

Talking Points: Stephen Hutchison, Wastewater Evidence for WWL for PC1 (HS2)

1. The Wellington region public wastewater network includes about 2,658 km of pipelines and associated pumping stations and treatment plants which provide an essential public health service to the urban areas of Wellington. Wellington Water manages, operates and maintains this public network on behalf of Wellington City Council, Porirua City Council, Hutt City Council and Upper Hutt City Council.
2. The public wastewater network and the private pipes which connect to the public network are a significant contributor to E. coli contamination to freshwater and enterococci in the urban coastal environment, due to condition and performance during both dry weather and wet weather. The proportionate contribution of the wastewater network to the E. coli and enterococci contamination at each location is not known and, in my view, will need further work to quantify.
3. The proposed E. coli standards will require a major uplift in investigation, repair, renewal and upgrade work to meet. While Wellington Water has undertaken studies on reducing wet weather overflows which contribute primarily to the 95%ile measure I am unable to quantify the degree of that work required due to the proposed standards as the standards are well beyond the level that we have experience with or understanding of. The evidence from Mr Walker appears to me to be a reasonable estimate of the scale of work, noting the significant uncertainties he has outlined.

Comments on rebuttal evidence

4. I acknowledge that the updated load reductions provided by Dr Greer in Table 1 are helpful, noting the uncertainty associated with them.
5. I acknowledge the urban / rural load estimates provided by Dr Greer in Table 4 and that the intent of implementing the Target Attribute States would be commensurate to the contributions.
6. I do however, have remaining concerns about the assumption in that Table that attributes the urban E.coli to wastewater leaks. In particular, I understand that avian sources are generally acknowledged to be significant, although are not well understood, and the scientific methods to quantifiably differentiate them are still developing. These appear to have been overlooked in the work to date.
7. With reference to section 28 in Dr Greer's rebuttal, I have remaining concerns about the understanding of 95%ile loads. The monitoring and reporting of overflows is not well managed at present, and I note that Water Services Authority - Taumata Arowai is currently consulting on a proposed national environmental performance standard to improve the visibility and consistency of reporting, but I also noted in paragraph 8.5 of my evidence that the most regular overflow sites occur around 20 times per year and there are several locations that discharge around 10 times per year, more than the "as few as 3 per year" that Dr Greer appears to infer from Mr Blyth's evidence.
8. The frequency of overflows is of course varied across the FMU's, but regardless of that Dr Greer's response remains unclear to me what the source of the elevated E.coli measurements that is so apparent in comparing the 95%ile measurements from the median is. It is beyond my expertise, but does not seem plausible that it is entirely resuspension of E.coli from dry weather leakage, hence my assumption that it is largely wet weather overflows and other non-wastewater sources. Wellington Water observes a strong correlation between wet weather and high E.coli readings, and we can talk to this point further in Hearing Stream 4.