

DRAINAGE SYSTEMS

Statement

HON DIANE EVERS (South West) [6.21 pm]: During 2019, a young man by the name of Reuben Williams worked with me as an intern. The topic of his report was *Urban stormwater in Perth: Strengths, weaknesses and recommendations for future management*. His completed report slipped my mind during the COVID year, as I had intended to table it for the government to consider, and I would like to table that document now.

[Leave granted. See paper [160](#).]

Hon DIANE EVERS: As members of the Greens, we have a lot of portfolios. I had the water portfolio and, as it is quite broad, I had to focus mostly on the environmental concerns and the southern forests irrigation scheme, so I regret that I did not have time to address the drainage issues within Perth. I was really pleased to have Reuben to help me, because he was able to look at that and pull it all together so that I had better knowledge of it, but he also may have come up with something that can feed into the new water act as it is being put together. This paper draws on recent news reports and research done in WA, other Australian states and internationally. Mr Williams also undertook in-depth interviews with Bob Humphries, who was the manager of sustainability at the Water Corporation from 1996 to 2016, so he had quite a bit of responsibility, and knows a lot about the Perth system.

This paper points out the challenges, and I quote —

The main issues facing Perth's stormwater management practices relate to water quality, ecosystem health, cultural and aesthetic values, financial cost, public health, water conservation and flood prevention.

Flood prevention is one of the major issues of concern for the Water Corporation. It sees that as its prime issue. It has to keep the water off the land so that we do not have damage caused by floods. Because of the way we have developed, flooding is becoming more of an issue; there are so many hard and impervious surfaces that the water runs straight off and it never has a chance to recharge. It makes the job very difficult. It is very important that we stop flooding from occurring. We also have to acknowledge that because of that, environmental harm is caused by the reduced recharge of our aquifers and the reduced recharge of our soils by plants. There is a balance that we have to address. The harm also continues because although we have drainage socks, as the City of Kwinana has put in place, or pollutant traps, most of these separate only the big items. Most of these do not get the small items of plastic and other bits of litter. They do not get the chemicals that leach through. They are really just something that makes it look better, because we do not have large rubbish going through our drainage system and clogging it up. But it does not really help with the water quality as it passes through the drains and into our rivers and streams or out into the ocean.

It also seems that many councils are not emptying their drains. The issue with the drains is that they fill up with leaf litter and other things. We might think that that is natural and should not be a problem, but when litter collects in the drains and stagnates, it breaks down and then the nitrogen that is released is another pollutant for our waterways. There are many issues with the drainage. Again I quote from the report —

Water quality also suffers from the fact that there is not one single regulatory body mandated to manage it. The Water Corporation is responsible for the construction and maintenance of the main arterial drainage network, however, it has no mandate to manage water quality within the drains; their main goal is flood prevention. Other stakeholders, such as local governments and Main Roads WA are responsible for a large portion of the water that flows into the arterial drainage network but have little to no legal responsibility to ensure its quality ...

This matter came up in a number of questions I asked during the annual report hearing. I was trying to find out who has responsibility for the quality of the water going through the drains, and it turns out that no-one does. How can that be? How can we just say that it does not matter and that the Department of Water and Environmental Regulation can look after it? The Water Corporation has to build the drains to get it out. Local governments are responsible for making things look pretty for their constituents, but no-one has responsibility for the quality of the water. It is unfathomable that we could be in that situation, and I hope that is corrected in the new water act.

The cost is also significant. We have outdated infrastructure, a backlog of repairs and high maintenance costs and, on top of that, we have the health issues. We get health warnings about not swimming in rivers because they are contaminated or have blue-green algae blooms—all sorts of things. It is definitely a problem. Poorly maintained drains also breed mosquitoes, which is another health issue. One of the things that is pointed out in this report is that we have to look more at infiltration and recharge. We have to figure out how to get more of that water going back underground into our aquifers to provide the water for the future. This can be done. It is being done around the world. There are numerous examples of it. Mr Williams explored the benefits of what is called water-sensitive urban design, because it emphasises the importance of exposed soils to facilitate natural infiltration. Other places in Australia do it. I would say that even some councils here recognise that that is something we need to do. Rather

than getting the water to run off the landscape, we need it to sink into it. It is something that needs to be addressed soon, and I hope it is addressed in the new water act. We have the aquifers and we have the need for our own water. These green spaces that have the water infiltrating also provide beautiful public space, when the water is not flowing too quickly. When I went to Canada on a parliamentary trip, I saw that the drains had been replaced with streams. Rather than trying to get the water out quickly, it was putting streams back and bringing that beauty and nature back into the community. We just looked at drainage there.

Yesterday I asked a question about the new water act. I understand that there is a water resources reference group. That is great. There are key community stakeholders on the committee who have been consulted over many years. Six different acts are being put together into one act, so there is much more to do. I am very concerned that this committee may not be broad enough given the range and depth of issues that this legislation will cover. I will likely ask another question without notice to find out who the members are and whom they represent.

I have already mentioned drainage, but there is also the provision of water. We have a changing climate. Each time we get light on water, we say, “Let’s put in another desal plant.” It is a never-ending situation, but it does not have to be like that. If we get recharge going and get that water back underground, we may have more water, so we might be looking at how we can contain that stormwater. It may be that we are going to try to support our water needs rather than going through desalination.

The country water supply will be covered by this new legislation. I want to make sure that country residents continue to pay the same amount as the people in Perth are paying, because there is no reason why they should pay more. Sewage treatment also must be covered by this new act. It is a big issue all on its own. How are we going to deal with it? We cannot have contamination from that going elsewhere, but, on the other hand, we could look at it as a resource to clean up for further water use or for recharge. Some of it could even be used in fertilisers in some areas. There is more we can do about sewage.

Licensing has also been a big issue. It is of great concern. In the previous term, this government put through a change to make mining companies and users of the public water supply pay the full cost of licensing. Of course agriculture was concerned about it. We do not want to do anything that is going to stop farmers from being able to farm. We have to be able to support farmers because we need them. Water licensing for mining, industrial use and domestic use all has to be in this new act. Of course, agricultural water use is different—whether it is in the rangeland, the Agricultural Region, the south west, or on peri-urban land. I do not see how one committee is going to be able to represent all these different issues. With agricultural water use, we have to look at ground extraction, spring rights, dams, irrigation and allocations. It cannot be like the 1914 act that said it was first in, best dressed for the allocation of water. We just do not have the supplies to continue being able to do that. The allocation may be based on water usage—what is a better use for water than any other use? It may be based on property size. I just hope that this act comes forward with good information and with legislation that is going to work in the long-term, into the future, in a fair and equitable way.

There is also environmental conservation. The Waterways Conservation Act will also be a part of this legislation. Plenty of money is going into wetlands and streams, and we are looking at trying to conserve and preserve the ocean. There is so much to do there, it is a whole issue on its own. We have to look at this. We have to look at regenerative agriculture again and ways to keep the soil as moist as possible, to keep it holding onto the water. Please, in this new legislation, do not disadvantage the environment. Please assist our food producers to make the best use of what we have to maintain our food security. Please take action urgently to address climate change.