Chapter 2

The water crisis in Southeast Queensland: How desalination turned the region into carbon emission heaven

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If you flew into Brisbane in 2006 you were greeted with a huge advertising hoarding on the airport drive with the words:

‘Head to Queensland. The climate’s great for growth.’

The text was set to a backdrop of vast humanoid cranes walking across a brown landscape. The state government advertising campaign, run nationally, reminded punters of Queensland’s booming open-cut coal mines, and set the scene for a state on which the sun never sets. Demographers, senior public servants, property developers and Premier Beattie bragged that SEQ was the fastest growing area in Australia, with more than 1000 people a week moving north. Local morale was further boosted by Sydney’s ailing property market and Melbourne’s unpredictable weather.

Such optimism has long marked image-making in Queensland, ever since the northern state stole the surfing limelight from New South Wales in the 1950s and 1960s. With the spectacular growth in tourist numbers in the last 40 years, Queensland put great store in its advertising slogans: ‘Beautiful one day, perfect the next’ is now one of the world’s most long-lived tourist marketing ploys. Coastal Queensland houses over one-third of all holiday-let rental apartments in Australia.

So in Queensland, the climate is good for holidaymakers, for locals and ‘for growth’, the optimum trilogy. What could go wrong? No-one ever suggested at the countless focus groups run by political parties that the cities might run out of potable water. Yet that is precisely the scenario that confronted Beattie in his last year of office, and has had water authorities, politicians and senior bureaucrats ducking for cover ever since. The ad agency that thought up the dusty imagery for ‘The climate’s great for growth’ must have known something.

While all major Australian cities have experienced periods of drought, few have been more innocent of the possibility in the last few decades than Brisbane. The 1974 flood, which entered much of the CBD and all of the upriver suburbs

and catchments, reinforced the notion that oversupply was the problem, not a lack of water. Over 90 per cent of the metropolitan area didn't get water meters until the 1990s — so the majority of Brisbane City Council (BCC) ratepayers simply paid an access charge for their water, not a usage charge. They had no way of knowing how much water they were using or wasting. Today, the hastily constituted Queensland Water Commission (June 2006) hands out egg-timers with a suction cap to be affixed to your bathroom wall to encourage you to shower in under four minutes. Such tactics have greatly reduced demand, and are being followed with interest around the world.

The turnaround in Southeast Queensland has been extraordinary, which is why it is such a pertinent study at present. Brisbane, from the 1960s to the 1970s, went from a city where most new subdivisions were unsewered to a sewered metropolis, the ALP City Council getting a large helping hand from the Whitlam government. But, at the same time, Brisbane had more fire hydrants than water meters. In the late 1980s, fewer than one in 15 houses had a water meter. No wonder per-capita consumption per day hovered around 700 litres. By 2007 — with restrictions and a well-supported public campaign — consumption had fallen to 140 litres, one of the lowest in the developed world, lower even than Israel. (See Cole 1984; *Courier Mail* 28 August 2007.)

Turn on the sprinklers, bury the water meters

In the 1950s, 1960s and 1970s, Brisbane's water debates were dominated by occasional bans on sprinklers, the adequacy of the system of reservoirs to supply sprinkler demand, an ongoing debate about sewerage more houses (most post-1950 subdivisions were septic) and from 1974, the fear of flood, after Brisbane experienced its worst flood since the 1890s.

The proportion of properties with water meters fell from 80 per cent in the late 1930s to 6 per cent in the 1980s. Installing meters to the hundreds of thousands of un-metered properties became such a political hot potato that both sides in Council promised not to install more meters. In late 1984 thousands of brand-new water meters were buried at Boondall, a tip and wetlands area north-west of the airport. They await liberation by future archaeologists. Neither the dominant ALP group in Brisbane City Council (Australia's only metropolitan-wide council) nor its opponents wanted to be seen to be measuring, let alone charging individual ratepayers for the amount of water they used. Water — as much of it as any household or business wanted or needed — was seen as an inalienable right.

The policy of not bothering to install water meters, even for new subdivisions, continued until the late 1980s. This changed in 1989, and in the six years between 1990 and 1995 218 000 new water meters, in black plastic containers flush with the nature strip, were installed throughout Brisbane. Suddenly households could

be informed of how much water they were actually using. But this didn't stop the sprinklers, because water was plentiful and extraordinarily cheap, less than \$1 for 1000 litres. The catchment areas and the dams, which filled from time to time with deluge rains, seemed able to keep up with demand (BCC Archives; *Brisbane Statistics*; *Brisbane Yearbooks*).

Water restrictions: How strict can you get?

For a society which just three years ago turned on water sprinklers at any hour of the day or night, and which still regards the installation of a swimming pool as the ultimate expression of sustainable sub-tropical living, Level 3 water restrictions, introduced in June 2006, banning any form of hosing at all, were an almost unthinkable nightmare. Earlier residents of Brisbane got stuck into the rainforest, harvested the fine timbers, and built sensible wooden houses until generations of sawmillers ran out of trees to cut down. The imported species that give Brisbane what is left of its green canopy — especially the Leopard trees — struggled in the drought. Even the fig trees were troubled (Spearritt 2003). The city's fountains remain waterless, in a rather pathetic attempt to pretend that everyone is tackling the crisis seriously, a bit like the marketing ploy of buying carbon offsets to discount guilt when travelling by air.

Gone are Brisbane's long-touted ambitions as Australia's only sub-tropical capital city. And on the Gold and Sunshine Coasts the outdoor showers — surely the quintessential Queensland act for locals, interstate and international visitors — were turned off. To get an outdoor shower you had to cross the border and head for Byron Bay, where it still rains regularly and where much more of the natural landscape has been preserved in national parks and nature reserves. Byron Bay could easily have become another Gold Coast were it not for interventions from both a brave local council and the NSW state government, which under Premier Carr, attempted to prevent coastal overdevelopment.

Catchments for real estate, not for water

How did the SEQ crisis come to pass? Why did a government whose own Population and Forecasting Unit correctly predicted the rate of growth in Southeast Queensland allow water stocks in its dams to fall to perilously low levels while simultaneously allowing the government's own electric power stations to continue to thrive on potable water supplies? By 2006 the power stations were using up to one-fifth of SEQ's daily consumption of water. What an irony that at peak times in summer most of the electricity goes to air-conditioning for apartments and houses built without any attempt at cross ventilation. Surely the upper-middle class should be left to sizzle in the neo-Tuscan mansions they erect, having managed to get rid of the traditional Queenslanders on river and hillside sites. And investors in inner-city apartments

should be made to live in their shoddily-designed concrete boxes after the air-conditioning has been disconnected.

The explanation of the crisis in SEQ lies in an analysis of infrastructure quick-fixes popular with civil engineers, a remarkable lack of accountability in the water bureaucracies, and untold arrogance in the electricity authorities. Local governments and the state government were so preoccupied by real-estate-driven growth that they lost interest in the quality of the urban environment. The property industry in Queensland is the largest single source of election funds for both the ALP and the coalition parties. Since the late 1950s all Queensland premiers have embraced the property industry as a vital engine for growth.

Premier Bjelke Petersen fondly bragged about the cranes on the skyline. Subsequent premiers have been more subtle but the message has been the same. Premier Beattie finally delivered the first statutory plan for the SEQ region in June 2005, partly to placate growing environmental concerns about the fate of the coastal and hinterland landscape, but the real beneficiary has been the property industry, which now has oodles of infrastructure support to create higher densities in the inner suburbs and certainty about where it can bulldoze afresh to create instant 'Lakes estates' on the urban periphery. Fortunately some of the lakes do offer on-site stormwater management and capture.

A society so dependent on real and speculative building booms creates a haphazard urban form. Car-based suburban development, well beyond any prospect of either rail or Brisbane's impressive and recently augmented busway system, has led to the creation of a 200 kilometre city from Noosa to the Tweed. As over 30 per cent of the population can't drive or don't have a car, there are a lot of youth and older adults stranded in this urban form. Successive state governments refused to contemplate the looming problem and no major political party has yet been brave enough to question the rights of an adult electorate where three-quarters of voters drive (Spearritt 2004).

Only 17 per cent of Southeast Queensland is held in state forests and national parks, compared to 43 per cent of Greater Sydney. One obvious result is that the catchment areas for dams in SEQ are not a patch on the Sydney catchment areas. Because so much of the relatively arable environment of SEQ had been carved up into small rural landholdings by the early 1950s, when it came to locating new dams they ended up to the north-west of the city in a relatively dry catchment area, the Wivenhoe dam site selected as much to prevent flooding as to collect and store water. Add the worst drought in 100 years, and you've got a very big problem (Brisbane Institute 2003).

Existing bulk water supply and transport infrastructure, *SEQ Draft Water Strategy*, April 2008, chapter 5, p.105

Even Gold Coast property developers got worried at the thought that the water might run out. Imagine the indignity of having to buy in water — via truck — from northern New South Wales to fill up your lap pool. It hardly goes with the Gold Coast's image of sunshine, instant palm plantings and unlimited largesse, from meter maids and schoolies week to champagne at the Indy 500. The current Gold Coast marketing campaign, 'Very GC', brags of 'miles of sandy beach, lush green rainforest, world-class golfing greens and world-famous theme parks'. (Verygc.com 2007)

Whatever happened to the 'deluge rains'? Belated recognition of the water crisis

The Beattie government got rattled by the water crisis. The government had already weathered the doctor shortage (and embarrassment about some surgeons with below-par success rates) but managed to avoid too much blame for alleged shortcomings in electricity infrastructure, primarily caused by a rapid rise in air-conditioning demand (AJPH, 2004+). But unlike these two issues, every member of the public knew about the water crisis, for the remarkably obvious reason that we were not getting much rain and, in particular, were not getting the 'deluge rains' which, every few summers, used to augment the Wivenhoe and Somerset dams and freshen up their gardens. Suburban streets the length and breadth of Australia's 'fastest-growing urban region', as the Beattie government was wont to boast, rang out with neighbourly exhortations for rain. Nature strips, once watered, were now brown, and so were the lawns. Hardy shrubs gave up. Nurseries closed, car-washes flourished (now they have to use recycled water), swimming-pool builders grumbled and landscape gardeners struggled to make ends meet.

Successive senior bureaucrats, government ministers and their advisors ignored the warning signs, sounded as early as 1997 by experts in the Department for Natural Resources and Mines, which in various guises had the biggest group of hydrologists and others responsible for assessing water resources and calibrating those resources with consumption patterns and evaporation. The failure to follow this advice reflects badly on senior government bureaucrats and equally badly on ministers who encouraged a culture of 'see no problems, speak no problems' (Interviews 2007–08).

The Department of Natural Resources released a draft strategy for water supply in SEQ in August 2004 and a much more alarmist, but well-argued, Interim Report in November 2005, which included the — at that time — amazing proposition that consumption might have to be limited to 300 litres per person per day. As the Executive Summary put it: 'If significant inflows to the Wivenhoe, Somerset and North Pine are not received by around February 2006, SEQ will be in the grip of the worst drought in recorded history.' The report pointed out that these dams were last full in February 2001 and had only

minimum inflow in 2004. By November 2005 the dams were under 35 per cent full. The report's main recommendations included: water restrictions, recycled water for industry and power stations (to reduce demand on Somerset and Wivenhoe), construction of a weir on the Mary River, and the investigation of 'regional desalination facilities' (SEQRWWS *Interim Report*, November 2005: 1).

In the following months, dam levels continued to fall precipitously. Generous state government and local council tank subsidies were introduced, enabling householders who installed more than 5000-litre capacity to recoup up to \$2200. The Beattie Government ran full-page newspaper advertisements exhorting residents to install tanks and take advantage of a subsidised scheme to install water-wise devices. Tens of thousands of households took up the offer. All new government, commercial and residential structures were encouraged to collect rainwater on site. Level 2 water restrictions, which had been introduced in October 2005, were made more stringent, with Level 3 introduced in June 2006 (hoses banned) and Level 4 in November 2006, allowing bucket-watering for just a few hours a week. Greywater recycling for gardening purposes became legal under BCC regulations in late 2006. Brisbane, a dusty city, especially in dry winters, became dustier still as the brave new world of freeway tunnelling projects, proclaimed by Lord Mayor Campbell Newman, with the implicit backing of the State Government, created huge piles of shale and dirt. Cynics wondered out loud who would tunnel for cars at a time when the very supply of adequate water for the metropolis hung in the balance (Pretty 2006; Dixon 2005).

'Poowoomba' and the politics of recycling

The garden city of Toowoomba — famous for its floral festivities — was in even more trouble than Brisbane. Its citizens had already been warned by the Department of Natural Resources and Mines in December 2004 that its extraction procedures for underground water were exceeding safe water yields. The Toowoomba City Council sought support from the federal government's new National Water Commission for a water recycling grant, supported by Minister Malcolm Turnbull on the proviso that they held a referendum.

Local business interests, led by millionaire property developer Clive Berghoffer, a former National Party MP and medical philanthropist, organised 10 000 signatures from 'Citizens against Drinking Sewage'. This clever if misleading notion, following on the success of 'Australians for a constitutional monarchy' (we don't want a 'politicians' republic') underpinned the successful 'No' campaign in the referendum. A 6–3 vote at the Toowoomba Council in favour of recycling and a vast scientific effort mounted in favour of the 'Yes' vote proved to be of no avail. Beattie did not help the situation by quipping on 2 June 2006, probably inadvertently, that 'replenishing dams with recycled water' would be 'the Armageddon solution'. Media-savvy Beattie always had a penchant for a slogan but this one backfired (*Courier Mail*, 3 June 2006).

The 'Yes' case rested primarily on returning recycled water to dams, multiple and proven barrier-treatment processes, with two–three years' testing by CSIRO before release. The 'Yes' case, championed by Mayor Di Thorley, drew modest support from Beattie, Turnbull and the *Courier Mail*. The 'No' case — 'to deny your natural instincts and adopt untested new technology is foolish' — went on to claim that thalidomide, asbestos and mad-cow disease were all caused by the ignorance of 'the long-term effects of science'. On 29 July 2006, 62 per cent of the population voted against the referendum question 'Do you support the addition of purified recycled water to Toowoomba's water supply'. Toowoomba, with its population of 120 000, remains desperately short of water (Vuuren 2007).

Beattie's water grid to the rescue

In August 2006 a re-branded department, now the Department of Natural Resources and Water, issued its *Water for Queensland, a long term solution* and gave Beattie the concept of the 'water grid' as the way forward. The analogy with the electricity grid amused some commentators, even though electricity is rather easier to manufacture than potable water and comes with a vast distribution network already in place. Imagine the Government's embarrassment when, at the budget estimates committee, it was forced to admit that its own Tarong Energy Power Station had been secretly 'siphoning' potable water from Wivenhoe despite an edict from Energy Minister John Mickel that it should take water from Boondooma Weir. The press leaped on the revelation, so an 'agreed separation' was promptly organised for Tarong CEO Andrew Pickford. Power station operators prefer potable water for their cooling towers because it is less salty than other water sources. But this revelation came at a time when all of Southeast Queensland was being asked to show restraint while government-owned instrumentalities obviously went their merry way (*Gold Coast Bulletin*, 15 July 2006; *Courier Mail*, 20 July 2006; *The Australian*, 20 July 2006).

The tone of *Water for Queensland* was grim: 'If Queenslanders are to maintain the lifestyle they currently take for granted, it is essential that demand for water is reduced and supplies are increased, so that economic growth and wealth creation can continue.' This document may well constitute the emergence of the ALP as a 'lifestyle' political party. The document boldly acknowledged the defeat of the Toowoomba referendum but stated that 'recycling within residential and non-residential developments will need to be introduced'. It gave Beattie the 'water grid' terminology, the catchphrase to solve everything, and announced the following infrastructure for 'the short term to 2016': Gold Coast desalination facility (45 000 ML/a); Western Corridor recycling scheme (30,000 MLa); Traveston dam stage I (70 000 ML/a); and a raft of smaller projects.

The Government paid lip service to some of the environmental impacts, especially of the desal plant, where the contemplation of alternatives got short

shift, while the Traveston dam proposal attracted a voluminous report with dozens of mitigation measures. The report pointed out that only 6–7 per cent of treated effluent in SEQ was currently recycled, mainly for golf courses and sports ovals. It also pointed out that the Western Corridor recycling scheme would make water available to the Tarong, Tarong North and Swanbank power stations. It had much less to say about how much electricity would be required to move all this water around SEQ, including the fact that the pipes will need continuous water flow to remain operational (*Water for Queensland* 2006: 1, 31).

Beattie's 'water grid', and an extensive advertising campaign for water-wise initiatives and tank subsidies, got him off the water hook for the September 2006 election and the ALP won a fourth term with little loss of seats. The National Party had failed dismally to command attention on the water issue, shooting itself in the foot when one of its senior politicians, Lawrence Springborg, suggested that evidence that male Danish fish developed female characteristics when swimming in recycled water could have implications for 'feminisation' in Queensland. The junior party in the coalition, a rag-tag of Liberal members, simply couldn't get their minds around either the scale or the severity of the water issue (*The Australian*, 1 August 2006; *Courier Mail*, 21 November 2006).

Despite the disarray of the opposition, pressure on the government continued to mount, not least because the dam levels kept falling, unlike the rain. In late October, less than two months after the election, Beattie announced that he would hold a referendum on recycling in the coming year. The Southeast Council of Mayors — nervous after the Toowoomba result — said they would not take sides in the referendum, though Brisbane Lord Mayor Campbell Newman came out in favour of recycling. Beattie abandoned the referendum idea in late January, explaining that the situation was so dire that purified recycled water 'is no longer an option, we have no choice'. He also explained that the Queensland Water Commission had given him 'compelling advice' to cancel the 17 March plebiscite. For once, Beattie got a favourable editorial in the *Courier Mail*: 'With Brisbane's Wivenhoe Dam at just above 20 per cent capacity, Premier Peter Beattie has made the right decision to press ahead with recycled drinking water for southeast Queensland and scrap what would have been a farcical \$10 million plebiscite over the issue.' Four days later the *Courier Mail* informed its readers that some of them were already drinking recycled water (Beattie press release, 28 January 2007; *Courier Mail*, 28 October 2006, 28 December 2006, 29 January 2007, 3 February 2007).

A handful of well-informed journalists continued to point to the failure of the state government's water policy initiatives much more effectively than the divided and demoralised opposition. In April 2007, Craig Johnstone told his readers:

Remember how we were told nine months ago that drinking recycled waste water was an Armageddon solution? Next year, we'll be puckering up to glasses full of it. Remember last year, when the Government insisted its future water supply planning was sound because it was based on 2004–05 inflow figures into the dams, which were the lowest on record? It turns out the 2006–07 inflows are half that figure. Policy options that were beyond the pale six months ago are suddenly central to drought-proofing the region.

(*Courier Mail*, 11 April 2007)

The Queensland Water Commission

The Queensland Water Commission was created by Beattie on 19 June 2006, just before the Toowoomba referendum. Chaired by Elizabeth Nosworthy, a well-regarded and no-nonsense corporate bureaucrat, it was primarily set up to dictate uniform water restrictions in Southeast Queensland and to oversee the claims and activities of the various water authorities, which Malcolm Turnbull, among others, had criticised for self-interest and income maximisation at the expense of sound water policy.

The Southeast council mayors had been bickering for months about uniform water restrictions and they would often break ranks. Outrage greeted Gold Coast Mayor Ron Clarke when he allowed his own residents a 'wet weekend' of hosing down their driveways and washing their cars in May 2006, simply because the Hinze Dam happened to be full. But Clarke's action reflected the local view voiced by many Gold Coast residents that they should not be dictated to by Brisbane. The complications of overlapping jurisdictions and financial responsibilities in the water bureaucracies are much less tractable. The Queensland Government is now proposing to buy out the interests of local governments in water, but councils are bitterly complaining that the remuneration is insufficient for both the asset value and its long-term income potential. Owning water and charging for it, along with sewerage provision, has formed a major part of councils' urban assets and cash flow and has been a central plank in the services they provide for charging rates (*Courier Mail*, 21 April 2006. Between 1 May and 25 May 2006 the *Gold Coast Bulletin* continually reported the water-restriction issue).

The phenomenal success of the Queensland Water Commission in its 'Target 140' campaign, with Brisbane now boasting the lowest per-capita use of any major Australian urban area, shows just how much consumption can be reduced with media support and a degree of bi-partisan consensus, in marked contrast to the recycling referendum in Toowoomba, where cashed-up opponents ran a brilliant negative campaign as outlined, implying to the populace that they would literally be drinking from their own toilets. The negative campaign was

aided and abetted — perhaps unknowingly — by sub-editors and picture editors who simply couldn't resist pictures of toilet bowls linked to taps. This facile visual journalism cut across the serious discussion of the water crisis to be found in the same papers.

The Queensland Water Commission continues to run a clever and successful marketing campaign for its Target 140. The Commission's website carries weekly updates on dam levels and household consumption. One of its key selling points is that if residents can stick to 140 litres, they will still be allowed to water plants with a bucket or watering-can for a few hours a week. This approach has the great merit that the Commission, while attempting to severely curtail household usage, is not trying to mandate exactly how and where individuals can use what is deemed as a reasonable, if heavily constrained, daily rate of consumption. There is an element of trust in this that has paid off in a level of region-wide compliance that is quite remarkable. Council mayors are mightily relieved that the Commission takes responsibility for determining water restrictions. Gold Coast Mayor Ron Clarke wanted to break ranks again in January 2008 when heavy summer rain overfilled the (small) Hinze Dam and he suggested that allowing ratepayers to hose down their driveways would reduce the risk of flooding. The Water Commission did make one minor and sensible concession: Gold Coast beaches could again turn on their outdoor showers (*Gold Coast Bulletin; Courier Mail*, January 2008).

The Gold Coast desal plant

In 1994 the Albert Shire Council and the Gold Coast City Council (they were amalgamated the following year) produced a 14-page glossy brochure entitled *Water...Lifeline of a City*, replete with photographs of the Hinze Dam wall, a natural waterfall, sprinklers on golf courses, and the obligatory swim-suited woman lolling on a red flotation device in a pool. As with most such brochures, there was a brief explanation of the water cycle and of Australia as the driest inhabited continent, before readers were informed that a reliable water supply is 'vital' for 'the nation's most popular holiday region'. The little Nerang Dam and the augmentable Hinze Dam (about to have its wall raised for the third time) were said to provide for the needs 'well into the next century'.

The brochure also devoted quite a few pages to saving water. With 60 per cent of water used inside their homes, householders were advised not to use their toilet bowl as a bin or ashtray; take shorter showers; and check their taps for leaks. The 40 per cent of water used on the garden could be reduced by soaking, not spraying; using mulch; adding a timer to the sprinkler system; letting the lawn go brown in summer; and installing a swimming pool cover. They were even shown how to read their water meter.

(L) Front cover of *Water...Lifeline of a City*, Albert Shire Council and Gold Coast City Council, 1994

(R) Hinze Dam propaganda, from *Water...Lifeline of A City*, Albert Shire Council and Gold Coast City Council, 1994

Because the Gold Coast has a higher average rainfall than Brisbane, the Hinze Dam fills quickly, but because it is a small dam it also empties quickly. The Gold Coast continued to draw water from Wivenhoe, but once levels fell below 30 per cent the Gold Coast looked like it would be hung out to dry, to use a technical engineering term. The Goss Labor government, having abandoned the proposal to build the Wolfendene dam in the early 1990s, had not left the Gold Coast with a conventional legacy of large urban dams. With a population of 500 000, and more real-estate spruikers per head than anywhere else in Australia, investors got worried, as did their backers, banks and the superannuation funds.

By early 2005 the Gold Coast was well on the way to the strictest water restrictions in its history. Lord Mayor Ron Clarke announced in April that Southeast Queensland needed at least six mini-desalination plants, but a Brisbane City Council spokesman pointed out that using recycled water at Swanbank power station would save as much potable water as one of Clarke's projected plants. By September 2005 Clarke was pushing heavily for a fast-tracked desal plant, allegedly necessary because the coast's population would increase from 500 000 to 1.2 million within 50 years. The Gold Coast Council decided to bankroll a \$165 million desalination plant to create a 'bulk water source', 'regardless of the drought'. As part of the water grid, the state government agreed in June 2006 to partner with the Gold Coast City Council and in November that year

they formed a 50–50 joint venture company to develop and own the desalination plant, to be built on council land to the immediate west of the Gold Coast airport. This plant would have a capacity of 125MLs per day. The promotional video for the site, with its intake off Tugun beach, describes the project as ‘environmentally sound and sustainable’ while admitting that the desal water will be ‘so free of salt and minerals’ that ‘minerals will have to be added’ for potable consumption (*Courier Mail*, 27 April 2005; *Gold Coast Bulletin*, 24 September 2005; 26 November 2005. See also www.desalinfo.com.au, including the project’s *Community Newsletter* 2007).

A bold and well-prepared state government and a similarly well-informed Gold Coast City Council could have implemented a serious water-tank initiative three years ago, retaining reticulated potable water supplies for kitchen and bathroom. The 150 000 dwellings on the Gold Coast that could be fitted with 20 000 litre capacity (gardens to be watered from laundry greywater) could have been undertaken for a maximum cost of \$750 million over that period, including the cost of a pump and plumbing in for toilet and laundry use. This is calculated on a generous basis, with mass-purchase discounts of \$5000 per dwelling. Instead, we get the desal plant at \$1.2 billion, not counting the operating costs, let alone the carbon emissions. The Gold Coast desal plant is a knee-jerk instant fix. It proceeded without any environmental impact statement. Beattie told one protestor: ‘If we don’t have desal, we’re not going to have any water. If you don’t have water, you’re dead.’ Such insights appear to be propelling Labor premiers everywhere to embrace desal, which has almost become a plank of ALP platforms. (See Cooley *et al.* 2006; *Courier Mail*, 1 February 2007; Warren 2007.)

A really substantial water-tank initiative would have the added advantage that the thousands of sub-contractors on the Gold Coast currently employed in installing swimming pools, spa baths and Grecian bathrooms could be doing something environmentally useful. If you think I’m exaggerating you might like to contemplate Jade, a brand-new, one-apartment-per-floor block, near Q1 which is the world’s tallest residential tower, explicitly planned as such, with a commercial observation deck. In Jade, which is right on the beachfront, every individual apartment has its own lap pool, saving its occupants the 30 seconds it would take to walk to the surf. One has to wonder about any society that embraces such conspicuous, privatised opulence, beyond anything imagined by the Romans in their baths.

The army of consultants, including many of leading engineering firms, hired to justify the new infrastructure developments in SEQ specialise in going into enormous and lucrative detail about mitigating environmental impacts, and dismiss in just a couple of pages the prospect of much more extensive use of water tanks. Two pages is all that Sinclair Knight Merz devote to water tanks in their 1600-page justification of the Traveston Crossing Dam on the Mary River

near Gympie. The consultants point to energy costs for pumping tank water, but don't compare that to costs for pumping the reticulated and recycled supply and fail to point out that gravity feed will be sufficient for some household tanks, depending on their location and the lay of the land. They are concerned about tanks getting contaminated, but there is no mention of the filtering systems now readily available. They are particularly concerned about tanks in a 'reduced rainfall scenario', an absurd comment when one reflects that the Sunshine Coast, Brisbane and the Gold Coast all have much higher rainfalls than the Wivenhoe catchment (Sinclair, Knight, Merz 2007).

Perth's desal plant opened in the southern suburb of Kwinana in November 2006. The WA Premier proudly proclaimed that Perth, in 'harnessing water from the ocean', had acquired 'an abundant source of drinking water that is not dependent on rainfall'. Although it will supply 17 per cent of the city's needs, if potable water in Perth were used only for the kitchen and bathroom it would not be needed at all. Perth's residents had been warned by George Seddon in his 1970 book *Swan River Landscapes* that they needed to 'fear the hose' and create gardens suitable for the landscape and the climate. The WA government cleverly side-stepped carbon emission criticisms by drawing electricity for the plant from the Emu Downs wind farm 200 kilometres north of Perth. This is sheer sophistry, as the power generated could equally be used for other needs. (For Perth's plant see www.watercorporation.com.au)

Resorting to desalination plants constitutes one of the great public policy failures of our times. Labor governments in Queensland, NSW, Victoria and WA, increasingly keen to prove how pro-business they are by placating their property industry lobbies, have gone down the track of desal plants with remarkably little analysis about the longer-term implications for both demand management and environmental costs. The freeway systems of the 1960s to the 1990s received much more internal government and public scrutiny than the desal plants have. One well-placed energy analyst has calculated that the proposed Sydney desal plant is the equivalent of adding 220 000 cars to Sydney's roads each year (Australia Institute 2005).

In embracing its desal plant, the Gold Coast City Council can now proudly claim to be Australia's least sustainable major city. With less than 2 per cent of its travel by public transport, its heavy reliance on air-conditioning and its desal plant, residents of the Gold Coast will shortly produce more carbon emissions per head than any other major Australian city. What a great claim for Australia's surfing holiday capital. How will the spin doctors respond? Perhaps their next advertising campaign will be about the Gold Coast being less environmentally conscious than Dubai.

Potential desalination sites, *SEQ Draft Water Strategy, April 2008, chapter 5, p.125*

All this is the more extraordinary because both the Sunshine Coast and the Gold Coast have regular and quite healthy rainfalls, with the potential for householders to capture rainwater and for councils to harvest at least some stormwater. The Gold Coast and the Sunshine Coast received so much rain in January and February 2008 that every tank could have been filled and refilled within days. Such are the ironies of knee-jerk and alarmist infrastructure developments which do not adequately address alternative options. In going down the high-capital, high-energy and high-carbon emissions road, Queensland has now committed a generation to paying through the nose for a desal quick-fix rather than confronting more-sustainable approaches to climate change.

Conclusion

It took a long time for politicians, senior public servants and rarely-accountable heads of key agencies — from electricity power stations to water bureaucracies — to face up to the severity of the crisis in Southeast Queensland. For a while it looked like they would contemplate some sustainable initiatives, including what appeared to be genuine encouragement for the mass installation of water tanks. Had they been quicker to realise the severity of the issue, it would have been more sensible to suggest that households install 10 000 to 20 000 litres to get a rebate, and it is not too late for policy change to happen,

Instead, the Queensland Water Commission, in its latest Draft *SEQ Water Strategy*, released in April 2007, has in effect given up on rainwater tanks by suggesting that they can only provide 7 per cent of the region's needs by 2256. The Commission suggests, instead, another six desal plants up and down the coast, all located in the region's diminishing open space, including two of its sand islands. Yet most of coastal SEQ has, and is predicted to continue to have, a reasonable rainfall (The Draft Strategy is available at www.qwc.qld.gov.au).

The documentation on this public-policy failure is primarily to be found on the web in endless numbers of documents carefully re-phrased by wordsmiths to avoid later attribution or retribution. Senior public servants have become remarkably risk-averse in a political climate where governments hide behind FOI legislation and where speaking your mind is not encouraged. A number of university water-research centres get funding from firms who stand to make millions of dollars out of desalination infrastructure.

In this melange of public-policy obfuscation, a few brave acts have happened. Beattie cleverly abandoned his proposed referendum on recycling in January 2007 and the hapless Liberal/National Party coalition was unable to turn it into a telling political issue. Much less edifying is the rush to build desal plants with little attempt to inform the public about the high carbon emissions and high running costs of such installations. I wonder whether the Gold Coast desal plant, tucked away at the back of the Coolangatta airport, will be quietly

decommissioned within a decade on both environmental and cost grounds, assuming an aeroplane overshooting the runway doesn't collect it first.

When you reach the eightieth floor of the Q1 observation deck, the world's highest apartment block, you look across at the scenic rim, the Lamington National Park and Mt Warning. In the middle ground you see the Gold Coast airport and the mammoth structure housing the desal plant, a monument to the worst case of coastal overdevelopment in Australia. Perhaps the new slogan for Southeast Queensland could be: 'Head for the 200 kilometre city — carbon emission heaven'.

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