

Responses to NRC questions on Taipa WWTP consent renewal

Question	Response
Has FNDC decided on and committed to an upgrade option to reduce ammoniacal nitrogen levels in the effluent?	No. FNDC is in the process of engaging a consultant to investigate options to achieve the consent application's proposed discharge parameters.
Is it still FNDC's position that it does not intend to upgrade the WWTP by including a specific process for pathogen disinfection (e.g., UV, ozone, chlorination)?	FNDC is in the process of engaging a consultant to investigate options to achieve the consent application's proposed discharge parameters.
Is the dry weather flow still expected to be 1,570 m ³ /day in 2033, based on a 30 day rolling average?	The current average DWF is 408m ³ / day - a fairly consistent rate for the last few years. Therefore the expected flow rate of 1,570 m ³ /day still stands.
If so, how will the treatment cope with the additional inflow if the applicant has decided that the application will be revised so that the flow will remain at the current consented volume of 1,005 m ³ /day?	The application is to renew the existing consent to discharge up to 1570m ³ /day of treated wastewater on an average daily dry weather flow basis. FNDC is in the process of engaging a consultant to investigate options to achieve the consent application's proposed discharge parameters.
Is the third aerated facultative pond in operation and has the plant capacity increased to 1775 m ³ /day?	The third aerated lagoon has been in operation since 2013. The aerated ponds now run in series with raw influent entering #1 and flowing through system to #2, then #3, before discharging to the main pond. With the advent of putting #3 aerobic pond in series, this should be capable of reaching the flow rate of 1775m ³ /day. We note that the plant will not cope with this loading without an upgrade to reach resource consent compliance.
What are the wet weather flows during various design rainfall events? And how does the treatment plant perform during and after the wet weather inflows?	The logs indicate the following during significant rain events: <ul style="list-style-type: none"> • 60+ mm rain doubles the flow rate through the plant and can slowly reduce back to normal dry weather flows within 5 days. • 100+ mm rain triples the flow rate through the plant. Continuous rain days will hold the flow rate up high for long periods of time. <p>The effects on the plant are an increase in PH & DO with a slight reduction in NH₄ initially then reverting back to our normal NH₄ results as the infiltration and dilution drops.</p>
Does FNDC know what might be causing the increasing trend [of ammoniacal nitrogen levels in the effluent]?	FNDC hypothesizes the following causes of the increased trend of ammoniacal nitrogen levels: <ul style="list-style-type: none"> • Sludge volumes impeding treatment processes • Increased development (99 new connections over 10 years – lower than predicted, see graphs below) • Increased use of private holiday accommodation within the area of benefit, e.g: <ul style="list-style-type: none"> ○ Air B&B: 102 properties ○ BookaBach: 94 properties ○ HolidayHouses: 77 properties

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○ Bachcare: 15 properties
 (Note that there may be some double-ups in the figures if properties are listed with more than one website).

