes to my wife and **myself**." One would have thought that his mother would have taught him that *myself* should only be used reflexively (I hurt *myself*) or emphatically (I will do it *myself*). I guess, though, he could have said, as do so many misguided people, "to my wife and **I**." As the pronoun follows a preposition, it must be objective case. Nobody would ever say "best wishes to I". In what is supposed to be the ME AGE why has the humble pronoun *me* been so frequently supplanted? Do the misusers think it makes them seem posh?



King's knot

On a totally different subject, I am always intrigued by the fact that the men of the House of Windsor do not use Windsor knots in their ties.



Windsor knot

## Dealing With Illegal Parking German Style

Rolf Rose  
While in Bremen, Germany, last year we watched how they deal with illegal parking. Initially there was a car at the rear of the offender but it shifted. It only takes about 10 minutes to remove a car, even quicker than loading it on the back of a tow truck.



A homophonic limerick

### By and bye

He was sentenced; his wife said "Good bye"  
not knowing just how she'd get by,  
but his weak alibi  
that he'd been in Dubai  
was a story the court wouldn't buy.

## A Sign of the Times

Outside a Vet's at Waterford

**Not all ball-tampering is bad – de-sex your pet...**

## Terry's Trivia (from the Centenary luncheon.)

Answers on page 9.

- Where is Australia's first divided road? (i) Hume Highway out of Melbourne; (ii) Parramatta Road; (iii) High St Toowong; (iv) Mt Panorama Drive Bathurst; (v) Denison Street, Rockhampton; (vi) St Kilda Road.
- Rupert and Jerry - how many divorces? (i) 1/1; (ii) 2/2; (iii) 3/3; (iv) 4/4; (v) 4/1
- Which news-media organisation was founded on 18 October 1922, the very same day that the *Irrigation Act of 1922* received assent? (i) The Balonne Beacon (St George); (ii) The Logan Witness (Beenleigh); (iii) The Mitchell Grasslands; (v) Queensland Country Life; (vi) The BBC; (vii) The ABC.
- After 14 hours underground, a group of cavers recently uncovered Australia's deepest known cave, at a depth of 401 metres. Which state is it in? (i) Queensland; (ii) New South Wales; (iii) Victoria; (iv) Tasmania; (v) South Australia.
- Who, what, or where is the 'Lodi' made famous by Creedence Clearwater Revival: (i) A nightclub in Florida; (ii) A prison in Kansas; (iii) A town in California; (iv) A Care Home in Ohio; (v) A farm in Iowa.
- Who or what are X AE A-12 and Exa Dark Siderael? (i) Galaxies discovered by the James Webb Telescope; (ii) Characters in a Star Wars movie; (iii) Two of Elon Musk's children; (ii) Racing Catamarans; (v) On-line Computer Games.
- An Australian was recently crowned World Barista Champ at the Melbourne coffee expo. Which state was he from? (i) NSW; (ii) WA; (iii) Qld; (iv) Vic; (v) Tas.



*I've always found the easiest way to find something is to buy a replacement..*

**I prefer to leave standing up, like a well-mannered guest at a party. Leontyne Price**



## Book Club

*Before I Forget* by Geoffrey Blainey

Most months I visit the council library in Toowong Village and quickly pick up four or five books with no preconceived titles in mind.

I always scan the biography shelves, often finding interest in the stories of the famous or infamous. I recently picked up Blainey's early memoir of his fascinating early days.

Blainey is now 93 years old and one of Australia's most eminent historians, having been a professor of economic history at Melbourne University for over 20 years and having published more than 40 books. He has been described as an Australian living treasure.

He describes his early boyhood days as a son of a Methodist minister in various regional towns in Victoria. At school he was inspired by teachers to read and to read more. Not particularly history at first but later on.

He had an enquiring mind and at an early age set out with a friend to hitchhike to Sydney to see the harbour where the First Fleet arrived. At night they slept in the open or in showground pavilions. During other school holidays he hitchhiked to a relative's distant farm to work for a week or two.

He describes attending AFL matches at the Geelong club ground – men in suits with hats – no women in the crowd – a different era.

Fortunately he won a scholarship to Wesley College in Melbourne and then to university, but on graduation had no specific idea as to his future.

His career began when he was invited to write a history of the Mt Lyell mining company. He travelled to Queenstown and immersed himself in the life of the mining community. The resulting book was called *The Peaks of Lyell*. Numerous commissions followed and the interest in economic history grew. His appointment to the history department at Melbourne University followed.

Shortly after Blainey's marriage, he became eligible for a period of study leave from the University and he and his wife decided to travel separately to London. He decided to travel overland alone via China and Russia. This was 1966!

His major books followed – *The Tyranny of Distance; A Short History of Australia*; and *A Short History of Christianity* which is not at all short.

Blainey's memoir is warm, lively and affectionate. I'm so pleased I picked this book up.

**Lee Rogers**

### Office Bearers

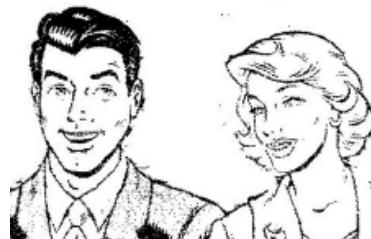
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Lynne Truss, the author of *Eats, Shoots and Leaves* has written a series of quirky little crime novels. In 1950s Bath, the dim-witted Inspector Steine and Constable "Clever Clogs" Twitten have to investigate a series of crimes with minor assistance from Sergeant Brunswick and support from Mrs Groynes, the charlady. *A Shot in the Dark*, *The Man Who Got Away* and *Murder by Milk Bottle* can fill the unforgiving minute with some amusement.

**Ian Pullar**

*I'm sure Santa would have left any number of excellent books in members' Christmas stockings (as he did in mine to provide me with hours of happy reading).*

*But the readers have not shared the joy by providing other readers of this newsletter with the title, author and brief description of the work. It would be nice if they did. - Ed.*



*No one will ever win the battle of the sexes. There's too much fraternising.*



*"When I bore people at a party, they think it's their fault."*